
S.I. Ltd Contract No: 6169

Client: Drogheda Institute of Further Education
Engineer: DBFL
Contractor: Site Investigations Ltd

DIFE Changing Rooms,
The Twenties, Drogheda, Co. Louth
Site Investigation

Prepared by:

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Stephen Letch

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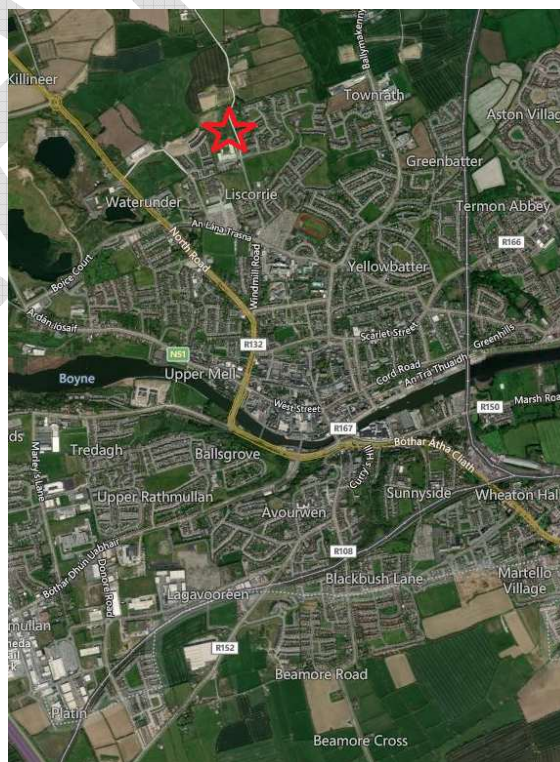
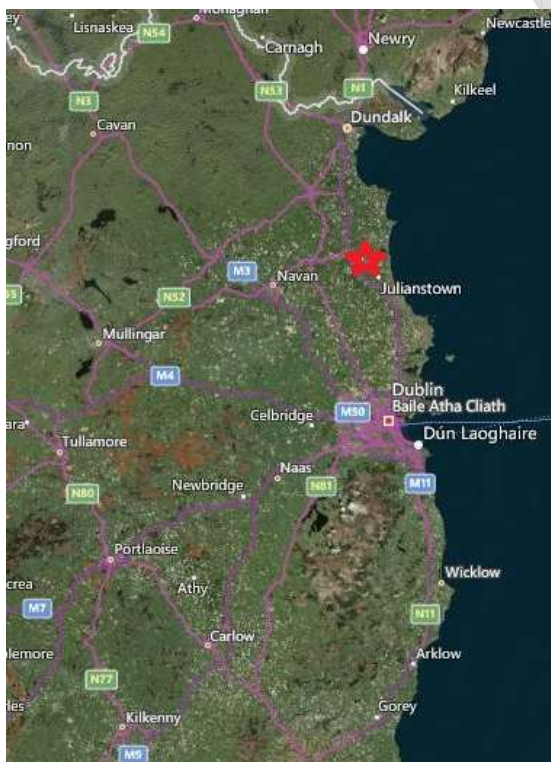
1. Introduction

On the instructions of DBFL, Site Investigations Ltd (SIL) were appointed to complete a site investigation at Drogheda Institute of Further Education, The Twenties, Drogheda, Co. Louth. The investigation was for new changing rooms and was completed on behalf of the Client, Drogheda Institute of Further Education. The investigation was started in July and completed in August 2023.

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

Drogheda Institute of Further Education is located to the north of Drogheda town centre. The map on the left shows the location of Drogheda to the north of Dublin and the second map shows the college location in the town.



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 of the following:

- 3 No. cable percussive boreholes
- 10 No. trial pits
- 2 No. soakaway tests
- 14 No. dynamic probes
- 1 No. foundation pits
- 4 No. California Bearing Ratio tests

3.1. Cable Percussive Boreholes

Cable percussion boring was undertaken at 3 No. locations using a Dando 150 rig and constructed 200mm diameter boreholes. The boreholes terminated at depths ranging from 1.80mbgl (BH03) to 4.30mbgl (BH01) after an hour and a half chiselling was completed and no further progress was made. It was not possible to collect undisturbed samples due to the granular soils encountered so bulk disturbed samples were recovered at regular intervals.

To test the strength of the stratum, Standard Penetration Tests (SPT's) were performed at 1.00m intervals in accordance with BS 1377 (1990). In soils with high gravel and cobble content it is appropriate to use a solid cone (60°) (CPT) instead of the split spoon and this was used throughout the testing. The test is completed over 450mm and the cone is driven 150mm into the stratum to ensure that the test is conducted over an undisturbed zone. The cone is then driven the remaining 300mm and the blows recorded to report the N-Value. The report shows the N-Value with the 75mm incremental blows listed in brackets (e.g., BH01 at 1.00mbgl where $N=9-(1,1/2,3,2,2)$). Where refusal of 50 blows across the test zone was encountered was achieved during testing, the penetration depth is also reported (e.g., BH01 at 4.00mbgl where $N=50-(6,7/50 \text{ for } 85\text{mm})$).

At BH02, a groundwater standpipe was installed to allow for the equalisation of the water table and long-term monitoring. These included a gravel response zone around the slotted standpipe with bentonite seals at the top of the holes to stop migration of water from the surface.

The cable percussive borehole logs are presented in Appendix 1.

3.2. Trial Pits

10 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.

The trial pit logs and photographs are presented in Appendix 2.

3.3. Soakaway Tests

At 2 No. locations, 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 3.

3.4. Dynamic Probes

At 14 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 4.

3.5. Foundation Pits

Adjacent to the existing structure, a foundation pit was excavated to investigate the depths of the wall foundations. This included hand excavating around the foundation to measure the

depth to the top, extension out from the wall and the thickness of the foundation. The pit was then photographed, backfilled with arisings and reinstated.

The foundation pit log with photographs is presented in Appendix 5.

3.6. California Bearing Ratio Tests

At 4 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. The tests are completed to BS1377: 1990: Part 4, Clause 7 'Determination of California Bearing Ratio'.

The California Bearing Ratio test results are presented in Appendix 6.

3.7. 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 10.

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:

- 10 No. Moisture contents
- 10 No. Atterberg limits
- 20 No. Particle size gradings
- 10 No. pH and sulphate content

The geotechnical laboratory test results are presented in Appendix 7.

4.2. Environmental Testing

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

- 10 No. Suite I analysis

The environmental results are presented in Appendix 8 and a Waste Classification Report in Appendix 9.

5. Ground Conditions

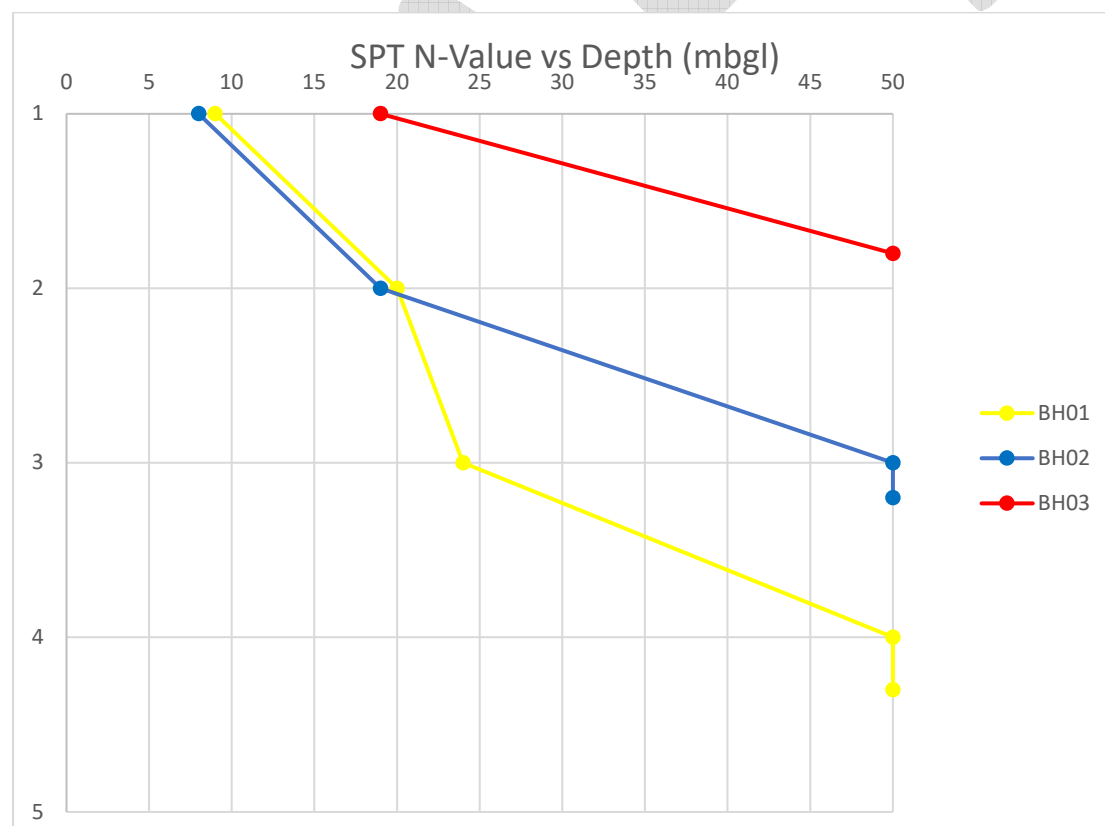
5.1. MADE GROUND

MADE GROUND was encountered across the site to a maximum depth of 0.90mbgl at TP06. The material was generally recorded as cohesive grey brown sandy slightly gravelly silty clay with cobbles. Anthropogenic material of red brick, rag, timber and plastic fragments were recorded across the site.

5.2. Overburden

The natural ground conditions are dominated by brown (slightly) sandy (slightly) gravelly silty CLAY with cobbles and boulders with granular grey silty sandy GRAVEL recorded at TP04 and TP07.

The boreholes recorded slightly different SPT N-value profiles. BH03 recorded a value of 19 at 1.00mbgl and then the borehole terminated at 1.80mbgl. BH01 and BH02 recorded lower SPT N-values of 9 and 8 respectively at 1.00mbgl, 20 and 19 at 2.00mbgl and then BH01 recorded 24 at 3.00mbgl with a refusal at BH02. The graph below shows the SPT N-values vs depth.



The laboratory tests of the cohesive soils show CLAY soils with low to intermediate plasticity indexes of 14 to 19% recorded. The particle size distribution curves were poorly sorted straight-line curves with 37% to 76% fines content in the cohesive CLAY soils.

5.3. Groundwater

Groundwater details in the boreholes and trial pits during the fieldworks are noted on the logs in Appendices 1 and 2. No groundwater ingresses were recorded in the boreholes or 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

Due to the unknown depth of foundation and no longer-term groundwater information, this analysis assumes the groundwater will not influence the construction or performance of these foundations.

MADE GROUND was encountered across the site to a maximum depth of 0.90mbgl at TP06. SIL do not recommend that narrow shallow foundations are placed on fill material due to the unknown compaction methods used during laying of man-made material. This unknown could result in softer spots and differential settlement once construction is completed. If shallow foundations are to be used and man-made soils are encountered below foundation level, then the soil should be removed and replaced with engineered fill which is compacted to the required standard.

The boreholes encountered firm to stiff brown slightly sandy slightly gravelly silty CLAY at 1.00mbgl and the SPT N-values at these locations range from 9 to 19. Using a correlation

proposed by Stroud and Butler between SPT N-values and plasticity indices, the SPT N-value can be used to calculate the undrained shear strength. With the low plasticity indexes recorded in the laboratory for the soils, this correlation is $C_u=6N$. Therefore, using the lower value of 9, this indicates that the undrained shear strength of the CLAY is 54kN/m^2 . This can be used to calculate the ultimate bearing capacity, and this has been calculated to be 293kN/m^2 . Finally, a factor of safety is applied and with a factor of 3, an allowable bearing capacity of 100kN/m^2 would be anticipated using the lowest SPT value.

The SPT N-values increase to 19 or higher at 2.00mbgl and this indicates an undrained shear strength of 114kN/m^2 , an ultimate bearing capacity of 607kN/m^2 and finally and allowable bearing capacity of 205kN/m^2 .

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 2.1. 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.

In granular soils, the N_{100} value is used to correlate the SPT N-value. The SPT N-value can then be used to calculate the allowable bearing capacity, as per Terzaghi and Peck, using the correlation of $\text{SPT N-value} \times 10 = \text{ABC}$.

The table overleaf shows the allowable bearing capacities for N_{100} values 1 to 10 at 1.00mbgl.

N_{100} Value	Cohesive Soils			Granular Soils	
	C_u	ULS	ABC	SPT N-value	ABC
1	45	248	83	2.5	25
2	60	330	110	5	50
3	75	400	135	7.5	75
4	90	480	160	10	100
5	105	555	185	12.5	125
6	120	630	210	15	150
7	135	705	235	17.5	175
8	150	780	260	20	200
9	165	855	285	22.5	225
10	180	930	310	250	250

All capacities shown are in kN/m^2 .

The probes generally recorded values of 2 or greater at 1.00mbgl although DP10 did record values of 1 to 1.40mbgl. The values of 2 indicate allowable bearing capacities of 110kN/m² so correlate with the boreholes.

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.

- The foundation is to be 1m wide.
- Foundations are to be constructed on a level formation of uniform material type (described above).
- 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/m³.
- All bearing capacity calculations allow for a settlement of 25mm.
- Based on groundwater observations this analysis assumes the groundwater will not influence the construction or performance of these foundations.

The trial pit walls generally remained stable during excavation but it would still be recommended that all excavations should be checked immediately and battered back accordingly. Regular inspection of temporary excavations should be completed during construction to ensure that all slopes are stable. Temporary support should be used on any excavation that will be left open for an extended period.

6.2. 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 in the boreholes or trial pits during the fieldworks.

There is always considerable uncertainty as to the likely rates of water ingress into excavations in cohesive soil sites 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.

6.3. Soakaway Test

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.

6.4. Pavement Design

The CBR test results in Appendix 6 indicate CBR values ranging from 2.8% to 5.9%.

The CBR samples were recovered at 0.50mbgl and 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.

6.5. Contamination

Environmental testing was carried out on ten samples from the investigation and the results are shown in Appendix 8. 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. Three samples recorded the Total Petroleum Hydrocarbons above the limit of detection but this is not in liquid phase and therefore, HP3 can be discounted.

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.

Ten 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.

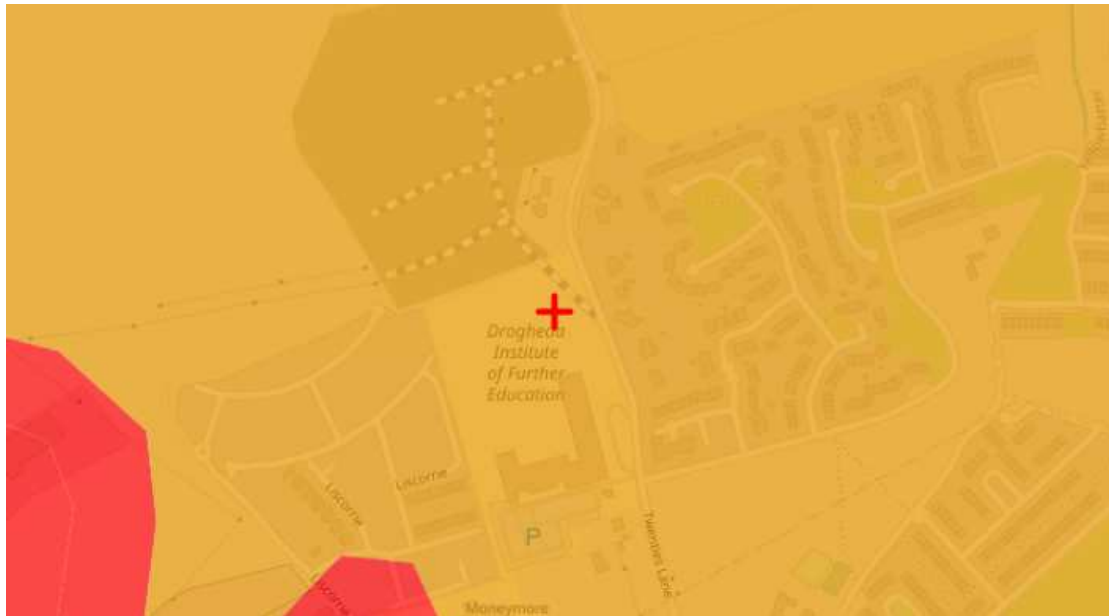
6.6. Aggressive Ground Conditions

The chemical test results in Appendix 7 indicate a general pH value between 8.21 and 8.67, 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 SO₃. The BRE Special Digest 1:2005 – '*Concrete in Aggressive Ground*' guidelines require SO₄ values and after conversion ($SO_4 = SO_3 \times 1.2$), 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. Although the map is based on residential homes, the map below shows that the site falls within the medium level of 1 in 10 homes have a possibility of high 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
Cable Percussive Borehole Logs

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Contract No: 6169		Cable Percussion Borehole Log										Borehole No: BH01							
Contract:		DIFE Changing Rooms				Easting:		708295.994		Date Started:		31/07/2023							
Location:		The Twenties, Drogheda, Co. Louth				Northing:		776800.782		Date Completed:		31/07/2023							
Client:		Drogheda Institute for Further Education				Elevation:		34.15		Drilled By:		D. Clarke							
Engineer:		DBFL				Borehole Diameter:		200mm		Status:		FINAL							
Depth (m)		Stratum Description				Legend	Level (mOD)		Samples and Insitu Tests				Water Strike	Backfill					
Scale	Depth						Scale	Depth	Depth	Type	Result								
		TOPSOIL.					34.0												
	0.40	MADE GROUND: grey brown slightly sandy slightly gravelly silty clay with high cobble content.					33.75												
	0.60						33.55												
		Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble content.																	
	1.0			1.00	B	DC01													
				1.00	C	N=9 (1,1/2,3,2,2)													
	1.5																		
	2.0			2.00	B	DC02													
				2.00	C	N=20 (3,5/5,4,5,6)													
	2.5																		
	3.0			3.00	B	DC03													
				3.00	C	N=24 (4,4/5,6,6,7)													
	3.5																		
	3.80	Stiff brown slightly sandy slightly gravelly silty CLAY with high cobble content.					30.35												
	4.0			4.00	B	DC04													
				4.00	C	50 (6,7/50 for 85mm)													
	4.20	Obstruction - possible boulders.					29.95												
	4.30	End of Borehole at 4.30m					29.85	4.30	C	50 (25 for 5mm/50 for 5mm)									
	4.5						29.5												
		Chiselling:			Water Strikes:			Water Details:			Installation:			Backfill:			Remarks:		Legend: B: Bulk D: Disturbed U: Undisturbed ES: Environmental W: Water C: Cone SPT S: Split spoon SPT
		From:	To:	Time:	Strike:	Rose:	Depth Sealed:	Date:	Hole Depth:	Water Depth:	From:	To:	Pipe:	From:	To:	Type:	Borehole terminated due to obstruction.		
		4.20	4.30	01:30				31/07	4.30	Dry				0.00	4.30	Arisings			

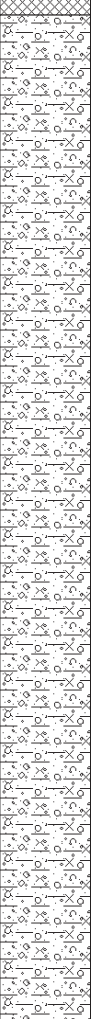
Contract No: 6169				Cable Percussion Borehole Log												Borehole No: BH02				
Contract:				DIFE Changing Rooms						Easting:		708300.921			Date Started:		01/08/2023			
Location:				The Twenties, Drogheda, Co. Louth						Northing:		776781.709			Date Completed:		01/08/2023			
Client:				Drogheda Institute for Further Education						Elevation:		34.24			Drilled By:		D. Clarke			
Engineer:				DBFL						Borehole Diameter:		200mm			Status:		FINAL			
Depth (m)		Stratum Description								Legend	Level (mOD)		Samples and Insitu Tests					Water Strike	Backfill	
Scale	Depth										Scale	Depth	Depth	Type	Result					
	0.10	TOPSOIL.										34.14								
	0.40	MADE GROUND: grey brown sandy slightly gravelly silty clay with low cobble content.										34.0								
		0.5	Firm brown slightly sandy slightly gravelly silty CLAY with low cobble content.										33.84							

[illegible]

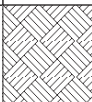
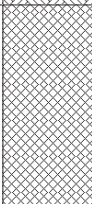
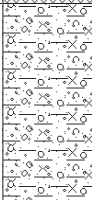
Appendix 2
Trial Pit Logs and Photographs

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Contract No: 6169		Trial Pit Log					Trial Pit No: TP01	
Contract:		DIFE Changing Rooms		Easting:	708301.701	Date:	31/07/2023	
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776800.611	Excavator:	12T Tracked Excavator	
Client:		Drogheda Institute for Further Education		Elevation:	34.27	Logged By:	M. Kaliski	
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.30 x 0.70 x 2.50	Status:	FINAL	

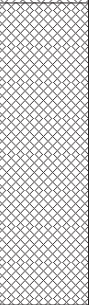
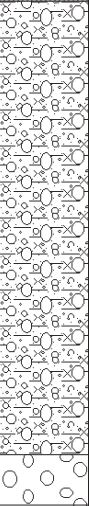
Level (mbgl)		Stratum Description	Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth			Scale:	Depth:	Depth	Type	Result	
		TOPSOIL.							
0.30		MADE GROUND: grey brown sandy slightly gravelly silty clay with low cobble content and some red brick fragments.		34.0	33.97				
0.5	0.50	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.			33.77	0.50	ES	MK01	
					33.5				
	1.0				33.0	1.00	B	MK02	
					32.5				
	2.0				32.0	2.00	B	MK03	
					31.77				
2.5	2.50	Pit terminated at 2.50m			31.5				

	Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:	Key:
	Scheduled depth.	Pit walls stable.	Dry	-	B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental

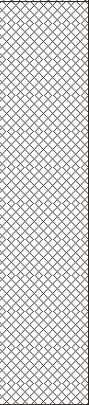
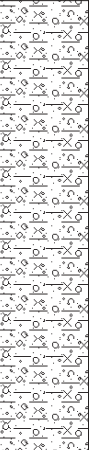
Contract No: 6169		Trial Pit Log						Trial Pit No: TP02				
Contract:		DIFE Changing Rooms		Easting:		708291.686		Date:		31/07/2023		
Location:		The Twenties, Drogheda, Co. Louth		Northing:		776802.099		Excavator:		12T Tracked Excavator		
Client:		Drogheda Institute for Further Education		Elevation:		34.13		Logged By:		M. Kaliski		
Engineer:		DBFL		Dimensions (LxWxD) (m):		3.50 x 0.70 x 2.50		Status:		FINAL		
Level (mbgl)		Stratum Description				Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth						Scale:	Depth:	Depth	Type	Result	
	0.20	TOPSOIL.					34.0					
		MADE GROUND: grey brown sandy slightly gravelly silty clay with low cobble and boulder content and some red brick fragments.						33.93				
0.5									0.50	ES	MK04	
	0.60	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.					33.5	33.53				
1.0									1.00	B	MK05	
							33.0					

Contract No: 6169		Trial Pit Log						Trial Pit No: TP03				
Contract:		DIFE Changing Rooms		Easting:		708297.379		Date:		31/07/2023		
Location:		The Twenties, Drogheda, Co. Louth		Northing:		776783.871		Excavator:		12T Tracked Excavator		
Client:		Drogheda Institute for Further Education		Elevation:		34.15		Logged By:		M. Kaliski		
Engineer:		DBFL		Dimensions (LxWxD) (m):		3.90 x 0.70 x 2.50		Status:		FINAL		
Level (mbgl)		Stratum Description				Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth						Scale:	Depth:	Depth	Type	Result	
0.10 <												

Contract No: 6169		Trial Pit Log					Trial Pit No: TP04				
Contract:		DIFE Changing Rooms		Easting:	708302.728		Date:	31/07/2023			
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776767.863		Excavator:	12T Tracked Excavator			
Client:		Drogheda Institute for Further Education		Elevation:	34.15		Logged By:	M. Kaliski			
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.60 x 0.70 x 1.90		Status:	FINAL			
Level (mbgl)		Stratum Description			Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth					Scale:	Depth:	Depth	Type	Result	
	0.20 										

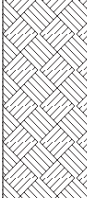
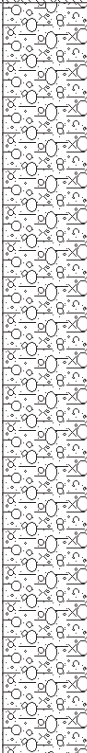
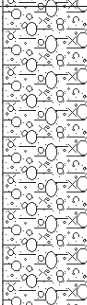
Contract No: 6169		Trial Pit Log					Trial Pit No: TP05			
Contract:		DIFE Changing Rooms		Easting:	708307.209	Date:	31/07/2023			
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776749.579	Excavator:	12T Tracked Excavator			
Client:		Drogheda Institute for Further Education		Elevation:	34.22	Logged By:	M. Kaliski			
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.50 x 0.70 x 1.80	Status:	FINAL			
Level (mbgl)		Stratum Description			Legend	Level (mOD)		Samples / Field Tests	Water Strike	
Scale:	Depth					Scale:	Depth:	Depth	Type	Result
	0.20	TOPSOIL.								
		MADE GROUND: grey brown sandy slightly gravelly silty clay with low cobble content and some red brick, rag and plastic fragments.				34.0	34.02			
	0.5							0.50	ES	MK12
	0.80	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles and boulders are angular to subangular of limestone (up to 250mm diameter).				33.5	33.42			
	1.0							1.00	B	MK13
	1.70	Obstruction - possible boulders.				32.5	32.52			
	1.80	Pit terminated at 1.80m					32.42			
	2.0									
	2.5									
		Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:	Key:				
		Obstruction - possible boulders.	Pit walls stable.	Dry	-	B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental				

Contract No: 6169		Trial Pit Log					Trial Pit No: TP06	
Contract:		DIFE Changing Rooms		Easting:	708318.771	Date:	31/07/2023	
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776754.566	Excavator:	12T Tracked Excavator	
Client:		Drogheda Institute for Further Education		Elevation:	34.56	Logged By:	M. Kaliski	
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.50 x 0.70 x 1.80	Status:	FINAL	

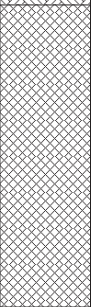
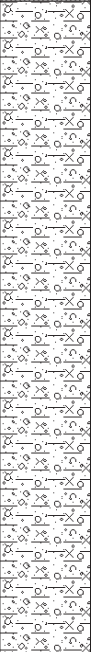
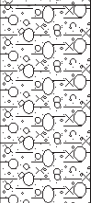
Level (mbgl)		Stratum Description	Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth			Scale:	Depth:	Depth	Type	Result	
	0.10	TOPSOIL.		34.5	34.46				
		MADE GROUND: grey brown sandy slightly gravelly silty clay with medium cobble content.							
0.5				34.0		0.50	ES	MK14	
	0.90	Firm becoming stiff brown slightly sandy gravelly silty CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.		33.66					
1.0				33.5		1.00	B	MK15	
				33.0					
1.5				32.76					
	1.80	Obstruction - possible boulders. Pit terminated at 1.80m							
2.0				32.5					
				32.0					
2.5									

	Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:	Key:
	Obstruction - possible boulders.	Pit walls stable.	Dry	-	B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental

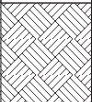
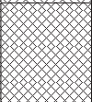
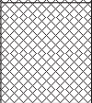
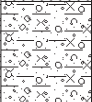
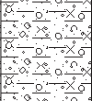
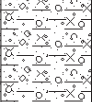
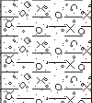
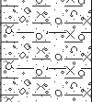
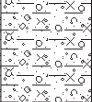
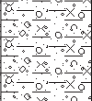
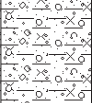
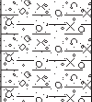
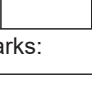
Contract No: 6169		Trial Pit Log					Trial Pit No: TP07			
Contract:		DIFE Changing Rooms		Easting:	708313.597	Date:	31/07/2023			
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776772.107	Excavator:	12T Tracked Excavator			
Client:		Drogheda Institute for Further Education		Elevation:	34.38	Logged By:	M. Kaliski			
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.60 x 0.70 x 1.90	Status:	FINAL			
Level (mbgl)		Stratum Description			Legend	Level (mOD)		Samples / Field Tests		Water Strike
Scale:	Depth					Scale:	Depth:	Depth	Type	Result
		TOPSOIL.								
	0.20	MADE GROUND: grey brown sandy slightly gravelly silty clay with low cobble content and some red brick fragments.				34.18				
0.5						34.0	0.50	ES	MK16	
	0.60	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.				33.78				
						33.5				
1.0							1.00	B	MK17	
						33.0				
						32.78				
1.5										
	1.60	Grey silty sandy fine to coarse, angular to subangular GRAVEL of limestone with high cobble content. Sand is fine to coarse. Cobbles are angular to subangular of limestone.				32.5				
						32.48				
1.90		Obstruction - possible boulders.								
2.0		Pit terminated at 1.90m								

Contract No: 6169		Trial Pit Log					Trial Pit No: TP08				
Contract:		DIFE Changing Rooms		Easting:	708308.916	Date:	31/07/2023				
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776788.437	Excavator:	12T Tracked Excavator				
Client:		Drogheda Institute for Further Education		Elevation:	34.34	Logged By:	M. Kaliski				
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.50 x 0.70 x 2.50	Status:	FINAL				
Level (mbgl)		Stratum Description			Legend	Level (mOD)		Samples / Field Tests		Water Strike	
Scale:	Depth					Scale:	Depth:	Depth	Type		Result
0.40		TOPSOIL.				34.0	33.94	0.50	ES	MK18	
0.5		Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble and boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles and boulders are angular to subangular of limestone (up to 750mm diameter).				33.5					
1.0					33.0		1.00	B	MK19		
1.5					32.5						
1.90					32.44						
2.0		Stiff brown slightly sandy slightly gravelly silty CLAY with high cobble and low boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles and boulders are angular to subangular of limestone (up to 750mm diameter).				32.0	31.84	2.00	B	MK20	
2.5		Pit terminated at 2.50m				31.5					
		Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:		Key:				
		Scheduled depth.	Pit walls stable.	Dry	-		B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental				

Contract No: 6169		Trial Pit Log					Trial Pit No: TP09	
Contract:		DIFE Changing Rooms		Easting:	708321.689	Date:	31/07/2023	
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776770.188	Excavator:	12T Tracked Excavator	
Client:		Drogheda Institute for Further Education		Elevation:	34.45	Logged By:	M. Kaliski	
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.60 x 0.70 x 2.50	Status:	FINAL	

Level (mbgl)		Stratum Description	Legend	Level (mOD)		Samples / Field Tests			Water Strike
Scale:	Depth			Scale:	Depth:	Depth	Type	Result	
		TOPSOIL.							
	0.20	MADE GROUND: grey brown slightly sandy gravelly silty clay with medium cobble content and some plastic fragments.			34.25				
	0.5						0.50	ES	MK21
	0.80								
	1.0	Firm becoming stiff brown sandy slightly gravelly silty CLAY with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.			33.65				
						33.5			
						33.0			
						32.5			
	2.10	Stiff brown slightly sandy slightly gravelly silty CLAY with high cobble and low boulder content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles and boulders are angular to subangular of limestone (up to 250mm diameter).			32.35				
						32.0			
	2.50	Pit terminated at 2.50m			31.95	2.50	B	MK23	
					31.5				

	Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:	Key:
	Scheduled depth.	Pit walls stable.	Dry	-	B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental

Contract No: 6169		Trial Pit Log					Trial Pit No: TP10				
Contract:		DIFE Changing Rooms		Easting:	708338.834	Date:	31/07/2023				
Location:		The Twenties, Drogheda, Co. Louth		Northing:	776722.805	Excavator:	12T Tracked Excavator				
Client:		Drogheda Institute for Further Education		Elevation:	34.54	Logged By:	M. Kaliski				
Engineer:		DBFL		Dimensions (LxWxD) (m):	3.20 x 0.70 x 2.00	Status:	FINAL				
Level (mbgl)		Stratum Description			Legend	Level (mOD)		Samples / Field Tests	Water Strike		
Scale:	Depth					Scale:	Depth:	Depth		Type	Result
		TOPSOIL.				34.5					
	0.20	MADE GROUND: grey silty sandy gravel with medium cobble content.				34.34					
	0.40	MADE GROUND: grey brown slightly sandy gravelly silty clay with low cobble content and some red brick and timber fragments.				34.14					
0.5	0.60	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with medium cobble content. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular of limestone. Cobbles are angular to subangular of limestone.				34.0		0.50	ES	MK24	
						33.94					
1.0											
											
											
1.5											
											
											
2.0											
											
											
											
2.5	2.50	Pit terminated at 2.00m				32.5		2.00	B	MK26	
						32.04					
						32.0					
		Termination:	Pit Wall Stability:	Groundwater Rate:	Remarks:	Key:					
		Obstruction - possible boulders.	Pit walls stable.	Dry	-	B = Bulk disturbed D = Small disturbed CBR = Undisturbed CBR ES = Environmental					

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



TP08 Sidewall



TP08 Spoil



TP09 Sidewall



TP09 Spoil



TP10 Sidewall



TP10 Spoil



Appendix 3
Soakaway Test Results and Photographs

DRAFT

SOAKAWAY TEST



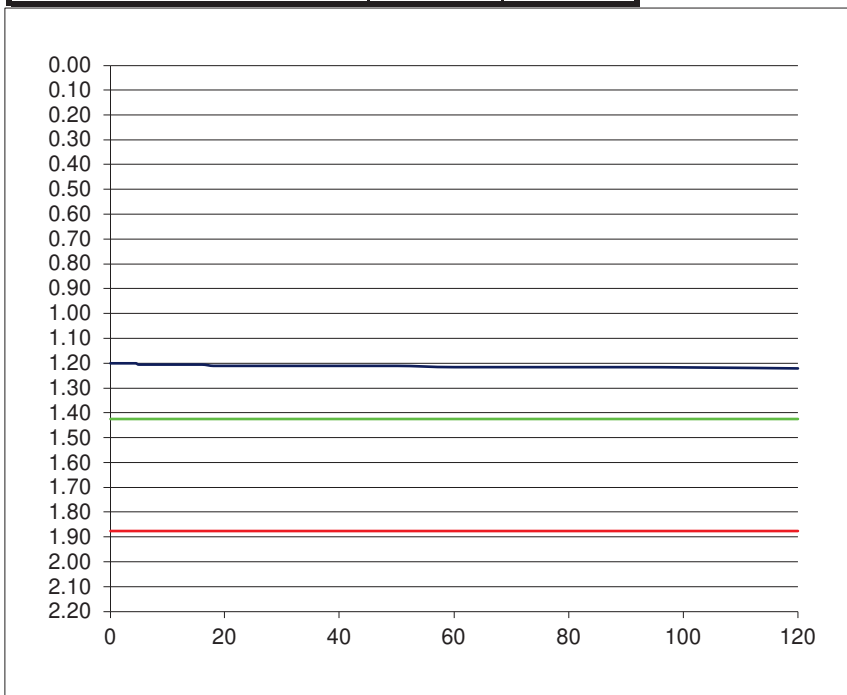
Project Reference:	6169
Contract name:	DIFE Changing Rooms
Location:	The Twenties, Drogheda, Co. Louth
Test No:	IT01
Date:	31/07/2023

Ground Conditions

From	To	
0.00	0.20	TOPSOIL.
0.30	2.10	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble and boulder content.

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

Pit Dimensions (m)		
Length (m)	3.20	m
Width (m)	0.70	m
Depth	2.10	m
Water		
Start Depth of Water	1.20	m
Depth of Water	0.90	m
75% Full	1.43	m
25% Full	1.88	m
75%-25%	0.45	m
Volume of water (75%-25%)	1.01	m ³
Area of Drainage	16.38	m ²
Area of Drainage (75%-25%)	5.75	m ²
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



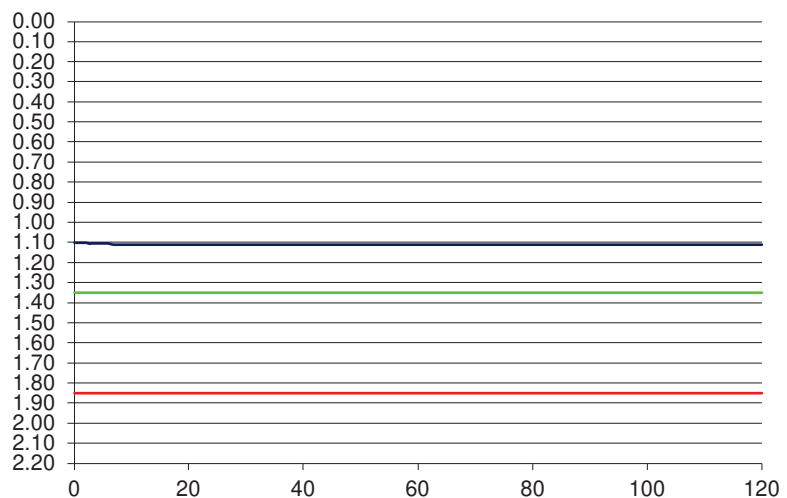
Project Reference:	6169
Contract name:	DIFE Changing Rooms
Location:	The Twenties, Drogheda, Co. Louth
Test No:	IT02
Date:	31/07/2023

Ground Conditions

From	To	
0.00	0.05	MADE GROUND: grey silty sandy gravel with high cobble content.
0.05	0.20	MADE GROUND: brown sandy slightly gravelly silty clay.
0.20	0.70	MADE GROUND: grey brown silty sandy gravel with medium cobble content.
0.70	0.90	MADE GROUND: grey brown slightly sandy slightly gravelly silty clay with low cobble content and some red brick fragments.
0.90	2.10	Firm becoming stiff brown slightly sandy slightly gravelly silty CLAY with low cobble and boulder content.

Elapsed Time (mins)	Fall of Water (m)
0	1.10
0.5	1.10
1	1.10
1.5	1.10
2	1.10
2.5	1.11
3	1.11
3.5	1.11
4	1.11
4.5	1.11
5	1.11
6	1.11
7	1.11
8	1.11
9	1.11
10	1.11
12	1.11
14	1.11
16	1.11
18	1.11
20	1.11
25	1.11
30	1.11
40	1.11
50	1.11
60	1.11
75	1.11
90	1.11
120	1.11

Pit Dimensions (m)		
Length (m)	3.20	m
Width (m)	0.70	m
Depth	2.10	m
Water		
Start Depth of Water	1.10	m
Depth of Water	1.00	m
75% Full	1.35	m
25% Full	1.85	m
75%-25%	0.50	m
Volume of water (75%-25%)	1.12	m3
Area of Drainage	16.38	m2
Area of Drainage (75%-25%)	6.14	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

IT01 Sidewall



IT01 Spoil



IT02 Sidewall



IT02 Spoil

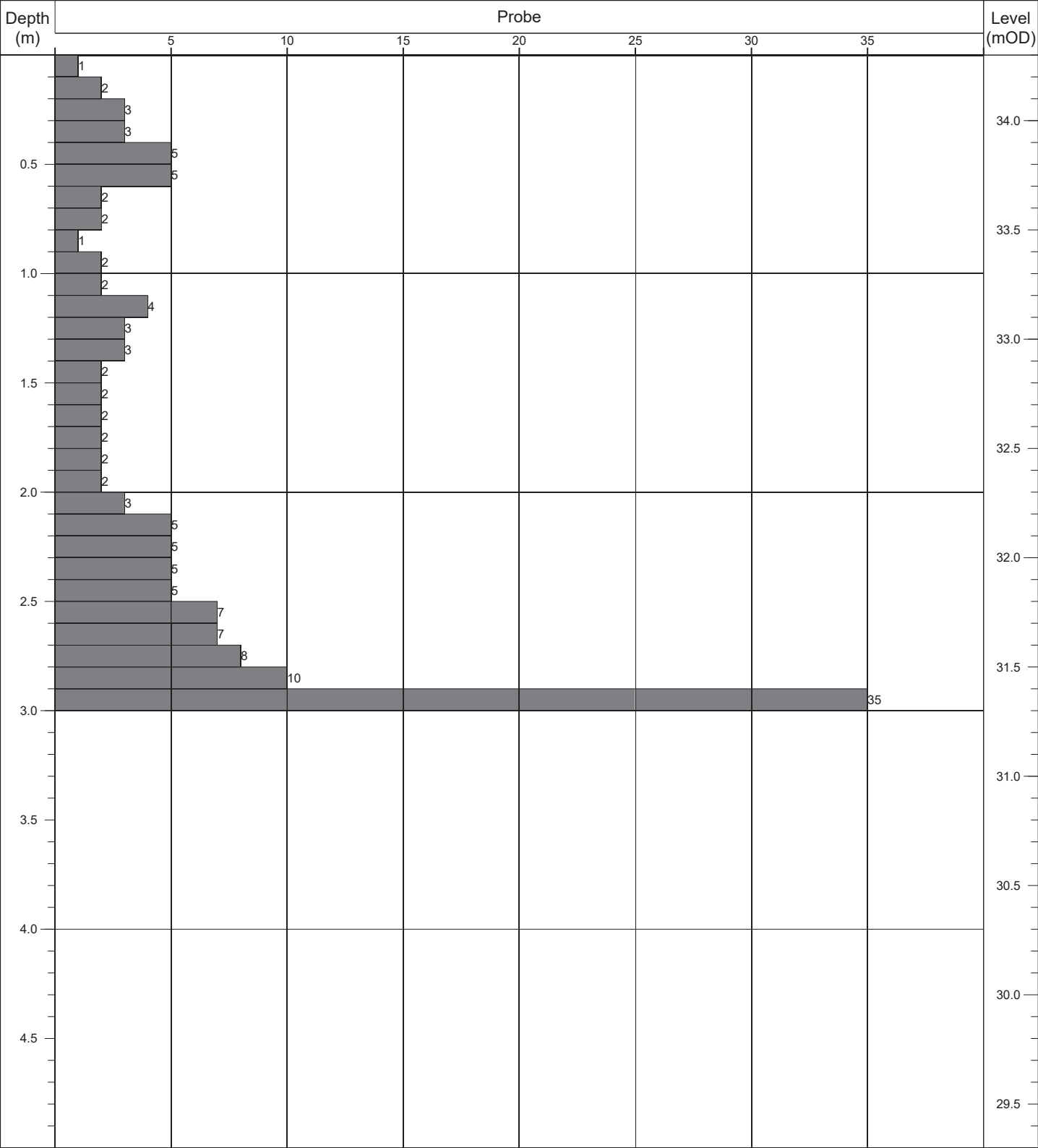


Appendix 4

Dynamic Probe Logs

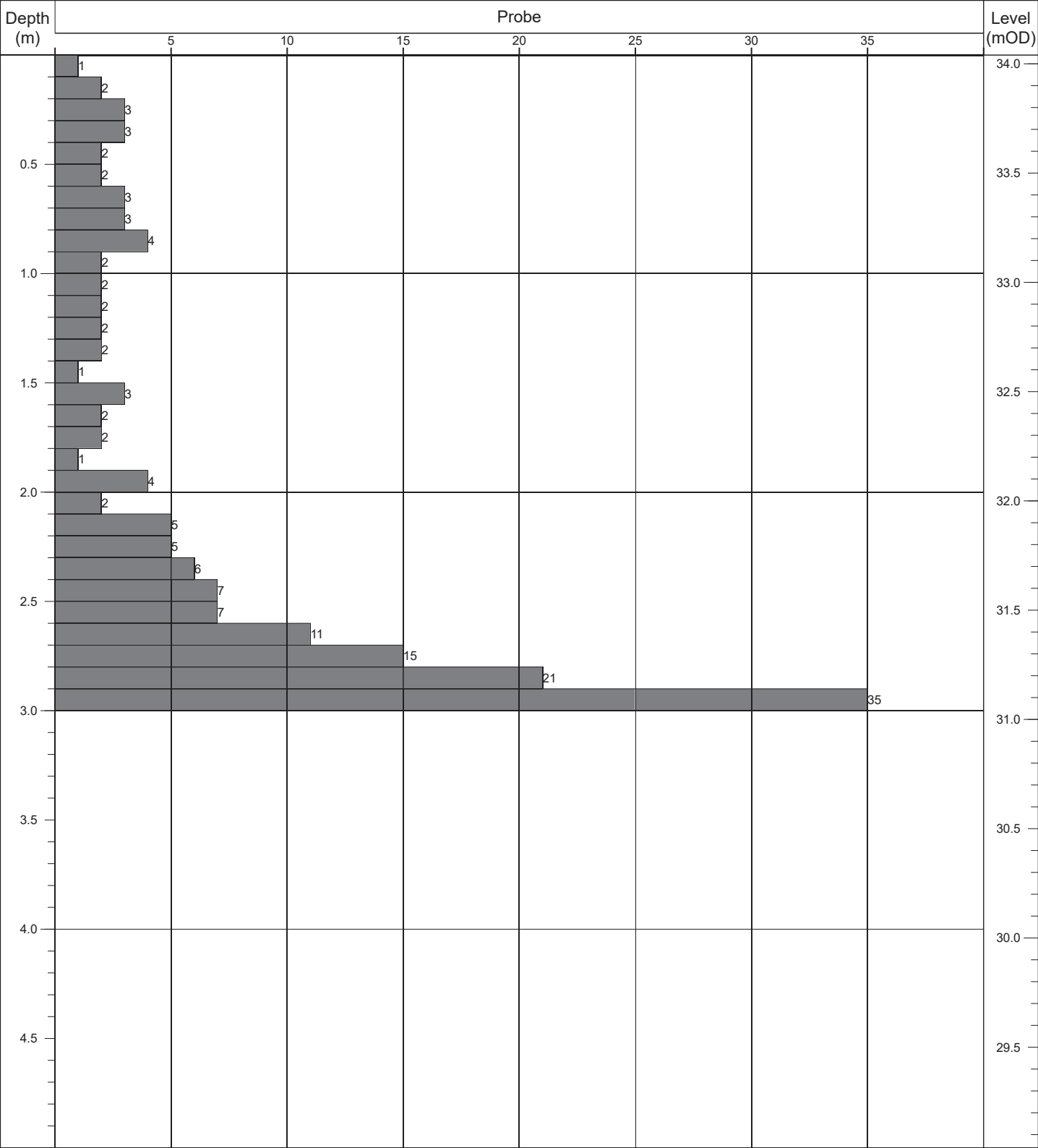
DRAFT

Contract No: 6169	Dynamic Probe Log				Probe No: DP01
Contract:	DIFE Changing Rooms	Easting:	708303.112	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776797.178	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.30	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



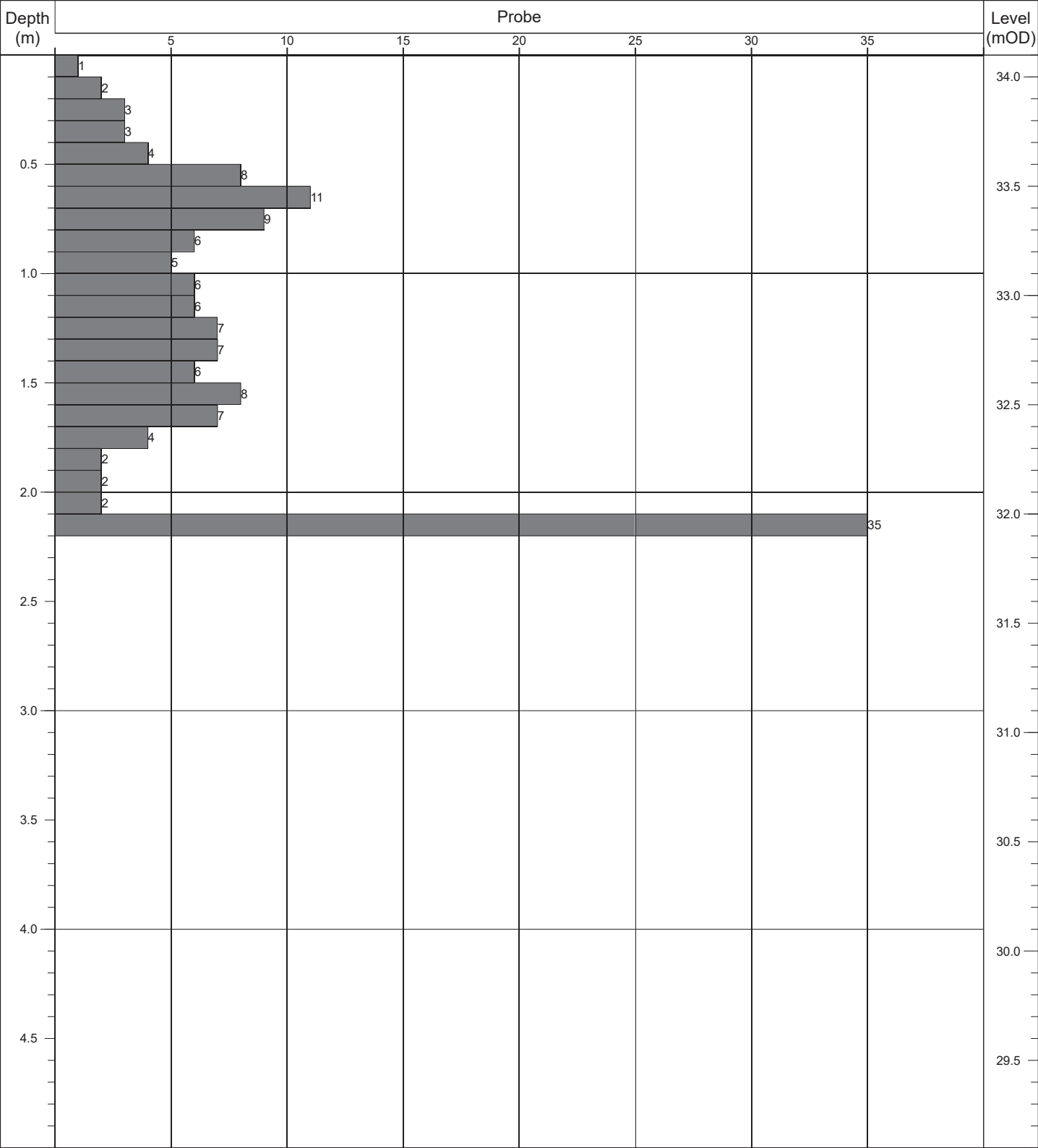
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	3.00m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP02
Contract:	DIFE Changing Rooms	Easting:	708292.892	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776798.090	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.04	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



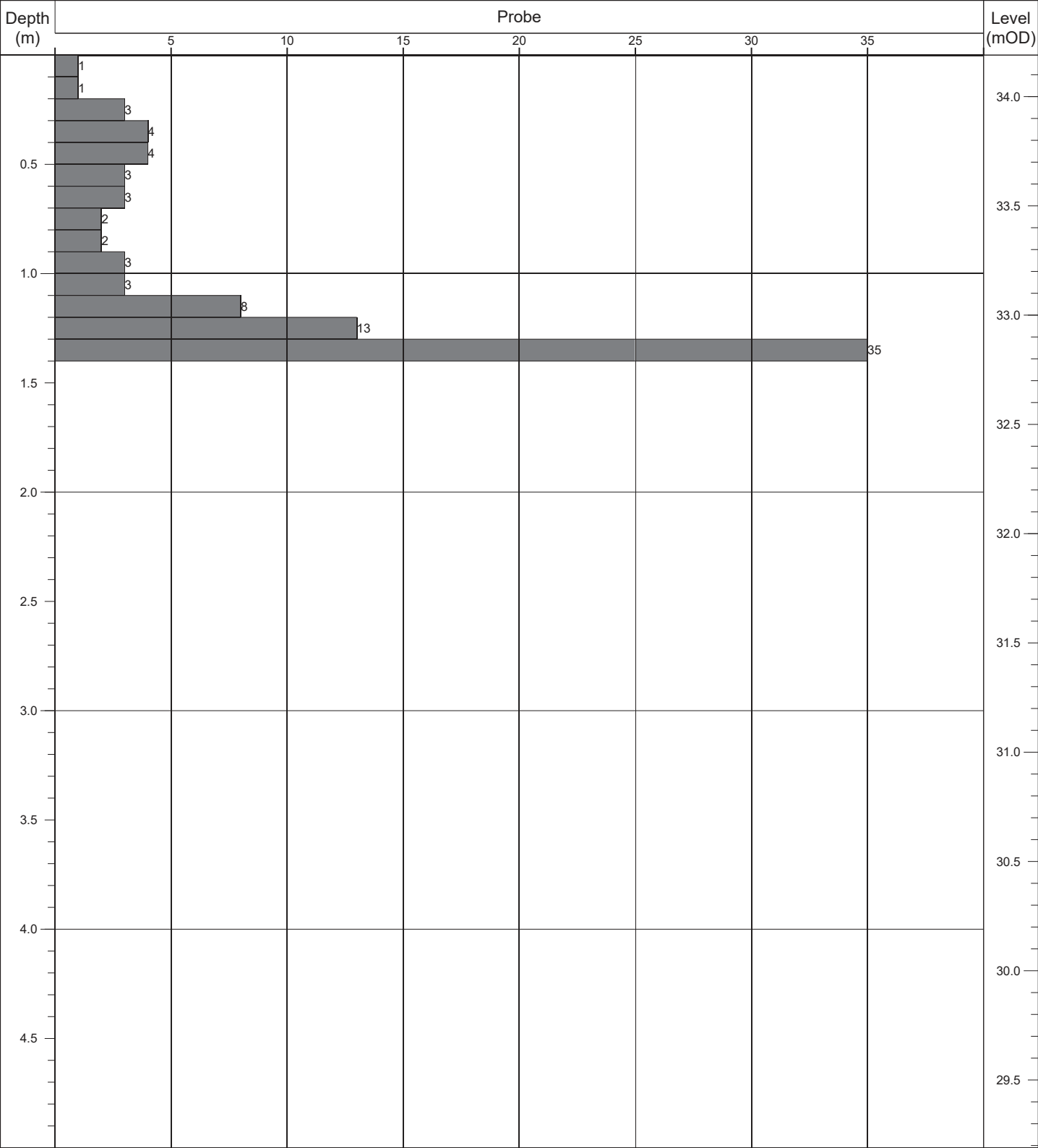
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	3.00m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP03
Contract:	DIFE Changing Rooms	Easting:	708297.662	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776782.455	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.10	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



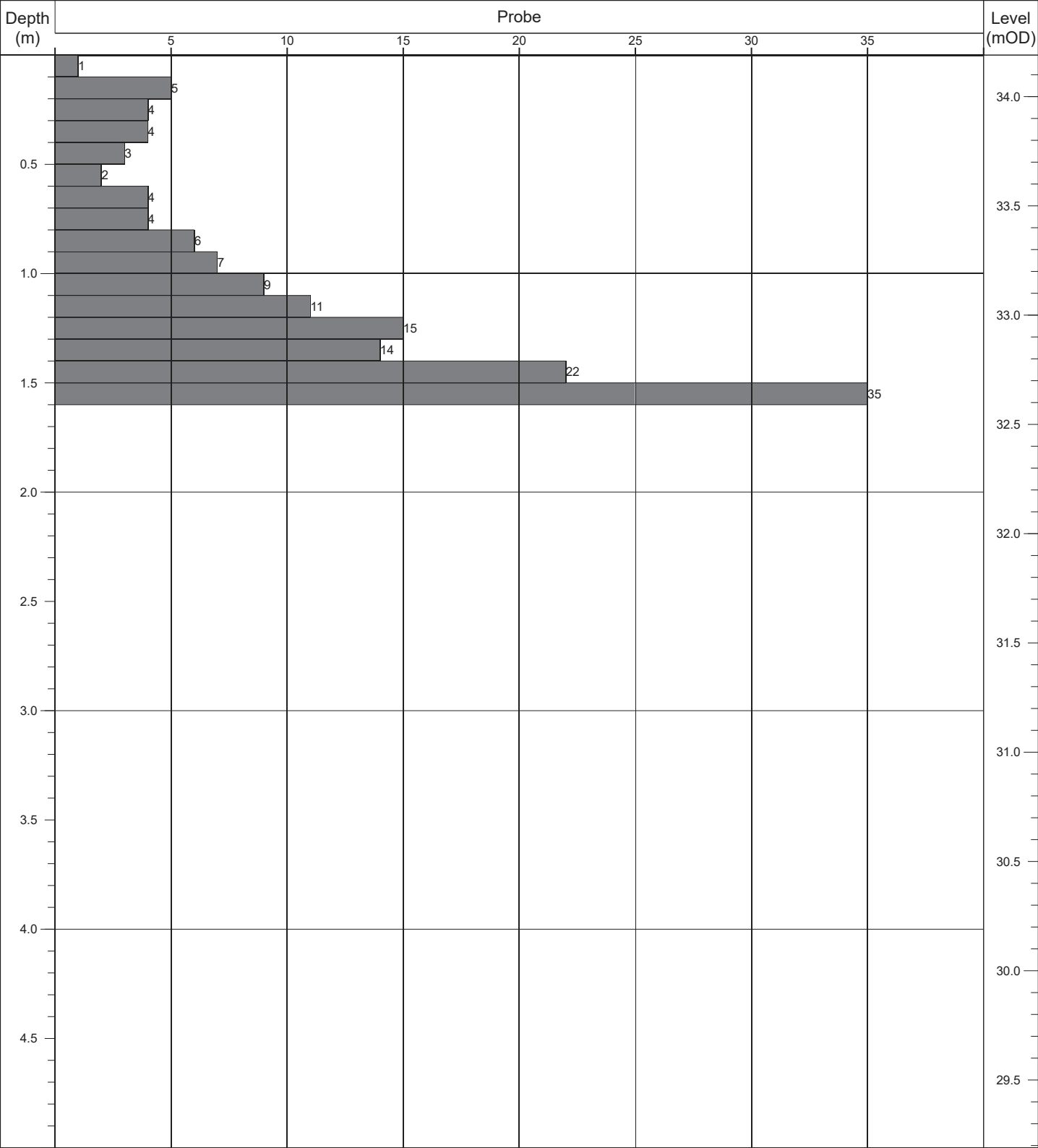
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.20m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP04
Contract:	DIFE Changing Rooms	Easting:	708303.037	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776766.419	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.19	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



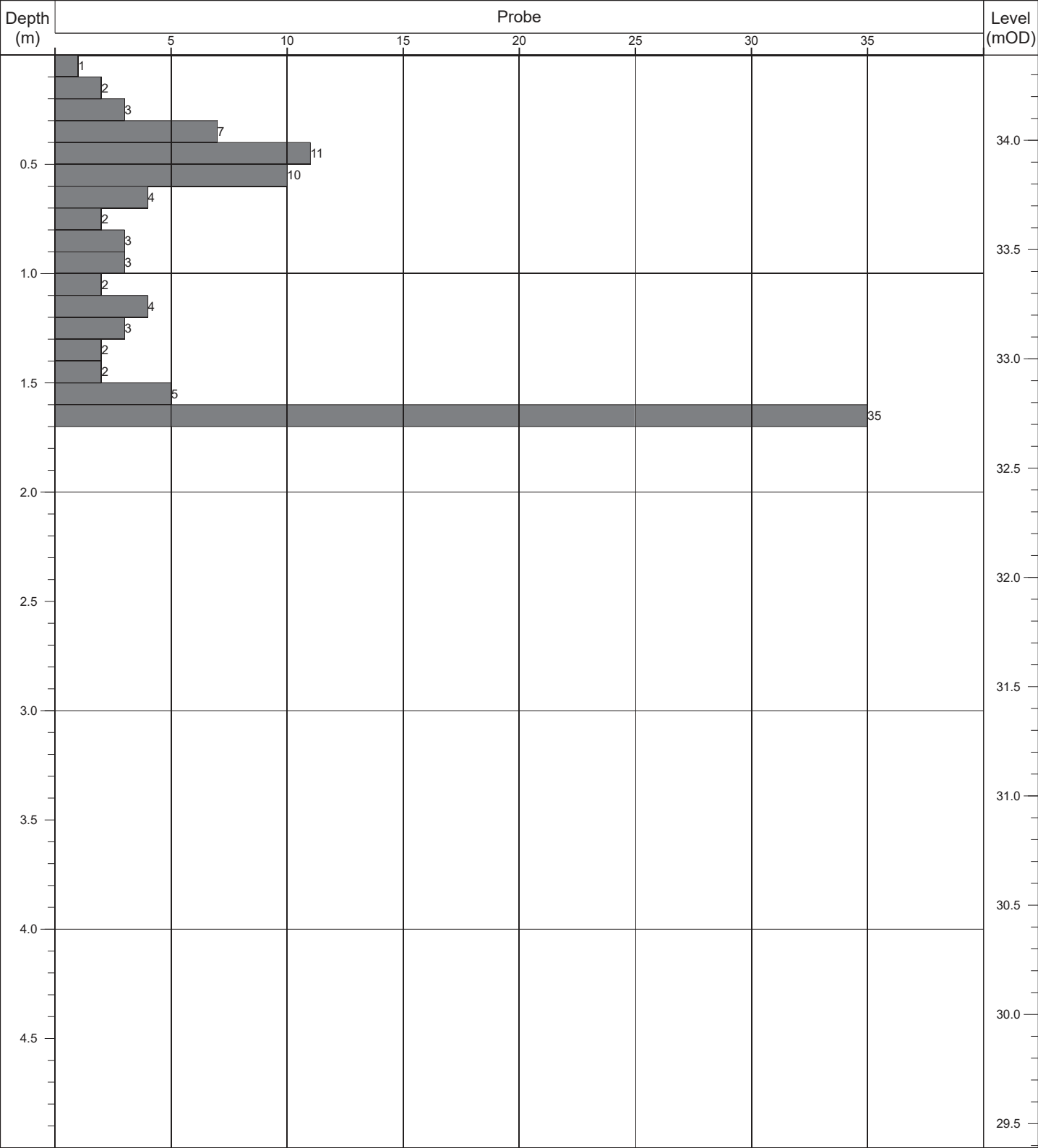
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.40m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP05
Contract:	DIFE Changing Rooms	Easting:	708306.331	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776753.992	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.19	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



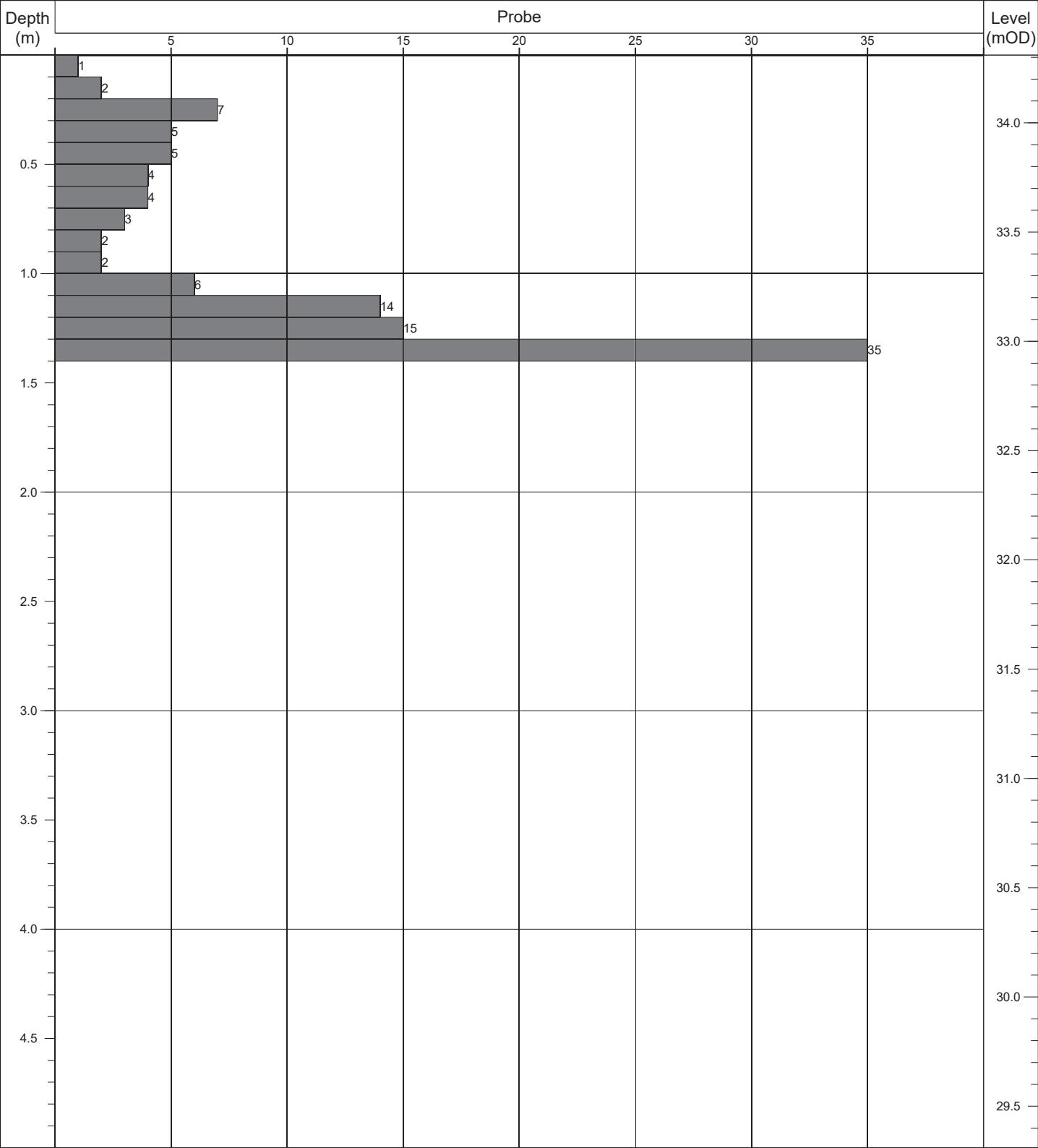
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.60m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP06
Contract:	DIFE Changing Rooms	Easting:	708316.316	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776755.972	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.39	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



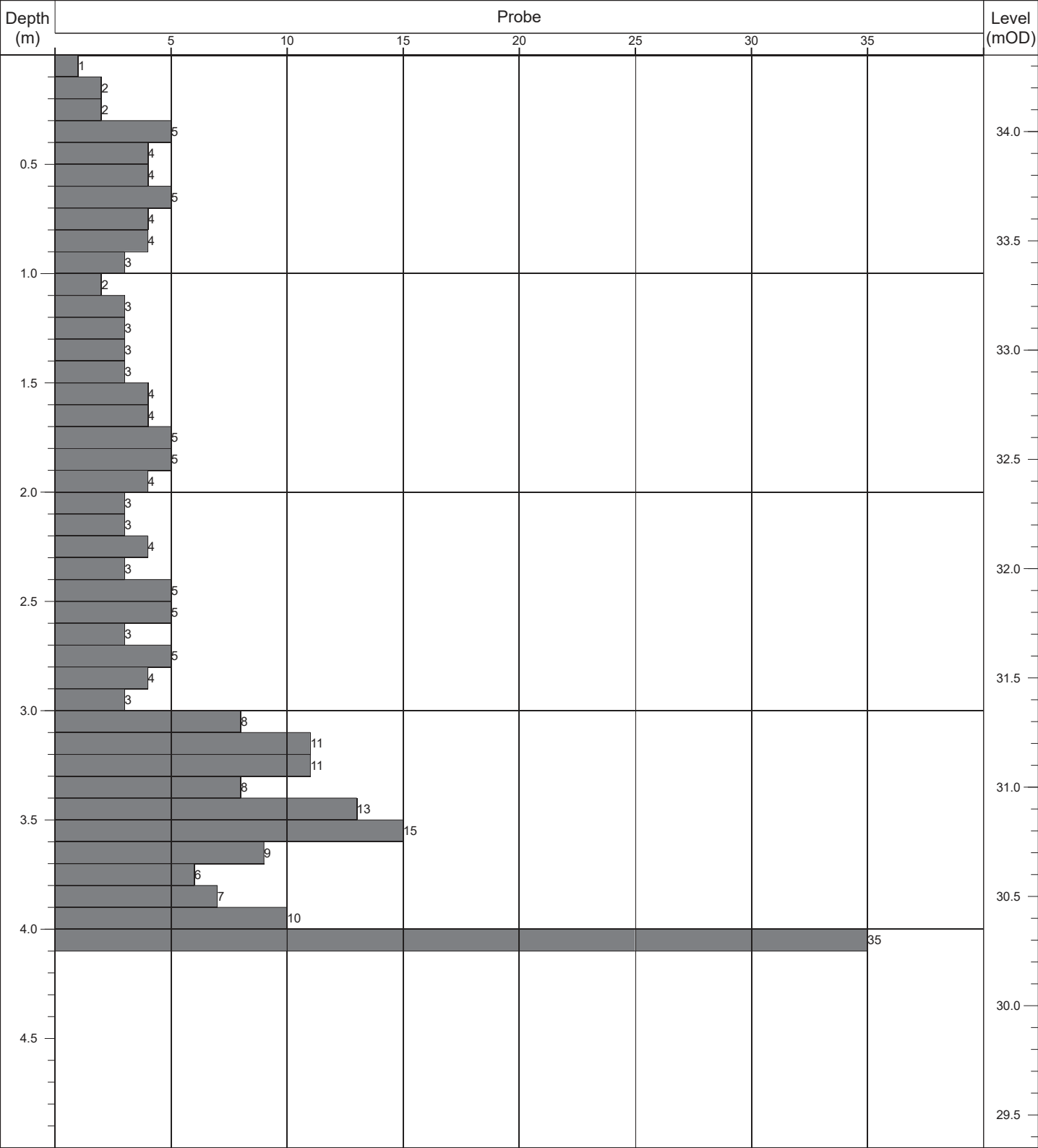
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.70m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP07
Contract:	DIFE Changing Rooms	Easting:	708312.721	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776773.785	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.31	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



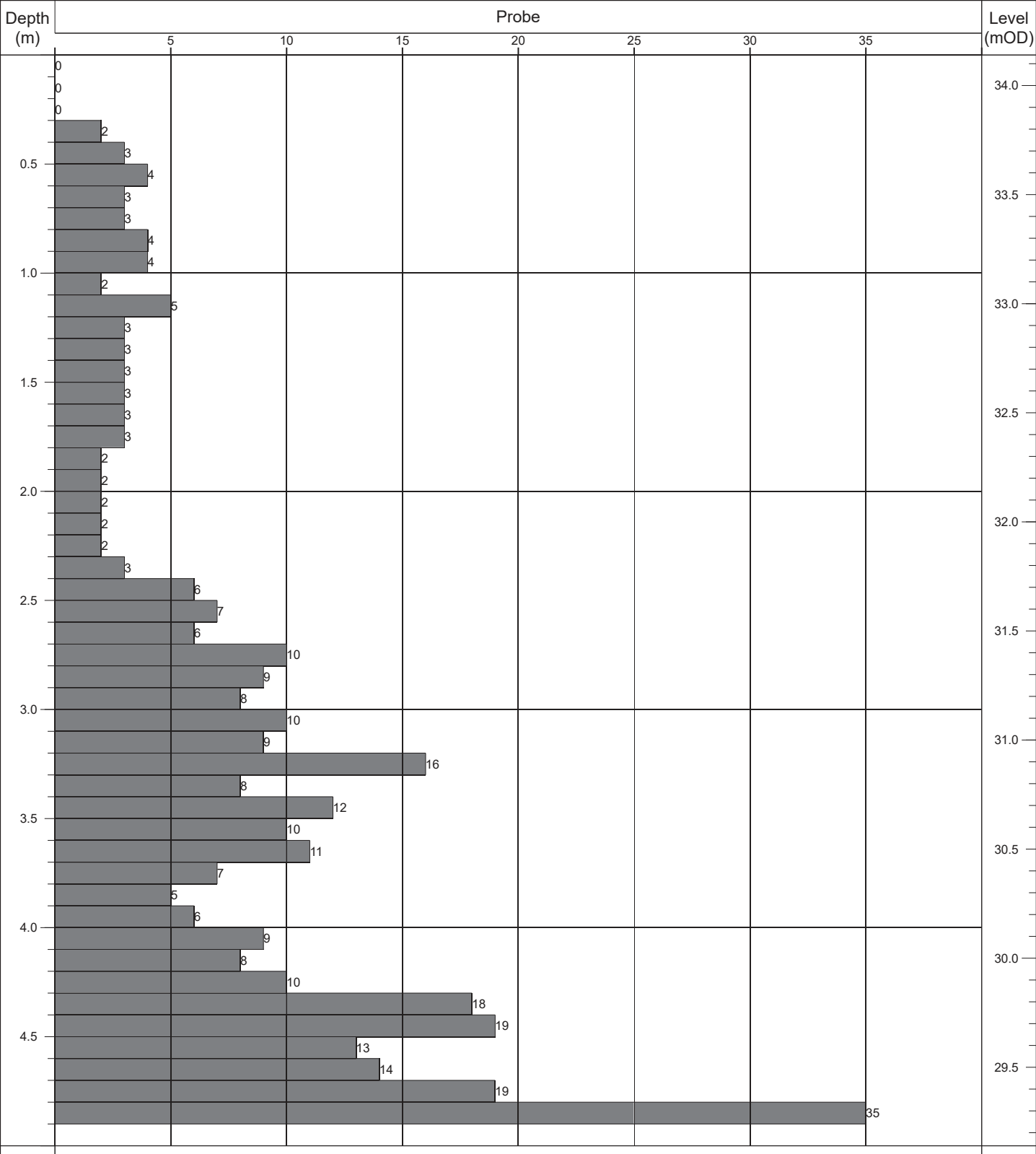
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.40m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP08
Contract:	DIFE Changing Rooms	Easting:	708310.208	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776785.070	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.35	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



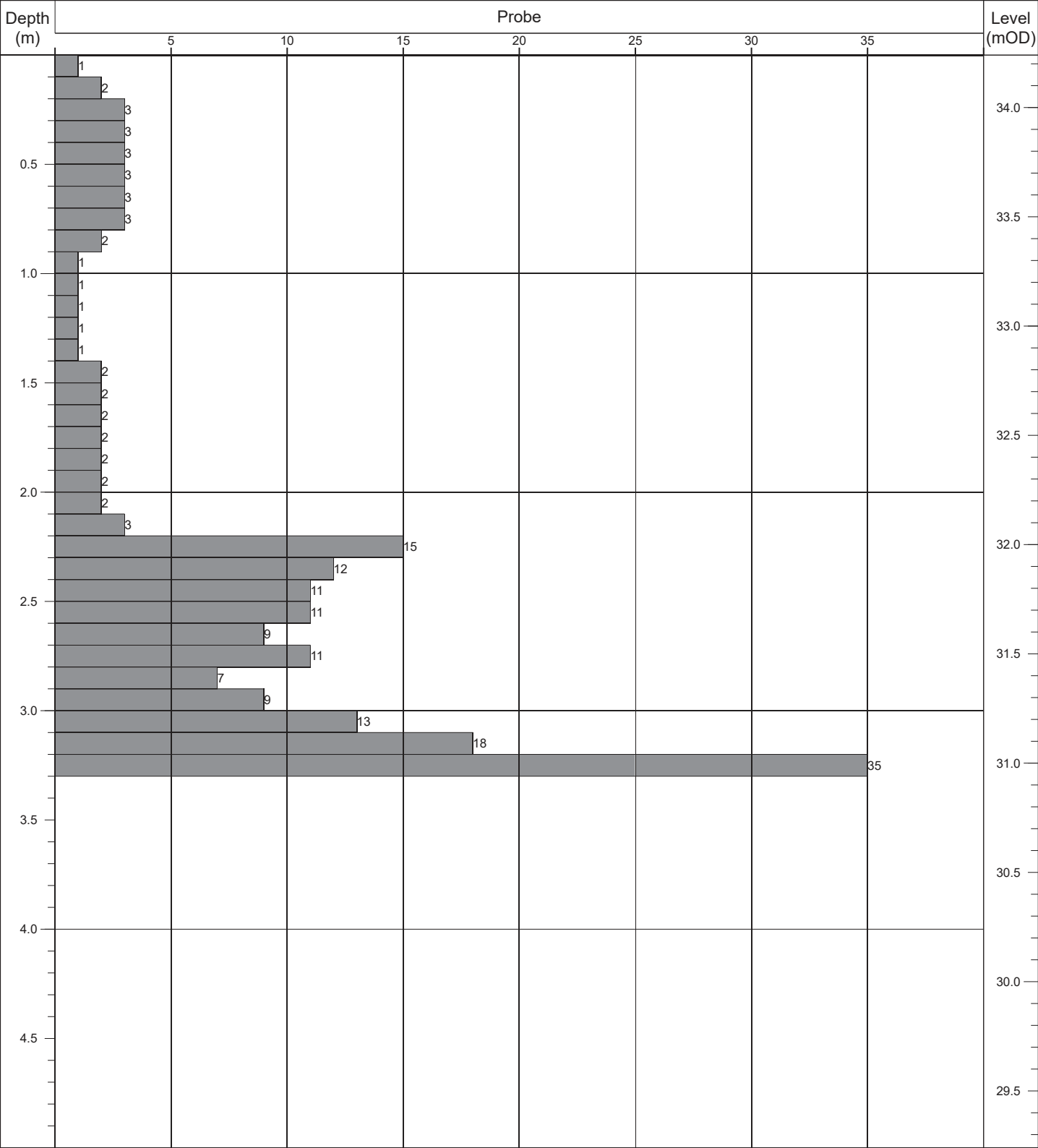
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	4.10m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP09
Contract:	DIFE Changing Rooms	Easting:	708293.984	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776804.793	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.14	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



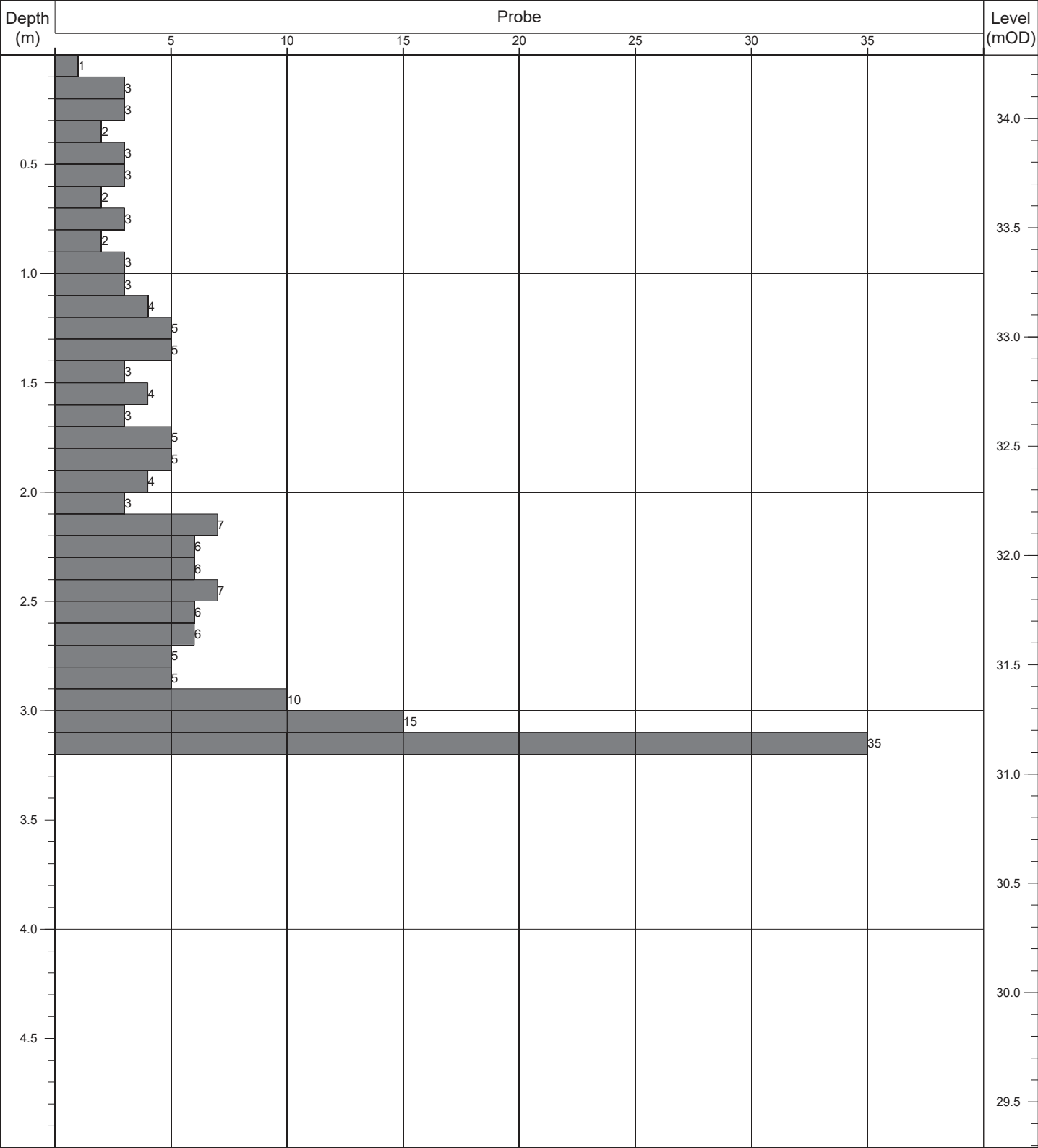
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	4.90m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP10
Contract:	DIFE Changing Rooms	Easting:	708298.929	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776793.694	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.24	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



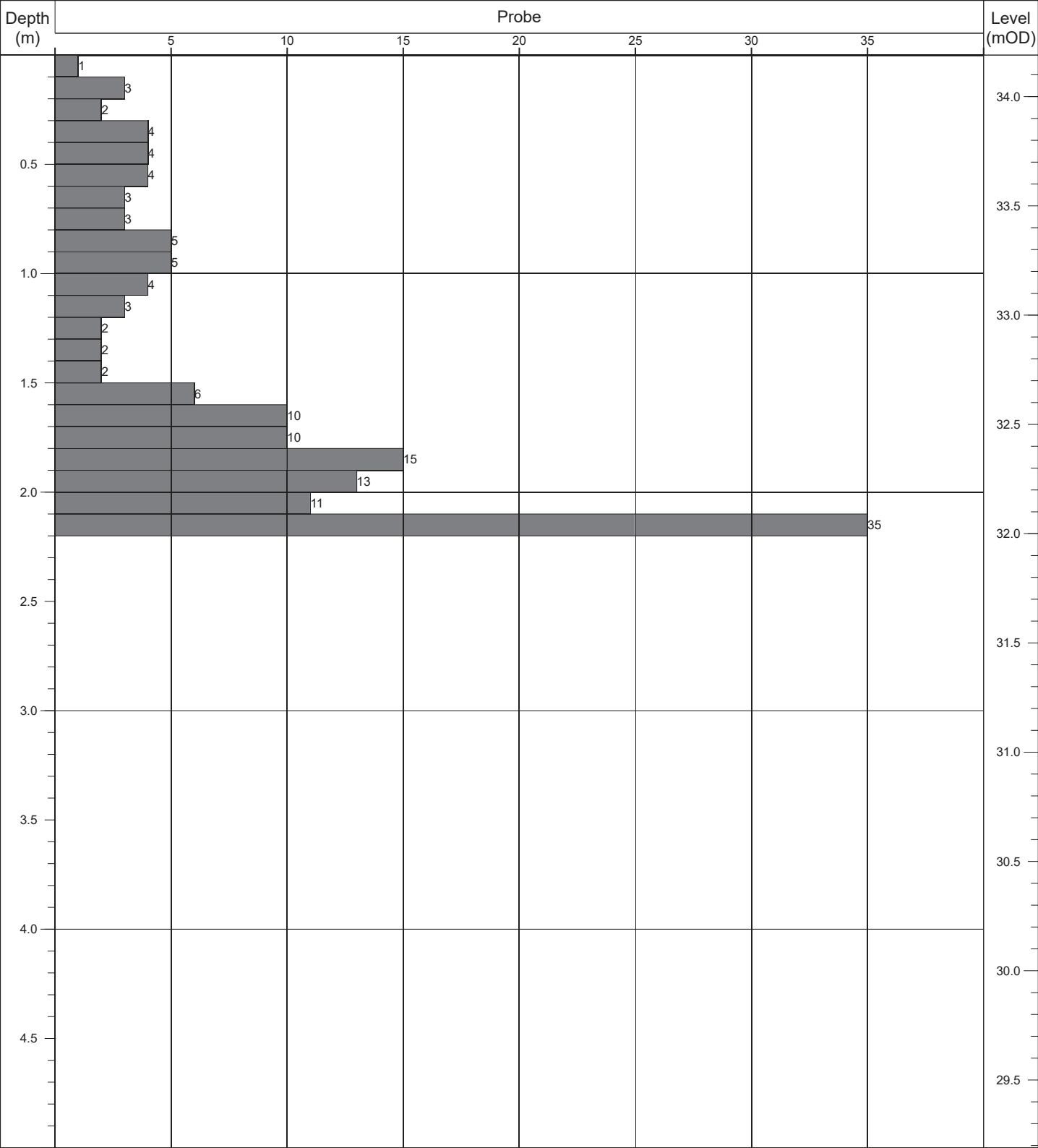
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	3.30m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP11
Contract:	DIFE Changing Rooms	Easting:	708303.006	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776784.358	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.29	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



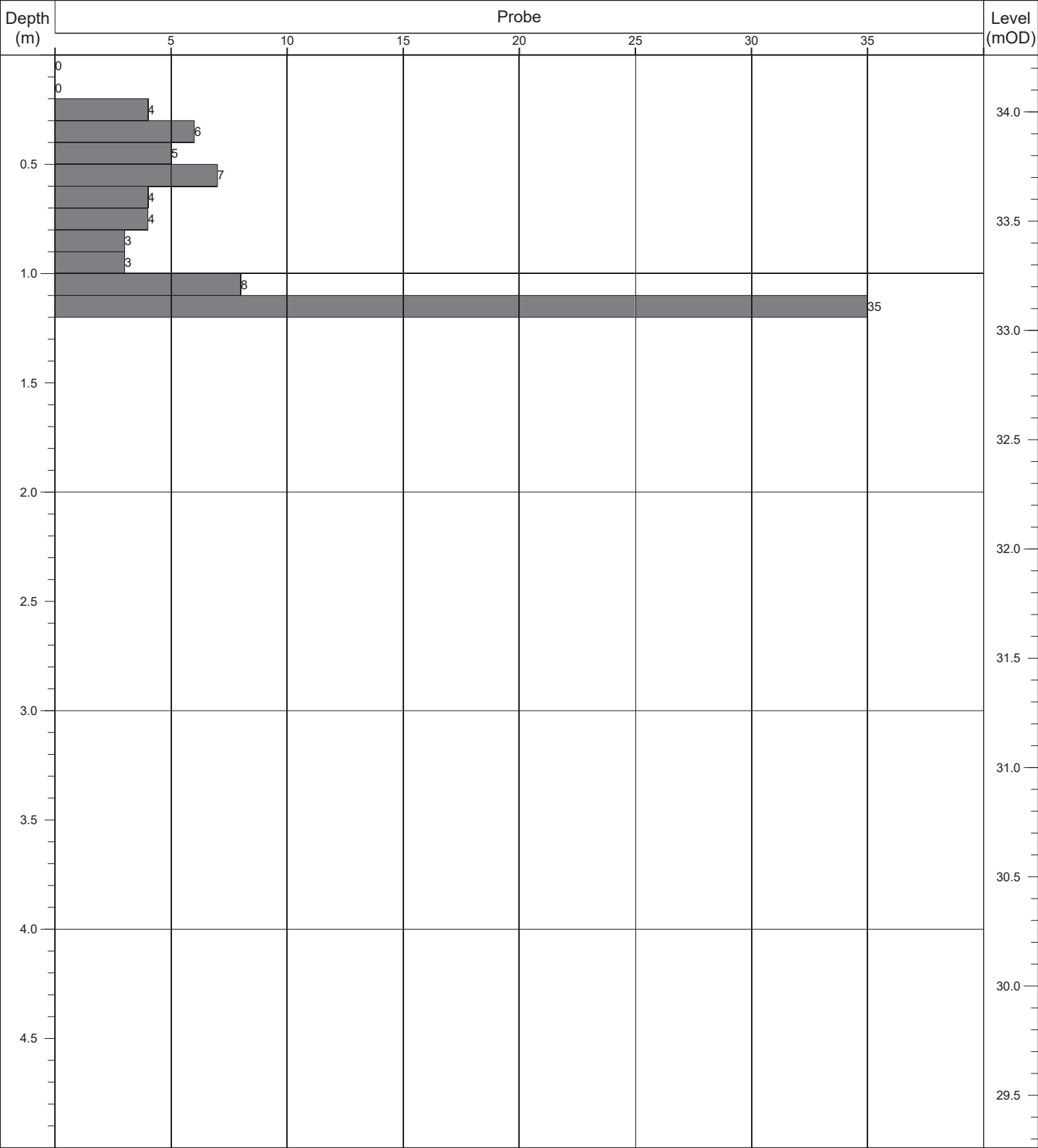
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	3.20m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP12
Contract:	DIFE Changing Rooms	Easting:	708305.328	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776776.034	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.19	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



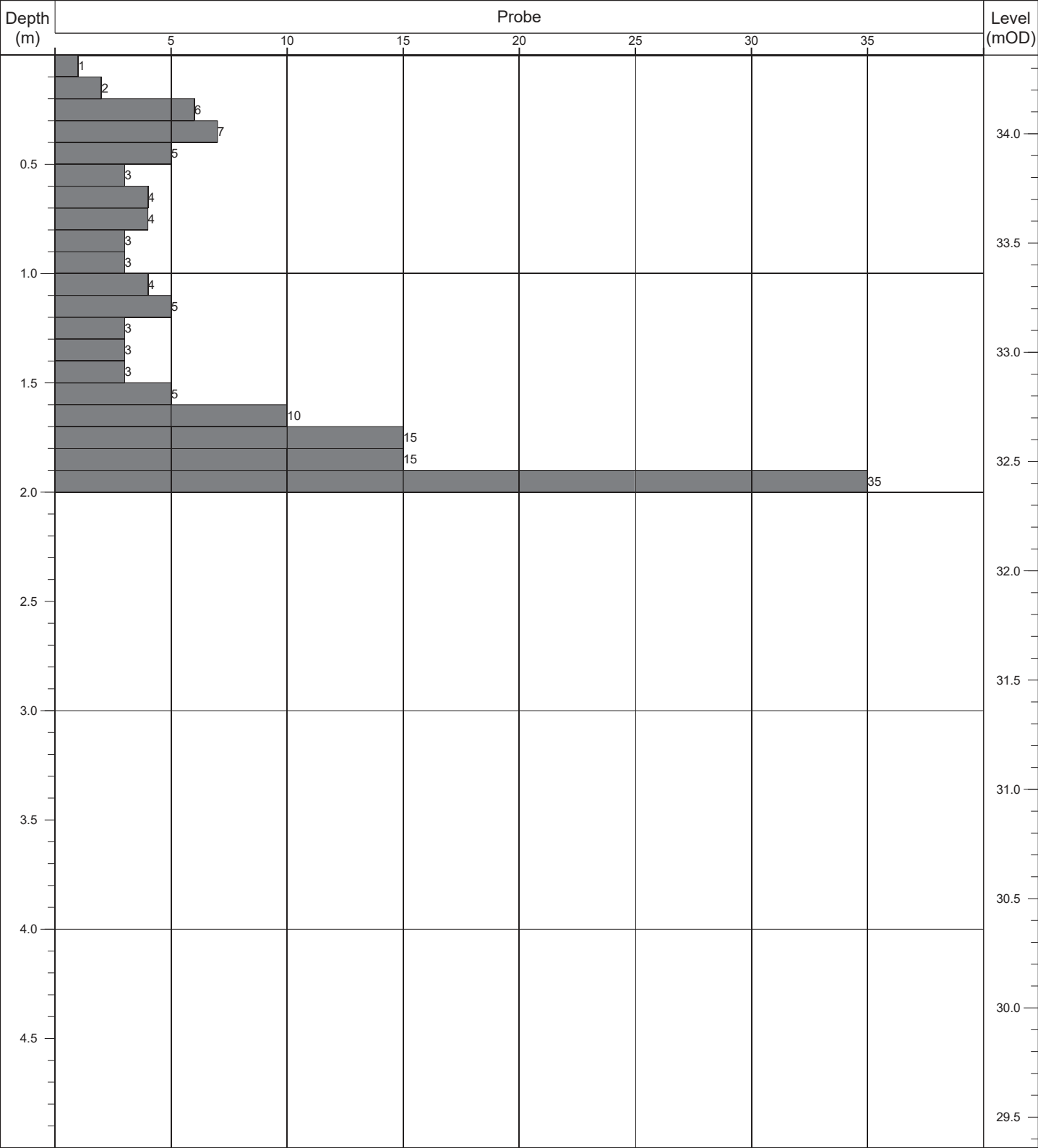
	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.20m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP13
Contract:	DIFE Changing Rooms	Easting:	708309.712	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776761.390	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.26	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	1.20m	Obstruction.	DPH	50kg	500mm	

Contract No: 6169	Dynamic Probe Log				Probe No: DP14
Contract:	DIFE Changing Rooms	Easting:	708313.513	Date Started:	04/08/2023
Location:	The Twenties, Drogheda, Co. Louth	Northing:	776748.447	Logged By:	D. McEoin
Client:	Drogheda Institute for Further Education	Elevation:	34.36	Scale:	1:25
Engineer:	DBFL	Rig Type:	Competitor 130	Sheet No:	Sheet 1 of 1



	Termination:		Probe Details:			Remarks:
	Depth:	Reason:	Type:	Mass	Drop:	-
	2.00m	Obstruction.	DPH	50kg	500mm	

Appendix 5
Foundation Pit Log

DRAFT

Foundation Pits

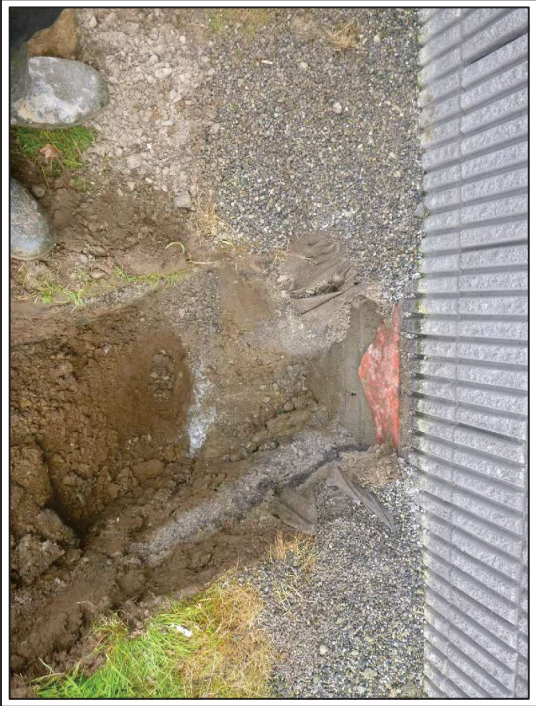
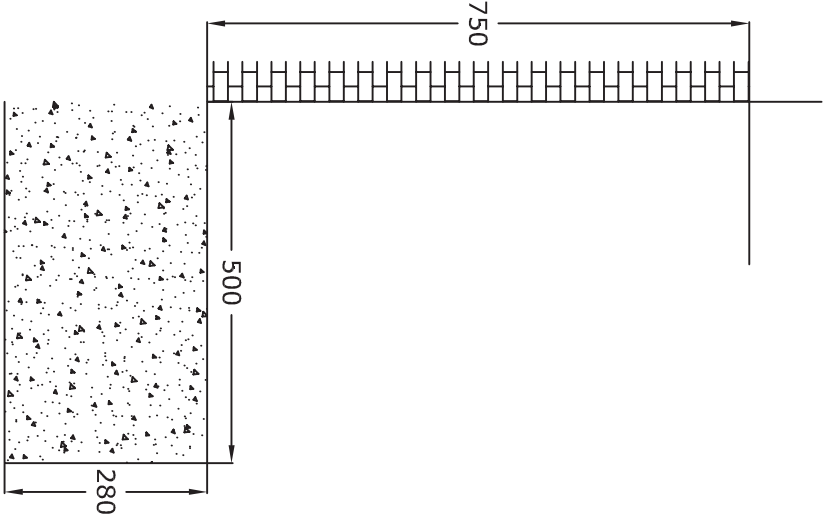
FP01

Foundation Details:

Wall to 750mm below ground level, foundation extends 500mm from wall and 280mm thick.

Ground Conditions:

- 0.00m:** MADE GROUND: gravel.
- 0.10m:** MADE GROUND: grey silty sandy gravel.
- 0.30m:** MADE GROUND: grey brown slightly sandy slightly gravelly silty clay with medium cobble content and some plastic and red brick fragments.
- 1.20m:** Pit terminated.



SITE INVESTIGATIONS LTD

Project:

DIFE Changing Rooms

Client:

Drogheda Institute for Further Education

Consultant:

DBFL

Logged by:

M. Kaliski

Excavation Started:

31/07/2023

Excavation Finished:

31/07/2023

CONTRACT
NUMBER

Scale:
NOT TO SCALE, ALL DISTANCES IN mm

DEPTH ARE TO THE TOP OF SERVICES

6169

Appendix 6
California Bearing Ratio Test Results

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

Client	Drogheda Institute of Further Education
Site	DIFE Changing Rooms
S.I. File No	6169 / 23
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email info@siteinvestigations.ie
Report Date	2nd August 2023

CBR No	Depth (mBGL)	Sample No	Lab Ref	Sample Type	Moisture Content (%)	CBR Value (%)	Location / Remarks
1	0.50	MK30	23/971	B	14.2	5.9	
2	0.50	MK31	23/972	B	11.5	4.7	
3	0.50	MK32	23/973	B	12.2	4.2	
4	0.50	MK33	23/974	B	16.3	2.8	

Appendix 7
Geotechnical Soil Laboratory Test Results

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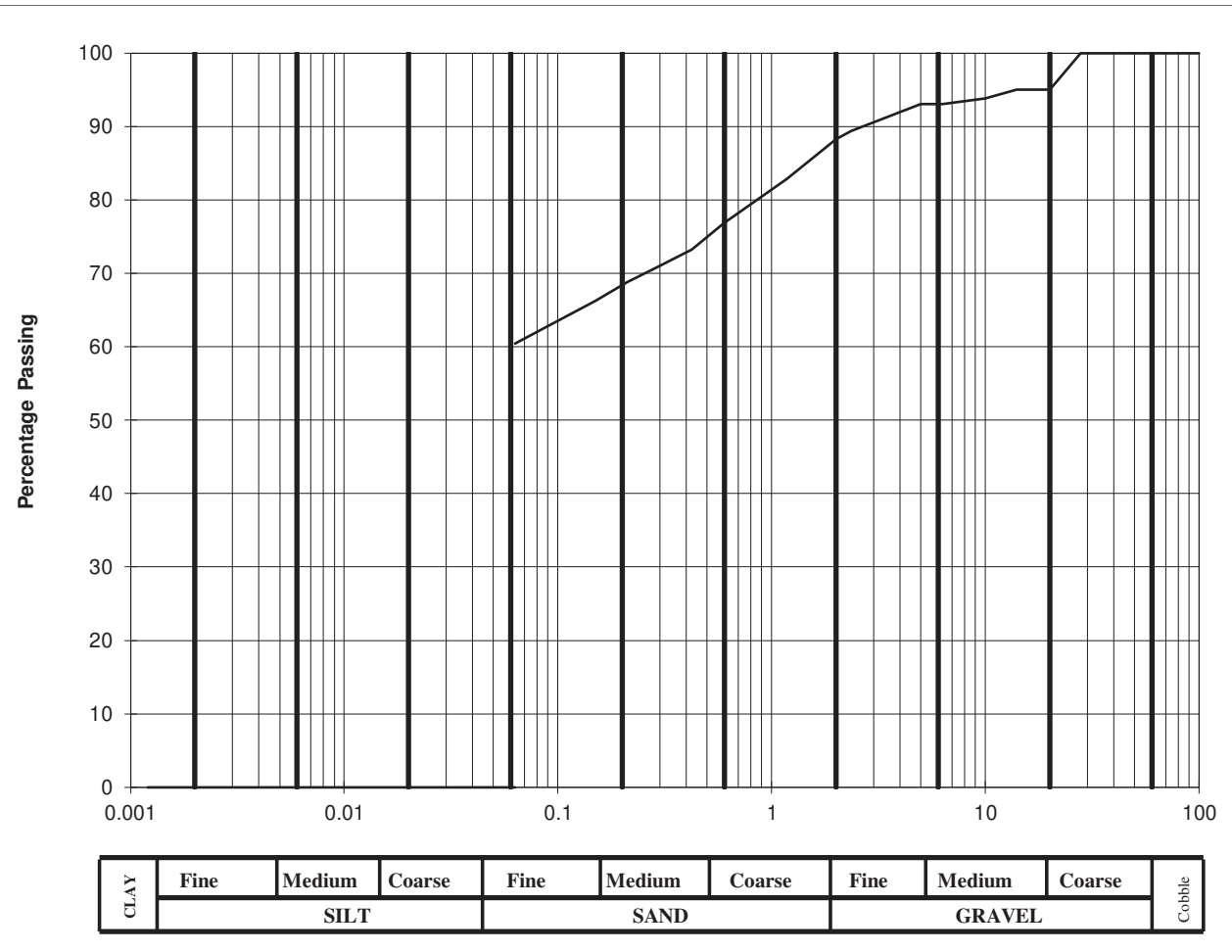
Classification Tests
In accordance with BS 1377: Part 2

Client	Drogheda Institute of Further Education
Site	DIFE Changing Rooms
S.I. File No	6169 / 23
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email:info@siteinvestigations.ie
Report Date	28th August 2023

Hole ID	Depth	Sample No	Lab Ref No.	Sample Type	Natural Moisture Content %	Liquid Limit %	Plastic Limit %	Plastic Index %	Max. Density Mg/m ²	Bulk Density Mg/m ³	% passing 425um	Comments	Remarks C=Clay; M=Silt Plasticity: L=Low; I=Intermediate; H=High; V=Very High; E=Extremely High
TP01	1.00	MK02	23/971	B	17.1	38	20	18			73.2		CI
TP02	1.00	MK05	23/972	B	15.3	40	21	19			77.6		CI
TP03	1.00	MK08	23/973	B	23.0	37	20	17			74.3		CI
TP04	1.00	MK11	23/974	B	27.0	38	19	19			79.0		CI
TP05	1.00	MK13	23/975	B	20.3	39	20	19			70.3		CI
TP06	1.00	MK15	23/976	B	18.6	36	20	16			52.5		CI
TP07	1.00	MK17	23/977	B	16.9	34	19	15			66.1		CL
TP08	1.00	MK19	23/978	B	15.4	35	20	15			75.9		CL/CI
TP09	1.00	MK22	23/979	B	17.4	33	19	14			68.5		CL
TP10	1.00	MK25	23/980	B	16.2	37	19	18			80.2		CI

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	95		
14	95		
10	93.8		
6.3	93		
5.0	93		
2.36	89.4		
2.00	88.3		
1.18	82.9		
0.600	76.8		
0.425	73.2		
0.300	71		
0.212	68.8		
0.150	66.2		
0.063	61		

Cobbles, %	0
Gravel, %	12
Sand, %	27
Clay / Silt, %	61



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

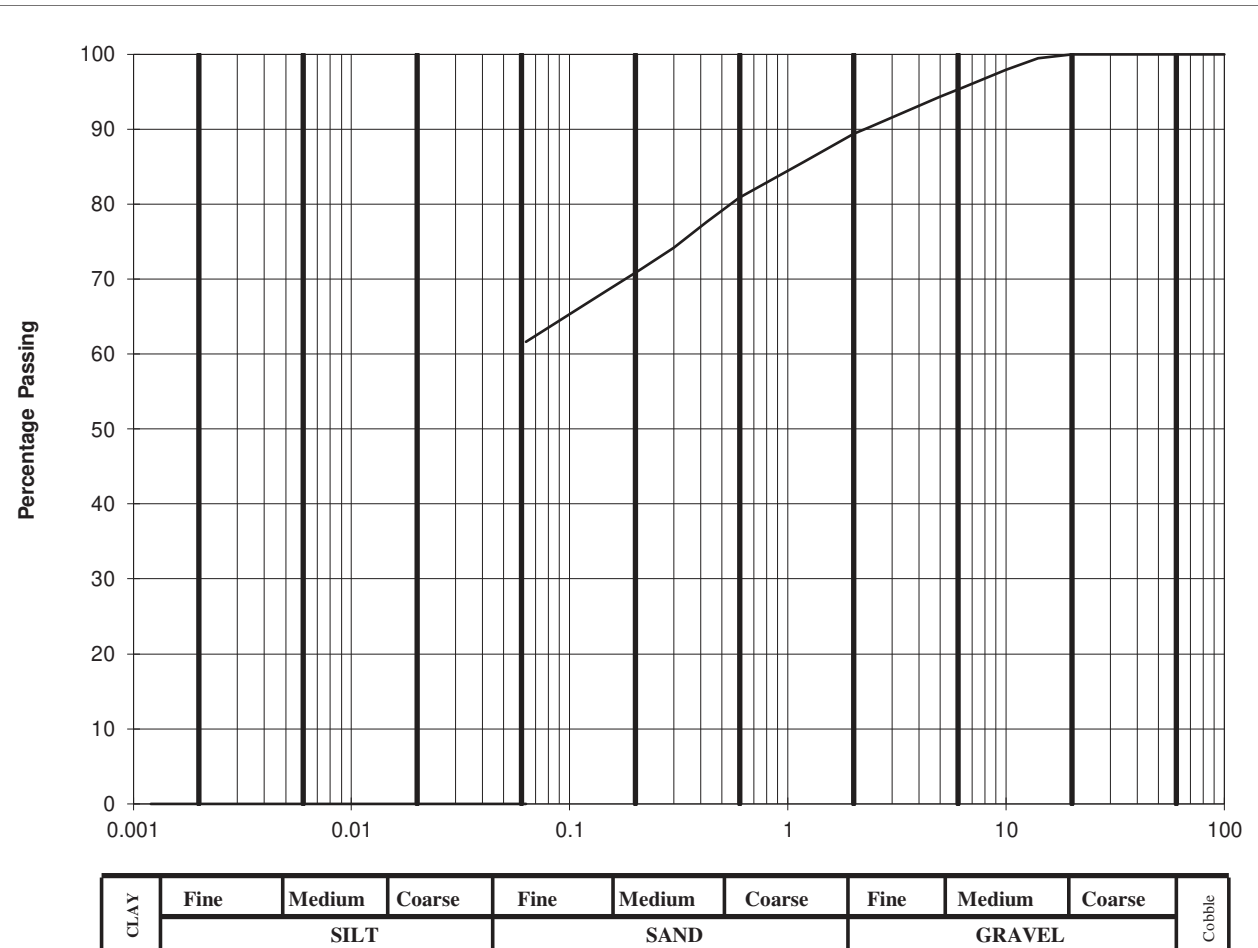
Lab. No :	23/971
Sample No :	MK02

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	99.4		
10	97.9		
6.3	95.5		
5.0	94.3		
2.36	90.2		
2.00	89.4		
1.18	85.6		
0.600	80.8		
0.425	77.6		
0.300	74.2		
0.212	71.3		
0.150	68.5		
0.063	62		

Cobbles, %	0
Gravel, %	11
Sand, %	27
Clay / Silt, %	62



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

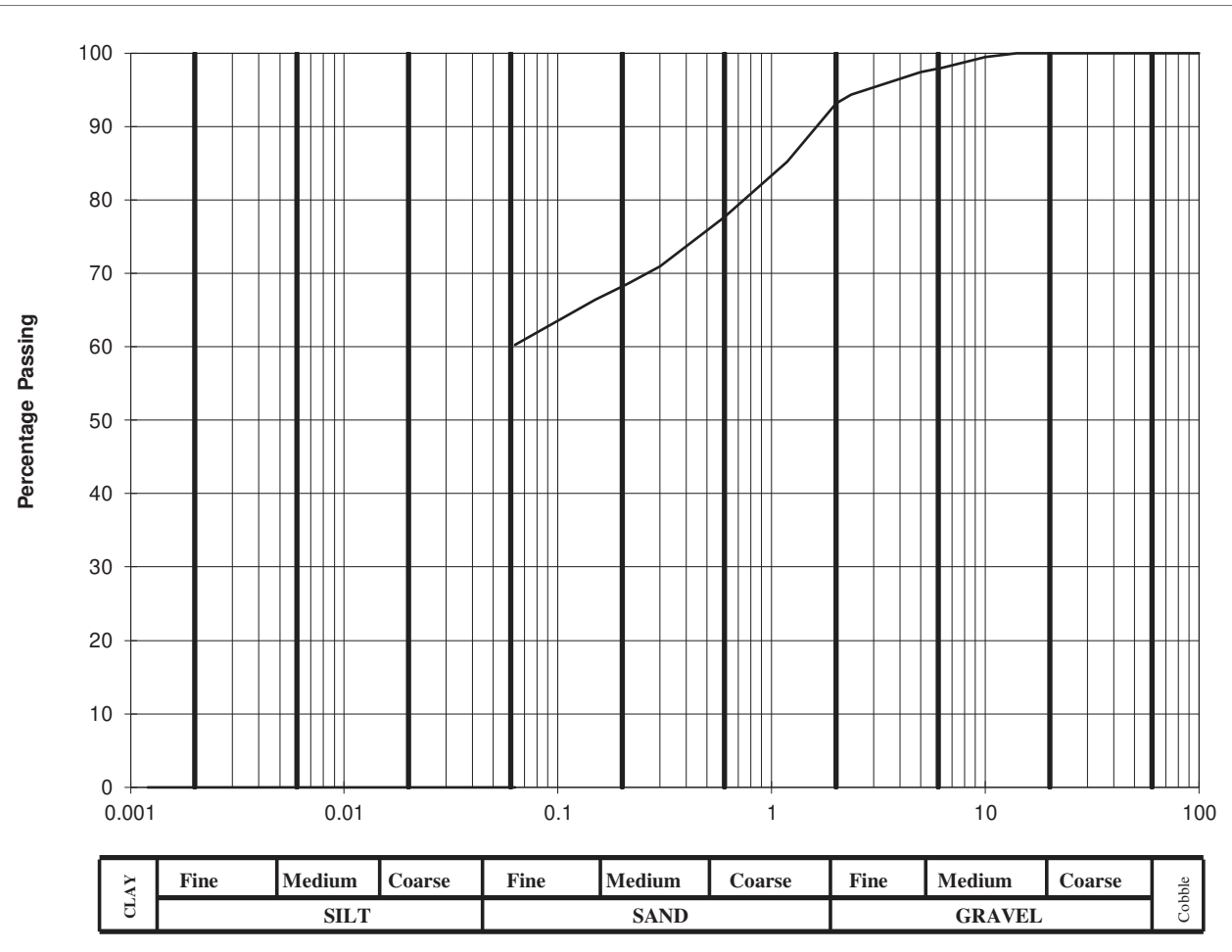
Lab. No :	23/973
Sample No :	MK05

Hole ID :	TP 02
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	99.4		
6.3	98		
5.0	97.4		
2.36	94.3		
2.00	93.1		
1.18	85.2		
0.600	77.6		
0.425	74.3		
0.300	70.9		
0.212	68.5		
0.150	66.4		
0.063	60		

Cobbles, %	0
Gravel, %	7
Sand, %	33
Clay / Silt, %	60



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

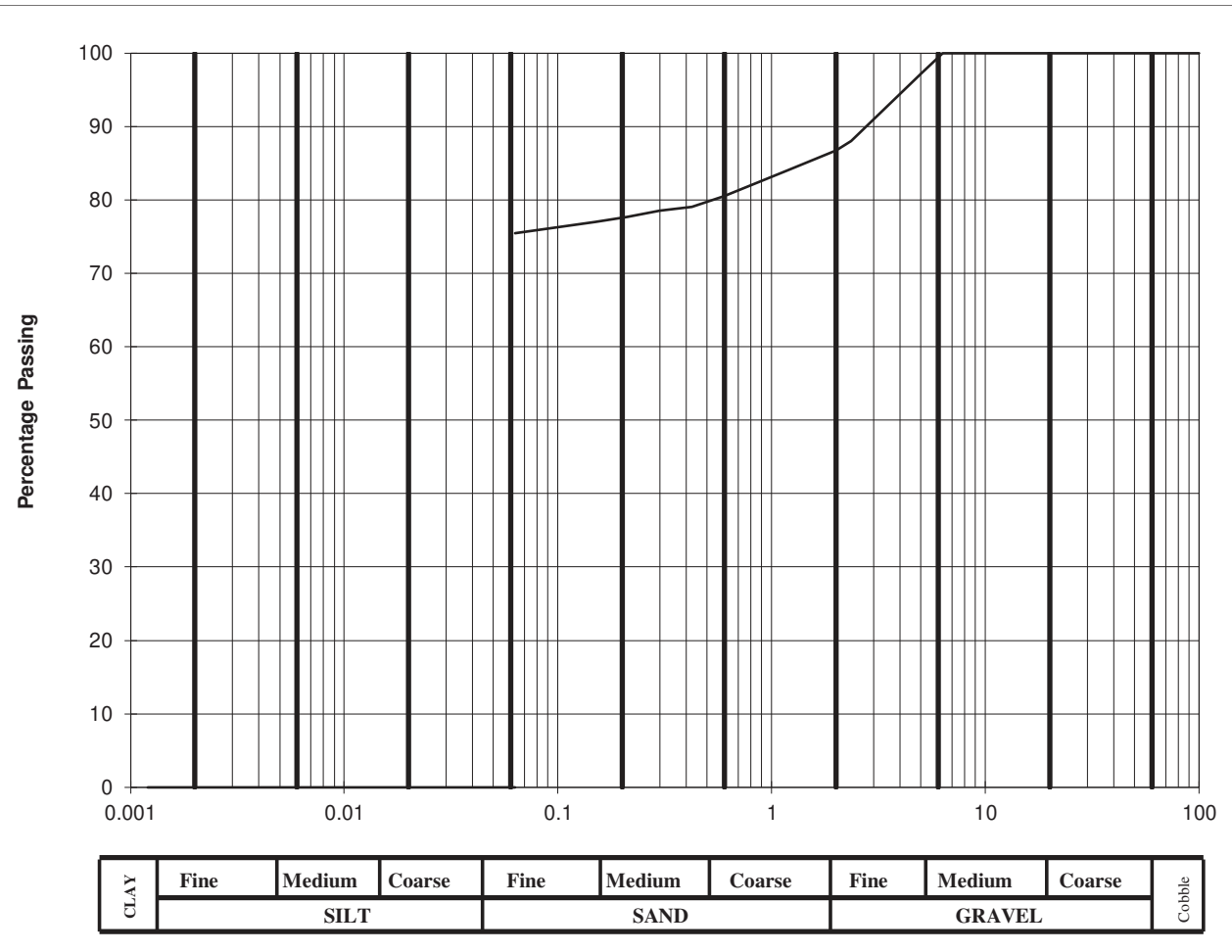
Lab. No :	23/973
Sample No :	MK08

Hole ID :	TP 03
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	100		
6.3	100		
5.0	97.1		
2.36	88		
2.00	86.7		
1.18	84		
0.600	80.5		
0.425	79		
0.300	78.5		
0.212	77.7		
0.150	77		
0.063	76		

Cobbles, %	0
Gravel, %	13
Sand, %	11
Clay / Silt, %	76



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

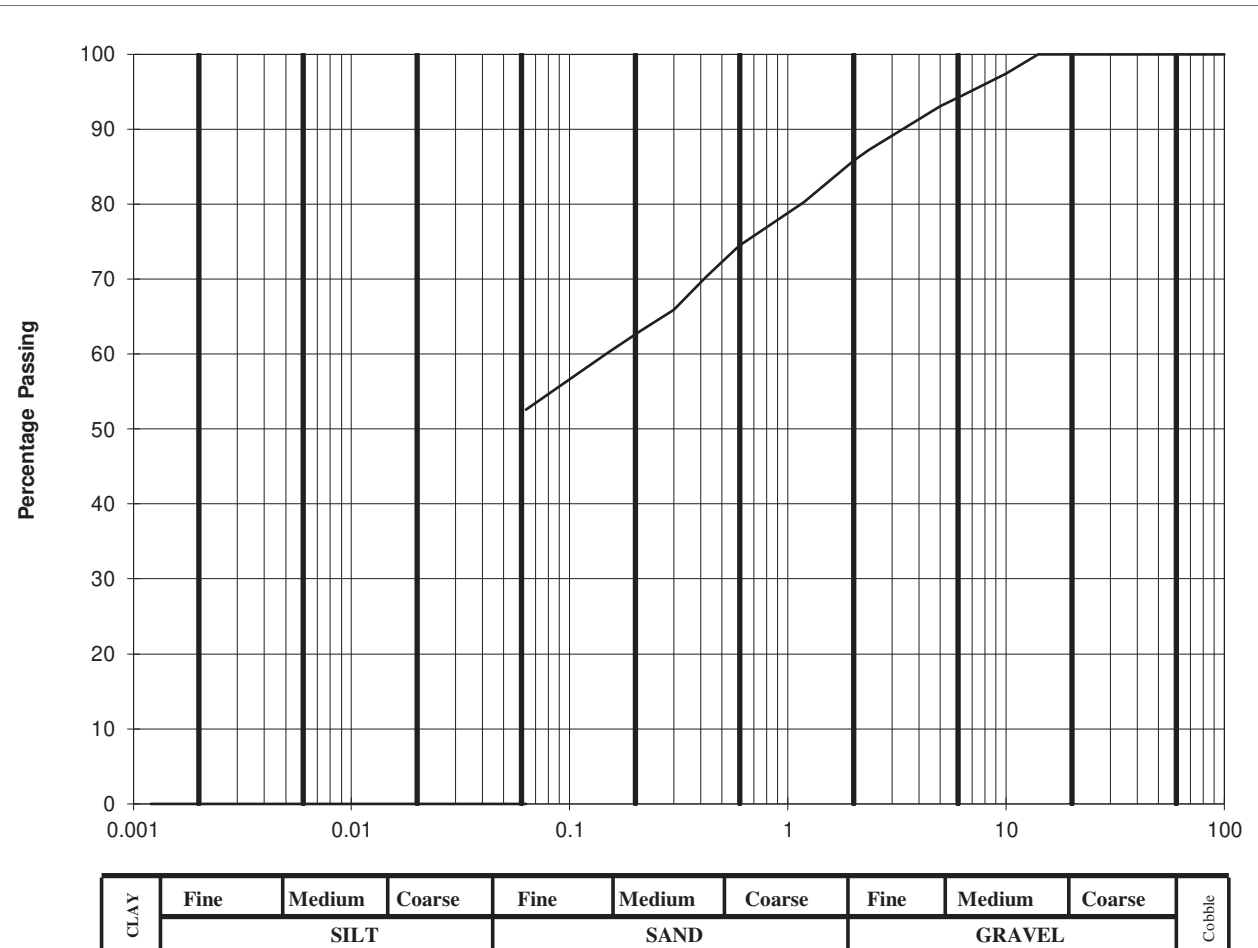
Lab. No :	23/974
Sample No :	MK11

Hole ID :	TP 04
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	97.4		
6.3	94.5		
5.0	93		
2.36	87.2		
2.00	85.8		
1.18	80.2		
0.600	74.4		
0.425	70.3		
0.300	65.9		
0.212	63.1		
0.150	60.2		
0.063	53		

Cobbles, %	0
Gravel, %	14
Sand, %	33
Clay / Silt, %	53



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

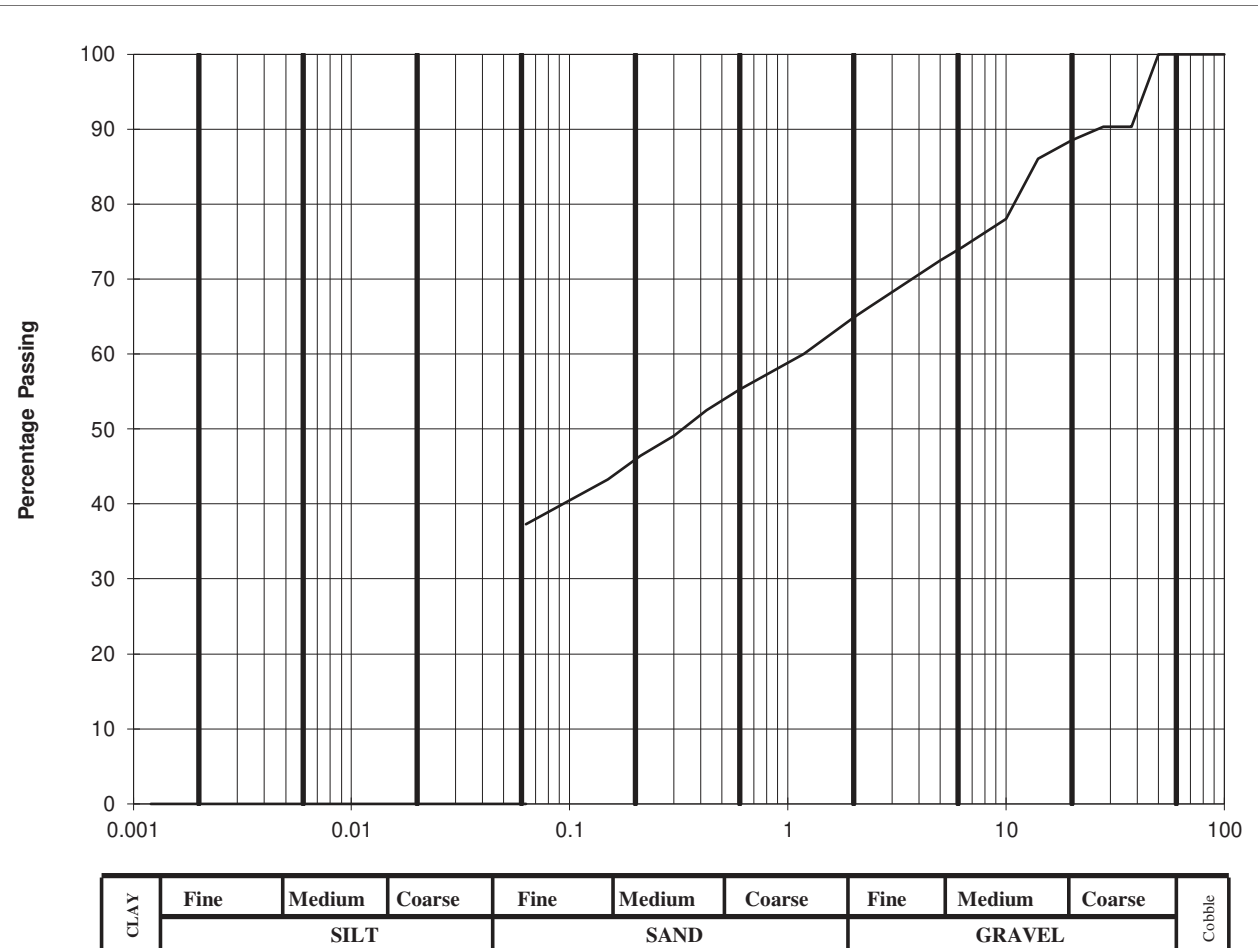
Lab. No :	23/975
Sample No :	MK13

Hole ID :	TP 05
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	90.3		
28	90.3		
20	88.5		
14	86		
10	78		
6.3	74.3		
5.0	72.5		
2.36	66.2		
2.00	64.9		
1.18	60		
0.600	55.2		
0.425	52.5		
0.300	49.1		
0.212	46.4		
0.150	43.3		
0.063	37		

Cobbles, %	0
Gravel, %	35
Sand, %	28
Clay / Silt, %	37



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

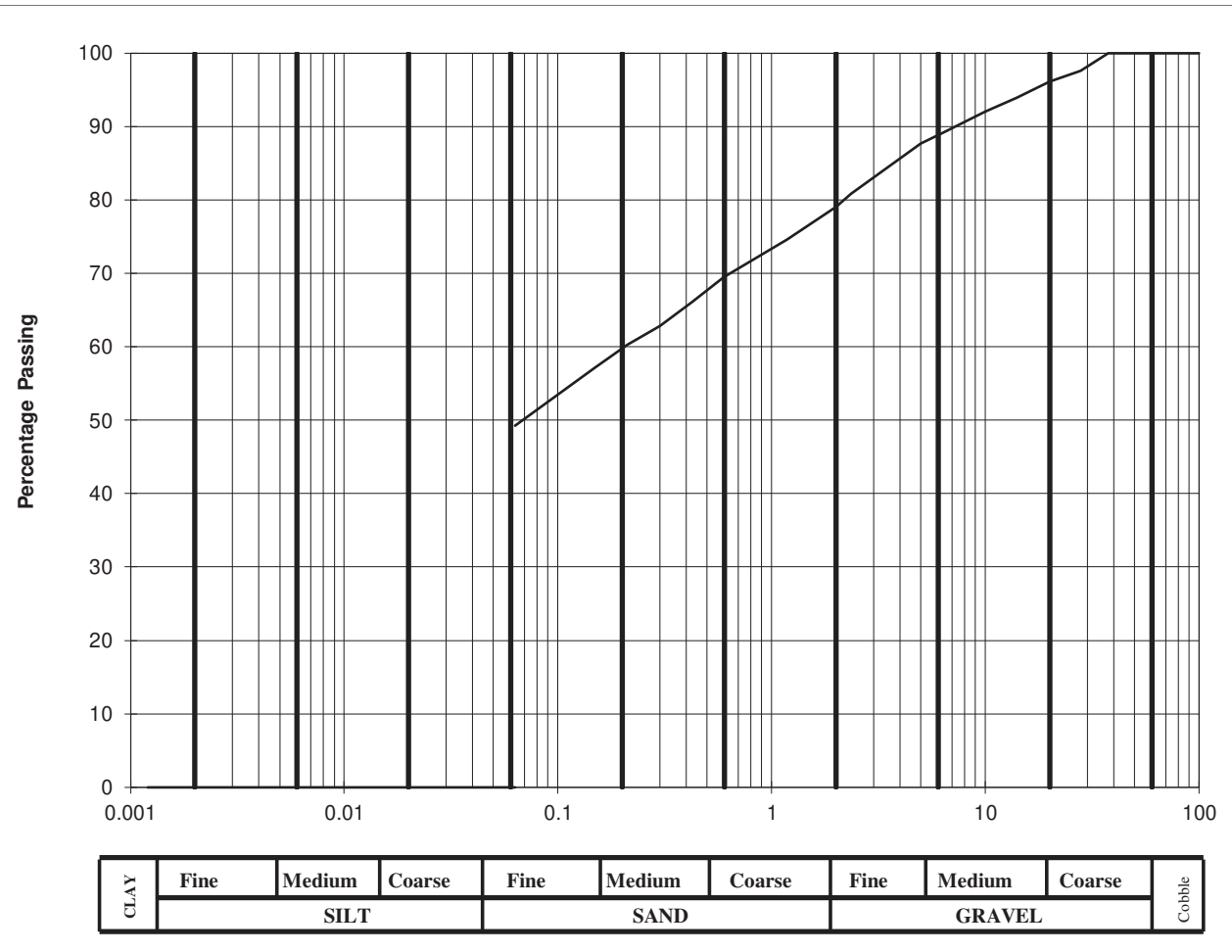
Lab. No :	23/976
Sample No :	MK15

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

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	97.6		
20	96.1		
14	93.9		
10	92		
6.3	89.1		
5.0	87.7		
2.36	80.8		
2.00	79		
1.18	74.6		
0.600	69.5		
0.425	66.1		
0.300	62.8		
0.212	60.3		
0.150	57.2		
0.063	49		

Cobbles, %	0
Gravel, %	21
Sand, %	30
Clay / Silt, %	49



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

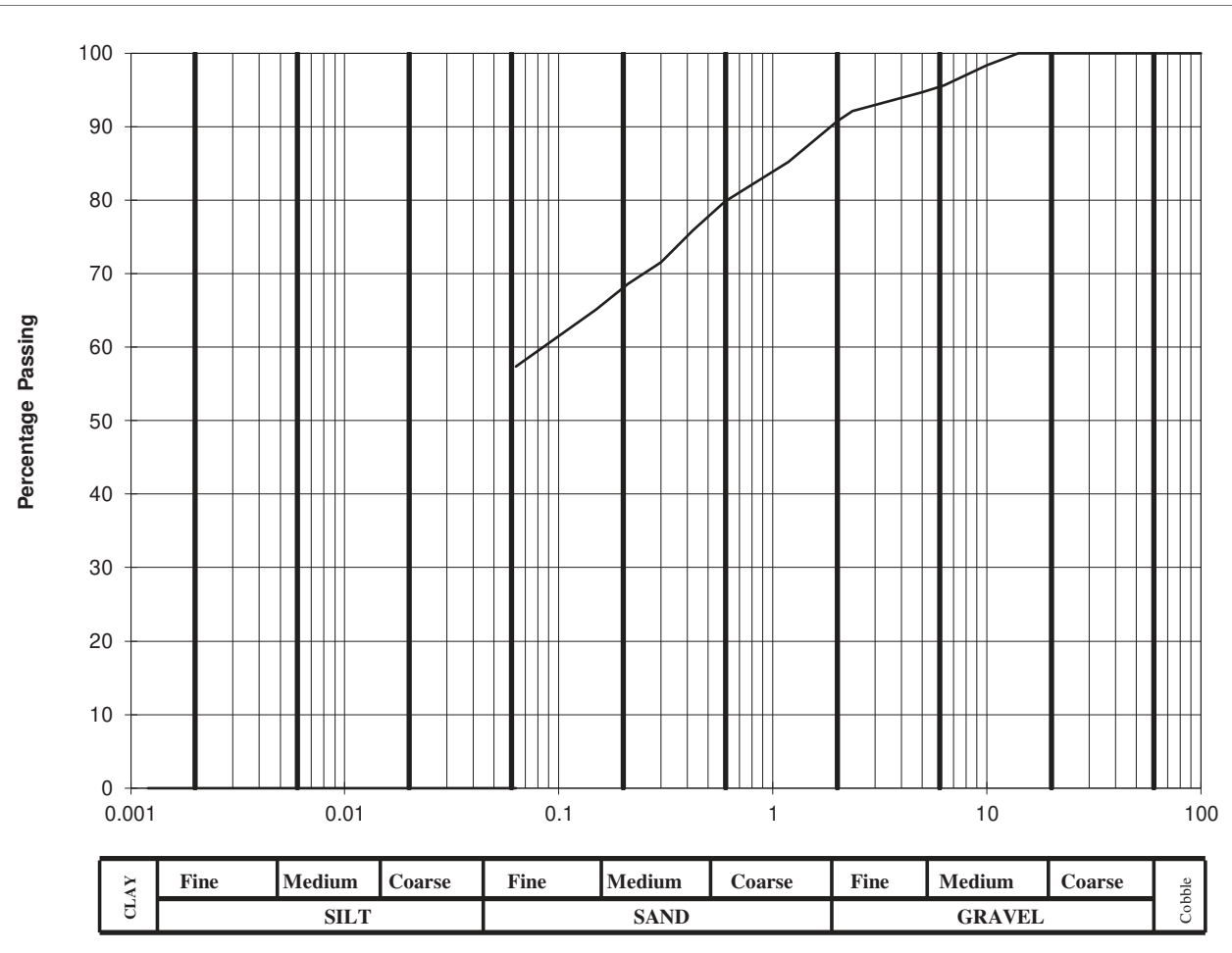
Lab. No :	23/977
Sample No :	MK17

Hole ID :	TP 07
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	98.3		
6.3	95.6		
5.0	94.7		
2.36	92.1		
2.00	90.7		
1.18	85.2		
0.600	79.8		
0.425	75.9		
0.300	71.5		
0.212	68.6		
0.150	65.1		
0.063	57		

Cobbles, %	0
Gravel, %	9
Sand, %	34
Clay / Silt, %	57



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

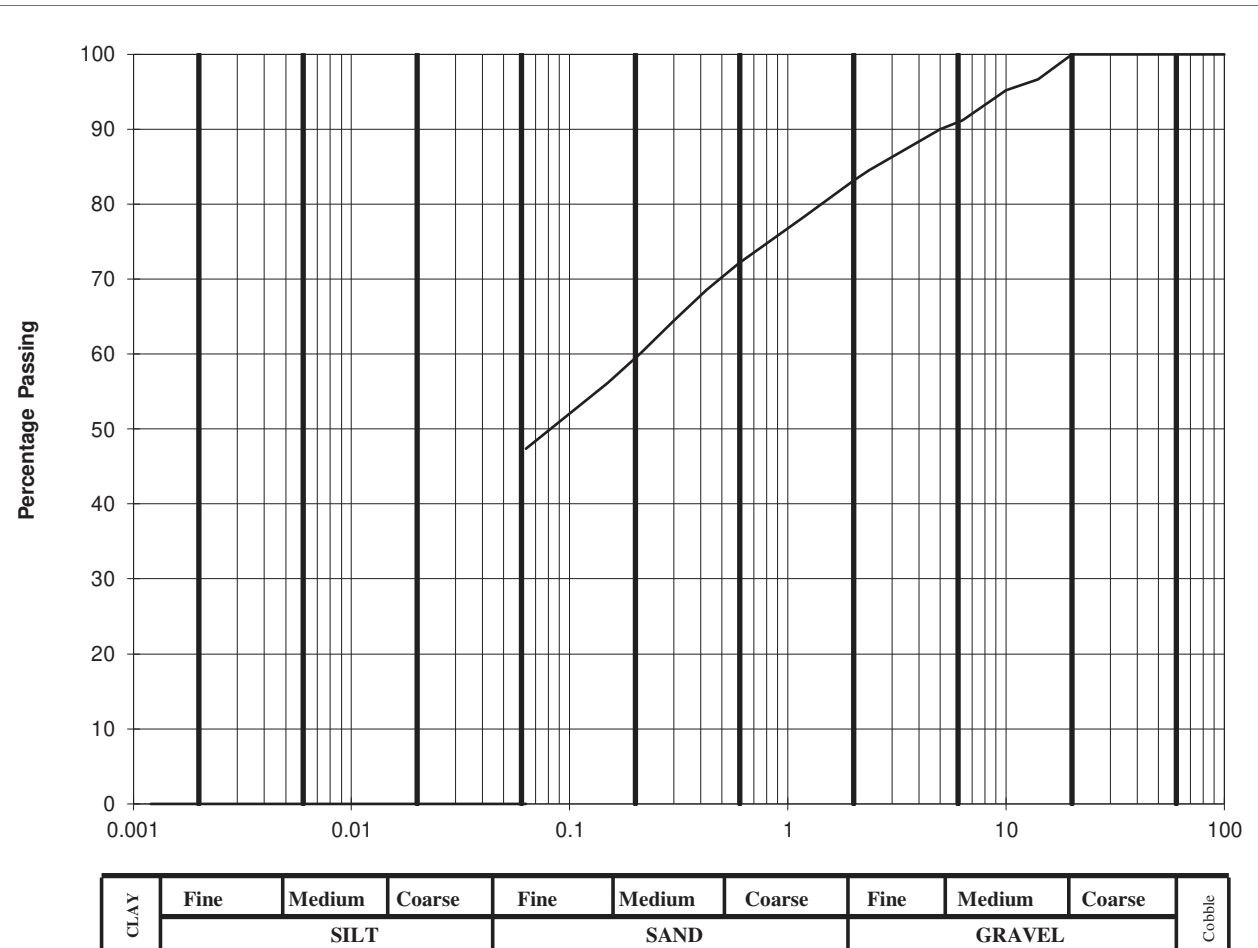
Lab. No :	23/978
Sample No :	MK19

Hole ID :	TP 08
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	96.6		
10	95.2		
6.3	91.2		
5.0	90		
2.36	84.5		
2.00	83.1		
1.18	78.3		
0.600	72.1		
0.425	68.5		
0.300	64.4		
0.212	60.1		
0.150	56.2		
0.063	47		

Cobbles, %	0
Gravel, %	17
Sand, %	36
Clay / Silt, %	47



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

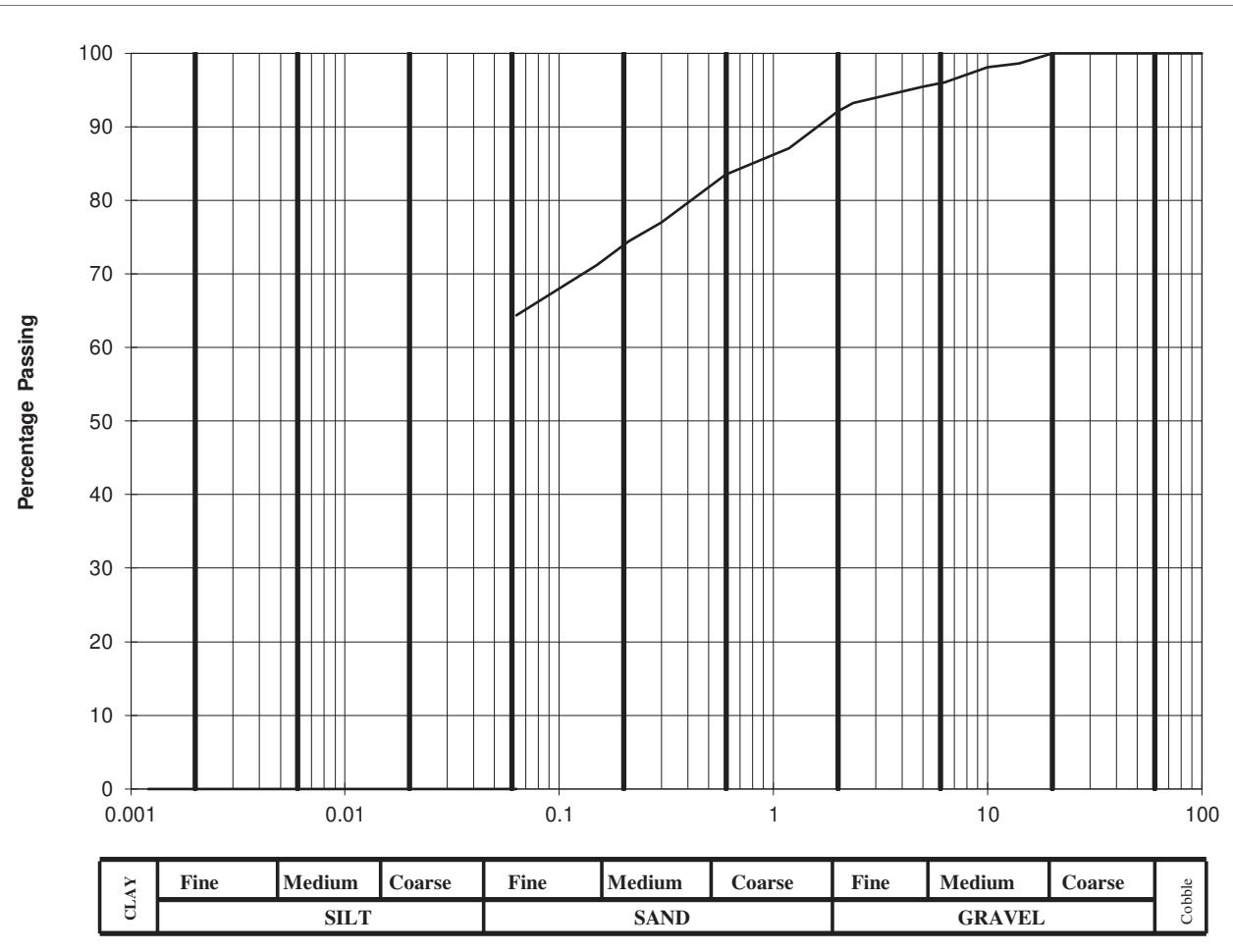
Lab. No :	23/979
Sample No :	MK22

Hole ID :	TP 09
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	100		
28	100		
20	100		
14	98.6		
10	98.1		
6.3	96		
5.0	95.4		
2.36	93.2		
2.00	92.1		
1.18	87.1		
0.600	83.5		
0.425	80.2		
0.300	77		
0.212	74.4		
0.150	71.2		
0.063	64		

Cobbles, %	0
Gravel, %	8
Sand, %	28
Clay / Silt, %	64



Client :	Drogheda Institute of Further Education
Project :	DIFE Changing Rooms

Lab. No :	23/980
Sample No :	MK25

Hole ID :	TP 10
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

Chemical Testing
In accordance with BS 1377: Part 3

Client	Drogheda Institute of Further Education
Site	DIFE Changing Rooms
S.I. File No	6169 / 23
Test Lab	Site Investigations Ltd., Carhugar The Grange, 12th Lock Rd., Lucan Co. Dublin. Tel (01) 6108768 Email:info@siteinvestigations.ie
Report Date	28th August 2023

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	MK02	23/971	8.31	0.129	0.114				88.3
TP02	1.00	MK05	23/972	8.49	0.127	0.114				89.4
TP03	1.00	MK08	23/973	8.27	0.130	0.121				93.1
TP04	1.00	MK11	23/974	8.67	0.126	0.109				86.7
TP05	1.00	MK13	23/975	8.50	0.124	0.107				85.8
TP06	1.00	MK15	23/976	8.50	0.122	0.079				64.9
TP07	1.00	MK17	23/977	8.43	0.123	0.097				79.0
TP08	1.00	MK19	23/978	8.35	0.124	0.113				90.7
TP09	1.00	MK22	23/979	8.21	0.123	0.102				83.1
TP10	1.00	MK25	23/980	8.53	0.127	0.117				92.1

Appendix 8
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 August 2023
Customer:	Site Investigations Ltd
Sample Delivery Group (SDG):	230807-66
Your Reference:	6169
Location:	Dife Changing Rooms
Report No:	700731
Order Number:	50/A/23

We received 10 samples on Monday August 07, 2023 and 10 of these samples were scheduled for analysis which was completed on Friday August 18, 2023. 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:

Sonia McWhan

Operations Manager





CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66

Report Number: 700731

Superseded Report:

Client Ref.: 6169

Location: Dife Changing Rooms

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28442830	TP01		0.50 - 0.50	
28442831	TP02		0.50 - 0.50	
28442832	TP03		0.50 - 0.50	
28442833	TP04		0.50 - 0.50	
28442834	TP05		0.50 - 0.50	
28442841	TP06		0.50 - 0.50	
28442843	TP07		0.50 - 0.50	
28442844	TP08		0.50 - 0.50	
28442845	TP09		0.50 - 0.50	
28442846	TP10		0.50 - 0.50	

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



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

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	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type	
	28442843	TP07		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
	28442841	TP06		0.50 - 0.50	60g VOC (ALE215)	S						
	28442834	TP05		0.50 - 0.50	250g Amber Jar (ALE210)	S						
	28442834	TP05		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
	28442833	TP04		0.50 - 0.50	60g VOC (ALE215)	S						
	28442833	TP04		0.50 - 0.50	250g Amber Jar (ALE210)	S						
	28442832	TP03		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
	28442832	TP03		0.50 - 0.50	60g VOC (ALE215)	S						
	28442831	TP02		0.50 - 0.50	250g Amber Jar (ALE210)	S						
	28442831	TP02		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
	28442830	TP01		0.50 - 0.50	60g VOC (ALE215)	S						
	28442830	TP01		0.50 - 0.50	250g Amber Jar (ALE210)	S						
	28442830	TP01		0.50 - 0.50	1 kg TUB with Handle (ALE260)	S						
Anions by Kone (w)	All	NDPs: 0 Tests: 10										
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 1										
CEN Readings	All	NDPs: 0 Tests: 10										
Chromium III	All	NDPs: 0 Tests: 10										
Coronene	All	NDPs: 0 Tests: 10										
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 10										
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 10										
EPH by GCxGC-FID	All	NDPs: 0 Tests: 10										
EPH CWG GC (S)	All	NDPs: 0 Tests: 10										
Fluoride	All	NDPs: 0 Tests: 10										
GRO by GC-FID (S)	All	NDPs: 0 Tests: 10										
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 10										
Loss on Ignition in soils	All	NDPs: 0 Tests: 10										
Mercury Dissolved	All	NDPs: 0 Tests: 10										
Metals in solid samples by OES	All	NDPs: 0 Tests: 10										

28442846	TP10		0.50 - 0.50	60g VOC (ALE215)	S														X							
				250g Amber Jar (ALE210)	S						X	X			X	X						X	X			X
				1 kg TUB with Handle (ALE260)	S	X			X			X	X			X									X	
28442845	TP09		0.50 - 0.50	60g VOC (ALE215)	S														X							
				250g Amber Jar (ALE210)	S					X	X			X	X						X	X			X	
				1 kg TUB with Handle (ALE260)	S	X			X			X	X			X								X		
28442844	TP08		0.50 - 0.50	60g VOC (ALE215)	S														X							
				250g Amber Jar (ALE210)	S					X	X			X	X						X	X			X	
				1 kg TUB with Handle (ALE260)	S	X			X			X	X			X								X		
28442843	TP07		0.50 - 0.50	60g VOC (ALE215)	S														X							
				250g Amber Jar (ALE210)	S					X	X			X	X						X	X			X	



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

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	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container		Sample Type	
	28442843		TP07				0.50 - 0.50		1kg TUB with Handle (ALE260)	S		
	28442841		TP06				0.50 - 0.50		60g VOC (ALE215)	S		
	28442834		TP05				0.50 - 0.50		250g Amber Jar (ALE210)	S		
	28442833		TP04				0.50 - 0.50		1kg TUB with Handle (ALE260)	S		
	28442832		TP03				0.50 - 0.50		250g Amber Jar (ALE215)	S		
	28442831		TP02				0.50 - 0.50		1kg TUB with Handle (ALE260)	S		
	28442830		TP01				0.50 - 0.50		250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									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		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
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									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
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									1kg TUB with Handle (ALE260)	S		
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									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
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									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
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									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
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									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		
									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
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									1kg TUB with Handle (ALE260)	S		
									250g Amber Jar (ALE210)	S		
									60g VOC (ALE215)	S		



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

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
28442830	TP01	0.50 - 0.50	Light Brown	Clay	Stones	None
28442831	TP02	0.50 - 0.50	Light Brown	Sandy Loam	Stones	Vegetation
28442832	TP03	0.50 - 0.50	Light Brown	Sandy Clay Loam	Stones	None
28442833	TP04	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
28442834	TP05	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
28442841	TP06	0.50 - 0.50	Dark Brown	Sandy Silt Loam	Stones	Vegetation
28442843	TP07	0.50 - 0.50	Dark Brown	Sandy Silt Loam	Stones	Crushed Brick
28442844	TP08	0.50 - 0.50	Dark Brown	Sandy Clay Loam	Stones	Vegetation
28442845	TP09	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
28442846	TP10	0.50 - 0.50	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: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

Results Legend			Customer Sample Ref. Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	TP01	TP02	TP03	TP04	TP05	TP06
# 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 (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)				0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442830	0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442831	0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442832	0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442833	0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442834	0.50 - 0.50 Soil/Solid (S) - 07/08/2023 230807-66 28442841
Component	LOD/Units	Method							
Moisture Content Ratio (% of as received sample)	%	PM024		12 \$	12 \$	12 \$	14 \$	17 \$	16 \$
Loss on ignition	<0.7 %	TM018		5.72 \$ M	6.8 \$ M	4.13 \$ M	4.47 \$ M	6.98 \$ M	7.75 \$ M
Organic Carbon, Total	<0.2 %	TM132		<0.2 \$ M	2.18 \$ M	0.405 \$ M	1.49 \$ M	2.84 \$ M	2.35 \$ M
pH	1 pH Units	TM133		8.89 \$ M	6.72 \$ M	6.83 \$ M	7.24 \$ M	7.68 \$ M	8.27 \$ 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	34.7 \$	23.3 \$	30.1 \$	26.2 \$	23.1 \$	21.1 \$	
Antimony	<0.6 mg/kg	TM181	<0.6 \$ #	0.911 \$ #	<0.6 \$ #	<0.6 \$ #	0.637 \$ #	0.601 \$ #	
Arsenic	<0.6 mg/kg	TM181	13.5 \$ M	17 \$ M	16 \$ M	16.1 \$ M	13.4 \$ M	12.4 \$ M	
Barium	<0.6 mg/kg	TM181	113 \$ #	569 \$ #	69.9 \$ #	72.7 \$ #	78.4 \$ #	77.7 \$ #	
Cadmium	<0.02 mg/kg	TM181	0.279 \$ M	0.973 \$ M	0.521 \$ M	0.0972 \$ M	0.219 \$ M	0.222 \$ M	
Chromium	<0.9 mg/kg	TM181	34.7 \$ M	23.3 \$ M	30.1 \$ M	26.2 \$ M	23.1 \$ M	21.1 \$ M	
Copper	<1.4 mg/kg	TM181	28.5 \$ M	35 \$ M	35.8 \$ M	29.2 \$ M	30.9 \$ M	33.7 \$ M	
Lead	<0.7 mg/kg	TM181	13 \$ M	48.7 \$ M	21.2 \$ M	47.2 \$ M	70.8 \$ M	60.2 \$ M	
Mercury	<0.1 mg/kg	TM181	<0.1 \$ M	<0.1 \$ M	<0.1 \$ M	<0.1 \$ M	<0.1 \$ M	<0.1 \$ M	
Molybdenum	<0.1 mg/kg	TM181	0.181 \$ #	3.66 \$ #	0.685 \$ #	0.796 \$ #	0.965 \$ #	0.918 \$ #	
Nickel	<0.2 mg/kg	TM181	45.3 \$ M	49.7 \$ M	53.3 \$ M	45 \$ M	33 \$ M	30 \$ M	
Selenium	<1 mg/kg	TM181	<1 \$ #	4.5 \$ #	<1 \$ #	<1 \$ #	<1 \$ #	<1 \$ #	
Zinc	<1.9 mg/kg	TM181	73.4 \$ M	74.7 \$ M	77.4 \$ M	85.4 \$ M	83 \$ M	79.3 \$ 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 \$	6.84 \$	<5 \$	5.18 \$	9.6 \$	<5 \$	



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

Results Legend			Customer Sample Ref.	TP07	TP08	TP09	TP10		
# 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 (F) Trigger breach confirmed 1-4* Sample deviation (see appendix)			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) 07/08/2023 230807-66 28442843	0.50 - 0.50 Soil/Solid (S) 07/08/2023 230807-66 28442844	0.50 - 0.50 Soil/Solid (S) 07/08/2023 230807-66 28442845	0.50 - 0.50 Soil/Solid (S) 07/08/2023 230807-66 28442846		
Component	LOD/Units	Method							
Moisture Content Ratio (% of as received sample)	%	PM024	15	12	12	13			
			\$	\$	\$	\$			
Loss on ignition	<0.7 %	TM018	5.24	3.6	4.59	11.2			
			\$ M	\$ M	\$ M	\$ M			
Organic Carbon, Total	<0.2 %	TM132	1.85	0.527	1.66	2.28			
			\$ M	\$ M	\$ M	\$ M			
pH	1 pH Units	TM133	7.27	6.85	8.44	8.37			
			\$ M	\$ M	\$ M	\$ M			
Chromium, Hexavalent	<0.6 mg/kg	TM151	<0.6	<0.6	<0.6	<0.6			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 28	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 52	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 101	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 118	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 138	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 153	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
PCB congener 180	<3 µg/kg	TM168	<3	<3	<3	<3			
			\$ M	\$ M	\$ M	\$ M			
Sum of detected PCB 7 Congeners	<21 µg/kg	TM168	<21	<21	<21	<21			
			\$	\$	\$	\$			
Chromium, Trivalent	<0.9 mg/kg	TM181	28.6	27.3	19	16			
			\$	\$	\$	\$			
Antimony	<0.6 mg/kg	TM181	0.809	0.815	<0.6	<0.6			
			\$ #	\$ #	\$ #	\$ #			
Arsenic	<0.6 mg/kg	TM181	14.9	15.4	9.05	11.7			
			\$ M	\$ M	\$ M	\$ M			
Barium	<0.6 mg/kg	TM181	81	55.6	57.7	75.9			
			\$ #	\$ #	\$ #	\$ #			
Cadmium	<0.02 mg/kg	TM181	0.228	0.0502	0.45	0.214			
			\$ M	\$ M	\$ M	\$ M			
Chromium	<0.9 mg/kg	TM181	28.6	27.3	19	16			
			\$ M	\$ M	\$ M	\$ M			
Copper	<1.4 mg/kg	TM181	33.2	26.5	19.9	26.5			
			\$ M	\$ M	\$ M	\$ M			
Lead	<0.7 mg/kg	TM181	59.6	26.5	26.9	47.2			
			\$ M	\$ M	\$ M	\$ M			
Mercury	<0.1 mg/kg	TM181	<0.1	<0.1	<0.1	<0.1			
			\$ M	\$ M	\$ M	\$ M			
Molybdenum	<0.1 mg/kg	TM181	0.955	0.695	1.12	1.05			
			\$ #	\$ #	\$ #	\$ #			
Nickel	<0.2 mg/kg	TM181	41.7	50.7	26	24.6			
			\$ M	\$ M	\$ M	\$ M			
Selenium	<1 mg/kg	TM181	<1	1.15	<1	1.1			
			\$ #	\$ #	\$ #	\$ #			
Zinc	<1.9 mg/kg	TM181	84.9	79.4	54.4	68.3			
			\$ M	\$ M	\$ M	\$ M			
PAH Total 17 (inc Coronene) Moisture Corrected	<10 mg/kg	TM410	<10	<10	<10	<10			
			\$	\$	\$	\$			
Coronene	<200 µg/kg	TM410	<200	<200	<200	<200			
			\$	\$	\$	\$			
Mineral Oil >C10-C40 (EH_2D_AL)	<5 mg/kg	TM415	<5	<5	<5	<5			
			\$	\$	\$	\$			



CERTIFICATE OF ANALYSIS

Validated

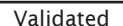
SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

TPH CWG (S)

Results Legend			Customer Sample Ref.	TP01	TP02	TP03	TP04	TP05	TP06
#	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								
(F)	Trigger breach confirmed								
1-4\$@	Sample deviation (see appendix)								
		Depth (m)	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	
		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	
		Date Sampled	-	-	-	-	-	-	
		Sample Time	-	-	-	-	-	-	
		Date Received	07/08/2023	07/08/2023	07/08/2023	07/08/2023	07/08/2023	07/08/2023	
		SDG Ref	230807-66	230807-66	230807-66	230807-66	230807-66	230807-66	
		Lab Sample No.(s)	28442830	28442831	28442832	28442833	28442834	28442841	
		AGS Reference							
Component	LOD/Units	Method							
GRO Surrogate % recovery**	%	TM089	107	91.9	108	98.8	91.4	89.1	
			\$	\$	\$	\$	\$	\$	
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	<1000	2370	<1000	2210	5130	8220	
			\$ #	\$ #	\$ #	\$ #	\$ #	\$ #	
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	5340	8830	
			\$	\$	\$	\$	\$	\$	
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	<10000	<10000	<10000	<10000	12800	22000	
			\$	\$	\$	\$	\$	\$	
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	2110	2290	<1000	2170	6040	10000	
			\$ #	\$ #	\$ #	\$ #	\$ #	\$ #	
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	<1000	<1000	1120	2820	
			\$	\$	\$	\$	\$	\$	
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	7460	13200	
			\$	\$	\$	\$	\$	\$	
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10000 µg/kg	TM414	<10000	<10000	<10000	<10000	12800	22000	
			\$	\$	\$	\$	\$	\$	
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	
			\$	\$	\$	\$	\$	\$	



Superseded Report:



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66

Report Number: 700731

Superseded Report:

Client Ref.: 6169

Location: Dife Changing Rooms

Asbestos Identification - Solid Samples

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+\$\$\$	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
Cust. Sample Ref.	TP07	18/08/2023	Renata Bozhkov	N/A	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.50 - 0.50										
Sample Type	SOLID										
Date Sampled											
Date Received	07/08/2023 10:40:00										
SDG	230807-66										
Original Sample	28442843										
Method Number	TM048										



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

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

Dife Changing Rooms

Natural Moisture Content (%) 17.5

Dry Matter Content (%) 85.1

Case

SDG 230807-66

Lab Sample Number(s) 28442830

Sampled Date

Customer Sample Ref. TP01

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 (%) <0.2

Loss on Ignition (%) 5.72

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) 8.89

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	0.000763	<0.0005	0.00763	<0.005	0.5	2	25
Barium	0.171	<0.0002	1.71	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00119	<0.001	0.0119	<0.01	0.5	10	70
Copper	0.00123	<0.0003	0.0123	<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	0.000964	<0.0004	0.00964	<0.004	0.4	10	40
Lead	0.000387	<0.0002	0.00387	<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	0.00889	<0.001	0.0889	<0.01	4	50	200
Chloride	4	<2	40	<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	29.8	<10	298	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.17	<3	41.7	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023
pH (pH Units) 8.11
Conductivity (µS/cm) 42
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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference

Mass Sample taken (kg) 0.109

Mass of dry sample (kg) 0.090

Particle Size <4mm >95%

Site Location

Dife Changing Rooms

Natural Moisture Content (%) 19.8

Dry Matter Content (%) 83.5

Case

SDG 230807-66

Lab Sample Number(s) 28442831

Sampled Date

Customer Sample Ref. TP02

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 (%) 2.18

Loss on Ignition (%) 6.8

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) 6.84

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 6.72

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	0.000769	<0.0005	0.00769	<0.005	0.5	2	25
Barium	0.00153	<0.0002	0.0153	<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	0.00353	<0.0003	0.0353	<0.003	2	50	100
Mercury Dissolved (CVAF)	0.0000193	<0.00001	0.000193	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00129	<0.0004	0.0129	<0.004	0.4	10	40
Lead	0.00233	<0.0002	0.0233	<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	0.00181	<0.001	0.0181	<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	12.9	<10	129	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	6.2	<3	62	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023

pH (pH Units) 7.37

Conductivity (µS/cm) 20

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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

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

Dife Changing Rooms

Natural Moisture Content (%) 9.31

Dry Matter Content (%) 91.5

Case

SDG 230807-66

Lab Sample Number(s) 28442832

Sampled Date

Customer Sample Ref. TP03

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 (%) 0.405

Loss on Ignition (%) 4.13

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) 6.83

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	0.000705	<0.0005	0.00705	<0.005	0.5	2	25
Barium	0.000925	<0.0002	0.00925	<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	0.00193	<0.0003	0.0193	<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	0.000886	<0.0004	0.00886	<0.004	0.4	10	40
Lead	0.000596	<0.0002	0.00596	<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	0.00232	<0.001	0.0232	<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	10.9	<10	109	<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 09-Aug-2023
pH (pH Units) 7.52
Conductivity (µS/cm) 15
Volume Leachant (Litres) 0.892

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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

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

Dife Changing Rooms

Natural Moisture Content (%) 14.7

Dry Matter Content (%) 87.2

Case

SDG 230807-66

Lab Sample Number(s) 28442833

Sampled Date

Customer Sample Ref. TP04

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 (%) 1.49

Loss on Ignition (%) 4.47

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) 5.18

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 7.24

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	0.000722	<0.0005	0.00722	<0.005	0.5	2	25
Barium	0.00152	<0.0002	0.0152	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00127	<0.001	0.0127	<0.01	0.5	10	70
Copper	0.00316	<0.0003	0.0316	<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	0.00152	<0.0004	0.0152	<0.004	0.4	10	40
Lead	0.0014	<0.0002	0.014	<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	0.00183	<0.001	0.0183	<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	15.9	<10	159	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.67	<3	36.7	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023
pH (pH Units) 7.54
Conductivity (µS/cm) 21
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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

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

Dife Changing Rooms

Natural Moisture Content (%) 21.4

Dry Matter Content (%) 82.4

Case

SDG 230807-66

Lab Sample Number(s) 28442834

Sampled Date

Customer Sample Ref. TP05

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 (%) 2.84

Loss on Ignition (%) 6.98

Sum of BTEX (mg/kg) -

Sum of 7 PCBs (mg/kg) <0.021

Mineral Oil (mg/kg) (EH_2D_AL) 9.6

PAH Sum of 17 (mg/kg) <10

pH (pH Units) 7.68

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	0.000687	<0.0005	0.00687	<0.005	0.5	2	25
Barium	0.129	<0.0002	1.29	<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	0.00262	<0.0003	0.0262	<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	0.000935	<0.0004	0.00935	<0.004	0.4	10	40
Lead	0.00103	<0.0002	0.0103	<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	0.0127	<0.001	0.127	<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	63.7	<10	637	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	5.84	<3	58.4	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023
pH (pH Units) 8.16
Conductivity (µS/cm) 88
Volume Leachant (Litres) 0.880

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)

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19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.107
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Dife Changing Rooms
Natural Moisture Content (%)	19.7
Dry Matter Content (%)	83.5

Case	
SDG	230807-66
Lab Sample Number(s)	28442841
Sampled Date	
Customer Sample Ref.	TP06
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 (%)	2.35
Loss on Ignition (%)	7.75
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)	8.27
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	0.000906	<0.0005	0.00906	<0.005	0.5	2	25
Barium	0.00556	<0.0002	0.0556	<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	0.00328	<0.0003	0.0328	<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	0.000844	<0.0004	0.00844	<0.004	0.4	10	40
Lead	0.00022	<0.0002	0.0022	<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	0.602	<0.5	6.02	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	114	<10	1140	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	5.81	<3	58.1	<30	500	800	1000

Leach Test Information

Date Prepared	09-Aug-2023
pH (pH Units)	8.31
Conductivity (µS/cm)	157
Volume Leachant (Litres)	0.883

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)

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19/08/2023 05:03:01

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CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

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	Dife Changing Rooms
Natural Moisture Content (%)	14.3
Dry Matter Content (%)	87.5

Case	
SDG	230807-66
Lab Sample Number(s)	28442843
Sampled Date	
Customer Sample Ref.	TP07
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 (%)	1.85
Loss on Ignition (%)	5.24
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)	7.27
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	0.000905	<0.0005	0.00905	<0.005	0.5	2	25
Barium	0.00254	<0.0002	0.0254	<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	0.00442	<0.0003	0.0442	<0.003	2	50	100
Mercury Dissolved (CVAF)	0.0000352	<0.00001	0.000352	<0.0001	0.01	0.2	2
Molybdenum	<0.003	<0.003	<0.03	<0.03	0.5	10	30
Nickel	0.00181	<0.0004	0.0181	<0.004	0.4	10	40
Lead	0.00285	<0.0002	0.0285	<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	0.00292	<0.001	0.0292	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.507	<0.5	5.07	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	32.3	<10	323	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	5.7	<3	57	<30	500	800	1000

Leach Test Information

Date Prepared	09-Aug-2023
pH (pH Units)	7.81
Conductivity (µS/cm)	46
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)

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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05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

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

Dife Changing Rooms

Natural Moisture Content (%) 8.98

Dry Matter Content (%) 91.8

Case

SDG 230807-66

Lab Sample Number(s) 28442844

Sampled Date

Customer Sample Ref. TP08

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 (%) 0.527

Loss on Ignition (%) 3.6

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) 6.85

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	0.000757	<0.0005	0.00757	<0.005	0.5	2	25
Barium	0.00112	<0.0002	0.0112	<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	0.0023	<0.0003	0.023	<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	0.00123	<0.0004	0.0123	<0.004	0.4	10	40
Lead	0.000731	<0.0002	0.00731	<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	0.0026	<0.001	0.026	<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	17.1	<10	171	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	3.8	<3	38	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023
pH (pH Units) 7.64
Conductivity (µS/cm) 25
Volume Leachant (Litres) 0.892

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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

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

Dife Changing Rooms

Natural Moisture Content (%) 10.4

Dry Matter Content (%) 90.5

Case

SDG 230807-66

Lab Sample Number(s) 28442845

Sampled Date

Customer Sample Ref. TP09

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 (%) 1.66

Loss on Ignition (%) 4.59

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) 8.44

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	0.00105	<0.0005	0.0105	<0.005	0.5	2	25
Barium	0.00374	<0.0002	0.0374	<0.002	20	100	300
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00321	<0.001	0.0321	<0.01	0.5	10	70
Copper	0.00202	<0.0003	0.0202	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.00437	<0.003	0.0437	<0.03	0.5	10	30
Nickel	0.000509	<0.0004	0.00509	<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	89.7	<10	897	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	4.63	<3	46.3	<30	500	800	1000

Leach Test Information

Date Prepared 09-Aug-2023
pH (pH Units) 8.67
Conductivity (µS/cm) 124
Volume Leachant (Litres) 0.891

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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

CEN 10:1 SINGLE STAGE LEACHATE TEST

WAC ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference	
Mass Sample taken (kg)	0.107
Mass of dry sample (kg)	0.090
Particle Size <4mm	>95%

Site Location	Dife Changing Rooms
Natural Moisture Content (%)	19.1
Dry Matter Content (%)	83.9

Case	
SDG	230807-66
Lab Sample Number(s)	28442846
Sampled Date	
Customer Sample Ref.	TP10
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 (%)	11.2
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)	8.37
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	0.000911	<0.0005	0.00911	<0.005	0.5	2	25
Barium	0.00434	<0.0002	0.0434	<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	0.00411	<0.0003	0.0411	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.00343	<0.003	0.0343	<0.03	0.5	10	30
Nickel	0.000827	<0.0004	0.00827	<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	0.00313	<0.001	0.0313	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.649	<0.5	6.49	<5	10	150	500
Sulphate (soluble)	<2	<2	<20	<20	1000	20000	50000
Total Dissolved Solids	110	<10	1100	<100	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	6.8	<3	68	<30	500	800	1000

Leach Test Information

Date Prepared	09-Aug-2023
pH (pH Units)	8.32
Conductivity (µS/cm)	152
Volume Leachant (Litres)	0.883

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)

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

19/08/2023 05:03:01

05:02:53 19/08/2023



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

Table of Results - Appendix

Method No	Description
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
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
TM123	The Determination of Total Dissolved Solids in Water
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
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
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
TM048	Identification of Asbestos in Bulk Material
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

NA = not applicable.

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



CERTIFICATE OF ANALYSIS

Validated

SDG: 230807-66
Client Ref.: 6169

Report Number: 700731
Location: Dife Changing Rooms

Superseded Report:

Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	28442830	28442831	28442832	28442833	28442834	28442841	28442843	28442844	28442845	28442846
	TP01	TP02	TP03	TP04	TP05	TP06	TP07	TP08	TP09	TP10
AGS Ref.										
Depth	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50	0.50 - 0.50
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)	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023
Asbestos ID in Solid Samples							18-Aug-2023			
CEN 10:1 Leachate (1 Stage)	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023
CEN Readings	14-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023
Chromium III	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Coronene	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023
Dissolved Metals by ICP-MS	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Dissolved Organic/Inorganic Carbon	13-Aug-2023	12-Aug-2023	12-Aug-2023	13-Aug-2023	13-Aug-2023	13-Aug-2023	13-Aug-2023	13-Aug-2023	12-Aug-2023	12-Aug-2023
EPH by GCxGC-FID	14-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023
EPH CWG GC (S)	14-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	14-Aug-2023	10-Aug-2023
Fluoride	11-Aug-2023	10-Aug-2023	10-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023
GRO by GC-FID (S)	10-Aug-2023	10-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023	11-Aug-2023
Hexavalent Chromium (s)	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023
Loss on Ignition in soils	14-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023
Mercury Dissolved	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Metals in solid samples by OES	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Moisture at 105C	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023
PAH 16 & 17 Calc	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	11-Aug-2023	10-Aug-2023
PAH by GCMS	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	10-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023
PCBs by GCMS	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	14-Aug-2023	10-Aug-2023
pH	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023
pH Value of Filtered Water	14-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023
Phenols by HPLC (W)	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Sample description	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023	09-Aug-2023
Total Dissolved Solids on Leachates	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023	14-Aug-2023
Total Organic Carbon	14-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023
TPH CWG GC (S)	14-Aug-2023	14-Aug-2023	14-Aug-2023	11-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	11-Aug-2023	14-Aug-2023	11-Aug-2023
VOC MS (S)	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023	11-Aug-2023	11-Aug-2023	10-Aug-2023	10-Aug-2023	10-Aug-2023



CERTIFICATE OF ANALYSIS

SDG: 230807-66
Client Ref: 6169

Report Number: 700731
Location: Dife Changing Rooms

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 one month 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.

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.

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.

Appendix 9
Waste Classification Report

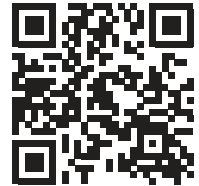
DRAFT



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)



9F56R-PTREF-KL8WV

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

Job name

6169

Description/Comments

Client: Drogheda Institute for Further Education
Engineer: DBFL

Project

DIFE Changing Rooms

Site

The Twenties, Drogheda, Co. Louth

Classified by

Name: **Stephen Letch**
Date: **14 Sep 2023 13:11 GMT**
Telephone: **00353 86817 9449**
Company: **Site Investigations Ltd**
The Grange
12th Lock Road
Lucan
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

The Twenties, Drogheda, Co. Louth

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		Pass	Pass	4
2	TP02-0.50	0.50	Non Hazardous		Pass	Pass	8
3	TP03-0.50	0.50	Non Hazardous		Pass	Pass	12
4	TP04-0.50	0.50	Non Hazardous		Pass	Pass	16
5	TP05-0.50	0.50	Non Hazardous		Pass	Pass	20
6	TP06-0.50	0.50	Non Hazardous		Pass	Pass	24
7	TP07-0.50	0.50	Non Hazardous		Pass	Pass	28
8	TP08-0.50	0.50	Non Hazardous		Pass	Pass	32
9	TP09-0.50	0.50	Non Hazardous		Pass	Pass	36
10	TP10-0.50	0.50	Non Hazardous		Pass	Pass	40

Related documents

#	Name	Description
1	230807-66.hwol	ALS Hawarden .hwol file used to populate the Job
2	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

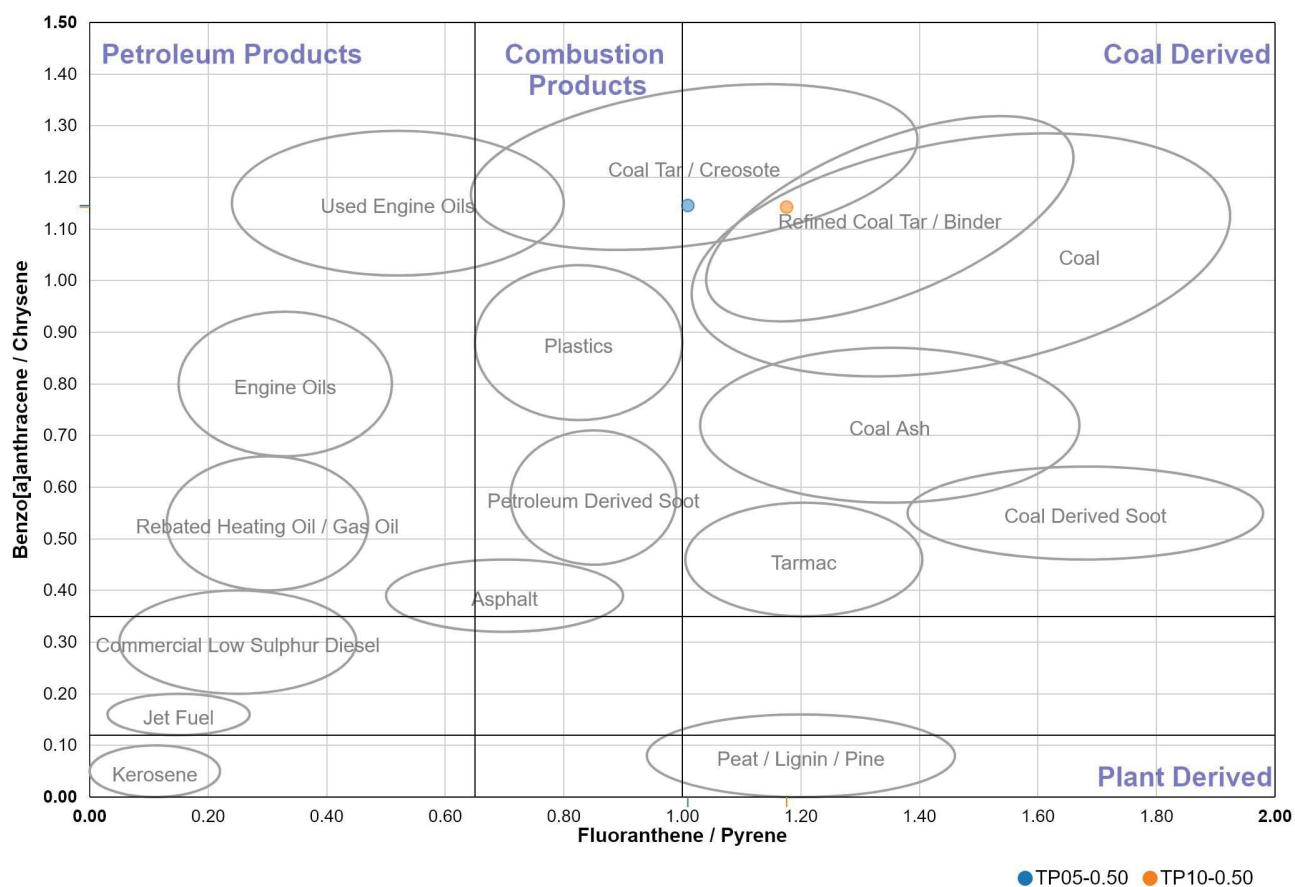
Created by: Stephen Letch

Created date: 14 Sep 2023 13:11 GMT

Appendices	Page
Appendix A: Classifier defined and non EU CLP determinands	44
Appendix B: Rationale for selection of metal species	45
Appendix C: Version	46



Double Ratio PAH Plot



Disclaimer

The domains, oval areas and the plotted points are **indicators only** and must be combined with other lines of evidence to form conclusions. Samples marked with an empty circle are not plotted as they fall outside of the graph's boundaries.

Credits

The domains and the horizontal and vertical lines are derived from Yunker et al. 2002 (Organic Geochemistry 33, 489-515). Most of the ellipses and their labels are with kind permission of Jones Environmental Forensics Limited (now Element Materials Technology).



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)
12%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				<0.6 mg/kg	1.197	<0.718 mg/kg	<0.0000718 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				13.5 mg/kg	1.534	18.222 mg/kg	0.00182 %		✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				113 mg/kg	1.233	122.659 mg/kg	0.0123 %		✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.279 mg/kg	1.855	0.455 mg/kg	0.0000455 %		✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				28.5 mg/kg	1.126	28.237 mg/kg	0.00282 %		✓	
	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	13 mg/kg		11.44 mg/kg	0.00114 %		✓	
	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 }				0.181 mg/kg	1.5	0.239 mg/kg	0.0000239 %		✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				45.3 mg/kg	2.637	105.109 mg/kg	0.0105 %		✓	
	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 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
13	zinc { zinc sulphate }				73.4 mg/kg	2.469	159.497 mg/kg	0.0159 %		✓	
	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) }				34.7 mg/kg	1.462	44.63 mg/kg	0.00446 %		✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				8.89 pH		8.89 pH	8.89 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0504 %		



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: TP01-0.50

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)	%	<0.2	3	5
2	LOI (loss on ignition)	%	5.72	-	-
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	8.89	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0076	0.5	2
10	barium	mg/kg	1.71	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	0.0119	0.5	10
13	copper	mg/kg	0.0123	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	0.0096	0.4	10
17	lead	mg/kg	0.0038	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	0.0889	4	50
21	chloride	mg/kg	40	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	41.7	500	800
26	TDS (total dissolved solids)	mg/kg	298	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)
12%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				0.911 mg/kg	1.197	0.96 mg/kg	0.000096 %		✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				17 mg/kg	1.534	22.947 mg/kg	0.00229 %		✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				569 mg/kg	1.233	617.635 mg/kg	0.0618 %		✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.973 mg/kg	1.855	1.588 mg/kg	0.000159 %		✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				35 mg/kg	1.126	34.677 mg/kg	0.00347 %		✓	
	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	48.7 mg/kg		42.856 mg/kg	0.00429 %		✓	
	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 }				3.66 mg/kg	1.5	4.832 mg/kg	0.000483 %		✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				49.7 mg/kg	2.637	115.318 mg/kg	0.0115 %		✓	
	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 }				4.5 mg/kg	1.405	5.564 mg/kg	0.000556 %		✓	
	034-002-00-8										
13	zinc { zinc sulphate }				74.7 mg/kg	2.469	162.322 mg/kg	0.0162 %		✓	
	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) }				23.3 mg/kg	1.462	29.968 mg/kg	0.003 %		✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				0.0173 mg/kg		0.0152 mg/kg	0.00000152 %	✓	
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				6.72 pH		6.72 pH	6.72 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.105 %		



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)	%	2.18	3	5
2	LOI (loss on ignition)	%	6.8	-	-
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	6.84	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	6.72	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0076	0.5	2
10	barium	mg/kg	0.0153	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0353	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	0.0129	0.4	10
17	lead	mg/kg	0.0233	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	0.0181	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	62	500	800
26	TDS (total dissolved solids)	mg/kg	129	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:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m		
Moisture content:		
12%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				<0.6 mg/kg	1.197	<0.718	mg/kg	<0.0000718 %		<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				16 mg/kg	1.534	21.597	mg/kg	0.00216 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				69.9 mg/kg	1.233	75.875	mg/kg	0.00759 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.521 mg/kg	1.855	0.85	mg/kg	0.000085 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				35.8 mg/kg	1.126	35.47	mg/kg	0.00355 %	✓	
	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		18.656	mg/kg	0.00187 %	✓	
	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 }				0.685 mg/kg	1.5	0.904	mg/kg	0.0000904 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				53.3 mg/kg	2.637	123.671	mg/kg	0.0124 %	✓	
	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 mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
	034-002-00-8										
13	zinc { zinc sulphate }				77.4 mg/kg	2.469	168.189	mg/kg	0.0168 %	✓	
	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) }				30.1 mg/kg	1.462	38.714	mg/kg	0.00387 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				6.83 pH		6.83 pH	6.83 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0498 %		



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)	%	0.405	3	5
2	LOI (loss on ignition)	%	4.13	-	-
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	6.83	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.007	0.5	2
10	barium	mg/kg	0.0092	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0193	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	0.0088	0.4	10
17	lead	mg/kg	0.0059	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	0.0232	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	109	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:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m		
Moisture content:		
14%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				<0.6 mg/kg	1.197	<0.718 mg/kg		<0.0000718 %		<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				16.1 mg/kg	1.534	21.238 mg/kg		0.00212 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				72.7 mg/kg	1.233	77.12 mg/kg		0.00771 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.0972 mg/kg	1.855	0.155 mg/kg		0.0000155 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				29.2 mg/kg	1.126	28.273 mg/kg		0.00283 %	✓	
	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	47.2 mg/kg		40.592 mg/kg		0.00406 %	✓	
	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 }				0.796 mg/kg	1.5	1.027 mg/kg		0.000103 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				45 mg/kg	2.637	102.04 mg/kg		0.0102 %	✓	
	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 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
13	zinc { zinc sulphate }				85.4 mg/kg	2.469	181.355 mg/kg		0.0181 %	✓	
	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) }				26.2 mg/kg	1.462	32.932 mg/kg		0.00329 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				0.0206 mg/kg		0.0177 mg/kg	0.00000177 %	✓	
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				7.24 pH		7.24 pH	7.24 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0499 %		



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)	%	1.49	3	5
2	LOI (loss on ignition)	%	4.47	-	-
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	5.18	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.24	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0072	0.5	2
10	barium	mg/kg	0.0152	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	0.0127	0.5	10
13	copper	mg/kg	0.0316	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	0.0152	0.4	10
17	lead	mg/kg	0.014	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	0.0183	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	36.7	500	800
26	TDS (total dissolved solids)	mg/kg	159	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)
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				12.8 mg/kg		10.624 mg/kg	0.00106 %	☒		
				TPH								
2		confirm TPH has NOT arisen from diesel or petrol				☒						
3		antimony { antimony trioxide }				0.637 mg/kg	1.197	0.633 mg/kg	0.0000633 %	☒		
		051-005-00-X	215-175-0	1309-64-4								
4		arsenic { arsenic pentoxide }				13.4 mg/kg	1.534	17.06 mg/kg	0.00171 %	☒		
		033-004-00-6	215-116-9	1303-28-2								
5		barium {  barium sulphide }				78.4 mg/kg	1.233	80.266 mg/kg	0.00803 %	☒		
		016-002-00-X	244-214-4	21109-95-5								
6		cadmium { cadmium sulfate }				0.219 mg/kg	1.855	0.337 mg/kg	0.0000337 %	☒		
		048-009-00-9	233-331-6	10124-36-4								
7		copper { dicopper oxide; copper (I) oxide }				30.9 mg/kg	1.126	28.876 mg/kg	0.00289 %	☒		
		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	70.8 mg/kg		58.764 mg/kg	0.00588 %	☒		
		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 }				0.965 mg/kg	1.5	1.202 mg/kg	0.00012 %	☒		
		042-001-00-9	215-204-7	1313-27-5								
11		nickel { nickel sulfate }				33 mg/kg	2.637	72.219 mg/kg	0.00722 %	☒		
		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 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD	
		034-002-00-8										
13		zinc { zinc sulphate }				83 mg/kg	2.469	170.11 mg/kg	0.017 %	☒		
		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) }				23.1 mg/kg	1.462	28.022 mg/kg	0.0028 %	☒		
			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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				0.0181 mg/kg		0.015 mg/kg	0.0000015 %	✓	
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				0.0219 mg/kg		0.0182 mg/kg	0.00000182 %	✓	
		205-912-4	206-44-0							
23	pyrene				0.0217 mg/kg		0.018 mg/kg	0.0000018 %	✓	
		204-927-3	129-00-0							
24	benzo[a]anthracene				0.0181 mg/kg		0.015 mg/kg	0.0000015 %	✓	
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				0.0158 mg/kg		0.0131 mg/kg	0.00000131 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				0.0203 mg/kg		0.0168 mg/kg	0.00000168 %	✓	
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				7.68 pH		7.68 pH	7.68 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0471 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because 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.: 0.00106%)



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)	%	2.84	3	5
2	LOI (loss on ignition)	%	6.98	-	-
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	9.6	500	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	<10	100	-
7	pH	pH	7.68	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0068	0.5	2
10	barium	mg/kg	1.29	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0262	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	0.0093	0.4	10
17	lead	mg/kg	0.0103	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	0.127	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	58.4	500	800
26	TDS (total dissolved solids)	mg/kg	637	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)
16%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				22 mg/kg		18.48 mg/kg		0.00185 %	✓	
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☑						
3	antimony { antimony trioxide }				0.601 mg/kg	1.197	0.604 mg/kg		0.0000604 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				12.4 mg/kg	1.534	15.977 mg/kg		0.0016 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				77.7 mg/kg	1.233	80.508 mg/kg		0.00805 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.222 mg/kg	1.855	0.346 mg/kg		0.0000346 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				33.7 mg/kg	1.126	31.872 mg/kg		0.00319 %	✓	
	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	60.2 mg/kg		50.568 mg/kg		0.00506 %	✓	
	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 }				0.918 mg/kg	1.5	1.157 mg/kg		0.000116 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				30 mg/kg	2.637	66.444 mg/kg		0.00664 %	✓	
	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 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
13	zinc { zinc sulphate }				79.3 mg/kg	2.469	164.485 mg/kg		0.0164 %	✓	
	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) }				21.1 mg/kg	1.462	25.905 mg/kg		0.00259 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				0.0207 mg/kg		0.0174 mg/kg	0.00000174 %	✓	
		205-912-4	206-44-0							
23	pyrene				0.0191 mg/kg		0.016 mg/kg	0.0000016 %	✓	
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				0.0139 mg/kg		0.0117 mg/kg	0.00000117 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				8.27 pH		8.27 pH	8.27 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.046 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because 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.: 0.00185%)



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)	%	2.35	3	5
2	LOI (loss on ignition)	%	7.75	-	-
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	8.27	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.009	0.5	2
10	barium	mg/kg	0.0556	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0328	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	0.0084	0.4	10
17	lead	mg/kg	0.0022	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	6.02	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	58.1	500	800
26	TDS (total dissolved solids)	mg/kg	1140	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 }				0.809 mg/kg	1.197	0.823 mg/kg	0.0000823 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
4	arsenic { arsenic pentoxide }				14.9 mg/kg	1.534	19.427 mg/kg	0.00194 %	✓	
	033-004-00-6	215-116-9	1303-28-2							
5	barium { barium sulphide }				81 mg/kg	1.233	84.926 mg/kg	0.00849 %	✓	
	016-002-00-X	244-214-4	21109-95-5							
6	cadmium { cadmium sulfate }				0.228 mg/kg	1.855	0.359 mg/kg	0.0000359 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
7	copper { dicopper oxide; copper (I) oxide }				33.2 mg/kg	1.126	31.773 mg/kg	0.00318 %	✓	
	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	59.6 mg/kg		50.66 mg/kg	0.00507 %	✓	
	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 }				0.955 mg/kg	1.5	1.218 mg/kg	0.000122 %	✓	
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel sulfate }				41.7 mg/kg	2.637	93.457 mg/kg	0.00935 %	✓	
	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 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
13	zinc { zinc sulphate }				84.9 mg/kg	2.469	178.197 mg/kg	0.0178 %	✓	
	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) }				28.6 mg/kg	1.462	35.53 mg/kg	0.00355 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				0.0213 mg/kg		0.0181 mg/kg	0.00000181 %	✓	
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				0.0195 mg/kg		0.0166 mg/kg	0.00000166 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				0.0292 mg/kg		0.0248 mg/kg	0.00000248 %	✓	
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				0.043 mg/kg		0.0366 mg/kg	0.00000366 %	✓	
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				0.0367 mg/kg		0.0312 mg/kg	0.00000312 %	✓	
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				7.27 pH		7.27 pH	7.27 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.051 %		



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)	%	1.85	3	5
2	LOI (loss on ignition)	%	5.24	-	-
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	7.27	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.009	0.5	2
10	barium	mg/kg	0.0254	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0442	2	50
14	mercury	mg/kg	0.0003	0.01	0.2
15	molybdenum	mg/kg	<0.03	0.5	10
16	nickel	mg/kg	0.0181	0.4	10
17	lead	mg/kg	0.0285	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	0.0292	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	5.07	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	57	500	800
26	TDS (total dissolved solids)	mg/kg	323	4,000	60,000

Key

User supplied data



Classification of sample: TP08-0.50

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

Sample details

Sample name:	LoW Code:
TP08-0.50	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)
12%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				0.815 mg/kg	1.197	0.859	mg/kg	0.0000859 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				15.4 mg/kg	1.534	20.787	mg/kg	0.00208 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				55.6 mg/kg	1.233	60.352	mg/kg	0.00604 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.0502 mg/kg	1.855	0.0819	mg/kg	0.00000819 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				26.5 mg/kg	1.126	26.256	mg/kg	0.00263 %	✓	
	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	26.5 mg/kg		23.32	mg/kg	0.00233 %	✓	
	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 }				0.695 mg/kg	1.5	0.918	mg/kg	0.0000918 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				50.7 mg/kg	2.637	117.638	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 }				1.15 mg/kg	1.405	1.422	mg/kg	0.000142 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				79.4 mg/kg	2.469	172.535	mg/kg	0.0173 %	✓	
	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) }				27.3 mg/kg	1.462	35.112	mg/kg	0.00351 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				6.85 pH		6.85 pH	6.85 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0471 %		



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: TP08-0.50

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)	%	0.527	3	5
2	LOI (loss on ignition)	%	3.6	-	-
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	6.85	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0075	0.5	2
10	barium	mg/kg	0.0112	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.023	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	0.0123	0.4	10
17	lead	mg/kg	0.0073	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	0.026	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	500	800
26	TDS (total dissolved solids)	mg/kg	171	4,000	60,000

Key

User supplied data



Classification of sample: TP09-0.50

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

Sample details

Sample name:	LoW Code:	
TP09-0.50	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m		
Moisture content:		
12%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	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 }				<0.6 mg/kg	1.197	<0.718 mg/kg		<0.0000718 %		<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				9.05 mg/kg	1.534	12.216 mg/kg		0.00122 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				57.7 mg/kg	1.233	62.632 mg/kg		0.00626 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.45 mg/kg	1.855	0.734 mg/kg		0.0000734 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				19.9 mg/kg	1.126	19.717 mg/kg		0.00197 %	✓	
	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	26.9 mg/kg		23.672 mg/kg		0.00237 %	✓	
	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 }				1.12 mg/kg	1.5	1.479 mg/kg		0.000148 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				26 mg/kg	2.637	60.327 mg/kg		0.00603 %	✓	
	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 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
13	zinc { zinc sulphate }				54.4 mg/kg	2.469	118.21 mg/kg		0.0118 %	✓	
	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) }				19 mg/kg	1.462	24.437 mg/kg		0.00244 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				0.0179 mg/kg		0.0158 mg/kg	0.00000158 %	✓	
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				<0.017 mg/kg		<0.017 mg/kg	<0.0000017 %		<LOD
		205-912-4	206-44-0							
23	pyrene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
		204-927-3	129-00-0							
24	benzo[a]anthracene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				<0.015 mg/kg		<0.015 mg/kg	<0.0000015 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				8.44 pH		8.44 pH	8.44 pH		
			pH							
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0337 %		



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: TP09-0.50

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)	%	1.66	3	5
2	LOI (loss on ignition)	%	4.59	-	-
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	8.44	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0105	0.5	2
10	barium	mg/kg	0.0374	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	0.0321	0.5	10
13	copper	mg/kg	0.0202	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	0.0437	0.5	10
16	nickel	mg/kg	0.005	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	46.3	500	800
26	TDS (total dissolved solids)	mg/kg	897	4,000	60,000

Key

User supplied data



Classification of sample: TP10-0.50

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

Sample details

Sample name:	LoW Code:	
TP10-0.50	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m		
Moisture content:		
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				17.2 mg/kg		14.964 mg/kg		0.0015 %	✓	
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☑						
3	antimony { antimony trioxide }				<0.6 mg/kg	1.197	<0.718 mg/kg		<0.0000718 %		<LOD
	051-005-00-X	215-175-0	1309-64-4								
4	arsenic { arsenic pentoxide }				11.7 mg/kg	1.534	15.613 mg/kg		0.00156 %	✓	
	033-004-00-6	215-116-9	1303-28-2								
5	barium { barium sulphide }				75.9 mg/kg	1.233	81.451 mg/kg		0.00815 %	✓	
	016-002-00-X	244-214-4	21109-95-5								
6	cadmium { cadmium sulfate }				0.214 mg/kg	1.855	0.345 mg/kg		0.0000345 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
7	copper { dicopper oxide; copper (I) oxide }				26.5 mg/kg	1.126	25.957 mg/kg		0.0026 %	✓	
	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	47.2 mg/kg		41.064 mg/kg		0.00411 %	✓	
	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 }				1.05 mg/kg	1.5	1.37 mg/kg		0.000137 %	✓	
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel sulfate }				24.6 mg/kg	2.637	56.43 mg/kg		0.00564 %	✓	
	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 }				1.1 mg/kg	1.405	1.345 mg/kg		0.000134 %	✓	
	034-002-00-8										
13	zinc { zinc sulphate }				68.3 mg/kg	2.469	146.728 mg/kg		0.0147 %	✓	
	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) }				16 mg/kg	1.462	20.345 mg/kg		0.00203 %	✓	
		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 }				<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
16	naphthalene				<0.009 mg/kg		<0.009 mg/kg	<0.0000009 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
17	acenaphthylene				<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
		205-917-1	208-96-8							
18	acenaphthene				<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
		201-469-6	83-32-9							
19	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
20	phenanthrene				0.0436 mg/kg		0.0379 mg/kg	0.00000379 %	✓	
		201-581-5	85-01-8							
21	anthracene				<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
		204-371-1	120-12-7							
22	fluoranthene				0.0782 mg/kg		0.068 mg/kg	0.0000068 %	✓	
		205-912-4	206-44-0							
23	pyrene				0.0665 mg/kg		0.0579 mg/kg	0.00000579 %	✓	
		204-927-3	129-00-0							
24	benzo[a]anthracene				0.0409 mg/kg		0.0356 mg/kg	0.00000356 %	✓	
	601-033-00-9	200-280-6	56-55-3							
25	chrysene				0.0358 mg/kg		0.0311 mg/kg	0.00000311 %	✓	
	601-048-00-0	205-923-4	218-01-9							
26	benzo[b]fluoranthene				0.0322 mg/kg		0.028 mg/kg	0.0000028 %	✓	
	601-034-00-4	205-911-9	205-99-2							
27	benzo[k]fluoranthene				<0.014 mg/kg		<0.014 mg/kg	<0.0000014 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
28	benzo[a]pyrene; benzo[def]chrysene				0.0285 mg/kg		0.0248 mg/kg	0.00000248 %	✓	
	601-032-00-3	200-028-5	50-32-8							
29	indeno[123-cd]pyrene				<0.018 mg/kg		<0.018 mg/kg	<0.0000018 %		<LOD
		205-893-2	193-39-5							
30	dibenz[a,h]anthracene				<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
31	benzo[ghi]perylene				<0.024 mg/kg		<0.024 mg/kg	<0.0000024 %		<LOD
		205-883-8	191-24-2							
32	polychlorobiphenyls; PCB				<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
33	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
34	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
35	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
36	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
37	coronene				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
		205-881-7	191-07-1							
38	pH				8.37 pH		8.37 pH	8.37 pH		
39	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.0408 %		



Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because 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.: 0.0015%)



WAC results for sample: TP10-0.50

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)	%	11.2	-	-
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	8.37	-	>6
8	ANC (acid neutralisation capacity)	mol/kg		-	-
Eluate Analysis 10:1					
9	arsenic	mg/kg	0.0091	0.5	2
10	barium	mg/kg	0.0434	20	100
11	cadmium	mg/kg	<0.0008	0.04	1
12	chromium	mg/kg	<0.01	0.5	10
13	copper	mg/kg	0.0411	2	50
14	mercury	mg/kg	<0.0001	0.01	0.2
15	molybdenum	mg/kg	0.0343	0.5	10
16	nickel	mg/kg	0.0082	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	0.0313	4	50
21	chloride	mg/kg	<20	800	15,000
22	fluoride	mg/kg	6.49	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	68	500	800
26	TDS (total dissolved solids)	mg/kg	1100	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: 2023.237.5731.10565 (25 Aug 2023)

HazWasteOnline Database: 2023.237.5731.10565 (25 Aug 2023)

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 25 May 2023

Appendix 10
Survey Data

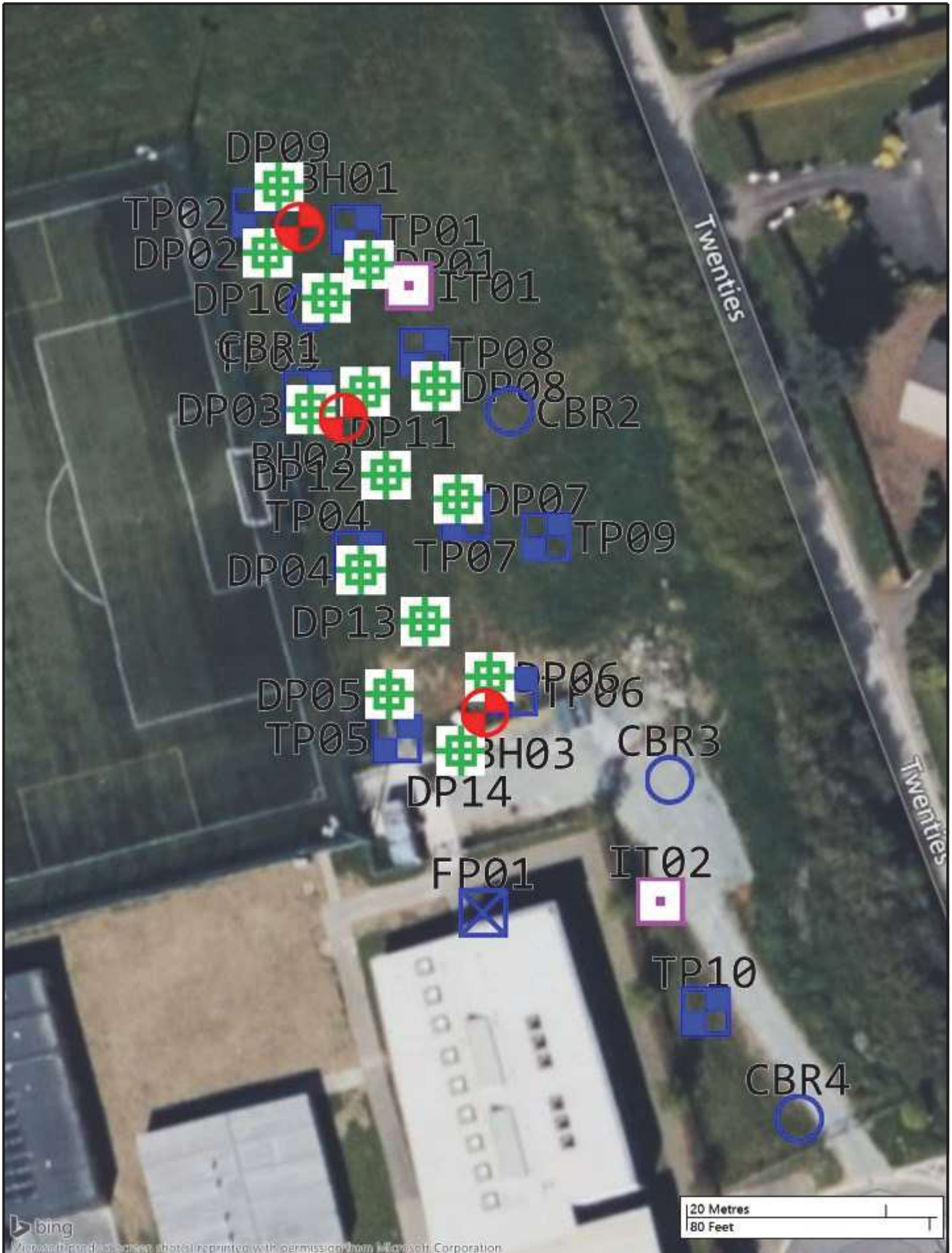
DRAFT

Survey Data

Location	Irish Transverse Mercator		Elevation	Irish National Grid	
	Easting	Northing		Easting	Northing
Cable Percussive Boreholes					
BH01	708295.994	776800.782	34.15	308368.355	276783.687
BH02	708300.921	776781.709	34.24	308373.284	276764.610
BH03	708315.938	776752.344	34.40	308388.304	276735.238
Trial Pits					
TP01	708301.701	776800.611	34.27	308374.064	276783.516
TP02	708291.686	776802.099	34.13	308364.047	276785.004
TP03	708297.379	776783.871	34.15	308369.741	276766.772
TP04	708302.728	776767.863	34.15	308375.091	276750.761
TP05	708307.209	776749.579	34.22	308379.573	276732.473
TP06	708318.771	776754.566	34.56	308391.138	276737.461
TP07	708313.597	776772.107	34.38	308385.962	276755.006
TP08	708308.916	776788.437	34.34	308381.280	276771.339
TP09	708321.689	776770.188	34.45	308394.056	276753.086
TP10	708338.834	776722.805	34.54	308411.205	276705.693
Dynamic Probes					
DP01	708303.112	776797.178	34.30	308375.475	276780.082
DP02	708292.892	776798.090	34.04	308365.253	276780.994
DP03	708297.662	776782.455	34.10	308370.024	276765.356
DP04	708303.037	776766.419	34.19	308375.400	276749.316
DP05	708306.331	776753.992	34.19	308378.695	276736.887
DP06	708316.316	776755.972	34.39	308388.682	276738.867
DP07	708312.721	776773.785	34.31	308385.086	276756.684
DP08	708310.208	776785.070	34.35	308382.573	276767.971
DP09	708293.984	776804.793	34.14	308366.345	276787.699
DP10	708298.929	776793.694	34.24	308371.291	276776.597
DP11	708303.006	776784.358	34.29	308375.369	276767.259
DP12	708305.328	776776.034	34.19	308377.692	276758.933
DP13	708309.712	776761.390	34.26	308382.077	276744.286
DP14	708313.513	776748.447	34.36	308385.879	276731.341
Soakaway Tests					
IT01	708307.357	776795.121	34.37	308379.721	276778.025
IT02	708334.116	776733.786	34.62	308406.486	276716.676
Foundation Pit					
FP01	708316.222	776732.226	34.39	308388.588	276715.116
California Bearing Ratio Tests					
CBR1	708297.373	776792.756	34.18	308369.735	276775.659
CBR2	708317.755	776782.736	34.42	308390.121	276765.637
CBR3	708334.781	776746.017	34.69	308407.151	276728.910

Survey Data

Location	Irish Transverse Mercator		Elevation	Irish National Grid	
	Easting	Northing		Easting	Northing
CBR4	708348.486	776712.243	34.58	308420.859	276695.129



	Contract No:	6169	Client:	Drogheda Institute for Further Education	Legend Key ● Locations By Type - CP ◆ Locations By Type - DP ○ Locations By Type - ICBR
	Contract:	DIFE Changing Rooms	Engineer:	DBFL	
	Location:	The Twenties, Drogheda, Co. Louth	Scale:	1:500	
	Title:	Site Plan	Drawn By:	SL	