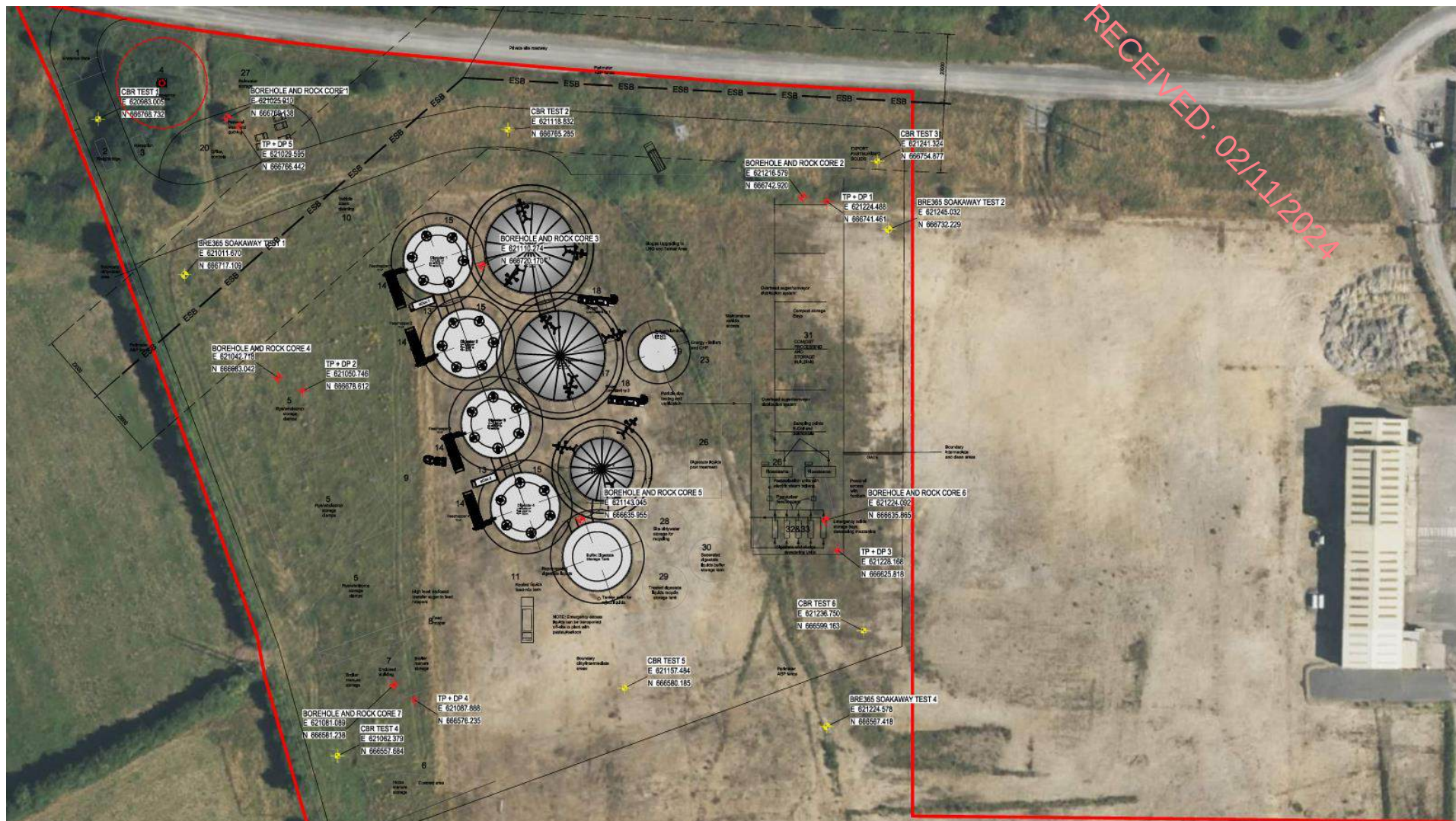


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O'Callaghan Moran & Associates,
Unit 15 Melbourne Business Park,
Model Farm Road, Cork.
Tel. (021) 4345366
Email: info@ocaughanmoran.com

Title:

Figure 2.2 Sample Location Plan

Legend

Client:

IGSL Limited

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2.2 Waste Classification

The Haz Waste Online Classification Engine, developed in the UK by One Touch Data Ltd, was used to determine the waste classification. This tool was developed specifically to establish whether waste is non-hazardous or hazardous and has been approved for use in Ireland by the Environmental Protection Agency. The full Waste Classification Report is in Appendix 3 and the results are summarised in Table 2.1.

Table 2.1 Waste Classification

Sample No.	Depth	Classification	LoW Code
TP01	0.6	Non-Hazardous	17 05 04
TP02	0.4	Non-Hazardous	17 05 04
TP-SA03	0.7	Non-Hazardous	17 05 04
TP04	0.7	Non-Hazardous	17 05 04
TP05	1.00	Non-Hazardous	17 05 04
TP6	0.50	Non-Hazardous	17 05 04
TP7	0.60	Non-Hazardous	17 05 04
TP8	1.00	Non-Hazardous	17 05 04
TP9	0.60	Non-Hazardous	17 05 04
TP10	0.50	Non-Hazardous	17 05 04
TP11	0.50	Non-Hazardous	17 05 04
BH1	1.00	Non-Hazardous	17 05 04
BH2	1.00	Non-Hazardous	17 05 04
BH3	1.00	Non-Hazardous	17 05 04
BH4	1.00	Non-Hazardous	17 05 04
BH6	1.0	Non-Hazardous	17 05 04
BH7	1.0	Non-Hazardous	17 05 04
BH7	3.0	Non-Hazardous	17 05 04

Asbestos was not detected in any of the samples tested.

All samples are classified as non-hazardous and the appropriate List of Waste Code is 17 05 04 (Soil and Stone other than those mentioned in 17 05 03*).

2.3 Waste Acceptance Criteria

The results of the WAC testing are presented in Table 2.2-2.3, which includes for comparative purposes the WAC for Inert, Non Hazardous and Hazardous Waste Landfills pursuant to Article 16 of the EU Landfill Directive 1999/31/EC Annex II which establishes criteria and procedures for the acceptance of waste at landfills.

Chromium exceeds the inert WAC increased limits for TP06 (0.50m).

Total Organic Carbon (TOC) exceeds the inert WAC for BH03 (1.00m), BH04 (1.00m) and BH07 (3.00m), and the inert WAC increased limits for BH01 (1.00m).

All other samples meet the inert WAC.

Table 2.2 WAC Results

Parameter	Unit	TP01	TP02	TP-SA03	TP04	TP05	TP6	TP7	TP8	TP9	Inert Landfill	Inert Landfill Increased Limits	Non-Hazardous Landfill	Hazardous Landfill
Depth	m	0.6	0.4	0.7	0.7	1.00	0.50	0.60	1.00	0.60				
Antimony	mg/kg	<0.0050	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.06	0.18	0.7	5
Arsenic	mg/kg	<0.0020	0.0093	<0.0020	0.0055	0.015	0.0039	0.0021	<0.0020	<0.0020	0.5	1.5	2	25
Barium	mg/kg	0.084	0.081	0.082	0.12	0.067	<0.050	<0.050	0.061	<0.050	20	20	100	300
Cadmium	mg/kg	<0.0011	0.0027	<0.0011	<0.0011	0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.04	0.04	1	5
Chromium	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	1.6	<0.0050	<0.0050	<0.0050	0.5	0.5	10	70
Copper	mg/kg	0.0068	0.020	0.010	0.011	0.0099	0.015	0.015	0.016	0.015	2	2	50	100
Lead	mg/kg	<0.0050	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.5	0.5	10	50
Molybdenum	mg/kg	0.0076	0.027	0.013	0.013	0.033	0.022	0.0065	0.010	0.017	0.5	1.5	10	30
Nickel	mg/kg	0.0058	0.0058	<0.0050	0.0056	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	0.4	0.4	10	40
Selenium	mg/kg	<0.0050	0.0090	<0.0050	0.0057	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	0.1	0.3	0.5	7
Zinc	mg/kg	0.042	0.11	0.059	0.032	0.026	0.043	0.049	0.035	0.043	4	4	50	200
Mercury	mg/kg	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.01	0.01	0.2	2
Phenol	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	1	1	NE	NE
Fluoride	mg/kg	6.8	5.7	3.6	2.5	1.7	2.2	2.0	2.8	1.8	10	10	150	500
Chloride	mg/kg	<10	16	<10	<10	<10	<10	<10	<10	<10	800	2,400	15,000	25,000
Sulphate	mg/kg	<10	44	<10	18	<10	<10	<10	<10	25	1000*	3,000	20000*	50,000
DOC **	mg/kg	79	68	56	53	<50	<50	<50	<50	<50	500	500	800	1,000
pH	pH units	8.4	8.3	8.6	8.4	8.4	8.5	8.6	8.5	8.4	NE	NE	NE	NE
TDS ***	mg/kg	570	620	460	620	540	400	400	360	56	4,000	12,000	60,000	100,000
TOC	%	0.40	6.9	0.99	0.85	0.66	2.1	1.4	0.44	0.88	3	6	NE	6
Benzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Toluene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Ethylbenzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
m/p-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
o-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
PCB Total of 7	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1	1	NE	NE
Total 17 PAH's	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NE	100	NE	NE
Mineral Oil	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	500	500	NE	NE
Asbestos	% mass	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NE	NE	NE	NE

NAD denotes No Asbestos Detected

* denotes sulphate level exceeding inert waste limit may be considered as complying if the TDS value does not exceed 6,000mg/kg at L/S = 10l/kg.

** denotes a higher limit may be accepted provided the DOC alternative values of 500mg/kg is achieved

*** denotes TDS. The values for TDS can be used to sulphate and chloride.

 PAH over 1mg/kg and Mineral Oil over 50 mg/kg exceeds limit at soil recovery site in Ireland

Table 2.3 WAC Results

Parameter	Unit	TP10	TP11	BH1	BH2	BH3	BH4	BH6	BH7	BH7	Inert Landfill	Inert Landfill Increased Limits	Non-Hazardous Landfill	Hazardous Landfill
Depth	m	0.50	0.50	1.00	1.00	1.00	1.00	1.0	1.0	3.0				
Antimony	mg/kg	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.013	0.012	0.06	0.18	0.7	5
Arsenic	mg/kg	0.022	0.0038	0.0097	0.0024	0.0033	0.0042	0.0039	0.010	0.0079	0.5	1.5	2	25
Barium	mg/kg	0.13	0.077	< 0.050	0.060	0.086	0.082	0.072	0.79	0.54	20	20	100	300
Cadmium	mg/kg	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	0.04	0.04	1	5
Chromium	mg/kg	0.0075	0.0053	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0055	0.0077	0.0051	0.5	0.5	10	70
Copper	mg/kg	0.028	0.017	0.010	0.0079	0.017	0.012	0.012	0.021	0.012	2	2	50	100
Lead	mg/kg	0.037	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.019	0.0050	0.5	0.5	10	50
Molybdenum	mg/kg	0.018	0.0068	0.069	0.0077	0.031	0.022	0.0083	0.021	0.014	0.5	1.5	10	30
Nickel	mg/kg	0.032	0.0068	< 0.0050	< 0.0050	0.0068	0.0058	0.0062	0.022	0.010	0.4	0.4	10	40
Selenium	mg/kg	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.1	0.3	0.5	7
Zinc	mg/kg	0.28	0.045	0.065	0.061	0.075	0.030	0.050	0.089	0.051	4	4	50	200
Mercury	mg/kg	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	0.01	0.01	0.2	2
Phenol	mg/kg	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	1	1	NE	NE
Fluoride	mg/kg	3.6	2.5	1.5	6.1	4.0	3.2	2.5	2.0	1.4	10	10	150	500
Chloride	mg/kg	< 10	< 10	46	13	34	23	< 10	< 10	< 10	800	2,400	15,000	25,000
Sulphate	mg/kg	26	16	36	< 10	15	< 10	< 10	51	32	1000*	3,000	20000*	50,000
DOC **	mg/kg	< 50	< 50	< 50	60	< 50	65	< 50	< 50	< 50	500	500	800	1,000
pH	pH units	8.3	8.3	8.3	8.6	8.7	8.8	8.0	8.4	8.2	NE	NE	NE	NE
TDS ***	mg/kg	520	410	580	650	670	880	440	910	480	4,000	12,000	60,000	100,000
TOC	%	0.83	0.54	7.4	0.67	5.4	4.7	0.31	1.9	3.2	3	6	NE	6
Benzene	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	6	6	NE	NE
Toluene	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	6	6	NE	NE
Ethylbenzene	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	6	6	NE	NE
m/p-Xylene	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	6	6	NE	NE
o-Xylene	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	6	6	NE	NE
PCB Total of 7	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	1	NE	NE
Total 17 PAH's	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NE	100	NE	NE
Mineral Oil	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	500	500	NE	NE
Asbestos	% mass	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NE	NE	NE	NE

NAD denotes No Asbestos Detected

* denotes sulphate level exceeding inert waste limit may be considered as complying if the TDS value does not exceed 6,000mg/kg at L/S = 10l/kg.

** denotes a higher limit may be accepted provided the DOC alternative values of 500mg/kg is achieved

*** denotes TDS. The values for TDS can be used to sulphate and chloride.

 PAH over 1mg/kg and Mineral Oil over 50 mg/kg exceeds limit at soil recovery site in Ireland

2.4 Waste Management Options

The EPA has issued guidance on acceptance criteria for a range of parameters for soil recovery sites. This includes;

- Metals (solid conc. not leachability) in soil and stone (including As, Cd, Cr, Cu, Hg, Ni, Pb, Zn);
- Total organic carbon in soil and stone;
- Total BTEX (benzene, toluene, ethylbenzene, xylenes) in soil and stone;
- Mineral oil in soil and stone;
- Polycyclic aromatic hydrocarbons (PAHs) in soil and stone;
- Polychlorinated Biphenyls (PCBs) in soil and stone;
- Asbestos fibres in soil and stone.

The guidance requires that soils from brownfield sites should not exceed the limits for the parameters specified in Table 2.4 and 2.5. For metals limits have been specified for a range of soil types nationally separated into six domain areas.

Table 2.4 Soil Recovery Site Criteria

Parameter	Limit for Soil Recovery Sites
Total BTEX	0.05 mg/kg
Mineral Oil	50 mg/kg
Total PAHs	1 mg/kg
Total PCBs	0.05 mg/kg

All samples meet the soil recovery criteria for Total BTEX, Mineral Oil, Total PAH's and Total PCB's.

The soil and stone cannot be sent to soil recovery sites if the trigger levels for a particular domain are exceeded. There is however some flexibility in applying the limits. A derogation applies where up to three parameters can exceed the limit for a sample provided the concentration in the samples is no more than 1.5 times the trigger level. The site which is subject to this investigation is located in Domain 2 and the trigger levels are listed in Table 2.5.

Table 2.5 Soil Recovery Trigger Levels

		Domain 2 Trigger Level	1.5 times Trigger Level
Arsenic	mg/kg	24.90	37.35
Cadmium	mg/kg	3.28	4.92
Chromium	mg/kg	50.30	75.45
Copper	mg/kg	63.50	95.25
Mercury	mg/kg	0.36	0.54
Nickel	mg/kg	61.90	92.85
Lead	mg/kg	86.10	129.15
Zinc	mg/kg	197.00	295.5

The samples from TP02 (0.40m) and TP04 (0.70m) exceed the soil recovery criteria for metal concentrations. The sample from TP02 exceeds the 1.5 times trigger level for Zinc. The sample from TP04 exceeds the 1.5 times trigger level for Chromium. All other samples meet the soil recovery criteria for metal concentrations.

Waste management options are summarised on Table 2.7. All are subject to approval of the waste management facility operators. Class A material is suitable for removal to a soil recovery facility. Class B-1 wastes are suitable for recovery/disposal to Inert Landfill. Class B-2 wastes are suitable for recovery/disposal to Inert Landfill with increased limits. Class C wastes are suitable for disposal to Non-Hazardous Landfill.

Table 2.7 Waste Management Options

Sample No.	Depth	Classification	LoW Code	Category
TP01	0.6	Non-Hazardous	17 05 04	A
TP02	0.4	Non-Hazardous	17 05 04	B-1
TP-SA03	0.7	Non-Hazardous	17 05 04	A
TP04	0.7	Non-Hazardous	17 05 04	B-1
TP05	1.00	Non-Hazardous	17 05 04	A
TP6	0.50	Non-Hazardous	17 05 04	C
TP7	0.60	Non-Hazardous	17 05 04	A
TP8	1.00	Non-Hazardous	17 05 04	A
TP9	0.60	Non-Hazardous	17 05 04	A
TP10	0.50	Non-Hazardous	17 05 04	A
TP11	0.50	Non-Hazardous	17 05 04	A
BH1	1.00	Non-Hazardous	17 05 04	C
BH2	1.00	Non-Hazardous	17 05 04	A
BH3	1.00	Non-Hazardous	17 05 04	B-2
BH4	1.00	Non-Hazardous	17 05 04	B-2
BH6	1.0	Non-Hazardous	17 05 04	A
BH7	1.0	Non-Hazardous	17 05 04	A
BH7	3.0	Non-Hazardous	17 05 04	B-2

A	Meets Soil Recovery Criteria
B-1	Suitable for disposal/recovery to Inert Landfill
B-2	Suitable for disposal/recovery to Inert Landfill with increased limits
C	Suitable for disposal to Non-Hazardous Landfill

3 CONCLUSIONS AND RECOMMENDATIONS

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3.1 Conclusions

3.1.1 *Waste Classification*

Asbestos was not detected in any of the samples tested.

All samples are classified as non-hazardous and the appropriate List of Waste Code is 17 05 04 (Soil and Stone other than those mentioned in 17 05 03*).

If the soils have to be removed from the site the disposal options are outlined in Section 2.4.

3.2 Recommendations

OCM recommend that a copy of this report be provided in full to the relevant waste management facilities to which the made ground and subsoils will be consigned to confirm its suitability for acceptance.

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Appendix 1

Borehole and Trial Pit Logs

 GEOTECHNICAL BORING RECORD										REPORT NUMBER 25517	
CONTRACT Lisheen Mine , Co.Tipperary								BOREHOLE NO. BH01			
CO-ORDINATES 621,215.75 E 666,738.35 N				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200 BOREHOLE DEPTH (m) 3.10				SHEET Sheet 1 of 1 DATE COMMENCED 30/07/2024 DATE COMPLETED 30/07/2024			
GROUND LEVEL (m AOD) 127.20											
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)				BORED BY P.Allan PROCESSED BY F.C			

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		126.10	1.10	AA228304	B	1.00		N = 23 (4, 6, 4, 7, 7, 5)	
1	Firm grey/brown sandy SILT/CLAY with some gravel									
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles									
3	Obstruction End of Borehole at 3.10 m		124.10	3.10	AA228306	B	3.00		N = 25/75 mm (10, 25, 25)	
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.3	1.5	1							No water strike
2.9	3.1	1.5							

INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)				
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD										REPORT NUMBER 25517	
CONTRACT Lisheen Mine , Co.Tipperary								BOREHOLE NO. BH02			
CO-ORDINATES 621,042.35 E 666,682.77 N				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200		SHEET Sheet 1 of 1		DATE COMMENCED 26/07/2024 DATE COMPLETED 29/07/2024			
GROUND LEVEL (m AOD) 129.72				BOREHOLE DEPTH (m) 2.70							
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)		BORED BY P.Allan PROCESSED BY F.C					

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		129.42	0.30						
	Firm brown sandy SILT/CLAY		128.92	0.80						
1	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA228310	B	1.00		N = 29 (4, 4, 5, 6, 9, 9) N = 31 (5, 7, 7, 7, 8, 9) N = 50/75 mm (25, 50)	
	Grey/brown sandy SILT/CLAY with some gravel and occasional cobbles									
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA228311	B	2.00			
	Grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		127.32	2.40						
	Obstruction		127.02	2.70						
3	Obstruction End of Borehole at 2.70 m									
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.8	1.9	1							No water strike
2.2	2.4	1.5							
2.5	2.7	1.5							
INSTALLATION DETAILS				GROUNDWATER PROGRESS					
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)					UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample				
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD REPORT NUMBER 25517										
CONTRACT Lisheen Mine , Co.Tipperary						BOREHOLE NO. BH03				
CO-ORDINATES 621,224.65 E 666,634.11 N			RIG TYPE Dando 2000			SHEET Sheet 1 of 1				
GROUND LEVEL (m AOD) 127.39			BOREHOLE DIAMETER (mm) 200			DATE COMMENCED 30/07/2024				
			BOREHOLE DEPTH (m) 2.50			DATE COMPLETED 30/07/2024				
CLIENT DOBA			SPT HAMMER REF. NO.			BORED BY P.Allan				
ENGINEER			ENERGY RATIO (%)			PROCESSED BY F.C				
Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		126.49	0.90	AA228300	B	1.00		N = 30 (5, 5, 7, 8, 8, 7)	
1	Firm brown SILT/CLAY with occasional gravel									
2	Very stiff grey/brown sandy gravelly CLAY occasional cobbles					AA228301	B	2.00		N = 38 (6, 7, 10, 9, 9, 10)
2.50	Obstruction End of Borehole at 2.50 m		124.89	2.50					N = 50/75 mm (18, 20, 50)	
3										
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
2.1	2.5	2							No water strike

INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS	CAT scanned location and hand dug inspection pit was carried out .	Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)	UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD										REPORT NUMBER 25517	
CONTRACT Lisheen Mine , Co.Tipperary								BOREHOLE NO. BH04			
CO-ORDINATES 621,082.02 E 666,580.48 N				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200		SHEET Sheet 1 of 1		DATE COMMENCED 29/07/2024			
GROUND LEVEL (m AOD) 129.73				BOREHOLE DEPTH (m) 2.80		DATE COMPLETED 29/07/2024					
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)		BORED BY P.Allan PROCESSED BY F.C					

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		129.43	0.30						
1	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles Firm brown SILT/CLAY with some gravel				AA228302	B	1.00		N = 24 (6, 8, 9, 5, 5, 5)	
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles Firm brown SILT/CLAY with some gravel Stiff to very stiff grey/brown sandy gravelly CLAY with occasional cobbles		128.53	1.20						
					AA228303	B	2.00		N = 36 (6, 7, 7, 10, 10, 9)	
										
			126.93	2.80					N = 50/75 mm (25, 50)	
3	Obstruction End of Borehole at 2.80 m									
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING					WATER STRIKE DETAILS				
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.5	1.6	1							
2.6	2.8	1.5							No water strike

INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)				
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

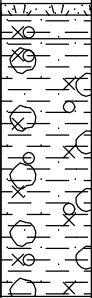
 GEOTECHNICAL BORING RECORD REPORT NUMBER 25517										
CONTRACT Lisheen Mine , Co.Tipperary							BOREHOLE NO. BH05 SHEET Sheet 1 of 1			
CO-ORDINATES 621,150.80 E 666,579.94 N GROUND LEVEL (m AOD) 127.71				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200 BOREHOLE DEPTH (m) 0.70			DATE COMMENCED 28/08/2024 DATE COMPLETED 28/08/2024			
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)			BORED BY D.Tolster PROCESSED BY F.C			
Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL Brown sandy SILT/CLAY with occasional gravel Light brown very sandy SILT/CLAY with some gravel and occasional cobbles Obstruction - Possible boulder End of Borehole at 0.70 m		127.61 127.41 127.01	0.10 0.30 0.70	AA219546	B	0.50			
1										
2										
3										
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
0.6	0.7	1							No water strike

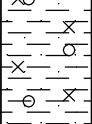
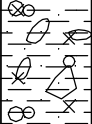
INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out . Obstruction encountered at 0.70m. Moved rig to BH05A and attempted rebore.	Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)	UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

		GEOTECHNICAL BORING RECORD					REPORT NUMBER 25517			
CONTRACT Lisheen Mine , Co.Tipperary						BOREHOLE NO. BH05A				
CO-ORDINATES			RIG TYPE Dando 2000		SHEET Sheet 1 of 1					
GROUND LEVEL (m AOD)			BOREHOLE DIAMETER (mm) 200		DATE COMMENCED 28/08/2024					
			BOREHOLE DEPTH (m) 2.50		DATE COMPLETED 28/08/2024					
CLIENT ENGINEER DOBA			SPT HAMMER REF. NO.		BORED BY D.Tolster					
			ENERGY RATIO (%)		PROCESSED BY F.C					
Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL			0.10	AA211709	B	1.00		N = 18 (3, 2, 3, 4, 4, 7)	
	Brown sandy SILT/CLAY with occasional gravel			0.30						
1	Stiff light brown very sandy SILT/CLAY with some gravel and occasional cobbles									
2										
				2.50	AA211710	B	2.00		N = 27 (5, 4, 6, 7, 7, 7)	
3	Obstruction End of Borehole at 2.50 m									
4										
5										
6										
7										
8										
9										
HARD STRATA BORING/CHISELLING					WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments	
2.4	2.5	1.5							No water strike	
					GROUNDWATER PROGRESS					
INSTALLATION DETAILS				Date	Hole Depth	Casing Depth	Depth to Water	Comments		
Date	Tip Depth	RZ Top	RZ Base	Type						
REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub) UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample					

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

		GEOTECHNICAL BORING RECORD						REPORT NUMBER 25517									
CONTRACT Lisheen Mine , Co.Tipperary						BOREHOLE NO. BH06											
CO-ORDINATES 621,117.29 E 666,389.67 N			RIG TYPE Dando 2000			SHEET Sheet 1 of 1											
GROUND LEVEL (m AOD) 127.46			BOREHOLE DIAMETER (mm) 200			DATE COMMENCED 29/08/2024											
			BOREHOLE DEPTH (m) 3.80			DATE COMPLETED 29/08/2024											
CLIENT ENGINEER DOBA			SPT HAMMER REF. NO.			BORED BY D.Tolster											
			ENERGY RATIO (%)			PROCESSED BY F.C											
Depth (m) 0 1 2 3 4 5 6 7 8 9	Description		Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details						
						Ref. Number	Sample Type	Depth (m)	Recovery								
	TOPSOIL			127.26	0.20												
	Soft mottled brown sandy SILT/CLAY with occasional gravel					AA219547	B	1.00									
	Firm mottled grey sandy SILT/CLAY with some gravel and occasional cobbles			125.96	1.50												
						AA219548	B	2.00		N = 18 (2, 2, 4, 4, 5, 5)							
	Very stiff brown sandy silty gravelly CLAY with some cobbles and occasional boulders			124.86	2.60					N = 37 (4, 4, 8, 10, 10, 9)							
						AA219549	B	3.00									
	Obstruction - Possible boulder End of Borehole at 3.80 m			123.66	3.80					N = 50/75 mm (18, 21, 50)							
HARD STRATA BORING/CHISELLING												WATER STRIKE DETAILS					
From (m)		To (m)		Time (h)		Comments		Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments				
3.7		3.8		1.5									No water strike				
INSTALLATION DETAILS												GROUNDWATER PROGRESS					
Date		Tip Depth		RZ Top		RZ Base		Type		Date	Hole Depth	Casing Depth	Depth to Water	Comments			
REMARKS CAT scanned location and hand dug inspection pit was carried out .										Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)				UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample			

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD REPORT NUMBER 25517										
CONTRACT Lisheen Mine , Co.Tipperary							BOREHOLE NO. BH07 SHEET Sheet 1 of 1			
CO-ORDINATES 621,259.03 E 666,518.46 N GROUND LEVEL (m AOD) 126.71			RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200 BOREHOLE DEPTH (m) 5.10			DATE COMMENCED 27/08/2024 DATE COMPLETED 28/08/2024				
CLIENT DOBA ENGINEER DOBA			SPT HAMMER REF. NO. ENERGY RATIO (%)			BORED BY D.Tolster PROCESSED BY F.C				
Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		126.61	0.10						
1	Firm grey/brown sandy SILT/CLAY with occasional gravel		125.51	1.20	AA229644	B	1.00		N = 11 (2, 2, 2, 2, 3, 4)	
	Firm grey/black sandy SILT/CLAY with some gravel and occasional cobbles (Possibly Made Ground)				AA229645	B	1.50			
2			124.41	2.30	AA229646	B	2.00		N = 16 (4, 4, 6, 3, 4, 3)	
	Stiff grey/brown sandy silty gravelly CLAY with some cobbles and occasional boulders				AA229647	B	3.00			
3			122.81	3.90	AA229648	B	3.50		N = 26 (4, 6, 6, 7, 6, 7)	
					AA229649	B	4.00			
4	Dense grey fine to coarse sandy angular GRAVEL		121.61	5.10	AA229650	B	5.00		N = 37 (6, 8, 10, 10, 8, 9)	
5	Obstruction End of Borehole at 5.10 m									
6										
7										
8										
9										
HARD STRATA BORING/CHISELLING					WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments	
2.1	2.4	1		3.60	3.60	No	2.40	20	Moderate	
5	5.1	1.5								
					GROUNDWATER PROGRESS					
INSTALLATION DETAILS				Date	Hole Depth	Casing Depth	Depth to Water	Comments		
Date	Tip Depth	RZ Top	RZ Base	Type	28-09-24	5.10	Nil	2.30	End of BH	
REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub) UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample					

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD										REPORT NUMBER 25517	
CONTRACT Lisheen Mine , Co.Tipperary								BOREHOLE NO. BH08			
CO-ORDINATES 621,334.77 E 666,486.83 N				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200 BOREHOLE DEPTH (m) 1.40		SHEET Sheet 1 of 1		DATE COMMENCED 27/08/2024 DATE COMPLETED 27/08/2024			
GROUND LEVEL (m AOD) 126.53											
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)		BORED BY D.Tolster PROCESSED BY F.C					

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		126.43	0.10						
	Mottled brown sandy SILT/CLAY with occasional gravel		126.23	0.30						
1	Firm grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA219500	B	0.80		N = 15 (4, 3, 3, 5, 4, 3) N = 50/75 mm (25, 50)	
	Obstruction		125.13	1.40						
	End of Borehole at 1.40 m									
2										
3										
4										
5										
6										
7										
8										
9										

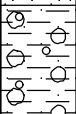
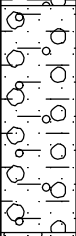
HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.3	1.4	1.5							No water strike

INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)					UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample				
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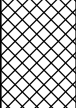
IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine							TRIAL PIT NO. TP01 SHEET Sheet 1 of 1		
LOGGED BY I.Redder		CO-ORDINATES 621,012.20 E 666,724.97 N				DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024			
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 130.56				EXCAVATION METHOD 5T tracked machine			

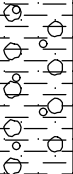
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm to stiff, redish brown, slightly sandy gravelly CLAY with medium cobble content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subanglar to subrounded of various lithology.		0.30	130.26						
	Dense, brown, very clayey very gravelly fine to coarse SAND with high subangular to subrounded cobbles content (possible very sandy very gravelly clay)		0.80	129.76		AA203976	B	0.60		
1.0										
	Dense, light brown, slightly clayey/silty very gravelly fine to coarse SAND with high subangular to subrounded cobbles and low boulders content content		1.80	128.76		AA203977	B	1.50		
2.0										
	End of Trial Pit at 2.50m		2.50	128.06		AA203978	B	2.30		
3.0										
4.0										

Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services; SA01 and PBT01 done in location - for all details see SA01 and PBT01 logs										

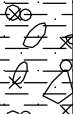
		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine							TRIAL PIT NO. TP02		
LOGGED BY I.Redder				CO-ORDINATES 621,256.43 E 666,555.23 N			SHEET Sheet 1 of 1		
CLIENT ENGINEER DOBA				GROUND LEVEL (m) 126.74			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024		
							EXCAVATION METHOD 5T tracked machine		

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown silty sandy gravel, cobbles, organic matter, roots)									
	Dense, yellowish light brown, very gravelly very silty/clayey fine to coarse SAND with high subangular to subrounded cobbles and boulders content (possible very sandy very gravelly silty clay)		0.50	126.24		AA203982	B	0.40		
1.0										
						AA203983	B	1.40		
					↓ (Slow)					
1.80	TP terminated due to possible big boulders or rock End of Trial Pit at 1.80m		1.80	124.94						
2.0										
3.0										
4.0										

Groundwater Conditions Slow water flow at 1.7m										
Stability TP stable										
General Remarks CAT scanned for services; SA02 and PBT02 done in location - for all details see SA02 and PBT02 logs										

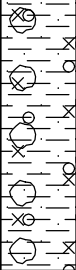
		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP03 SHEET Sheet 1 of 1			
LOGGED BY I.Reder		CO-ORDINATES 621,081.88 E 666,513.38 N				DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024				
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 129.70				EXCAVATION METHOD 5T tracked machine				
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm to stiff, redish brown, sandy gravelly CLAY with medium cobble content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subanglar to subrounded of various lithology.		0.30	129.40		AA203979	B	0.70		
1.0	Stiff to very stiff, light brown, sandy gravelly CLAY with high cobbles, low boulders and lenses of grey sandy gravel between 1.1m - 1.5m content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.10	128.60		AA203980	B	1.60		
2.0										
						AA203981	B	2.60		
2.80	End of Trial Pit at 2.80m		2.80	126.90						
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP04			
LOGGED BY I.Reder			CO-ORDINATES 621,213.44 E 666,419.01 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 126.84			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024			
						EXCAVATION METHOD 5T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Stiff, brown, sandy gravelly CLAY with high cobbles and low boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		0.30	126.54						
	Firm to stiff, brown, sandy gravelly slightly silty CLAY with medium cobbles content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology.		0.90	125.94		AA203986	B	0.70		
1.0										
	Stiff to very stiff, yellowish light brown, sandy very gravelly slightly silty CLAY with high cobbles and low boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.80	125.04						
2.0										
	End of Trial Pit at 2.70m		2.70	124.14		AA203988	B	2.50		
3.0										
4.0										

Groundwater Conditions TP dry	
Stability TP stable	
General Remarks CAT scanned for services; SA04 and PBT04 done in location - for all details see SA04 and PBT04 logs	

		TRIAL PIT RECORD					REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP05		
LOGGED BY I.Redder			CO-ORDINATES 621,207.88 E 666,471.36 N			SHEET Sheet 1 of 1		
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 127.04			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024		
						EXCAVATION METHOD 5T tracked machine		

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of topsoil, brown sandy gravelly clay, cobbles, roots)									
	Firm to stiff, brown, very sandy very gravelly slightly silty CLAY with high cobbles content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology. (possible very clayey gravel)		0.30	126.74						
1.0						AA203984	B	1.00		
	Stiff to very stiff, yellowish light brown becoming brown, sandy very gravelly slightly silty CLAY with high cobbles and medium boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.50	125.54						
2.0						AA203985	B	2.00		
	End of Trial Pit at 2.70m		2.70	124.34						
3.0										
4.0										

Groundwater Conditions TP dry	
Stability TP stable	
General Remarks CAT scanned for services	

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine							TRIAL PIT NO. TP06 SHEET Sheet 1 of 1		
LOGGED BY I.Reder		CO-ORDINATES 621,152.79 E 666,625.18 N				DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024			
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 127.33				EXCAVATION METHOD 6T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown sandy gravelly clay, sandy gravel, organic matter, roots, cobbles)		0.25	127.08						
	MADE GROUND (comprised of yellowish brown/grey sandy gravelly clay, sandy gravel, cobbles, boulders)					AA208996	B	0.50		
1.0	Dense, light greyish brown, silty/clayey very sandy fine to coarse subangular to sibrounded GRAVEL with high subangular to subrounded cobbles and boulders content (possible original ground)		1.10	126.23						
						AA208997	B	1.50		
2.0										
	TP terminated due to possible big boulders or rock End of Trial Pit at 2.50m		2.50	124.83						
3.0										
4.0										

Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP07			
LOGGED BY I.Reder				CO-ORDINATES 621,103.10 E 666,502.98 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA				GROUND LEVEL (m) 128.59			DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024 EXCAVATION METHOD 6T tracked machine			
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm to stiff, brown sandy gravelly slightly silty CLAY with medium subangular to subrounded cobbles content (possible fill)		0.30	128.29						
	Dense, brown, very silty/clayey very gravelly fine to coarse SAND with high subangular cobbles content (possible very sandy gravel)		0.80	127.79		AA208993	B	0.60		
1.0										
	Stiff, light brown, very sandy very gravelly silty CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded.		1.70	126.89		AA208994	B	1.40		
2.0										
	TP terminated due to possible big boulders End of Trial Pit at 2.70m		2.70	125.89		AA208995	B	2.40		
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

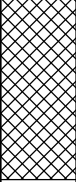
		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP08 SHEET Sheet 1 of 1			
LOGGED BY I.Reder		CO-ORDINATES 621,192.70 E 666,492.95 N				DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024				
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 126.62				EXCAVATION METHOD 6T tracked machine				
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown sandy gravelly clay, cobbles, organic pieces, roots)									
	Stiff to very stiff, brown, sandy very gravelly CLAY with high subangular cobbles and low boulders content (possible fill)		0.30	126.32						
1.0						AA208991	B	1.00		
	Very stiff, light yellowish brown, sandy very gravelly CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangulr of various lithology.		1.70	124.92						
2.0						AA208992	B	2.00		
	TP terminated due to possible big boulders End of Trial Pit at 2.50m		2.50	124.12						
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP09			
LOGGED BY I.Reder			CO-ORDINATES 621,282.55 E 666,486.20 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 126.37			DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024			
						EXCAVATION METHOD 6T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of light brown/brown sandy gravelly clay, cobbles, organic pieces, roots) Firm to stiff, light brown/grey mottled, very sandy very gravelly silty CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular of various lithology.		0.10	126.27		AA208986	B	0.60		
						AA208987	B	1.60		
						AA208988	B	2.50		
1.0										
2.0	Dense, light grey, very silty, very sandy fine to coarse subangular to subrounded GRAVEL with high subangular to angular cobbles and boulders content		2.20	124.17						
2.60	TP terminated due to possible big boulders or rock End of Trial Pit at 2.60m		2.60	123.77						
3.0										
4.0										

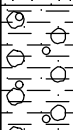
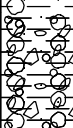
Groundwater Conditions Slow water flow at 2.5m										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP11			
LOGGED BY I.Reder		CO-ORDINATES 621,224.14 E 666,500.70 N				SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 126.33				DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024			
						EXCAVATION METHOD 6T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of light brown/grey very sandy very gravelly clay, cobbles, boulders, roots)									
			0.80	125.53		AA208989	B	0.50		
1.0	Firm to stiff, light greyish/yellowish brown, very sandy very gravelly silty CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.30	125.03		AA208990	B	1.10		
	Dense, brownish grey, very silty/clayey very sandy fine to coarse subangular to subrounded GRAVEL with high subangular cobbles and boulders content		1.50	124.83						
	TP terminated due to possible big boulders or rock End of Trial Pit at 1.50m									
2.0										
3.0										
4.0										

Groundwater Conditions TP dry
Stability TP stable
General Remarks CAT scanned for services

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP-SA05		SHEET Sheet 1 of 1	
LOGGED BY I.Reder			CO-ORDINATES 621,175.80 E 666,443.48 N			DATE STARTED 18/07/2024 DATE COMPLETED 18/07/2024		EXCAVATION METHOD 5T tracked machine	
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 127.11						

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm, brown/grey mottled sandy gravelly CLAY with high cobbles and roots content. Sand if fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology. (possible FILL)		0.30	126.81		AA203989	B	0.60		
1.0	Dense, brownish grey, sandy fine to coarse subangular to subrounded GRAVEL with high subangular to subrounded cobbles content		0.90	126.21		AA203990	B	1.20		
	Firm, brown, sandy gravelly CLAY		1.50	125.61						
	Firm, brown, sandy gravelly CLAY with medium cobbles content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology.		1.70	125.41						
2.0	End of Trial Pit at 1.80m		1.80	125.31						
3.0										
4.0										

Groundwater Conditions TP dry	
Stability TP slightly unstable	
General Remarks CAT scanned for services; SA05 and PBT05 done in location - for all details see SA05 and PBT05 logs	

RECEIVED: 02/11/2024

Appendix 2
Laboratory Report



Final Report

Report No.: 24-31051-1

Initial Date of Issue: 08-Oct-2024

Re-Issue Details:

Client IGSL

Client Address: M7 Business Park
Naas
County Kildare
Ireland

Contact(s): Darren Keogh

Project 25517 Lisheen Mine

Quotation No.: Q23-33421

Date Received: 26-Sep-2024

Order No.:

Date Instructed: 26-Sep-2024

No. of Samples: 9

Turnaround (Wkdays): 7

Results Due: 04-Oct-2024

Date Approved: 08-Oct-2024

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Leachate

Project: 25517 Lisheen Mine

Client: IGSL	Chemtest Job No.:						24-31051	24-31051	24-31051	24-31051	24-31051	24-31051
Quotation No.: Q23-33421	Chemtest Sample ID.:						1872250	1872251	1872253	1872255	1872256	1872257
Order No.:	Client Sample Ref.:						TP6	TP7	TP8	TP9	TP10	TP11
	Sample Type:						SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):						0.50	0.60	1.00	0.60	0.50	0.50
	Date Sampled:						20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024
Determinand	Accred.	SOP	Type	Units	LOD							
Ammonium	U	1220	10:1	mg/l	0.050	0.11	< 0.050	< 0.050	0.053	< 0.050	0.056	
Ammonium	N	1220	10:1	mg/kg	0.10	1.3	0.53	0.33	0.67	0.45	0.77	

RECEIVED: 02/11/2024

Results - Soil

Project: 25517 Lisheen Mine

Client: IGSL		Chemtest Job No.:				24-31051	24-31051	24-31051	24-31051	24-31051	24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:				1872250	1872251	1872252	1872253	1872254	1872255	1872256
Order No.:		Client Sample Ref.:				TP6	TP7	TP7	TP8	TP8	TP9	TP10
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.50	0.60	1.40	1.00	2.00	0.60	0.50
		Date Sampled:				20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024
		Asbestos Lab:				DURHAM	DURHAM		DURHAM		DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
ACM Type		U	2192		N/A	-	-		-			-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	7.3	7.1	7.4	7.4	7.8	8.6	10
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones and Roots
Soil Texture		N	2040		N/A	Loam	Loam	Loam	Loam	Loam	Loam	Clay
pH (2.5:1) at 20C		N	2010		4.0			8.7		8.6		
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	< 0.40		< 0.40		< 0.40	< 0.40
Magnesium (Water Soluble)		N	2120	g/l	0.010			< 0.010		< 0.010		
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010			< 0.010		< 0.010		
Total Sulphur		U	2175	%	0.010			0.010		0.010		
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0	< 1.0		< 1.0		< 1.0	< 1.0
Chloride (Water Soluble)		M	2220	g/l	0.010			< 0.010		< 0.010		
Nitrate (Water Soluble)		N	2220	g/l	0.010			< 0.010		< 0.010		
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50		< 0.50		< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	4.0	4.7		7.3		< 0.50	4.9
Ammonium (Water Soluble)		M	2220	g/l	0.01			< 0.01		< 0.01		
Sulphate (Total)		U	2430	%	0.010	< 0.010	0.016		< 0.010		< 0.010	0.084
Sulphate (Acid Soluble)		U	2430	%	0.010			< 0.010		< 0.010		
Arsenic		M	2455	mg/kg	0.5	8.9	3.8		4.7		3.1	17
Barium		M	2455	mg/kg	0.5	28	25		45		54	93
Cadmium		M	2455	mg/kg	0.10	0.42	0.28		0.23		< 0.10	0.88
Chromium		M	2455	mg/kg	0.5	7.7	5.0		6.9		5.7	9.1
Molybdenum		M	2455	mg/kg	0.5	< 0.5	< 0.5		< 0.5		< 0.5	0.6
Antimony		N	2455	mg/kg	2.0	< 2.0	< 2.0		< 2.0		< 2.0	< 2.0
Copper		M	2455	mg/kg	0.50	8.7	4.7		6.5		6.2	13
Mercury		M	2455	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	0.05
Nickel		M	2455	mg/kg	0.50	16	13		14		14	36
Lead		M	2455	mg/kg	0.50	12	8.4		10		8.9	71
Selenium		M	2455	mg/kg	0.25	0.52	0.38		0.36		0.43	0.80
Zinc		M	2455	mg/kg	0.50	40	96		29		32	220
Chromium (Trivalent)		N	2490	mg/kg	1.0	7.7	5.0		6.9		5.7	9.1
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50		< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05

Results - Soil

Project: 25517 Lisheen Mine

Client: IGS		Chemtest Job No.:		24-31051	24-31051	24-31051	24-31051	24-31051	24-31051	24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:		1872250	1872251	1872252	1872253	1872254	1872255	1872256	
Order No.:		Client Sample Ref.:		TP6	TP7	TP7	TP8	TP8	TP9	TP10	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.50	0.60	1.40	1.00	2.00	0.60	0.50	
		Date Sampled:		20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	
		Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	4.4	7.1	7.3	6.2	6.8	
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	< 5.0	7.2	7.4	6.3	7.4	
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Mine

Client: IGSL		Chemtest Job No.:		24-31051	24-31051	24-31051	24-31051	24-31051	24-31051	24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:		1872250	1872251	1872252	1872253	1872254	1872255	1872256	
Order No.:		Client Sample Ref.:		TP6	TP7	TP7	TP8	TP8	TP9	TP10	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.50	0.60	1.40	1.00	2.00	0.60	0.50	
		Date Sampled:		20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	20-Sep-2024	
		Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010		< 0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10		< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Mine

Client: IGSL		Chemtest Job No.:				24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:				1872257	1872258
Order No.:		Client Sample Ref.:				TP11	TP11
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.50	1.10
		Date Sampled:				20-Sep-2024	20-Sep-2024
		Asbestos Lab:				DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
ACM Type		U	2192		N/A	-	
Asbestos Identification		U	2192		N/A	No Asbestos Detected	
Moisture		N	2030	%	0.020	6.7	7.3
Soil Colour		N	2040		N/A	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones
Soil Texture		N	2040		N/A	Loam	Loam
pH (2.5:1) at 20C		N	2010		4.0		8.7
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	
Magnesium (Water Soluble)		N	2120	g/l	0.010		< 0.010
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010		< 0.010
Total Sulphur		U	2175	%	0.010		0.010
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0	
Chloride (Water Soluble)		M	2220	g/l	0.010		0.33
Nitrate (Water Soluble)		N	2220	g/l	0.010		< 0.010
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.8	
Ammonium (Water Soluble)		M	2220	g/l	0.01		< 0.01
Sulphate (Total)		U	2430	%	0.010	< 0.010	
Sulphate (Acid Soluble)		U	2430	%	0.010		< 0.010
Arsenic		M	2455	mg/kg	0.5	2.3	
Barium		M	2455	mg/kg	0.5	21	
Cadmium		M	2455	mg/kg	0.10	< 0.10	
Chromium		M	2455	mg/kg	0.5	3.6	
Molybdenum		M	2455	mg/kg	0.5	< 0.5	
Antimony		N	2455	mg/kg	2.0	< 2.0	
Copper		M	2455	mg/kg	0.50	2.8	
Mercury		M	2455	mg/kg	0.05	0.33	
Nickel		M	2455	mg/kg	0.50	6.9	
Lead		M	2455	mg/kg	0.50	5.6	
Selenium		M	2455	mg/kg	0.25	< 0.25	
Zinc		M	2455	mg/kg	0.50	14	
Chromium (Trivalent)		N	2490	mg/kg	1.0	3.6	
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	

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Results - Soil

Project: 25517 Lisheen Mine

Client: IGSL		Chemtest Job No.:				24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:				1872257	1872258
Order No.:		Client Sample Ref.:				TP11	TP11
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.50	1.10
		Date Sampled:				20-Sep-2024	20-Sep-2024
		Asbestos Lab:				DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	2.4	
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	3.8	
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	6.2	
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	6.8	
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	7.4	
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	14	
Mineral Oil EPH		N	2670	mg/kg	10	< 10	
Benzene		M	2760	µg/kg	1.0	< 1.0	
Toluene		M	2760	µg/kg	1.0	< 1.0	
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	
o-Xylene		M	2760	µg/kg	1.0	< 1.0	
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	
Naphthalene		M	2800	mg/kg	0.10	< 0.10	
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	
Fluorene		M	2800	mg/kg	0.10	< 0.10	
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	
Anthracene		M	2800	mg/kg	0.10	< 0.10	
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	
Pyrene		M	2800	mg/kg	0.10	< 0.10	
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	
Chrysene		M	2800	mg/kg	0.10	< 0.10	
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	

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Results - Soil

Project: 25517 Lisheen Mine

Client: IGSL		Chemtest Job No.:				24-31051	24-31051
Quotation No.: Q23-33421		Chemtest Sample ID.:				1872257	1872258
Order No.:		Client Sample Ref.:				TP11	TP11
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.50	1.10
		Date Sampled:				20-Sep-2024	20-Sep-2024
		Asbestos Lab:				DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	
Coronene		N	2800	mg/kg	0.10	< 0.10	
PCB 28		U	2815	mg/kg	0.010	< 0.010	
PCB 52		U	2815	mg/kg	0.010	< 0.010	
PCB 101		U	2815	mg/kg	0.010	< 0.010	
PCB 118		U	2815	mg/kg	0.010	< 0.010	
PCB 153		U	2815	mg/kg	0.010	< 0.010	
PCB 138		U	2815	mg/kg	0.010	< 0.010	
PCB 180		U	2815	mg/kg	0.010	< 0.010	
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	
Total Phenols		M	2920	mg/kg	0.10	< 0.10	

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Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872250						Inert Waste Landfill	Limits	
Sample Ref: TP6							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.50								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	2.1	3	5	6
Loss On Ignition	2610		M	%	1.3	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.5	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.074	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0004	0.0039	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.16	1.6	0.5	10	70
Copper	1455		U	0.0015	0.015	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0022	0.022	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.004	0.043	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.22	2.2	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	40	400	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	3.1	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.3

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872251						Limits		
Sample Ref: TP7						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.60								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	1.4	3	5	6
Loss On Ignition	2610		M	%	1.0	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.6	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.10	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0002	0.0021	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0015	0.015	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0007	0.0065	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.049	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.20	2.0	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	40	400	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	2.7	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.1

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872253						Limits		
Sample Ref: TP8						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.00								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.44	3	5	6
Loss On Ignition	2610		M	%	1.4	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.5	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.11	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	< 0.0002	< 0.0020	0.5	2	25
Barium	1455		U	0.006	0.061	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0016	0.016	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0010	0.010	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.003	0.035	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.28	2.8	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	36	360	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	7.4

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872255						Inert Waste Landfill	Limits	
Sample Ref: TP9							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.60								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.88	3	5	6
Loss On Ignition	2610		M	%	1.3	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.4	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.12	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	< 0.0002	< 0.0020	0.5	2	25
Barium	1455		U	< 0.005	< 0.050	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0015	0.015	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0017	0.017	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.004	0.043	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.18	1.8	10	150	500
Sulphate	1220		U	2.5	25	1000	20000	50000
Total Dissolved Solids	1020		N	5.6	56	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	< 2.5	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	8.6

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872256						Inert Waste Landfill	Limits	
Sample Ref: TP10							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.50								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.83	3	5	6
Loss On Ignition	2610		M	%	4.4	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.3	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.087	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0022	0.022	0.5	2	25
Barium	1455		U	0.013	0.13	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0008	0.0075	0.5	10	70
Copper	1455		U	0.0028	0.028	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0018	0.018	0.5	10	30
Nickel	1455		U	0.0031	0.032	0.4	10	40
Lead	1455		U	0.0037	0.037	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.027	0.28	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.36	3.6	10	150	500
Sulphate	1220		U	2.6	26	1000	20000	50000
Total Dissolved Solids	1020		N	52	520	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	3.3	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Mine

Chemtest Job No: 24-31051						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1872257						Inert Waste Landfill	Limits	
Sample Ref: TP11							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.50								
Bottom Depth(m):								
Sampling Date: 20-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.54	3	5	6
Loss On Ignition	2610		M	%	0.92	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.3	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.097	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0004	0.0038	0.5	2	25
Barium	1455		U	0.008	0.077	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0005	0.0053	0.5	10	70
Copper	1455		U	0.0016	0.017	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0007	0.0068	0.5	10	30
Nickel	1455		U	0.0007	0.0068	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.045	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.25	2.5	10	150	500
Sulphate	1220		U	1.6	16	1000	20000	50000
Total Dissolved Solids	1020		N	41	410	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	3.6	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	6.7

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2015	Acid Neutralisation Capacity	Acid Reserve	Titration	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.	
2300	Cyanides & Thiocyanate in Soils	Free (or easily liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS. Reported PCB 101 results may contain contributions from PCB 90 due to inseparable chromatography.	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

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Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

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PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 24-29760-1

Initial Date of Issue: 26-Sep-2024

Re-Issue Details:

Client IGSL

Client Address: M7 Business Park
Naas
County Kildare
Ireland

Contact(s): Darren Keogh

Project 25517 Lisheen Tipperary

Quotation No.: Q24-34387

Date Received: 17-Sep-2024

Order No.:

Date Instructed: 17-Sep-2024

No. of Samples: 5

Turnaround (Wkdays): 7

Results Due: 25-Sep-2024

Date Approved: 26-Sep-2024

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Leachate

Project: 25517 Lisheen Tipperary

Client: IGSL	Chemtest Job No.:					24-29760	24-29760	24-29760
Quotation No.: Q24-34387	Chemtest Sample ID.:					1867007	1867009	1867010
Order No.:	Client Sample Ref.:					BH6	BH7	BH7
	Sample Type:					SOIL	SOIL	SOIL
	Top Depth (m):					1.0	1.0	3.0
	Date Sampled:					11-Sep-2024	11-Sep-2024	11-Sep-2024
Determinand	Accred.	SOP	Type	Units	LOD			
Ammonium	U	1220	10:1	mg/l	0.050	< 0.050	0.067	0.19
Ammonium	N	1220	10:1	mg/kg	0.10	1.4	0.93	2.4

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Results - Soil

Project: 25517 Lisheen Tipperary

Client: IGSL		Chemtest Job No.:		24-29760	24-29760	24-29760	24-29760	24-29760
Quotation No.: Q24-34387		Chemtest Sample ID.:		1867007	1867008	1867009	1867010	1867011
Order No.:		Client Sample Ref.:		BH6	BH6	BH7	BH7	BH7
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.0	2.0	1.0	3.0	3.50
		Date Sampled:		11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024
		Asbestos Lab:		DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
ACM Type		U	2192		N/A	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	15	11	13
Soil Colour		N	2040		N/A	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Roots and Stones	Stones and Roots
Soil Texture		N	2040		N/A	Clay	Clay	Clay
pH (2.5:1) at 20C		N	2010		4.0		8.8	
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40
Magnesium (Water Soluble)		N	2120	g/l	0.010		< 0.010	< 0.010
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010		< 0.010	0.044
Total Sulphur		U	2175	%	0.010		0.020	0.090
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0	3.0	6.4
Chloride (Water Soluble)		M	2220	g/l	0.010		< 0.010	< 0.010
Nitrate (Water Soluble)		N	2220	g/l	0.010		< 0.010	0.012
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.5	4.7	5.9
Ammonium (Water Soluble)		M	2220	g/l	0.01		< 0.01	< 0.01
Sulphate (Total)		U	2430	%	0.010	0.019	0.069	0.12
Sulphate (Acid Soluble)		U	2430	%	0.010		0.073	0.063
Arsenic		M	2455	mg/kg	0.5	10	11	5.8
Barium		M	2455	mg/kg	0.5	97	110	78
Cadmium		M	2455	mg/kg	0.10	1.4	1.3	1.1
Chromium		M	2455	mg/kg	0.5	15	15	7.5
Molybdenum		M	2455	mg/kg	0.5	0.8	0.7	< 0.5
Antimony		N	2455	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Copper		M	2455	mg/kg	0.50	12	19	7.2
Mercury		M	2455	mg/kg	0.05	0.14	0.09	0.05
Nickel		M	2455	mg/kg	0.50	34	54	15
Lead		M	2455	mg/kg	0.50	30	32	48
Selenium		M	2455	mg/kg	0.25	1.7	2.3	0.86
Zinc		M	2455	mg/kg	0.50	55	170	170
Chromium (Trivalent)		N	2490	mg/kg	1.0	15	15	7.5
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05

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Results - Soil

Project: 25517 Lisheen Tipperary

Client: IGS		Chemtest Job No.:		24-29760	24-29760	24-29760	24-29760	24-29760
Quotation No.: Q24-34387		Chemtest Sample ID.:		1867007	1867008	1867009	1867010	1867011
Order No.:		Client Sample Ref.:		BH6	BH6	BH7	BH7	BH7
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.0	2.0	1.0	3.0	3.50
		Date Sampled:		11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024
		Asbestos Lab:		DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	3.5	2.4	3.2
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Tipperary

Client: IGSL		Chemtest Job No.:		24-29760	24-29760	24-29760	24-29760	24-29760
Quotation No.: Q24-34387		Chemtest Sample ID.:		1867007	1867008	1867009	1867010	1867011
Order No.:		Client Sample Ref.:		BH6	BH6	BH7	BH7	BH7
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		1.0	2.0	1.0	3.0	3.50
		Date Sampled:		11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024	11-Sep-2024
		Asbestos Lab:		DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

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Results - Single Stage WAC

Project: 25517 Lisheen Tipperary

Chemtest Job No: 24-29760						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1867007						Inert Waste Landfill	Limits	
Sample Ref: BH6							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.0								
Bottom Depth(m):								
Sampling Date: 11-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.31	3	5	6
Loss On Ignition	2610		M	%	1.5	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.0	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0060	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0004	0.0039	0.5	2	25
Barium	1455		U	0.007	0.072	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0006	0.0055	0.5	10	70
Copper	1455		U	0.0012	0.012	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0008	0.0083	0.5	10	30
Nickel	1455		U	0.0006	0.0062	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.050	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.25	2.5	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	44	440	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	3.6	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	15

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary

Chemtest Job No: 24-29760						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1867009						Inert Waste Landfill	Limits	
Sample Ref: BH7							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.0								
Bottom Depth(m):								
Sampling Date: 11-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	1.9	3	5	6
Loss On Ignition	2610		M	%	1.4	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.4	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0060	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0010	0.010	0.5	2	25
Barium	1455		U	0.079	0.79	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0008	0.0077	0.5	10	70
Copper	1455		U	0.0021	0.021	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0021	0.021	0.5	10	30
Nickel	1455		U	0.0022	0.022	0.4	10	40
Lead	1455		U	0.0019	0.019	0.5	10	50
Antimony	1455		U	0.0013	0.013	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.009	0.089	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.20	2.0	10	150	500
Sulphate	1220		U	5.1	51	1000	20000	50000
Total Dissolved Solids	1020		N	91	910	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.1	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	11

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary

Chemtest Job No: 24-29760						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1867010						Inert Waste Landfill	Limits	
Sample Ref: BH7							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 3.0								
Bottom Depth(m):								
Sampling Date: 11-Sep-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	3.2	3	5	6
Loss On Ignition	2610		M	%	2.7	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.2	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0030	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0008	0.0079	0.5	2	25
Barium	1455		U	0.054	0.54	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	0.0005	0.0051	0.5	10	70
Copper	1455		U	0.0012	0.012	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0014	0.014	0.5	10	30
Nickel	1455		U	0.0010	0.010	0.4	10	40
Lead	1455		U	0.0005	0.0050	0.5	10	50
Antimony	1455		U	0.0012	0.012	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.005	0.051	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.14	1.4	10	150	500
Sulphate	1220		U	3.2	32	1000	20000	50000
Total Dissolved Solids	1020		N	48	480	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	4.3	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2015	Acid Neutralisation Capacity	Acid Reserve	Titration	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.	
2300	Cyanides & Thiocyanate in Soils	Free (or easily liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS. Reported PCB 101 results may contain contributions from PCB 90 due to inseparable chromatography.	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

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Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

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PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 24-25300-1

Initial Date of Issue: 20-Aug-2024

Re-Issue Details:

Client IGSL

Client Address: M7 Business Park
Naas
County Kildare
Ireland

Contact(s): Darren Keogh

Project 25517 Lisheen Tipperary (DOBA)

Quotation No.: Date Received: 08-Aug-2024

Order No.: Date Instructed: 08-Aug-2024

No. of Samples: 15

Turnaround (Wkdays): 7 Results Due: 16-Aug-2024

Date Approved: 20-Aug-2024

Approved By:

Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Leachate

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL	Chemtest Job No.:					24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:	Chemtest Sample ID.:					1847654	1847655	1847657	1847659	1847661	1847663	1847664	1847666	1847667
Order No.:	Client Sample Ref.:					TP01	TP02	TP04	TP05	TP-SA03	BH1	BH2	BH3	BH4
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.6	0.4	0.7	1.00	0.7	1.00	1.00	1.00	1.00
	Date Sampled:					07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024
Determinand	Accred.	SOP	Type	Units	LOD									
Ammonium	U	1220	10:1	mg/l	0.050	0.17	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.10	0.063
Ammonium	N	1220	10:1	mg/kg	0.10	1.7	0.36	0.40	0.53	0.51	0.57	0.36	1.1	0.68

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:				24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:				1847654	1847655	1847656	1847657	1847658	1847659	1847660
Order No.:		Client Sample Ref.:				TP01	TP02	TP03	TP04	TP04	TP05	TP05
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.6	0.4	0.7	0.7	1.5	1.00	2.00
		Date Sampled:				07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024
		Asbestos Lab:				DURHAM	DURHAM		DURHAM		DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
ACM Type		U	2192		N/A	-	-		-			
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture		N	2030	%	0.020	15	15	16	9.8	9.5	10	9.1
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH (2.5:1) at 20C		N	2010		4.0			8.4		8.6		8.3
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	< 0.40		< 0.40		< 0.40	
Magnesium (Water Soluble)		N	2120	g/l	0.010			< 0.010		< 0.010		< 0.010
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010			< 0.010		< 0.010		< 0.010
Total Sulphur		U	2175	%	0.010			0.010		0.020		0.020
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0	< 1.0		< 1.0		< 1.0	
Chloride (Water Soluble)		M	2220	g/l	0.010			< 0.010		< 0.010		< 0.010
Nitrate (Water Soluble)		N	2220	g/l	0.010			< 0.010		< 0.010		< 0.010
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50		< 0.50		< 0.50	
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	4.0	3.9		21		3.7	
Ammonium (Water Soluble)		M	2220	g/l	0.01			< 0.01		< 0.01		< 0.01
Sulphate (Total)		U	2430	%	0.010	0.015	0.093		0.043		0.041	
Sulphate (Acid Soluble)		U	2430	%	0.010			0.021		0.016		0.010
Arsenic		M	2455	mg/kg	0.5	11	22		8.1		15	
Barium		M	2455	mg/kg	0.5	130	110		96		110	
Cadmium		M	2455	mg/kg	0.10	0.75	2.1		< 0.10		1.4	
Chromium		M	2455	mg/kg	0.5	16	9.2		78		19	
Molybdenum		M	2455	mg/kg	0.5	< 0.5	1.3		< 0.5		0.6	
Antimony		N	2455	mg/kg	2.0	3.1	< 2.0		< 2.0		2.6	
Copper		M	2455	mg/kg	0.50	14	11		11		18	
Mercury		M	2455	mg/kg	0.05	0.10	0.07		0.05		0.12	
Nickel		M	2455	mg/kg	0.50	38	43		24		51	
Lead		M	2455	mg/kg	0.50	29	110		19		33	
Selenium		M	2455	mg/kg	0.25	0.96	0.55		< 0.25		0.90	
Zinc		M	2455	mg/kg	0.50	63	430		53		100	
Chromium (Trivalent)		N	2490	mg/kg	1.0	16	9.2		78		19	
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50		< 0.50	
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05	< 0.05		< 0.05		< 0.05	

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGS		Chemtest Job No.:		24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:		1847654	1847655	1847656	1847657	1847658	1847659	1847660
Order No.:		Client Sample Ref.:		TP01	TP02	TP03	TP04	TP04	TP05	TP05
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.6	0.4	0.7	0.7	1.5	1.00	2.00
		Date Sampled:		07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024
		Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	1.7	1.4	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	5.0	< 3.0	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	< 5.0	9.0	< 5.0	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	5.2	3.7	3.2	4.9	4.9
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	2.1	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	5.4	5.8	< 5.0	< 5.0	< 5.0
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	15	< 10	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:		24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:		1847654	1847655	1847656	1847657	1847658	1847659	1847660
Order No.:		Client Sample Ref.:		TP01	TP02	TP03	TP04	TP04	TP05	TP05
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.6	0.4	0.7	0.7	1.5	1.00	2.00
		Date Sampled:		07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024
		Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:		24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:		1847661	1847662	1847663	1847664	1847665	1847666	1847667		
Order No.:		Client Sample Ref.:		TP-SA03	TP-SA05	BH1	BH2	BH2	BH3	BH4		
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL		
		Top Depth (m):		0.7	0.6	1.00	1.00	2.00	1.00	1.00		
		Date Sampled:		07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024		
		Asbestos Lab:		DURHAM		DURHAM	DURHAM		DURHAM	DURHAM		
Determinand	HWOL Code	Accred.	SOP	Units	LOD							
ACM Type		U	2192		N/A	-		-	-			-
Asbestos Identification		U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	13	14	13	2.9	16	17	14
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones	Roots	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture		N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Clay
pH (2.5:1) at 20C		N	2010		4.0		8.3			8.4		
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40		< 0.40	< 0.40		< 0.40	< 0.40
Magnesium (Water Soluble)		N	2120	g/l	0.010		< 0.010			< 0.010		
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010		0.013			< 0.010		
Total Sulphur		U	2175	%	0.010		0.030			0.010		
Sulphur (Elemental)		M	2180	mg/kg	1.0	< 1.0		< 1.0	< 1.0		< 1.0	< 1.0
Chloride (Water Soluble)		M	2220	g/l	0.010		< 0.010			0.013		
Nitrate (Water Soluble)		N	2220	g/l	0.010		0.012			< 0.010		
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.0		9.5	3.8		3.4	16
Ammonium (Water Soluble)		M	2220	g/l	0.01		< 0.01			< 0.01		
Sulphate (Total)		U	2430	%	0.010	0.031		0.036	0.049		0.034	0.036
Sulphate (Acid Soluble)		U	2430	%	0.010		0.040			0.010		
Arsenic		M	2455	mg/kg	0.5	10		17	12		12	11
Barium		M	2455	mg/kg	0.5	35		84	92		72	71
Cadmium		M	2455	mg/kg	0.10	0.11		< 0.10	< 0.10		< 0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	5.2		43	32		15	10
Molybdenum		M	2455	mg/kg	0.5	3.2		2.8	< 0.5		< 0.5	2.5
Antimony		N	2455	mg/kg	2.0	< 2.0		< 2.0	< 2.0		< 2.0	< 2.0
Copper		M	2455	mg/kg	0.50	7.5		15	15		9.2	8.6
Mercury		M	2455	mg/kg	0.05	< 0.05		0.09	0.07		0.06	0.09
Nickel		M	2455	mg/kg	0.50	30		53	30		35	37
Lead		M	2455	mg/kg	0.50	12		29	38		19	18
Selenium		M	2455	mg/kg	0.25	< 0.25		< 0.25	< 0.25		< 0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	52		98	84		72	70
Chromium (Trivalent)		N	2490	mg/kg	1.0	5.2		43	32		15	10
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05		< 0.05	< 0.05		< 0.05	< 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05		< 0.05	< 0.05		< 0.05	< 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05		< 0.05	< 0.05		< 0.05	< 0.05
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	< 0.05		< 0.05	< 0.05		< 0.05	< 0.05

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGS		Chemtest Job No.:	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:	1847661	1847662	1847663	1847664	1847665	1847666	1847667
Order No.:		Client Sample Ref.:	TP-SA03	TP-SA05	BH1	BH2	BH2	BH3	BH4
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.7	0.6	1.00	1.00	2.00	1.00	1.00
		Date Sampled:	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024
		Asbestos Lab:	DURHAM		DURHAM	DURHAM		DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	< 3.0	< 3.0	< 3.0	< 3.0
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	4.7	3.7	3.5	3.6
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	< 2.0	< 2.0	< 2.0	< 2.2
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0	< 5.8
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	< 10	< 10	< 10	< 10
Mineral Oil EPH		N	2670	mg/kg	10	< 10	< 10	< 10	< 10
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:		24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300	24-25300
Quotation No.:		Chemtest Sample ID.:		1847661	1847662	1847663	1847664	1847665	1847666	1847667	
Order No.:		Client Sample Ref.:		TP-SA03	TP-SA05	BH1	BH2	BH2	BH3	BH4	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.7	0.6	1.00	1.00	2.00	1.00	1.00	
		Date Sampled:		07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	07-Aug-2024	
		Asbestos Lab:		DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
PCB 28		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 52		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 101		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 118		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 153		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 138		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
PCB 180		U	2815	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:				24-25300
Quotation No.:		Chemtest Sample ID.:				1847668
Order No.:		Client Sample Ref.:				BH4
		Sample Type:				SOIL
		Top Depth (m):				2.00
		Date Sampled:				07-Aug-2024
		Asbestos Lab:				
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
ACM Type		U	2192		N/A	
Asbestos Identification		U	2192		N/A	
Moisture		N	2030	%	0.020	18
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones and Roots
Soil Texture		N	2040		N/A	Sand
pH (2.5:1) at 20C		N	2010		4.0	8.5
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	
Magnesium (Water Soluble)		N	2120	g/l	0.010	< 0.010
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010
Total Sulphur		U	2175	%	0.010	0.020
Sulphur (Elemental)		M	2180	mg/kg	1.0	
Chloride (Water Soluble)		M	2220	g/l	0.010	0.015
Nitrate (Water Soluble)		N	2220	g/l	0.010	0.012
Cyanide (Total)		M	2300	mg/kg	0.50	
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	
Ammonium (Water Soluble)		M	2220	g/l	0.01	< 0.01
Sulphate (Total)		U	2430	%	0.010	
Sulphate (Acid Soluble)		U	2430	%	0.010	0.020
Arsenic		M	2455	mg/kg	0.5	
Barium		M	2455	mg/kg	0.5	
Cadmium		M	2455	mg/kg	0.10	
Chromium		M	2455	mg/kg	0.5	
Molybdenum		M	2455	mg/kg	0.5	
Antimony		N	2455	mg/kg	2.0	
Copper		M	2455	mg/kg	0.50	
Mercury		M	2455	mg/kg	0.05	
Nickel		M	2455	mg/kg	0.50	
Lead		M	2455	mg/kg	0.50	
Selenium		M	2455	mg/kg	0.25	
Zinc		M	2455	mg/kg	0.50	
Chromium (Trivalent)		N	2490	mg/kg	1.0	
Chromium (Hexavalent)		N	2490	mg/kg	0.50	
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	

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Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:				24-25300
Quotation No.:		Chemtest Sample ID.:				1847668
Order No.:		Client Sample Ref.:				BH4
		Sample Type:				SOIL
		Top Depth (m):				2.00
		Date Sampled:				07-Aug-2024
		Asbestos Lab:				
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	
Mineral Oil EPH		N	2670	mg/kg	10	
Benzene		M	2760	µg/kg	1.0	
Toluene		M	2760	µg/kg	1.0	
Ethylbenzene		M	2760	µg/kg	1.0	
m & p-Xylene		M	2760	µg/kg	1.0	
o-Xylene		M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	
Naphthalene		M	2800	mg/kg	0.10	
Acenaphthylene		N	2800	mg/kg	0.10	
Acenaphthene		M	2800	mg/kg	0.10	
Fluorene		M	2800	mg/kg	0.10	
Phenanthrene		M	2800	mg/kg	0.10	
Anthracene		M	2800	mg/kg	0.10	
Fluoranthene		M	2800	mg/kg	0.10	
Pyrene		M	2800	mg/kg	0.10	
Benzo[a]anthracene		M	2800	mg/kg	0.10	
Chrysene		M	2800	mg/kg	0.10	
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	
Benzo[a]pyrene		M	2800	mg/kg	0.10	

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Results - Soil

Project: 25517 Lisheen Tipperary (DOBA)

Client: IGSL		Chemtest Job No.:	24-25300			
Quotation No.:		Chemtest Sample ID.:	1847668			
Order No.:		Client Sample Ref.:	BH4			
		Sample Type:	SOIL			
		Top Depth (m):	2.00			
		Date Sampled:	07-Aug-2024			
		Asbestos Lab:				
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	
Coronene		N	2800	mg/kg	0.10	
PCB 28		U	2815	mg/kg	0.010	
PCB 52		U	2815	mg/kg	0.010	
PCB 101		U	2815	mg/kg	0.010	
PCB 118		U	2815	mg/kg	0.010	
PCB 153		U	2815	mg/kg	0.010	
PCB 138		U	2815	mg/kg	0.010	
PCB 180		U	2815	mg/kg	0.010	
Tot PCBs Low (7 Congeners)		N	2815	mg/kg	0.05	
Total Phenols		M	2920	mg/kg	0.10	

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Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847654						Limits		
Sample Ref: TP01						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.6								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.40	3	5	6
Loss On Ignition	2610		M	%	1.8	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.4	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.011	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	< 0.0002	< 0.0020	0.5	2	25
Barium	1455		U	0.008	0.084	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0007	0.0068	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0008	0.0076	0.5	10	30
Nickel	1455		U	0.0006	0.0058	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.004	0.042	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.68	6.8	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	57	570	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	7.9	79	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	15

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847655						Inert Waste Landfill	Limits	
Sample Ref: TP02							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.4								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	6.9	3	5	6
Loss On Ignition	2610		M	%	2.2	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.3	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.010	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0009	0.0093	0.5	2	25
Barium	1455		U	0.008	0.081	20	100	300
Cadmium	1455		U	0.00027	0.0027	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0020	0.020	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0027	0.027	0.5	10	30
Nickel	1455		U	0.0006	0.0058	0.4	10	40
Lead	1455		U	0.0010	0.010	0.5	10	50
Antimony	1455		U	0.0006	0.0060	0.06	0.7	5
Selenium	1455		U	0.0009	0.0090	0.1	0.5	7
Zinc	1455		U	0.011	0.11	4	50	200
Chloride	1220		U	1.6	16	800	15000	25000
Fluoride	1220		U	0.57	5.7	10	150	500
Sulphate	1220		U	4.4	44	1000	20000	50000
Total Dissolved Solids	1020		N	62	620	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	6.8	68	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	15

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847657						Limits		
Sample Ref: TP04						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.7								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.85	3	5	6
Loss On Ignition	2610		M	%	1.4	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.4	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0080	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0005	0.0055	0.5	2	25
Barium	1455		U	0.012	0.12	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0011	0.011	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0013	0.013	0.5	10	30
Nickel	1455		U	0.0006	0.0056	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	0.0006	0.0057	0.1	0.5	7
Zinc	1455		U	0.003	0.032	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.25	2.5	10	150	500
Sulphate	1220		U	1.8	18	1000	20000	50000
Total Dissolved Solids	1020		N	62	620	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	5.3	53	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	9.8

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria						
Chemtest Sample ID: 1847659						Inert Waste Landfill	Limits					
Sample Ref: TP05							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill				
Sample ID:												
Sample Location:												
Top Depth(m): 1.00												
Bottom Depth(m):												
Sampling Date: 07-Aug-2024						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill				
Determinand	SOP	HWOL Code	Accred.	Units								
Total Organic Carbon	2625		M	%					0.66	3	5	6
Loss On Ignition	2610		M	%					1.0	--	--	10
Total BTEX	2760		M	mg/kg					< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg					< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg					< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg					< 1.0	100	--	--
pH at 20C	2010		M						8.4	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg					0.0060	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l					10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0014	0.015	0.5	2	25				
Barium	1455		U	0.007	0.067	20	100	300				
Cadmium	1455		U	0.00011	0.0011	0.04	1	5				
Chromium	1455		U	0.0005	0.0055	0.5	10	70				
Copper	1455		U	0.0010	0.0099	2	50	100				
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2				
Molybdenum	1455		U	0.0033	0.033	0.5	10	30				
Nickel	1455		U	0.0005	0.0053	0.4	10	40				
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50				
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5				
Selenium	1455		U	0.0006	0.0060	0.1	0.5	7				
Zinc	1455		U	0.003	0.026	4	50	200				
Chloride	1220		U	< 1.0	< 10	800	15000	25000				
Fluoride	1220		U	0.17	1.7	10	150	500				
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000				
Total Dissolved Solids	1020		N	54	540	4000	60000	100000				
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-				
Dissolved Organic Carbon	1610		U	4.8	< 50	500	800	1000				

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	10

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847661						Inert Waste Landfill	Limits	
Sample Ref: TP-SA03							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 0.7								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.99	3	5	6
Loss On Ignition	2610		M	%	1.6	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.6	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.011	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	< 0.0002	< 0.0020	0.5	2	25
Barium	1455		U	0.008	0.082	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0010	0.010	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0013	0.013	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.006	0.059	4	50	200
Chloride	1220		U	< 1.0	< 10	800	15000	25000
Fluoride	1220		U	0.36	3.6	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	46	460	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	5.6	56	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria						
Chemtest Sample ID: 1847663						Inert Waste Landfill	Limits					
Sample Ref: BH1							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill				
Sample ID:												
Sample Location:												
Top Depth(m): 1.00												
Bottom Depth(m):												
Sampling Date: 07-Aug-2024						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill				
Determinand	SOP	HWOL Code	Accred.	Units								
Total Organic Carbon	2625		M	%					7.4	3	5	6
Loss On Ignition	2610		M	%					2.2	--	--	10
Total BTEX	2760		M	mg/kg					< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg					< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg					< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg					< 1.0	100	--	--
pH at 20C	2010		M						8.3	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg					0.017	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l					10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0010	0.0097	0.5	2	25				
Barium	1455		U	< 0.005	< 0.050	20	100	300				
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5				
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70				
Copper	1455		U	0.0010	0.010	2	50	100				
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2				
Molybdenum	1455		U	0.0069	0.069	0.5	10	30				
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40				
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50				
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5				
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7				
Zinc	1455		U	0.006	0.065	4	50	200				
Chloride	1220		U	4.6	46	800	15000	25000				
Fluoride	1220		U	0.15	1.5	10	150	500				
Sulphate	1220		U	3.6	36	1000	20000	50000				
Total Dissolved Solids	1020		N	58	580	4000	60000	100000				
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-				
Dissolved Organic Carbon	1610		U	3.1	< 50	500	800	1000				

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	13

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847664						Inert Waste Landfill	Limits	
Sample Ref: BH2							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.00								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	0.67	3	5	6
Loss On Ignition	2610		M	%	2.9	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.6	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0020	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0002	0.0024	0.5	2	25
Barium	1455		U	0.006	0.060	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0008	0.0079	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0008	0.0077	0.5	10	30
Nickel	1455		U	< 0.0005	< 0.0050	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.006	0.061	4	50	200
Chloride	1220		U	1.3	13	800	15000	25000
Fluoride	1220		U	0.61	6.1	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	65	650	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	6.0	60	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	2.9

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847666						Inert Waste Landfill	Limits	
Sample Ref: BH3							Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.00								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	5.4	3	5	6
Loss On Ignition	2610		M	%	2.8	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.7	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0060	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0003	0.0033	0.5	2	25
Barium	1455		U	0.009	0.086	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0017	0.017	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0031	0.031	0.5	10	30
Nickel	1455		U	0.0007	0.0068	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.007	0.075	4	50	200
Chloride	1220		U	3.4	34	800	15000	25000
Fluoride	1220		U	0.40	4.0	10	150	500
Sulphate	1220		U	1.5	15	1000	20000	50000
Total Dissolved Solids	1020		N	67	670	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	5.0	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	17

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - Single Stage WAC

Project: 25517 Lisheen Tipperary (DOBA)

Chemtest Job No: 24-25300						Landfill Waste Acceptance Criteria		
Chemtest Sample ID: 1847667						Limits		
Sample Ref: BH4						Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID:								
Sample Location:								
Top Depth(m): 1.00								
Bottom Depth(m):								
Sampling Date: 07-Aug-2024								
Determinand	SOP	HWOL Code	Accred.	Units				
Total Organic Carbon	2625		M	%	4.7	3	5	6
Loss On Ignition	2610		M	%	2.6	--	--	10
Total BTEX	2760		M	mg/kg	< 0.010	6	--	--
Total PCBs (7 Congeners)	2815		M	mg/kg	< 0.10	1	--	--
TPH Total WAC	2670	EH_CU_1D_Total	M	mg/kg	< 10	500	--	--
Total Of 17 PAHs Lower	2800		N	mg/kg	< 1.0	100	--	--
pH at 20C	2010		M		8.8	--	>6	--
Acid Neutralisation Capacity	2015		N	mol/kg	0.0080	--	To evaluate	To evaluate
Eluate Analysis				10:1 Eluate mg/l	10:1 Eluate mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455		U	0.0004	0.0042	0.5	2	25
Barium	1455		U	0.008	0.082	20	100	300
Cadmium	1455		U	< 0.00011	< 0.0011	0.04	1	5
Chromium	1455		U	< 0.0005	< 0.0050	0.5	10	70
Copper	1455		U	0.0012	0.012	2	50	100
Mercury	1455		U	< 0.00005	< 0.00050	0.01	0.2	2
Molybdenum	1455		U	0.0022	0.022	0.5	10	30
Nickel	1455		U	0.0006	0.0058	0.4	10	40
Lead	1455		U	< 0.0005	< 0.0050	0.5	10	50
Antimony	1455		U	< 0.0005	< 0.0050	0.06	0.7	5
Selenium	1455		U	< 0.0005	< 0.0050	0.1	0.5	7
Zinc	1455		U	0.003	0.030	4	50	200
Chloride	1220		U	2.3	23	800	15000	25000
Fluoride	1220		U	0.32	3.2	10	150	500
Sulphate	1220		U	< 1.0	< 10	1000	20000	50000
Total Dissolved Solids	1020		N	88	880	4000	60000	100000
Phenol Index	1920		U	< 0.030	< 0.30	1	-	-
Dissolved Organic Carbon	1610		U	6.5	65	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.090
Moisture (%)	14

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2015	Acid Neutralisation Capacity	Acid Reserve	Titration	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurement by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.	
2300	Cyanides & Thiocyanate in Soils	Free (or easily liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS. Reported PCB 101 results may contain contributions from PCB 90 due to inseparable chromatography.	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

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Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

-
- A - Date of sampling not supplied
 - B - Sample age exceeds stability time (sampling to extraction)
 - C - Sample not received in appropriate containers
 - D - Broken Container
 - E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

-
- DW - Drinking Water
 - GW - Ground Water
 - LE - Land Leachate
 - NA - Not Applicable

Report Information

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PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

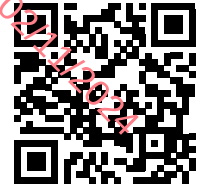
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Appendix 3
Waste Classification Report

Waste Classification Report

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

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



IDXWG-GPZDN-E1MCR

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

Job name

24-001-60 Lisheen

Description/Comments

18 No. Composite Samples from 11 No. Trial Pits and 6 No. Cable Percussion Boreholes

Project

24-001-60

Site

Lisheen Mine

Classified by

Name:

Austin Hynes

Date:

21 Oct 2024 15:12 GMT

Telephone:

+353 (0)21 4345366

Company:

O'Callaghan Moran & Associates

Unit 15 Melbourne Business Park,

Model Farm Road

Cork

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

HazWasteOnline™ Certification:

CERTIFIED

Course

Hazardous Waste Classification

Date

06 Oct 2022

Next 3 year Refresher due by Oct 2025

Purpose of classification

7 - Disposal of Waste

Address of the waste

Lisheen Mine, Co. Tipperary

Post Code **NA**

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

Excavation

Description of the waste

Soil and Stone

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Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP01	0.6	Non Hazardous		3
2	TP02	0.4	Non Hazardous		6
3	TP-SA03	0.7	Non Hazardous		9
4	TP04	0.7	Non Hazardous		12
5	TP05	1.00	Non Hazardous		15
6	TP6	0.50	Non Hazardous		18
7	TP7	0.60	Non Hazardous		21
8	TP8	1.00	Non Hazardous		24
9	TP9	0.60	Non Hazardous		27
10	TP10	0.50	Non Hazardous		30
11	TP11	0.50	Non Hazardous		33
12	BH1	1.00	Non Hazardous		36
13	BH2	1.00	Non Hazardous		39
14	BH3	1.00	Non Hazardous		42
15	BH4	1.00	Non Hazardous		45
16	BH6	1.0	Non Hazardous		48
17	BH7	1.0	Non Hazardous		51
18	BH7[2]	3.0	Non Hazardous		54

Related documents

#	Name	Description
1	OCM Hazwaste 2024	waste stream template used to create this Job

Report

Created by: Austin Hynes

Created date: 21 Oct 2024 15:12 GMT

Appendices	Page
Appendix A: Classifier defined and non EU CLP determinands	57
Appendix B: Rationale for selection of metal species	58
Appendix C: Version	59

Classification of sample: TP01

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

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Sample details

Sample name:	LoW Code:
TP01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.6 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 15% No 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	antimony { antimony trioxide }				3.1 mg/kg	1.197	3.711 mg/kg	0.000371 %		
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				11 mg/kg	1.32	14.524 mg/kg	0.00145 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				0.75 mg/kg	1.142	0.857 mg/kg	0.0000857 %		
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				16 mg/kg	1.462	23.385 mg/kg	0.00234 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				14 mg/kg	1.126	15.762 mg/kg	0.00158 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	29 mg/kg	1.56	45.235 mg/kg	0.0029 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.1 mg/kg	1.353	0.135 mg/kg	0.0000135 %		
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %		<LOD
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				38 mg/kg	2.976	113.098 mg/kg	0.0113 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				0.96 mg/kg	2.554	2.452 mg/kg	0.000245 %		
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				63 mg/kg	1.245	78.417 mg/kg	0.00784 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	CMC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0297 %		

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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

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Classification of sample: TP02

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

Sample details

Sample name:	LoW Code:
TP02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.4 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **15% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				22 mg/kg	1.32	29.047 mg/kg	0.0029 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				2.1 mg/kg	1.142	2.399 mg/kg	0.00024 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				9.2 mg/kg	1.462	13.446 mg/kg	0.00134 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				11 mg/kg	1.126	12.385 mg/kg	0.00124 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	110 mg/kg	1.56	171.58 mg/kg	0.011 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.07 mg/kg	1.353	0.0947 mg/kg	0.00000947 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				1.3 mg/kg	1.5	1.95 mg/kg	0.000195 %			
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				43 mg/kg	2.976	127.979 mg/kg	0.0128 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				0.55 mg/kg	2.554	1.405 mg/kg	0.00014 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				430 mg/kg	1.245	535.227 mg/kg	0.0535 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				15 mg/kg		15 mg/kg	0.0015 %			
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0856 %		

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Key

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

Supplementary Hazardous Property Information

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

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

Classification of sample: TP-SA03

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

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Sample details

Sample name:	LoW Code:
TP-SA03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.7 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 13% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				10 mg/kg	1.32	13.203 mg/kg	0.00132 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				0.11 mg/kg	1.142	0.126 mg/kg	0.0000126 %		
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				5.2 mg/kg	1.462	7.6 mg/kg	0.00076 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				7.5 mg/kg	1.126	8.444 mg/kg	0.000844 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	12 mg/kg	1.56	18.718 mg/kg	0.0012 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				3.2 mg/kg	1.5	4.801 mg/kg	0.00048 %		
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				30 mg/kg	2.976	89.288 mg/kg	0.00893 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				52 mg/kg	1.245	64.725 mg/kg	0.00647 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

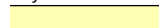


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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	Conc. Not Used
	EU CLP index number	EC Number	CAS Number						
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-020-00-8	200-753-7	71-43-2						
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-021-00-3	203-625-9	108-88-3						
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-023-00-4	202-849-4	100-41-4						
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<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]						
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %	<LOD
	006-007-00-5								
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-052-00-2	202-049-5	91-20-3						
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-917-1	208-96-8						
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-469-6	83-32-9						
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-695-5	86-73-7						
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-581-5	85-01-8						
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-371-1	120-12-7						
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-912-4	206-44-0						
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-927-3	129-00-0						
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-033-00-9	200-280-6	56-55-3						
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-048-00-0	205-923-4	218-01-9						
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-034-00-4	205-911-9	205-99-2						
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-036-00-5	205-916-6	207-08-9						
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-032-00-3	200-028-5	50-32-8						
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-893-2	193-39-5						
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-041-00-2	200-181-8	53-70-3						
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-883-8	191-24-2						
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	604-001-00-2	203-632-7	108-95-2						
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %	<LOD
	602-039-00-4	215-648-1	1336-36-3						
Total:								0.0218 %	

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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

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Classification of sample: TP04

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

Sample details

Sample name:	LoW Code:
TP04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.7 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
9.8%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 9.8% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				8.1 mg/kg	1.32	10.695 mg/kg	0.00107 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				78 mg/kg	1.462	114.001 mg/kg	0.0114 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				11 mg/kg	1.126	12.385 mg/kg	0.00124 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	19 mg/kg	1.56	29.636 mg/kg	0.0019 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.05 mg/kg	1.353	0.0677 mg/kg	0.00000677 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				24 mg/kg	2.976	71.43 mg/kg	0.00714 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				53 mg/kg	1.245	65.97 mg/kg	0.0066 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0313 %		



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Key

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

Classification of sample: TP05

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

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Sample details

Sample name:	LoW Code:
TP05	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
10%	
(no correction)	

Hazard properties

None identified

Determinands

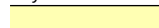
Moisture content: 10% No Moisture Correction applied (MC)

#	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	antimony { antimony trioxide }				2.6 mg/kg	1.197	3.112 mg/kg	0.000311 %		
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				15 mg/kg	1.32	19.805 mg/kg	0.00198 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				1.4 mg/kg	1.142	1.599 mg/kg	0.00016 %		
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				19 mg/kg	1.462	27.77 mg/kg	0.00278 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				18 mg/kg	1.126	20.266 mg/kg	0.00203 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	33 mg/kg	1.56	51.474 mg/kg	0.0033 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.12 mg/kg	1.353	0.162 mg/kg	0.0000162 %		
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				0.6 mg/kg	1.5	0.9 mg/kg	0.00009 %		
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				51 mg/kg	2.976	151.79 mg/kg	0.0152 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				0.9 mg/kg	2.554	2.298 mg/kg	0.00023 %		
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				100 mg/kg	1.245	124.471 mg/kg	0.0124 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	CMC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene 601-020-00-8	200-753-7	71-43-2		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
17	toluene 601-021-00-3	203-625-9	108-88-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
18	ethylbenzene 601-023-00-4	202-849-4	100-41-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
19	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
21	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
33	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
34	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
35	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
36	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
37	phenol 604-001-00-2	203-632-7	108-95-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
38	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.04 %		

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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

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Classification of sample: TP6

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

Sample details

Sample name:	LoW Code:
TP6	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)
7.3%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.3% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				8.9 mg/kg	1.32	11.751 mg/kg	0.00118 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.42 mg/kg	1.142	0.48 mg/kg	0.000048 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.7 mg/kg	1.462	11.254 mg/kg	0.00113 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				8.7 mg/kg	1.126	9.795 mg/kg	0.00098 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	12 mg/kg	1.56	18.718 mg/kg	0.0012 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				16 mg/kg	2.976	47.62 mg/kg	0.00476 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				0.52 mg/kg	2.554	1.328 mg/kg	0.000133 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				40 mg/kg	1.245	49.789 mg/kg	0.00498 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0162 %		

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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

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Classification of sample: TP7

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

Sample details

Sample name:	LoW Code:
TP7	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.1%	
(no correction)	

Hazard properties

None identified

Determinands

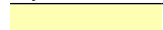
Moisture content: 7.1% No Moisture Correction applied (MC)

#	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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				3.8 mg/kg	1.32	5.017 mg/kg	0.000502 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				0.28 mg/kg	1.142	0.32 mg/kg	0.000032 %		
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				5 mg/kg	1.462	7.308 mg/kg	0.000731 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				4.7 mg/kg	1.126	5.292 mg/kg	0.000529 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	8.4 mg/kg	1.56	13.102 mg/kg	0.00084 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %		<LOD
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				13 mg/kg	2.976	38.691 mg/kg	0.00387 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				0.38 mg/kg	2.554	0.97 mg/kg	0.000097 %		
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				96 mg/kg	1.245	119.493 mg/kg	0.0119 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	CMC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0204 %		

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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

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Classification of sample: TP8

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

Sample details

Sample name:	LoW Code:
TP8	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.4%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.4% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				4.7 mg/kg	1.32	6.206 mg/kg	0.000621 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.23 mg/kg	1.142	0.263 mg/kg	0.0000263 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				6.9 mg/kg	1.462	10.085 mg/kg	0.00101 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				6.5 mg/kg	1.126	7.318 mg/kg	0.000732 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	10 mg/kg	1.56	15.598 mg/kg	0.001 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				14 mg/kg	2.976	41.668 mg/kg	0.00417 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				0.36 mg/kg	2.554	0.919 mg/kg	0.0000919 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				29 mg/kg	1.245	36.097 mg/kg	0.00361 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0131 %		



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HazWasteOnline™

Report created by Austin Hynes on 21 Oct 2024

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Key

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

Classification of sample: TP9

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

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Sample details

Sample name: **TP9** LoW Code: Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: **0.60 m** Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: **8.6%**
(no correction)

Hazard properties

None identified

Determinands

Moisture content: 8.6% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				3.1 mg/kg	1.32	4.093 mg/kg	0.000409 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				5.7 mg/kg	1.462	8.331 mg/kg	0.000833 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				6.2 mg/kg	1.126	6.981 mg/kg	0.000698 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	8.9 mg/kg	1.56	13.882 mg/kg	0.00089 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %		<LOD
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				14 mg/kg	2.976	41.668 mg/kg	0.00417 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				0.43 mg/kg	2.554	1.098 mg/kg	0.00011 %		
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				32 mg/kg	1.245	39.831 mg/kg	0.00398 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							



environmental management for business

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	Conc. Not Used
	EU CLP index number	EC Number	CAS Number						
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-020-00-8	200-753-7	71-43-2						
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-021-00-3	203-625-9	108-88-3						
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-023-00-4	202-849-4	100-41-4						
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<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]						
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %	<LOD
	006-007-00-5								
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-052-00-2	202-049-5	91-20-3						
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-917-1	208-96-8						
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-469-6	83-32-9						
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-695-5	86-73-7						
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-581-5	85-01-8						
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-371-1	120-12-7						
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-912-4	206-44-0						
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-927-3	129-00-0						
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-033-00-9	200-280-6	56-55-3						
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-048-00-0	205-923-4	218-01-9						
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-034-00-4	205-911-9	205-99-2						
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-036-00-5	205-916-6	207-08-9						
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-032-00-3	200-028-5	50-32-8						
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-893-2	193-39-5						
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-041-00-2	200-181-8	53-70-3						
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-883-8	191-24-2						
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	604-001-00-2	203-632-7	108-95-2						
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %	<LOD
	602-039-00-4	215-648-1	1336-36-3						
Total:								0.0129 %	

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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

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Classification of sample: TP10

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

Sample details

Sample name:	LoW Code:
TP10	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)
10%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **10% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				17 mg/kg	1.32	22.446 mg/kg	0.00224 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.88 mg/kg	1.142	1.005 mg/kg	0.000101 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				9.1 mg/kg	1.462	13.3 mg/kg	0.00133 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	14.637 mg/kg	0.00146 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	71 mg/kg	1.56	110.747 mg/kg	0.0071 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.05 mg/kg	1.353	0.0677 mg/kg	0.00000677 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				0.6 mg/kg	1.5	0.9 mg/kg	0.00009 %			
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				36 mg/kg	2.976	107.146 mg/kg	0.0107 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				0.8 mg/kg	2.554	2.043 mg/kg	0.000204 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				220 mg/kg	1.245	273.837 mg/kg	0.0274 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



environmental management for business

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0524 %		

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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

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Classification of sample: TP11

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

Sample details

Sample name:	LoW Code:
TP11	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)
6.7%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 6.7% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				2.3 mg/kg	1.32	3.037 mg/kg	0.000304 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				3.6 mg/kg	1.462	5.262 mg/kg	0.000526 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				2.8 mg/kg	1.126	3.152 mg/kg	0.000315 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	5.6 mg/kg	1.56	8.735 mg/kg	0.00056 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.33 mg/kg	1.353	0.447 mg/kg	0.0000447 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				6.9 mg/kg	2.976	20.536 mg/kg	0.00205 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				14 mg/kg	1.245	17.426 mg/kg	0.00174 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				14 mg/kg		14 mg/kg	0.0014 %			
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	Conc. Not Used
	EU CLP index number	EC Number	CAS Number						
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-020-00-8	200-753-7	71-43-2						
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-021-00-3	203-625-9	108-88-3						
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-023-00-4	202-849-4	100-41-4						
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<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]						
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %	<LOD
	006-007-00-5								
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-052-00-2	202-049-5	91-20-3						
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-917-1	208-96-8						
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-469-6	83-32-9						
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-695-5	86-73-7						
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-581-5	85-01-8						
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-371-1	120-12-7						
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-912-4	206-44-0						
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-927-3	129-00-0						
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-033-00-9	200-280-6	56-55-3						
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-048-00-0	205-923-4	218-01-9						
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-034-00-4	205-911-9	205-99-2						
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-036-00-5	205-916-6	207-08-9						
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-032-00-3	200-028-5	50-32-8						
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-893-2	193-39-5						
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-041-00-2	200-181-8	53-70-3						
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-883-8	191-24-2						
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	604-001-00-2	203-632-7	108-95-2						
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %	<LOD
	602-039-00-4	215-648-1	1336-36-3						
Total:								0.00785 %	

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Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: 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.: 0.0014%)

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Classification of sample: BH1

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

Sample details

Sample name:	LoW Code:
BH1	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **13% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				17 mg/kg	1.32	22.446 mg/kg	0.00224 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				43 mg/kg	1.462	62.847 mg/kg	0.00628 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				15 mg/kg	1.126	16.888 mg/kg	0.00169 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	29 mg/kg	1.56	45.235 mg/kg	0.0029 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.09 mg/kg	1.353	0.122 mg/kg	0.0000122 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				2.8 mg/kg	1.5	4.201 mg/kg	0.00042 %			
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				53 mg/kg	2.976	157.742 mg/kg	0.0158 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				98 mg/kg	1.245	121.982 mg/kg	0.0122 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0433 %		

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Key

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

Classification of sample: BH2

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

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Sample details

Sample name:	LoW Code:
BH2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.9%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 2.9% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				12 mg/kg	1.32	15.844 mg/kg	0.00158 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				15 mg/kg	1.126	16.888 mg/kg	0.00169 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	38 mg/kg	1.56	59.273 mg/kg	0.0038 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.07 mg/kg	1.353	0.0947 mg/kg	0.00000947 %		
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %		<LOD
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				30 mg/kg	2.976	89.288 mg/kg	0.00893 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				84 mg/kg	1.245	104.556 mg/kg	0.0105 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group		TPH		12 mg/kg		12 mg/kg	0.0012 %		
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	Conc. Not Used
	EU CLP index number	EC Number	CAS Number						
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-020-00-8	200-753-7	71-43-2						
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-021-00-3	203-625-9	108-88-3						
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<LOD
	601-023-00-4	202-849-4	100-41-4						
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %	<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]						
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %	<LOD
	006-007-00-5								
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-052-00-2	202-049-5	91-20-3						
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-917-1	208-96-8						
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-469-6	83-32-9						
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-695-5	86-73-7						
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		201-581-5	85-01-8						
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-371-1	120-12-7						
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-912-4	206-44-0						
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		204-927-3	129-00-0						
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-033-00-9	200-280-6	56-55-3						
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-048-00-0	205-923-4	218-01-9						
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-034-00-4	205-911-9	205-99-2						
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-036-00-5	205-916-6	207-08-9						
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-032-00-3	200-028-5	50-32-8						
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-893-2	193-39-5						
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	601-041-00-2	200-181-8	53-70-3						
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
		205-883-8	191-24-2						
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %	<LOD
	604-001-00-2	203-632-7	108-95-2						
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %	<LOD
	602-039-00-4	215-648-1	1336-36-3						
Total:								0.0332 %	

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Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: 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.: 0.0012%)

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Classification of sample: BH3

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

Sample details

Sample name:	LoW Code:
BH3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
17%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 17% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				12 mg/kg	1.32	15.844 mg/kg	0.00158 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	21.923 mg/kg	0.00219 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				9.2 mg/kg	1.126	10.358 mg/kg	0.00104 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	19 mg/kg	1.56	29.636 mg/kg	0.0019 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.06 mg/kg	1.353	0.0812 mg/kg	0.00000812 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				35 mg/kg	2.976	104.169 mg/kg	0.0104 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				72 mg/kg	1.245	89.619 mg/kg	0.00896 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



environmental management for business

HazWasteOnline™

Report created by Austin Hynes on 21 Oct 2024

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<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]								
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %			<LOD
	006-007-00-5										
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-581-5	85-01-8								
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-371-1	120-12-7								
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-912-4	206-44-0								
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-927-3	129-00-0								
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-893-2	193-39-5								
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-883-8	191-24-2								
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-039-00-4	215-648-1	1336-36-3								
Total:									0.028 %		

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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

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Classification of sample: BH4

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

Sample details

Sample name:	LoW Code:
BH4	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 14% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %		<LOD
	051-005-00-X	215-175-0	1309-64-4							
2	arsenic { arsenic trioxide }				11 mg/kg	1.32	14.524 mg/kg	0.00145 %		
	033-003-00-0	215-481-4	1327-53-3							
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
4	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				10 mg/kg	1.462	14.616 mg/kg	0.00146 %		
		215-160-9	1308-38-9							
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
	024-017-00-8									
7	copper { dicopper oxide; copper (I) oxide }				8.6 mg/kg	1.126	9.683 mg/kg	0.000968 %		
	029-002-00-X	215-270-7	1317-39-1							
8	lead { lead chromate }			1	18 mg/kg	1.56	28.077 mg/kg	0.0018 %		
	082-004-00-2	231-846-0	7758-97-6							
9	mercury { mercury dichloride }				0.09 mg/kg	1.353	0.122 mg/kg	0.0000122 %		
	080-010-00-X	231-299-8	7487-94-7							
10	molybdenum { molybdenum(VI) oxide }				2.5 mg/kg	1.5	3.75 mg/kg	0.000375 %		
	042-001-00-9	215-204-7	1313-27-5							
11	nickel { nickel chromate }				37 mg/kg	2.976	110.122 mg/kg	0.011 %		
	028-035-00-7	238-766-5	14721-18-7							
12	selenium { nickel selenate }				<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	zinc { zinc oxide }				70 mg/kg	1.245	87.13 mg/kg	0.00871 %		
	030-013-00-7	215-222-5	1314-13-2							
14	TPH (C6 to C40) petroleum group				10 mg/kg		10 mg/kg	0.001 %		
			TPH							
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	CMC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene 601-020-00-8	200-753-7	71-43-2		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
17	toluene 601-021-00-3	203-625-9	108-88-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
18	ethylbenzene 601-023-00-4	202-849-4	100-41-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
19	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
21	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
33	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
34	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
35	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
36	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
37	phenol 604-001-00-2	203-632-7	108-95-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
38	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0276 %		

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Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1000 mg/kg (0.1%)
because: 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.: 0.001%)

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Classification of sample: BH6

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

Sample details

Sample name:	LoW Code:
BH6	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **15% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				10 mg/kg	1.32	13.203 mg/kg	0.00132 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.4 mg/kg	1.142	1.599 mg/kg	0.00016 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	21.923 mg/kg	0.00219 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	13.511 mg/kg	0.00135 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	30 mg/kg	1.56	46.794 mg/kg	0.003 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.14 mg/kg	1.353	0.189 mg/kg	0.0000189 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				0.8 mg/kg	1.5	1.2 mg/kg	0.00012 %			
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				34 mg/kg	2.976	101.193 mg/kg	0.0101 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				1.7 mg/kg	2.554	4.342 mg/kg	0.000434 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				55 mg/kg	1.245	68.459 mg/kg	0.00685 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



environmental management for business

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0273 %		

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Key

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

Classification of sample: BH7

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

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Sample details

Sample name:	LoW Code:
BH7	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
11%	
(no correction)	

Hazard properties

None identified

Determinands

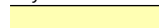
Moisture content: 11% No Moisture Correction applied (MC)

#	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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				11 mg/kg	1.32	14.524 mg/kg	0.00145 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.3 mg/kg	1.142	1.485 mg/kg	0.000149 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	21.923 mg/kg	0.00219 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				19 mg/kg	1.126	21.392 mg/kg	0.00214 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	32 mg/kg	1.56	49.914 mg/kg	0.0032 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.09 mg/kg	1.353	0.122 mg/kg	0.0000122 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				0.7 mg/kg	1.5	1.05 mg/kg	0.000105 %			
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				54 mg/kg	2.976	160.718 mg/kg	0.0161 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				2.3 mg/kg	2.554	5.874 mg/kg	0.000587 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				170 mg/kg	1.245	211.601 mg/kg	0.0212 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	CMC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0488 %		

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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

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Classification of sample: BH7[2]

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

Sample details

Sample name:	LoW Code:
BH7[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
3.0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **13% No 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	antimony { antimony trioxide }				<2 mg/kg	1.197	<2.394 mg/kg	<0.000239 %			<LOD
	051-005-00-X	215-175-0	1309-64-4								
2	arsenic { arsenic trioxide }				5.8 mg/kg	1.32	7.658 mg/kg	0.000766 %			
	033-003-00-0	215-481-4	1327-53-3								
3	boron { diboron trioxide }			11	<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.1 mg/kg	1.142	1.257 mg/kg	0.000126 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.5 mg/kg	1.462	10.962 mg/kg	0.0011 %			
		215-160-9	1308-38-9								
6	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %			<LOD
	024-017-00-8										
7	copper { dicopper oxide; copper (I) oxide }				7.2 mg/kg	1.126	8.106 mg/kg	0.000811 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead chromate }			1	48 mg/kg	1.56	74.871 mg/kg	0.0048 %			
	082-004-00-2	231-846-0	7758-97-6								
9	mercury { mercury dichloride }				0.05 mg/kg	1.353	0.0677 mg/kg	0.00000677 %			
	080-010-00-X	231-299-8	7487-94-7								
10	molybdenum { molybdenum(VI) oxide }				<0.5 mg/kg	1.5	<0.75 mg/kg	<0.000075 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
11	nickel { nickel chromate }				15 mg/kg	2.976	44.644 mg/kg	0.00446 %			
	028-035-00-7	238-766-5	14721-18-7								
12	selenium { nickel selenate }				0.86 mg/kg	2.554	2.196 mg/kg	0.00022 %			
	028-031-00-5	239-125-2	15060-62-5								
13	zinc { zinc oxide }				170 mg/kg	1.245	211.601 mg/kg	0.0212 %			
	030-013-00-7	215-222-5	1314-13-2								
14	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
15	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								



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#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
18	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
19	xylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<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]							
20	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
21	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
22	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
23	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
24	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
25	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
26	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
27	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
28	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
29	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
30	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
31	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
32	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
33	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
34	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
35	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
36	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
37	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
38	polychlorobiphenyls; PCB				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
Total:								0.0353 %		



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HazWasteOnline™

Report created by Austin Hynes on 21 Oct 2024

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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

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Appendix A: Classifier defined and non EU CLP determinands

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

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

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

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

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

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

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

EU CLP index number: 006-007-00-5

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

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

Reason for additional Hazards Statement(s):

14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

• **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

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■ **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

Appendix B: Rationale for selection of metal species

antimony {antimony trioxide}

Worst case CLP species based on hazard statements/molecular weight and low solubility. Industrial sources include: flame retardants in electrical apparatus, textiles and coatings (edit as required)

arsenic {arsenic trioxide}

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

boron {diboron trioxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

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

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

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

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

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

copper {dicopper oxide; copper (I) oxide}

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

lead {lead chromate}

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

mercury {mercury dichloride}

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

molybdenum {molybdenum(VI) oxide}

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

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nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc oxide}

Laboratory analysis shows that hexavalent chromium is below detection, thus zinc chromate is extremely unlikely to have formed.

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

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

Appendix C: Version

HazWasteOnline Classification Engine: **EU WM3 1st Edition v1.1.NI using the EU LoW**

HazWasteOnline Classification Engine Version: 2024.289.6294.11540 (15 Oct 2024)

HazWasteOnline Database: 2024.289.6294.11540 (15 Oct 2024)

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

POPs Amendment 2022 - Regulation (EU) 2022/2400 of 23 November 2022

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

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

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

Appendix 12

Exploratory Hole Location Plan

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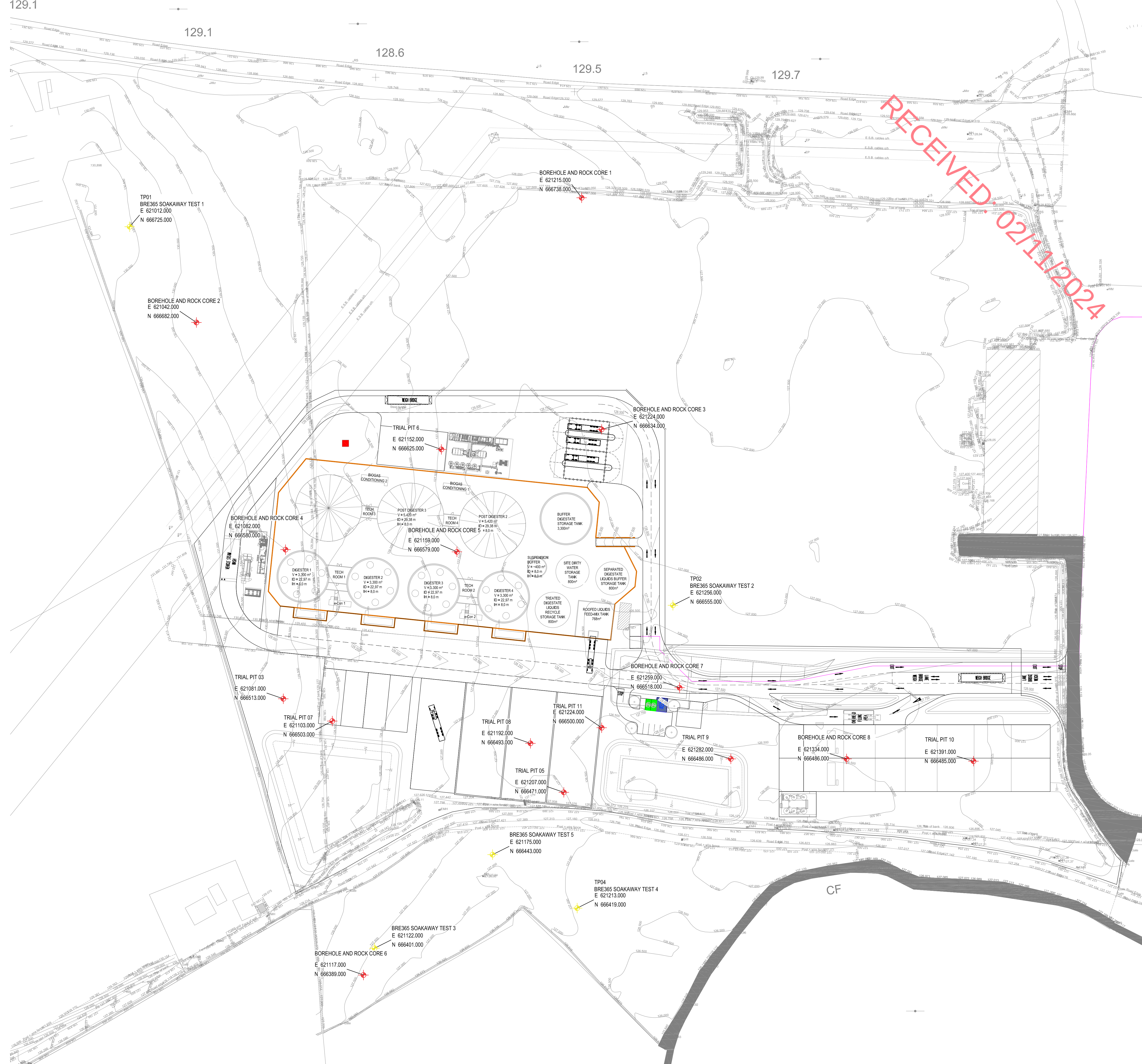
25517 - Lisheen Mine

Exploratory Hole Location Plan

Legend

-  Cable Percussion Borehole / Rotary Drillhole
-  Trial Pit
-  Trial Pit w/Soakway Test to BRE365





Unit 15
Melbourne Business Park
Model Farm Road
Cork T12 WR89



T: 021 434 5366
E: admin@ocallaghanmoran.com
www.ocallaghanmoran.com

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Waste Characterisation Assessment

Lisheen Mine

Co. Tipperary

Prepared For: -

IGSL Limited
Unit F
M7 Business Park
Naas
County Kildare

Prepared By: -

O'Callaghan Moran & Associates
Unit 15 Melbourne Business Park
Model Farm Road
Cork

October 2024

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Project		Waste Characterisation: Lisheen Mine, Co. Tipperary		
Client		IGSL Limited		
Report No	Date	Status	Prepared By	Reviewed By
240016001	23/10/2024	Final	Austin Hynes PGeo MSc	Sean Moran B.Sc. MSc

TABLE OF CONTENTS

	<u>PAGE</u>
1 INTRODUCTION	1
1.1 METHODOLOGY.....	1
2 WASTE CLASSIFICATION ASSESSMENT	2
2.1 SOIL SAMPLING AND LABORATORY ANALYSIS.....	2
2.2 WASTE CLASSIFICATION	5
2.3 WASTE ACCEPTANCE CRITERIA	6
2.4 WASTE MANAGEMENT OPTIONS	9
3 CONCLUSIONS AND RECOMMENDATIONS	11
3.1 CONCLUSIONS	11
3.2 RECOMMENDATIONS	11

APPENDICES

APPENDIX 1	-	Trial Pit and Borehole Logs
APPENDIX 2	-	Laboratory Results
APPENDIX 3	-	Waste Classification Report

1 INTRODUCTION

IGSL Limited requested O'Callaghan Moran & Associates (OCM) to undertake a waste characterisation assessment of eighteen (18 No.) samples of made and natural ground collected from eleven (11 No.) trial pits and six (6 No.) cable percussion boreholes from a site at Lisheen Mine, Co. Tipperary.

1.1 Methodology

IGSL provided a description of the ground conditions and collected samples of the soils from the borehole and trial pit locations. The samples were analysed at an accredited laboratory and the results formed the basis for a waste classification assessment, which was undertaken by OCM in accordance with the Environmental Protection Agency (EPA) Guidelines on the Classification of Waste (2015).

2 WASTE CLASSIFICATION ASSESSMENT

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2.1 Soil Sampling and Laboratory Analysis

2.1.1 Site Investigation

The site investigation was undertaken in July and August 2024 and included the collection of eighteen (18 No.) samples of made and natural ground collected from eleven (11 No.) trial pits and six (6 No.) cable percussion boreholes. The location of the samples is shown on Figure 2.1 and 2.2. The logs are in Appendix 1.

There is topsoil at the surface of BH01-BH07, TP01, TP03, TP04 and TP07. There is Made Ground at the surface of TP02, TP05, TP06, TP08, TP10 and TP11. The Made Ground is composed of sandy gravelly CLAY/clayey sandy GRAVEL. The Made Ground ranges in thickness from 0.30-1.10 mbgl.

The Natural Ground is generally comprises firm to stiff sandy gravelly CLAY with cobble and boulder content to 2.00-3.50 mbgl which becomes very stiff below 2.50 mbgl. Some lenses of dense sandy GRAVEL/gravelly SAND were encountered across the site.

At BH07, dense sandy GRAVEL was encountered from 3.90-5.10 mbgl.

2.1.2 Sample Collection

IGSL collected the samples and placed them in laboratory prepared containers that were stored in coolers prior to shipment to Chemtest Ltd.

2.1.3 Laboratory Analysis

The samples were tested for, metals (arsenic, barium, cadmium, chromium, copper, mercury, molybdenum, nickel, lead, antimony, selenium and zinc, total organic carbon (TOC), BTEX (benzene, toluene, ethylbenzene and xylene) aliphatic and aromatic hydrocarbons, polychlorinated biphenyls (PCB), mineral oil, polyaromatic hydrocarbons (PAH) and asbestos. Leachate generated from the samples was tested for arsenic, barium, cadmium, chromium, copper, mercury, molybdenum, nickel, lead, antimony, selenium and zinc, chloride, fluoride, soluble sulphate, phenols, dissolved organic carbon (DOC), total dissolved solids (TDS).

This parameter range facilitates an assessment of the hazardous properties of the waste, and also allows a determination of appropriate off-site management options based on the Waste Acceptance Criteria (WAC) applied by landfill operators.

The analytical methods were all ISO/CEN approved and the method detection limits were below the relevant guidance/threshold values. The full laboratory report is in Appendix 2.



O'Callaghan Moran & Associates,
Unit 15 Melbourne Business Park,
Model Farm Road, Cork.
Tel. (021) 4345366
Email: info@ocallaghanmoran.com

Title:

Figure 2.1 Sample Location Plan

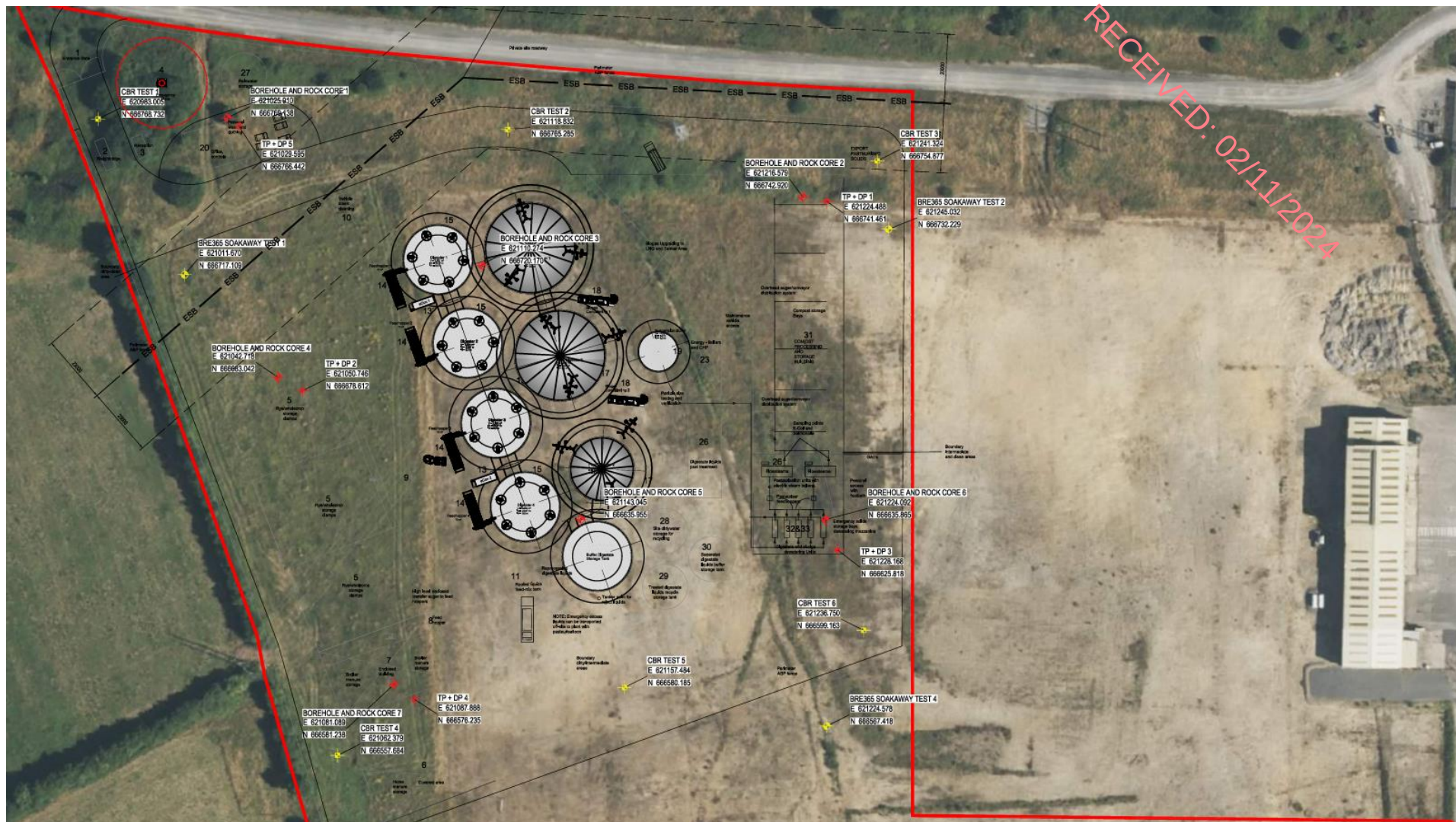
Legend

Client:

IGSL Limited

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Tel. (021) 4345366
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Figure 2.2 Sample Location Plan

Legend

Client:

IGSL Limited

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2.2 Waste Classification

The Haz Waste Online Classification Engine, developed in the UK by One Touch Data Ltd, was used to determine the waste classification. This tool was developed specifically to establish whether waste is non-hazardous or hazardous and has been approved for use in Ireland by the Environmental Protection Agency. The full Waste Classification Report is in Appendix 3 and the results are summarised in Table 2.1.

Table 2.1 Waste Classification

Sample No.	Depth	Classification	LoW Code
TP01	0.6	Non-Hazardous	17 05 04
TP02	0.4	Non-Hazardous	17 05 04
TP-SA03	0.7	Non-Hazardous	17 05 04
TP04	0.7	Non-Hazardous	17 05 04
TP05	1.00	Non-Hazardous	17 05 04
TP6	0.50	Non-Hazardous	17 05 04
TP7	0.60	Non-Hazardous	17 05 04
TP8	1.00	Non-Hazardous	17 05 04
TP9	0.60	Non-Hazardous	17 05 04
TP10	0.50	Non-Hazardous	17 05 04
TP11	0.50	Non-Hazardous	17 05 04
BH1	1.00	Non-Hazardous	17 05 04
BH2	1.00	Non-Hazardous	17 05 04
BH3	1.00	Non-Hazardous	17 05 04
BH4	1.00	Non-Hazardous	17 05 04
BH6	1.0	Non-Hazardous	17 05 04
BH7	1.0	Non-Hazardous	17 05 04
BH7	3.0	Non-Hazardous	17 05 04

Asbestos was not detected in any of the samples tested.

All samples are classified as non-hazardous and the appropriate List of Waste Code is 17 05 04 (Soil and Stone other than those mentioned in 17 05 03*).

2.3 Waste Acceptance Criteria

The results of the WAC testing are presented in Table 2.2-2.3, which includes for comparative purposes the WAC for Inert, Non Hazardous and Hazardous Waste Landfills pursuant to Article 16 of the EU Landfill Directive 1999/31/EC Annex II which establishes criteria and procedures for the acceptance of waste at landfills.

Chromium exceeds the inert WAC increased limits for TP06 (0.50m).

Total Organic Carbon (TOC) exceeds the inert WAC for BH03 (1.00m), BH04 (1.00m) and BH07 (3.00m), and the inert WAC increased limits for BH01 (1.00m).

All other samples meet the inert WAC.

Table 2.2 WAC Results

Parameter	Unit	TP01	TP02	TP-SA03	TP04	TP05	TP6	TP7	TP8	TP9	Inert Landfill	Inert Landfill Increased Limits	Non-Hazardous Landfill	Hazardous Landfill
Depth	m	0.6	0.4	0.7	0.7	1.00	0.50	0.60	1.00	0.60				
Antimony	mg/kg	<0.0050	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.06	0.18	0.7	5
Arsenic	mg/kg	<0.0020	0.0093	<0.0020	0.0055	0.015	0.0039	0.0021	<0.0020	<0.0020	0.5	1.5	2	25
Barium	mg/kg	0.084	0.081	0.082	0.12	0.067	<0.050	<0.050	0.061	<0.050	20	20	100	300
Cadmium	mg/kg	<0.0011	0.0027	<0.0011	<0.0011	0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.04	0.04	1	5
Chromium	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	1.6	<0.0050	<0.0050	<0.0050	0.5	0.5	10	70
Copper	mg/kg	0.0068	0.020	0.010	0.011	0.0099	0.015	0.015	0.016	0.015	2	2	50	100
Lead	mg/kg	<0.0050	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.5	0.5	10	50
Molybdenum	mg/kg	0.0076	0.027	0.013	0.013	0.033	0.022	0.0065	0.010	0.017	0.5	1.5	10	30
Nickel	mg/kg	0.0058	0.0058	<0.0050	0.0056	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	0.4	0.4	10	40
Selenium	mg/kg	<0.0050	0.0090	<0.0050	0.0057	0.0060	<0.0050	<0.0050	<0.0050	<0.0050	0.1	0.3	0.5	7
Zinc	mg/kg	0.042	0.11	0.059	0.032	0.026	0.043	0.049	0.035	0.043	4	4	50	200
Mercury	mg/kg	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.01	0.01	0.2	2
Phenol	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	1	1	NE	NE
Fluoride	mg/kg	6.8	5.7	3.6	2.5	1.7	2.2	2.0	2.8	1.8	10	10	150	500
Chloride	mg/kg	<10	16	<10	<10	<10	<10	<10	<10	<10	800	2,400	15,000	25,000
Sulphate	mg/kg	<10	44	<10	18	<10	<10	<10	<10	25	1000*	3,000	20000*	50,000
DOC **	mg/kg	79	68	56	53	<50	<50	<50	<50	<50	500	500	800	1,000
pH	pH units	8.4	8.3	8.6	8.4	8.4	8.5	8.6	8.5	8.4	NE	NE	NE	NE
TDS ***	mg/kg	570	620	460	620	540	400	400	360	56	4,000	12,000	60,000	100,000
TOC	%	0.40	6.9	0.99	0.85	0.66	2.1	1.4	0.44	0.88	3	6	NE	6
Benzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Toluene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Ethylbenzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
m/p-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
o-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
PCB Total of 7	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1	1	NE	NE
Total 17 PAH's	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NE	100	NE	NE
Mineral Oil	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	500	500	NE	NE
Asbestos	% mass	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NE	NE	NE	NE

NAD denotes No Asbestos Detected

* denotes sulphate level exceeding inert waste limit may be considered as complying if the TDS value does not exceed 6,000mg/kg at L/S = 10l/kg.

** denotes a higher limit may be accepted provided the DOC alternative values of 500mg/kg is achieved

*** denotes TDS. The values for TDS can be used to sulphate and chloride.

 PAH over 1mg/kg and Mineral Oil over 50 mg/kg exceeds limit at soil recovery site in Ireland

Table 2.3 WAC Results

Parameter	Unit	TP10	TP11	BH1	BH2	BH3	BH4	BH6	BH7	BH7	Inert Landfill	Inert Landfill Increased Limits	Non-Hazardous Landfill	Hazardous Landfill
Depth	m	0.50	0.50	1.00	1.00	1.00	1.00	1.0	1.0	3.0				
Antimony	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.013	0.012	0.06	0.18	0.7	5
Arsenic	mg/kg	0.022	0.0038	0.0097	0.0024	0.0033	0.0042	0.0039	0.010	0.0079	0.5	1.5	2	25
Barium	mg/kg	0.13	0.077	<0.050	0.060	0.086	0.082	0.072	0.79	0.54	20	20	100	300
Cadmium	mg/kg	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	0.04	0.04	1	5
Chromium	mg/kg	0.0075	0.0053	<0.0050	<0.0050	<0.0050	<0.0050	0.0055	0.0077	0.0051	0.5	0.5	10	70
Copper	mg/kg	0.028	0.017	0.010	0.0079	0.017	0.012	0.012	0.021	0.012	2	2	50	100
Lead	mg/kg	0.037	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.019	0.0050	0.5	0.5	10	50
Molybdenum	mg/kg	0.018	0.0068	0.069	0.0077	0.031	0.022	0.0083	0.021	0.014	0.5	1.5	10	30
Nickel	mg/kg	0.032	0.0068	<0.0050	<0.0050	0.0068	0.0058	0.0062	0.022	0.010	0.4	0.4	10	40
Selenium	mg/kg	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.1	0.3	0.5	7
Zinc	mg/kg	0.28	0.045	0.065	0.061	0.075	0.030	0.050	0.089	0.051	4	4	50	200
Mercury	mg/kg	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.01	0.01	0.2	2
Phenol	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	1	1	NE	NE
Fluoride	mg/kg	3.6	2.5	1.5	6.1	4.0	3.2	2.5	2.0	1.4	10	10	150	500
Chloride	mg/kg	<10	<10	46	13	34	23	<10	<10	<10	800	2,400	15,000	25,000
Sulphate	mg/kg	26	16	36	<10	15	<10	<10	51	32	1000*	3,000	20000*	50,000
DOC **	mg/kg	<50	<50	<50	60	<50	65	<50	<50	<50	500	500	800	1,000
pH	pH units	8.3	8.3	8.3	8.6	8.7	8.8	8.0	8.4	8.2	NE	NE	NE	NE
TDS ***	mg/kg	520	410	580	650	670	880	440	910	480	4,000	12,000	60,000	100,000
TOC	%	0.83	0.54	7.4	0.67	5.4	4.7	0.31	1.9	3.2	3	6	NE	6
Benzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Toluene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
Ethylbenzene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
m/p-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
o-Xylene	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	6	6	NE	NE
PCB Total of 7	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1	1	NE	NE
Total 17 PAH's	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NE	100	NE	NE
Mineral Oil	mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	<10	500	500	NE	NE
Asbestos	% mass	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NE	NE	NE	NE

NAD denotes No Asbestos Detected

* denotes sulphate level exceeding inert waste limit may be considered as complying if the TDS value does not exceed 6,000mg/kg at L/S = 10l/kg.

** denotes a higher limit may be accepted provided the DOC alternative values of 500mg/kg is achieved

*** denotes TDS. The values for TDS can be used to sulphate and chloride.

 PAH over 1mg/kg and Mineral Oil over 50 mg/kg exceeds limit at soil recovery site in Ireland

2.4 Waste Management Options

The EPA has issued guidance on acceptance criteria for a range of parameters for soil recovery sites. This includes;

- Metals (solid conc. not leachability) in soil and stone (including As, Cd, Cr, Cu, Hg, Ni, Pb, Zn);
- Total organic carbon in soil and stone;
- Total BTEX (benzene, toluene, ethylbenzene, xylenes) in soil and stone;
- Mineral oil in soil and stone;
- Polycyclic aromatic hydrocarbons (PAHs) in soil and stone;
- Polychlorinated Biphenyls (PCBs) in soil and stone;
- Asbestos fibres in soil and stone.

The guidance requires that soils from brownfield sites should not exceed the limits for the parameters specified in Table 2.4 and 2.5. For metals limits have been specified for a range of soil types nationally separated into six domain areas.

Table 2.4 Soil Recovery Site Criteria

Parameter	Limit for Soil Recovery Sites
Total BTEX	0.05 mg/kg
Mineral Oil	50 mg/kg
Total PAHs	1 mg/kg
Total PCBs	0.05 mg/kg

All samples meet the soil recovery criteria for Total BTEX, Mineral Oil, Total PAH's and Total PCB's.

The soil and stone cannot be sent to soil recovery sites if the trigger levels for a particular domain are exceeded. There is however some flexibility in applying the limits. A derogation applies where up to three parameters can exceed the limit for a sample provided the concentration in the samples is no more than 1.5 times the trigger level. The site which is subject to this investigation is located in Domain 2 and the trigger levels are listed in Table 2.5.

Table 2.5 Soil Recovery Trigger Levels

		Domain 2 Trigger Level	1.5 times Trigger Level
Arsenic	mg/kg	24.90	37.35
Cadmium	mg/kg	3.28	4.92
Chromium	mg/kg	50.30	75.45
Copper	mg/kg	63.50	95.25
Mercury	mg/kg	0.36	0.54
Nickel	mg/kg	61.90	92.85
Lead	mg/kg	86.10	129.15
Zinc	mg/kg	197.00	295.5

The samples from TP02 (0.40m) and TP04 (0.70m) exceed the soil recovery criteria for metal concentrations. The sample from TP02 exceeds the 1.5 times trigger level for Zinc. The sample from TP04 exceeds the 1.5 times trigger level for Chromium. All other samples meet the soil recovery criteria for metal concentrations.

Waste management options are summarised on Table 2.7. All are subject to approval of the waste management facility operators. Class A material is suitable for removal to a soil recovery facility. Class B-1 wastes are suitable for recovery/disposal to Inert Landfill. Class B-2 wastes are suitable for recovery/disposal to Inert Landfill with increased limits. Class C wastes are suitable for disposal to Non-Hazardous Landfill.

Table 2.7 Waste Management Options

Sample No.	Depth	Classification	LoW Code	Category
TP01	0.6	Non-Hazardous	17 05 04	A
TP02	0.4	Non-Hazardous	17 05 04	B-1
TP-SA03	0.7	Non-Hazardous	17 05 04	A
TP04	0.7	Non-Hazardous	17 05 04	B-1
TP05	1.00	Non-Hazardous	17 05 04	A
TP6	0.50	Non-Hazardous	17 05 04	C
TP7	0.60	Non-Hazardous	17 05 04	A
TP8	1.00	Non-Hazardous	17 05 04	A
TP9	0.60	Non-Hazardous	17 05 04	A
TP10	0.50	Non-Hazardous	17 05 04	A
TP11	0.50	Non-Hazardous	17 05 04	A
BH1	1.00	Non-Hazardous	17 05 04	C
BH2	1.00	Non-Hazardous	17 05 04	A
BH3	1.00	Non-Hazardous	17 05 04	B-2
BH4	1.00	Non-Hazardous	17 05 04	B-2
BH6	1.0	Non-Hazardous	17 05 04	A
BH7	1.0	Non-Hazardous	17 05 04	A
BH7	3.0	Non-Hazardous	17 05 04	B-2

A	Meets Soil Recovery Criteria
B-1	Suitable for disposal/recovery to Inert Landfill
B-2	Suitable for disposal/recovery to Inert Landfill with increased limits
C	Suitable for disposal to Non-Hazardous Landfill

3 CONCLUSIONS AND RECOMMENDATIONS

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3.1 Conclusions

3.1.1 *Waste Classification*

Asbestos was not detected in any of the samples tested.

All samples are classified as non-hazardous and the appropriate List of Waste Code is 17 05 04 (Soil and Stone other than those mentioned in 17 05 03*).

If the soils have to be removed from the site the disposal options are outlined in Section 2.4.

3.2 Recommendations

OCM recommend that a copy of this report be provided in full to the relevant waste management facilities to which the made ground and subsoils will be consigned to confirm its suitability for acceptance.

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Appendix 1

Borehole and Trial Pit Logs



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH01

SHEET Sheet 1 of 1

CO-ORDINATES 621,215.75 E
666,738.35 N
GROUND LEVEL (m AOD) 127.20RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 3.10DATE COMMENCED 30/07/2024
DATE COMPLETED 30/07/2024CLIENT
ENGINEER DOBASPT HAMMER REF. NO.
ENERGY RATIO (%)BORED BY P.Allan
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		126.10	1.10	AA228304	B	1.00		N = 23 (4, 6, 4, 7, 7, 5)	
1	Firm grey/brown sandy SILT/CLAY with some gravel									
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA228305	B	2.00		N = 29 (5, 7, 7, 8, 7, 7)	
3	Firm grey/brown sandy SILT/CLAY with some gravel		124.10	3.10	AA228306	B	3.00		N = 25/75 mm (10, 25, 25)	
4	Stiff to very stiff gravelly CLAY with some cobbles									
5	Obstruction									
6	End of Borehole at 3.10 m									
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.3	1.5	1							No water strike
2.9	3.1	1.5							

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH02

SHEET Sheet 1 of 1

CO-ORDINATES 621,042.35 E
666,682.77 N
GROUND LEVEL (m AOD) 129.72

RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 2.70

DATE COMMENCED 26/07/2024
DATE COMPLETED 29/07/2024

CLIENT
ENGINEER DOBA

SPT HAMMER REF. NO.
ENERGY RATIO (%)

BORED BY P.Allan
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		129.42	0.30						
	Firm brown sandy SILT/CLAY		128.92	0.80						
1	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA228310	B	1.00		N = 29 (4, 4, 5, 6, 9, 9)	
	Grey/brown sandy SILT/CLAY with some gravel and occasional cobbles									
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA228311	B	2.00		N = 31 (5, 7, 7, 7, 8, 9) N = 50/75 mm (25, 50)	
	Grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		127.32	2.40						
	Obstruction		127.02	2.70						
3	Obstruction									
	End of Borehole at 2.70 m									
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.8	1.9	1							
2.2	2.4	1.5							No water strike
2.5	2.7	1.5							

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)

UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH03

SHEET Sheet 1 of 1

CO-ORDINATES 621,224.65 E
666,634.11 N
GROUND LEVEL (m AOD) 127.39

RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 2.50

DATE COMMENCED 30/07/2024
DATE COMPLETED 30/07/2024

CLIENT
ENGINEER DOBA

SPT HAMMER REF. NO.
ENERGY RATIO (%)

BORED BY P.Allan
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles		126.49	0.90	AA228300	B	1.00		N = 30 (5, 5, 7, 8, 8, 7)	
1	Firm brown SILT/CLAY with occasional gravel									
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles									
	Firm brown SILT/CLAY with occasional gravel		124.89	2.50	AA228301	B	2.00		N = 38 (6, 7, 10, 9, 9, 10)	
	Very stiff grey/brown sandy gravelly CLAY occasional cobbles									
	Obstruction End of Borehole at 2.50 m									
3										
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
2.1	2.5	2							No water strike

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)

UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH04

SHEET Sheet 1 of 1

CO-ORDINATES 621,082.02 E
666,580.48 N
GROUND LEVEL (m AOD) 129.73

RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 2.80

DATE COMMENCED 29/07/2024
DATE COMPLETED 29/07/2024

CLIENT
ENGINEER DOBA

SPT HAMMER REF. NO.
ENERGY RATIO (%)

BORED BY P.Allan
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		129.43	0.30						
1	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles Firm brown SILT/CLAY with some gravel		128.53	1.20	AA228302	B	1.00		N = 24 (6, 8, 9, 5, 5, 5)	
2	Stiff to very stiff grey/brown sandy SILT/CLAY with some gravel and occasional cobbles Firm brown SILT/CLAY with some gravel									
2	Stiff to very stiff grey/brown sandy gravelly CLAY with occasional cobbles				AA228303	B	2.00		N = 36 (6, 7, 7, 10, 10, 9)	
3	Obstruction End of Borehole at 2.80 m		126.93	2.80					N = 50/75 mm (25, 50)	
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.5	1.6	1							
2.6	2.8	1.5							No water strike

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)

UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH05

SHEET Sheet 1 of 1

CO-ORDINATES 621,150.80 E
666,579.94 N
GROUND LEVEL (m AOD) 127.71

RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 0.70

DATE COMMENCED 28/08/2024
DATE COMPLETED 28/08/2024

CLIENT
ENGINEER DOBA

SPT HAMMER REF. NO.
ENERGY RATIO (%)

BORED BY D.Tolster
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		127.61	0.10	AA219546	B	0.50			
	Brown sandy SILT/CLAY with occasional gravel		127.41	0.30						
	Light brown very sandy SILT/CLAY with some gravel and occasional cobbles		127.01	0.70						
1	Obstruction - Possible boulder End of Borehole at 0.70 m									
2										
3										
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
0.6	0.7	1							No water strike

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

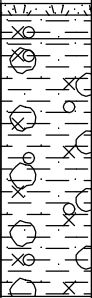
REMARKS CAT scanned location and hand dug inspection pit was carried out . Obstruction encountered at 0.70m. Moved rig to BH05A and attempted rebore.

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)

UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

		GEOTECHNICAL BORING RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine , Co.Tipperary						BOREHOLE NO. BH05A				
CO-ORDINATES			RIG TYPE Dando 2000			SHEET Sheet 1 of 1				
GROUND LEVEL (m AOD)			BOREHOLE DIAMETER (mm) 200			DATE COMMENCED 28/08/2024				
			BOREHOLE DEPTH (m) 2.50			DATE COMPLETED 28/08/2024				
CLIENT ENGINEER DOBA			SPT HAMMER REF. NO.			BORED BY D.Tolster				
			ENERGY RATIO (%)			PROCESSED BY F.C				
Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL			0.10	AA211709	B	1.00		N = 18 (3, 2, 3, 4, 4, 7)	
	Brown sandy SILT/CLAY with occasional gravel			0.30						
	Stiff light brown very sandy SILT/CLAY with some gravel and occasional cobbles									
1										
2					AA211710	B	2.00		N = 27 (5, 4, 6, 7, 7, 7)	
				2.50						
	Obstruction End of Borehole at 2.50 m									
3										
4										
5										
6										
7										
8										
9										
HARD STRATA BORING/CHISELLING					WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments	
2.4	2.5	1.5							No water strike	
					GROUNDWATER PROGRESS					
INSTALLATION DETAILS				Date	Hole Depth	Casing Depth	Depth to Water	Comments		
Date	Tip Depth	RZ Top	RZ Base	Type						
REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub) UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample					

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH06

SHEET Sheet 1 of 1

CO-ORDINATES 621,117.29 E
666,389.67 N
GROUND LEVEL (m AOD) 127.46

RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 3.80

DATE COMMENCED 29/08/2024
DATE COMPLETED 29/08/2024

CLIENT
ENGINEER DOBA

SPT HAMMER REF. NO.
ENERGY RATIO (%)

BORED BY D.Tolster
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		127.26	0.20						
1	Soft mottled brown sandy SILT/CLAY with occasional gravel				AA219547	B	1.00		N = 7 (1, 2, 2, 1, 2, 2)	
2	Firm mottled grey sandy SILT/CLAY with some gravel and occasional cobbles		125.96	1.50	AA219548	B	2.00		N = 18 (2, 2, 4, 4, 5, 5)	
3	Very stiff brown sandy silty gravelly CLAY with some cobbles and occasional boulders		124.86	2.60	AA219549	B	3.00		N = 37 (4, 4, 8, 10, 10, 9)	
4	Obstruction - Possible boulder End of Borehole at 3.80 m		123.66	3.80					N = 50/75 mm (18, 21, 50)	
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
3.7	3.8	1.5							No water strike

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type					

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)

UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24



GEOTECHNICAL BORING RECORD

REPORT NUMBER

25517

CONTRACT Lisheen Mine , Co.Tipperary

BOREHOLE NO. BH07

SHEET Sheet 1 of 1

CO-ORDINATES 621,259.03 E
666,518.46 N
GROUND LEVEL (m AOD) 126.71RIG TYPE Dando 2000
BOREHOLE DIAMETER (mm) 200
BOREHOLE DEPTH (m) 5.10DATE COMMENCED 27/08/2024
DATE COMPLETED 28/08/2024CLIENT
ENGINEER DOBASPT HAMMER REF. NO.
ENERGY RATIO (%)BORED BY D.Tolster
PROCESSED BY F.C

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		126.61	0.10						
1	Firm grey/brown sandy SILT/CLAY with occasional gravel									
			125.51	1.20	AA229644	B	1.00		N = 11 (2, 2, 2, 2, 3, 4)	
	Firm grey/black sandy SILT/CLAY with some gravel and occasional cobbles (Possibly Made Ground)				AA229645	B	1.50			
2			124.41	2.30	AA229646	B	2.00		N = 16 (4, 4, 6, 3, 4, 3)	
	Stiff grey/brown sandy silty gravelly CLAY with some cobbles and occasional boulders				AA229647	B	3.00		N = 26 (4, 6, 6, 7, 6, 7)	
3					AA229648	B	3.50			
4	Dense grey fine to coarse sandy angular GRAVEL		122.81	3.90	AA229649	B	4.00		N = 37 (6, 8, 10, 10, 8, 9)	
5	Obstruction End of Borehole at 5.10 m		121.61	5.10	AA229650	B	5.00		N = 50/75 mm (25, 50)	
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING

WATER STRIKE DETAILS

From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
2.1	2.4	1		3.60	3.60	No	2.40	20	Moderate
5	5.1	1.5							

GROUNDWATER PROGRESS

INSTALLATION DETAILS					Date	Hole Depth	Casing Depth	Depth to Water	Comments
Date	Tip Depth	RZ Top	RZ Base	Type	28-09-24	5.10	Nil	2.30	End of BH

REMARKS CAT scanned location and hand dug inspection pit was carried out .

Sample Legend

D - Small Disturbed (tub)
B - Bulk Disturbed
LB - Large Bulk Disturbed
Env - Environmental Sample (Jar + Vial + Tub)UT - Undisturbed 100mm Diameter Sample
P - Undisturbed Piston Sample
W - Water Sample

IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

 GEOTECHNICAL BORING RECORD										REPORT NUMBER 25517	
CONTRACT Lisheen Mine , Co.Tipperary								BOREHOLE NO. BH08			
CO-ORDINATES 621,334.77 E 666,486.83 N				RIG TYPE Dando 2000 BOREHOLE DIAMETER (mm) 200		SHEET Sheet 1 of 1		DATE COMMENCED 27/08/2024			
GROUND LEVEL (m AOD) 126.53				BOREHOLE DEPTH (m) 1.40		DATE COMPLETED 27/08/2024					
CLIENT ENGINEER DOBA				SPT HAMMER REF. NO. ENERGY RATIO (%)		BORED BY D.Tolster PROCESSED BY F.C					

Depth (m)	Description	Legend	Elevation	Depth (m)	Samples				Field Test Results	Standpipe Details
					Ref. Number	Sample Type	Depth (m)	Recovery		
0	TOPSOIL		126.43	0.10						
	Mottled brown sandy SILT/CLAY with occasional gravel		126.23	0.30						
1	Firm grey/brown sandy SILT/CLAY with some gravel and occasional cobbles				AA219500	B	0.80		N = 15 (4, 3, 3, 5, 4, 3) N = 50/75 mm (25, 50)	
	Obstruction End of Borehole at 1.40 m		125.13	1.40						
2										
3										
4										
5										
6										
7										
8										
9										

HARD STRATA BORING/CHISELLING				WATER STRIKE DETAILS					
From (m)	To (m)	Time (h)	Comments	Water Strike	Casing Depth	Sealed At	Rise To	Time (min)	Comments
1.3	1.4	1.5							No water strike

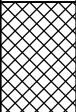
INSTALLATION DETAILS					GROUNDWATER PROGRESS				
Date	Tip Depth	RZ Top	RZ Base	Type	Date	Hole Depth	Casing Depth	Depth to Water	Comments

REMARKS CAT scanned location and hand dug inspection pit was carried out .					Sample Legend D - Small Disturbed (tub) B - Bulk Disturbed LB - Large Bulk Disturbed Env - Environmental Sample (Jar + Vial + Tub)					UT - Undisturbed 100mm Diameter Sample P - Undisturbed Piston Sample W - Water Sample				
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IGSL BH LOG 25517.GPJ IGSL.GDT 25/9/24

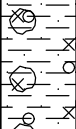
		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP01			
LOGGED BY I.Reder				CO-ORDINATES 621,012.20 E 666,724.97 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA				GROUND LEVEL (m) 130.56			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024			
							EXCAVATION METHOD 5T tracked machine			
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm to stiff, redish brown, slightly sandy gravelly CLAY with medium cobble content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subanglar to subrounded of various lithology.		0.30	130.26						
	Dense, brown, very clayey very gravelly fine to coarse SAND with high subangular to subrounded cobbles content (possible very sandy very gravelly clay)		0.80	129.76		AA203976	B	0.60		
1.0										
	Dense, light brown, slightly clayey/silty very gravelly fine to coarse SAND with high subangular to subrounded cobbles and low boulders content content		1.80	128.76		AA203977	B	1.50		
2.0										
	End of Trial Pit at 2.50m		2.50	128.06		AA203978	B	2.30		
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services; SA01 and PBT01 done in location - for all details see SA01 and PBT01 logs										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP02		SHEET Sheet 1 of 1	
LOGGED BY I.Reder			CO-ORDINATES 621,256.43 E 666,555.23 N			DATE STARTED 17/07/2024		DATE COMPLETED 17/07/2024	
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 126.74			EXCAVATION METHOD 5T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown silty sandy gravel, cobbles, organic matter, roots)									
	Dense, yellowish light brown, very gravelly very silty/clayey fine to coarse SAND with high subangular to subrounded cobbles and boulders content (possible very sandy very gravelly silty clay)		0.50	126.24		AA203982	B	0.40		
1.0										
						AA203983	B	1.40		
1.80	TP terminated due to possible big boulders or rock End of Trial Pit at 1.80m		1.80	124.94	 (Slow)					
2.0										
3.0										
4.0										

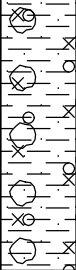
Groundwater Conditions Slow water flow at 1.7m										
Stability TP stable										
General Remarks CAT scanned for services; SA02 and PBT02 done in location - for all details see SA02 and PBT02 logs										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine							TRIAL PIT NO. TP04		
LOGGED BY I.Reder				CO-ORDINATES 621,213.44 E 666,419.01 N			SHEET Sheet 1 of 1		
CLIENT ENGINEER DOBA				GROUND LEVEL (m) 126.84			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024		
							EXCAVATION METHOD 5T tracked machine		

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Stiff, brown, sandy gravelly CLAY with high cobbles and low boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		0.30	126.54						
	Firm to stiff, brown, sandy gravelly slightly silty CLAY with medium cobbles content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology.		0.90	125.94		AA203986	B	0.70		
1.0										
	Stiff to very stiff, yellowish light brown, sandy very gravelly slightly silty CLAY with high cobbles and low boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.80	125.04		AA203987	B	1.50		
2.0										
	End of Trial Pit at 2.70m		2.70	124.14		AA203988	B	2.50		
3.0										
4.0										

Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services; SA04 and PBT04 done in location - for all details see SA04 and PBT04 logs										

IGSL TP LOG 25517 GPU IGSL GDT 2/9/24

		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP05			
LOGGED BY I.Reder				CO-ORDINATES 621,207.88 E 666,471.36 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA				GROUND LEVEL (m) 127.04			DATE STARTED 17/07/2024 DATE COMPLETED 17/07/2024			
							EXCAVATION METHOD 5T tracked machine			
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of topsoil, brown sandy gravelly clay, cobbles, roots)									
	Firm to stiff, brown, very sandy very gravelly slightly silty CLAY with high cobbles content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles are subangular to subrounded of various lithology. (possible very clayey gravel)		0.30	126.74						
1.0						AA203984	B	1.00		
	Stiff to very stiff, yellowish light brown becoming brown, sandy very gravelly slightly silty CLAY with high cobbles and medium boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded of various lithology.		1.50	125.54						
2.0						AA203985	B	2.00		
	End of Trial Pit at 2.70m		2.70	124.34						
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP06		SHEET Sheet 1 of 1	
LOGGED BY I.Reder			CO-ORDINATES 621,152.79 E 666,625.18 N			DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024		EXCAVATION METHOD 6T tracked machine	
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 127.33						

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown sandy gravelly clay, sandy gravel, organic matter, roots, cobbles)		0.25	127.08		AA208996	B	0.50		
	MADE GROUND (comprised of yellowish brown/grey sandy gravelly clay, sandy gravel, cobbles, boulders)									
1.0	Dense, light greyish brown, silty/clayey very sandy fine to coarse subangular to sibounded GRAVEL with high subangular to subrounded cobbles and boulders content (possible original ground)		1.10	126.23		AA208997	B	1.50		
2.0										
2.50	TP terminated due to possible big boulders or rock End of Trial Pit at 2.50m		2.50	124.83		AA208998	B	2.50		
3.0										
4.0										

Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP07		SHEET Sheet 1 of 1	
LOGGED BY I.Reder			CO-ORDINATES 621,103.10 E 666,502.98 N			DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024		EXCAVATION METHOD 6T tracked machine	
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 128.59						

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	TOPSOIL									
	Firm to stiff, brown sandy gravelly slightly silty CLAY with medium subangular to subrounded cobbles content (possible fill)		0.30	128.29						
	Dense, brown, very silty/clayey very gravelly fine to coarse SAND with high subangular cobbles content (possible very sandy gravel)		0.80	127.79		AA208993	B	0.60		
1.0										
	Stiff, light brown, very sandy very gravelly silty CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular to subrounded.		1.70	126.89		AA208994	B	1.40		
2.0										
	TP terminated due to possible big boulders End of Trial Pit at 2.70m		2.70	125.89		AA208995	B	2.40		
3.0										
4.0										

Groundwater Conditions TP dry	
Stability TP stable	
General Remarks CAT scanned for services	

		TRIAL PIT RECORD						REPORT NUMBER 25517		
CONTRACT Lisheen Mine							TRIAL PIT NO. TP08 SHEET Sheet 1 of 1			
LOGGED BY I.Reder		CO-ORDINATES 621,192.70 E 666,492.95 N				DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024				
CLIENT ENGINEER DOBA		GROUND LEVEL (m) 126.62				EXCAVATION METHOD 6T tracked machine				
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of brown sandy gravelly clay, cobbles, organic pieces, roots)									
	Stiff to very stiff, brown, sandy very gravelly CLAY with high subangular cobbles and low boulders content (possible fill)		0.30	126.32						
1.0						AA208991	B	1.00		
	Very stiff, light yellowish brown, sandy very gravelly CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangulr of various lithology.		1.70	124.92						
2.0						AA208992	B	2.00		
	TP terminated due to possible big boulders End of Trial Pit at 2.50m		2.50	124.12						
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										

		TRIAL PIT RECORD						REPORT NUMBER 25517	
CONTRACT Lisheen Mine						TRIAL PIT NO. TP09			
LOGGED BY I.Reder			CO-ORDINATES 621,282.55 E 666,486.20 N			SHEET Sheet 1 of 1			
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 126.37			DATE STARTED 27/08/2024 DATE COMPLETED 27/08/2024			
						EXCAVATION METHOD 6T tracked machine			

	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of light brown/brown sandy gravelly clay, cobbles, organic pieces, roots) Firm to stiff, light brown/grey mottled, very sandy very gravelly silty CLAY with high cobbles and boulders content. Sand is fine to coarse, gravel is fine to coarse subangular to subrounded, cobbles and boulders are subangular of various lithology.		0.10	126.27	 (Slow)	AA208986	B	0.60		
						AA208987	B	1.60		
						AA208988	B	2.50		
1.0										
2.0	Dense, light grey, very silty, very sandy fine to coarse subangular to subrounded GRAVEL with high subangular to angular cobbles and boulders content		2.20	124.17						
2.60	TP terminated due to possible big boulders or rock End of Trial Pit at 2.60m		2.60	123.77						
3.0										
4.0										

Groundwater Conditions Slow water flow at 2.5m										
Stability TP stable										
General Remarks CAT scanned for services										

	TRIAL PIT RECORD						REPORT NUMBER 25517			
CONTRACT Lisheen Mine						TRIAL PIT NO. TP10		SHEET Sheet 1 of 1		
LOGGED BY I.Reder			CO-ORDINATES 621,391.04 E 666,485.94 N			DATE STARTED 27/08/2024		DATE COMPLETED 27/08/2024		
CLIENT ENGINEER DOBA			GROUND LEVEL (m) 126.76			EXCAVATION METHOD 6T tracked machine				
	Geotechnical Description	Legend	Depth (m)	Elevation	Water Strike	Samples			Vane Test (KPa)	Hand Penetrometer (KPa)
						Sample Ref	Type	Depth		
0.0	MADE GROUND (comprised of light brown sandy gravelly silty clay, angular cobbles and boulders, roots, organic pieces)		0.70	126.06		AA208985	B	0.50		
1.0	TP terminated due to possible big boulders or rock End of Trial Pit at 0.70m									
2.0										
3.0										
4.0										
Groundwater Conditions TP dry										
Stability TP stable										
General Remarks CAT scanned for services										