

Appendix 7.1 – Site Investigation Report, 2025

S.I. Ltd Contract No: 6438

Client: Castlethorn Construction
Engineer: Barrett Mahony
Contractor: Site Investigations Ltd

Molloy's Field,
Luttrellstown, Dublin 15
Site Investigation

Prepared by:

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Stephen Letch

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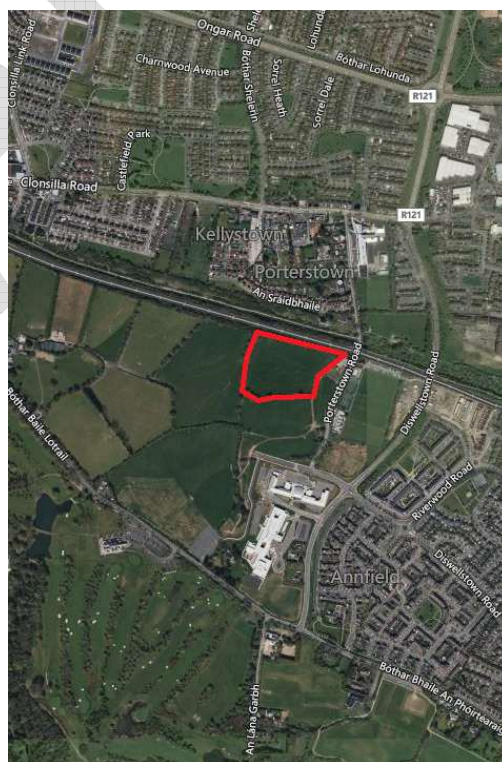
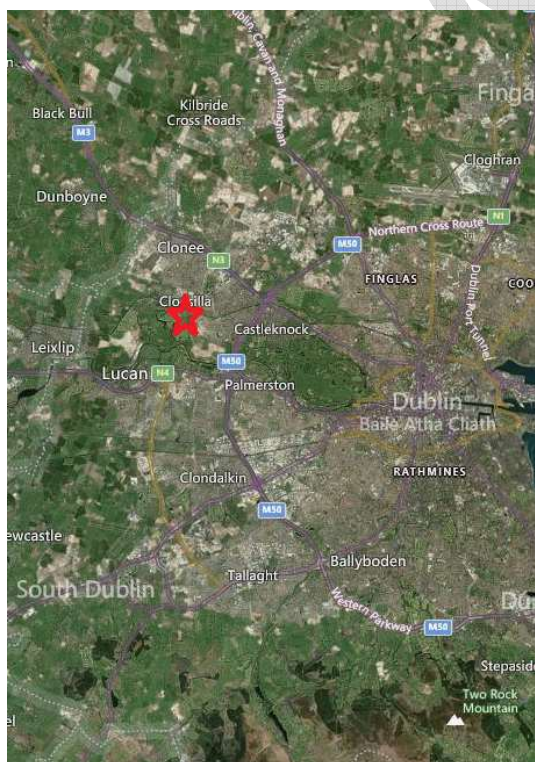
1. Introduction

On the instructions of Barrett Mahony, Site Investigations Ltd (SIL) were appointed to complete a site investigation at Molloy's Field, Luttrellstown, Dublin 15. The investigation was completed for a new residential development on behalf of the Client, Castlethorn Construction, and the fieldworks were completed in February 2025.

This draft report presents the factual geotechnical data obtained from the field and laboratory testing with interpretation of the ground conditions discussed. The report may be used for reference only with no permission for the report to be used in planning permission submissions. The final report will be issued on receipt of payment and at that time, the report may be used for design purposes and planning permission submissions.

2. Site Location

Molloy's Field is located in Luttrellstown, Dublin 15, with the railway line to the north of the site. The map on the left shows the location of the site in the Dublin area and the second map shows the site location in the local area.



3. Fieldwork

All fieldwork was carried out in accordance with BS 5930:2015, Engineers Ireland GI Specification and Related Document 2nd Edition 2016 and Eurocode 7: Geotechnical Design. The fieldworks comprised the following:

- 7 No. trial pits with soakaway tests
- 6 No. dynamic probes
- 8 No. California Bearing Ratio tests

3.1. Trial Pits and Soakaway Tests

7 No. trial pits were excavated using a wheeled excavator. The strata were logged and photographed by SIL geotechnical engineer and groundwater ingresses and pit wall stability was also recorded. Representative disturbed bulk samples were recovered as the pits were excavated, which were returned to the laboratory for geotechnical testing.

In the trial pits, soakaway tests were completed and logged by SIL geotechnical engineer. BRE Special Digest 365 stipulates that the pit should be filled three times and that the final cycle is used to provide the infiltration rate. The time taken for the water level to fall from 75% volume to 25% volume is required to calculate the rate of infiltration. However, if the water level does not fall at a steady rate, then the test is deemed to have failed and the area is unsuitable for storm water drainage.

The soakaway test results and photographs are presented in Appendix 1.

3.2. Dynamic Probes

At 6 No. locations, dynamic probes were completed using a track mounted Competitor 130 machine. The testing complies with the requirements of BS1377: Part 9 (1990) and Eurocode 7: Part 3. The configuration utilised standard DPH (Heavy) probing method comprising a 50kg weight, 500mm drop height and a 50mm diameter (90°) cone. The number of blows required to drive the cone each 100mm increment into the sub soil is recorded in accordance with the standards. The dynamic probe provides no information regarding soil type or groundwater conditions.

The dynamic probe results can be used to analyse the strength of the soil strata encountered by the probe. 'Proceedings of the Trinity College Dublin Symposium of Field and Laboratory Testing of Soils for Foundations and Embankments' presents a paper by Foibart that is most relevant to Irish soil conditions and within this paper the following equations were included:

Granular Soils: $DPH N_{100} \times 2.5 = SPT N \text{ value}$

Cohesive Soils: $C_u = 15 \times DPH N_{100} + 30 \text{ kN/m}^2$

These equations present a relationship between the probe N_{100} value and the SPT N value for granular soils and the undrained shear strength of cohesive soils.

The dynamic probe logs are presented in Appendix 2.

3.3. California Bearing Ratio Tests

At 8 No. locations, undisturbed cylindrical mould samples were recovered to complete California Bearing Ratio tests in the laboratory. The results facilitate the designing of the access roads and can also be used for slab foundations for the playing courts. The tests are completed to BS1377: 1990: Part 4, Clause 7 'Determination of California Bearing Ratio'.

The CBR test results are presented in Appendix 3.

3.4. Surveying

Following completion of all the fieldworks, a survey of the exploratory hole locations was completed using a GeoMax GPS Rover. The data is supplied on each individual log and along with a site plan in Appendix 7.

4. Laboratory Testing

4.1. Geotechnical Testing

Geotechnical classification testing has been completed on representative soil samples in accordance with BS 1377 (1990). Testing includes:

- 3 No. Moisture contents
- 3 No. Atterberg limits
- 3 No. Particle size gradings
- 8 No. remoulded CBR tests
- 8 No. pH, sulphate and chloride content

The geotechnical laboratory test results are presented in Appendix 4.

4.2. Environmental Testing

Environmental testing was completed by ALS Environmental Ltd. and consists of the following:

- 21 No. Suite I analysis

The environmental results are presented in Appendix 5 and a Waste Classification Report in Appendix 6.

5. Ground Conditions

5.1. Overburden

The natural soils are dominated by cohesive brown (slightly) sandy (slightly) gravelly CLAY with cobble content increasing with depth. TP03 and TP04 in the east of the site encountered shallow obstructions at 0.70mbgl and 1.70mbgl respectively.

The dynamic probes recorded N_{100} values of 2 around 1.00mbgl and then increased. DP02 did record a thin soft layer at 5.00mbgl before increasing and terminating at 6.40mbgl.

The laboratory tests of the cohesive soils show CLAY soils with low to intermediate plasticity indexes of 10% to 20% recorded. The particle size distribution curves were poorly sorted straight-line curves with 20% to 75% fines content in the cohesive soils.

5.2. Groundwater

No groundwater was recorded in the trial pits during the fieldworks.

6. Recommendations and Conclusions

Please note the following caveats:

The recommendations given, and opinions expressed in this report are based on the findings as detailed in the exploratory hole records. Where an opinion is expressed on the material between the exploratory hole locations or below the final level of excavation, this is for guidance only and no liability can be accepted for its accuracy. No responsibility can be accepted for adjacent unexpected conditions that have not been revealed by the exploratory holes. It is further recommended that all bearing surfaces when excavated should be inspected by a suitably qualified Engineer to verify the information given in this report.

Excavated surfaces in clay strata should be kept dry to avoid softening prior to foundation placement. Foundations should always be taken to a minimum depth of 0.50mBGL to avoid the effects of frost action and possible seasonal shrinkage/swelling.

If it is intended that on-site materials are to be used as fill, then the necessary laboratory testing should be specified by the Client to confirm the suitability. Also, relevant lab testing should be specified where stability of side slopes to excavations is a concern, or where contamination may be an issue.

6.1. Shallow Foundations

For analysis of bearing capacities from the dynamic probes, the N_{100} values are used as follows in cohesive soils. The undrained shear strength (C_u) is calculated using the N_{100} value as per the equation in Section 3.2. This can then be used in calculations to work out the ultimate

bearing capacity (ULS) and when a factor of safety of 3 is applied, the allowable bearing capacity (ABC) can be provided. The table below shows the allowable bearing capacities for N_{100} values 1 to 10 at 1.00mbgl.

N_{100} Value	Cohesive Soils		
	C_u	ULS	ABC
1	45	248	83
2	60	330	110
3	75	400	135
4	90	480	160
5	105	555	185
6	120	630	210
7	135	705	235
8	150	780	260
9	165	855	285
10	180	930	310

All capacities shown are in kN/m^2 .

The probes at 1.00mbgl recorded values of 2 or greater and this correlates with an allowable bearing capacity of 110kN/m^2 .

The following assumptions were made as part of these analyses. If any of these assumptions are not in accordance with detailed design or observations made during construction these recommendations should be re-evaluated.

- Foundations are to be constructed on a level formation of uniform material type.
- All man-made or filled material is to be removed prior to construction.
- The bulk unit weight of the material in this stratum has a minimum density of 19kN/m^3 .
- Based on groundwater observations this analysis assumes the groundwater will not influence the construction or performance of these foundations.
- All bearing capacity calculations allow for 25mm settlement.

6.2. Slope Stability

The pit walls remained stable as the excavations progressed but it would still be recommended that all excavations should be checked immediately by a suitably qualified engineer and the slope battered back accordingly.

Regular inspection of temporary excavations should also be completed at regular intervals to ensure that all slopes are stable. Temporary support should be used on any excavation that will be left open for an extended period.

6.3. Groundwater

The caveats below relating to interpretation of groundwater levels should be noted:

There is always considerable uncertainty as to the likely rates of water ingress into excavations in clayey soil sites due to the possibility of localised unforeseen sand and gravel lenses acting as permeable conduits for unknown volumes of water.

Furthermore, water levels noted on the borehole and trial pit logs do not generally give an accurate indication of the actual groundwater conditions as the borehole or trial pit is rarely left open for sufficient time for the water level to reach equilibrium.

Also, during boring procedures, a permeable stratum may have been sealed off by the borehole casing, or water may have been added to aid drilling. Therefore, an extended period of groundwater monitoring using any constructed standpipes is required to provide more accurate information regarding groundwater conditions. Finally, groundwater levels vary with time of year, rainfall and possible nearby construction sites.

Pumping tests would be required to determine likely seepage rates and persistence into excavations taken below the groundwater level. Deep trial pits also aid estimation of seepage rates.

As discussed previously, no groundwater was recorded during the fieldworks.

There is always considerable uncertainty as to the likely rates of water ingress into excavations in cohesive soils due to the possibility of localised unforeseen sand and gravel lenses acting as permeable conduits for unknown volumes of water. Based on this information at the exploratory hole locations to date, it is considered likely that any shallow ingress (less than 2.00mbgl) into excavations of the CLAY will be slow to medium. If granular soils are encountered in shallow excavations, then the possibility of water ingressing into an excavation increase.

If groundwater is encountered during excavations then mechanical pumps will be required to remove the groundwater from sumps. Sumps should be carefully located and constructed to ensure that groundwater is efficiently removed from excavations and trenches.

6.4. Soakaway Tests

The soakaway tests failed the specification as the water level did not fall sufficiently enough to complete the test. The BRE Digest stipulates that the pit should half empty within 24hrs, and extrapolation indicates this condition would not be satisfied. The tests were terminated at the end of the first (of a possible three) fill/empty cycle since further testing would give even slower fall rates due to increased soil saturation. The unsuitability of the soils for soakaways is further suggested by the soil descriptions of the materials in this area of the site where the soakaway was completed, i.e., well compacted clay soils.

6.5. Pavement Design

The insitu CBR samples recorded values of 4.4% to 6.4%, and these were completed on samples from 0.50mbgl. The remoulded samples in the laboratory testing section of the report recorded a wider range of values of 3.4% to 9.3%

Inspection of the formation strata should be completed prior to construction of the pavement. Once the exact formation levels are finalised then additional in-situ testing could be completed to assist with the detailed pavement design.

6.6. Contamination

Environmental testing was completed on twenty-one samples with the results presented in Appendix 5. For material to be removed from site, Suite I testing was carried out to determine if the material is hazardous or non-hazardous and then the leachate results were compared with the published waste acceptance limits of BS EN 12457-2 to determine whether the material on the site could be accepted as 'inert material' by an Irish landfill.

The Waste Classification report created using HazWasteOnline™ software shows that the material tested can be classified as non-hazardous material.

Following this analysis of the solid test results, the leachate disposal suite results indicate that the soils tested would generally be able to be treated as Inert Waste. The sample from TP01 recorded a total organic carbon value of 3.1%, which is 0.1% above the inert threshold and this could be from natural sources.

Twenty-one samples were tested for analysis but it cannot be discounted that any localised contamination may have been missed. Any MADE GROUND excavated on site should be stockpiled separately to natural soils to avoid any potential cross contamination of the soils. Additional testing of these soils may be requested by the individual landfill before acceptance and a testing regime designed by an environmental engineer would be recommended to satisfy the landfill.

6.6. Aggressive Ground Conditions

The chemical test results in Appendix 4 indicate a general pH value between 7.51 to 8.46, which is close to neutral and below the level of 9, therefore no special precautions are required.

The maximum value obtained for water soluble sulphate was 130mg/l as SO_3 . The BRE Special Digest 1:2005 – '*Concrete in Aggressive Ground*' guidelines require SO_4 values and after conversion ($\text{SO}_4 = \text{SO}_3 \times 1.2$), the maximum value of 156mg/l shows Class 1 conditions and no special precautions are required.

6.7. Radon Gas

The Environmental Protection Agency (EPA) has recently updated the Radon gas exposure map and this is available to view on the EPA website. This shows the possible exposure to radon gas with the bedrock geology, subsoil geology, soil permeability and aquifer type analysed to produce the map. The map below shows that the site falls within the medium level of 1 in 10 homes have possible radon exposure. Measures should be taken in the form of radon protection barriers to protect from radon exposure in the new structure.



EPA map identifying possible Radon exposure.

<https://gis.epa.ie/EPAMaps/Radon?&lid=EPA:RadonRiskMapofIreland>

Appendix 1
Soakaway Test Results and Photographs

DRAFT

SOAKAWAY TEST



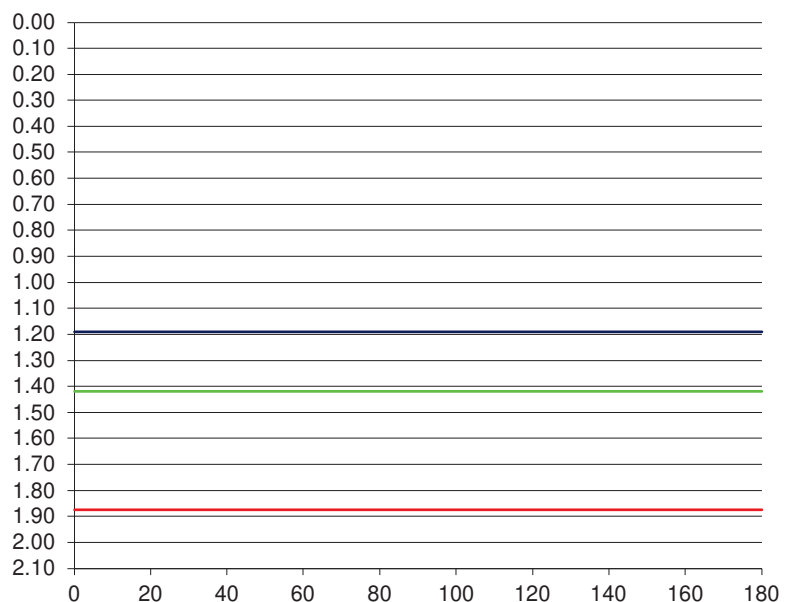
Project Reference:	6438
Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP01
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	2.10	Firm brown slightly sandy slightly gravelly silty CLAY with medium cobble content.

Elapsed Time (mins)	Fall of Water (m)
0	1.19
0.5	1.19
1	1.19
1.5	1.19
2	1.19
2.5	1.19
3	1.19
3.5	1.19
4	1.19
4.5	1.19
5	1.19
6	1.19
7	1.19
8	1.19
9	1.19
10	1.19
12	1.19
14	1.19
16	1.19
18	1.19
20	1.19
25	1.19
30	1.19
40	1.19
50	1.19
60	1.19
75	1.19
90	1.19
120	1.19
150	1.19
180	1.19

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	2.10	m
Water		
Start Depth of Water	1.19	m
Depth of Water	0.91	m
75% Full	1.42	m
25% Full	1.87	m
75%-25%	0.46	m
Volume of water (75%-25%)	1.09	m3
Area of Drainage	15.96	m2
Area of Drainage (75%-25%)	5.86	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = Fail or
m/min

Fail
m/s

SOAKAWAY TEST



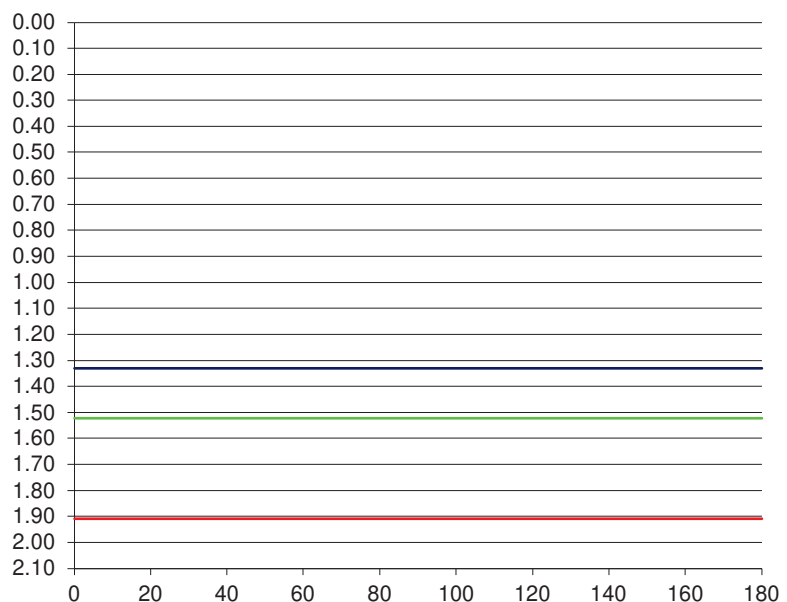
Project Reference:	6438
Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP02
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	2.10	Firm brown slightly sandy slightly gravelly silty CLAY with medium cobble and low boulder content.

Elapsed Time (mins)	Fall of Water (m)
0	1.33
0.5	1.33
1	1.33
1.5	1.33
2	1.33
2.5	1.33
3	1.33
3.5	1.33
4	1.33
4.5	1.33
5	1.33
6	1.33
7	1.33
8	1.33
9	1.33
10	1.33
12	1.33
14	1.33
16	1.33
18	1.33
20	1.33
25	1.33
30	1.33
40	1.33
50	1.33
60	1.33
75	1.33
90	1.33
120	1.33
150	1.33
180	1.33

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	2.10	m
Water		
Start Depth of Water	1.33	m
Depth of Water	0.77	m
75% Full	1.52	m
25% Full	1.91	m
75%-25%	0.39	m
Volume of water (75%-25%)	0.92	m3
Area of Drainage	15.96	m2
Area of Drainage (75%-25%)	5.33	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = Fail or
m/min

Fail
m/s

SOAKAWAY TEST



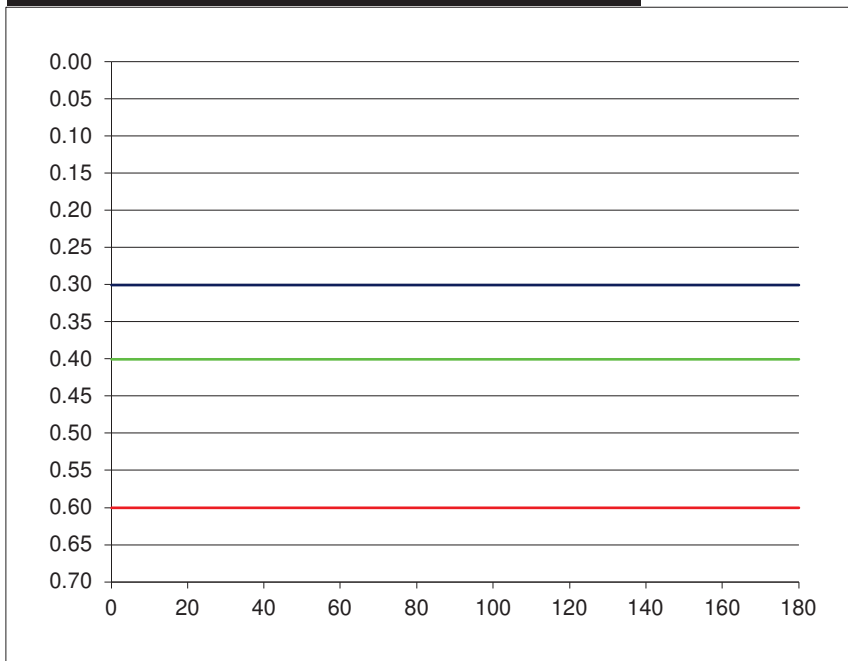
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Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP03
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	0.70	Firm brown slightly sandy slightly gravelly silty CLAY with medium cobble content.
0.70		Obstruction encountered - pit terminated and test completed.

Elapsed Time (mins)	Fall of Water (m)
0	0.30
0.5	0.30
1	0.30
1.5	0.30
2	0.30
2.5	0.30
3	0.30
3.5	0.30
4	0.30
4.5	0.30
5	0.30
6	0.30
7	0.30
8	0.30
9	0.30
10	0.30
12	0.30
14	0.30
16	0.30
18	0.30
20	0.30
25	0.30
30	0.30
40	0.30
50	0.30
60	0.30
75	0.30
90	0.30
120	0.30
150	0.30
180	0.30

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	0.70	m
Water		
Start Depth of Water	0.30	m
Depth of Water	0.40	m
75% Full	0.40	m
25% Full	0.60	m
75%-25%	0.20	m
Volume of water (75%-25%)	0.48	m3
Area of Drainage	5.32	m2
Area of Drainage (75%-25%)	3.92	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = **Fail** or
m/min

Fail
m/s

SOAKAWAY TEST

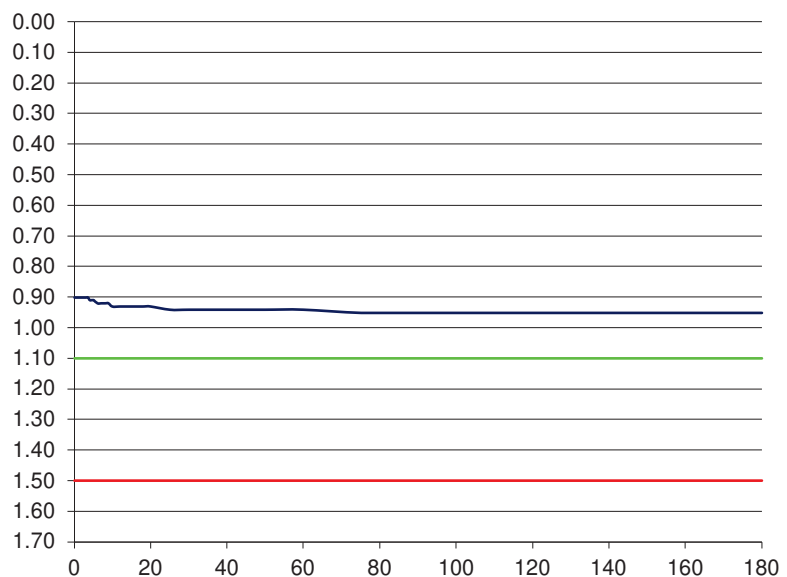


Project Reference:	6438
Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP04
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	1.70	Firm brown sandy slightly gravelly silty CLAY with medium cobble and low boulder content.
1.70		Obstruction encountered - pit terminated and test completed.

Elapsed Time (mins)	Fall of Water (m)	Pit Dimensions (m)		
0	0.90	Length (m)	3.00	m
0.5	0.90	Width (m)	0.80	m
1	0.90	Depth	1.70	m
1.5	0.90	Water		
2	0.90	Start Depth of Water	0.90	m
2.5	0.90	Depth of Water	0.80	m
3	0.90	75% Full	1.10	m
3.5	0.90	25% Full	1.50	m
4	0.91	75%-25%	0.40	m
4.5	0.91	Volume of water (75%-25%)	0.96	m3
5	0.91	Area of Drainage	12.92	m2
6	0.92	Area of Drainage (75%-25%)	5.44	m2
7	0.92	Time		
8	0.92	75% Full	N/A	min
9	0.92	25% Full	N/A	min
10	0.93	Time 75% to 25%	N/A	min
12	0.93	Time 75% to 25% (sec)	N/A	sec
14	0.93			
16	0.93			
18	0.93			
20	0.93			
25	0.94			
30	0.94			
40	0.94			
50	0.94			
60	0.94			
75	0.95			
90	0.95			
120	0.95			
150	0.95			
180	0.95			



f = **Fail** or
m/min

Fail
m/s

SOAKAWAY TEST



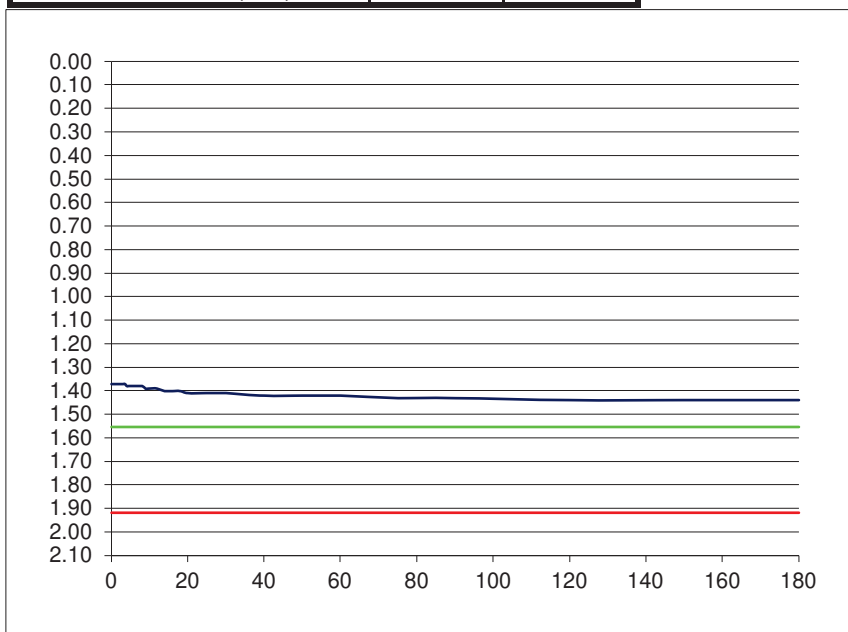
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Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP05
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	1.40	Firm brown slightly sandy slightly gravelly silty CLAY with medium cobble content.
1.40	2.10	Firm brown grey slightly sandy gravelly silty CLAY with medium cobble content.

Elapsed Time (mins)	Fall of Water (m)
0	1.37
0.5	1.37
1	1.37
1.5	1.37
2	1.37
2.5	1.37
3	1.37
3.5	1.37
4	1.38
4.5	1.38
5	1.38
6	1.38
7	1.38
8	1.38
9	1.39
10	1.39
12	1.39
14	1.40
16	1.40
18	1.40
20	1.41
25	1.41
30	1.41
40	1.42
50	1.42
60	1.42
75	1.43
90	1.43
120	1.44
150	1.44
180	1.44

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	2.10	m
Water		
Start Depth of Water	1.37	m
Depth of Water	0.73	m
75% Full	1.55	m
25% Full	1.92	m
75%-25%	0.37	m
Volume of water (75%-25%)	0.88	m3
Area of Drainage	15.96	m2
Area of Drainage (75%-25%)	5.17	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = Fail or
m/min

Fail
m/s

SOAKAWAY TEST



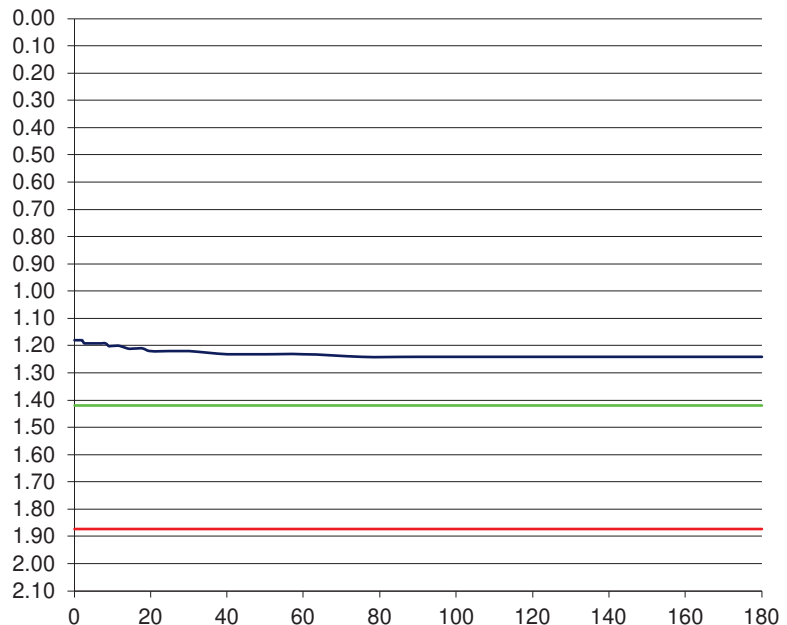
Project Reference:	6438
Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP06
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	2.10	Firm brown slightly sandy gravelly silty CLAY with medium cobble content.

Elapsed Time (mins)	Fall of Water (m)
0	1.18
0.5	1.18
1	1.18
1.5	1.18
2	1.18
2.5	1.19
3	1.19
3.5	1.19
4	1.19
4.5	1.19
5	1.19
6	1.19
7	1.19
8	1.19
9	1.20
10	1.20
12	1.20
14	1.21
16	1.21
18	1.21
20	1.22
25	1.22
30	1.22
40	1.23
50	1.23
60	1.23
75	1.24
90	1.24
120	1.24
150	1.24
180	1.24

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	2.10	m
Water		
Start Depth of Water	1.19	m
Depth of Water	0.91	m
75% Full	1.42	m
25% Full	1.87	m
75%-25%	0.46	m
Volume of water (75%-25%)	1.09	m3
Area of Drainage	15.96	m2
Area of Drainage (75%-25%)	5.86	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = Fail or
m/min

Fail
m/s

SOAKAWAY TEST



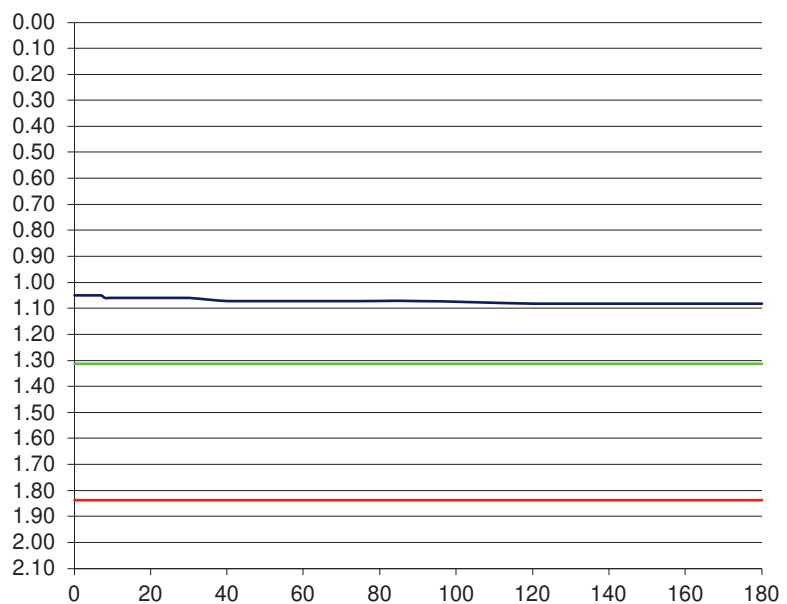
Project Reference:	6438
Contract name:	Molloy's Field
Location:	Luttrellstown, Dublin 15
Test No:	TP07
Date:	05/02/2025

Ground Conditions

From	To	
0.00	0.30	TOPSOIL.
0.30	2.10	Firm brown slightly sandy slightly gravelly silty CLAY with medium cobble and low boulder content.

Elapsed Time (mins)	Fall of Water (m)
0	1.05
0.5	1.05
1	1.05
1.5	1.05
2	1.05
2.5	1.05
3	1.05
3.5	1.05
4	1.05
4.5	1.05
5	1.05
6	1.05
7	1.05
8	1.06
9	1.06
10	1.06
12	1.06
14	1.06
16	1.06
18	1.06
20	1.06
25	1.06
30	1.06
40	1.07
50	1.07
60	1.07
75	1.07
90	1.07
120	1.08
150	1.08
180	1.08

Pit Dimensions (m)		
Length (m)	3.00	m
Width (m)	0.80	m
Depth	2.10	m
Water		
Start Depth of Water	1.05	m
Depth of Water	1.05	m
75% Full	1.31	m
25% Full	1.84	m
75%-25%	0.53	m
Volume of water (75%-25%)	1.26	m3
Area of Drainage	15.96	m2
Area of Drainage (75%-25%)	6.39	m2
Time		
75% Full	N/A	min
25% Full	N/A	min
Time 75% to 25%	N/A	min
Time 75% to 25% (sec)	N/A	sec



f = Fail or
m/min

Fail
m/s

TP01 Sidewall



TP01 Spoil



TP02 Sidewall



TP02 Spoil



TP03 Sidewall



TP03 Spoil



TP04 Sidewall



TP04 Spoil



TP05 Sidewall



TP05 Spoil



TP06 Sidewall



TP06 Spoil



TP07 Sidewall



TP07 Spoil

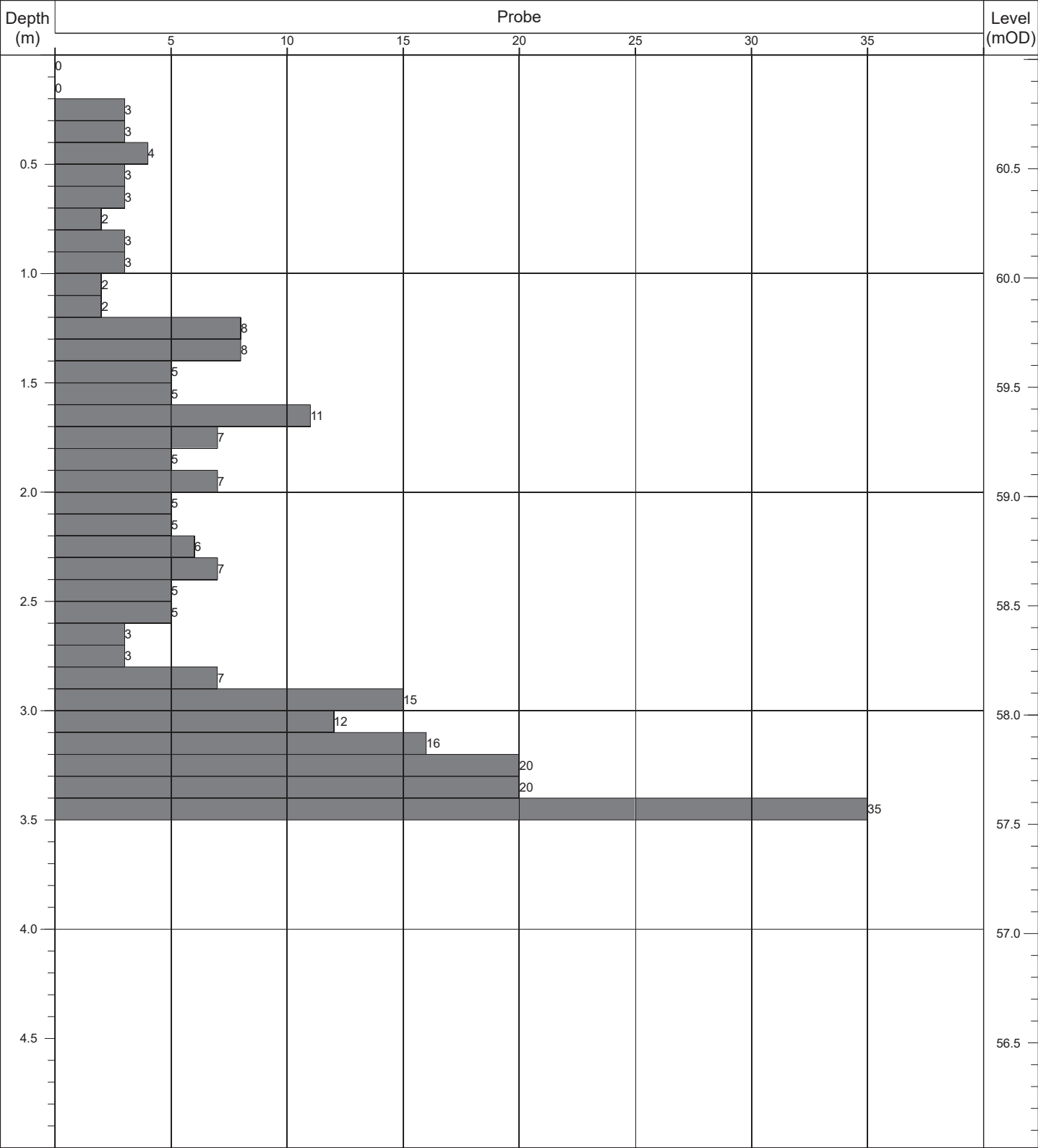


Appendix 2

Dynamic Probe Logs

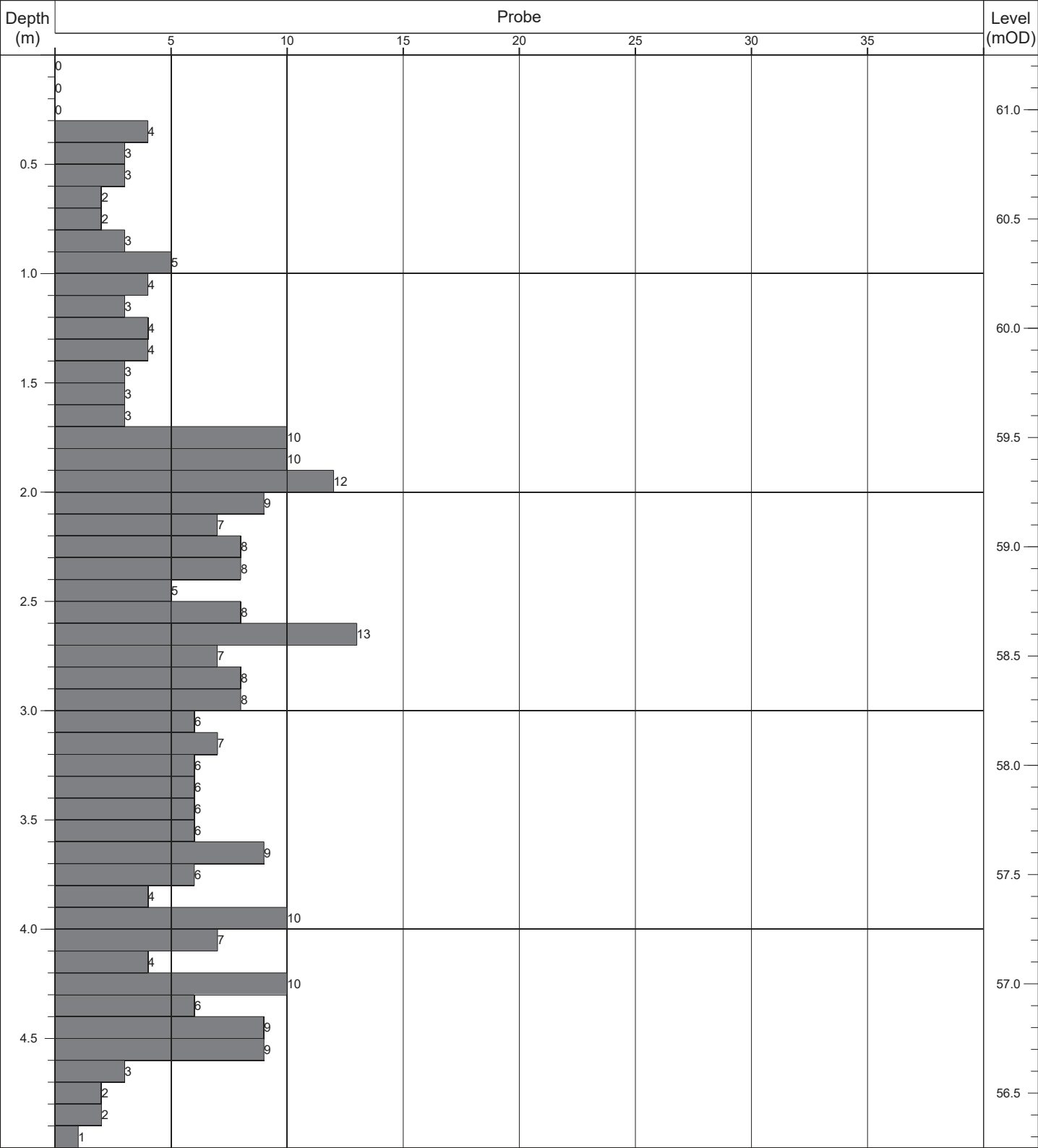
DRAFT

Contract No: 6438	Dynamic Probe Log				Probe No: DP01
Contract:	Molloy's Field	Easting:	705805.235	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737699.944	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	61.02	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



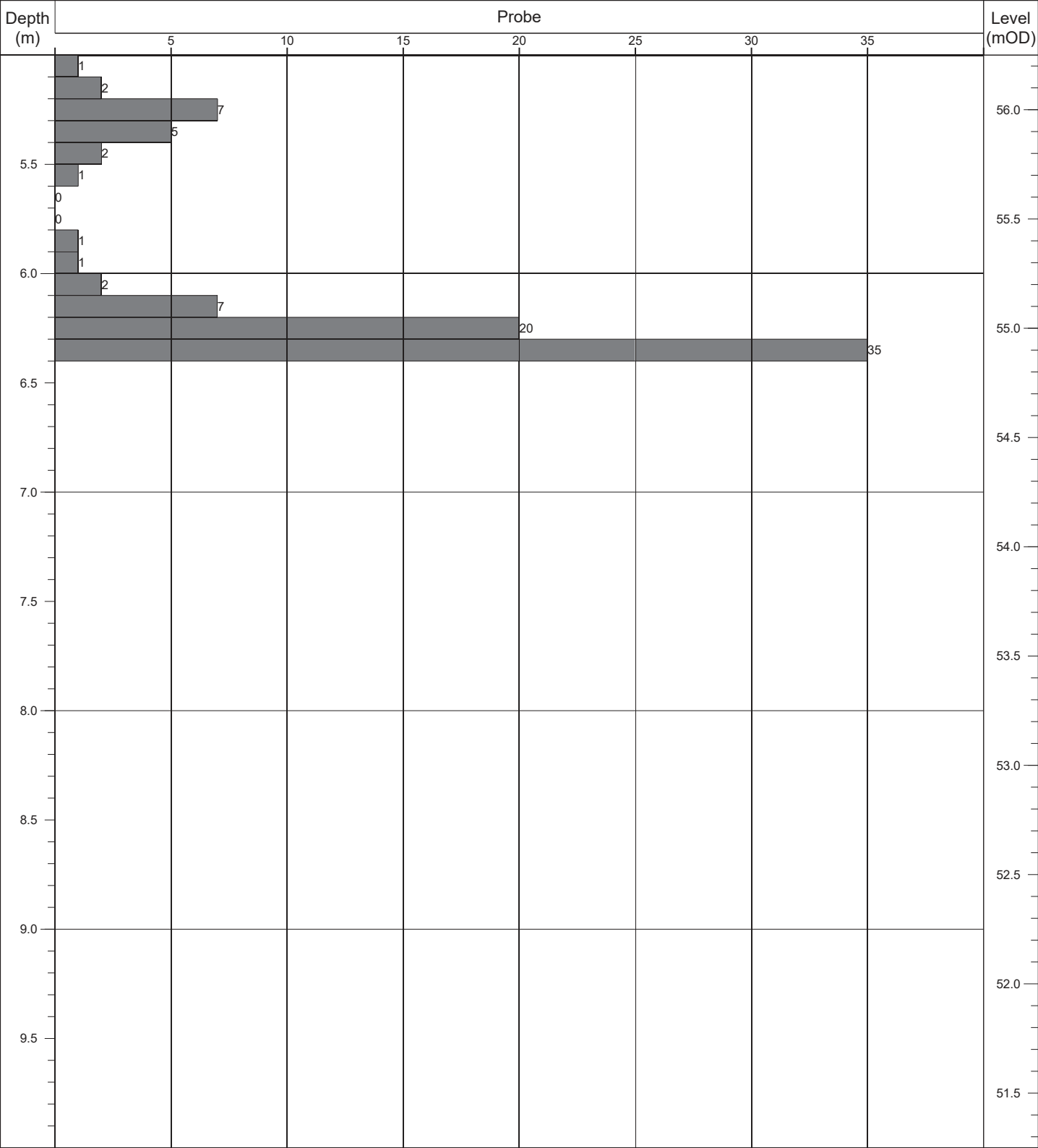
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	3.50m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP02
Contract:	Molloy's Field	Easting:	705845.495	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737762.114	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	61.25	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 2



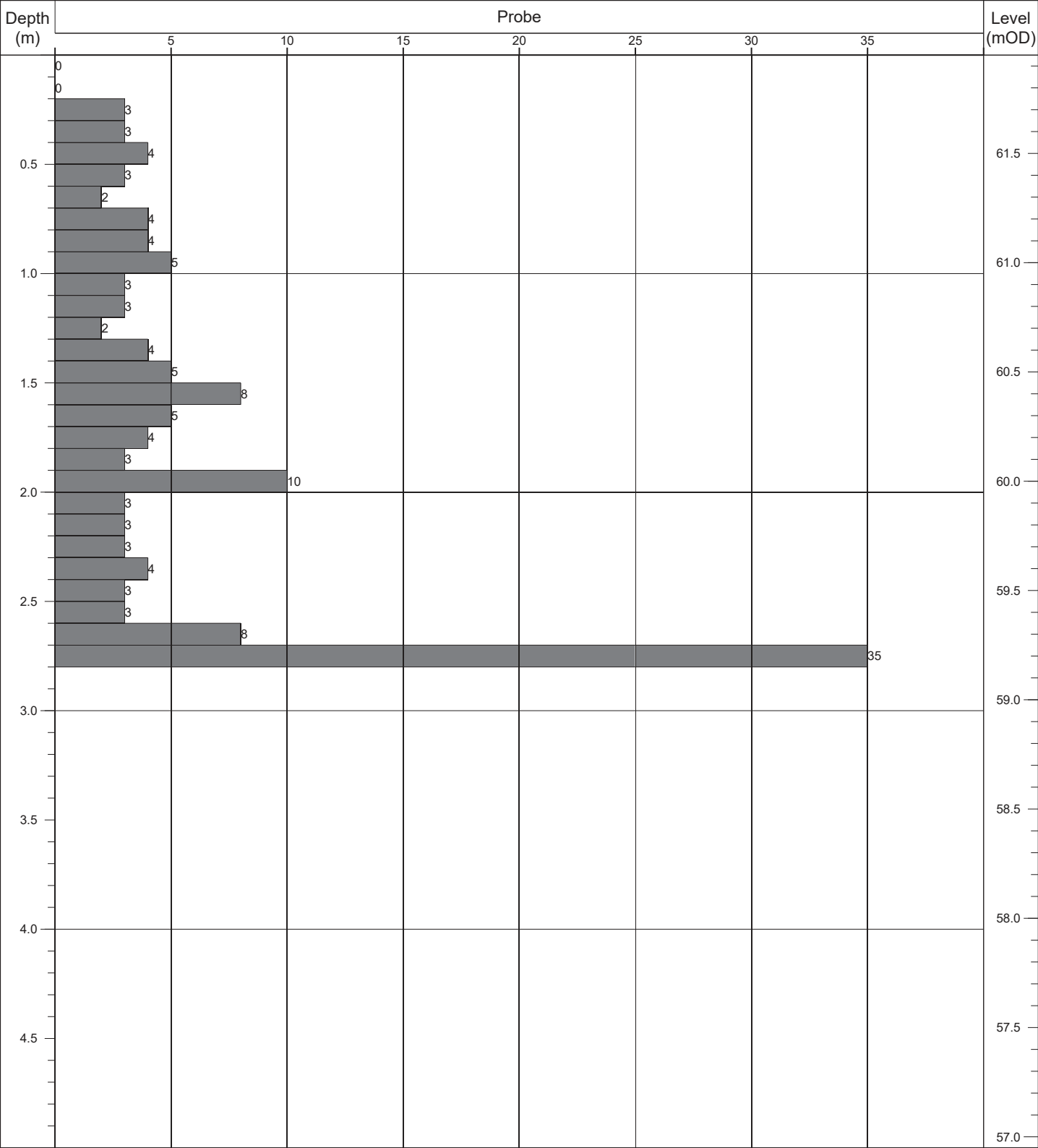
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	6.40m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP02
Contract:	Molloy's Field	Easting:	705845.495	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737762.114	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	61.25	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 2 of 2



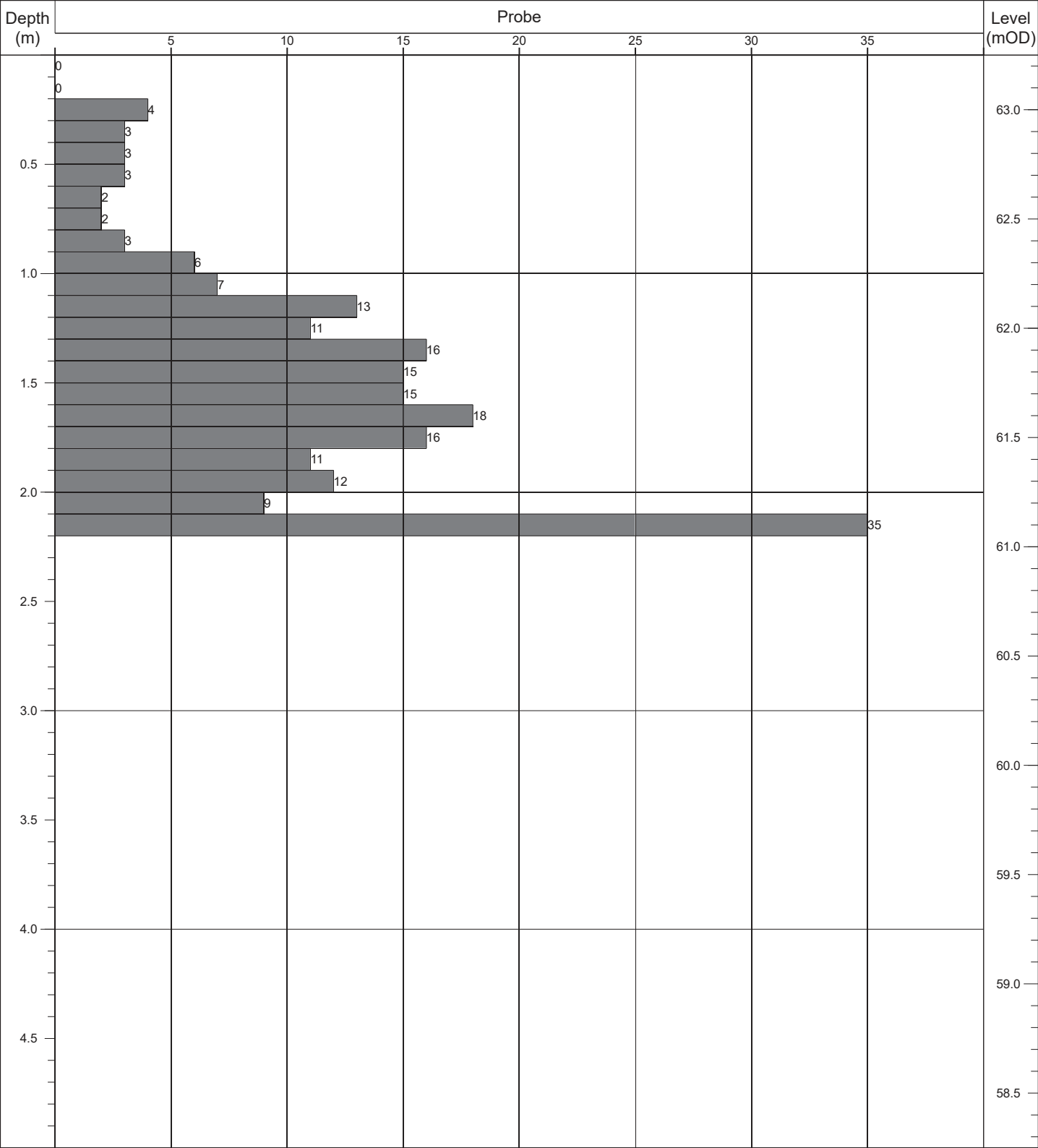
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	6.40m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP03
Contract:	Molloy's Field	Easting:	705870.952	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737706.744	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	61.95	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



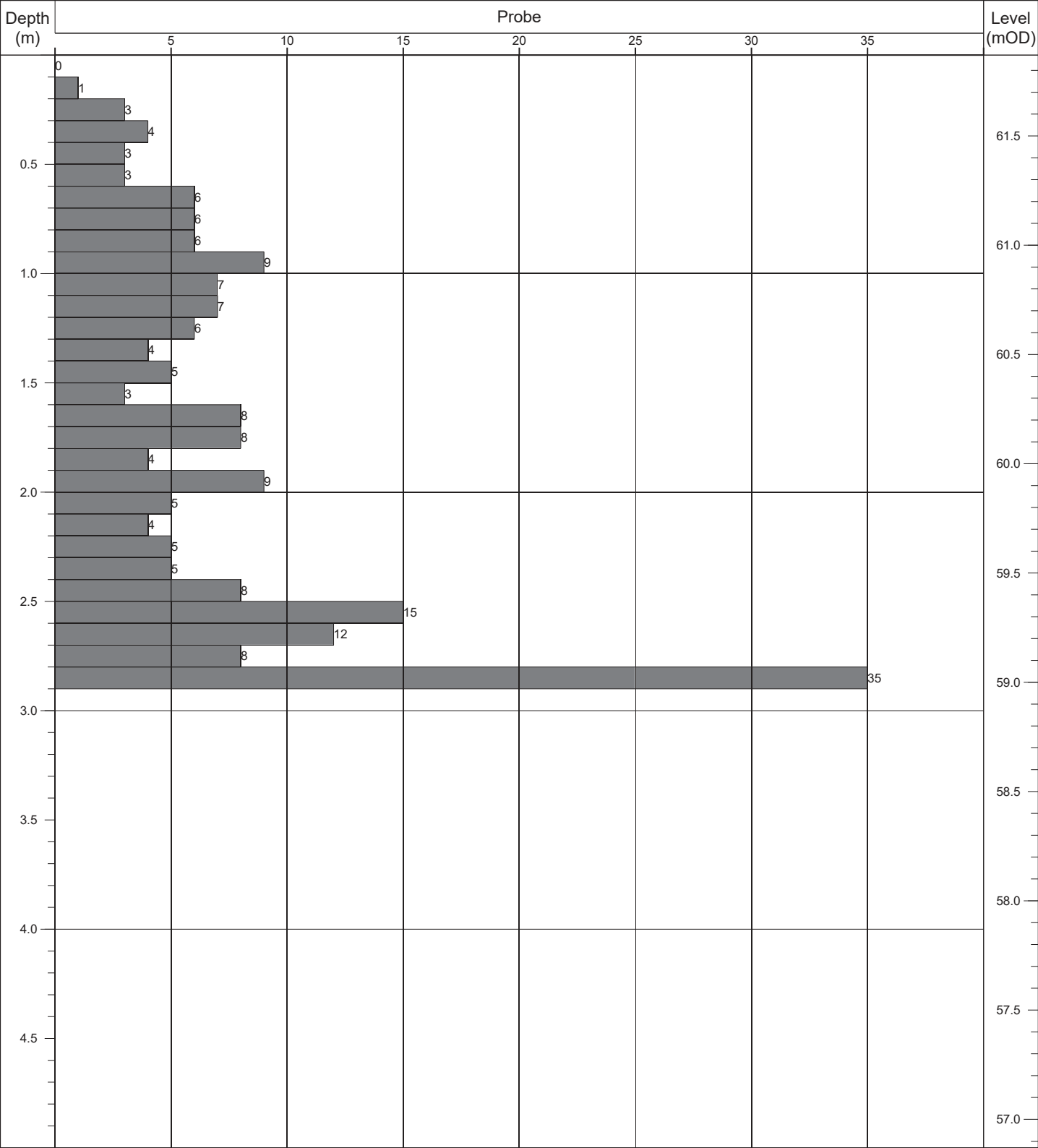
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.80m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP04
Contract:	Molloy's Field	Easting:	705901.190	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737774.784	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	63.25	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



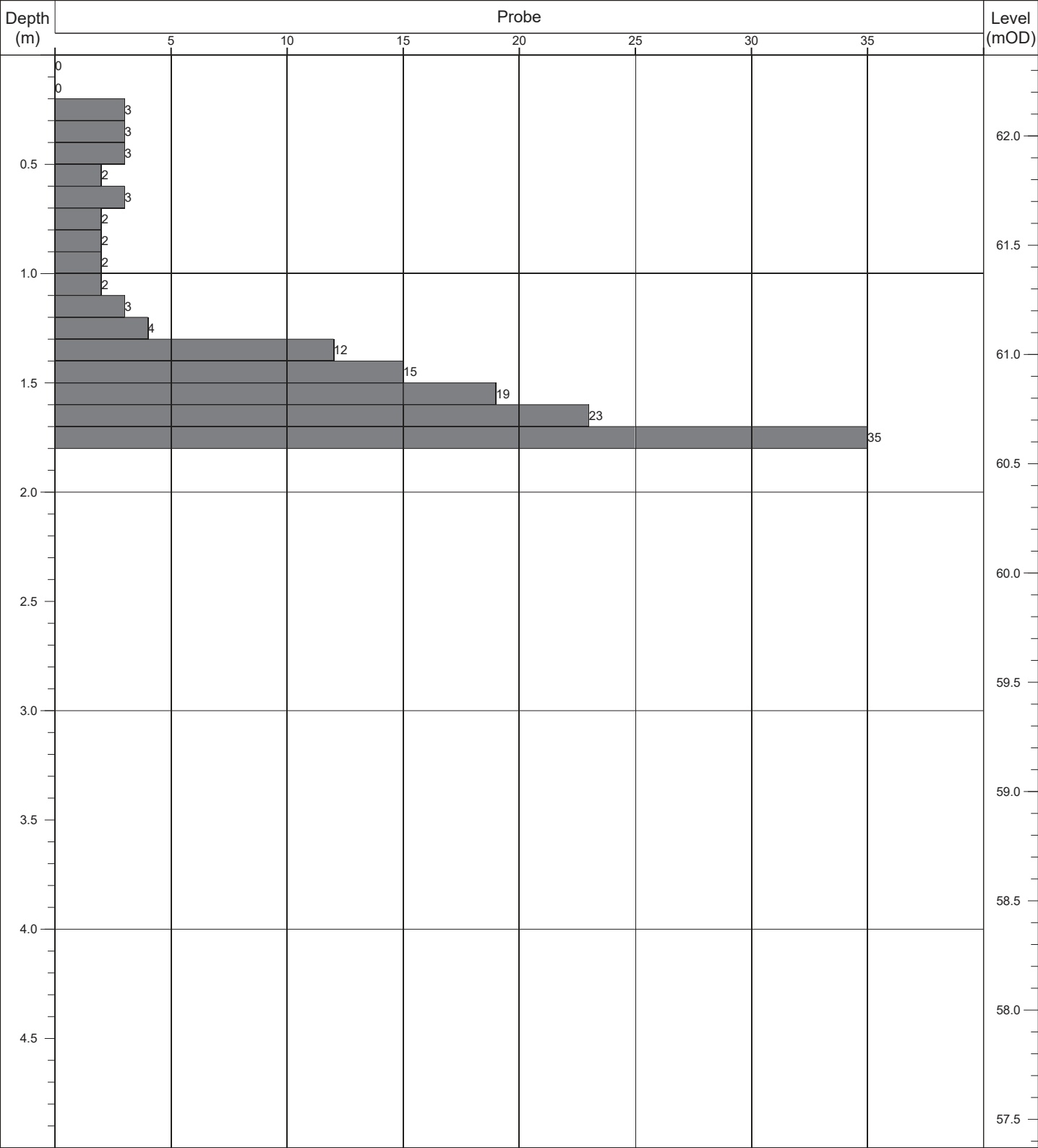
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.20m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP05
Contract:	Molloy's Field	Easting:	705940.018	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737684.067	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	61.87	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.90m		DPH	50kg	500mm	

Contract No: 6438	Dynamic Probe Log				Probe No: DP06
Contract:	Molloy's Field	Easting:	705974.198	Date Started:	05/02/2025
Location:	Luttrellstown, Dublin 15	Northing:	737738.847	Logged By:	D. McEoin
Client:	Castlethorn Construction	Elevation:	62.37	Scale:	1:25
Engineer:	Barrett Mahony	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.80m		DPH	50kg	500mm	

Appendix 3
Insitu California Bearing Ratio Test Results

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California Bearing Ratio (CBR) In accordance with BS1377: Part 4: Method 7

Client	Castlethorn Construction Ltd.
Site	Molloy's Field, Luttrellstown
S.I. File No	6438 / 25
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email info@siteinvestigations.ie
Report Date	20th February 2025

CBR No	Depth (mBGL)	Sample No	Sample Type	Lab Ref	Moisture Content (%)	CBR Value (%)	Location / Remarks
CBR01	0.50	DM30	CBR	25/302	10.7	5.7	
CBR02	0.50	DM31	CBR	25/303	10.7	5.5	
CBR03	0.50	DM32	CBR	25/304	13.9	6.4	
CBR04	0.50	DM33	CBR	25/305	12.9	5.8	
CBR05	0.50	DM34	CBR	25/306	10.0	6.1	
CBR06	0.50	DM35	CBR	25/307	10.9	4.4	
CBR07	0.50	DM36	CBR	25/308	14.2	6.2	
CBR08	0.50	DM37	CBR	25/309	13.9	6.0	

Appendix 4

Geotechnical Laboratory Test Results

DRAFT

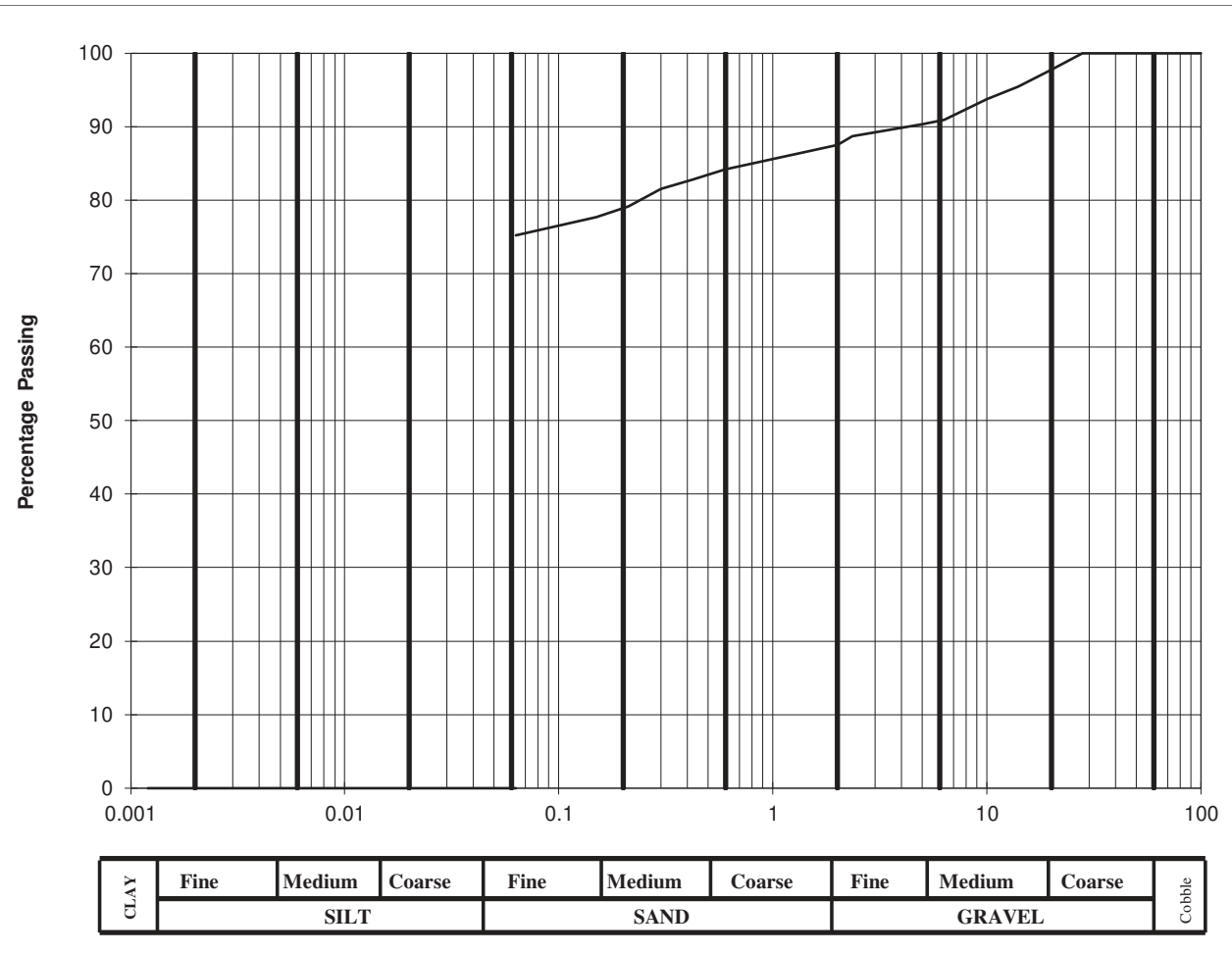
Classification Tests
In accordance with BS 1377: Part 2

Client	Castlethorn Construction Ltd.
Site	Molloy's Field, Luttrellstown
S.I. File No	6438 / 25
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email:info@siteinvestigations.ie
Report Date	20th February 2025

Hole ID	Depth	Sample No	Lab Ref No.	Sample Type	Natural Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %	Bulk Density g/cm ³	Specific gravity	% passing 425um	Comments	Remarks C=Clay; M=Silt Plasticity: L=Low; I=Intermediate; H=High; V=Very High; E=Extremely High
TP01	1.00	DM02	B	25/274	19.2	42	22	20			82.8		CI
TP04	1.00	DM12	B	25/277	23.8	30	20	10			47.1		CL
TP06	1.00	DM19	B	25/279	10.8	29	19	10			28.1		CL

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	100		
20	97.7		
14	95.4		
10	93.7		
6.3	90.9		
5.0	90.3		
2.36	88.7		
2.00	87.5		
1.18	86		
0.600	84.2		
0.425	82.8		
0.300	81.5		
0.212	79.1		
0.150	77.7		
0.063	75		

Cobbles, %	0
Gravel, %	13
Sand, %	13
Clay / Silt, %	75



Client :	Castlethorn Construction Ltd.
Project :	Molloy's Field, Luttrellstown

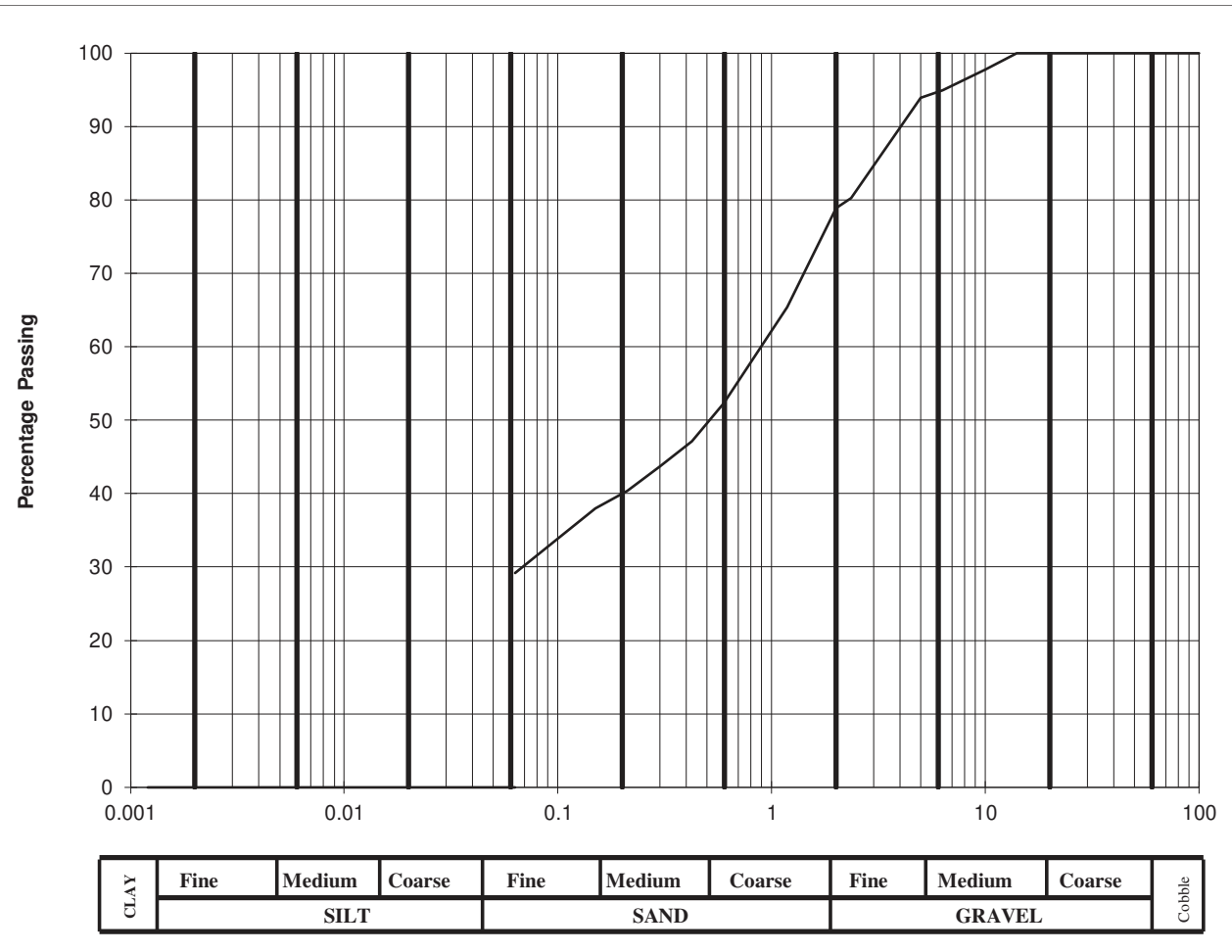
Lab. No :	25/274
Sample No :	DM02

Hole ID :	TP 01
Depth, m :	1.00

Material description :	slightly sandy slightly gravelly silty CLAY
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	97.7		
6.3	94.9		
5.0	93.9		
2.36	80.2		
2.00	78.9		
1.18	65.4		
0.600	52.3		
0.425	47.1		
0.300	43.7		
0.212	40.4		
0.150	38		
0.063	29		

Cobbles, %	0
Gravel, %	21
Sand, %	50
Clay / Silt, %	29



Client :	Castlethorn Construction Ltd.
Project :	Molloy's Field, Luttrellstown

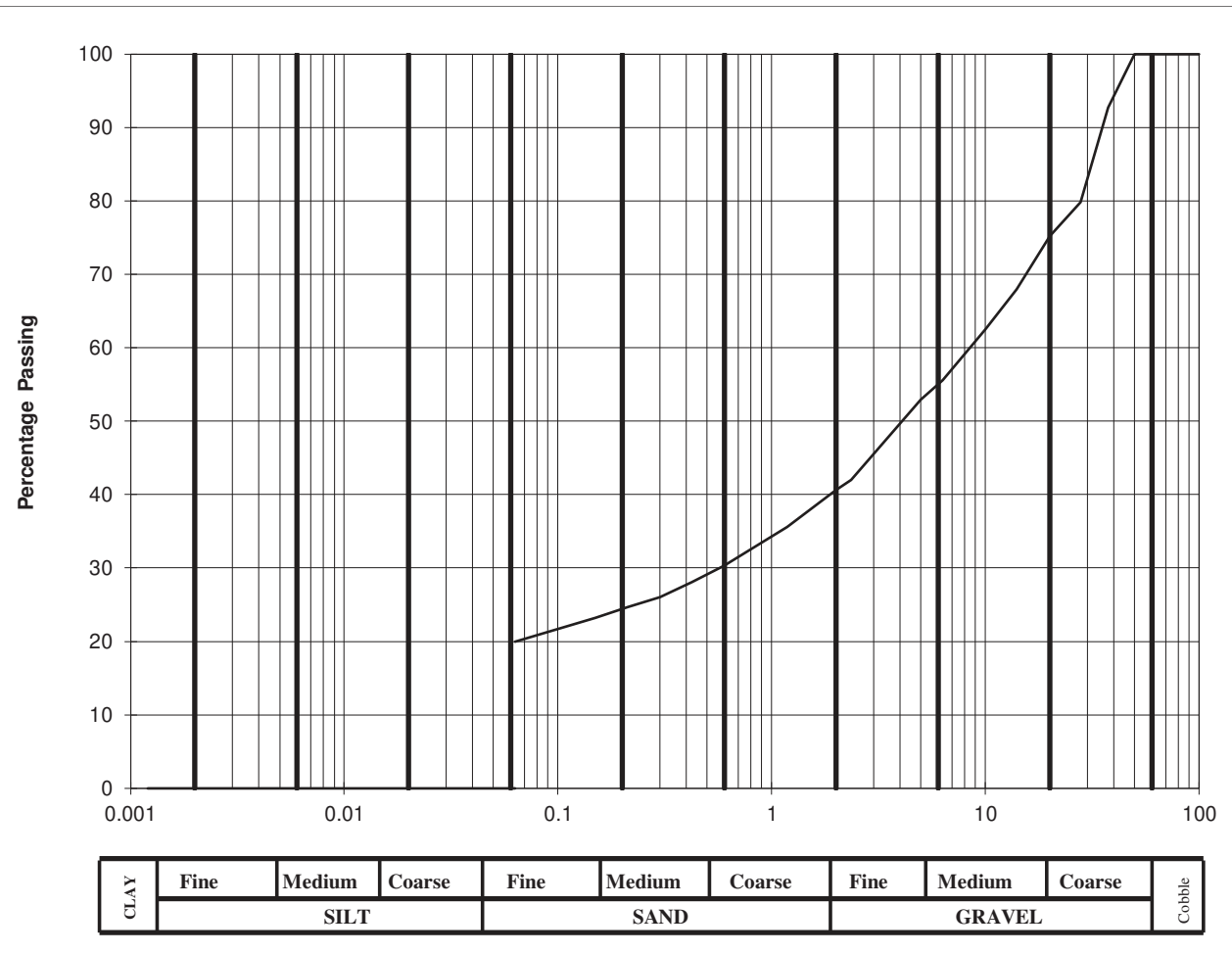
Lab. No :	25/276
Sample No :	DM11

Hole ID :	TP 04
Depth, m :	1.00

Material description :	sandy slightly gravelly silty CLAY
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

BS Sieve size, mm	Percent passing	Hydrometer analysis	
		Diameter, mm	% passing
100	100	0.0630	
90	100	0.0200	
75	100	0.0060	
63	100	0.0020	
50	100		
37.5	92.7		
28	79.8		
20	75.2		
14	67.9		
10	62.5		
6.3	55.6		
5.0	52.9		
2.36	42		
2.00	40.6		
1.18	35.6		
0.600	30.3		
0.425	28.1		
0.300	26		
0.212	24.7		
0.150	23.2		
0.063	20		

Cobbles, %	0
Gravel, %	59
Sand, %	21
Clay / Silt, %	20



Client :	Castlethorn Construction Ltd.
Project :	Molloy's Field, Luttrellstown

Lab. No :	25/279
Sample No :	DM19

Hole ID :	TP 06
Depth, m :	1.00

Material description :	slightly sandy gravelly silty CLAY
Remarks :	Soils with clay or silt content between 15% - 35% can be classified as clay or silt depending on the field Engineers assessment of in-situ behaviour. Where material is for re-use and therefore disturbed, only soils with clay or silt >35% are classified as clay or silt

California Bearing Ratio (CBR) In accordance with BS1377: Part 4: Method 7

Client	Castlethorn Construction Ltd.
Site	Molloy's Field, Luttrellstown
S.I. File No	6438 / 25
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email info@siteinvestigations.ie
Report Date	20th February 2025

CBR No	Depth (mBGL)	Sample No	Sample Type	Lab Ref	Moisture Content (%)	CBR Value (%)	Location / Remarks
TP01	1.00	DM02	B	25/274	19.2	3.4	Remoulded disturbed sample
TP02	1.00	DM06	B	25/275	18.4	3.7	Remoulded disturbed sample
TP03	1.00	DM11	B	25/276	17.6	3.5	Remoulded disturbed sample
TP04	1.00	DM12	B	25/277	23.8	4.8	Remoulded disturbed sample
TP05	1.00	DM15	B	25/278	15.4	5.2	Remoulded disturbed sample
TP06	1.00	DM19	B	25/279	10.8	9.3	Remoulded disturbed sample
TP07	1.50	DM23	B	25/280	12.2	8.5	Remoulded disturbed sample

Chemical Testing
In accordance with BS 1377: Part 3

Client	Castlethorn Construction Ltd.
Site	Molloy's Field, Luttrellstown
S.I. File No	6438 / 25
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email:info@siteinvestigations.ie
Report Date	20th February 2025

Hole Id	Depth (mBGL)	Sample No	Lab Ref	pH Value	Water Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) g/L	Water Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) %	Acid Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) g/L	Acid Soluble Sulphate Content (2:1 Water-soil extract) (SO ₃) %	Chloride ion Content (water:soil ratio 2:1) %	% passing 2mm
TP01	1.00	DM02	25/274	8.01	0.119	0.104				87.5
TP02	1.00	DM06	25/275	7.55	0.130	0.107				82.3
TP03	1.00	DM11	25/276	7.51	0.124	0.088				70.7
TP04	1.00	DM12	25/277	8.46	0.123	0.097				78.9
TP05	1.00	DM15	25/278	8.19	0.120	0.095				79.4
TP06	1.00	DM19	25/279	7.68	0.122	0.049				40.6
TP07	1.00	DM23	25/280	7.98	0.122	0.054				44.3
TP07	1.50	DM24	25/281	7.69	0.124	0.092				74.2

Appendix 5

Environmental Laboratory Test Results

DRAFT



Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US

Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Site Investigations Ltd
The Grange
Carhugar
12th Lock Road
Lucan
Co. Dublin

Attention: Stephen Letch

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 February 2025
Customer:	Site Investigations Ltd
Sample Delivery Group (SDG):	250212-98
Your Reference:	6438
Location:	Molloys Field, Luttresltown
Report No:	756750
Order Number:	04/B/25

We received 13 samples on Wednesday February 12, 2025 and 13 of these samples were scheduled for analysis which was completed on Wednesday February 19, 2025. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Justin Keeton
Business Unit Leader - Land





CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttresltown

Superseded Report:

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
31064057	TP 01		0.50 - 0.50	10/02/2025
31064064	TP 01		1.50 - 1.50	10/02/2025
31064058	TP 02		0.50 - 0.50	10/02/2025
31064065	TP 02		1.50 - 1.50	10/02/2025
31064059	TP 03		0.50 - 0.50	10/02/2025
31064060	TP 04		0.50 - 0.50	10/02/2025
31064066	TP 04		1.50 - 1.50	10/02/2025
31064061	TP 05		0.50 - 0.50	10/02/2025
31064067	TP 05		1.50 - 1.50	10/02/2025
31064062	TP 06		0.50 - 0.50	10/02/2025
31064068	TP 06		1.50 - 1.50	10/02/2025
31064063	TP 07		0.50 - 0.50	10/02/2025
31064069	TP 07		1.50 - 1.50	10/02/2025

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750

Superseded Report:

Location: Molloy's Field, Luttreslown

Results Legend

X Test
N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type	
	31064066	TP 04		1.50 - 1.50	1 kg TUB with Handle (ALE260)	S						
	31064060	TP 04		0.50 - 0.50	60g VOC (ALE215)	S						
	31064059	TP 03		0.50 - 0.50	250g Amber Jar (ALE210)	S						
	31064058	TP 02		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
	31064065	TP 02		1.50 - 1.50	60g VOC (ALE215)	S						
	31064064	TP 01		1.50 - 1.50	250g Amber Jar (ALE210)	S						
	31064057	TP 01		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
Anions by Kone (w)	All	NDPs: 0 Tests: 13										
CEN Readings	All	NDPs: 0 Tests: 13										
Chromium III	All	NDPs: 0 Tests: 13										
Coronene	All	NDPs: 0 Tests: 13										
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 13										
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 13										
EPH by GCxGC-FID	All	NDPs: 0 Tests: 13										
EPH CWG GC (S)	All	NDPs: 0 Tests: 13										
Fluoride	All	NDPs: 0 Tests: 13										
GRO by GC-FID (S)	All	NDPs: 0 Tests: 13										
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 13										
Loss on Ignition in soils	All	NDPs: 0 Tests: 13										
Mercury Dissolved	All	NDPs: 0 Tests: 13										
Metals in solid samples by OES	All	NDPs: 0 Tests: 13										
PAH 16 & 17 Calc	All	NDPs: 0 Tests: 13										



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttreslown

Superseded Report:

Results Legend

- X** Test
- N** No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend X Test N No Determination Possible Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type
	31064066		TP 04			1.50 - 1.50		1kg TUB with Handle (ALE260)		S	
	31064060		TP 04			0.50 - 0.50		250g Amber Jar (ALE215)		S	
	31064059		TP 03			0.50 - 0.50		1kg TUB with Handle (ALE260)		S	
	31064065		TP 02			1.50 - 1.50		250g Amber Jar (ALE210)		S	
	31064058		TP 02			0.50 - 0.50		1kg TUB with Handle (ALE260)		S	
	31064064		TP 01			1.50 - 1.50		250g Amber Jar (ALE210)		S	
31064057		TP 01			0.50 - 0.50		250g Amber Jar (ALE210)		S		
							60g VOC (ALE215)		S		
							1kg TUB with Handle (ALE260)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
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							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
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							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
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							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
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							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
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							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
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							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (ALE215)		S		
							250g Amber Jar (ALE210)		S		
							1kg TUB with Handle (ALE260)		S		
							60g VOC (				

31064069	TP 07		1.50 - 1.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	
				1kg TUB with Handle (ALE260)	S					X		X						
31064063	TP 07		0.50 - 0.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X	X		X		X		X		
31064068	TP 06		1.50 - 1.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	
				1kg TUB with Handle (ALE260)	S					X		X						
31064062	TP 06		0.50 - 0.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	
				1kg TUB with Handle (ALE260)	S					X		X						
31064067	TP 05		1.50 - 1.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	
				1kg TUB with Handle (ALE260)	S					X		X						
31064061	TP 05		0.50 - 0.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	
				1kg TUB with Handle (ALE260)	S					X		X						
31064066	TP 04		1.50 - 1.50	60g VOC (ALE215)	S													X
				250g Amber Jar (ALE210)	S	X		X	X				X		X		X	



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
31064057	TP 01	0.50 - 0.50	Dark Brown	Silt Loam	Stones	Vegetation
31064064	TP 01	1.50 - 1.50	Dark Brown	Sandy Silt Loam	Stones	Vegetation
31064058	TP 02	0.50 - 0.50	Light Brown	Silt Loam	Stones	Vegetation
31064065	TP 02	1.50 - 1.50	Light Brown	Clay Loam	Stones	Vegetation
31064059	TP 03	0.50 - 0.50	Light Brown	Sandy Loam	Stones	Vegetation
31064060	TP 04	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Vegetation
31064066	TP 04	1.50 - 1.50	Light Brown	Clay Loam	Stones	Vegetation
31064061	TP 05	0.50 - 0.50	Light Brown	Sandy Loam	Stones	Vegetation
31064067	TP 05	1.50 - 1.50	Light Brown	Sandy Loam	Vegetation	None
31064062	TP 06	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
31064068	TP 06	1.50 - 1.50	Light Brown	Sandy Loam	Stones	Vegetation
31064063	TP 07	0.50 - 0.50	Light Brown	Sandy Loam	Stones	Vegetation
31064069	TP 07	1.50 - 1.50	Dark Brown	Silt Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttreslown

Superseded Report:

Results Legend			Customer Sample Ref.		TP 01	TP 01	TP 02	TP 02	TP 03	TP 04
# ISO17025 accredited.	M mCERTS accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		0.50 - 0.50 Soil/Solid (S) 10/02/2025	1.50 - 1.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025	1.50 - 1.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025
aq Aqueous / settled sample.										
diss.filt Dissolved / filtered sample.										
tot.unfiltTotal / unfiltered sample.										
* Subcontracted - refer to subcontractor report for accreditation status.										
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery					12/02/2025 250212-98 31064057	12/02/2025 250212-98 31064064	12/02/2025 250212-98 31064058	12/02/2025 250212-98 31064065	12/02/2025 250212-98 31064059	12/02/2025 250212-98 31064060
*** 6.2 FTAB (see appendix)										
1-4**@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Moisture Content Ratio (% of as received sample)	%	PM024			22	15	22	13	20	19
Loss on ignition	<0.7 %	TM018			11.1	2.95	4.06	2.58	8.09	5.71
					M	M	M	M	M	M
Organic Carbon, Total	<0.2 %	TM132			3.1	0.601	0.565	0.44	2.28	0.772
					M	M	M	M	M	M
pH	1 pH Units	TM133			8.21	8.52	8.1	8.63	7.16	8.21
					M	M	M	M	M	M
Chromium, Hexavalent	<0.6 mg/kg	TM151			<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
					M	M	M	M	M	M
PCB congener 28	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 52	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 101	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 118	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 138	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 153	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 180	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<21	<21	<21	<21	<21	<21
Chromium, Trivalent	<0.9 mg/kg	TM181			17.2	12.3	17.4	6.03	13	12.3
Antimony	<0.6 mg/kg	TM181			1.25	1.18	0.684	1.86	0.927	1.43
					#	#	#	#	#	#
Arsenic	<0.6 mg/kg	TM181			23.2	14.1	25.9	17.5	28.3	36.9
					M	M	M	M	M	M
Barium	<0.6 mg/kg	TM181			151	62	106	56.8	400	1490
					#	#	#	#	#	#
Cadmium	<0.02 mg/kg	TM181			1.43	0.739	1.63	1.43	2.22	5.72
					M	M	M	M	M	M
Chromium	<0.9 mg/kg	TM181			17.2	12.3	17.4	6.03	13	12.3
					M	M	M	M	M	M
Copper	<1.4 mg/kg	TM181			53.8	29.1	75.1	42.3	39.8	44.8
					M	M	M	M	M	M
Lead	<0.7 mg/kg	TM181			46.5	24	160	50.9	67.8	96.3
					M	M	M	M	M	M
Mercury	<0.1 mg/kg	TM181			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
					M	M	M	M	M	M
Molybdenum	<0.1 mg/kg	TM181			1.92	1.41	1.9	2.38	2.59	3.23
					#	#	#	#	#	#
Nickel	<0.2 mg/kg	TM181			61.6	56.7	142	47.8	66	103
					M	M	M	M	M	M
Selenium	<1 mg/kg	TM181			2.61	1.13	2.35	1.49	4.07	4.44
					#	#	#	#	#	#
Zinc	<1.9 mg/kg	TM181			213	129	268	114	251	829
					M	M	M	M	M	M
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410			<10	<10	<10	<10	<10	<10
Coronene	<200 µg/kg	TM410			<200	<200	<200	<200	<200	<200
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415			8.74	<5	<5	<5	5.57	<5



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttresltown

Superseded Report:

Results Legend			Customer Sample Ref.		TP 04	TP 05	TP 05	TP 06	TP 06	TP 07
# ISO17025 accredited.	M mCERTS accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.50 - 1.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025	1.50 - 1.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025	1.50 - 1.50 Soil/Solid (S) 10/02/2025	0.50 - 0.50 Soil/Solid (S) 10/02/2025
aq Aqueous / settled sample.										
diss.filt Dissolved / filtered sample.										
tot.unfiltTotal / unfiltered sample.										
* Subcontracted - refer to subcontractor report for accreditation status.										
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery					12/02/2025 250212-98 31064066	12/02/2025 250212-98 31064061	12/02/2025 250212-98 31064067	12/02/2025 250212-98 31064062	12/02/2025 250212-98 31064068	12/02/2025 250212-98 31064063
*** 6.2 FTAB (see appendix)										
1-4*§@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Moisture Content Ratio (% of as received sample)	%	PM024			20	18	17	22	14	15
Loss on ignition	<0.7 %	TM018			5.78	5.14	3.98	9.01	3.03	4.68
					M	M	M	M	M	M
Organic Carbon, Total	<0.2 %	TM132			0.893	0.554	0.527	2.93	0.689	1.3
					M	M	M	M	M	M
pH	1 pH Units	TM133			7.66	7.9	8.4	7.53	8.47	8.39
					M	M	M	M	M	M
Chromium, Hexavalent	<0.6 mg/kg	TM151			<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
					M	M	M	M	M	M
PCB congener 28	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 52	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 101	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 118	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 138	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 153	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
PCB congener 180	<3 µg/kg	TM168			<3	<3	<3	<3	<3	<3
					M	M	M	M	M	M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<21	<21	<21	<21	<21	<21
Chromium, Trivalent	<0.9 mg/kg	TM181			13.9	13.9	9.35	11.1	4.22	5.65
Antimony	<0.6 mg/kg	TM181			1.04	0.77	1.17	1.3	1.26	1.53
					#	#	#	#	#	#
Arsenic	<0.6 mg/kg	TM181			28.8	26.9	19.1	24.5	11.6	15.2
					M	M	M	M	M	M
Barium	<0.6 mg/kg	TM181			895	494	338	175	76.2	62.1
					#	#	#	#	#	#
Cadmium	<0.02 mg/kg	TM181			4.06	2.75	1.4	1.64	1.26	0.869
					M	M	M	M	M	M
Chromium	<0.9 mg/kg	TM181			13.9	13.9	9.35	11.1	4.22	5.65
					M	M	M	M	M	M
Copper	<1.4 mg/kg	TM181			36	42.2	32.1	69.4	23.1	25.2
					M	M	M	M	M	M
Lead	<0.7 mg/kg	TM181			83.5	42.3	30.2	63	16.5	21.2
					M	M	M	M	M	M
Mercury	<0.1 mg/kg	TM181			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
					M	M	M	M	M	M
Molybdenum	<0.1 mg/kg	TM181			2.98	2.65	2.13	2.62	1.93	1.36
					#	#	#	#	#	#
Nickel	<0.2 mg/kg	TM181			72.9	87.7	53.8	63.3	34.9	42.9
					M	M	M	M	M	M
Selenium	<1 mg/kg	TM181			3.59	1.67	2.94	3.1	2.28	1.51
					#	#	#	#	#	#
Zinc	<1.9 mg/kg	TM181			548	207	175	204	91.3	99.1
					M	M	M	M	M	M
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410			<10	<10	<10	<10	<10	<10
Coronene	<200 µg/kg	TM410			<200	<200	<200	<200	<200	<200
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415			<5	<5	<5	<5	<5	<5



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

Results Legend		Customer Sample Ref.	TP 07				
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery. *** 6.2 FTAB (see appendix) 1-4* \$@ Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.50 - 1.50 Soil/Solid (S) 10/02/2025 12/02/2025 250212-98 31064069				
Component	LOD/Units	Method					
Moisture Content Ratio (% of as received sample)	%	PM024	17				
Loss on ignition	<0.7 %	TM018	5.75	M			
Organic Carbon, Total	<0.2 %	TM132	1.54	M			
pH	1 pH Units	TM133	8.41	M			
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	M			
PCB congener 28	<3 µg/kg	TM168	<3	M			
PCB congener 52	<3 µg/kg	TM168	<3	M			
PCB congener 101	<3 µg/kg	TM168	<3	M			
PCB congener 118	<3 µg/kg	TM168	<3	M			
PCB congener 138	<3 µg/kg	TM168	<3	M			
PCB congener 153	<3 µg/kg	TM168	<3	M			
PCB congener 180	<3 µg/kg	TM168	<3	M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<21				
Chromium, Trivalent	<0.9 mg/kg	TM181	7.58				
Antimony	<0.6 mg/kg	TM181	0.712	#			
Arsenic	<0.6 mg/kg	TM181	19.8	M			
Barium	<0.6 mg/kg	TM181	122	#			
Cadmium	<0.02 mg/kg	TM181	1.53	M			
Chromium	<0.9 mg/kg	TM181	7.58	M			
Copper	<1.4 mg/kg	TM181	35.6	M			
Lead	<0.7 mg/kg	TM181	35.5	M			
Mercury	<0.1 mg/kg	TM181	<0.1	M			
Molybdenum	<0.1 mg/kg	TM181	1.55	#			
Nickel	<0.2 mg/kg	TM181	65.4	M			
Selenium	<1 mg/kg	TM181	2.67	#			
Zinc	<1.9 mg/kg	TM181	136	M			
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410	<10				
Coronene	<200 µg/kg	TM410	<200				
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415	<5				



Superseded Report:

Location: Molloy's Field, Luttrellstown

1.50 - 1.50
Soil/Solid (S)
10/02/2025
.
12/02/2025
250212-98
31064069



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttreslown

Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample Ref.	TP 01	TP 01	TP 02	TP 02	TP 03	TP 04
#	ISO17025 accredited.								
M	mCERTS accredited.								
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfiltTotal	/ unfiltered sample.								
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
*** 6.2 FTAB (see appendix)									
1-4\$@Sample deviation (see appendix)									
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	82	88.2	92.1	97.8	92.8	94.1	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	7780	1320	<1000	<1000	4720	1100	
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	8520	<5000	<5000	<5000	<5000	<5000	
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	21100	<10000	<10000	<10000	<10000	<10000	
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1660	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	9420	<1000	<1000	<1000	3230	<1000	
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1440	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	12600	<5000	<5000	<5000	<5000	<5000	
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	21100	<10000	<10000	<10000	<10000	<10000	
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	<50	<50	<50	<50	<50	<50	
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50	<50	<50	<50	<50	<50	
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttreslown

Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample Ref.	TP 04	TP 05	TP 05	TP 06	TP 06	TP 07
#	ISO17025 accredited.	M							
aq	Aqueous / settled sample.								
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery.									
*** 6.2 FTAB (see appendix)									
1-4**@Sample deviation (see appendix)									
Customer Sample Ref.			Depth (m)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089							
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089							
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089							
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089							
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414							
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414							
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414							
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414							
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414							
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414							
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414							
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089							
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089							
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089							
Aromatics >EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Aromatics >EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Aromatics >EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Aromatics >EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Aromatics >EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414							
Total Aromatics >EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414							
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414							
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089							
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089							
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089							
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089							
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089							
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089							
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089							
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089							



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

TPH CWG (S)

Results Legend		Customer Sample Ref.	TP 07				
# ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.50 - 1.50				
M mCERTS accredited.			Soil/Solid (S)				
aq Aqueous / settled sample.			10/02/2025				
diss.filt Dissolved / filtered sample.			12/02/2025				
tot.unfiltTotal / unfiltered sample.			250212-98				
* Subcontracted - refer to subcontractor report for accreditation status.			31064069				
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery							
*** 6.2 FTAB (see appendix)							
1-4* Sample deviation (see appendix)							
Component	LOD/Units	Method					
GRO Surrogate % recovery**	%	TM089	92.5				
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	<10				
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	<10				
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	<10				
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	#			
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	#			
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	#			
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	4260	#			
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000				
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000				
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	<10000				
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10				
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10				
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	<10				
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	#			
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	#			
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	#			
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	2310	#			
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000				
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000				
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000				
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	<10000				
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089	<20				
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089	<20				
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089	<20				
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089	<20				
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089	<20				
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	<50				
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50				
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	<20				



Location: Molloy's Field, Luttrellstown



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.118

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Molloy's Field, Luttrellstown

Natural Moisture Content (%) 36

Dry Matter Content (%) 73.5

Case

SDG 250212-98

Lab Sample Number(s) 31064057

Sampled Date 10-Feb-2025

Customer Sample Ref. TP 01

Depth (m) 0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%)	3.1
Loss on Ignition (%)	11.1
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	8.74
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.21
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis

C₂ Concⁿ in 10:1 eluate (mg/l)A₂ 10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00903	<0.0002	0.0903	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00484	<0.0003	0.0484	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00167	<0.0004	0.0167	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0223	<0.001	0.223	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.685	<0.5	6.85	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	124	<10	1240	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	8.47	<3	84.7	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.35
Conductivity (µS/cm)	159
Volume Leachant (Litres)	0.868

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/02/2025 14:59:08

14:58:59 19/02/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.121
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	29.1
Dry Matter Content (%)	77.5

Case	
SDG	250212-98
Lab Sample Number(s)	31064058
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 02
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.565
Loss on Ignition (%)	4.06
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.1
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00476	<0.0002	0.0476	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00277	<0.0003	0.0277	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00143	<0.0004	0.0143	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0218	<0.001	0.218	<0.01	4	50	200
Chloride	2.5	<2	25	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	67.3	<10	673	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	7.61	<3	76.1	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	7.92
Conductivity (µS/cm)	88
Volume Leachant (Litres)	0.873

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/02/2025 14:59:08

14:58:59 19/02/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg)	0.114
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location

Molloy's Field, Luttrellstown

Natural Moisture Content (%)	24.7
Dry Matter Content (%)	80.2

Case

SDG	250212-98
Lab Sample Number(s)	31064059
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 03
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%)	2.28
Loss on Ignition (%)	8.09
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	5.57
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.16
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis

C₂ Concⁿ in 10:1 eluate (mg/l)A₂ 10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00953	<0.0002	0.0953	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00169	<0.0003	0.0169	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000499	<0.0004	0.00499	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00633	<0.001	0.0633	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	48	<10	480	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.39	<3	43.9	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	7.96
Conductivity (µS/cm)	63
Volume Leachant (Litres)	0.878

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloys Field, Luttrestown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.113

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Molloys Field, Luttrestown

Natural Moisture Content (%) 25.9

Dry Matter Content (%) 79.5

Case

SDG 250212-98

Lab Sample Number(s) 31064060

Sampled Date 10-Feb-2025

Customer Sample Ref. TP 04

Depth (m) 0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%) 0.772

Loss on Ignition (%) 5.71

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) <5

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 8.21

ANC to pH 6 (mol/kg) -

ANC to pH 4 (mol/kg) -

Eluate Analysis

C₂ Concⁿ in 10:1 eluate (mg/l)A₂ 10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0586	<0.0002	0.586	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00103	<0.0003	0.0103	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000681	<0.0004	0.00681	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00218	<0.001	0.0218	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	6.8	<2	68	<20	1000	20000	50000
Total Dissolved Solids	68.7	<10	687	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.11	<3	41.1	<30	500	800	1000

Leach Test Information

Date Prepared 13-Feb-2025
pH (pH Units) 8.17
Conductivity (µS/cm) 88
Volume Leachant (Litres) 0.876

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.110
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	25.3
Dry Matter Content (%)	79.8

Case	
SDG	250212-98
Lab Sample Number(s)	31064061
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 05
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.554
Loss on Ignition (%)	5.14
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.9
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00958	<0.0002	0.0958	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00201	<0.0003	0.0201	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00105	<0.0004	0.0105	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00356	<0.001	0.0356	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	31.6	<10	316	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	5.97	<3	59.7	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	7.67
Conductivity (µS/cm)	41
Volume Leachant (Litres)	0.878

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.115
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	30.5
Dry Matter Content (%)	76.6

Case	
SDG	250212-98
Lab Sample Number(s)	31064062
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 06
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	2.93
Loss on Ignition (%)	9.01
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.53
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00798	<0.0002	0.0798	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00294	<0.0003	0.0294	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.00315	<0.003	0.0315	<0.03	0.5	10	30
Nickel	0.00065	<0.0004	0.0065	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0201	<0.001	0.201	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.601	<0.5	6.01	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	112	<10	1120	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.44	<3	44.4	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.23
Conductivity (µS/cm)	144
Volume Leachant (Litres)	0.873

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.102
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	18.2
Dry Matter Content (%)	84.6

Case	
SDG	250212-98
Lab Sample Number(s)	31064063
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 07
Depth (m)	0.50 - 0.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	1.3
Loss on Ignition (%)	4.68
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.39
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00594	<0.0002	0.0594	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00218	<0.0003	0.0218	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	0.000416	<0.0002	0.00416	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00534	<0.001	0.0534	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.802	<0.5	8.02	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	82	<10	820	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	12-Feb-2025
pH (pH Units)	8.36
Conductivity (µS/cm)	104
Volume Leachant (Litres)	0.884

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloys Field, Luttrestown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.106
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrestown
Natural Moisture Content (%)	15.9
Dry Matter Content (%)	86.3

Case	
SDG	250212-98
Lab Sample Number(s)	31064064
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 01
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.601
Loss on Ignition (%)	2.95
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.52
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00718	<0.0002	0.0718	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00129	<0.0003	0.0129	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000749	<0.0004	0.00749	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	0.00328	<0.001	0.0328	<0.01	0.1	0.5	7
Zinc	0.00524	<0.001	0.0524	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	85.2	<10	852	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.74	<3	37.4	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.43
Conductivity (µS/cm)	109
Volume Leachant (Litres)	0.885

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.097
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	11.9
Dry Matter Content (%)	89.4

Case	
SDG	250212-98
Lab Sample Number(s)	31064065
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 02
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.44
Loss on Ignition (%)	2.58
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.63
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00369	<0.0002	0.0369	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00086	<0.0003	0.0086	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000536	<0.0004	0.00536	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00104	<0.001	0.0104	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	69.5	<10	695	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.87	<3	38.7	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.54
Conductivity (µS/cm)	87
Volume Leachant (Litres)	0.889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

19/02/2025 14:59:08

14:58:59 19/02/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.111
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	27.6
Dry Matter Content (%)	78.4

Case	
SDG	250212-98
Lab Sample Number(s)	31064066
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 04
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.893
Loss on Ignition (%)	5.78
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.66
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0629	<0.0002	0.629	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.001	<0.0003	0.01	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000684	<0.0004	0.00684	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00567	<0.001	0.0567	<0.01	4	50	200
Chloride	3	<2	30	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	35.6	<10	356	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	5.54	<3	55.4	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	7.82
Conductivity (µS/cm)	46
Volume Leachant (Litres)	0.875

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.114
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	23.5
Dry Matter Content (%)	81

Case	
SDG	250212-98
Lab Sample Number(s)	31064067
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 05
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.527
Loss on Ignition (%)	3.98
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.4
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0175	<0.0002	0.175	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.000922	<0.0003	0.00922	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000536	<0.0004	0.00536	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00167	<0.001	0.0167	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	82.8	<10	828	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.09	<3	30.9	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.53
Conductivity (µS/cm)	105
Volume Leachant (Litres)	0.879

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.105
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	19.2
Dry Matter Content (%)	83.9

Case	
SDG	250212-98
Lab Sample Number(s)	31064068
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 06
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.689
Loss on Ignition (%)	3.03
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.47
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0072	<0.0002	0.072	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00484	<0.0003	0.0484	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00118	<0.0004	0.0118	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00305	<0.001	0.0305	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	112	<10	1120	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.76	<3	47.6	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.45
Conductivity (µS/cm)	144
Volume Leachant (Litres)	0.883

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.108
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloy's Field, Luttrellstown
Natural Moisture Content (%)	23.9
Dry Matter Content (%)	80.7

Case	
SDG	250212-98
Lab Sample Number(s)	31064069
Sampled Date	10-Feb-2025
Customer Sample Ref.	TP 07
Depth (m)	1.50 - 1.50

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	1.54
Loss on Ignition (%)	5.75
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.41
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00626	<0.0002	0.0626	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00167	<0.0003	0.0167	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000675	<0.0004	0.00675	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00137	<0.001	0.0137	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.828	<0.5	8.28	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	95.5	<10	955	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.93	<3	39.3	<30	500	800	1000

Leach Test Information

Date Prepared	13-Feb-2025
pH (pH Units)	8.50
Conductivity (µS/cm)	122
Volume Leachant (Litres)	0.879

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

Table of Results - Appendix

Method No	Description
TM152	Analysis of Aqueous Samples by ICP-MS
TM168	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM218	The determination of PAH in soil samples by GC-MS
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM415	Determination of Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM104	Determination of Fluoride using the Kone Analyser
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM151	Determination of Hexavalent Chromium using Kone analyser
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
PM024	Soil preparation including homogenisation, moisture, screens of soils for Asbestos Containing Material
PM115	Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM018	Determination of Loss on Ignition
TM090	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM410	Determination of Coronene in soils by GCMS

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



CERTIFICATE OF ANALYSIS

Validated

SDG: 250212-98
Client Ref.: 6438

Report Number: 756750
Location: Molloy's Field, Luttrestown

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	31064057	31064064	31064058	31064065	31064059	31064060	31064066	31064061	31064067	31064062
	TP 01	TP 01	TP 02	TP 02	TP 03	TP 04	TP 04	TP 05	TP 05	TP 06
	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50
AGS Ref.										
Depth										
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (w)	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
CEN 10:1 Leachate (1 Stage)	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025
CEN Readings	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
Chromium III	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025
Coronene	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Dissolved Metals by ICP-MS	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Dissolved Organic/Inorganic Carbon	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025	15-Feb-2025
EPH by GCxGC-FID	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
EPH CWG GC (S)	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	18-Feb-2025	18-Feb-2025	14-Feb-2025
Fluoride	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
GRO by GC-FID (S)	13-Feb-2025	14-Feb-2025	13-Feb-2025	14-Feb-2025	14-Feb-2025	13-Feb-2025	13-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Hexavalent Chromium (s)	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025
Loss on Ignition in soils	14-Feb-2025	17-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
Mercury Dissolved	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Metals in solid samples by OES	17-Feb-2025	17-Feb-2025	14-Feb-2025	14-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Moisture at 105C	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025
PAH 16 & 17 Calc	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
PAH by GCMS	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
PCBs by GCMS	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
pH	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025
pH Value of Filtered Water	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
Phenols by HPLC (W)	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025
Sample description	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	12-Feb-2025	13-Feb-2025	13-Feb-2025	13-Feb-2025
Total Organic Carbon	14-Feb-2025	14-Feb-2025	17-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025	17-Feb-2025
TPH CWG GC (S)	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	14-Feb-2025	18-Feb-2025	18-Feb-2025	18-Feb-2025
VOC MS (S)	18-Feb-2025	17-Feb-2025	19-Feb-2025	18-Feb-2025	18-Feb-2025	19-Feb-2025	19-Feb-2025	19-Feb-2025	18-Feb-2025	18-Feb-2025

Lab Sample No(s) Customer Sample Ref.	31064068	31064063	31064069
	TP 06	TP 07	TP 07
	1.50 - 1.50	0.50 - 0.50	1.50 - 1.50
AGS Ref.			
Depth			
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (w)	18-Feb-2025	14-Feb-2025	18-Feb-2025
CEN 10:1 Leachate (1 Stage)	13-Feb-2025	13-Feb-2025	13-Feb-2025
CEN Readings	17-Feb-2025	17-Feb-2025	17-Feb-2025
Chromium III	19-Feb-2025	19-Feb-2025	19-Feb-2025
Coronene	18-Feb-2025	18-Feb-2025	18-Feb-2025
Dissolved Metals by ICP-MS	18-Feb-2025	17-Feb-2025	18-Feb-2025
Dissolved Organic/Inorganic Carbon	15-Feb-2025	15-Feb-2025	15-Feb-2025
EPH by GCxGC-FID	14-Feb-2025	17-Feb-2025	14-Feb-2025
EPH CWG GC (S)	14-Feb-2025	18-Feb-2025	14-Feb-2025
Fluoride	17-Feb-2025	17-Feb-2025	17-Feb-2025
GRO by GC-FID (S)	13-Feb-2025	18-Feb-2025	14-Feb-2025
Hexavalent Chromium (s)	19-Feb-2025	19-Feb-2025	19-Feb-2025
Loss on Ignition in soils	14-Feb-2025	17-Feb-2025	17-Feb-2025
Mercury Dissolved	18-Feb-2025	18-Feb-2025	18-Feb-2025
Metals in solid samples by OES	17-Feb-2025	18-Feb-2025	14-Feb-2025
Moisture at 105C	13-Feb-2025	12-Feb-2025	13-Feb-2025
PAH 16 & 17 Calc	18-Feb-2025	18-Feb-2025	18-Feb-2025
PAH by GCMS	17-Feb-2025	17-Feb-2025	17-Feb-2025
PCBs by GCMS	17-Feb-2025	17-Feb-2025	17-Feb-2025
pH	13-Feb-2025	13-Feb-2025	13-Feb-2025
pH Value of Filtered Water	18-Feb-2025	18-Feb-2025	18-Feb-2025
Phenols by HPLC (W)	19-Feb-2025	15-Feb-2025	19-Feb-2025
Sample description	12-Feb-2025	13-Feb-2025	12-Feb-2025
Total Organic Carbon	17-Feb-2025	17-Feb-2025	14-Feb-2025
TPH CWG GC (S)	14-Feb-2025	18-Feb-2025	14-Feb-2025
VOC MS (S)	19-Feb-2025	18-Feb-2025	18-Feb-2025



CERTIFICATE OF ANALYSIS

SDG: 250212-98
Client Ref: 6438

Report Number: 756750
Location: Molloy's Field, Luttrellstown

Superseded Report:

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur - e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

If during the search of the two 'pinch' samples by PLM only 1 or 2 fibres or fibre bundles are seen and identified as asbestos, the term 'trace asbestos identified' is reported.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung. Potentially respirable fibres are identified by using a Phase Contrast Microscope.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

21. 6:2 FTAB

Recovery of 6:2 FTAB in the quality control samples has been observed to be <50% of the target value. Please note the 6:2 FTAB result is supplied as indicative only.



Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US

Tel: (01244) 528777
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Site Investigations Ltd
The Grange
Carhugar
12th Lock Road
Lucan
Co. Dublin

Attention: Stephen Letch

CERTIFICATE OF ANALYSIS

Date of report Generation: 03 March 2025
Customer: Site Investigations Ltd
Sample Delivery Group (SDG): 250219-103
Your Reference: 6438
Location: Molloys Field, Luttrellstown
Report No: 757813
Order Number: 06/B/25

This report has been revised and directly supersedes 756934 in its entirety.

We received 8 samples on Wednesday February 19, 2025 and 8 of these samples were scheduled for analysis which was completed on Monday March 03, 2025. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Justin Keeton
Business Unit Leader - Land





CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
31098774	TP 01		2.00	18/02/2025
31098775	TP 02		2.00	18/02/2025
31098776	TP 04		1.00	18/02/2025
31098777	TP 04		2.00	18/02/2025
31098778	TP 05		2.00	18/02/2025
31098779	TP 06		2.00	18/02/2025
31098780	TP 07		1.00	18/02/2025
31098781	TP 07		2.00	18/02/2025

Only received samples which have had analysis scheduled will be shown on the following pages.



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Results Legend

X Test
N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend X Test N No Determination Possible Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	Lab Sample No(s)		Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
	31098780		TP 07		1.00	250g Amber Jar (ALE210)	S
	31098779		TP 06		2.00	1kg TUB with Handle (ALE260)	S
	31098778		TP 05		2.00	250g Amber Jar (ALE215)	S
	31098777		TP 04		2.00	250g Amber Jar (ALE210)	S
	31098776		TP 04		1.00	1kg TUB with Handle (ALE260)	S
	31098775		TP 02		2.00	250g Amber Jar (ALE215)	S
31098774		TP 01		2.00	1kg TUB with Handle (ALE260)	S	
31098773					250g Amber Jar (ALE215)	S	
31098772					250g Amber Jar (ALE210)	S	
31098771					1kg TUB with Handle (ALE260)	S	
31098770					60g VOC (ALE215)	S	
31098769					250g Amber Jar (ALE210)	S	
31098768					1kg TUB with Handle (ALE260)	S	
31098767					60g VOC (ALE215)	S	
31098766					250g Amber Jar (ALE210)	S	
31098765					1kg TUB with Handle (ALE260)	S	
31098764					60g VOC (ALE215)	S	
31098763					250g Amber Jar (ALE210)	S	
31098762					1kg TUB with Handle (ALE260)	S	
31098761					60g VOC (ALE215)	S	
31098760					250g Amber Jar (ALE210)	S	
31098759					1kg TUB with Handle (ALE260)	S	
31098758					60g VOC (ALE215)	S	
31098757					250g Amber Jar (ALE210)	S	
31098756					1kg TUB with Handle (ALE260)	S	
31098755					60g VOC (ALE215)	S	
31098754					250g Amber Jar (ALE210)	S	
31098753					1kg TUB with Handle (ALE260)	S	
31098752					60g VOC (ALE215)	S	
31098751					250g Amber Jar (ALE210)	S	
31098750					1kg TUB with Handle (ALE260)	S	
31098749					60g VOC (ALE215)	S	
31098748					250g Amber Jar (ALE210)	S	
31098747					1kg TUB with Handle (ALE260)	S	
31098746					60g VOC (ALE215)	S	
31098745					250g Amber Jar (ALE210)	S	
31098744					1kg TUB with Handle (ALE260)	S	
31098743					60g VOC (ALE215)	S	
31098742					250g Amber Jar (ALE210)	S	
31098741					1kg TUB with Handle (ALE260)	S	
31098740					60g VOC (ALE215)	S	
31098739					250g Amber Jar (ALE210)	S	
31098738					1kg TUB with Handle (ALE260)	S	
31098737					60g VOC (ALE215)	S	
31098736					250g Amber Jar (ALE210)	S	
31098735					1kg TUB with Handle (ALE260)	S	
31098734					60g VOC (ALE215)	S	
31098733					250g Amber Jar (ALE210)	S	
31098732					1kg TUB with Handle (ALE260)	S	
31098731					60g VOC (ALE215)	S	
31098730					250g Amber Jar (ALE210)	S	
31098729					1kg TUB with Handle (ALE260)	S	
31098728					60g VOC (ALE215)	S	
31098727					250g Amber Jar (ALE210)	S	
31098726					1kg TUB with Handle (ALE260)	S	
31098725					60g VOC (ALE215)	S	
31098724					250g Amber Jar (ALE210)	S	
31098723					1kg TUB with Handle (ALE260)	S	
31098722					60g VOC (ALE215)	S	
31098721					250g Amber Jar (ALE210)	S	
31098720					1kg TUB with Handle (ALE260)	S	
31098719					60g VOC (ALE215)	S	
31098718					250g Amber Jar (ALE210)	S	
31098717					1kg TUB with Handle (ALE260)	S	
31098716					60g VOC (ALE215)	S	
31098715					250g Amber Jar (ALE210)	S	
31098714					1kg TUB with Handle (ALE260)	S	
31098713					60g VOC (ALE215)	S	
31098712					250g Amber Jar (ALE210)	S	
31098711					1kg TUB with Handle (ALE260)	S	
31098710					60g VOC (ALE215)	S	
31098709					250g Amber Jar (ALE210)	S	
31098708					1kg TUB with Handle (ALE260)	S	
31098707					60g VOC (ALE215)	S	
31098706					250g Amber Jar (ALE210)	S	
31098705					1kg TUB with Handle (ALE260)	S	
31098704					60g VOC (ALE215)	S	
31098703					250g Amber Jar (ALE210)	S	
31098702					1kg TUB with Handle (ALE260)	S	
31098701					60g VOC (ALE215)	S	
31098700					250g Amber Jar (ALE210)	S	
31098699					1kg TUB with Handle (ALE260)	S	
31098698					60g VOC (ALE215)	S	
31098697					250g Amber Jar (ALE210)	S	
31098696					1kg TUB with Handle (ALE260)	S	
31098695					60g VOC (ALE215)	S	
31098694					250g Amber Jar (ALE210)	S	
31098693					1kg TUB with Handle (ALE260)	S	
31098692					60g VOC (ALE215)	S	
31098691					250g Amber Jar (ALE210)	S	
31098690					1kg TUB with Handle (ALE260)	S	
31098689					60g VOC (ALE215)	S	
31098688					250g Amber Jar (ALE210)	S	
31098687					1kg TUB with Handle (ALE260)	S	
31098686					60g VOC (ALE215)	S	
31098685					250g Amber Jar (ALE210)	S	
31098684					1kg TUB with Handle (ALE260)	S	
31098683					60g VOC (ALE215)	S	
31098682					250g Amber Jar (ALE210)	S	
31098681					1kg TUB with Handle (ALE260)	S	
31098680					60g VOC (ALE215)	S	
31098679					250g Amber Jar (ALE210)	S	
31098678					1kg TUB with Handle (ALE260)	S	
31098677					60g VOC (ALE215)	S	
31098676					250g Amber Jar (ALE210)	S	
31098675					1kg TUB with Handle (ALE260)	S	
31098674					60g VOC (ALE215)	S	
31098673					250g Amber Jar (ALE210)	S	
31098672					1kg TUB with Handle (ALE260)	S	
31098671					60g VOC (ALE215)	S	
31098670					250g Amber Jar (ALE210)	S	
31098669					1kg TUB with Handle (ALE260)	S	
31098668					60g VOC (ALE215)	S	
31098667					250g Amber Jar (ALE210)	S	
31098666					1kg TUB with Handle (ALE260)	S	
31098665					60g VOC (ALE215)	S	
31098664					250g Amber Jar (ALE210)	S	
31098663					1kg TUB with Handle (ALE260)	S	
31098662					60g VOC (ALE215)	S	
31098661					250g Amber Jar (ALE210)	S	
31098660					1kg TUB with Handle (ALE260)	S	
31098659					60g VOC (ALE215)	S	
31098658					250g Amber Jar (ALE210)	S	
31098657					1kg TUB with Handle (ALE260)	S	
31098656					60g VOC (ALE215)	S	
31098655					250g Amber Jar (ALE210)	S	
31098654					1kg TUB with Handle (ALE260)	S	
31098653					60g VOC (ALE215)	S	
31098652					250g Amber Jar (ALE210)	S	
31098651					1kg TUB with Handle (ALE260)	S	
31098650					60g VOC (ALE215)	S	
31098649					250g Amber Jar (ALE210)	S	
31098648					1kg TUB with Handle (ALE260)	S	
31098647					60g VOC (ALE215)	S	
31098646					250g Amber Jar (ALE210)	S	
31098645					1kg TUB with Handle (ALE260)	S	
31098644					60g VOC (ALE215)	S	
31098643					250g Amber Jar (ALE210)	S	
31098642					1kg TUB with Handle (ALE260)	S	
31098641					60g VOC (ALE215)	S	
31098640					250g Amber Jar (ALE210)	S	
31098639					1kg TUB with Handle (ALE260)	S	
31098638					60g VOC (ALE215)	S	
31098637					250g Amber Jar (ALE210)	S	
31098636					1kg TUB with Handle (ALE260)	S	
31098635					60g VOC (ALE215)	S	
31098634					250g Amber Jar (ALE210)	S	
31098633					1kg TUB with Handle (ALE260)	S	
31098632					60g VOC (ALE215)	S	
31098631					250g Amber Jar (ALE210)	S	
31098630					1kg TUB with Handle (ALE260)	S	
31098629					60g VOC (ALE215)	S	
31098628					250g Amber Jar (ALE210)	S	
31098627					1kg TUB with Handle (ALE260)	S	
31098626					60g VOC (ALE215)	S	
31098625					250g Amber Jar (ALE210)	S	
31098624					1kg TUB with Handle (ALE260)	S	
31098623					60g VOC (ALE215)	S	
31098622					250g Amber Jar (ALE210)	S	
31098621					1kg TUB with Handle (ALE260)	S	
31098620					60g VOC (ALE215)	S	
31098619					250g Amber Jar (ALE210)	S	
31098618					1kg TUB with Handle (ALE260)	S	
31098617					60g VOC (ALE215)	S	
31098616					250g Amber Jar (ALE210)	S	
31098615					1kg TUB with Handle (ALE260)	S	
31098614					60g VOC (ALE215)	S	
31098613					250g Amber Jar (ALE210)	S	
31098612					1kg TUB with Handle (ALE260)	S	
31098611					60g VOC (ALE215)	S	
31098610					250g Amber Jar (ALE210)	S	
31098609					1kg TUB with Handle (ALE260)	S	
31098608					60g VOC (ALE215)	S	
31098607					250g Amber Jar (ALE210)	S	
31098606					1kg TUB with Handle (ALE260)	S	
31098605					60g VOC (ALE215)	S	
31098604					250g Amber Jar (ALE210)	S	
31098603							

31098781	TP 07		2.00	60g VOC (ALE215)	S												X											
				250g Amber Jar (ALE210)	S				X	X			X	X				X		X				X		X		
				1kg TUB with Handle (ALE260)	S	X	X				X	X				X						X						
31098780	TP 07		1.00	60g VOC (ALE215)	S												X											



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Results Legend



Test



No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type	
	31098774		TP 01				2.00		250g Amber Jar (ALE210)	S	S	
	31098775		TP 02				2.00		1kg TUB with Handle (ALE260)	S	S	
	31098776		TP 04				1.00		250g Amber Jar (ALE215)	S	S	
	31098777		TP 04				2.00		1kg TUB with Handle (ALE260)	S	S	
	31098778		TP 05				2.00		250g Amber Jar (ALE215)	S	S	
	31098779		TP 06				2.00		1kg TUB with Handle (ALE260)	S	S	
	31098780		TP 07				1.00		250g Amber Jar (ALE210)	S	S	
PAH by GCMS	All	NDPs: 0 Tests: 8										
PCBs by GCMS	All	NDPs: 0 Tests: 8										
pH	All	NDPs: 0 Tests: 8										
pH Value of Filtered Water	All	NDPs: 0 Tests: 8										
Phenols by HPLC (W)	All	NDPs: 0 Tests: 8										
Sample description	All	NDPs: 0 Tests: 8										
Total Organic Carbon	All	NDPs: 0 Tests: 8										
TPH CWG GC (S)	All	NDPs: 0 Tests: 8										
VOC MS (S)	All	NDPs: 0 Tests: 8										



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
31098774	TP 01	2.00	Dark Brown	Clay Loam	Stones	None
31098775	TP 02	2.00	Dark Brown	Clay Loam	None	None
31098776	TP 04	1.00	Dark Brown	Loamy Sand	Vegetation	None
31098777	TP 04	2.00	Dark Brown	Clay Loam	Vegetation	None
31098778	TP 05	2.00	Dark Brown	Sandy Loam	Stones	Vegetation
31098779	TP 06	2.00	Dark Brown	Sandy Loam	Stones	Vegetation
31098780	TP 07	1.00	Dark Brown	Sandy Loam	Stones	Vegetation
31098781	TP 07	2.00	Dark Brown	Sandy Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Results Legend			Customer Sample Ref.		TP 01	TP 02	TP 04	TP 04	TP 05	TP 06
# ISO17025 accredited.	M mCERTS accredited.	aq Aqueous / settled sample.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		2.00 Soil/Solid (S) 18/02/2025	2.00 Soil/Solid (S) 18/02/2025	1.00 Soil/Solid (S) 18/02/2025	2.00 Soil/Solid (S) 18/02/2025	2.00 Soil/Solid (S) 18/02/2025	2.00 Soil/Solid (S) 18/02/2025
diss.filt Dissolved / filtered sample.	tot.unfilt Total / unfiltered sample.	* Subcontracted - refer to subcontractor report for accreditation status.			19/02/2025 250219-103 31098774	19/02/2025 250219-103 31098775	19/02/2025 250219-103 31098776	19/02/2025 250219-103 31098777	19/02/2025 250219-103 31098778	19/02/2025 250219-103 31098779
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	*** 6.2 FTAB (see appendix)	1-4**@Sample deviation (see appendix)								
Component	LOD/Units	Method								
Moisture Content Ratio (% of as received sample)	%	PM024			14	14	17	19	13	11
Loss on ignition	<0.7 %	TM018			3.47 M	2.87 M	6.39 M	7.05 M	2.95 M	2.26 M
Organic Carbon, Total	<0.2 %	TM132			0.948 M	0.423 M	1.11 M	0.754 M	0.329 M	0.283 M
pH	1 pH Units	TM133			8.46 M	8.6 M	7.69 M	7.81 M	8.67 M	8.71 M
Chromium, Hexavalent	<0.6 mg/kg	TM151			<0.6 M	<0.6 M	<0.6 M	<0.6 M	<0.6 M	<0.6 M
PCB congener 28	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 52	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 101	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 118	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 138	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 153	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
PCB congener 180	<3 µg/kg	TM168			<3 M	<3 M	<3 M	<3 M	<3 M	<3 M
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168			<21	<21	<21	<21	<21	<21
Chromium, Trivalent	<0.9 mg/kg	TM181			11.5	8.05	15.6	20.8	10.8	8.98
Antimony	<0.6 mg/kg	TM181			2.02 #	1.69 #	2.3 #	2.75 #	3.55 #	1.48 #
Arsenic	<0.6 mg/kg	TM181			16 M	13.5 M	26.4 M	29.2 M	20.6 M	18.8 M
Barium	<0.6 mg/kg	TM181			56.8 #	51.9 #	351 #	844 #	343 #	58.4 #
Cadmium	<0.02 mg/kg	TM181			1.55 M	1.9 M	2.19 M	4.48 M	1.06 M	0.702 M
Chromium	<0.9 mg/kg	TM181			11.5 M	8.05 M	15.6 M	20.8 M	10.8 M	8.98 M
Copper	<1.4 mg/kg	TM181			32.2 M	27.7 M	36.9 M	34.8 M	26.2 M	25.2 M
Lead	<0.7 mg/kg	TM181			23 M	29.6 M	56.5 M	86.4 M	30.8 M	14.9 M
Mercury	<0.1 mg/kg	TM181			0.416 M	0.271 M	0.296 M	<0.1 M	<0.1 M	0.244 M
Molybdenum	<0.1 mg/kg	TM181			2.17 #	3.19 #	3.53 #	3.19 #	1.11 #	1.21 #
Nickel	<0.2 mg/kg	TM181			52.4 M	40.9 M	59.4 M	76.5 M	46.9 M	45.6 M
Selenium	<1 mg/kg	TM181			3.15 #	2.15 #	5.2 #	5.47 #	2.97 #	1.72 #
Zinc	<1.9 mg/kg	TM181			122 M	102 M	257 M	562 M	99.1 M	90.3 M
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410			<10	<10	<10	<10	<10	<10
Coronene	<200 µg/kg	TM410			<200	<200	<200	<200	<200	<200
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415			<5	<5	<5	<5	<5	<5



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Results Legend			Customer Sample Ref.		TP 07	TP 07				
#	ISO17025 accredited.		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference		1.00	2.00				
M	mCERTS accredited.				Soil/Solid (S)	Soil/Solid (S)				
aq	Aqueous / settled sample.				18/02/2025	18/02/2025				
diss.filt	Dissolved / filtered sample.				19/02/2025	19/02/2025				
tot.unfilt	Total / unfiltered sample.				250219-103	250219-103				
* Subcontracted - refer to subcontractor report for accreditation status.					31098780	31098781				
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery										
*** 6.2 FTAB (see appendix)										
1-4*§@Sample deviation (see appendix)										
Component	LOD/Units	Method								
Moisture Content Ratio (% of as received sample)	%	PM024	14		11					
Loss on ignition	<0.7 %	TM018	3.29		2.5					
			M		M					
Organic Carbon, Total	<0.2 %	TM132	0.683		0.288					
			M		M					
pH	1 pH Units	TM133	8.46		8.85					
			M		M					
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6		<0.6					
			M		M					
PCB congener 28	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 52	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 101	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 118	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 138	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 153	<3 µg/kg	TM168	<3		<3					
			M		M					
PCB congener 180	<3 µg/kg	TM168	<3		<3					
			M		M					
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<21		<21					
Chromium, Trivalent	<0.9 mg/kg	TM181	7.89		7.65					
Antimony	<0.6 mg/kg	TM181	1.49		1.45					
			#		#					
Arsenic	<0.6 mg/kg	TM181	15		19					
			M		M					
Barium	<0.6 mg/kg	TM181	51.7		52.7					
			#		#					
Cadmium	<0.02 mg/kg	TM181	1.01		0.678					
			M		M					
Chromium	<0.9 mg/kg	TM181	7.89		7.65					
			M		M					
Copper	<1.4 mg/kg	TM181	23.4		24.7					
			M		M					
Lead	<0.7 mg/kg	TM181	18.3		14.1					
			M		M					
Mercury	<0.1 mg/kg	TM181	0.518		0.501					
			M		M					
Molybdenum	<0.1 mg/kg	TM181	1.59		1.1					
			#		#					
Nickel	<0.2 mg/kg	TM181	50.1		45.6					
			M		M					
Selenium	<1 mg/kg	TM181	2.94		2.16					
			#		#					
Zinc	<1.9 mg/kg	TM181	97.6		91					
			M		M					
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410	<10		<10					
Coronene	<200 µg/kg	TM410	<200		<200					
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415	<5		<5					



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

TPH CWG (S)

Results Legend			Customer Sample Ref.	TP 01	TP 02	TP 04	TP 04	TP 05	TP 06
#	ISO17025 accredited.			2.00	2.00	1.00	2.00	2.00	2.00
M	mCERTS accredited.			Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
aq	Aqueous / settled sample.			18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
diss.filt	Dissolved / filtered sample.								
tot.unfilt	Total / unfiltered sample.								
* Subcontracted - refer to subcontractor report for accreditation status.									
** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery									
*** 6.2 FTAB (see appendix)									
1-4**@Sample deviation (see appendix)									
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	75.2	97.6	95.8	95.8	90.5	93.5	
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000	<5000	<5000	<5000	<5000	<5000	
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	<10000	<10000	<10000	<10000	<10000	<10000	
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10	<10	<10	<10	<10	
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	1140	<1000	<1000	<1000	<1000	1010	
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	<1000	<1000	
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000	<5000	<5000	<5000	<5000	<5000	
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	<10000	<10000	<10000	<10000	<10000	<10000	
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	<50	<50	<50	<50	<50	<50	
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50	<50	<50	<50	<50	<50	
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	<20	<20	<20	<20	<20	<20	



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

TPH CWG (S)

Results Legend		Customer Sample Ref.	TP 07					
#	ISO17025 accredited.		TP 07	TP 07				
M	mCERTS accredited.	Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	1.00	2.00				
aq	Aqueous / settled sample.		Soil/Solid (S)	Soil/Solid (S)				
diss.filt	Dissolved / filtered sample.		18/02/2025	18/02/2025				
tot.unfilt	Total / unfiltered sample.		19/02/2025	19/02/2025				
	* Subcontracted - refer to subcontractor report for accreditation status.		250219-103	250219-103				
	** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery	Lab Sample No.(s) AGS Reference	31098780	31098781				
	*** 6.2 FTAB (see appendix)							
	1-4*§@Sample deviation (see appendix)	Method						
Component	LOD/Units							
GRO Surrogate % recovery**	%	TM089	96.7	93.3				
Aliphatics >C5-C6 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10				
Aliphatics >C6-C8 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10				
Aliphatics >C8-C10 (HS_1D_AL)	<10 µg/kg	TM089	<10	<10				
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000				
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000	<5000				
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	<10000	<10000				
Aromatics >EC5-EC7 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10				
Aromatics >EC7-EC8 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10				
Aromatics >EC8-EC10 (HS_1D_AR)	<10 µg/kg	TM089	<10	<10				
Aromatics >EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aromatics >EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aromatics >EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aromatics >EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Aromatics >EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000				
Total Aromatics >EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	<5000	<5000				
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	<10000	<10000				
GRO >C5-C6 (HS_1D)	<20 µg/kg	TM089	<20	<20				
GRO >C6-C7 (HS_1D)	<20 µg/kg	TM089	<20	<20				
GRO >C7-C8 (HS_1D)	<20 µg/kg	TM089	<20	<20				
GRO >C8-C10 (HS_1D)	<20 µg/kg	TM089	<20	<20				
GRO >C10-C12 (HS_1D)	<20 µg/kg	TM089	<20	<20				
Total Aliphatics >C5-C10 (HS_1D_AL_TOTAL)	<50 µg/kg	TM089	<50	<50				
Total Aromatics >EC5-EC10 (HS_1D_AR_TOTAL)	<50 µg/kg	TM089	<50	<50				
GRO >C5-C10 (HS_1D_TOTAL)	<20 µg/kg	TM089	<20	<20				



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.106
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrellstown
Natural Moisture Content (%)	14.5
Dry Matter Content (%)	87.3

Case	
SDG	250219-103
Lab Sample Number(s)	31098774
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 01
Depth (m)	2.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.948
Loss on Ignition (%)	3.47
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.46
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00724	<0.0002	0.0724	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00143	<0.0003	0.0143	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	0.00461	<0.001	0.0461	<0.01	0.1	0.5	7
Zinc	<0.001	<0.001	<0.01	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	83.4	<10	834	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	8.65
Conductivity (µS/cm)	109
Volume Leachant (Litres)	0.887

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

03/03/2025 16:27:00

16:26:51 03/03/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.098
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrellstown
Natural Moisture Content (%)	14.2
Dry Matter Content (%)	87.6

Case	
SDG	250219-103
Lab Sample Number(s)	31098775
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 02
Depth (m)	2.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.423
Loss on Ignition (%)	2.87
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.6
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00272	<0.0002	0.0272	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00118	<0.0003	0.0118	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00404	<0.001	0.0404	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	65.8	<10	658	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	8.68
Conductivity (µS/cm)	86
Volume Leachant (Litres)	0.888

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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16:26:51 03/03/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg)	0.110
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location

Molloy's Field, Luttrellstown

Natural Moisture Content (%)

20.7

Dry Matter Content (%)

82.9

Case

SDG	250219-103
Lab Sample Number(s)	31098776
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 04
Depth (m)	1.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%)	1.11
Loss on Ignition (%)	6.39
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.69
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis

C₂Concⁿ in 10:1 eluate (mg/l)A₂10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0128	<0.0002	0.128	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.0026	<0.0003	0.026	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000703	<0.0004	0.00703	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0179	<0.001	0.179	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.535	<0.5	5.35	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	83.9	<10	839	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	8.40
Conductivity (µS/cm)	110
Volume Leachant (Litres)	0.882

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.102
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrellstown
Natural Moisture Content (%)	15.2
Dry Matter Content (%)	86.8

Case	
SDG	250219-103
Lab Sample Number(s)	31098777
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 04
Depth (m)	2.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.754
Loss on Ignition (%)	7.05
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	7.81
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0114	<0.0002	0.114	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00111	<0.0003	0.0111	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00229	<0.001	0.0229	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	28.8	<10	288	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	7.94
Conductivity (µS/cm)	38
Volume Leachant (Litres)	0.887

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.099

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Molloy's Field, Luttrellstown

Natural Moisture Content (%) 11.2

Dry Matter Content (%) 90

Case

SDG 250219-103

Lab Sample Number(s) 31098778

Sampled Date 18-Feb-2025

Customer Sample Ref. TP 05

Depth (m) 2.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%) 0.329

Loss on Ignition (%) 2.95

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) <5

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 8.67

ANC to pH 6 (mol/kg) -

ANC to pH 4 (mol/kg) -

Eluate Analysis

C₂ Concⁿ in 10:1 eluate (mg/l)A₂ 10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.0173	<0.0002	0.173	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00128	<0.0003	0.0128	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00297	<0.001	0.0297	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.503	<0.5	5.03	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	67.7	<10	677	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared 20-Feb-2025

pH (pH Units) 8.73

Conductivity (µS/cm) 88

Volume Leachant (Litres) 0.890

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

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CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.101
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrellstown
Natural Moisture Content (%)	11.9
Dry Matter Content (%)	89.4

Case	
SDG	250219-103
Lab Sample Number(s)	31098779
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 06
Depth (m)	2.00

Landfill Waste Acceptance Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.283
Loss on Ignition (%)	2.26
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.71
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00541	<0.0002	0.0541	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.000824	<0.0003	0.00824	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	<0.0004	<0.0004	<0.004	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	<0.001	<0.001	<0.01	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	54.2	<10	542	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	8.84
Conductivity (µS/cm)	71
Volume Leachant (Litres)	0.889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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16:26:51 03/03/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.103
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Molloys Field, Luttrellstown
Natural Moisture Content (%)	12.6
Dry Matter Content (%)	88.8

Case	
SDG	250219-103
Lab Sample Number(s)	31098780
Sampled Date	18-Feb-2025
Customer Sample Ref.	TP 07
Depth (m)	1.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis	Result
Total Organic Carbon (%)	0.683
Loss on Ignition (%)	3.29
Sum of BTEX (mg/kg)	-
Sum of 7 PCBs (mg/kg)	<0.021
Mineral Oil (mg/kg) (EH_2D_AL)	<5
PAH Sum of 17 (mg/kg)	<10
pH (pH Units)	8.46
ANC to pH 6 (mol/kg)	-
ANC to pH 4 (mol/kg)	-

Eluate Analysis	C ₂ Conc ⁿ in 10:1 eluate (mg/l)		A ₂ 10:1 conc ⁿ leached (mg/kg)		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00336	<0.0002	0.0336	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00226	<0.0003	0.0226	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000415	<0.0004	0.00415	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00428	<0.001	0.0428	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.662	<0.5	6.62	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	66	<10	660	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared	20-Feb-2025
pH (pH Units)	8.91
Conductivity (µS/cm)	86
Volume Leachant (Litres)	0.889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

03/03/2025 16:27:00

16:26:51 03/03/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438Report Number: 757813
Location: Molloys Field, Luttrellstown

Superseded Report: 756934

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.103

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Molloys Field, Luttrellstown

Natural Moisture Content (%) 10.6

Dry Matter Content (%) 90.4

Case

SDG 250219-103

Lab Sample Number(s) 31098781

Sampled Date 18-Feb-2025

Customer Sample Ref. TP 07

Depth (m) 2.00

Landfill Waste Acceptance
Criteria Limits

Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
3	5	6
-	-	10
-	-	-
1	-	-
500	-	-
100	-	-
-	>6	-
-	-	-
-	-	-

Solid Waste Analysis

Result

Total Organic Carbon (%) 0.288

Loss on Ignition (%) 2.5

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) <5

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 8.85

ANC to pH 6 (mol/kg) -

ANC to pH 4 (mol/kg) -

Eluate Analysis

C₂ Concⁿ in 10:1 eluate (mg/l)A₂ 10:1 concⁿ leached (mg/kg)Limit values for compliance leaching test
using BS EN 12457-3 at L/S 10 l/kg

	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	<0.0005	<0.0005	<0.005	<0.005	0.5	2	25
Barium	0.00471	<0.0002	0.0471	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00106	<0.0003	0.0106	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.000432	<0.0004	0.00432	<0.004	0.4	10	40
Lead	<0.0002	<0.0002	<0.002	<0.002	0.5	10	50
Antimony	<0.001	<0.001	<0.01	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00376	<0.001	0.0376	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	<0.5	<0.5	<5	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	53.4	<10	534	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	<3	<3	<30	<30	500	800	1000

Leach Test Information

Date Prepared 20-Feb-2025

pH (pH Units) 8.67

Conductivity (µS/cm) 70

Volume Leachant (Litres) 0.890

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C). Prepared leachates do not hold ISO17025 accreditation.

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

03/03/2025 16:27:00

16:26:51 03/03/2025



CERTIFICATE OF ANALYSIS

Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Table of Results - Appendix

Method No	Description
PM024	Soil preparation including homogenisation, moisture, screens of soils for Asbestos Containing Material
PM115	Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM018	Determination of Loss on Ignition
TM089	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM104	Determination of Fluoride using the Kone Analyser
TM116	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	ELTRA CS800 Operators Guide
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Determination of Hexavalent Chromium using Kone analyser
TM152	Analysis of Aqueous Samples by ICP-MS
TM168	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM218	The determination of PAH in soil samples by GC-MS
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	Determination of Phenols in Waters and Leachates by HPLC
TM410	Determination of Coronene in soils by GCMS
TM414	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID
TM415	Determination of Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



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Validated

SDG: 250219-103
Client Ref.: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Test Completion Dates

Lab Sample No(s)
Customer Sample Ref.

AGS Ref.
Depth
Type

	31098774	31098775	31098776	31098777	31098778	31098779	31098780	31098781
	TP 01	TP 02	TP 04	TP 04	TP 05	TP 06	TP 07	TP 07
	2.00	2.00	1.00	2.00	2.00	2.00	1.00	2.00
	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Anions by Kone (w)	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025
CEN 10:1 Leachate (1 Stage)	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025
CEN Readings	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
Chromium III	26-Feb-2025	27-Feb-2025	26-Feb-2025	26-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025	26-Feb-2025
Coronene	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
Dissolved Metals by ICP-MS	24-Feb-2025	25-Feb-2025	25-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	25-Feb-2025	25-Feb-2025
Dissolved Organic/Inorganic Carbon	24-Feb-2025	24-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	24-Feb-2025
EPH by GCxGC-FID	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
EPH CWG GC (S)	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	25-Feb-2025	27-Feb-2025	27-Feb-2025
Fluoride	24-Feb-2025	24-Feb-2025	22-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025
GRO by GC-FID (S)	25-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025	24-Feb-2025
Hexavalent Chromium (s)	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025
Loss on Ignition in soils	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
Mercury Dissolved	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025	25-Feb-2025
Metals in solid samples by OES	26-Feb-2025	27-Feb-2025	26-Feb-2025	27-Feb-2025	25-Feb-2025	25-Feb-2025	26-Feb-2025	26-Feb-2025
Moisture at 105C	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025
PAH 16 & 17 Calc	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
PAH by GCMS	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025
PCBs by GCMS	28-Feb-2025	28-Feb-2025	26-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025	28-Feb-2025
pH	03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025	03-Mar-2025
pH Value of Filtered Water	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
Phenols by HPLC (W)	24-Feb-2025	24-Feb-2025	25-Feb-2025	25-Feb-2025	24-Feb-2025	25-Feb-2025	25-Feb-2025	24-Feb-2025
Sample description	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025	20-Feb-2025
Total Organic Carbon	26-Feb-2025	27-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025	26-Feb-2025
TPH CWG GC (S)	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	25-Feb-2025	27-Feb-2025	27-Feb-2025
VOC MS (S)	26-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025	27-Feb-2025



CERTIFICATE OF ANALYSIS

SDG: 250219-103
Client Ref: 6438

Report Number: 757813
Location: Molloy's Field, Luttrellstown

Superseded Report: 756934

Appendix

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH₄ by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of 15 days after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur - e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

General

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

If during the search of the two 'pinch' samples by PLM only 1 or 2 fibres or fibre bundles are seen and identified as asbestos, the term 'trace asbestos identified' is reported.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung. Potentially respirable fibres are identified by using a Phase Contrast Microscope.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

21. 6:2 FTAB

Recovery of 6:2 FTAB in the quality control samples has been observed to be <50% of the target value. Please note the 6:2 FTAB result is supplied as indicative only.

Appendix 6
Waste Classification Report

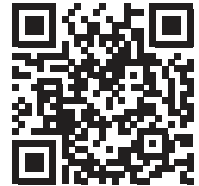
DRAFT



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)



E0GQG-FQ6DZ-0EQ08

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

Report is invalid if pages are removed.

Job name

6438

Description/Comments

Client: Castlethorn Construction
Engineer: Barratt Mahony

Project

Molloy's Field

Site

Luttrellstown, Dublin 15

Classified by

Name:	Company:
Stephen Letch	Site Investigations Ltd
Date:	The Grange
06 Mar 2025 14:20 GMT	12th Lock Road
Telephone:	Lucan
00353 86817 9449	K78 F598

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
Most recent 3 year Refresher

Date

09 Oct 2019
04 Oct 2022

Next 3 year Refresher due by Oct 2025

Purpose of classification

2 - Material Characterisation

Address of the waste

Molloy's Field, Luttrellstown, Dublin 15

Post Code N/A

SIC for the process giving rise to the waste

43130 Test drilling and boring

Description of industry/producer giving rise to the waste

Site Investigation

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

Soils recovered for environmental testing

Description of the waste

Natural soils



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	WAC Results		Page
					Inert	Non Haz	
1	TP01-0.50	0.50	Non Hazardous		Fail	Pass	3
2	TP01-1.50	1.50	Non Hazardous		Pass	Pass	7
3	TP02-0.50	0.50	Non Hazardous		Pass	Pass	11
4	TP02-1.50	1.50	Non Hazardous		Pass	Pass	15
5	TP03-0.50	0.50	Non Hazardous		Pass	Pass	19
6	TP04-0.50	0.50	Non Hazardous		Pass	Pass	23
7	TP04-1.50	1.50	Non Hazardous		Pass	Pass	27
8	TP05-0.50	0.50	Non Hazardous		Pass	Pass	31
9	TP05-1.50	1.50	Non Hazardous		Pass	Pass	35
10	TP06-0.50	0.50	Non Hazardous		Pass	Pass	39
11	TP06-1.50	1.50	Non Hazardous		Pass	Pass	43
12	TP07-0.50	0.50	Non Hazardous		Pass	Pass	47
13	TP07-1.50	1.50	Non Hazardous		Pass	Pass	51
14	TP01-2.00	2.00	Non Hazardous		Pass	Pass	55
15	TP02-2.00	2.00	Non Hazardous		Pass	Pass	59
16	TP04-1.00	1.00	Non Hazardous		Pass	Pass	63
17	TP04-2.00	2.00	Non Hazardous		Pass	Pass	67
18	TP05-2.00	2.00	Non Hazardous		Pass	Pass	71
19	TP06-2.00	2.00	Non Hazardous		Pass	Pass	75
20	TP07-1.00	1.00	Non Hazardous		Pass	Pass	79
21	TP07-2.00	2.00	Non Hazardous		Pass	Pass	83

Related documents

#	Name	Description
1	250212-98.hwol	ALS Hawarden .hwol file used to populate the Job
2	250219-103.hwol	ALS Hawarden .hwol file used to populate the Job
3	Rilta Suite NEW	waste stream template used to create this Job

WAC results

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate the samples in this Job: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

Report

Created by: Stephen Letch

Created date: 06 Mar 2025 14:20 GMT

Appendices	Page
Appendix A: Classifier defined and non EU CLP determinands	87
Appendix B: Rationale for selection of metal species	88
Appendix C: Version	89



Classification of sample: TP01-0.50

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

Sample details

Sample name:	LoW Code:
TP01-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% 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	TPH (C6 to C40) petroleum group				21.1 mg/kg		16.458 mg/kg	0.00165 %	✓	
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☑					
3	antimony { antimony trioxide }				1.25 mg/kg	1.197	1.167 mg/kg	0.000117 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				23.2 mg/kg	1.534	27.757 mg/kg	0.00278 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				151 mg/kg	1.233	145.281 mg/kg	0.0145 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				1.43 mg/kg	1.855	2.069 mg/kg	0.000207 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				53.8 mg/kg	1.126	47.247 mg/kg	0.00472 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	46.5 mg/kg		36.27 mg/kg	0.00363 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.92 mg/kg	1.5	2.247 mg/kg	0.000225 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				61.6 mg/kg	2.637	126.687 mg/kg	0.0127 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.61 mg/kg	1.405	2.86 mg/kg	0.000286 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				213 mg/kg	2.469	410.249 mg/kg	0.041 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				17.2 mg/kg	1.462	19.608 mg/kg	0.00196 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		0.0308 mg/kg		0.024 mg/kg	0.0000024 %	✓	
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		0.252 mg/kg		0.197 mg/kg	0.0000197 %	✓	
23	pyrene	204-927-3	129-00-0		0.249 mg/kg		0.194 mg/kg	0.0000194 %	✓	
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.168 mg/kg		0.131 mg/kg	0.0000131 %	✓	
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.157 mg/kg		0.122 mg/kg	0.0000122 %	✓	
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.271 mg/kg		0.211 mg/kg	0.0000211 %	✓	
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.107 mg/kg		0.0835 mg/kg	0.00000835 %	✓	
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.202 mg/kg		0.158 mg/kg	0.0000158 %	✓	
29	indeno[123-cd]pyrene	205-893-2	193-39-5		0.116 mg/kg		0.0905 mg/kg	0.00000905 %	✓	
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		0.131 mg/kg		0.102 mg/kg	0.0000102 %	✓	
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.21 pH		8.21 pH	8.21 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.075 mg/kg		<0.075 mg/kg	<0.0000075 %		<LOD
Total:								0.0841 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: HP 3 can be 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.: 0.00165%)



WAC results for sample: TP01-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample FAILS the Inert (Inert waste landfill) criteria.

The sample PASSES the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	3.1	3	5
2	LOI (loss on ignition)	%	11.1	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.105	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	8.74	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.21	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0903	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0484	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0167	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.223	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	6.85	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	84.7	500	800
26	TDS (total dissolved solids)	mg/kg	1240	4,000	60,000

Key

	User supplied data
	Inert WAC criteria fail



Classification of sample: TP01-1.50

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

Sample details

Sample name:	LoW Code:
TP01-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(wet weight correction)	

Hazard properties

None identified

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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				1.18 mg/kg	1.197	1.201	mg/kg	0.00012 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				14.1 mg/kg	1.534	18.384	mg/kg	0.00184 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				62 mg/kg	1.233	65.005	mg/kg	0.0065 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.739 mg/kg	1.855	1.165	mg/kg	0.000116 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				29.1 mg/kg	1.126	27.849	mg/kg	0.00278 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	24 mg/kg		20.4	mg/kg	0.00204 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				1.41 mg/kg	1.5	1.798	mg/kg	0.00018 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				56.7 mg/kg	2.637	127.075	mg/kg	0.0127 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.13 mg/kg	1.405	1.35	mg/kg	0.000135 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				129 mg/kg	2.469	270.758	mg/kg	0.0271 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12.3 mg/kg	1.462	15.281	mg/kg	0.00153 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.52 pH		8.52 pH	8.52 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.125 mg/kg		<0.125 mg/kg	<0.0000125 %		<LOD
Total:								0.0562 %		



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



WAC results for sample: TP01-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.601	3	5
2	LOI (loss on ignition)	%	2.95	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.155	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.52	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0718	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0129	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0074	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	0.0328	0.1	0.5
20	zinc	mg/kg	0.0524	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	37.4	500	800
26	TDS (total dissolved solids)	mg/kg	852	4,000	60,000

Key

User supplied data



Classification of sample: TP02-0.50

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

Sample details

Sample name:	LoW Code:
TP02-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				0.684 mg/kg	1.197	0.639	mg/kg	0.0000639 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				25.9 mg/kg	1.534	30.987	mg/kg	0.0031 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				106 mg/kg	1.233	101.985	mg/kg	0.0102 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.63 mg/kg	1.855	2.358	mg/kg	0.000236 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				75.1 mg/kg	1.126	65.952	mg/kg	0.0066 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	160 mg/kg		124.8	mg/kg	0.0125 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				1.9 mg/kg	1.5	2.223	mg/kg	0.000222 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				142 mg/kg	2.637	292.039	mg/kg	0.0292 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.35 mg/kg	1.405	2.575	mg/kg	0.000258 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				268 mg/kg	2.469	516.182	mg/kg	0.0516 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				17.4 mg/kg	1.462	19.836	mg/kg	0.00198 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.1 pH		8.1 pH	8.1 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
Total:								0.117 %		



Key

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



WAC results for sample: TP02-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.565	3	5
2	LOI (loss on ignition)	%	4.06	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.007	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.1	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0476	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0277	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0143	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.218	4	50
21	chloride	mg/kg	25	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	76.1	500	800
26	TDS (total dissolved solids)	mg/kg	673	4,000	60,000

Key

User supplied data



Classification of sample: TP02-1.50

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

Sample details

Sample name:	LoW Code:
TP02-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				1.86 mg/kg	1.197	1.937	mg/kg	0.000194 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				17.5 mg/kg	1.534	23.353	mg/kg	0.00234 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				56.8 mg/kg	1.233	60.954	mg/kg	0.0061 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.43 mg/kg	1.855	2.307	mg/kg	0.000231 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				42.3 mg/kg	1.126	41.434	mg/kg	0.00414 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	50.9 mg/kg		44.283	mg/kg	0.00443 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				2.38 mg/kg	1.5	3.106	mg/kg	0.000311 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				47.8 mg/kg	2.637	109.649	mg/kg	0.011 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.49 mg/kg	1.405	1.821	mg/kg	0.000182 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				114 mg/kg	2.469	244.905	mg/kg	0.0245 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				6.03 mg/kg	1.462	7.667	mg/kg	0.000767 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0055 mg/kg		<0.0055 mg/kg	<0.00000055 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.63 pH		8.63 pH	8.63 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0145 mg/kg		<0.0145 mg/kg	<0.00000145 %		<LOD
Total:								0.0553 %		



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



WAC results for sample: TP02-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.44	3	5
2	LOI (loss on ignition)	%	2.58	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.024	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.63	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0369	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0086	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0053	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0104	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	38.7	500	800
26	TDS (total dissolved solids)	mg/kg	695	4,000	60,000

Key

User supplied data



Classification of sample: TP03-0.50

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

Sample details

Sample name:	LoW Code:
TP03-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				0.927 mg/kg	1.197	0.888 mg/kg	0.0000888 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				28.3 mg/kg	1.534	34.727 mg/kg	0.00347 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				400 mg/kg	1.233	394.718 mg/kg	0.0395 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				2.22 mg/kg	1.855	3.294 mg/kg	0.000329 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				39.8 mg/kg	1.126	35.848 mg/kg	0.00358 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	67.8 mg/kg		54.24 mg/kg	0.00542 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				2.59 mg/kg	1.5	3.108 mg/kg	0.000311 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				66 mg/kg	2.637	139.217 mg/kg	0.0139 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				4.07 mg/kg	1.405	4.575 mg/kg	0.000457 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				251 mg/kg	2.469	495.835 mg/kg	0.0496 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				13 mg/kg	1.462	15.2 mg/kg	0.00152 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		0.0462 mg/kg		0.037 mg/kg	0.0000037 %	✓	
23	pyrene	204-927-3	129-00-0		0.0434 mg/kg		0.0347 mg/kg	0.00000347 %	✓	
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.0249 mg/kg		0.0199 mg/kg	0.00000199 %	✓	
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.0242 mg/kg		0.0194 mg/kg	0.00000194 %	✓	
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.0377 mg/kg		0.0302 mg/kg	0.00000302 %	✓	
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.0263 mg/kg		0.021 mg/kg	0.0000021 %	✓	
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.16 pH		7.16 pH	7.16 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
Total:								0.119 %		



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



WAC results for sample: TP03-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	2.28	3	5
2	LOI (loss on ignition)	%	8.09	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.007	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	5.57	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.16	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0953	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0169	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0049	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0633	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	43.9	500	800
26	TDS (total dissolved solids)	mg/kg	480	4,000	60,000

Key

User supplied data



Classification of sample: TP04-0.50

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

Sample details

Sample name:	LoW Code:
TP04-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☑					
3	antimony { antimony trioxide }				1.43 mg/kg	1.197	1.387 mg/kg	0.000139 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				36.9 mg/kg	1.534	45.846 mg/kg	0.00458 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				1490 mg/kg	1.233	1488.704 mg/kg	0.149 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				5.72 mg/kg	1.855	8.593 mg/kg	0.000859 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				44.8 mg/kg	1.126	40.856 mg/kg	0.00409 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	96.3 mg/kg		78.003 mg/kg	0.0078 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				3.23 mg/kg	1.5	3.925 mg/kg	0.000392 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				103 mg/kg	2.637	219.979 mg/kg	0.022 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				4.44 mg/kg	1.405	5.053 mg/kg	0.000505 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				829 mg/kg	2.469	1658.108 mg/kg	0.166 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12.3 mg/kg	1.462	14.561 mg/kg	0.00146 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.0015 mg/kg		<0.0015 mg/kg	<0.00000015 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.0025 mg/kg		<0.0025 mg/kg	<0.00000025 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.21 pH		8.21 pH	8.21 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0085 mg/kg		<0.0085 mg/kg	<0.00000085 %		<LOD
Total:								0.358 %		



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



WAC results for sample: TP04-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.772	3	5
2	LOI (loss on ignition)	%	5.71	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0135	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.21	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.586	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0103	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0068	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0218	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	68	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	41.1	500	800
26	TDS (total dissolved solids)	mg/kg	687	4,000	60,000

Key

User supplied data



Classification of sample: TP04-1.50

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

Sample details

Sample name:	LoW Code:
TP04-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				1.04 mg/kg	1.197	0.996	mg/kg	0.0000996 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				28.8 mg/kg	1.534	35.34	mg/kg	0.00353 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				895 mg/kg	1.233	883.182	mg/kg	0.0883 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				4.06 mg/kg	1.855	6.024	mg/kg	0.000602 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				36 mg/kg	1.126	32.426	mg/kg	0.00324 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	83.5 mg/kg		66.8	mg/kg	0.00668 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				2.98 mg/kg	1.5	3.576	mg/kg	0.000358 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				72.9 mg/kg	2.637	153.771	mg/kg	0.0154 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.59 mg/kg	1.405	4.035	mg/kg	0.000404 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				548 mg/kg	2.469	1082.54	mg/kg	0.108 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				13.9 mg/kg	1.462	16.253	mg/kg	0.00163 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0015 mg/kg		<0.0015 mg/kg	<0.00000015 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.66 pH		7.66 pH	7.66 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0085 mg/kg		<0.0085 mg/kg	<0.00000085 %		<LOD
Total:								0.23 %		



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



WAC results for sample: TP04-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.893	3	5
2	LOI (loss on ignition)	%	5.78	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.012	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.66	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.629	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.01	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0068	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0567	4	50
21	chloride	mg/kg	30	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	55.4	500	800
26	TDS (total dissolved solids)	mg/kg	356	4,000	60,000

Key

User supplied data



Classification of sample: TP05-0.50

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

Sample details

Sample name:	LoW Code:
TP05-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				0.77 mg/kg	1.197	0.756 mg/kg	0.0000756 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				26.9 mg/kg	1.534	33.834 mg/kg	0.00338 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				494 mg/kg	1.233	499.664 mg/kg	0.05 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				2.75 mg/kg	1.855	4.182 mg/kg	0.000418 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				42.2 mg/kg	1.126	38.96 mg/kg	0.0039 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	42.3 mg/kg		34.686 mg/kg	0.00347 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				2.65 mg/kg	1.5	3.26 mg/kg	0.000326 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				87.7 mg/kg	2.637	189.615 mg/kg	0.019 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.67 mg/kg	1.405	1.924 mg/kg	0.000192 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				207 mg/kg	2.469	419.138 mg/kg	0.0419 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				13.9 mg/kg	1.462	16.659 mg/kg	0.00167 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0015 mg/kg		<0.0015 mg/kg	<0.00000015 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.9 pH		7.9 pH	7.9 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
Total:								0.125 %		



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



WAC results for sample: TP05-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.554	3	5
2	LOI (loss on ignition)	%	5.14	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0075	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.9	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0958	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0201	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0105	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0356	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	59.7	500	800
26	TDS (total dissolved solids)	mg/kg	316	4,000	60,000

Key

User supplied data



Classification of sample: TP05-1.50

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

Sample details

Sample name:	LoW Code:
TP05-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				1.17 mg/kg	1.197	1.163 mg/kg	0.000116 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				19.1 mg/kg	1.534	24.317 mg/kg	0.00243 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				338 mg/kg	1.233	346.044 mg/kg	0.0346 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				1.4 mg/kg	1.855	2.155 mg/kg	0.000216 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				32.1 mg/kg	1.126	29.997 mg/kg	0.003 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	30.2 mg/kg		25.066 mg/kg	0.00251 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				2.13 mg/kg	1.5	2.652 mg/kg	0.000265 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				53.8 mg/kg	2.637	117.739 mg/kg	0.0118 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.94 mg/kg	1.405	3.428 mg/kg	0.000343 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				175 mg/kg	2.469	358.665 mg/kg	0.0359 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				9.35 mg/kg	1.462	11.342 mg/kg	0.00113 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.4 pH		8.4 pH	8.4 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0095 mg/kg		<0.0095 mg/kg	<0.00000095 %		<LOD
Total:								0.0934 %		



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



WAC results for sample: TP05-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.527	3	5
2	LOI (loss on ignition)	%	3.98	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0165	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.4	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.175	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0092	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0053	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0167	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	30.9	500	800
26	TDS (total dissolved solids)	mg/kg	828	4,000	60,000

Key

User supplied data



Classification of sample: TP06-0.50

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

Sample details

Sample name:	LoW Code:
TP06-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				1.3 mg/kg	1.197	1.214 mg/kg	0.000121 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				24.5 mg/kg	1.534	29.312 mg/kg	0.00293 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				175 mg/kg	1.233	168.372 mg/kg	0.0168 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				1.64 mg/kg	1.855	2.372 mg/kg	0.000237 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				69.4 mg/kg	1.126	60.947 mg/kg	0.00609 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	63 mg/kg		49.14 mg/kg	0.00491 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				2.62 mg/kg	1.5	3.066 mg/kg	0.000307 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				63.3 mg/kg	2.637	130.184 mg/kg	0.013 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.1 mg/kg	1.405	3.397 mg/kg	0.00034 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				204 mg/kg	2.469	392.914 mg/kg	0.0393 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				11.1 mg/kg	1.462	12.654 mg/kg	0.00127 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		0.0256 mg/kg		0.02 mg/kg	0.000002 %	✓	
23	pyrene	204-927-3	129-00-0		0.026 mg/kg		0.0203 mg/kg	0.00000203 %	✓	
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.0159 mg/kg		0.0124 mg/kg	0.00000124 %	✓	
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.0234 mg/kg		0.0183 mg/kg	0.00000183 %	✓	
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.53 pH		7.53 pH	7.53 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
Total:								0.0865 %		



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



WAC results for sample: TP06-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	2.93	3	5
2	LOI (loss on ignition)	%	9.01	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.07	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.53	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0798	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0294	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	0.0315	0.5	10
16	nickel	mg/kg	0.0065	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.201	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	6.01	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	44.4	500	800
26	TDS (total dissolved solids)	mg/kg	1120	4,000	60,000

Key

User supplied data



Classification of sample: TP06-1.50

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

Sample details

Sample name:	LoW Code:
TP06-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				1.26 mg/kg	1.197	1.297	mg/kg	0.00013 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				11.6 mg/kg	1.534	15.302	mg/kg	0.00153 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				76.2 mg/kg	1.233	80.833	mg/kg	0.00808 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.26 mg/kg	1.855	2.01	mg/kg	0.000201 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				23.1 mg/kg	1.126	22.367	mg/kg	0.00224 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	16.5 mg/kg		14.19	mg/kg	0.00142 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				1.93 mg/kg	1.5	2.49	mg/kg	0.000249 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				34.9 mg/kg	2.637	79.137	mg/kg	0.00791 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.28 mg/kg	1.405	2.755	mg/kg	0.000275 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				91.3 mg/kg	2.469	193.884	mg/kg	0.0194 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				4.22 mg/kg	1.462	5.304	mg/kg	0.00053 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	0.0031 mg/kg		0.0027 mg/kg	0.000000273 %	✓	
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.47 pH		8.47 pH	8.47 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.013 mg/kg		<0.013 mg/kg	<0.0000013 %		<LOD
Total:								0.0431 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: HP 3 can be discounted as this is a solid waste without a free draining liquid phase.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene (conc.: 2.73e-07%)



WAC results for sample: TP06-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.689	3	5
2	LOI (loss on ignition)	%	3.03	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	0.0031	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.47	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.072	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0484	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0118	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0305	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	47.6	500	800
26	TDS (total dissolved solids)	mg/kg	1120	4,000	60,000

Key

User supplied data



Classification of sample: TP07-0.50

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

Sample details

Sample name:	LoW Code:
TP07-0.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(wet weight correction)	

Hazard properties

None identified

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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☑					
3	antimony { antimony trioxide }				1.53 mg/kg	1.197	1.557 mg/kg	0.000156 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				15.2 mg/kg	1.534	19.818 mg/kg	0.00198 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				62.1 mg/kg	1.233	65.11 mg/kg	0.00651 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				0.869 mg/kg	1.855	1.37 mg/kg	0.000137 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				25.2 mg/kg	1.126	24.117 mg/kg	0.00241 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	21.2 mg/kg		18.02 mg/kg	0.0018 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.36 mg/kg	1.5	1.734 mg/kg	0.000173 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				42.9 mg/kg	2.637	96.147 mg/kg	0.00961 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.51 mg/kg	1.405	1.803 mg/kg	0.00018 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				99.1 mg/kg	2.469	208.001 mg/kg	0.0208 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				5.65 mg/kg	1.462	7.019 mg/kg	0.000702 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0015 mg/kg		<0.0015 mg/kg	<0.00000015 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.39 pH		8.39 pH	8.39 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]	<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
Total:								0.0456 %		



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



WAC results for sample: TP07-0.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	1.3	3	5
2	LOI (loss on ignition)	%	4.68	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0075	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.39	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0594	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0218	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	<0.004	0.4	10
17	lead	mg/kg	0.0041	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0534	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	8.02	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	820	4,000	60,000

Key

User supplied data



Classification of sample: TP07-1.50

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

Sample details

Sample name:	LoW Code:
TP07-1.50	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				0.712 mg/kg	1.197	0.707 mg/kg	0.0000707 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				19.8 mg/kg	1.534	25.208 mg/kg	0.00252 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				122 mg/kg	1.233	124.904 mg/kg	0.0125 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				1.53 mg/kg	1.855	2.355 mg/kg	0.000236 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				35.6 mg/kg	1.126	33.268 mg/kg	0.00333 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	35.5 mg/kg		29.465 mg/kg	0.00295 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.55 mg/kg	1.5	1.93 mg/kg	0.000193 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				65.4 mg/kg	2.637	143.125 mg/kg	0.0143 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.67 mg/kg	1.405	3.114 mg/kg	0.000311 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				136 mg/kg	2.469	278.734 mg/kg	0.0279 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.58 mg/kg	1.462	9.195 mg/kg	0.00092 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		0.0196 mg/kg		0.0163 mg/kg	0.00000163 %	✓	
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.0125 mg/kg		0.0104 mg/kg	0.00000104 %	✓	
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.0203 mg/kg		0.0168 mg/kg	0.00000168 %	✓	
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0045 mg/kg		<0.0045 mg/kg	<0.00000045 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.41 pH		8.41 pH	8.41 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
Total:								0.0664 %		



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



WAC results for sample: TP07-1.50

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	1.54	3	5
2	LOI (loss on ignition)	%	5.75	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0175	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.41	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0626	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0167	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0067	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0137	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	8.28	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	39.3	500	800
26	TDS (total dissolved solids)	mg/kg	955	4,000	60,000

Key

User supplied data



Classification of sample: TP01-2.00

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

Sample details

Sample name:	LoW Code:
TP01-2.00	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)
2.00 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				2.02 mg/kg	1.197	2.08	mg/kg	0.000208 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				16 mg/kg	1.534	21.106	mg/kg	0.00211 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				56.8 mg/kg	1.233	60.254	mg/kg	0.00603 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.55 mg/kg	1.855	2.472	mg/kg	0.000247 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				32.2 mg/kg	1.126	31.178	mg/kg	0.00312 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	23 mg/kg		19.78	mg/kg	0.00198 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				0.416 mg/kg	1.353	0.484	mg/kg	0.0000484 %	✓	
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				2.17 mg/kg	1.5	2.8	mg/kg	0.00028 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				52.4 mg/kg	2.637	118.82	mg/kg	0.0119 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.15 mg/kg	1.405	3.806	mg/kg	0.000381 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				122 mg/kg	2.469	259.079	mg/kg	0.0259 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				11.5 mg/kg	1.462	14.455	mg/kg	0.00145 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	0.0248 mg/kg		0.0213 mg/kg	0.00000213 %	✓	
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.46 pH		8.46 pH	8.46 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
Total:								0.0548 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: HP 3 can be discounted as this is a solid waste without a free draining liquid phase.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene (conc.: 2.13e-06%)



WAC results for sample: TP01-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.948	3	5
2	LOI (loss on ignition)	%	3.47	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	0.0248	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.46	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0724	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0143	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	<0.004	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	0.0461	0.1	0.5
20	zinc	mg/kg	<0.01	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	834	4,000	60,000

Key

User supplied data



Classification of sample: TP02-2.00

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

Sample details

Sample name:	LoW Code:
TP02-2.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				1.69 mg/kg	1.197	1.74	mg/kg	0.000174 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				13.5 mg/kg	1.534	17.808	mg/kg	0.00178 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				51.9 mg/kg	1.233	55.056	mg/kg	0.00551 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.9 mg/kg	1.855	3.03	mg/kg	0.000303 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				27.7 mg/kg	1.126	26.821	mg/kg	0.00268 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	29.6 mg/kg		25.456	mg/kg	0.00255 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				0.271 mg/kg	1.353	0.315	mg/kg	0.0000315 %	✓	
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				3.19 mg/kg	1.5	4.116	mg/kg	0.000412 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				40.9 mg/kg	2.637	92.743	mg/kg	0.00927 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.15 mg/kg	1.405	2.598	mg/kg	0.00026 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				102 mg/kg	2.469	216.607	mg/kg	0.0217 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				8.05 mg/kg	1.462	10.118	mg/kg	0.00101 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0035 mg/kg		<0.0035 mg/kg	<0.00000035 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.0025 mg/kg		<0.0025 mg/kg	<0.00000025 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.6 pH		8.6 pH	8.6 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0085 mg/kg		<0.0085 mg/kg	<0.00000085 %		<LOD
Total:								0.0468 %		



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



WAC results for sample: TP02-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.423	3	5
2	LOI (loss on ignition)	%	2.87	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0155	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.6	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0272	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0118	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	<0.004	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0404	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	658	4,000	60,000

Key

User supplied data



Classification of sample: TP04-1.00

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

Sample details

Sample name:	LoW Code:
TP04-1.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				2.3 mg/kg	1.197	2.285 mg/kg	0.000229 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				26.4 mg/kg	1.534	33.61 mg/kg	0.00336 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				351 mg/kg	1.233	359.354 mg/kg	0.0359 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				2.19 mg/kg	1.855	3.371 mg/kg	0.000337 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				36.9 mg/kg	1.126	34.483 mg/kg	0.00345 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	56.5 mg/kg		46.895 mg/kg	0.00469 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				0.296 mg/kg	1.353	0.333 mg/kg	0.0000333 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				3.53 mg/kg	1.5	4.395 mg/kg	0.00044 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				59.4 mg/kg	2.637	129.994 mg/kg	0.013 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				5.2 mg/kg	1.405	6.064 mg/kg	0.000606 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				257 mg/kg	2.469	526.726 mg/kg	0.0527 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15.6 mg/kg	1.462	18.924 mg/kg	0.00189 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.69 pH		7.69 pH	7.69 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.007 mg/kg		<0.007 mg/kg	<0.0000007 %		<LOD
Total:								0.118 %		



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



WAC results for sample: TP04-1.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	1.11	3	5
2	LOI (loss on ignition)	%	6.39	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.012	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.69	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.128	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.026	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.007	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.179	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	5.35	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	839	4,000	60,000

Key

User supplied data



Classification of sample: TP04-2.00

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

Sample details

Sample name:	LoW Code:
TP04-2.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.00 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				2.75 mg/kg	1.197	2.667	mg/kg	0.000267 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				29.2 mg/kg	1.534	36.279	mg/kg	0.00363 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				844 mg/kg	1.233	843.266	mg/kg	0.0843 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				4.48 mg/kg	1.855	6.73	mg/kg	0.000673 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				34.8 mg/kg	1.126	31.737	mg/kg	0.00317 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	86.4 mg/kg		69.984	mg/kg	0.007 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				3.19 mg/kg	1.5	3.876	mg/kg	0.000388 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				76.5 mg/kg	2.637	163.382	mg/kg	0.0163 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				5.47 mg/kg	1.405	6.225	mg/kg	0.000623 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				562 mg/kg	2.469	1124.073	mg/kg	0.112 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				20.8 mg/kg	1.462	24.624	mg/kg	0.00246 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		7.81 pH		7.81 pH	7.81 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0065 mg/kg		<0.0065 mg/kg	<0.00000065 %		<LOD
Total:								0.232 %		



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



WAC results for sample: TP04-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.754	3	5
2	LOI (loss on ignition)	%	7.05	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0105	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.81	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.114	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0111	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	<0.004	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0229	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	288	4,000	60,000

Key

User supplied data



Classification of sample: TP05-2.00

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

Sample details

Sample name:	LoW Code:
TP05-2.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.00 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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	antimony { antimony trioxide }				3.55 mg/kg	1.197	3.697	mg/kg	0.00037 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				20.6 mg/kg	1.534	27.49	mg/kg	0.00275 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				343 mg/kg	1.233	368.087	mg/kg	0.0368 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				1.06 mg/kg	1.855	1.71	mg/kg	0.000171 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				26.2 mg/kg	1.126	25.663	mg/kg	0.00257 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	30.8 mg/kg		26.796	mg/kg	0.00268 %	✓	
	082-001-00-6										
9	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				1.11 mg/kg	1.5	1.449	mg/kg	0.000145 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				46.9 mg/kg	2.637	107.585	mg/kg	0.0108 %	✓	
	028-009-00-5	232-104-9	7786-81-4								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.97 mg/kg	1.405	3.63	mg/kg	0.000363 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				99.1 mg/kg	2.469	212.895	mg/kg	0.0213 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				10.8 mg/kg	1.462	13.733	mg/kg	0.00137 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0055 mg/kg		<0.0055 mg/kg	<0.00000055 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.0025 mg/kg		<0.0025 mg/kg	<0.00000025 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.67 pH		8.67 pH	8.67 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0085 mg/kg		<0.0085 mg/kg	<0.00000085 %		<LOD
Total:								0.0804 %		



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



WAC results for sample: TP05-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.329	3	5
2	LOI (loss on ignition)	%	2.95	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0175	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.67	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.173	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0128	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	<0.004	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0297	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	5.03	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	677	4,000	60,000

Key

User supplied data



Classification of sample: TP06-2.00

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

Sample details

Sample name:	LoW Code:
TP06-2.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
11%	
(wet weight correction)	

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				1.48 mg/kg	1.197	1.577 mg/kg	0.000158 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				18.8 mg/kg	1.534	25.665 mg/kg	0.00257 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				58.4 mg/kg	1.233	64.112 mg/kg	0.00641 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				0.702 mg/kg	1.855	1.159 mg/kg	0.000116 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				25.2 mg/kg	1.126	25.251 mg/kg	0.00253 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	14.9 mg/kg		13.261 mg/kg	0.00133 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				0.244 mg/kg	1.353	0.294 mg/kg	0.0000294 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.21 mg/kg	1.5	1.616 mg/kg	0.000162 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				45.6 mg/kg	2.637	107.007 mg/kg	0.0107 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.72 mg/kg	1.405	2.151 mg/kg	0.000215 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				90.3 mg/kg	2.469	198.45 mg/kg	0.0198 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				8.98 mg/kg	1.462	11.681 mg/kg	0.00117 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.71 pH		8.71 pH	8.71 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0075 mg/kg		<0.0075 mg/kg	<0.00000075 %		<LOD
Total:								0.0464 %		



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



WAC results for sample: TP06-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis			Landfill Waste Acceptance Criteria Limits	
#	Determinand	User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	% 0.283	3	5
2	LOI (loss on ignition)	% 2.26	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg <0.0135	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg <0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg <5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg <10	100	-
7	pH	pH 8.71	-	>6
8	ANC (acid neutralisation capacity)	mol/kg	-	-
Eluate Analysis 10:1				
9	arsenic	mg/kg <0.005	0.5	2
10	barium	mg/kg 0.0541	20	100
11	cadmium	mg/kg <0.0008	0.04	1
12	chromium	mg/kg <0.01	0.5	10
13	copper	mg/kg 0.0082	2	50
14	mercury	mg/kg <0.0001	0.01	0.2
15	molybdenum	mg/kg <0.03	0.5	10
16	nickel	mg/kg <0.004	0.4	10
17	lead	mg/kg <0.002	0.5	10
18	antimony	mg/kg <0.01	0.06	0.7
19	selenium	mg/kg <0.01	0.1	0.5
20	zinc	mg/kg <0.01	4	50
21	chloride	mg/kg <20	800	15,000
22	fluoride	mg/kg <5	10	150
23	sulphate	mg/kg <20	1,000	20,000
24	phenol index	mg/kg <0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg <30	500	800
26	TDS (total dissolved solids)	mg/kg 542	4,000	60,000

Key

User supplied data



Classification of sample: TP07-1.00

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

Sample details

Sample name:	LoW Code:
TP07-1.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☒					
3	antimony { antimony trioxide }				1.49 mg/kg	1.197	1.534 mg/kg	0.000153 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				15 mg/kg	1.534	19.787 mg/kg	0.00198 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				51.7 mg/kg	1.233	54.844 mg/kg	0.00548 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				1.01 mg/kg	1.855	1.611 mg/kg	0.000161 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				23.4 mg/kg	1.126	22.657 mg/kg	0.00227 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	18.3 mg/kg		15.738 mg/kg	0.00157 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				0.518 mg/kg	1.353	0.603 mg/kg	0.0000603 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.59 mg/kg	1.5	2.051 mg/kg	0.000205 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				50.1 mg/kg	2.637	113.604 mg/kg	0.0114 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.94 mg/kg	1.405	3.552 mg/kg	0.000355 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				97.6 mg/kg	2.469	207.263 mg/kg	0.0207 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.89 mg/kg	1.462	9.917 mg/kg	0.000992 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.0025 mg/kg		<0.0025 mg/kg	<0.00000025 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.46 pH		8.46 pH	8.46 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0075 mg/kg		<0.0075 mg/kg	<0.00000075 %		<LOD
Total:								0.0465 %		



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



WAC results for sample: TP07-1.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.683	3	5
2	LOI (loss on ignition)	%	3.29	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.013	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.46	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0336	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0226	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0041	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0428	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	6.62	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	660	4,000	60,000

Key

User supplied data



Classification of sample: TP07-2.00

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

Sample details

Sample name: **TP07-2.00** LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: **2.00 m** Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
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	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
2	confirm TPH has NOT arisen from diesel or petrol				☑					
3	antimony { antimony trioxide }				1.45 mg/kg	1.197	1.545 mg/kg	0.000154 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				19 mg/kg	1.534	25.938 mg/kg	0.00259 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				52.7 mg/kg	1.233	57.855 mg/kg	0.00579 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				0.678 mg/kg	1.855	1.119 mg/kg	0.000112 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				24.7 mg/kg	1.126	24.75 mg/kg	0.00248 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	14.1 mg/kg		12.549 mg/kg	0.00125 %	✓	
	082-001-00-6									
9	mercury { mercury dichloride }				0.501 mg/kg	1.353	0.604 mg/kg	0.0000604 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				1.1 mg/kg	1.5	1.469 mg/kg	0.000147 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				45.6 mg/kg	2.637	107.007 mg/kg	0.0107 %	✓	
	028-009-00-5	232-104-9	7786-81-4							
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.16 mg/kg	1.405	2.701 mg/kg	0.00027 %	✓	
	034-002-00-8									
13	zinc { zinc sulphate }				91 mg/kg	2.469	199.988 mg/kg	0.02 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
14	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.65 mg/kg	1.462	9.951 mg/kg	0.000995 %	✓	
		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							
15	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0	<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
18	acenaphthene	201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
20	phenanthrene	201-581-5	85-01-8		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
21	anthracene	204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
22	fluoranthene	205-912-4	206-44-0		<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
23	pyrene	204-927-3	129-00-0		<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
32	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
34	benzene	601-020-00-8	200-753-7	71-43-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
35	toluene	601-021-00-3	203-625-9	108-88-3	<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
36	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
37	coronene	205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
38	pH		PH		8.85 pH		8.85 pH	8.85 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	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]	<0.0075 mg/kg		<0.0075 mg/kg	<0.00000075 %		<LOD
Total:								0.0457 %		



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



WAC results for sample: TP07-2.00

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "Ireland"

The WAC used in this report are the WAC defined for the inert and non-hazardous classes of landfill in the Republic of Ireland. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample **PASSES** the Inert (Inert waste landfill) criteria.

The sample **PASSES** the Non Haz (Non hazardous waste landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits	
#	Determinand		User entered data	Inert waste landfill	Non hazardous waste landfill
1	TOC (total organic carbon)	%	0.288	3	5
2	LOI (loss on ignition)	%	2.5	-	-
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.0135	6	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.021	1	-
5	Mineral oil (C10 to C40)	mg/kg	<5	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	8.85	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	<0.005	0.5	2
10	barium	mg/kg	0.0471	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0106	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0043	0.4	10
17	lead	mg/kg	<0.002	0.5	10
18	antimony	mg/kg	<0.01	0.06	0.7
19	selenium	mg/kg	<0.01	0.1	0.5
20	zinc	mg/kg	0.0376	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	<5	10	150
23	sulphate	mg/kg	<20	1,000	20,000
24	phenol index	mg/kg	<0.16	1	-
25	DOC (dissolved organic carbon)	mg/kg	<30	500	800
26	TDS (total dissolved solids)	mg/kg	534	4,000	60,000

Key

User supplied data



Appendix A: Classifier defined and non EU CLP determinands

• **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

• **confirm TPH has NOT arisen from diesel or petrol**

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

• **barium sulphide** (EC Number: 244-214-4, CAS Number: 21109-95-5)

EU CLP index number: 016-002-00-X

Description/Comments:

Additional Hazard Statement(s): EUH031 >= 0.8 %

Reason for additional Hazards Statement(s):

14 Dec 2015 - EUH031 >= 0.8 % hazard statement sourced from: WM3, Table C12.2

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

EU CLP index number: 082-001-00-6

Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following CLP 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):

03 Jun 2015 - 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

• **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

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

EU CLP index number: 602-039-00-4

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

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

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

Reason for additional Hazards Statement(s):

29 Sep 2015 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

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

EU CLP index number: 601-023-00-4

Description/Comments:

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

Reason for additional Hazards Statement(s):

03 Jun 2015 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

• **coronene** (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.

Data source: <http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en>

Data source date: 16 Jun 2014

Hazard Statements: STOT SE 2; H371

• **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

Appendix B: Rationale for selection of metal species

antimony {antimony trioxide}

Worst case scenario.

arsenic {arsenic pentoxide}

Arsenic pentoxide used as most hazardous species.



barium {barium sulphide}

Chromium VI at limits of detection. Barium sulphide used as the next most hazardous species. No chromate present.

cadmium {cadmium sulfate}

Cadmium sulphate used as the most hazardous species.

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected.

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

Chromium VI at limits of detection. Lead compounds used as the next most hazardous species. No chromate present.

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

molybdenum {molybdenum(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight.

nickel {nickel sulfate}

Chromium VI at limits of detection. Nickel sulphate used as the next most hazardous species. No chromate present.

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

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil.

zinc {zinc sulphate}

Chromium VI at limits of detection. Zinc sulphate used as the next most hazardous species. No chromate present.

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

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

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

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments.

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1.NI - Jan 2021

HazWasteOnline Classification Engine Version: 2025.64.6479.11811 (05 Mar 2025)

HazWasteOnline Database: 2025.64.6479.11811 (05 Mar 2025)



This classification utilises the following guidance and legislation:

WM3 v1.1.NI - Waste Classification - 1st Edition v1.1.NI - Jan 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

17th ATP - Regulation (EU) 2021/849 of 11 March 2021

18th ATP - Regulation (EU) 2022/692 of 16 February 2022

19th ATP - Regulation (EU) 2023/1434 of 25 April 2023

20th ATP - Regulation (EU) 2023/1435 of 2 May 2023

21st ATP - Regulation (EU) 2024/197 of 19 October 2023

22nd ATP - Regulation (EU) 2024/2564 of 19th June 2024

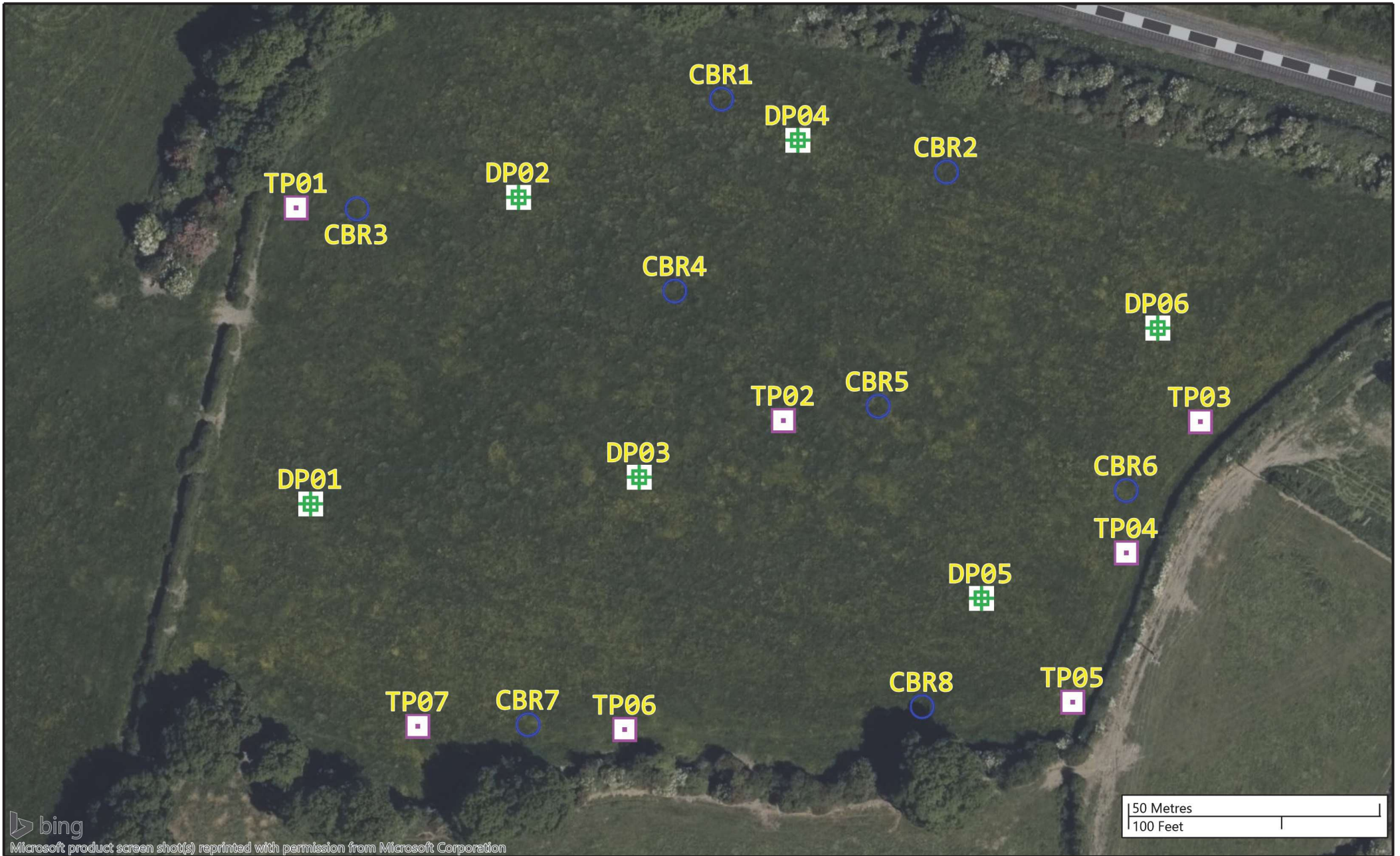
Appendix 7

Survey Data

DRAFT

Survey Data

Location	Irish Transverse Mercator		Elevation	Irish National Grid	
	Easting	Northing		Easting	Northing
Soakaway Tests					
TP01	705801.022	737759.018	59.33	305873.217	237733.464
TP02	705899.551	737718.692	62.65	305971.767	237693.130
TP03	705983.100	737720.341	62.13	306055.334	237694.780
TP04	705968.884	737693.787	62.10	306041.115	237668.220
TP05	705958.835	737663.729	61.70	306031.064	237638.155
TP06	705869.202	737656.252	61.62	305941.412	237630.676
TP07	705827.676	737655.978	61.48	305899.877	237630.402
Dynamic Probes					
DP01	705805.235	737699.944	61.02	305877.431	237674.377
DP02	705845.495	737762.114	61.25	305917.699	237736.561
DP03	705870.952	737706.744	61.95	305943.162	237681.179
DP04	705901.190	737774.784	63.25	305973.406	237749.234
DP05	705940.018	737684.067	61.87	306012.243	237658.497
DP06	705974.198	737738.847	62.37	306046.430	237713.289
California Bearing Ratio Tests					
CBR01	705885.807	737782.644	62.65	305958.020	237757.095
CBR02	705931.154	737769.103	63.22	306003.377	237743.552
CBR03	705813.172	737759.067	59.19	305885.369	237733.513
CBR04	705877.303	737744.100	62.28	305949.514	237718.543
CBR05	705918.477	737721.977	62.97	305990.697	237696.415
CBR06	705968.648	737706.274	62.21	306040.879	237680.709
CBR07	705849.844	737656.785	61.65	305922.050	237631.209
CBR08	705928.659	737662.149	61.28	306000.882	237636.575



	Site Investigations Ltd The Grange 12th Lock Road Lucan Co. Dublin T: 01 6108768 e: info@siteinvestigations.ie	Contract No:	6438	Client:	Castlethorn Construction	Legend Key ○ Locations By Type - CBR ⊕ Locations By Type - DP ◻ Locations By Type - IP
		Contract Name:	Molloy's Field	Engineer:	Barrett Mahony	
		Location:	Luttrellstown, Dublin 15	Scale:	1:1000	
		Title:	Site Plan	Drawn By:	SL	