

Environmental Impact Assessment Report (EIAR)

Volume 3.3: Appendices Chapter 11 & 12

Appendix 11.1 & 12.1: GI Report Cherry Orchard Sites 4 & 5

Appendix 11.2 & 12.2: GII Waste Classification Report Cherry Orchard Sites 4 & 5

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Ground Investigations Ireland Cherry Orchard Site 4 & 5

Van Dijk Architects

Ground Investigation Report

November 2022



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GROUND INVESTIGATIONS IRELAND

Geotechnical & Environmental

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GROUND INVESTIGATIONS IRELAND Geotechnical & Environmental

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1.0 Preamble

On the instructions of Waterman Moylan Engineers, a site investigation was carried out by Ground Investigations Ireland Ltd., between August and October at the site of the proposed Residential Development in Cherry Orchard, Dublin 10.

2.0 Overview

2.1. Background

It is proposed to construct a new residential development with associated services, access roads and car parking at the proposed site. The area proposed for development consists of site 4 to the West of Park West Avenue and site 5 to the East of park West Avenue. Site 4 is currently a mixture of greenfield and brownfield and some areas of the site previously used as a site compound. Site 5 is a brownfield site where infilling has taken place. The proposed construction is envisaged to consist of piled or conventional foundations and pavement make up with some local excavations for services and plant. It is understood that building heights will vary from 2 to 10+ stories across the two sites.

2.2. Purpose and Scope

The purpose of the site investigation was to investigate subsurface conditions utilising a variety of investigative methods in accordance with the project specification. The scope of the work undertaken for this project included the following:

- Visit project site to observe existing conditions
- Carry out 14 No. Trial Pits to a maximum depth of 3.2m BGL
- Carry out 11 No. Soakaways to determine a soil infiltration value to BRE digest 365
- Carry out 14 No. Dynamic Probes to determine soil strength/density characteristics
- Carry out 14 No. Cable Percussion boreholes to a maximum depth of 5.3m BGL
- Carry out 19 No. Rotary Core Boreholes to a maximum depth of 8.3m BGL
- Installation of 3 No. Groundwater monitoring wells
- Geotechnical & Environmental Laboratory testing
- Report with recommendations

3.0 Subsurface Exploration

3.1. General

During the ground investigation a programme of intrusive investigation specified by the Consulting Engineer was undertaken to determine the sub surface conditions at the proposed site. Regular sampling and in-

situ testing was undertaken in the exploratory holes to facilitate the geotechnical descriptions and to enable laboratory testing to be carried out on the soil samples recovered during excavation and drilling. The procedures used in this site investigation are in accordance with Eurocode 7 Part 2: Ground Investigation and testing (ISEN 1997 – 2:2007) and B.S. 5930:2015.

3.2. Trial Pits

The trial pits were excavated using a 8.5T tracked excavator at the locations shown in the exploratory hole location plan in Appendix 1. The locations were checked using a CAT scan to minimise the potential for encountering services during the excavation. The trial pits were sampled, logged and photographed by a Geotechnical Engineer/Engineering Geologist prior to backfilling with arisings. Notes were made of any services, inclusions, pit stability, groundwater encountered and the characteristics of the strata encountered and are presented on the trial pit logs which are provided in Appendix 2 of this Report.

3.3. Soakaway Testing

The soakaway testing was carried out in selected trial pits at the locations shown in the exploratory hole location plan in Appendix 1. These pits were carefully excavated and filled with water to assess the infiltration characteristics of the proposed site. The pits were allowed to drain and the drop in water level was recorded over time as required by BRE Digest 365. The pits were logged prior to completing the soakaway test and were backfilled with arising's upon completion. The soakaway test results are provided in Appendix 3 of this Report.

3.4. Dynamic Probing

The dynamic probe tests (DPH) were carried out at the locations shown in the location plan in Appendix 1 in accordance with B.S. 1377: Part 9 1990. The test consists of mechanically driving a cone with a 50kg weight in 100mm intervals and monitoring the number of blows required. An equivalent Standard Penetration Test (SPT) 'N' value may be calculated by dividing the total number of blows over a 300mm drive length by 1.5. The dynamic probe logs are provided in Appendix 4 of this Report.

3.5. Cable Percussion Boreholes

The Cable Percussion Boreholes were drilled using a Dando 2000 drilling rig with regular in-situ testing and sampling undertaken to facilitate the production of geotechnical logs and laboratory testing.

The standard method of boring in soil for site investigation is known as the Cable Percussion method. It consists of using a Shell in non cohesive soils and a clay cutter in cohesive soils, both operated on a wire cable. Very hard soils, boulders and other hard obstructions are broken up by chiselling and the fragments removed with the Shell. Where ground conditions made it necessary, the borehole was lined with 200mm diameter steel casing. While the use of the Cable Percussion method of boring gives the maximum data on soil conditions, some mixing of laminated soil is inevitable. For this reason, thin lenses of granular material may not be noticed. Disturbed samples were taken from the boring tools at suitable depths, so

that there is a representative sample at the top of each change in stratum and thereafter at regular intervals down the borehole until the next stratum was encountered. The disturbed samples were then sealed and sent to the laboratory where they were visually examined to confirm the description of the relevant strata. Standard Penetration Tests were carried out in the boreholes. The results of these tests, together with the depths at which the tests were taken are shown on the accompanying borehole records. The test consists of a thick wall sampler tube, 50mm external diameter, being driven into the soil by a monkey weighing 63.5kg and with a free drop of 760mm. For gravels and glacial till the driving shoe was replaced by a solid 60° cone. The Standard Penetration Test number referred to as the 'N' value is the number of blows required to drive the tube 300mm, after an initial penetration of 150mm. The number gives a guide to the consistency of the soil and can also be used to estimate the relative strength/density at the depth of the test and also to estimate the bearing capacity and compressibility of the soil. The cable percussion borehole logs are provided in Appendix 5 of this Report.

3.6. Rotary Boreholes

The rotary coring was carried out by a track mounted T44 Beretta rig at the locations shown on the location plan in Appendix 1. The rotary boreholes were completed from the ground surface or alternatively, where noted on the individual borehole log, from the base of the cable percussion borehole where a temporary liner was installed to facilitate follow-on rotary coring.

The T44 Beretta is equipped with rubber tracks which allow for short travel on pavement surfaces avoiding any damage to the surface. The T44 Beretta utilises a triple tube core barrel system operated using a wireline drilling process. The outer barrel is rotated by the drill rods and at its lower end, carries the coring bit. The inner barrel is mounted on a swivel so that it does not rotate during the process. The third barrel or liner is placed within the second one to retain the core intact and to preserve as much as possible the fabric of the drilling stratum. The core is cut by the coring bit and passes to the inner liner. The core is brought up to the surface within the inner barrel on a small diameter wire rope or line attached to the "overshoot" recovery tool which is then placed into a core box in order of recovery. A drilling fluid, typically air mist or water flush is passed from the surface through hollow drill rods to the drill bit and is used to cool the drill bit. Temporary casing is used in some situations to support unstable ground or to seal off fissures or voids. It should be noted that the rotary coring can only achieve limited recovery in overburden, particularly granular or weakly cemented strata due to the flushing medium washing away the cohesive fraction during coring. The recovery achieved, where required is noted on the borehole logs and core photographs are provided to allow assessment of the core recovered. The rotary borehole logs are provided in Appendix 5 of this Report.

3.7. Surveying

The exploratory hole locations have been recorded using a KQ GEO Technologies KQ-M8 System which records the coordinates and elevation of the locations to ITM or Irish National Grid as required by the project specification. The coordinates and elevations are provided on the exploratory hole logs in the appendices of this Report.

3.8. Groundwater Monitoring Installations

Groundwater Monitoring Installation were installed upon the completion of selected boreholes to enable sampling and the determination of the equilibrium groundwater level. The typical groundwater monitoring installation consists of a 50mm uPVC/HDPE slotted pipe with a pea gravel response zone and bentonite seal installed to the Engineers specification. Where required the standpipe is sealed with a gas tap and finished with a durable steel cover fixed in place with a concrete surround. The installation details are provided on the exploratory hole logs in the appendices of this Report.

3.9. Laboratory Testing

Samples were selected from the exploratory holes for a range of geotechnical and environmental testing to assist in the classification of soils and to provide information for the proposed design.

Environmental & Chemical testing as required by the specification, including the Rilta Suite, pH and sulphate testing was carried out by Element Materials Technology Laboratory in the UK. The Rilta suite testing includes both Solid Waste and Leachate Waste Acceptance Criteria.

Geotechnical testing consisting of moisture content, Atterberg limits, Particle Size Distribution (PSD), hydrometer tests were carried out in Prosoils Geotechnical Laboratory in the UK.

The results of the laboratory testing are included in Appendix 6 of this Report.

4.0 Ground Conditions

4.1. General

The ground conditions encountered during the investigation are summarised below with reference to insitu and laboratory test results. The full details of the strata encountered during the ground investigation are provided in the exploratory hole logs included in the appendices of this report.

The sequence of strata encountered across the site varied and generally comprised;

- Topsoil/Surfacing
- Made Ground
- Cohesive Deposits
- Bedrock

TOPSOIL: Topsoil was encountered in all the exploratory holes and was present to a maximum depth of 0.3m BGL. In some areas of the site Gravel fill was encountered at the surface.

MADE GROUND: On Site 4 the Made Ground deposits were encountered beneath the Topsoil/Surfacing and were present to depths of between 0.6m and 1.1m BGL. These deposits were described generally as brown slightly gravelly CLAY with occasional cobbles and contained occasional fragments of red brick, timber, glass and plastic.

On Site 5 to west of Park West Avenue, the Made Ground deposits were deeper and encountered to depths of up to 3.20m BGL. It should be noted that TP13 refused in the Made Ground at 2.9m BGL so the base wasn't proven at this location. These deposits were described generally as *brown slightly sandy slightly gravelly CLAY with occasional cobbles and contained occasional fragments of concrete, red brick, glass, rope, timber, ceramic, metal and plastic.*

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Made Ground and were described typically as *brown sandy gravelly CLAY with occasional cobbles and boulders* overlying a *stiff black sandy gravelly CLAY with occasional cobbles and boulders*. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. The strength of the cohesive deposits typically increased with depth and was firm to stiff or stiff below 1.0m BGL in the majority of the exploratory holes on site 4 and below 3 to 4 m BGL on site 5. These deposits had some, occasional or frequent cobble and boulder content, where noted on the exploratory hole logs.

BEDROCK: The rotary core boreholes recovered Medium strong to very strong grey/dark grey fine to medium grained laminated LIMESTONE interbedded with weak black fine grained laminated Mudstone. Locally the mudstone was weathered to black Clay. This is typical of the Calp Formation, which is noted

on the geological mapping of the proposed site. Rare visible pyrite veins were noted during logging which are typically present within the Calp Limestone.

The depth to rock varies from 2.3m BGL in BH03 to a maximum of 5.3m BGL in BH18. The total core recovery is good, typically 100% with some of the uppermost runs dropping to 80 or 90%. The SCR and RQD both are relatively poor in the upper weathered zone, often recovered as non-intact, however both indices show an increase with depth in each of the boreholes.

4.2. Groundwater

Groundwater strikes are noted on the exploratory hole logs where they occurred and where possible drilling was suspended for twenty minutes to allow the subsequent rise in groundwater to be recorded. We would point out that these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime and groundwater levels would be expected to vary with the tide, time of year, rainfall, nearby construction and other factors. For this reason, standpipes were installed in BH01, BH11 and BH18 to allow the equilibrium groundwater level to be determined. The groundwater monitoring is included in Appendix 7 of this Report.

4.3. Laboratory Testing

4.3.1. Geotechnical Laboratory Testing

The geotechnical testing carried out on soil samples recovered generally confirm the descriptions on the logs with the primary constituent of the cohesive deposits found to be a CLAY of low to intermediate plasticity. The Particle Size Distribution tests confirm that generally the cohesive deposits are well-graded with percentages of sands and gravels ranging between 11% and 56% generally with fines contents of 22 to 56%.

4.3.2. Chemical Laboratory Testing

The pH and sulphate testing carried out indicate that pH results are near neutral and that the water soluble sulphate results is low when compared to the guideline values from BRE Special Digest 1:2005. The samples tested classify the soil as a Design Sulphate Level DS-1.

4.3.3. Environmental Laboratory Testing

A number of samples were analysed for a suite of parameters which allows for the assessment of the sampled material in terms of total pollutant content for classification of materials as *hazardous* or *non-hazardous*. The suite also allows for the assessment of the sampled material in terms of suitability for placement at licenced landfills (inert, stable non-reactive, hazardous etc.). The parameter list for the suite includes analysis of the solid samples for arsenic, barium, cadmium, chromium, copper, cyanide, lead, nickel, mercury, zinc, speciated aliphatic and aromatic petroleum hydrocarbons, pH, sulphate, sulphide, moisture content, soil organic matter and an asbestos screen.

The suite also includes those parameters specified in the EU Council Decision establishing criteria for the acceptance of waste at Landfills (Council Decision 2003/33/EC), which for the solid samples are total organic carbon (TOC), speciated aliphatic and aromatic petroleum hydrocarbons, BTEX, phenol, polychlorinated biphenyls (PCB) and PAH.

As part of the suite a leachate is generated from the solid sample which is analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). While the laboratory report provides a comparison with the waste acceptance criteria limits it does not provide a waste classification of the material sampled nor does it comment on any potentially hazardous properties of the materials tested. The possibility for contamination, not revealed by the testing undertaken should be borne in mind particularly where Made Ground deposits are present or the previous site use or location indicate a risk of environmental variation. The waste classification report is included under the cover of a separate report by Ground Investigations Ireland.

The results from the completed laboratory testing are included in Appendix 6 of this report.

5.0 Recommendations & Conclusions

5.1. General

The recommendations given and opinions expressed in this report are based on the findings as detailed in the exploratory hole records. Where an opinion is expressed on the material between exploratory hole locations, this is for guidance only and no liability can be accepted for its accuracy. No responsibility can be accepted for conditions which have not been revealed by the exploratory holes. Limited information has been provided at the ground investigation stage and any designs based on the recommendations or conclusions should be completed in accordance with the current design codes, taking into account the variation and the specific details contained within the exploratory hole logs.

5.2. Foundations

5.2.1. Site 4

An allowable bearing capacity of 100 kN/m² is recommended for conventional strip or pad foundations on the stiff cohesive deposits at a depth of between 0.9m and 1.40m BGL on Site 4 for lightly loaded structures or conventional two-story residential development. A higher allowable bearing capacity of 250 kN/m² is recommended on the very stiff dark grey/black cohesive deposits however this stratum is not present in each of the exploratory holes completed and in some cases rock is shallow. As apartments are proposed with high loading, it may be more economically advantageous that foundations are excavated to the underlying bedrock where an allowable bearing capacity of 1000 kN/m² is recommended for conventional strip or pad foundations. The depth to bedrock is outlined in table 1 in section 5.2.3 below for each of the boreholes completed on the site. In any part of the site, should part of the foundation be on rock we would recommend that all the foundations of the unit in question be lowered to the competent rock stratum to avoid differential settlement.

The possibility for variation in the depth of the made ground in the vicinity of these foundations should be considered and foundation inspections should be carried out. Any soft spots encountered at the proposed foundation depths should be excavated and replaced with lean mix concrete.

5.2.2. Site 5

On Site 5 deeper Made Ground was encountered consistently across the site. An allowable bearing capacity of 100 kN/m² is achievable for strip or pad foundations at a depth of between 2.0m and 3.2m BGL below the Made Ground on the firm to stiff cohesive deposits. As apartments are proposed with high loading, it may be more economically advantageous that foundations are excavated to the underlying bedrock where an allowable bearing capacity of 1000 kN/m² is recommended for conventional strip or pad foundations. The depth to bedrock is outlined in table 1 in section 5.2.3 below for each of the boreholes completed on the site. In any part of the site, should part of the foundation be on rock we would recommend that all the foundations of the unit in question be lowered to the competent rock stratum to avoid differential settlement.

The possibility for variation in the depth of the made ground in the vicinity of these foundations should be considered and foundation inspections should be carried out. Any soft spots encountered at the proposed foundation depths should be excavated and replaced with lean mix concrete.

5.2.3. Site 4 and 5

		Allowa	ble Bearing C	apacities (ABC)	kN/m²		
Investigation	ABC	Depth	Comment	Investigation	ABC	Depth	Comment
No.	kN/m²	m BGL		No.	kN/m²	m BGL	
BH01	1000	4.00		BH11	1000	3.60	
BH02	1000	2.70		BH12	1000	3.35	
BH03	1000	2.50		BH13	1000	3.30	
BH04	1000	3.00		BH14	1000	3.25	
BH05	1000	3.10		BH15	1000	5.30	
BH06	1000	4.00		BH16	1000	3.20	
BH07	1000	4.40		BH17	1000	4.00	
BH08	1000	2.40		BH18	1000	5.60	
BH09	1000	2.25		BH19A	1000	4.30	
BH10	1000	3.90					

Table 1 - Allowable Bearing Capacities

A ground bearing floor slab is recommended to be based on the firm or firm to stiff cohesive deposits with an appropriate depth of compacted hardcore specified by the consulting engineer and in accordance with the limits and guidelines in SR21:2014+A1:2016 and/or NRA SRW CL808 Type E granular stone fill. Where the depth of Made Ground/Soft deposits exceeds 0.9m then suspended floor slabs should be considered.

Due to the presence of made ground, depth to rock in some areas and high loading anticipated for some structures, piled foundations may be more economically advantageous for some of the proposed structures. The type, size and depth of the pile foundations should be confirmed by a specialist piling contractor based on the loading from the proposed building.

The pH and sulphate testing completed on samples recovered from the exploratory holes indicates the pH results are near neutral and the sulphate results are low, when compared to the guideline values from BRE Special Digest 1:2005. No special precautions are required for concrete foundations to prevent sulphate attack. The samples tested were below the limits of DS1 in the BRE Special Digest 1:2005.

5.3. Excavations

Short term temporary excavations in the cohesive deposits will remain stable for a limited time only and will require to be appropriately battered or the sides supported if the excavation is below 1.25m BGL or is required to permit man entry.

Excavations in the Made Ground or soft Cohesive Deposits will require to be appropriately battered or the sides supported due to the low strength of these deposits.

Any excavations which penetrate the granular deposits will require to be appropriately battered or the sides supported and are likely to require dewatering due to the groundwater seepages noted in the exploratory hole logs in the Appendices of this Report.

The groundwater and stability noted on the trial pit logs should be consulted when determining the most appropriate construction methods for excavations.

Excavations in the upper cohesive and weathered rock deposits are expected to be excavatable with conventional excavation equipment, with zones of more intact bedrock below this depth requiring rock breaking techniques. Based on the fracture spacing, the rock strength estimates and Pettifer & Fookes (1994) Revised Excavatability Graph, the Calp Limestone ranges from hard digging to hard ripping, however the zones recovered as non-intact should be easy to hard digging. The 8T excavator generally refused on encountering the competent rock.

Any waste material to be removed off site should be disposed of to a suitably licenced landfill.

The environmental testing completed during the ground investigation is reported under the cover of a separate GII Waste Classification/Subsoil Assessment Report.

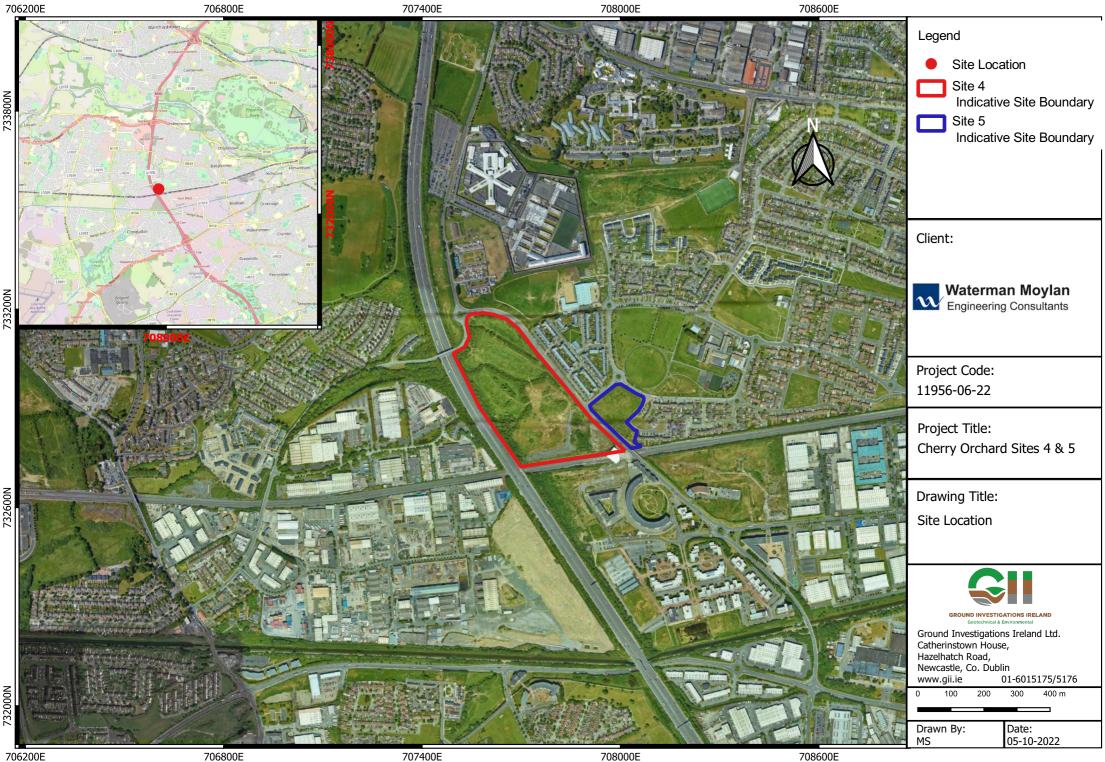
5.4. Soakaway Design

Infiltration rates of f=7.303 x 10^{-6} m/s, 6.95 x 10^{-6} m/s and 7.262 x 10^{-6} m/s respectively were calculated for the soakaway locations ST06, ST10 and ST11. At the locations of ST01, ST02, ST03, ST04, ST05, ST07, ST08 and ST09 the water level dropped too slowly to allow calculation of 'f' the soil infiltration rate. These locations are therefore not recommended as suitable for soakaway design and construction.

The recommendations provided in this report should be verified in the design of the proposed buildings, using the full details of the loading conditions and taking into consideration the allowable tolerable settlements/movements that the building can accommodate. The founding strata should be inspected and verified by a suitably qualified engineer prior to construction of the building foundations.

APPENDIX 1 - Site Location Plan





706200E

707400E

708000E



APPENDIX 2 – Trial Pit Records



SI	Grou	ind Inv	estigation www.gii.ie		Ltd	Site Cherry Orchard Sites 4 & 5	Trial P Numbe TP0
Machine : Ca Method : Tr		Dimensio 3.10 x 1.0		Ground	Level (mOD) 56.40	Client Van Dijk Architects	Job Numbe 11956-06
		Location 7076	628.6 E 733145.3 N	Dates 17	7/08/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Record	s Level (mOD)	Depth (m) (Thickness)	Description	Legend
					 (0.30)	Brown slightly sandy slightly gravelly TOPSOIL v	vith rootlets.
.50	В			56.10	0.30	MADE GROUND: Light brown slightly sandy slig gravelly Clay with occasional subangular to subi cobbles metal and red brick fragments.	ghtly ounded
				55.60		Stiff greyish brown slightly sandy gravelly CLAY occasional angular to subangular cobbles.	with $\begin{array}{c} 0 & \frac{1}{10} & \frac{1}{2} & \frac{1}{2} \\ 6 & \frac{1}{10} & \frac{1}{2} & \frac{1}{2} \\ \hline 1 & \frac{1}{10} & \frac{1}{10} & \frac{1}{2} \\ \hline 1 & \frac{1}{10} & \frac{1}{10} & \frac{1}{2} \\ \hline \end{array}$
.50	В				- - - - - - - - - - - - - - - - - - -		
.50	В			54.10	2.30 - 2.30 - (0.50)	Stiff dark grey slightly sandy gravelly CLAY with angular to subangular cobbles.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
				53.60		Obstruction: Presumed rockhead. Complete at 2.80m	
Plan					- - - - - - - - - - - - - - - - - - -	Remarks	
						No groundwater encountered during excavation. Trial pit stable. Trial pit backfilled upon completion.	
	· ·				s	cale (approx) Logged By	Figure No.

		estigations www.gii.ie			Site Cherry Orchard Sites 4 & 5	Trial Pit Number TP02
lachine : Case 8.5T lethod :Trial Pit	Dimension 3.30 x 1.1			Level (mOD) 56.67	Client Van Dijk Architects	Job Numbe 11956-06-
	Location 70758	88.6 E 733092.8 N	Dates 17	7/08/2022	Engineer Procert	Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50 В .50 В .50 В			56.47 55.77 54.47 53.77	(0.70) 0.90 (1.30) 2.20 (0.70)	Brown slightly sandy slightly gravelly TOPSOIL with rootlets MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles metal and red brick fragments. Stiff greyish brown slightly sandy gravelly CLAY with occasional angular to subangular cobbles. Stiff dark grey slightly sandy gravelly CLAY with occasional angular to subangular cobbles. Stiff dark grey slightly sandy gravelly CLAY with occasional angular to subangular cobbles. Obstruction: Presumed rockhead. Complete at 2.30m	
Plan	•				Remarks No groundwater encountered during excavation. Trial pit stable.	
	•				Trial pit backfilled upon completion.	
		· · ·		 		

		vestigations li www.gii.ie			Site Cherry Orchard Sites 4 & 5	Trial Pit Number TP03
lachine : Case 8.5T lethod : Trial Pit	Dimensio 2.90 x 1.7			Level (mOD) 56.41	Client Van Dijk Architects	Job Numbe 11956-06
	Location 7076	609.8 E 732987.9 N	Dates 17	//08/2022	Engineer Procert	Sheet 1/1
Depth (m) Sample / Test	s Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
50 B			56.21	(0.20) 0.20 (0.80) (0.80)	Brown slightly sandy slightly gravelly TOPSOIL with rootlets. MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles metal and red brick fragments.	
50 B			55.41		Firm to stiff greyish brown slightly sandy gravelly CLAY with occasional angular to subangular cobbles. Obstruction: Presumed rockhead. Complete at 2.00m	1 1
lan		· · ·		•••	Remarks	
					No groundwater encountered during excavation. Trial pit stable. Trial pit backfilled upon completion.	

	round In	vestigati www.g		eland	Ltd	Site Cherry Orchard Sites 4 & 5	Trial Pit Number TP04				
Machine : Case 8.5T Method :Trial Pit				Dimensions 3.20 x 1.00 x 2.70					Client Van Dijk Architects	Job Number 11956-06-22	
	Locatio	n 7671.5 E 73291	2.9 N	Dates 17	/08/2022	Engineer Procert	Sheet 1/1				
Depth (m) Sample / T	ests Water Depth (m)	Field R	ecords	Level (mOD)	Depth (m) (Thickness)	Description	Legend				
.50 В				56.47	(0.20) 0.20 (0.80) (0.80)	Brown slightly sandy slightly gravelly TOPSOIL with rootlets. MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles metal and red brick fragments.					
.50 В				55.67	- 1.00 - 1.00 	Stiff greyish brown slightly sandy gravelly CLAY with occasional angular to subangular cobbles.					
		Water strike(1)	at 2.60m.	53.97	- 2.70 - 2.70	Obstruction: Presumed rockhead. Complete at 2.70m	<u>k</u>				
Plan .	• •	• •	•		•	Remarks					
						Slow groundwater seepage at 2.60m BGL. Trial pit stable. Trial pit backfilled upon completion.					
			•								
					.						

Machine : Case 8.5T	Dimension	estigations Ir www.gii.ie		_LU Level (mOD)	Cherry Orchard Sites 4 & 5		Numbe TP05
lethod : Trial Pit	2.70 x 1.00			56.58	Van Dijk Architects		Numbe 11956-06-
	Location 70770)5.4 E 732848.6 N	Dates 16	/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend
.50 В			56.48 56.28 55.98 54.88	(0.10) 0.10 (0.20) 0.30 (0.30) (0.30) 1.70 1.70	Brown slightly sandy slightly gravelly TOF MADE GROUND: Greyish brown slightly Clay with occasional subangular to subro timber and red brick fragments. Stiff light brown slightly sandy slightly gra occasional subangular to subrounded col Stiff grey slightly sandy gravelly CLAY wit angular to subangular cobbles. Complete at 1.70m	sandy gravelly unded cobbles velly CLAY with bbles.	
Plan					No groundwater encountered during excav Trial pit stable. Trial pit backfilled upon completion.	ation.	
lan				•	That pit backnied upon completion.		
lan		 	· ·				
lan		 	· ·				

lethod : Trial Depth (m)		Dimensio 2.60 x 1.		Grou					
Depth (m)						Client Van Dijk Architects		Job Numbe 11956-06	
Depth (m)		Location	1 758.7 E 732783.7	Dates 7 N	16/08/2	2022	Engineer Procert		Sheet 1/1
	Sample / Tests	Water Depth (m)	Field Reco	ords (mOl	el C D) (Thi	Depth (m) ickness)	D	escription	Legend
50	В			57.	42	(0.10) 0.10 (1.00)	MADE GROUND: Grevist	tly gravelly TOPSOIL with rootlets n brown slightly sandy gravelly ngular to subrounded cobbles ients.	<u></u>
				56.		1.10 (0.30) 1.40	Stiff brown slightly sandy s occasional subangular to		
50	В					(1.00)		gravelly CLAY with occasional bles.	္လတ္ေတြေတြေတြေတြေတြေတြေတြေတြေတြ ျပင္လုပ္ရင္မွာလိုင္ကြက္ရပ္လင့္လြတ္လိုင္ရတိုလိုင္ရ ျပင္လုပ္ရင္ကုလိုင္ရတိုလိုင္ရတိုလိုင္ရတိုလိုင္ရ ျပင္နိုင္ရရွိတဲ့ ဒီ ရင္စြင့္လိုင္ရ စိုးတိုင္ရ တိုင္ရ
				55.		2.40	Obstruction: Presumed r	ockhead.	
lan .			· ·	· ·		•	Remarks No groundwater encountere	d during excavation.	
							Triaľ pit stable. Trial pit backfilled upon com		
	· ·		· ·	· ·		•			
						. s	cale (approx)	Logged By Fig	ure No.

		Ind Inv	estigatio/ www.gii.	ns Ireland ^{ie}	Ltd	Site Cherry Orchard Sites 4 & 5	Trial Pit Number TP07												
lachine : Ca lethod : Tr											Dimensions 2.80 x 1.00 x 2.40							Client Van Dijk Architects	Job Numbe 11956-06-
		Location 707	17/		ocation 707687.3 E 733068.3 N				7/08/2022	Engineer Procert	Sheet 1/1								
Depth (m)	Sample / Tests	Water Depth (m)	Field Reco	ords (mOD)	Depth (m) (Thickness)	Description	Legend												
.50	В			55.8	- - - - - - - - - -	Brown slightly sandy slightly gravelly TOPSOIL with rootlets MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles metal and red brick fragments.													
50	В			55.0	- - - - - - - - - - - - - - - - - - -	Stiff greyish brown slightly sandy gravelly CLAY with occasional angular to subangular cobbles.													
40	В			53.6	(0.50)	Stiff dark grey slightly sandy gravelly CLAY with occasional angular to subangular cobbles.	0 0 0 0 0 0 0 0 0 0 0 0 0 0												
						Complete at 2.40m													
Plan .					• •	Remarks													
						Trial pit stable. Trial pit backfilled upon completion.													
	· ·		· ·	· ·	· ·														

SI	Grou	ind In	vestigat www.g		eland	Ltd	Site Cherry Orchard Sites 4 & 5		Trial Pit Number TP08
Machine : Ca Method : Tri		Dimensions 2.70 x 1.10 x 2.80			Ground Level (mOD) Dates 17/08/2022		Client Van Dijk Architects		Job Number 11956-06-2
		Location 707727.3 E 732964.9 N		Engineer Procert				Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field R	ecords	Level (mOD)	Depth (m) (Thickness)	D	escription	Legend
2.50	в					(1.00) (1.00) (1.00) (1.00) (1.00) (1.00) (1.00) (1.00)	MADE GROUND: Light b gravelly Clay with occasio cobbles metal and red brid Firm greyish brown slightly occasional angular to sub Stiff dark grey slightly san angular to subangular cob	y sandy gravelly CLAY with angular cobbles.	
Plan . 	· · · · · · · · · · · · · · · · · · ·	· · ·	· · ·	· · · ·	· ·		Complete at 2.80m Complete at 2.80m Remarks No groundwater encountere Trial pit stable. Trial pit backfilled upon com	d during excavation.	

	nd Investigatior www.gii.ie		Site Cherry Orchard Sites 4 & 5	Trial Pit Numbe TP09
lachine : Case 8.5T lethod :Trial Pit	Dimensions 2.90 x 1.10 x 1.30	Ground Level (mOE 56.93	Client Van Dijk Architects	Job Numbe 11956-06-
	Location 707805.7 E 732906.6 I	Dates 16/08/2022	Engineer Procert	Sheet 1/1
Depth (m) Sample / Tests	Water Depth Field Record (m)	ds Level Depth (mOD) (Thickness	Description	Legend
50 В Рап			MADE GROUND: Greyish brown slightly sandy gravelly Clay with occasional subangular to subrounded cobbles timber and class fragments.	
· · ·	· · · ·	· · · ·		

S	Gro	und Inv	vestigations www.gii.ie	Ireland	Ltd	Site Cherry Orchard Sites 4 & 5	Trial Pit Number TP10
Machine : Ca Method : Tr		Dimensio 2.90 x 1.	ons 10 x 3.10		I Level (mOD) 57.01	Client Van Dijk Architects	Job Number 11956-06-2
		Location 7078	334.8 E 732827.4 N	Dates 10	6/08/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
0.50 1.50 2.50 Plan	в			56.21 56.21 54.21 53.91	(0.60) 0.80 (2.00) (2.00) (2.00) (0.30) (0.30) (0.30) (0.30)	Brown slightly sandy slightly gravelly TOPSOIL with MADE GROUND: Brown slightly sandy gravelly C occasional subangular to subrounded cobbles time stiff greyish brown slightly sandy gravelly CLAY wi occasional subangular to subrounded cobbles. Stiff grey sandy gravelly CLAY with occasional ang subangular cobbles (Possible weathered rock). Complete at 3.10m Remarks	lay with ber and th $\frac{\alpha + \frac{1}{2} - \frac{\alpha}{2}}{\alpha + \frac{1}{2} - \frac{\alpha}{2}}$ th $\frac{\alpha + \frac{1}{2} - \frac{\alpha}{2} - \frac{\alpha}{$
		•		·	•••	No groundwater encountered during excavation. Trial pit stable. Trial pit backfilled upon completion.	
·	· ·	•		•		חומי את שמללווויפט מאסור לסווואופונטוו.	
				•			
					\vdash		

	Grou	ind In	vestigatio www.gii	ons Irelai .ie	eland Ltd		Site Cherry Orchard Sites 4 & 5	
Machine : Ca Method : Tri		Dimensi 3.20 x 1	Gr	Ground Level (mOD) 57.03		Client Van Dijk Architects		
		Location 707950.1 E 732877.9 N			Dates 17/08/2022		Engineer Procert	Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Rec	cords (n	evel nOD)	Depth (m) Thickness)	Description	Legend
.50	8				55.83	(0.20) (0.20) (1.00) (1.00) (0.70) (0.70) (1.90) (1.30) (1.30) (1.30)	Brown slightly sandy slightly gravelly TOPSOIL with rootle MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles plastic metal and ceramic fragments. MADE GROUND: Greyish brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles ceramic and plastic fragments. Stiff greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles. Complete at 3.20m	
Plan .	· ·			· ·		•	Remarks	
•					·	·	Trial pit stable. Trial pit backfilled upon completion.	
	· ·							
	· ·		· ·	· ·				
							cale (approx) Logged By Fig	gure No.

lachine : C lethod : T		Dimensio 3.10 x 1.	www.gii.ie		Level (mOD) 56.80	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects		
		Location	989.1 E 732961.3 N	Dates 17	/08/2022	Engineer Procert	11956-06- Sheet 1/1	
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	
.50 Plan	В			56.60		Brown slightly sandy slightly gravelly TOPSOIL with rootlets. MADE GROUND: Light brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles plastic wire and concrete fragments. Bord Gais yellow warning tape. Complete at 1.10m Remarks		
					• •	No groundwater encountered during excavation. Trial pit stable. Trial pit backfilled upon completion.		
				· ·				
•	· ·							

	Grou	nd Inv	estigatio/ www.gii.i	ns Ireland ^e	Ltd	Site Cherry Orchard Sites 4 & 5		Trial Pit Number TP13
Machine : Case Method : Trial		Dimensio 3.40 x 1.	ons .10 x 2.90	Ground	Level (mOD) 57.65	Client Van Dijk Architects		Job Number 11956-06-2
		Location 707999.4 E 732916.1 N			7/08/2022	Engineer Procert		Sheet 1/1
Depth (m) S	Sample / Tests	Water Depth (m)	Field Reco	ords (mOD)	Depth (m) (Thickness)	D	escription	Legend
2.50 E	B			57.45	(1.00)	MADE GROUND: Greyish gravelly Clay with occasion cobbles plastic metal and	ey slightly sandy slightly gravelly angular to subrounded cobbles	
Plan		·			•••	Remarks No groundwater encountere Trial pit stable.		
· ·						Trial pit backfilled upon com	pletion.	
					•••			
	· ·	•	· ·	· ·	· · ·			
					s	cale (approx) 1:25		u re No.

		1	www.gii.i			Cherry Orchard Sites 4 & 5	
lachine : Ca lethod : Tr		Dimensi 3.20 x 1	ons .10 x 2.30	Ground	Level (mOD) 55.79	Client Van Dijk Architects	
		Location 708	ו 3017.9 E 732873.6		7/08/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Reco	ords Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50	В			55.69	(0.10) 0.10 (1.10) (1.10) (1.10)	Brown slightly sandy slightly gravelly TOPSOIL with rootlets MADE GROUND: Greyish brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles ceramic and plastic fragments.	
50	В			54.59	 	Stiff greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.	
Plan .			· ·		•••	Remarks No groundwater encountered during excavation.	
						Trial pit stable. Trial pit backfilled upon completion.	
·							



TP01



TP01



TP01



















TP04





























































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TP12
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TP14





TP14

APPENDIX 3 – Soakaway Records



		nd Inv	estigations/ www.gii.ie	s Ireland	Ltd	Site Cherry Orchard Sites 4 & 5	Trial Pit Number ST01
Machine : Case Method : Trial		Dimensio 1.70 x 0.	ons 60 x 1.70		Level (mOD) 56.37	Client Van Dijk Architects	Job Number 11956-06-2
		Location 707	604 E 733139 N	Dates 16	6/08/2022	Engineer Procert	Sheet 1/1
Depth (m) S	Sample / Tests	Water Depth (m)	Field Records	s Level (mOD)	Depth (m) (Thickness)	Description	Legend
Plan				56.12	(0.25) 0.25 1.70 1.70	Brown slightly sandy slightly gravelly TOPSOIL with rootlets. Stiff greyish brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. Complete at 1.70m Remarks	
		·				No groundwater encountered during excavation. Trial nit stable	
·		•			•••	Trial pit backfilled upon completion.	
·	· ·				•••		
	· ·			•			

Depth (m) Sample / Tests	Location 707548 Water Depth (m)	8.9 E 733033.4 N Field Records		08/2022 (Thickness) (Thickness) (Thickness) (0.20) 0.	Engineer Procert Description Brown slightly sandy slightly gravelly TOPSOIL with rootlets. Firm light brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. Stiff greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.	11956-06-2 Sheet 1/1 Legend
Depth (m) Sample / Tests	Water Depth (m)	Field Records	56.18	(0.20) (0.20) (0.20) (0.20) (0.20) (1.20) (1.20)	Brown slightly sandy slightly gravelly TOPSOIL with rootlets. Firm light brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. Stiff greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.	
			56.18	(0.20) (0.20) (0.20) (0.20) (0.20) (1.20) (1.20)	Firm light brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles. Stiff greyish brown slightly sandy gravelly CLAY with occasional subangular to subrounded cobbles.	
					Complete at 1.60m	
Nan 	· · ·	· · · ·	· · ·	•	Remarks No groundwater encountered during excavation. Trial pit stable. Soakaway test ST02 undertaken in pit. Trial pit backfilled upon completion.	

S		Gro	ound In	vestię ww	gatior w.gii.ie	ns Irel e	and	Ltd	Site Cherry Orchard Sites 4 &	5	Trial F Numb ST0
achine ethod		ase 8.5T al Pit	Dimens 1.90 x (ions 0.60 x 1.60)			Level (mOD) 57.45	Client Van Dijk Architects		Job Numb 11956-0
			Locatio 70		732909.9 N		Dates 16	/08/2022	Engineer Procert		Sheet 1/1
Depth (m)		Sample / Tes	ts Water Depth (m)	Fi	ield Recor	ds	Level (mOD)	Depth (m) (Thickness)	D	escription	Legend
								(0.25)	Brown slightly sandy slight	tly gravelly TOPSOIL with rootl	ets.
							57.20	0.25	MADE GROUND: Light bro gravelly Clay with occasion cobbles.	own slightly sandy slightly nal subangular to subrounded	
								(0.65)			
							56.55	- - - 0.90	Stiff greyish brown slightly occasional subangular to s	sandy gravelly CLAY with	.0. <u>.0</u> .0
								- - - - (0.70)	occasional subangular to s	subrounded coddles.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
								(0.70) 			0 <u>0</u> 0000000000000000000000000000000000
							55.85		Complete at 1.60m		0.0.0.0.0. 0.0.00
								 - 			
								- - -			
								-			
								- -			
								-			
								 - 			
								- - -			
an								F	Remarks		
	•		•	•	•		•		No groundwater encountere Trial pit stable	d during excavation.	
	•			·	•		•		Trial pit stable. Soakaway test ST03 undert Trial pit backfilled upon com	aken in pit. pletion.	
	•										
	•										
	•			·	•		•				
								s	Scale (approx)	Logged By F	igure No.
									1:25	C. Byrne 1 [,]	1956-06-22.S

		vestigations li www.gii.ie			Cherry Orchard Sites 4 & 5		Trial F Numb ST0
lachine : Case 8.5T lethod :Trial Pit	Dimensio 2.30 x 1.6			Level (mOD) 57.29	Client Van Dijk Architects		Job Numb 11956-0
	Location 7077	706.7 E 732769.4 N	Dates 16	6/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Des	cription	Legend
Plan			57.19 56.94 55.59	(0.25) 0.35	Brown slightly sandy slightly MADE GROUND: Greyish br gravelly Clay with occasional cobbles and red brick fragme Stiff brown slightly sandy slig occasional subangular to sub Complete at 1.70m	ents.	
					No groundwater encountered of Trial pit stable. Soakaway test ST04 undertak Trial pit backfilled upon comple	during excavation. en in pit. tion	
					mai pit backnileu upori comple		
			•	•••			
· · · ·		· · ·	· ·				

	:т	-		v.gii.ie	-		a		ST0
achine : Case 8. ethod : Trial Pit	51	Dimensio 2.20 x 0.	ons .60 x 1.70			Level (mOD) 56.10	Client Van Dijk Architects		Job Numbe 11956-06
		Location 707		33052.3 N	Dates 16	6/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sar	nple / Tests	Water Depth (m)	Fie	ld Records	Level (mOD)	Depth (m) (Thickness)	D	escription	Legend
					55.90	(0.20) 0.20		ly gravelly TOPSOIL with rootlets	3.
						(0.60)	occasional subangular to s	subrounded cobbles.	
					55.30	- 0.80 	Stiff greyish brown slightly occasional subangular to s	sandy gravelly CLAY with subrounded cobbles.	
						(0.90)			
					54.40	- 1.70			0 <u>00</u> 0
							Complete at 1.70m		
an .		•	·	· ·	•		Remarks No groundwater encountere	d during excavation.	
							Trial pit stable. Soakaway test ST05 underta Trial pit backfilled upon com	aken in pit. pletion.	
		·			· ·				
	· ·	•		· ·	• •				

	ind In	vestigatior www.gii.ie	ns Ireland e	Ltd	Site Cherry Orchard Sites 4 & 5		Trial Pit Number ST06
Machine : Case 8.5T Method : Trial Pit	Dimens 2.40 x	sions 0.60 x 1.80		Level (mOD) 55.71	Client Van Dijk Architects		Job Number 11956-06-
	Locatio	on)7739.1 E 733008.7 N	N Dates	6/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Recor	rds Level (mOD)	Depth (m) (Thickness)	Desc	cription	Legend
		Water strike(1) at 1 rose to 1.60m in 5 r	55.51 54.91 .80m, 53.91		MADE GROUND: Brown sligh Clay with occasional subangu Grey clayey gravelly fine to co Complete at 1.80m		
Plan					Remarks Groundwater encountered at 1. Trial pit stable.		
	·			•••	Trial pit backfilled upon complet	tion.	
· · ·	•	· ·	· · ·				

achine : Case 8.5T ethod : Trial Pit	Dimensio 2.30 x 0.0		Ground	Level (mOD) 56.73	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects		Job Numbe 11956-06
	Location	747.3 E 732866.9 N	Dates 16	/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Record	s Level (mOD)	Depth (m) (Thickness)	De	scription	Legend
Nan			56.58	(0.15) 0.15 0.15 0.25) 0.40 1.50 1.50 1.50	Brown slightly sandy slightly MADE GROUND: Greyish I gravelly Clay with occasion cobbles and ceramic fragm	y gravelly TOPSOIL with rootlets prown slightly sandy slightly al subangular to subrounded ents. ightly gravelly CLAY with ubrounded cobbles and boulders	
					No groundwater encountered Trial pit stable. Soakaway test ST07 underta Trial pit backfilled upon comp	l during excavation. ken in pit.	
					ттагри раскишен црон сотр	ισα0Π.	
	•	· ·					
	•			•			

lachine : Ca		Dimensio 2.10 x 0.	WWW.gi ons 60 x 1.80			.evel (mOD) 5.85	Client Van Dijk Architects		ST08 Job Numbe
						5.05	-		11956-06-
		Location 707	911.4 E 732810		Dates 16/0	08/2022	Engineer Procert		Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Re	cords	Level (mOD)	Depth (m) (Thickness)	۵	Description	Legend
Plan					55.45	(0.40) - 0.40 - 1.80 - 1.80	Subangular cobbles (Crus Firm to stiff greyish brown CLAY with occasional sub Complete at 1.80m Complete at 1.80m	a slightly sandy slightly gravelly angular to subrounded cobbles.	
							Trial pit stable. Soakaway test ST08 undert Trial pit backfilled upon com	taken in pit. apletion.	
	· ·								
						•			

lachine : Case 8.5T lethod : Trial Pit	Dimensio 2.10 x 0.6		Ground	Level (mOD) 55.92	Client Van Dijk Architects		Job Numb 11956-00
	Location	992.8 E 732844.3 N	Dates 16	6/08/2022	Engineer Procert		Sheet 1/1
Depth (m) Sample / Tests	Water Depth (m)	Field Record	s Level (mOD)	Depth (m) (Thickness)	De	escription	Legend
Plan		· · ·	55.72 55.22 54.12	(0.20) 0.20 (0.50) (0.50) (1.10) 1.80	Brown slightly sandy slight MADE GROUND: Greyish gravelly Clay with occasior cobbles plastic metal and Firm to stiff greyish brown	ly gravelly TOPSOIL with rootle brown slightly sandy slightly hal subangular to subrounded red brick fragments. slightly sandy slightly gravelly angular to subrounded cobbles. d during excavation. aken in pit. pletion.	

	nd Investigations Ir www.gii.ie	reland Ltd	Site Cherry Orchard Sites 4 & 5	Trial Pit Number ST10
Machine : Case 8.5T Method :Trial Pit	Dimensions 1.90 x 0.60 x 1.60	Ground Level (mOD) 56.86	Client Van Dijk Architects	Job Numbe 11956-06-
	Location 707954.6 E 732928.1 N	Dates 16/08/2022	Engineer Procert	
Depth (m) Sample / Tests	Water Depth (m) Field Records	Level Depth (mOD) (m) (Thickness)	Description	Legend
			Brown slightly sandy slightly gravelly TOPSOIL with rootlets. MADE GROUND: Greyish brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles cloth plastic metal and red brick fragments. Obstruction: Boulders. Complete at 1.60m	
Plan			Zomorko	
Plan	· · · ·		Remarks No groundwater encountered during excavation. Trial pit stable.	
'lan <u>.</u>	· · · ·		Remarks No groundwater encountered during excavation. Trial pit stable. Soakaway test ST10 undertaken in pit. Trial pit backfilled upon completion.	
lan				
'lan 				

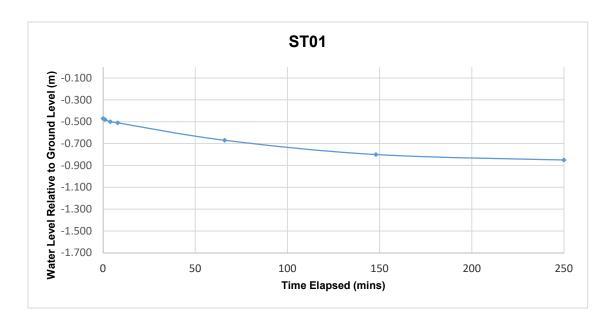
Alachine : Ca Alethod : Tr	ase 8.5T ial Pit	Dimension 2.10 x 0.7			Level (mOD) 55.71	Client Van Dijk Architects	Job Numbe 11956-06-
		Location 7080	55.6 E 732919.7 N	Dates 16/	/08/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
				55.61	(0.10) 	Brown slightly sandy slightly gravelly TOPSOIL with rootlet MADE GROUND: Greyish brown slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles plastic and metal fragments.	<u>s.</u>
				54.61	- 1.10 - 1.10 	Firm to stiff greyish brown slightly sandy slightly gravelly CLAY with occasional subangular to subrounded cobbles.	아, 아이
				53.81	1.90	Complete at 1.90m	10 4 4 4
lan						Remarks	
lan .	· ·		· · · ·		•	Remarks No groundwater encountered during excavation. Trial pit stable. Soakaway test ST11 undertaken in pit. Trial pit backfilled upon completion.	
lan .	· ·		· · · ·		•	No groundwater encountered during excavation	
lan _	· · ·	· · ·	· · · · · · · ·	· · ·	•	No groundwater encountered during excavation	



Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 1.70m x 0.60m x 1.70m (L x W x D)

Date	Time		r level bgl)
16/08/2022	0	-0.470	
16/08/2022	1	-0.480	
16/08/2022	4	-0.500	
16/08/2022	8	-0.510	
16/08/2022	66	-0.670	
16/08/2022	148	-0.800	
16/08/2022	250	-0.850	
		*Soakaway	y failed - Pit backfilled

Start depth Depth of Pit Diff 75% full 25% full 0.47 1.700 1.230 0.7775 1.3925



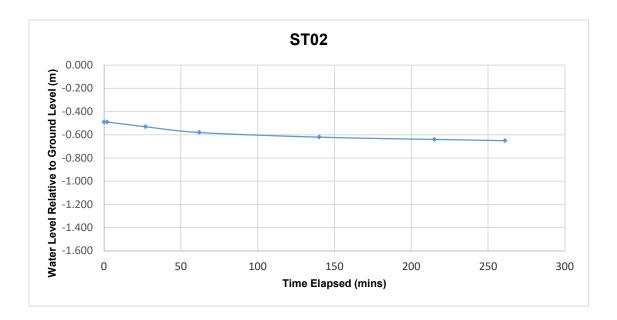
Catherinestown House, Hazelhatch Road, Newcastle, Co. Dublin. D22 YD52



Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.00m x 0.60m x 1.60m (L x W x D)

Date	Time	Water (m b	
16/08/2022	0	-0.490	
16/08/2022	2	-0.490	
16/08/2022	27	-0.530	
16/08/2022	62	-0.580	
16/08/2022	140	-0.620	
16/08/2022	215	-0.640	
16/08/2022	261	-0.650	
		*Soakaway	failed - Pit backfilled

Start depth	Depth of Pit	Diff	75% full	25%full
0.49	1.600	1.110	0.7675	1.3225



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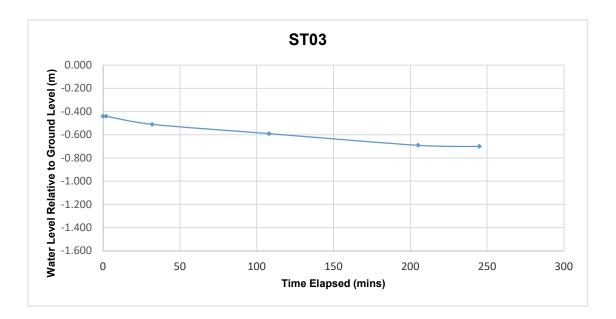
ST03

Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 1.90m x 0.60m x 1.60m (L x W x D)

Date	Time	Water level (m bgl)
16/08/2022	0	-0.440
16/08/2022	2	-0.440
16/08/2022	32	-0.510
16/08/2022	108	-0.590
16/08/2022	205	-0.690
16/08/2022	245	-0.700

*Soakaway failed - Pit backfilled

Start depth	Depth of Pit	Diff	75% full	25%full
0.44	1.600	1.160	0.73	1.31





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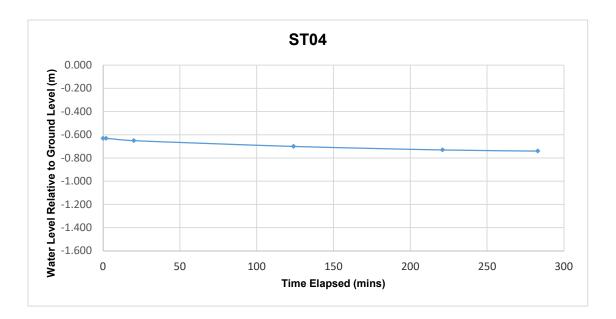
ST04

Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.30m x 0.60m x 1.70m (L x W x D)

Date	Time	Water level (m bgl)
16/08/2022	0	-0.630
16/08/2022	2	-0.630
16/08/2022	20	-0.650
16/08/2022	124	-0.700
16/08/2022	221	-0.730
16/08/2022	283	-0.740

*Soakaway failed - Pit backfilled

Start depth	Depth of Pit	Diff	75% full	25%full
0.63	1.700	1.070	0.8975	1.4325

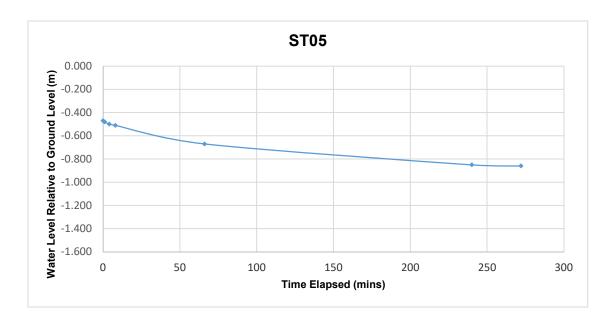




Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.20m x 0.60m x 1.70m (L x W x D)

Date	Time		r level bgl)
16/08/2022	0	-0.470	
16/08/2022	1	-0.480	
16/08/2022	4	-0.500	
16/08/2022	8	-0.510	
16/08/2022	66	-0.670	
16/08/2022	240	-0.850	
16/08/2022	272	-0.860	
		*Soakaway	y failed - Pit backfilled

Start depth Depth of Pit Diff 75% full 25% full 0.47 1.700 1.230 0.7775 1.3925



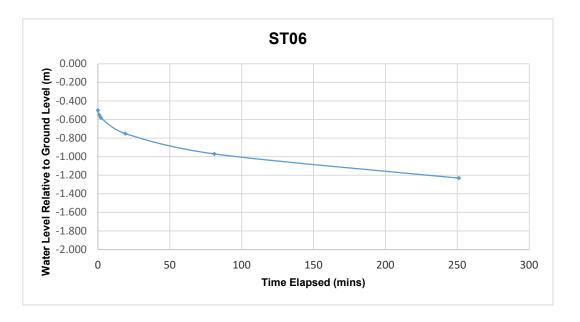
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Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.40m x 0.60m 1.80m (L x W x D)

Date	Time	Water level (m bgl)
16/08/2022	0	-0.500
16/08/2022	1	-0.550
16/08/2022	2	-0.580
16/08/2022	19	-0.750
16/08/2022	81	-0.970
16/08/2022	251	-1.230

Start depth 0.50	Depth of Pit 1.800		Diff 1.300	75% full 0.825	25%full 1.475
Length of pit (m) 2.400) Width of pit (m) 0.600			75-25Ht (m) 0.650	Vp75-25 (m3) 0.94
Tp75-25 (from graph) (s)		24000		50% Eff Depth 0.650	ap50 (m2) 5.34
f =	7.303E-06	m/s		0.000	0.01



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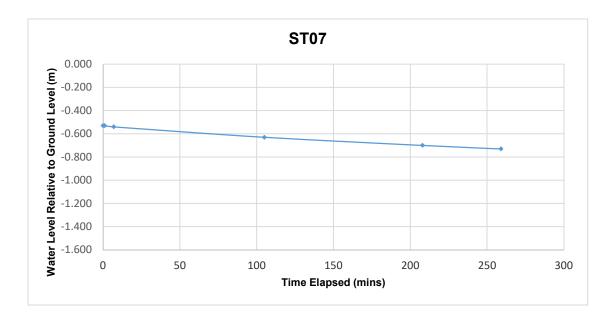


Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.30m x 0.60m x 1.50m (L x W x D)

Date	Time	Water level (m bgl)
16/08/2022	0	-0.530
16/08/2022	1	-0.530
16/08/2022	7	-0.540
16/08/2022	105	-0.630
16/08/2022	208	-0.700
16/08/2022	259	-0.730

*Soakaway failed - Pit backfilled

Start depth	Depth of Pit	Diff	75% full	25%full
0.53	1.500	0.970	0.7725	1.2575



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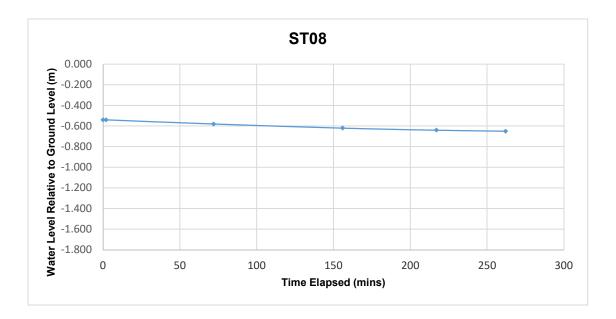
ST08

Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.10m x 0.60m x 1.80m (L x W x D)

Date	Time	Water level (m bgl)
18/08/2022	0	-0.540
18/08/2022	2	-0.540
18/08/2022	72	-0.580
18/08/2022	156	-0.620
18/08/2022	217	-0.640
18/08/2022	262	-0.650

*Soakaway failed - Pit backfilled

Start depth	Depth of Pit	Diff	75% full	25%full
0.54	1.800	1.260	0.855	1.485





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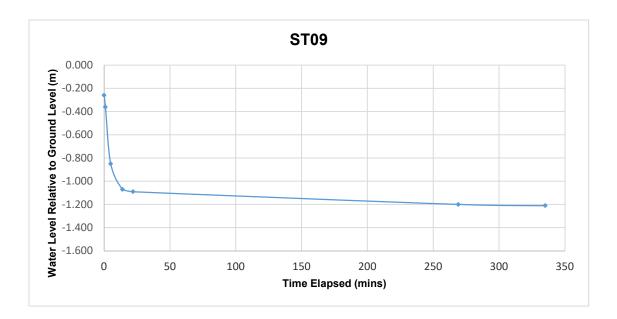
Tel: 01 601 5175 / 5176 Email: info@gii.ie Web: www.gii.ie

ST09

Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.10m x 0.60m x 1.80m (L x W x D)

Date	Time	Water level (m bgl)	
18/08/2022	0	-0.260	
18/08/2022	1	-0.360	
18/08/2022	5	-0.850	
18/08/2022	14	-1.070	
18/08/2022	22	-1.090	
18/08/2022	269	-1.200	
18/08/2022	335	-1.210	
		*Soakaway failed - Pit bacl	filled

Start depth	Depth of Pit	Diff	75% full	25%full
0.26	1.800	1.540	0.645	1.415



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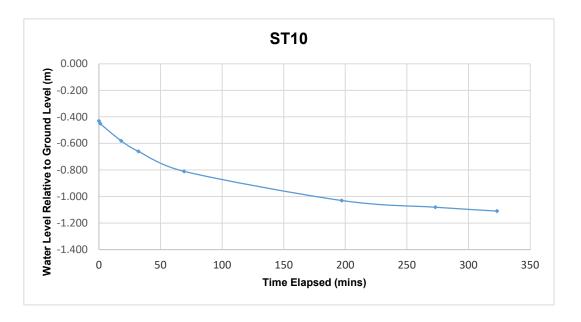


ST10

Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 1.80m x 0.60m 1.40m (L x W x D)

Date	Time	Water level (m bgl)
18/08/2022	0	-0.430
18/08/2022	1	-0.450
18/08/2022	18	-0.580
18/08/2022	32	-0.660
18/08/2022	69	-0.810
18/08/2022	197	-1.030
18/08/2022	273	-1.080
18/08/2022	323	-1.110

Start depth 0.43	Depth of Pit 1.400		Diff 0.970	75% full 0.6725	25%full 1.1575
Length of pit (m) 2.400) Width of pit (m) 0.600			75-25Ht (m) 0.485	Vp75-25 (m3) 0.70
Tp75-25 (from g	ıraph) (s)	23100		50% Eff Depth 0.485	ap50 (m2) 4.35
f =	6.950E-06	m/s			



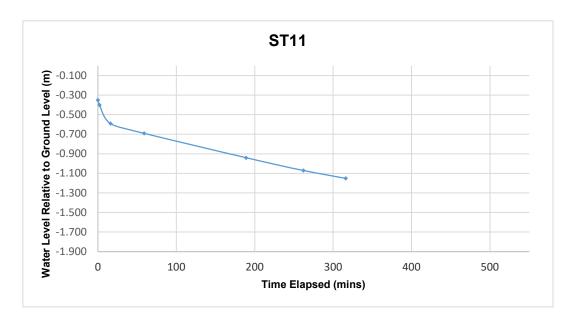
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Soakaway Test to BRE Digest 365 Trial Pit Dimensions: 2.10m x 0.70m 1.90m (L x W x D)

Date	Time	Water level (m bgl)	
18/08/2022	0	-0.350	
18/08/2022	2	-0.400	
18/08/2022	16	-0.590	
18/08/2022	59	-0.690	
18/08/2022	189	-0.940	
18/08/2022	262	-1.070	
18/08/2022	316	-1.150	

Start depth 0.35	Depth of Pit 1.900		Diff 1.550	75% full 0.7375	25%full 1.5125
Length of pit (m) 2.100) Width of pit (m) 0.700			75-25Ht (m) 0.775	Vp75-25 (m3) 1.14
Tp75-25 (from graph) (s)		27000		50% Eff Depth 0.775	ap50 (m2) 5.81
f =	7.262E-06	m/s			



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ST04















































ST10













APPENDIX 4 – Dynamic Probe Records



S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cher	ry Orch	ard Site	es 4 & 5					Probe Numb	
/lethod DPH: Dynai Fall Height:	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 56.40		Dijk Arcl	hitects						Job Numb 11956-0	
	olgni. ookg		Dates	0/0000	Engine								Sheet 1/1	
—		707628.6 E 733145.3 N		8/2022	Proce	ert			 					
Depth (m)	Blows for Depth Incremen	t Field Records	Level (mOD)	Depth (m)	0	4	8			rement 24 :		32 3	36 4	40
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.60-0.70	16 27													
).80-0.90).90-1.00	24 27			 - 										T
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.30-1.40	26 31			 - 									<u> </u>	
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S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cheri	y Orcha	ard Site	s 4 & 5			 		Probe Numb	
Method DPH: Dynar Fall Height: Hammer We	nic Probe Heavy 500mm eight:50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 56.67		Dijk Arch	itects						Job Numb 11956-0	
	-iginiceng	Location 707588.6 E 733092.8 N	Dates 01/0	8/2022	Engine Proce								Sheet 1/1	
Depth (m)	Blows for Depth Increment	t Field Records	Level (mOD)	Depth (m)	0	3	6		for De	-		24 2	27 3	30
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0.40-0.50 0.50-0.60	7 13		56.17	0.50										
0.60-0.70	27			 -										
0.70-0.80 0.80-0.90	21 22			 -										┢
0.90-1.00 1.00-1.10	18 16		55.67	1.00										╞
1.10-1.20	15			-										
1.20-1.30 1.30-1.40	17 11			- -										
1.40-1.50 1.50-1.60	10 7		55.17	 										
1.60-1.70	6			- -										╞
1.70-1.80 1.80-1.90	7 7			-								<u> </u>		
1.90-2.00 2.00-2.10	9		54.67	2.00										
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2.40-2.50 2.50-2.60	15 14		54.17	- - - 2.50										-
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			51.67	5.00							<u> </u>		<u> </u>	
Remarks Refusal at	t 2.84m BGL.										(Scale (approx)	Logge By	∍d
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S		und Investigations www.gii.ie				y Orchard	d Sites 4	& 5				Probe Numb	
	Tecopesa TEC10 Dynamic Probe Hea	Cone Dimensions vy Diameter 43.7mm, Angle 90°		.evel (mOD) 56.41		ijk Archite	ects					Job Numb 11956-0	
		Location 707609.8 E 732987.9 N	Dates 17/0	8/2022	Enginee Procei							Sheet 1/*	
Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)	0 4	4 8		ows for 16	Depth Ir 20		32 3	36 4	40
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S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cher	ry Orcha	rd Site	s 4 & 5					Probe Numb	
Method DPH: Dynar Fall Height: Hammer We	nic Probe Heavy 500mm ∋ight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 56.67		Dijk Arch	itects						Job Numb 11956-0	
	Signt. Ookg	Location 707671.5 E 732912.9 N	Dates 17/0	8/2022	Engine Proce					 			Sheet 1/1	
Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)	0	3	5	Blows				24	27 3	30
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0.40-0.50 0.50-0.60	8 13		56.17	0.50										
0.60-0.70	17													+
0.70-0.80 0.80-0.90	17 15			- -									<u> </u>	╞
0.90-1.00 1.00-1.10	14 14		55.67	 1.00										╞
1.10-1.20	16			-										
1.20-1.30 1.30-1.40	14 8			- 										
1.40-1.50 1.50-1.60	13 7		55.17	 										-
1.60-1.70	5			- -									<u> </u>	\vdash
1.70-1.80 1.80-1.90	9 8													
1.90-2.00 2.00-2.10	7		54.67	 2.00										
2.10-2.20	19		04.07	-										
2.20-2.30	25			 - 										-
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S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cherr	y Orcha	ard Site	s 4 & 5						Probe Numb	
Method DPH: Dynai Fall Height:	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		evel (mOD) 56.58)ijk Arch	itects							Job Numb 11956-0	
	eight. ookg	Location 707705.4 E 732848.6 N	Dates	8/2022	Engine Proce									Shee 1/*	
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lethod)PH: Dynai all Height: Jammer Wi	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		evel (mOD) 57.52)ijk Archi	tects							Job Numb 11956-0	
			Dates	0/0000	Engine									Sheet 1/1	
		707758.7 E 732783.7 N		8/2022	Proce	ert									
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.30-0.40 .40-0.50				— —											
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.60-0.70	21 8			- 					H						ĺ
).80-0.90).90-1.00	7														
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S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cher	ry Orch	ard Site	es 4 & 5					Probe Numb	
Method DPH: Dynan Fall Height: Hammer We	nic Probe Heavy 500mm sight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 56.05		Dijk Arcł	nitects						Job Numb 11956-0	
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		707687.3 E 733068.3 N		8/2022	Proc	ert								
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.30-0.40	11			-									<u> </u>	+
.50-0.60	13		55.55	0.50										
.60-0.70 .70-0.80	10 8													
.80-0.90 .90-1.00	9 13													T
.00-1.10	14		55.05	1.00										+
.10-1.20 .20-1.30	8			- 									<u> </u>	+
.30-1.40	8													
.40-1.50 .50-1.60	8 8		54.55	1.50										
.60-1.70 .70-1.80	7 9			-										T
.80-1.90	8													+
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			51.05	- 5.00										
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												1:25 Figure	NO.	G

S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cheri	ry Orcha	ard Sites	4 & 5					Probe Numb	
Nethod DPH: Dynar Fall Height:	nic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°	Ground L	.evel (mOD)		Dijk Arcł	nitects						Job Numb 11956-0	
	olgni. ookg	Location 707727.3 E 732964.9 N	Dates	8/2022	Engine Proce								Sheet 1/1	
					PIOCE					 				
Depth (m)	Blows for Depth Increment	t Field Records	Level (mOD)	Depth (m)	o	3	6 9		for Dep 2 1			24 2	27 3	30
0.00-0.10	3			0.00						-				F
).10-0.20).20-0.30	14 9			- -						 				╞
0.30-0.40	6			-										
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.20-2.30	15									 				╞
.30-2.40	18			-										
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				4.50										
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				5.00							<u> </u>			
Remarks Refusal at	t 2.70m BGL.											Scale (approx)	Logge By)d
											-	1:25 Figure	NG	;
												11956-0		

S	Gro	und Investigations www.gii.ie				ry Orch	ard Site	s 4 & 5						Probe Numb	
lethod)PH: Dynai all Height: lammer W	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 56.93		Dijk Arc	hitects							Job Numb 11956-0	
		Location 707805.7 E 732906.6 N	Dates	8/2022	Engine Proce									Sheet 1/1	
Depth (m)	Blows for Depth Incremen		Level (mOD)	Depth (m)					for De						
.00-0.10	1		56.93	0.00	0	5	10	15	20 2	25	30 :	35 4	.0 4	15 E	50
.10-0.20	4			-											
.20-0.30 .30-0.40	6 11			- 			-								
.40-0.50 .50-0.60	23 18		56.43	 											t
.60-0.70	16														+
.70-0.80 .80-0.90	16 28			-				Π						<u> </u>	
.90-1.00	42 25														
.00-1.02	25		55.93	1.00 											
				- -											ł
				-											+
			55.43	— 1.50 —											
				-											T
				-											İ
			54.93	2.00											
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				- ·											
			53.93	3.00											t
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				-											
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			52.93	4.00			_								+
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				- 											ſ
			52.43	 4.50											+
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Remarks Refusal a	t 1.02mBGL.		51.93	5.00			-	<u> </u>				S (a	Scale approx)	Logge By	±
													1:25	NG	3
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S	Gro	und Investigations www.gii.ie				y Orcha	ard Site	s 4 & 5						Probe Number
Vethod DPH: Dynar Fall Height: Hammer We	nic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 57.01		ijk Arch	itects							Job Number 11956-06-2
	olgini oolig	Location 707834.8 E 732827.4 N	Dates	8/2022	Engine Proce									Sheet 1/1
Depth (m)	Blows for Depth Increment		Level (mOD)	Depth (m)	11000			Blows	for De	pth Inc	remen			
		Field Records	(mOD) 57.01	(ṁ) — 0.00	0	3	6						24 2	27 30
0.00-0.10 0.10-0.20	3 17		57.01											
0.20-0.30 0.30-0.40	26 24													
0.40-0.50	27 25		50.54	- 0.50										
0.50-0.60 0.60-0.70	17		56.51	— 0.50 										
).70-0.80).80-0.90	10 7													
0.90-1.00	11		50.04	-										
1.00-1.10 1.10-1.20	14 13		56.01	1.00 										
1.20-1.30 1.30-1.40	13 15 19 11 13			-										
1.40-1.50	11			-										
1.50-1.60 1.60-1.70	9		55.51	— 1.50 										
1.70-1.80 1.80-1.90	9 13			-										
1.90-2.00	25 25		55.04	-										
2.00-2.04	25		55.01	2.00 										
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Remarks Refusal at	2.04m BGL.		52.01	5.00						<u> </u>		S (a	Scale approx)	Logged By
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S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cher	ry Orcha	ard Site	s 4 & 5					Probe Numi	
Method DPH: Dynar Fall Height: Hammer We	nic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 57.03		Dijk Arch	itects						Job Numl 11956-0	
	olgin. ookg	Location 707950.1 E 732877.9 N	Dates 17/0	8/2022	Engine Proce								Shee 1/	
Depth (m)	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m)	0	4	8	Blows	-			32 :	36	40
0.00-0.10	2		57.03	0.00		4	• 		20 .	24	20 3			40
0.10-0.20	9			-										
0.20-0.30 0.30-0.40	11 10			 -										
0.40-0.50 0.50-0.60	17 16		56.53	 0.50										
0.60-0.70	13			-										-
0.70-0.80 0.80-0.90	18 37			- 										
0.90-1.00 1.00-1.10	23 16		56.03	 1.00										
1.10-1.20	18			-										
1.20-1.30 1.30-1.40	17 12			-										T
1.40-1.50	7		55 52	 										-
1.50-1.60 1.60-1.70	6		55.53 -	- 1.50 										+
1.70-1.80 1.80-1.90	6 5													
1.90-2.00	11													
2.00-2.10 2.10-2.20	12 10		55.03	2.00										+
2.20-2.30	13			- 										-
2.30-2.40 2.40-2.50	13			-										
2.50-2.60	17		54.53	- - 2.50										
2.60-2.70 2.70-2.80	21 25			-										
2.70-2.00	23			-						-				-
			54.03	- 3.00										+
				-										
				- -										
			53.53											1
				- 										-
				-										_
			53.03	4.00										
				-										
			E0 50	-										+
			52.53	4.50										
				- 										
Remarks Refusal at	2.80mBGL.		52.03	5.00							5	Scale approx)	Logg By	ed
												1:25	N	
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be Heavy 0kg 0kg 0ws for 1ncrement 1 8 15 27 26 37 34 43 30 26 21 16 11 11 12 7 8	Cone Dimensions Diameter 43.7mm, Angle 0° Location 707989.1 E 732961.3 N Field Records	Dates	evel (mOD) 56.80 8/2022 Depth 0.00 - - - - - - - - - - - - -	Van D Engine Proce	rt		Blows 1						Job Numb 11956-00 Sheet 1/1 5 5	6-2
ows for 1 Increment 1 8 15 27 26 37 34 43 30 26 21 16 11 11 11 12 7 8	707989.1 E 732961.3 N	17/0 (mOD) 56.80 56.30	Depth (m) 	Proce	rt							40 4	1/1	
1 8 15 27 26 37 34 43 30 26 21 16 11 11 11 12 7 8		56.30	Depth (m) 									0 4	5 5	0
1 8 15 27 26 37 34 43 30 26 21 16 11 11 11 12 7 8	Field Records	56.80	0.00	0	5 1							0 4	5 5	0
8 15 27 26 37 34 43 30 26 21 16 11 11 12 7 8		56.30	- - - - - - - - - - - -						_					
15 27 26 37 34 43 30 26 21 16 11 11 12 7 8			· 											
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30 26 21 16 11 11 12 7 8		55.80	 100											
21 16 11 11 12 7 8		55.80	1_00											
11 11 12 7 8		F	1.00											
11 12 7 8			-											-
7 8			 											
		55.30	1.50											
9 13														
7 6		54.80	2.00											
15														
13 18		-	-											
25		54.30	2.50											
		50.00	-											
		53.80	3.00											
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		52.80	4.00											
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BGL.											5 (2	Scale approx)	Logge By	d
E	3GL.	SGL.	52.80	53.30 53.30 53.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 3.50 52.80 4.00 52.30 4.50 51.80 5.00	53.30 - 3.50 -<	53.30 3.50 52.80 4.00 52.80 4.00 52.30 4.00 52.30 4.50 52.30 4.50 52.30 5.00	3GL. 3.50 1 1 1 1 1	53.30 3.50 52.80 4.00 52.80 4.50 52.30 4.50 52.30 5.2.00

S	Gro	und Investigations www.gii.ie	Ireland	Ltd	Site Cheri	y Orchar	d Sites	4 & 5				Probe Numb	
lethod PH: Dynai all Height:	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		evel (mOD) 7.65)ijk Archit	tects					Job Numb 11956-0	
	eight. Jokg		Dates	2/2022	Engine							Sheet	
		707999.4 E 732916.1 N		3/2022	Proce	ert							_
Depth (m)	Blows for Depth Increment	t Field Records	Level (mOD)	Depth (m)	o	4 8		Blows f 2 1			32 3	36 4	40
.00-0.10	3		57.65	0.00									Ť
.10-0.20 .20-0.30	14 19			-									┼
.30-0.40	22			-									_
.40-0.50 .50-0.60	27 29		57.15	- 0.50									
.60-0.70 .70-0.80	22 27			-									
.80-0.90	23		-	-									+
.90-1.00 .00-1.10	28 26		56.65	— 1.00									╞
.10-1.20	18			-									
.20-1.30 .30-1.40	21 29			-									
.40-1.50	40		56.15	- 1.50									
				-									+
			-	-									-
			55.65	- 2.00									
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			55.15	- 2.50 -									
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			54.65	— 3.00									-
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			53.65	- 4.00									
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				-									+
			52.65	5.00						<u> </u>			1
temarks Refusal at	t 1.50m BGL.									C	Scale approx)	Logg By	e
											1:25	NC	3
										-	Figure	No.	

S	Gro	und Investigations www.gii.ie				Orchar	d Sites	\$ 4 & 5			 		Probe Numbe
Method DPH: Dynar Fall Height: Hammer We	nic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°		.evel (mOD) 55.79		jk Archit	tects						Job Numbe 11956-06
		Location 708017.9 E 732873.6 N	Dates 17/0	8/2022	Enginee Procer								Sheet 1/1
Depth (m)	Blows for Depth Increment	t Field Records	Level (mOD)	Depth (m)	0 3	3 6			for De 12 1			24 2	27 30
0.00-0.10	1		55.79	0.00									
).10-0.20	8												
).20-0.30).30-0.40	16 16			- -									
.40-0.50 .50-0.60	13 27		55.29	0.50									
				- 									
			54.79	1.00 									
				• 									
			54.29	- - 1.50									
			53.79	2.00									
			53.00										
			53.29	— 2.50 — —									
			52.79	3.00									
				· 									
			52.29	— 3.50 —									
			51.79	4.00 									
			51.29	- - - - - 4.50									
			51.29										
			50.79	 5.00									
Remarks Refusal at	t 0.60mBGL.	·	I		<u>. </u>				•	ł	(i	Scale approx)	Logged By
												1:25 igure l	NG No.

	Gro	und Investigations I	reland	l td	Site							Probe Numb	er
		www.gii.ie	rciaria		Cherr	y Orcha	ard Site:	s 4 & 5			I	DPH1	4A
Method DPH: Dynai Fall Height: Hammer We	mic Probe Heavy 500mm eight: 50kg	Cone Dimensions Diameter 43.7mm, Angle 0°	Ground	Level (mOD)		ijk Arch	itects					Job Numb 11956-06	
		Location	Dates		Engine							Sheet 1/1	
			-)8/2022	Proce	ert							
Depth (m) 0.00-0.10	Blows for Depth Increment	Field Records	Level (mOD)	Depth (m) 0.00	0	5 '		Blows			40 4	45 5	50
0.10-0.20	6												
0.20-0.30 0.30-0.40	13 18												
0.40-0.50 0.50-0.60	22 29			 									
0.60-0.70	45												
				- - - 1.00									
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Remarks				5.00								Loggr	
Refusal at	t 0.70mBGL.									(Scale approx)	Logge By	
											1:25	NG	i
											Figure 1	No. 6-22.DP	H12A
										ľ	00-00	~22.UP	· · · 4A

APPENDIX 5 - Borehole Records



		Grou	nd In		igations Ire ww.gii.ie	land	Ltd	Site Cherry Orchard Sites 4 & 5		N	orehol umber 3H01
Machine : Bo Flush : wa			-	Diamete mm case	er ed to 7.80m		Level (mOD) 56.44	Client Van Dijk Architects		N	ob umber 956-06-2
Core Dia: 62 Method : R		ł	Locatio 70		733145.6 N	Dates 30	/09/2022	Engineer Procert		Sł	heet 1/1
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00	38	0	0		10,13/12,18,20 SPT(C) 50/225	56.24 55.44	(0.20) 0.20 (0.80) 1.00 (1.60)	TOPSOIL Poor Recovery: Recovery consists of brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse. Poor Recovery: Recovery consists of brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse. (Stiff)			ው የሚሰው የሚሰው የሚሰው የሚሰው የሚሰው የሚሰው የሚሰው የሚሰ
2.60	87	0	0			53.84	2.60	Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.			<u>, 20 475 8</u> 04 <u>65 20 475 8</u> 04 <u>65 20 475 8</u> 04 <u>65 20 475 8</u> 04 <u>55 20 475 8</u> 04 <u>55 20 475 8</u> 04 707 0 045 10 10 10 10 10 10 10 10 10 10 10 10 10
.00 .10	100	30	12	14		52.44	4.00	Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locall recovered as dark grey Clay. Partially weatherec (4.00m-7.80m BGL) 2 fracture sets. F1: 5-15 degrees. Extremely closely to medium spaced. Planar, rough, open to incipient. F2: 40-60 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing.			2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 - 2010 2010 - 2
5.60	100	30	12	26				Strong to very strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey Clay. Partially weathered			
5.85 7.10 7.40 7.80	100	45	36	NI 11	-	48.64		(6.87m -7.43m BGL) Non Intact Complete at 7.80m			
Remarks Rotary drillin Borehole bad	g complete	from GL	to 7.80m	BGL.	1			1	Scale (approx)	Lo	ogge y
Standpipe in	stalled on c	completio	n. Slotted	from 7.8	0m BGL to 1.00m BG	GL, plain fro	m 1.00m BGL	. to GL with a raised cover.	1:50 Figure N 11956-0	lo.	NG 2.BH0

Interior TOTSSASE E T33146.5 N Procent Procent Interior 000 00 00 00 0 <	lush : wat			Casing 96		er ed to 6.10m		Level (mOD) 56.44	Client Van Dijk Architects	Job Number 11956-06-
0.00 1.00 1.00 0.0 0.1120 1.00 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>733145.6 N</th><th>Dates 30</th><th>/09/2022</th><th></th><th>Sheet 1/1</th></t<>						733145.6 N	Dates 30	/09/2022		Sheet 1/1
0.0-1.30 80 0 0 0 100	Depth (m)				FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
1:0 4 53.74 2.70 1:16 100 48 48 1:10 100 48 48 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 67 63 1:10 100 60 70 1:10 100 60 70 1:10 100 100 70 1:10 100 <td< td=""><td></td><td>80</td><td>0</td><td>0</td><td></td><td>10,13/19,31 SPT(C) 50/150</td><td></td><td>1.00 (0.30) 1.30 (1.40)</td><td>occasional cobbles and boulders. Gravel is angular to subangular fine to coarse. Stiff brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to subangular fine to coarse. Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to</td><td>00000000000000000000000000000000000000</td></td<>		80	0	0		10,13/19,31 SPT(C) 50/150		1.00 (0.30) 1.30 (1.40)	occasional cobbles and boulders. Gravel is angular to subangular fine to coarse. Stiff brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to subangular fine to coarse. Very stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to	00000000000000000000000000000000000000
160 100 80 70 1.10 80 70 50.34 6.10 1.10 1 1 1 1 1 1.10 1 1 1 1 1 1 1.10 1 1 1 1 1 1 1 1.10 1 </td <td>.70</td> <td>100</td> <td>48</td> <td>48</td> <td>4</td> <td>-</td> <td>53.29</td> <td>2.70 (0.45) 3.15</td> <td>argilaceous LIMESTONE interbedded with weak MUDSTONE recovered as dark grey Clay. Moderately weathered. (2.70m - 3.12m BGL) 1 set fracture: 10-20 degrees. Planar, rough, with occasional Clay infill. Medium strong to strong thinly laminated grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE. Moderately to slightly weathered. (3.12m - 6.10m BGL) 1 set fracture: 20-40 degrees.</td> <td></td>	.70	100	48	48	4	-	53.29	2.70 (0.45) 3.15	argilaceous LIMESTONE interbedded with weak MUDSTONE recovered as dark grey Clay. Moderately weathered. (2.70m - 3.12m BGL) 1 set fracture: 10-20 degrees. Planar, rough, with occasional Clay infill. Medium strong to strong thinly laminated grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE. Moderately to slightly weathered. (3.12m - 6.10m BGL) 1 set fracture: 20-40 degrees.	
100 80 70 110 80 70 50.34 6.10 Complete at 6.10m Complete at 6.10m Remarks. Complete from GL to 6.10m BGL. Solary drilling complete from GL to 6.10m BGL. Scale	.10	100	67	63	12			(2.95)	Very closely to medium spaced. Planar, rough, open to incipient with occasional Clay infill. F2:10-20	
Remarks. Solary drilling complete from GL to 6.10m BGL. Solary drilling complete from GL to 6.10m BGL.	.60	100	80	70						
Remarks Rotary drilling complete from GL to 6.10m BGL. Borehole backfilled on completion.	.10								Complete at 6.10m	
	Remarks	complete	from GL	to 6.10m	BGL.			-	Scale (approx)	Logged By
	orenole back	Tilled on C	ompletio	n.						NG

Machine : Da			Casing	WV	gations Ire w.gii.ie r		LLQ Level (mOD)	Cherry Orchard Sites 4 & 5 Client	Numbe BH03 Job
lethod : Ca	able Percus		200 961	0mm cas mm case	ed to 1.00m d to 5.70m		57.31	Van Dijk Architects	Numbe 11956-06
	th Rotary C llow on.	Core	Locatio		732955.7 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50 .00 .00-1.45	B	SCR	RQD	FI	2,2/2,3,3,4 B SPT(C) N=12	56.81	(0.50) 0.50 (0.50)	Brown slightly sandy slightly gravelly Clay TOPSOIL with rootlets. Stiff brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0
.30-2.33	46	0	0		25/50 SPT(C) 25*/25 50/0	56.31		Poor Recovery: Recovery consists of brown slightly sandy slightly gravelly CLAY with occasional cobbles.	
.50	83	75	27	18		54.81		Medium strong to strong thinly laminated grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE. Partially weathered. (2.30m - 4.90m BGL) 2 fracture sets. F1: 10-30 degrees extremely close to medium spaced. Planar, rough. F2:40-60 degrees. Planar, rough	
.30	100	85	42				(2.40)		
.00	100	96	84	10			4.90	Strong to very strong thinly laminated grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE. Fresh. (4.90m - 5.70m BGL) 1 fracture set. F1: 5-15 medium spaced. Planar, rough.	
5.70						51.61		Complete at 5.70m	
Remarks	tor encir	tored -	ring drillin					Scale	Logge By
lo groundwa Cable Percus Sorehole bac Chiselling fro	kfilled on c	completion	n.	g. th Rotary	drilling complete fro	m 1.00m B	GL to 5.70m E	3GL.	NG
	1.00111 (er i noui.					Figure	

Wachine : Da				WV	gations Ire w.gii.ie			Cherry Orchard Sites 4 & 5	Numbe BH04
Be Method : Ca	eretta T-44	ssion	Casing 200 961)mm cas	r ed to 1.50m d to 6.60m		Level (mOD) 57.42	Client Van Dijk Architects	Job Numbe 11956-06
	llow on.	JOIE	Locatio		732871.9 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50 .00-1.45	B SPT(C)	N=50			2,4/3,5,8,34	56.42	(1.00)	Brownish grey slightly sandy gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse. Stiff brownish grey slightly sandy slightly gravelly CLAY with	
.00 .50	B TCR	SCR	RQD	FI	В		(0.50)	occasional cobbles. Gravel is angular to subangular fine to coarse.	. 0, <u>0</u> , 0.
.50 .30-2.45 .30	44	0	0		14,25/50 SPT(C) 50/0	55.92	1.50	Poor Recovery: Recovery consists of brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.(Very Stiff)	
3.00 3.30	69	15	8			54.42	3.00	Medium strong grey thinly laminated fine grained argilaceous LIMESTONE with occasional pyrite veins interbedded with weak thinly laminated MUDSTONE.	
	83	73	42	30				Moderately to slightly weathered. (3.00m - 6.60m BGL) 2 fracture sets. F1: 5-15 degrees. Very closely to medium spaced. Undulating, rough. F2:75-90 degrees. Undulating rough.	
4.50 4.60	87	63	23	21					
6.00	88	87	87			50.00			
3.60						50.82		Complete at 6.60m	
Remarks Cable Percus Borehole bac	ssion refus	al at 1.50	m BGL wit	h Rotary	drilling complete fro	m 1.50m B	GL to 6.60m E	GL. Scale (approx)	Logge By
Borehole bac Chiselling fro	om 1.40m t	o 1.50m f	or 1 hour.					1:50	NG
								Figure	

Alethod : Ca	eretta T-44 able Percu:	ssion	200	Diameter Omm case	W.gii.ie		Level (mO 57.13	D) Client Van Dijk Architects		BH0 Job Numbe 11956-06-
	th Rotary (llow on	Core	Location		2811.3 N		/09/2022- /09/2022	Engineer Procert		Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thicknes	s) Description		Legend
						50.70	(0.4)	indginents (Drillers notes).	h concrete	
.50	B TCR	SCR	RQD	FI		56.73	0.4	Cobbles. Gravel is angular to subangular fine to cobbles.	occasional coarse.	0 <u>.0.0</u> 0 6 <u>.0</u> 0
.70						56.43	(0.50	 Poor Recovery: Recovery consists of grey subar medium to coarse GRAVEL with limestone bould Possible rock). 	ıgular ers (
						55.93 55.68	1.2 (0.29 1.4) Poor Recovery: Recovery consists of brown sligh	ntlly sandy igular fine	······································
	79	0	0				(0.8	 Poor Recovery: Recovery consists of grey claye COBBLES limestone with boulders. (Possible ro 	∕ .ck)	
						54.88	2.2	angular to subangular fine to coarse.	el is	······································
2.60						54.03	(0.8 			· · · · · · · · · · · · · · · · · · ·
.10	73	33	12	27				Weak to medium strong trinny laminated grey tim- argilaceous LIMESTONE interbedded with weak MUDSTONE. Partially to moderately weathered. (3.10m - 3.45m BGL) 2 fracture sets. F1: 5-15 Extremely close to closely spaced. Undulating, F2:85-90 degrees. Undulating, rouogh.	degrees. rough.	
.10				21				Extremely close to closely spaced. Planar, roug F2:75-90 degrees. Undulating, rouogh.		
.80	100	60	37			52.33	4.8	LIMESTONE with some calcite veins interbedded MUDSTONE.Fresh to partially weathered. (4.80m - 6.20m BGL) 2 fracture sets. F1: 20-30	d with weak	
.60				6			(1.4)	 degrees Medium spaced. Planar, rough, open incipient. F2:10-20 degrees. Extremely closely medium. Planar, rouogh with calcite veins. 	to	
	100	98	88			50.93	6.2			
5.20								Complete at 6.20m		
Remarks	ssion refus	al at 0.70	m BGL wit	th Rotary	drilling complete fro	 m 0.70m B	⊑ GL to 6.20r	BGL.	Scale (approx)	Logge By
orehole bac hiselling fro	ckfilled on a	completio	n.	,					1:50	NG
									Figure N	

Flush : wa	ando 2000 eretta T-44 ater		Casing 20	WV Diamete	gations Ire vw.gii.ie r ed to 0.50m d to 8.10m	Ground	Ltd Level (mOD) 57.58	Site Cherry Orchard Sites 4 & 5 Client Van Dijk Architects	Borehol Number BH06 Job Number 11956-06-2
			Locatio 70		732742.2 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
0.00 0.50 1.00-1.45	23	0	0		B 3,2/2,4,3,2 SPT(C) N=11	57.08	(0.50)	MADE GROUND: Greyish brown slightly sandy clayey angular to subangular fine to coarse Gravel with many angular cobbles. Poor Recovery: Recovery consists of greyish brown slightly sandy clayey angular to subangular fine to coarse GRAVEL with cobbles. Possible Made Ground	
	23					56.13		Poor Recovery:Recovery consists of brownish grey brown slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse.	0 0 0 0 0 0 0 0 0 0 0 0 0 0
2.60	57	0	0				(2.55)		0 0 0 0 0 0 0 0 0 0 0 0 0 0
4.00 4.10	100	93	63	<u>NI</u>		53.58		Medium strong to strong grey thinly laminated fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak thinly laminated MUDSTONE. Moderately to slightly weathered. (4.00m - 8.10m BGL) 2 fracture sets. F1: 10-30 degrees. Extremely closely to medium spaced. Planar, rough with Clay infill. F3:85-90 degrees. Planar, rough.	
5.60 5.80 5.93	100	43	29	3 NI 16			(4.10)		
7.10	100	92	26	26					
8.10						49.48	8.10	Complete at 8.10m	
Remarks Cable Percus Borehole bac	ssion refus	al at 0.50	m BGL wi	th Rotary	v drilling complete from	m GL to 8.		Scale (approx)	Logged By
Borenole bac Chiselling fro	om 0.50m to	5011pietio 5 0.50m f	or 1 hour.					1:50	NG
								Figure 1 11956-0	lo. 16-22.BH06

Core Date 163: 50: mm Method: Location TXTPSIG Z E TX35/79: 9 N Dates Dates (11:00:002) Engineer Procent Sheet Procent Sheet Sheet Procent Sheet Sheet Procent Sheet Sheet Procent Sheet Procent She	Machine : Be	eretta T-44	Grou	Casing	WV Diamete	gations Ire vw.gii.ie r ^{d to 8.20m}	Ground	Level (mOD) 56.48	Site Cherry Orchard Sites 4 & 5 Client Van Dijk Architects	Borehol Number BH07 Job Number 11956-06-2
0.00 TOPSOL TOPSOL 1.00-1.45 29 0 0 2.00 0 0 0 0 1.00-1.45 29 0 0 0 2.00 0 0 0 0 0 2.00 100 0 0 0 0 0 4.10 0 </th <th></th> <th></th> <th>b</th> <th></th> <th></th> <th>733076.9 N</th> <th></th> <th>/10/2022</th> <th></th> <th>Sheet 1/1</th>			b			733076.9 N		/10/2022		Sheet 1/1
1.00-1.45 29 0 0 2.60 100 0	Depth (m)				FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
100-1.45 29 0 0 SPT(C) N=37 ONN Interpretation Proor Recovery, Recovery, Calculate of Incoving and a subangular for sub	0.00						56.28		Poor Recovery: Recovery consists of brownish grey slightly sandy slightly gravelly CLAY with some cobbles and	. <u>0, 0, 0</u> .
2.00	1.00-1.45	29	0	0					sandy slightly gravelly CLAY with some cobbles and boulders. Gravel is angular to subangular fine to coarse.	0 10 0
48 91 24 11 48 91 24 11 550 (4.40m-8.20m BGL) 2 facture sets. F1: 10-20 degrees. Very closely to medium spaced. Planar, rough with occasional Clay influences and the origination of the origin of the origenet of the origenet of the origenet origin	2.60	100	0	0					some cobbles and boulders. Gravel is angular to	0.000
3.50 3.00 N (5.50m-6.10m BGL) Non - Intact 3.10 100 75 47 11 (3.80) 100 91 45 3.20 100 91 48.28 8.20 Complete at 8.20m		48	91	24	11				LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey Clay. Partially weathered. (4.40m-8.20m BGL) 2 fracture sets. F1: 10-20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 70-90 degrees. Very closely to medium	
8.20 48.28 8.20 Complete at 8.20m Image: Complete at 8.20m Remarks Rotary drilling complete from GL to 8.20m BGL. Image: Complete from GL to 8	5.50 5.60				NI					
3.20 48.28 8.20 Complete at 8.20m Complete at 8.20m Image: Complete at 8.20m Image: Complete at 8.20m Remarks Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Borehole backfilled on completion. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL.	5.10	100	75	47	11			(3.80)		
3.20 48.28 8.20 Complete at 8.20m Complete at 8.20m Image: Complete at 8.20m Image: Complete at 8.20m Remarks Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Borehole backfilled on completion. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL. Image: Complete from GL to 8.20m BGL.	7.10	100	91	45	13					
Remarks Rotary drilling complete from GL to 8.20m BGL. Borehole backfilled on completion. 1:50 NG	3.20						48.28	8.20	Complete at 8.20m	
1:50 NG	Remarks Rotary drilling Borehole bac	g complete	from GL	to 8.20m	BGL.				Scale (approx)	Logged By
									1:50 Figure	NG

Machine : Be	ater		-	Diamete	r d to 5.60m		Level (mOD) 55.89	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects	Job Number 11956-06-
Core Dia: 62 Method : Re		ł	Locatio		732997.2 N	Dates 01	/10/2022	Engineer Procert	Sheet 1/1
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
).00	42	0	0			55.69		_TOPSOIL Poor Recovery: Recovery consists of brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	
2.60	100	97	47	18		53.49		Medium strong to strong dark grey thinly laminated fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak thinly laminated MUDSTONE. Moderately to slightly weathered. (2.65m -5.60m BGL) 2 fracture sets. F1: 10-20 degrees. Very closely to medium spaced. Planar, rough, , open to incipient. F2: 40-60 degrees. Very closely to medium spaced. Planar, rough.	
4.10	100	79	33	26					
5.60						50.29		Complete at 5.60m	
Remarks No groundwa Rotary drilling	ater encour g complete	ntered du from GL	ring drillin to 5.60m	g. BGL.			<u> </u>	Scale (approx	Logge By
Borehole bad	ckfilled on o	completio	n.					1:50 Figure	NG No.

Machine : Da				WV	gations Ire w.gii.ie			Site Cherry Orchard Sites 4 & 5	Boreho Numbe BH09
Be Method : Ca	eretta T-44	ssion)mm cas	r ed to 1.50m d to 6.80m		Level (mOD) 56.62	Client Van Dijk Architects	Job Numbe 11956-06-
	llow on.	Jore	Locatio		732914.4 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50	В					55.62	(1.00)	Greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	
.00-1.45 .00	SPT(C) B	N=50			2,4/5,7,5,33	00.02	(0.50)	Stiff greyish brown slightly sandy gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to	0 <u>.0</u> 0
.50	TCR	SCR	RQD	FI	В	55.12	E `´	coarse.	0.0.0 0.0.0
.50	100	0	0				(0.75)	Stiff brown slightly sandy slightly gravelly CLAY. Gravel is angular to subangular fine to coarse.	0 <u>-0</u> -0 0-0-0-0 0-0-0-0
.30-2.33 .25 .30					25/50 SPT(C) 25*/25 50/0	54.37	2.25	Weak to medium strong grey thinly laminated fine grained argilaceous LIMESTONE interbedded with weak thinly laminated MUDSTONE. Higlhy weathered to moderately weathered.	
	93	30	7	5			(1.30)	(2.25m - 3.55m BGL) 2 fracture sets. F1: 20-30 degrees. Extremely closely to very closely. Undulating, rough with Clay infill. F2:85-90 degrees. Undulating rough.	
9.55 9.80						53.07	3.55	Medium strong grey thinly laminated fine grained argilaceous LIMESTONE with occasional pyrite and calcite veins interbedded with weak thinly laminated MUDSTONE. Moderately to slightly weathered.	
	87	87	75	7				(3.55m - 5.30m BGL) 2 fracture sets. F1:30-50 degrees. Extremely closely to closely. Undulating rough.F2: 75-90 degrees. Undulating, rough.	
5.30							(3.25)	(5.30m - 6.80m BGL) 1 fracture set. F1:30-40 degrees. Extremely closely to closely.	
	67	45	0	33					
5.80						49.82	6.80	Complete at 6.80m	
Remarks	ssion refus	al at 1.50	m BGL. R	otary dril	ling complete from 1	.50m BGL t	o 6.80m BGL.	Scale (approx) Logge By
Sorehole bac Chiselling fro	om 1.50m to	ompietio 1.50m f	or 1 hour.					1:50	NG
								Figure	

Be ethod :Ca	ando 2000 eretta T-44 able Percus th Rotary (ssion		Diamete)mm cas	vW.gii.ie r ed to 3.00m d to 7.80m		Level (mOD 57.22	Client Van Dijk Architects	Job Numbe 11956-06
fo	llow on.		Location 707		732837 N	Dates 07 29	/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness	Description	Legend
50	В					56.62	(0.60)	MADE GROUND: Greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0 <u>.0</u> 0 0.00 0.00 0.00 0.00 0.00 0.00
00-1.45 00	SPT(C) B	N=19			2,3/5,4,5,5	30.02	(1.70)	Stiff greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	
)0)0-2.45 30	B SPT(C) TCR	N=24 SCR	RQD	FI	3,5/6,5,6,7	54.92	2.30		
00-3.08					25/50 SPT(C) 25*/75 50/0	54.22	(0.70)	Stiff brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	
0	92	11	6		В		(0.90)	Very stiff greyish brown slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to subangular fine to coarse.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0						53.32	3.90	Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as black Clay. Partially weathered.	
	100	90	53	10			(1.30)	(3.90m - 5.20m BGL) 2 fracture sets. F1: 10-20 degrees.Closely to medium spaced. Planar, rough with Clay infill. F2:50-80 degrees. Planar, rough.	
0				NI 9		52.02	5.20	Strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE. Partially weathered to fresh. (5.20m - 7.80m BGL) 2 fracture sets. F1: 5-15 degrees. Extremely closely to very closely. Planar, rough with Clay infill. F2:40-60 degrees.Undulating, rough.	
	100	100	51	24			(2.60)	Ciay Infin. r2.40-00 degrees.ondulating, rough.	
0	100	100	85	5					
0						49.42	7.80	Complete at 7.80m	
emarks ble Percus rehole bac	ssion refus	al at 3.00	m BGL wit	h Rotary	drilling complete fro	m 3.00m B	⊑ GL to 7.80m	BGL. Scale (approx)	Logg By
iselling fro	om 2.90m to	o 3.00m fe	or 1 hour.					1:50	NG

Method : C	ando 2000 eretta T-44	+ ssion	Casing 200	WV Diamete	gations Ire vw.gii.ie r ed to 3.00m d to 6.80m	Ground		el (mOD)	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects		J	lumber BH11 ob lumber 956-06-2
			Location 707		732765.3 N		5/09/2 9/09/2		Engineer Procert		S	5 heet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	C (Thi	Depth (m) ckness)	Description	Legen	Water	Inst
0.50 1.00-1.45 1.00 2.00-2.45 2.00 3.00 3.00-3.08 3.40 3.60 3.80 5.30 6.80 6.80	B SPT(C) B SPT(C) 50/0 TCR 100 90 100	N=26	ROD 5 49 48	FI 13 9	2,3/3,3,4,4 3,4/5,5,7,9 25/50	57.04 56.54 56.09 54.54 53.94 50.74		(0.50) 0.50 (0.50) 1.00 (0.45) 1.45 (1.55) 3.00 (0.60) 3.60 (3.20) 6.80	MADE GROUND: Dark grey crushed rock FILL. Dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse. Firm to stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse. Stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse. Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locall recovered as dark grey Clay. Partially weathered (3.60m - 6.80m BGL) 1 set fracture: 0-20 degrees. Extremely closely to medium spaced. Planar, rough, open, open to incipient Complete at 6.80m			
lo groundwa Cable Percu Standpipe in Sorehole bao	stalled on o	completion	n, slotted f n.	rom 6.80	r drilling complete fro om BGL to 1.00m BG out from 3.00m to 3	L,selaed f	rom '	1.00m BG	BGL. BL to GL with a raised cover.	Scale (approx) 1:50 Figure 11956-	No.	NG

		Grou		WV	gations Ire w.gii.ie			Site Cherry Orchard Sites 4 & 5	Borehol Number BH12
Machine : Be Flush : wa				Diamete mm case	r d to 6.50m		Level (mOD) 56.20	Client Van Dijk Architects	Job Number 11956-06-2
Core Dia: 62 Method :R		b	Locatio 70		733106.4 N	Dates 30	/09/2022	Engineer Procert	Sheet 1/1
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
0.00	31	0	0			56.00	(0.20) 0.20) (0.20) (0.20) (2.40)	TOPSOIL Poor Recovery: Recovery consists of brown grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	
2.60						53.60	(0.75)	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
3.35	95	78	39	8		52.85 52.30	(0.55)	Medium strong to strong dark grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE locally recovered as black Clay. Partially weathered. (3.35m-3.90m BGL) 1 fracture sets. F1: 5-15 degrees. Extremely closely to medium spaced. Planar, rough, open to incipient.	
5.10 5.30	100	100	61	10 NI 7			(2.60)	Strong dark grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE. Partially weathered. (3.90m-6.50m BGL) 2 fracture sets. F1: 0- 20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40-80 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing. (5.10m -5.30m BGL) Non - Intact	
5.60	96	52	0	17					
6.50						49.70		Complete at 6.50m	
Remarks Rotary drillin Borehole bad	g complete ckfilled on c	from GL	to 4.90m n.	BGL.			<u> </u>	Scale (approx) Logged By
								1:50 Figure 11956-	NG No. 06-22.BH1

Machine : Be	ater			Diamete	vw.gii.ie r ed to 6.80m		Level (mOD) 55.54	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects	BH13 Job Number 11956-06-
Core Dia: 62 Method : Ro		ł	Locatio 70		733034.7 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
0.00	44	0	0		2,2/2,2,3,4 SPT(C) N=11			Poor Recovery: Recovery consists of brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0.00 0.00
2.30 2.30-2.60					8,12/18,32 SPT(C) 50/150	53.54	2.00 	Poor Recovery: Recovery consists of grey slightly clayey sandy subangular fine to coarse GRAVEL (Dense).	
3.30	52	33	10	6	-	52.24	3.30	Medium strong to strong dark grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE locally recovered as black Clay. Partially weathered.	
3.80 4.00 4.95	100	46	27	NI	-	51.74		Medium strong to strong dark grey fine grained argilaceous LIMESTONE interbedded with weak MUDSTONE locally recovered as black Clay. Partially weathered. (3.26m - 6.80m BGL) 2 fracture sets. F1: 10-20 degrees. Very closely to medium spaced. Undulating, rough. F2:75-90 degrees. Undulating rough.	
5.30	100	93	43	15					
6.80						48.74		Complete at 6.80m	
Remarks No groundwa Rotary drilling	ater encour	ntered dui from GL	ring drilling to 6.80m	g. BGL.			<u> </u>	Scale (approx)	Logged By
Borehole bac	kfilled on o	completion	n.					1:50 Figure I	NG

S			nd In		gations Ire w.gii.ie	land	Ltd	Site Cherry Orchard Sites 4 & 5	Boreho Numbe BH1	
Be	ando 2000 eretta T-44 able Percu		200	Diamete Omm cas	r ed to 2.00m d to 6.80m		Level (mOD) 56.44	Client Van Dijk Architects	Job Numbe 11956-06	
wi	ith Rotary (llow on.		Locatio	n	32959.3 N		/09/2022- /09/2022	Engineer Procert	Sheet 1/1	
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	
0 0-1.45 0	B SPT(C) B	N=18			2,3/4,5,5,4	55.44	(1.00)	Brownish grey slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse. Stiff brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.		
0 0-2.00 0-2.33 0	B 50/0 SPT(C) TCR	25*/0 SCR	RQD	FI	25/50 SPT(C) 25*/25 25/50 50/0	54.44	2.00	Poor Recovery: Recovery consists of brown slightly sandy slightly gravelly CLAY with subangular cobbles. Gravel is subangular fine to coarse (Very stiff)	0 <u>.0</u> .0 0 <u>.0</u> 0 0 <u>.0</u> 0	
						53.94	2.50	Poor Recovery: Recovery consists of grey slightly sandy slightly gravelly CLAY		
5	80	26	11			53.19	(0.75)	(2.85m -2.95m BGL) Grey subangular fine to coarse GRAVEL. Medium strong to strong grey thinly laminated fine grained argilaceous LIMESTONE with occasional pyrite veins		
)	90	59	13	17		54.24	(1.85)	 interbedded with weak thinly laminated MÜDSTONE. Moderately weathered. (3.25m - 5.10m BGL) 2 fracture sets. F1:35-45 degrees Extremely close to medium spaced. Planar, rough, open. F2:80-90 degrees. Planar, rough, open. 		
)	100	90	87	5		51.34	5.10 	Medium strong to strong grey thinly laminated fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak thinly laminated MUDSTONE. Moderately weathered to slightly weathered. (5.10m - 6.80m BGL) 2 fracture sets. F1:40-55 degrees Extremely close to medium spaced. Planar, rough, open. F2:70-85 degrees. Undulatinng, rough, open.		
0						49.64		Complete at 6.80m		
ole Percu		al at 2.00	m BGL wil	g. th Rotary	drilling complete fro	m 2.30m B	GL to 6.80m E	GL. Scale (approx)	Logg By	
	ckfilled on om 1.90m t			-				1:50	NG	
								Figure 11956-	No.)6-22.BH	

Method is: Caller Dressetion (bit Norm Cardot 0, D/m (bit Norm) Card 0, D/m (bit Norm) Card 0, D/m (bit Norm) Cardot 0,					WV	gations Ire w.gii.ie				Site Cherry Orchard Sites 4 & 5		Boreho Numbe BH1
Other Percession biols on 1000 Other made in 8.0m Image in 1000 Image in 10000 Image in 10000 Image in 10000 Image in 100000 Image in 100000 Image in 1	В	eretta T-44		20	0mm cas	ed to 0.50m		•	nUD)	Client Van Dijk Architects		Job Numbe 11956-06
TOTAD 3 E 732892 8 N 100000222 10000000000000000000000000000	w	ith Rotary (ed to 8.30m	Datas			-		
Image:	IC					732892.6 N	07			-		1/1
Image: Non-State in the second seco	Denth			Casing	Water			Dent	th			
1.50 B Image: Constraint of the second	(m)	Sample	/ Tests	Depth (m)	Depth (m)	Field Records	(mÕD)	(m) (Thickn) 1ess)	Description		Legend
1:00 B TCR SCR ROD F1 1:00 TCR SCR ROD SCR ROD 1:00 TCR S									50)		ional	
TCR SCR ROD FI 1:50 TCR SCR ROD FI S3.75 G	50						56.75	È Ì	, í	· · ·		
Image: state in the sector of the s	.50	В								Open noie drilling no recovery.		
So TCR SCR ROD FI 50 100 33 33 1 Dark grey slightly sandy clayey angular to subangular fine Stars												
50 TCR SCR ROD FI 50 100 33 33 1 Dark grey slightly sandy clayey angular to subangular fine Coarse GRAVEL, with some cobbles. 50 100 33 33 1 Dark grey slightly sandy slightly gravelly CLAY with 30 100 100 33 9 1.165 Store grey slightly sandy slightly gravelly CLAY with many cobbles. 30 98 92 33 9 1.165 Store grey slightly sandy slightly gravelly CLAY with many cobbles. 30 98 92 33 9 1.165 Store grey slightly sandy slightly gravelly CLAY with many cobbles. 30 100 100 79 10 50.455 6.80 Store grey slightly sandy slightly gravelly CLAY with many cobbles. 30 100 79 10 100 79 10 Store grey classes Tore grey classes												
Image: state in the sector of the s								E.				
50 TCR SCR ROD Fi 30 100 33 33 30 77 45 39 30 77 45 39 30 98 92 33 9 30 98 92 33 9 30 100 79 10 100 79 10 30 100 79 10 50.45 6.80 10.50 Medium sitong to strong dark grey fine grained argitacous limits to gate science as black CusP. Partially weak to gate science as black CusP. Partialy weak to gate science as black Cu								F (3	3.00)			
50 TCR SCR ROD FI 80 100 33 33												
50 TCR SCR ROD FI 50 100 33 33												
.50 100 33 33 .80 100 33 33 .80 77 45 39 .30 11.65 53.66 0,560 .30 11.65 11.65 11.65 .30 11.65 53.66 6.80 .30 98 92 33 9 .80 11.65 5.30 Medium storag to storag dark gray slightly gravelly CLAY with weak MUDSTONE locally recovered as black Clay. Partially weak weak meaning. .80 100 100 79 10 .30 48.95 8.30 Storag dark gray fine grained arginecous LIMESTONE with scalar receiver class black Clay. Partially weak receiver class thered. (6.30m - 6.3.0m BGL) 1 facture set F10-20 degrees. .30 100 100 79 10 (1.50) Storag dark gray fine grained arginecous LIMESTONE with receiver clay recovere as black Clay. Partially weak receivereceive												
.80 100 0.0 0		TCR	SCR	RQD	FI							
30 77 45 39 30 51.95 5.30 98 92 33 9 80 6.30 50.45 100 100 79 10 30 48.95 8.30 20 20.45 6.80 100 100 79 10 30 48.95 8.30 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 6.80 20 20.45 8.30 20		100	33	33					3.50 3.65	Dark grey slightly sandy clayey angular to subang to coarse GRAVEL with some cobbles.	ular fine	0 <u>.</u> 0
30 11 45 39 10 51.95 5.30 30 98 92 33 9 51.95 5.30 Medium strong to strong dark grey fine grained argilaceous tubes Clay. Partially weathered. 80 6.30m 6.40 BGL) 2 fracture sets F1-0.20 degrees. Yery closely to medium spaced. Planar, rough, open to incipient. F2: 40-60 degrees. 80 100 100 79 10 50.45 6.80 30 100 100 79 10 48.95 8.30 40 100 100 79 10 48.95 8.30 40 100 100 79 10 100 100 79 30 48.95 8.30 Complete at 8.30m Complete at 8.30m Complete at 8.30m	80										Y with	<u>, , , , , , , , , , , , , , , , , , , </u>
30 77 45 39 39 30 1 1 1 1 1 30 98 92 33 9 51.95 5.30 Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veries interbeded with weak MUDSTONE locally recovered as black Clay. Partially weathered. 80 6.30m 6.80 BGL) 2 fracture sets F1-0.20 degrees. Yery closely to medium spaced. Planar, rough, open to incipient. F2: 40-60 degrees. 80 100 100 79 10 6.80 Stong dark grey fine grained argilaceous LIMESTONE with occasional calcite veria interbedded with weak muscle veria weak weak veria calcite veria interbedded with weak muscle veria interbedded with weak muscle veria interbedded with weak muscle veria interbedded with weak weak muscle veria interbedded with weak muscle veria interbedded with weak weak weak veria ver												<u>, , , , , , , , , , , , , , , , , , , </u>
30 98 92 33 9 50.45 6.80 100 100 79 10 50.45 6.80 330 48.95 8.30 3.30 60.11 fracture set F1.0-20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40.60 dogrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40.60 dogrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40.60 dogrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40.60 dogrees. Very closely to medium spaced. Planar, rough, open to incipient. .30 48.95 8.30 Complete at 8.30m Complete at 8.30m		77	45	39				E (1	1.65)			0 <u>.0</u> 00
30 98 92 33 9 50.45 6.80 100 100 79 10 50.45 6.80 30 48.95 8.30 8.30 Complete at 8.30m 30 48.95 8.30 Complete at 8.30m Complete at 8.30m								Ē				<u>0.0</u> 0
98 92 33 9 (1.50) LMESTONE with occasional calcie veins interbedded with weath WUDSTONE locally recovered as black Clay. Partially weathered. .80 6.80 (1.50) (1.50) Strong dark grey fine grained argilaceous LIMESTONE with occasional Calcie veins interbedded with weath MUDSTONE locally recovered as black Clay. Partially weathered. .80 50.45 6.80 Strong dark grey fine grained argilaceous LIMESTONE with occasional Calcie veins interbedded with weath MUDSTONE locally recovered as black Clay. Partially weathered. .80 100 100 79 10 (48.95 8.30 .30 48.95 8.30 Complete at 8.30m Gomplete at 8.30m	.30					-	51.95		5.30	Medium strong to strong dark grey fine grained ar	gilaceous	·` <u>`~</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
98 92 33 9 .80 .60 .6.00 mGL) 2 fracture sets F1:0-20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40-60 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing. .80 .60 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 6.80 .80 .50.45 .60 .50.45 .60 .50.45 .60 .50.45 .60 .61 .50.45 .60 .62 .50.45 .60 .50.45 .60 .50.45 .60 .50.45 .50.45 .60 .50.75 .50.75 .60 .50.75 .50.75 .60 .50.75 .50.75 .60 .50										LIMESTONE with occasional calcite veins interbe weak MUDSTONE locally recovered as black Cla	dded with	
.80 50.45 6.80 100 100 79 10 .30 48.95 8.30 .30 48.95 8.30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30 .30		0.0	02	22	0				1.50)	(5.30m - 6.80m BGL) 2 fracture sets F1:0-20 de Very closely to medium spaced. Planar, rough, c	open to	
30 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 100 79 10 100 100 100 79 10 100 100 100 79 10 100		90	92	33	9				1.50)	incipient. F2: 40-60 degrees. Very closely to me spaced. Planar, rough with occasional Clay sme	dium earing.	
30 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 100 79 10 100 100 100 79 10 100 100 100 79 10 100												
30 100 100 79 10 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 79 10 100 100 100 79 10 100 100 100 79 10 100 <td>.80</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>50.45</td> <td>- e</td> <td>6.80</td> <td></td> <td>ONE with</td> <td></td>	.80						50.45	- e	6.80		ONE with	
30 100 100 79 10 48.95 8.30 Very closely to medium spaced. Planar, rough, open to incipient. .30 48.95 8.30 Complete at 8.30m Complete at 8.30m Scale (approx) (approx) Scale (approx) Scale (approx) Scale (approx) By Scale (MUDSTONE locally recovered as black Clay. Part weathered.		
Remarks o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL.		100	100	79	10			(1	1.50)	Very closely to medium spaced. Planar, rough, o		
Remarks o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL.												
Remarks o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL.	.30						48 95		8.30			
Remarks o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL. orehole backfilled on completion.							-0.00	Ē	5.50	Complete at 8.30m		
Remarks o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL. orehole backfilled on completion.												
Remarks Scale o groundwater encountered during drilling. Scale able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL. Scale orehole backfilled on completion. By												
Remarks Scale (approx) o groundwater encountered during drilling. able Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL. Scale (approx) By								Ē				
lo groundwater encountered during drilling. Cable Percussion refusal at 0.50m BGL on possible rock.Rotary drilling complete from 3.50m BGL to 8.30m BGL.												
able Percussion refusal at 0.50m BGL on possible rock. Rotary drilling complete from 3.50m BGL to 8.30m BGL.	Remarks o groundw	ater encou	ntered du	ring drillin	 q.			F			Scale	Logge By
	orehole ba	ckfilled on (completio	n.		e rock.Rotary drilling o	complete fi	om 3.50	m BG	L to 8.30m BGL.		NG
Figure No.	nisennig if(511 U.JUIII [0.00001	or r nouf.								

Machine : Da		+	Casing	WV Diamete	gations Ire vw.gii.ie r	Ground	Ltd Level (mOD) 55.75		Boreho Numbe BH16 Job Numbe
	able Percu ith Rotary (llow on		96 Locatio	mm case n	ad to 8.30m	Dates 06	55.75 5/09/2022- 1/09/2022	Van Dijk Architects Engineer Procert	11956-06- Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
0.50 .00-1.45 .00	B SPT(C) B	N=14			2,4/3,3,4,4	55.25 54.75	(0.50) (0.50) (0.50) (0.50)	MADE GROUND: Dark grey crushed rock FILL. Dark brown slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse. Stiff dark brown slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse.	0,
2.00-2.45 2.00	SPT(C) B	N=20			3,4/4,5,5,6 25/50 50/0	53.05	(1.70)		
3.00-3.00 3.00	TCR	SCR	RQD	FI	SPT(C) 25*/0 B		(0.50)	Stiff dark grey slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse.	0 <u>00</u> 0
3.10 3.20	100	69	33	4		52.55	3.20	Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as black Clay. Partially	
.80	100	100	61	11				weathered. (3.20m-6.80m BGL) 2 fracture sets. F1: 10-20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 20-50 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing.	
.30	100	94	64	11					
5.80	69	51	18	10		48.95	6.80	Strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as black Clay. Partially weathered. (6.80m - 8.30m BGL) 2 fracture sets. F1: 0-10 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 70-80 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing.	
3.30						47.45	8.30	Complete at 8.30m	
Remarks							<u> </u>	Scale_	Loaae
lo groundwa Cable Percu Borehole bao Chiselling fro	ssion refus ckfilled on (al at 3.00 completio	n.	th Rotary	/ drilling complete fro	m 3.10m B	GL to 8.30m I	3GL. (approx) 1:50 Figure	NG

			1	WV	gations Ire w.gii.ie			Site Cherry Orchard Sites 4 & 5	Borehol Number BH17
lethod : Ca	eretta T-44 able Percu	ssion	20		r ed to 2.00m ed to 6.80m		Level (mOD) 56.27	Client Van Dijk Architects	Job Number 11956-06-2
	ith Rotary (Ilow on	Jore	Locatio		732907 N		/09/2022-)/09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
.50	В					55.77	(0.50) 0.50 (0.50)	MADE GROUND: Brown sandy gravelly CLAY. Brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to subangular fine to coarse.	10 <u>10 g</u> <u>0 10 g</u> <u>0 10 g</u> <u>0 10 g</u> <u>10 g</u>
.00-1.45 .00	SPT(C) B	N=11			1,2/2,3,3,3	55.27	1.00	Firm brownish grey slightly sandy slightly gravelly CLAY with occasional cobbles and boulders. Gravel is angular to subangular fine to coarse.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
.00-2.45 .00	SPT(C) B	N=50			2,3/4,4,3,39	54.27	2.00	Stiff dark grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0 <u>.0</u> .0 0.00 0 <u>.00</u> 0 <u>.00</u> 0 <u>.0</u> 0 <u>.0</u>
60	TCR	SCR	RQD	FI	-		(1.05)		
80-3.88	80	0	0		22/50 SPT(C) 22*/75	53.22	3.05	Very stiff dark grey slightly sandy slightly gravelly CLAY some cobbles. Gravel is angular to subangular fine to coarse.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
30 00	100	45	14	12	50/0`´	52.27 51.77	4.00 (0.50) 4.50	Medium strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey slightly sandy gravelly Clay. Moderately to slightly weathered. (4.0m - 4.50m BGL) 1 fracture set. F1: 5-15 degrees. Very closely to medium spaced. Planar, rough, open to incipient.	
30	100	97	55	10			(2.30)	Strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey slightly sandy gravelly Clay. Moderately to slightly weathered. (4.50 m - 6.80m BGL) 2 fracture sets. F1: 5-15 degrees. Very closely to medium spaced. Planar, rough, , open to incipient. F2: 40-60 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing.	
30						49.47	6.80	Complete at 6.80m	
emarks groundwa	ater encour	ntered.	m BGL wi	th Rotary	r drilling complete fro	m 2.60m B	GL to 6.80m F	Scale (approx)	Logge By
rehole bad	ckfilled on o om 2.40m to	completio	n.	an notary		2.00111 D	CE 10 0.00111 E	1:50	NG
								Figure 11956-	No. 06-22.BH

lachine : D			1	WV	gations Ire /w.gii.ie			Site Cherry Orchard Sites 4 & 5		B	orehol umber 8H18
B	eretta T-44			0] to 5.30	m		Level (mOD) 58.00	Client Van Dijk Architects			ob umbei 56-06-
	able Percu ith Rotary Illow on				d to 8.30m	Detec		Freineer			
10			Location 708		732923.6 N		/09/2022- /09/2022	Engineer Procert		31	1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Insti
.50	B SPT(C)	N=15			1,2/4,5,3,3			MADE GROUND: Brown slightly sandy slightly gravelly CLAY with concrete, red brick, steel bar and plastic fragments.			
.00 .00-2.45 .00	B SPT(C) B	N=13			2,3/3,4,3,3		(3.20)			בעים ער מיסי ה מהמכרים מיני מיסים מהמריים מיסי היות מיסים המ	
.00-3.45 .00	SPT(C) B	N=14			2,2/3,5,3,3	54.80	3.20	Firm greyish brown slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		2, 0,02,020,02,02,02,02,02,02,02,02,02,02,0
00-4.45 00	SPT(C) B	N=26			4,5/7,6,6,7	54.00	4.00	Stiff brown slightly sandy slightly gravelly CLAY with some cobbles. Gravel is angular to subangular fine to coarse.		0,000,0	
.00 .00-5.15 .30	B SPT(C) TCR	50/0 SCR	RQD	FI NI	4,6/50		(1.60)		0000 0000 0000 0000 0000 0000 0000	0.0 0 °040 9 00 8 00 °04	50,000,000,000,000,000,000,000,000,000,
.45	100	47	27	11		52.40	5.60 (1.20)	Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey slightly sandy gravelly Clay. Partially weathered. (5.60m-6.80m BGL) 2 fracture sets. F1: 10-20 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 20-50			
80	100	87	10	21		51.20	6.80 (1.50)	degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing. Strong to very strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey slightly sandy gravelly Clay. Slightly weathered. (6.80 m-8.30m BGL) 2 fracture sets. F1: 5-15 degrees. Very closely to medium spaced. Planar, rough, open to incipient. F2: 40-60			
30						49.70	8.30	Planar, rough, open to inspect. 12. 40 00 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing. Complete at 8.30m		0 n 0 0 0 n n n n	
temarks able Percu	ssion refus	al at 5.30	m BGL wit	th Rotarv	r drilling complete fro	m 5.30m B	GL to 8.30m E	BGL.	Scale (approx)	Lo	ogge
orehole bac hiselling fro	ckfilled on	completio	n.		<u>.</u>						
									1:50		NG

Location Data Output Engineer Propertie Description Loge Description Loge 18/17 Sample / Tests Sample / Te	achine : Da ethod : Ca		Casing	WW Diameter	gations lre w.gii.ie		Level (mOD)	Cherry Orchard Sites 4 & 5 Client Van Dijk Architects		Boreho Numbe BH1 Job Numbe 11956-06
Image: state			Location	n		Dates 08	8/09/2022			Sheet 1/1
	Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend
nexts represented drilling. e Percussion resulting the first an ossible rock. Berline First an ossible rock. First an ossible r							(0.40)	MADE GROUND:Brown sandy gravelly Clay.		
narks roundwater encountered drilling. e Percussion refusal at 0.40m BGL on possible rock.										
e Percussion refusal at 0.40m BGL on possible rock.	emarks groundwa	ter encountered dril	lling.				Ē		Scale	Logge By
hole backfilled on completion. elling from 0.40m to 0.40m for 1 hour. 1:50 N	ble Percus rehole bac	sion refusal at 0.40 kfilled on completion m 0.40m to 0.40m fr	m BGL on n. or 1 hour	possible	rock.					ву NG

	ando 2000	+	nd In Casing	WV	gations Ire vw.gii.ie r		Ltd	Site Cherry Orchard Sites 4 & 5 Client	Boreho Numbe BH19 Job
	eretta T-44 able Percu		200	Omm cas	ed to 3.00m d to 7.50m		55.95	Van Dijk Architects	Numbe 11956-06
	ith Rotary f		Locatio	n	732846.6 N	Dates 08	8/09/2022	Engineer Procert	Sheet 1/1
Depth (m)	Sample	/ Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
						55.45	(0.50)	MADE GROUND: Brown sandy gravelly Clay.	
50	В					55.45	0.50	MADE GROUND: Brown sandy gravelly Clay with some cobbles.	
00-1.45 00	SPT(C) B	N=11			2,3/3,2,3,3				
)0-2.45)0	SPT(C) B	N=15			2,3/4,4,3,4		(2.20)		
00 00-3.03	B SPT(C)	25*/25			25/50	53.25 52.95	(0.30)	Stiff dark brown slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to coarse.	0.00
	50/0 TCR	SCR	RQD	FI				Very stiff grey slightly sandy slightly gravelly CLAY with occasional cobbles. Gravel is angular to subangular fine to	
50 80-3.83 80	100	0	0		25/50 SPT(C) 25*/25 50/0		(1.30)	coarse.	0 <u>0</u> 000
30 30	100	67	61	16		51.65		Medium strong to strong dark grey fine grained argilaceous LIMESTONE with occasional calcite veins interbedded with weak MUDSTONE locally recovered as dark grey slightly sandy gravelly Clay. Moderately to slightly weathered. (4.30m - 7.50m BGL) 2 fracture sets. F1: 15-30 degrees. Very closely to medium spaced. Planar, rough, , open to incipient. F2: 40-60 degrees. Very closely to medium spaced. Planar, rough with occasional Clay smearing.	
	100	100	73	15			(3.20)		
30	100	100	90	5					
50						48.45	7.50	Complete at 7.50m	
emarks groundwa	ater encoui	ntered du	ring drilling	j. ith Rotar	y drilling complete fro	om 3 10m F	3GL to 7 50m	Scale (appro:	Logge By
rehole bad	ckfilled on o om 3.00m t	completio	n.			5. 10111 L	2 2 10 7 .00m	1:50	NG
								Figure	No.

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BH-01
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BH-02



BH-03

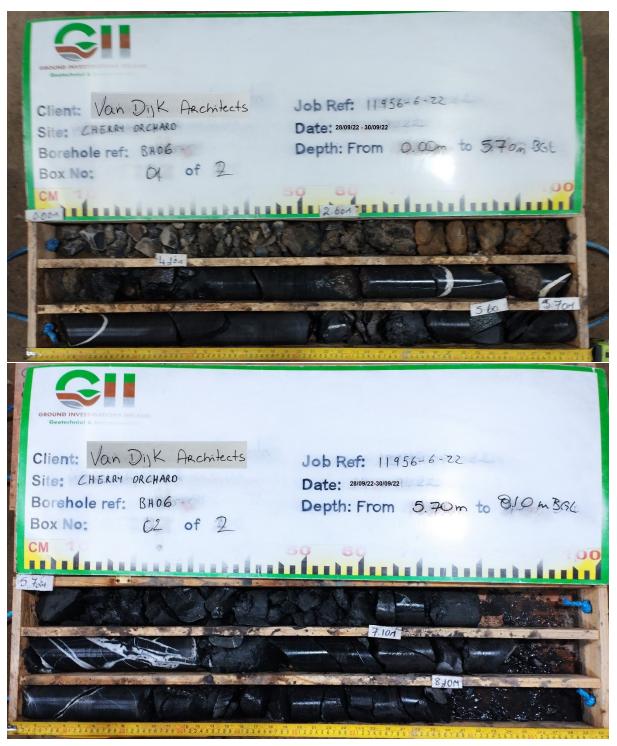


Client: Van Dijk Architects	Job Ref: 11956-6-22
Site: CHERRY ORCHARD Borehole ref: BH04 Box No: 1 of 2 CM	Date: 19 09 22 Depth: From 1.50m to 5.0m 34
-50m	
2 3 4 5 6 7 8 5 101 2 3 4 5 6 7 8 5 01 2 3 4 5 6 7	4 30 20 10 1 2 2 10 10 10 10 10 10 10 10 10 10 10 10 10
GROUND INVESTIGATIONS IRELAND Geotechnicid & Environmental	
Client: Van Dijk Architects Site: CHERRY ORCHARD Borehole ref: BH04 Box No: 2 of 2 CM 1	Job Ref: 11956-6-22 Date: 29/09/22 Depth: From 500m to 6.60m 344

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BH-04
```

BH-05	
Client: Van Dijk Architects	Job Ref: 11956-6-22
Site: CHERRY ORCHARD Borehole ref: BH05 Box No: 11 of 2 CM	Date: 29/09-30/09/22 Depth: From @ 70m to 4230m34
D: Fort	And a state of the
	2-6em
GROUND INVESTIGATIONS IRELAND Geotechnici & Environmentol	
Client: Van Dijk Architects	Job Ref: 11956-6-22
Site: CHERRY ORCHARD	Date: 29/09-30/09/22
Borehole ref: BH05 Box No: 2 of 2	Depth: From 4.86 m to 6.20m 344
CM 4:30A	
S. Garty	
Construction	670

BH-06



BH-07



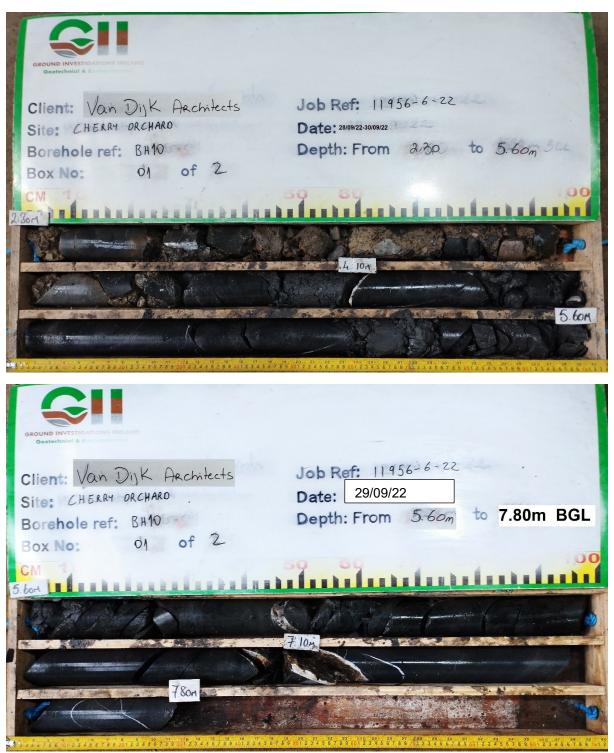
BH-08





BH-09

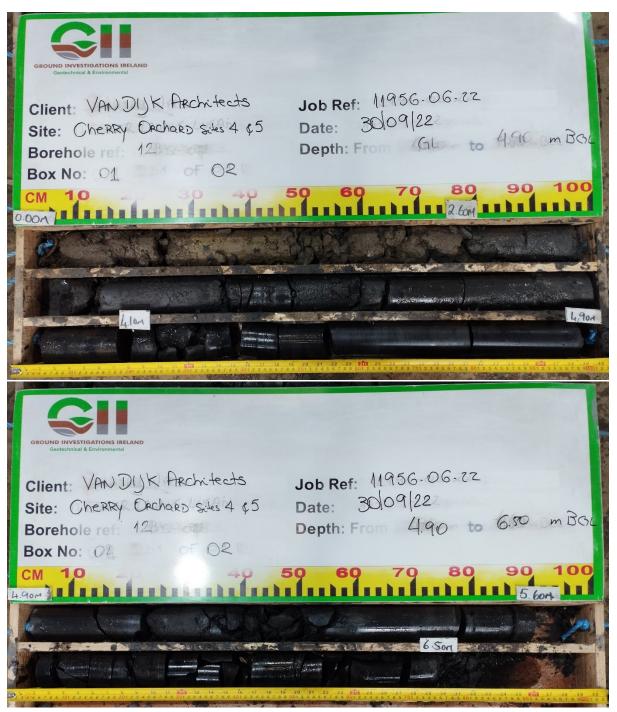
BH-10



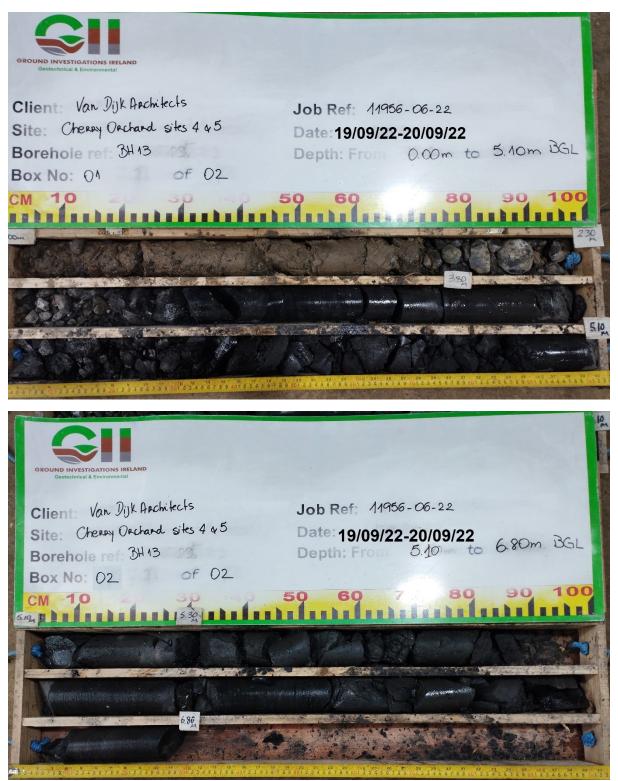
BH-11



BH-12



BH-13



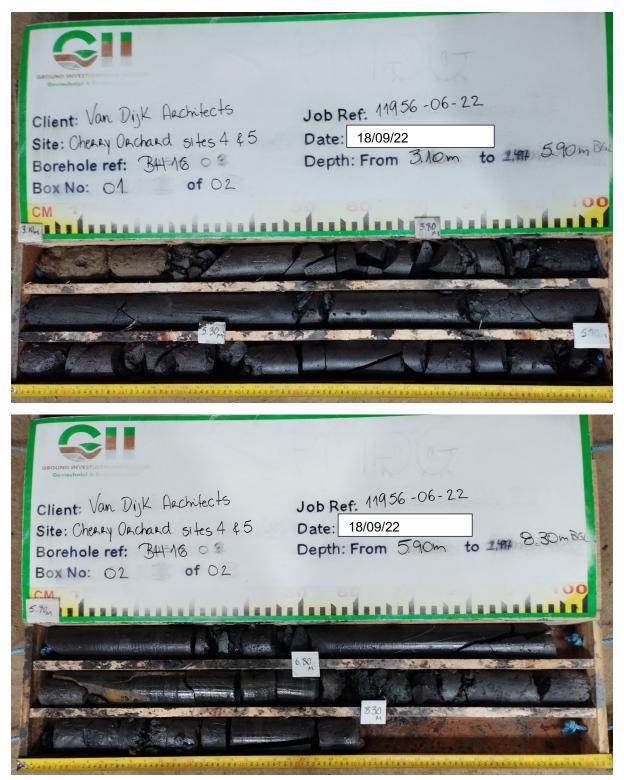
BH-14



BH-15



BH-16



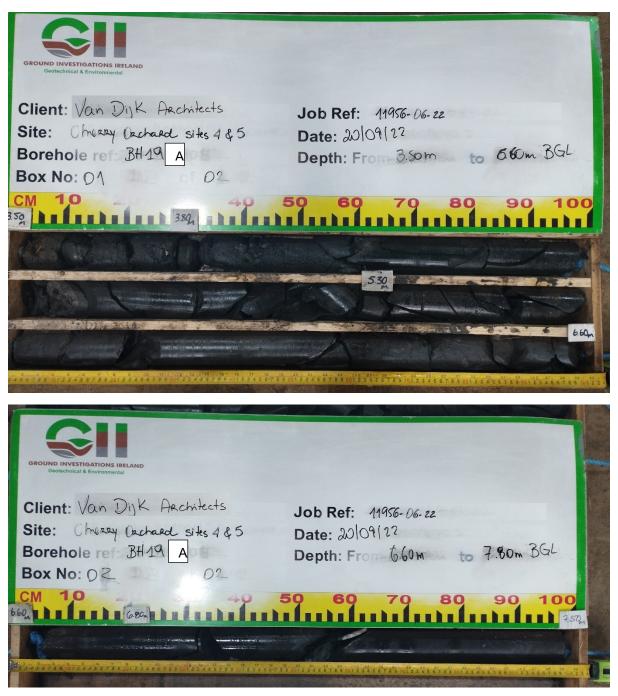




BH-18

CONTRACTOR STREAM Destechnical & Environmental
Client: Van Dijk Architects Job Ref: 11956-06-22
Site: Churry Occhard sites 4 & 5 Date: 20/09/22
Borehole ref BH18 Depth: From 5.30m to 8.30m BGL.
Box No: 01 01 01
CM 10 2 30 49 50 60 70 80 90 100
A A A A A A A A A A A A A A A A A A A

BH-19



APPENDIX 6 – Laboratory Testing





Issue :

Element Materials Technology Unit 3 Deeside Point Zone 3 Deeside Industrial Park Deeside CH5 2UA P: +44 (0) 1244 833780 F: +44 (0) 1244 833781

W: www.element.com

Ground Investigations Ireland Catherinestown House Hazelhatch Road Newcastle Co. Dublin Ireland diala TESTING 4225 Attention : Mike Sutton Date : 9th September, 2022 Your reference : 11956-6-22 Our reference : Test Report 22/13979 Batch 1 Cherry Orchard Location : Date samples received : 30th August, 2022 Status : Final Report

Fourteen samples were received for analysis on 30th August, 2022 of which fourteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

1

Authorised By:

h lun

Bruce Leslie Project Manager

Please include all sections of this report if it is reproduced



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT			
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt		30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022		30/08/2022	30/08/2022	LOD/LOR	Units	Method No.
Antimony	2	3	3	2	3	2	2	4	3	1	<1	mg/kg	TM30/PM15
Arsenic [#]	7.6	15.4	11.2	11.1	12.4	7.8	8.7	15.0	11.5	7.8	<0.5	mg/kg	TM30/PM15
Barium [#]	51	135	92	82	56	50	51	106	85	105	<1	mg/kg	TM30/PM15
Cadmium [#]	1.4	3.1	2.3	1.7	2.1	1.7	1.6	1.9	1.0	0.7	<0.1	mg/kg	TM30/PM15
Chromium #	31.5	73.9	70.7	42.7	32.7	33.2	42.1	51.8	47.7	42.8	<0.5	mg/kg	TM30/PM15
Copper [#]	23	43	26	31	33	25	28	59	153	27	<1	mg/kg	TM30/PM15
Lead [#]	12	93	60	25	16	13	12	51	85	20	<5	mg/kg	TM30/PM15
Mercury [#]	<0.1	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum [#]	3.8	7.2	5.5	5.5	4.1	4.4	4.8	5.3	3.8	3.8	<0.1	mg/kg	TM30/PM15
Nickel [#]	33.7	49.1	44.1	42.0	45.8	35.8	40.4	56.1	43.1	34.7	<0.7	mg/kg	TM30/PM15
Selenium [#]	<1	2	1	1	1	<1	<1	2	1	1	<1	mg/kg	TM30/PM15
Zinc [#]	67	158	97	115	100	80	94	159	282	90	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene [#]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene [#]	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	<0.03	0.08	0.07	0.14	<0.03	<0.03	<0.03	0.04	0.12	0.08	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	<0.03	0.14	0.11	0.16	< 0.03	<0.03	<0.03	0.07	0.21	< 0.03	< 0.03	mg/kg	TM4/PM8
Pyrene [#]	< 0.03	0.13	0.10	0.13	< 0.03	< 0.03	< 0.03	0.07	0.19	0.07	< 0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	0.11	0.09	0.11	< 0.06	<0.06	< 0.06	0.08	0.14	<0.06	< 0.06	mg/kg	TM4/PM8
Chrysene [#]	<0.02 <0.07	0.09	0.08	0.07	<0.02 <0.07	<0.02 <0.07	<0.02 <0.07	0.06	0.12	0.04 <0.07	<0.02 <0.07	mg/kg	TM4/PM8 TM4/PM8
Benzo(bk)fluoranthene [#] Benzo(a)pyrene [#]	<0.07	0.13	0.06	0.05	<0.07	<0.07	<0.07	<0.03	0.22	<0.07	<0.07	mg/kg mg/kg	TM4/PM8
Indeno(123cd)pyrene [#]	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.03	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total [#]	<0.22	0.46	0.28	0.33	<0.22	<0.22	<0.22	<0.22	0.71	<0.22	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	0.87	<0.64	0.78	<0.64	<0.64	<0.64	<0.64	1.28	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.11	0.08	0.09	<0.05	<0.05	<0.05	0.06	0.16	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.04	0.03	0.03	<0.02	<0.02	<0.02	0.03	0.06	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	96	90	98	95	98	96	96	89	95	95	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	348	<30	mg/kg	TM5/PM8/PM16



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT	VJT											
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil	Soil											
Batch Number	1	1	1	1	1	1	1	1	1	1			
											LOD/LOR	Units	Method No.
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022			
Aliphatics													
>C5-C6 (HS_1D_AL) [#]	<0.1*	<0.1*	<0.1+	<0.1*	<0.1+	<0.1*	<0.1*	<0.1+	<0.1*	<0.1*	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)*	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 <0.1 ^{SV}	<0.1 <0.1 ^{sv}	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS 1D AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH CU 1D AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) [#]	<4	<4	<4	<4	<4	<4	<4	<4	<4	16	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) [#]	<7	<7	<7	<7	<7	<7	<7	<7	<7	158	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)*	<7	<7	<7	<7	<7	<7	<7	<7	23	174	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	348	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	256	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	23	82	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4 <7	8 78	<4 <7	mg/kg	TM5/PM8/PM16 TM5/PM8/PM16								
>EC16-EC21 (EH_CU_1D_AR) [#] >EC21-EC35 (EH_CU_1D_AR) [#]	<7	<7	<7	<7	11	<7	<7	<7	71	88	<7	mg/kg mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	9	<7	<7	<7	17	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	<26	<26	<26	<26	88	174	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	<52	<52	<52	<52	88	522	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{sv}	<0.1 ^{sv}	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	127	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	66	49	<10	mg/kg	TM5/PM8/PM16
NTDE#	-5	-5	-5	-5	-5	-5	-5	-5	_sv	_sv	-5	1100	TM26/DM40
MTBE [#]	<5	<5	<5 <5	<5 <5	<5	<5 <5	<5 <5	<5	<5 ^{sv}	<5 ^{\$V}	<5	ug/kg	TM36/PM12 TM36/PM12
Benzene [#] Toluene [#]	<5 <5	<5 ^{sv}	<5 ^{sv}	<5 <5	ug/kg	TM36/PM12 TM36/PM12							
Ethylbenzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{SV}	5 <5 ^{SV}	<5	ug/kg ug/kg	TM36/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{sv}	<5 9 sv	<5	ug/kg	TM36/PM12
o-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{SV}	9 11 ^{SV}	<5	ug/kg	TM36/PM12
y	-	-	-	-	-	-	-	-	-5		-	-58	
PCB 28 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979										_		
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50		e attached n	
COC No / misc											abbrevi	ations and a	cronyms
Containers	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022			No.
Natural Moisture Content	10.2	21.8	16.9	6.3	7.3	11.9	8.7	9.4	10.5	8.5	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	9.3	17.9	14.4	6.0	6.8	10.6	8.0	8.6	9.5	7.9	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.0	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	31.5	73.9	70.7	42.7	32.7	33.2	41.1	51.8	47.7	42.8	<0.5	mg/kg	NONE/NONE
Total Organic Carbon [#]	0.26	1.75	0.91	0.53	0.41	0.21	0.27	1.00	0.96	0.66	<0.02	%	TM21/PM24
рН #	8.56	7.50	8.38	8.35	8.47	8.68	8.53	8.20	8.24	8.15	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0941	0.1042	0.0979	0.0953	0.0934	0.0978	0.0946	0.0952	0.0963	0.0935		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Client Name:
Reference:
Location:
Contact:
EMT Job No:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56]		
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50				Plaasa sa	e attached n	otos for all
COC No / misc									ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date			23/08/2022							
-										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt		30/08/2022	30/08/2022							
Antimony	3	4	2	2				<1	mg/kg	TM30/PM15
Arsenic [#]	12.6 91	9.8	8.9 51	8.6 41				<0.5 <1	mg/kg	TM30/PM15 TM30/PM15
Barium [#] Cadmium [#]	1.7	94 2.3	1.1	1.6				<0.1	mg/kg mg/kg	TM30/PM15 TM30/PM15
Chromium #	47.2	35.6	38.2	30.2				<0.5	mg/kg	TM30/PM15
Copper [#]	43	32	31	25				<1	mg/kg	TM30/PM15
Lead #	36	17	27	11				<5	mg/kg	TM30/PM15
Mercury [#]	0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM30/PM15
Molybdenum [#]	4.7	5.8	3.3	3.6				<0.1	mg/kg	TM30/PM15
Nickel [#]	49.7	51.1	32.5	33.7				<0.7	mg/kg	TM30/PM15
Selenium [#]	2	2	<1	<1				<1	mg/kg	TM30/PM15
Zinc [#]	124	105	126	72				<5	mg/kg	TM30/PM15
PAH MS										
Naphthalene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03				<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05				<0.05	mg/kg	TM4/PM8
Fluorene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	0.04	<0.03	0.05	<0.03				<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	0.06	< 0.03	0.07	< 0.03				< 0.03	mg/kg	TM4/PM8
Pyrene [#] Benzo(a)anthracene [#]	0.04 <0.06	<0.03 <0.06	0.06	<0.03 <0.06				<0.03 <0.06	mg/kg	TM4/PM8 TM4/PM8
Chrysene [#]	0.04	<0.08	0.07	<0.08				<0.00	mg/kg mg/kg	TM4/PM8
Benzo(bk)fluoranthene [#]	<0.07	<0.02	0.07	<0.02				<0.02	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene#	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
PAH 6 Total [#]	<0.22	<0.22	<0.22	<0.22				<0.22	mg/kg	TM4/PM8
PAH 17 Total Benzo(b)fluoranthene	<0.64 <0.05	<0.64 <0.05	<0.64 0.05	<0.64 <0.05				<0.64 <0.05	mg/kg mg/kg	TM4/PM8 TM4/PM8
Benzo(k)fluoranthene	<0.03	<0.03	<0.02	<0.03				<0.03	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1				<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	69	86	88	92				<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30				<30	mg/kg	TM5/PM8/PM16

Client Name:
Reference:
Location:
Contact:
EMT Job No:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56						
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50				Disease	e attached n	
COC No / misc									ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date										
-										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022						NO.
TPH CWG										
Aliphatics										
>C5-C6 (HS_1D_AL)#	<0.1	<0.1+	<0.1+	<0.1*				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) [#]	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) [#]	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) [#]	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)*	<7	<7	22	<7				<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26				<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10				<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	22	<10				<10	mg/kg	TM5/PM8/PM16
Aromatics	-0.4	.0.1	sv	-0.4				.0.4		T100/D1440
>C5-EC7 (HS_1D_AR) [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)*	<4 <7	<4 <7	<4 8	<4 <7				<4 <7	mg/kg	TM5/PM8/PM16 TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) [#]	<7	<7	90	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)*	<7	<7		<7				<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR) Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	18 116	<26				<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<20	<20	116	<20				<20	mg/kg mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)*	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<0.1 17	<10				<10	mg/kg	TM50/TW12 TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	74	<10				<10	mg/kg	TM5/PM8/PM16
2020 2000 (2.1_13_) **)										
MTBE [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Benzene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Toluene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Ethylbenzene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
m/p-Xylene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
o-Xylene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
PCB 28 [#]	<5 ^{SV}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 52 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 101 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 118 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 138 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 153 [#]	<5 ^{\$V}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 180 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35 ^{sv}	<35	<35	<35				<35	ug/kg	TM17/PM8

	11956-6-2 Cherry Or Mike Sutte	chard	ns Ireland			Report : Solids: V=	r, J=250g gl	lass jar, T=p	lastic tub		
EMT Job No:	22/13979										
EMT Sample No.	41-44	45-48	49-52	53-56							
Sample ID	TP-06	TP-13	TP-12	TP-07							
Depth	0.50	0.50	0.50	0.50						e attached n	
COC No / misc									abbrevi	ations and a	cronyms
Containers	VJT	VJT	VJT	VJT							
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022							
Sample Type	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1					LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022					LOD/LOR	Units	No.
Natural Moisture Content	13.3	9.1	4.6	7.5					<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	11.7	8.3	4.4	7.0					<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Chromium III	47.2	35.6	38.2	30.2					<0.5	mg/kg	NONE/NONE
Total Organic Carbon [#]	0.91	0.24	0.55	0.34					<0.02	%	TM21/PM24
рН #	8.03	8.43	8.30	8.59					<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0926	0.0946	0.0922	0.0929						kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09						kg	NONE/PM17



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : CEN 10:1 1 Batch

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1			Martin
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022		30/08/2022	30/08/2022	LOD/LOR	Units	Method No.
Dissolved Antimony [#]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) [#]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic [#]	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) [#]	< 0.025	<0.025	< 0.025	<0.025	< 0.025	< 0.025	< 0.025	<0.025	<0.025	< 0.025	< 0.025	mg/kg	TM30/PM17
Dissolved Barium [#]	< 0.003	0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.015	0.013	< 0.003	mg/l	TM30/PM17
Dissolved Barium (A10) [#]	<0.003	0.05	<0.003	<0.003	<0.03	<0.003	<0.03	<0.003	0.15	0.13	<0.003	mg/kg	TM30/PM17
Dissolved Cadmium [#]	<0.0005	< 0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	mg/l	TM30/PM17
Dissolved Cadmium (A10) [#]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	mg/kg	TM30/PM17
Dissolved Chromium [#]	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) [#]	< 0.015	< 0.015	< 0.015	<0.015	< 0.015	< 0.015	< 0.015	<0.015	<0.015	<0.015	< 0.015	mg/kg	TM30/PM17
Dissolved Copper [#]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.007	< 0.007	< 0.007	mg/l	TM30/PM17
Dissolved Copper (A10) [#]	<0.07	<0.07	<0.07	<0.07	< 0.07	< 0.07	<0.07	<0.07	0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	mg/l	TM30/PM17
Dissolved Lead (A10)#	<0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum [#]	0.005	< 0.002	< 0.002	0.008	< 0.002	0.013	0.004	0.005	0.010	0.010	< 0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) [#]	0.05	<0.02	<0.02	0.08	<0.02	0.13	0.04	0.05	0.10	0.10	<0.02	mg/kg	TM30/PM17
Dissolved Nickel [#]	< 0.002	< 0.002	< 0.002	<0.002	< 0.002	<0.002	< 0.002	<0.002	<0.002	<0.002	< 0.002	mg/l	TM30/PM17
Dissolved Nickel (A10)#	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium [#]	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) [#]	<0.03	< 0.03	< 0.03	< 0.03	<0.03	< 0.03	< 0.03	<0.03	< 0.03	<0.03	<0.03	mg/kg	TM30/PM17
Dissolved Zinc [#]	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.006	< 0.003	< 0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) [#]	<0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.06	< 0.03	< 0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF [#]	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF [#]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	< 0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0 TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	110120/P1010
Fluoride	0.3	<0.3	0.4	0.5	0.5	<0.3	<0.3	0.5	0.8	0.5	<0.3	mg/l	TM173/PM0
Fluoride	3	<3	4	5	5	<3	<3	5	8	5	<3	mg/kg	TM173/PM0
Sulphate as SO4 [#]	0.8	13.0	0.6	1.0	0.7	0.9	5.8	14.4	10.9	58.2	<0.5	ma/l	TM38/PM0
Sulphate as SO4	8	13.0	6	1.0	0.7	9	5.8	14.4	10.9	58.2	<0.5	mg/l mg/kg	TM38/PM0 TM38/PM0
Chloride [#]	0.5	0.6	0.4	0.6	0.5	0.7	0.4	0.5	0.9	0.5	<0.3	mg/l	TM38/PM0
Chloride [#]	5	6	4	6	5	7	4	5	9	5	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	2	4	3	3	2	3	<2	4	3	2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	20	40	30	30	20	30	<20	40	30	<20	<20	mg/kg	TM60/PM0
pH	8.16	8.04	8.30	8.31	8.37	8.22	8.13	8.23	8.34	8.13	<0.01	pH units	TM73/PM0
Total Dissolved Solids [#]	48	74	65	52	46	39	54	67	70	121	<35	mg/l	TM20/PM0
Total Dissolved Solids [#]	480	740	650	520	460	390	540	670	700	1209	<350	mg/kg	TM20/PM0
													<u> </u>



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : CEN 10:1 1 Batch

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56						
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50						
COC No / misc									e attached n ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022				LOD/LOR	Units	No.
Dissolved Antimony#	<0.002	<0.002	0.003	<0.002				<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10)#	<0.02	<0.02	0.03	<0.02				<0.02	mg/kg	TM30/PM17
Dissolved Arsenic [#]	<0.0025	<0.0025	<0.0025	<0.0025				<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) [#]	<0.025	<0.025	<0.025	<0.025				<0.025	mg/kg	TM30/PM17
Dissolved Barium [#]	<0.003	<0.003	<0.003	<0.003				<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) [#]	<0.03	<0.03	<0.03	<0.03				<0.03	mg/kg	TM30/PM17
Dissolved Cadmium [#]	<0.0005	<0.0005	<0.0005	<0.0005				<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) [#]	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM30/PM17
Dissolved Chromium [#]	<0.0015	<0.0015	<0.0015	<0.0015				<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) [#]	<0.015	<0.015	<0.015	<0.015				<0.015	mg/kg	TM30/PM17
Dissolved Copper [#]	<0.007	<0.007	<0.007	<0.007				<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) [#]	<0.07	<0.07	<0.07	<0.07				<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005				<0.005	mg/l	TM30/PM17
Dissolved Lead (A10)#	<0.05	<0.05	<0.05	<0.05				<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum [#]	0.002	0.007	0.008	0.006				<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) [#]	<0.02	0.07	0.08	0.06				<0.02	mg/kg	TM30/PM17
Dissolved Nickel [#]	<0.002	<0.002	<0.002	<0.002				<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) [#]	<0.02	<0.02	<0.02	<0.02				<0.02	mg/kg	TM30/PM17
Dissolved Selenium [#]	< 0.003	< 0.003	< 0.003	< 0.003				< 0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) [#]	< 0.03	< 0.03	< 0.03	< 0.03				< 0.03	mg/kg	TM30/PM17
Dissolved Zinc [#]	< 0.003	< 0.003	< 0.003	< 0.003				< 0.003	mg/l	TM30/PM17
Dissolved Zinc (A10)#	< 0.03	< 0.03	< 0.03	< 0.03				< 0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF [#]	<0.00001	<0.00001	<0.00001	<0.00001				<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01				<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM26/PM0
Fluoride	0.4	0.4	0.5	0.3				<0.3	mg/l	TM173/PM0
Fluoride	4	4	5	<3				<3	mg/kg	TM173/PM0
Sulphate as SO4 [#]	22.0	1.2	1.9	<0.5				<0.5	mg/l	TM38/PM0
Sulphate as SO4 [#]	220	12	19	<5				<5	mg/kg	TM38/PM0
Chloride [#]	0.6	0.5	0.6	<0.3				<0.3	mg/l	TM38/PM0
Chloride [#]	6	5	6	<3				<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	3	<2	3	<2				<2	mg/l	TM60/PM0
Dissolved Organic Carbon	30	<20	30	<20				<20	mg/kg	TM60/PM0
pH	8.29	8.33	8.40	8.26				<0.01	pH units	TM73/PM0
Total Dissolved Solids [#]	82	39	45	56				<35	mg/l	TM20/PM0
Total Dissolved Solids [#]	820	390	450	560				<350	mg/kg	TM20/PM0
									5.5	

Client Name: Ground Investigations Ireland Reference: 11956-6-22 Location: Cherry Orchard Contact: Mike Sutton EMT Job No: 22/13979

Report : EN12457_2

EMT Job No:	22/13979															
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40						
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13						
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50					e attached r ations and a	
COC No / misc														abbievi	auons anu a	Jonyms
Containers	VJT	VJT	VJT	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022						
Sample Type	Soil	Soil	Soil	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1	Inert	Stable Non-	Hazardous	LOD LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	indit	reactive	Hazardodo	LOD LON	01110	No.
Solid Waste Analysis																
Total Organic Carbon [#]	0.26	1.75	0.91	0.53	0.41	0.21	0.27	1.00	0.96	0.66	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025 ^{sv}	0.025 ^{sv}	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs#	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	348	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	0.46	0.28	0.33	<0.22	<0.22	<0.22	<0.22	0.71	<0.22	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	0.87	<0.64	0.78	<0.64	<0.64	<0.64	<0.64	1.28	<0.64	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic [#]	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	0.05	<0.020	<0.020	<0.020	<0.03	<0.03	<0.020	0.15	0.13	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	< 0.005	<0.005	<0.005	<0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	1	5	< 0.005	mg/kg	TM30/PM17
Chromium #	< 0.015	<0.015	<0.005	<0.005	<0.005	< 0.015	<0.005	<0.005	<0.005	<0.015	0.5	10	70	< 0.015	mg/kg	TM30/PM17
Copper [#]	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.07	<0.013	2	50	100	<0.013	mg/kg	TM30/PM17
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Mercury#	0.05	<0.001	<0.001	0.08	<0.001	0.13	0.04	0.05	0.10	0.10	0.5	10	30	<0.02		TM30/PM17
Molybdenum #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.3	10	40	<0.02	mg/kg	TM30/PM17
Nickel [#]								<0.02							mg/kg	TM30/PM17 TM30/PM17
Lead#	<0.05 <0.02	<0.03	<0.05 <0.02	<0.05 <0.02	0.5	10 0.7	50 5	<0.05 <0.02	mg/kg	TM30/PM17 TM30/PM17						
Antimony [#]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	7	<0.02	mg/kg	TM30/PM17 TM30/PM17
Selenium [#] Zinc [#]	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.06	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17 TM30/PM17
											4000	60000	100000		mg/kg	
Total Dissolved Solids	480	740	650	520	460	390 30	540	670 40	700	1209	500	800	100000	<350	mg/kg	TM20/PM0 TM60/PM0
Dissolved Organic Carbon	20	40	30	30	20	30	<20	40	30	<20	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	95.7	86.1	91.7	94.7	96.6	92.3	95.2	94.5	93.3	96.2	-	-	-	<0.1	%	NONE/PM4
Moisture Content 105C (% Dry Weight)	4.5	16.2	9.1	5.6	3.6	8.4	5.1	5.8	7.2	4.0	-	-	-	<0.1	%	PM4/PM0
рН #	8.56	7.50	8.38	8.35	8.47	8.68	8.53	8.20	8.24	8.15	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	3	<3	4	5	5	<3	<3	5	8	5	10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	8	130	6	10	7	9	58	144	109	582	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride [#]	5	6	4	6	5	7	4	5	9	5	800	15000	25000	<3	mg/kg	TM38/PM0

Client Name:	Name: Ground Investigations Ireland						Report :	EN12457	2							
Reference: Location: Contact: EMT Job No:	11956-6-2 Cherry Or Mike Sutto 22/13979	2 chard							-	ass jar, T=p	T=plastic tub					
EMT Sample No.	41-44	45-48	49-52	53-56												
Sample ID	TP-06	TP-13	TP-12	TP-07												
Depth	0.50	0.50	0.50	0.50											e attached n ations and a	
COC No / misc Containers	VJT	VJT	VJT	VJT												-
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022												
Sample Type	Soil	Soil	Soil	Soil												1
Batch Number Date of Receipt	1	1 30/08/2022	1 30/08/2022	1 30/08/2022							Inert	Stable Non- reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis	00/00/2022	00/00/2022	00/00/2022	00/00/2022												
Total Organic Carbon #	0.91	0.24	0.55	0.34							3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025 ^{sv}	<0.025							6	-	-	<0.025	mg/kg	TM36/PM1
Sum of 7 PCBs#	<0.035 ^{sv}	<0.035	<0.035	<0.035							1	-	-	<0.035	mg/kg	TM17/PM
Mineral Oil	<30	<30	<30	<30							500	-	-	<30	mg/kg	TM5/PM8/PM1
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22							-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64							100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	<0.025	<0.025							0.5	2	25	<0.025	mg/kg	TM30/PM1
Barium #	<0.03	<0.03	<0.03	<0.03							20	100	300	<0.03	mg/kg	TM30/PM1
Cadmium #	<0.005	<0.005	<0.005	<0.005							0.04	1	5	<0.005	mg/kg	TM30/PM1
Chromium #	<0.015	<0.015	<0.015	<0.015							0.5	10	70	<0.015	mg/kg	TM30/PM1
Copper#	<0.07	<0.07	<0.07	<0.07							2	50	100	<0.07	mg/kg	TM30/PM1
Mercury#	<0.0001	<0.0001	<0.0001	<0.0001							0.01	0.2	2	<0.0001	mg/kg	TM61/PM
Molybdenum #	<0.02	0.07	0.08	0.06							0.5	10	30	<0.02	mg/kg	TM30/PM1
Nickel [#]	<0.02	<0.02	<0.02	<0.02							0.4	10	40	<0.02	mg/kg	TM30/PM1
Lead #	<0.05	<0.05	<0.05	<0.05							0.5	10	50	<0.05	mg/kg	TM30/PM1
Antimony [#]	<0.02	<0.02	0.03	<0.02							0.06	0.7	5	<0.02	mg/kg	TM30/PM1
Selenium #	<0.03	<0.03	<0.03	<0.03							0.1	0.5	7	<0.03	mg/kg	TM30/PM1
Zinc#	<0.03	<0.03	<0.03	<0.03							4	50	200	<0.03	mg/kg	TM30/PM1
Total Dissolved Solids#	820	390	450	560							4000	60000	100000	<350	mg/kg	TM20/PM
Dissolved Organic Carbon	30	<20	30	<20							500	800	1000	<20	mg/kg	TM60/PM
Dry Matter Content Ratio	96.8	95.0	97.7	97.3							-	-	-	<0.1	%	NONE/PM
Moisture Content 105C (% Dry Weight)	3.3	5.3	2.3	2.8							-	-	-	<0.1	%	PM4/PM0
pH #	8.03	8.43	8.30	8.59							-	-	-	<0.01	pH units	TM73/PM1
Phenol	<0.1	<0.1	<0.1	<0.1							1	-	-	<0.1	mg/kg	TM26/PM
Fluoride	4	4	5	<3							10	150	500	<3	malka	TM173/PM
	+	+	5	-0							10	150	500	~>	mg/kg	AWLY S/F W
Sulphate as SO4 #	220	12	19	<5							1000	20000	50000	<5	mg/kg	TM38/PM
Chloride #	6	5	6	<3							800	15000	25000	<3	mg/kg	TM38/PM
																1
																1

Ground Investigations Ireland
11956-6-22
Cherry Orchard
Mike Sutton

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
22/13979	1	TP-03	0.50	1-4	No interpretation possible
22/13979	1	TP-11	1.50	5-8	No interpretation possible
22/13979	1	TP-01	0.50	9-12	No interpretation possible
22/13979	1	TP-11	0.50	13-16	No interpretation possible
22/13979	1	TP-09	0.50	17-20	No interpretation possible
22/13979	1	TP-03	1.50	21-24	No interpretation possible
22/13979	1	TP-10	0.50	25-28	No interpretation possible
22/13979	1	TP-10	1.50	29-32	No interpretation possible
22/13979	1	TP-14	0.50	33-36	Possible lubricating oil & naturally occurring compounds
22/13979	1	TP-13	1.50	37-40	Possible degraded diesel, lubricating oil & naturally occurring compounds
22/13979	1	TP-06	0.50	41-44	No interpretation possible
22/13979	1	TP-13	0.50	45-48	No interpretation possible
22/13979	1	TP-12	0.50	49-52	Possible lubricating oil & naturally occurring compounds
22/13979	1	TP-07	0.50	53-56	No interpretation possible

Asbestos Analysis

Element Materials Technology

Client Name:	Ground Investigations Ireland
Reference:	11956-6-22
Location:	Cherry Orchard
Contact:	Mike Sutton

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos subsamples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/13979	1	TP-03	0.50	4	Simon Postlewhite	01/09/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	01/09/2022	Asbestos Fibres	NAD
					Simon Postlewhite	01/09/2022	Asbestos ACM	NAD
					Simon Postlewhite	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-11	1.50	8	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-01	0.50	12	Anthony Carman	01/09/2022	General Description (Bulk Analysis)	Brown Soil/Stones
					Anthony Carman	01/09/2022	Asbestos Fibres	NAD
					Anthony Carman	01/09/2022	Asbestos ACM	NAD
					Anthony Carman	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-11	0.50	16	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-09	0.50	20	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-03	1.50	24	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-10	0.50	28	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-10	1.50	32	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD

Client Name:
Reference:
Location:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton

Location Contact			Cherry O Mike Sut					
EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
2/13979	1	TP-14	0.50	36	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-13	1.50	40	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-06	0.50	44	Catherine Coles	01/00/2022	Conserved Desceriminan (Bulk Analysia)	light brown coil/cond
22/139/9		11-00	0.50	44		01/09/2022	General Description (Bulk Analysis)	light brown soil/sand
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-13	0.50	48	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
								NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-12	0.50	52	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
			0.00	02	Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
					Rebecca Collins	01/09/2022	Aspestos Type	
22/13979	1	TP-07	0.50	56	Simon Postlewhite	01/09/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	01/09/2022	Asbestos Fibres	NAD
					Simon Postlewhite	01/09/2022	Asbestos ACM	NAD
					Simon Postlewhite	01/09/2022	Asbestos Type	NAD

Client Name:Ground Investigations IrelandReference:11956-6-22Location:Cherry Orchard

Contact: Mike Sutton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
22/13979	1	TP-03	1.50	21-24	PCB	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

Notification of Deviating Samples

Matrix : Solid

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/13979

SOILS and ASH

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

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at $35^{\circ}C \pm 5^{\circ}C$ unless otherwise stated. Moisture content for CEN Leachate tests are dried at $105^{\circ}C \pm 5^{\circ}C$. Ash samples are dried at $37^{\circ}C \pm 5^{\circ}C$.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCI (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation. Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
В	Indicates analyte found in associated method blank.
DR	Dilution required.
М	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
СО	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
Ν	Client Sample
ТВ	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

[
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	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 22/13979

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

EMT Job No: 22/13979

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co- elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co- elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM61	Determination of Mercury by Cold Vapour Atomic Fluorescence - WATERS: Modified USEPA Method 245.7, Rev 2, Feb 2005. SOILS: Modified USEPA Method 7471B, Rev.2, Feb 2007	PM0	No preparation is required.	Yes		AR	Yes

EMT Job No: 22/13979

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
ТМ73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377- 3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
ТМ73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377- 3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.			AR	
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	



Issue :

Element Materials Technology Unit 3 Deeside Point Zone 3 Deeside Industrial Park Deeside CH5 2UA P: +44 (0) 1244 833780 F: +44 (0) 1244 833781

W: www.element.com

Ground Investigations Ireland Catherinestown House Hazelhatch Road Newcastle Co. Dublin Ireland diala TESTING 4225 Attention : Mike Sutton Date : 30th September, 2022 Your reference : 11956-06-22 Our reference : Test Report 22/15588 Batch 1 Cherry Orchard Sites 4 & 5 Location : Date samples received : 26th September, 2022 Status : Final Report

Ten samples were received for analysis on 26th September, 2022 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

1

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:

h lun

Bruce Leslie Project Manager

Please include all sections of this report if it is reproduced

Client Name:
Reference:
Location:
Contact:
EMT Job No:

Ground Investigations Ireland 11956-06-22 Cherry Orchard Sites 4 & 5 Mike Sutton 22/15588

Report : Solid

EMI JOD NO:	22/15588										_		
EMT Sample No.	1	2	3	4	5	6	7	8	9	10			
Sample ID	TP-01	TP-02	TP-04	TP-05	TP-06	TP-07	TP-09	TP-11	TP-13	TP-14			
Depth	1.50	2.50	1.50	1.50	1.50	2.40	0.50	2.50	1.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	т	т	т	т	т	т	т	т	т	т			
Sample Date	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022	23/09/2022			
Sample Type	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1			Method
Date of Receipt	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	26/09/2022	LOD/LOR	Units	No.
Sulphate as SO4 (2:1 Ext) [#]	0.0079	0.3278	0.0067	0.0114	0.0240	0.1701	0.0117	0.0175	0.1508	0.0197	<0.0015	g/l	TM38/PM20
рН #	8.76	8.00	8.74	8.76	8.53	8.45	8.53	8.54	8.22	8.63	<0.01	pH units	TM73/PM11
pri	0.10	0.00	0.11	0.10	0.00	0.10	0.00	0.01	0.22	0.00	0.01	pri dinto	
									1				

Client Name:Ground Investigations IrelandReference:11956-06-22Location:Cherry Orchard Sites 4 & 5Contact:Mike Sutton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason			
	No deviating sample report results for job 22/15588								

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/15588

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If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

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Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

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STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation. Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

ISO17025 (UKAS Ref No. 4225) accredited - UK.
ISO17025 (SANAS Ref No.T0729) accredited - South Africa
Indicates analyte found in associated method blank.
Dilution required.
MCERTS accredited.
Not applicable
No Asbestos Detected.
None Detected (usually refers to VOC and/SVOC TICs).
No Determination Possible
Calibrated against a single substance
Surrogate recovery outside performance criteria. This may be due to a matrix effect.
Results expressed on as received basis.
AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
Analysis subcontracted to an Element Materials Technology approved laboratory.
Samples are dried at 35°C ±5°C
Suspected carry over
Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
Matrix Effect
No Fibres Detected
AQC Sample
Blank Sample
Client Sample
Trip Blank Sample
Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

[
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	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

Element Materials Technology

EMT Job No: 22/15588

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377- 3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No

Method Code Appendix



LABORATORY REPORT



4043

Contract Number: PSL22/6449

Report Date: 21 October 2022

Client's Reference: 11956-06-22

Client Name: Ground Investigations Ireland Ltd Catherinestown House Hazelhatch Road Newcastle Co Dublin D22 YD52

For the attention of: Michael Sutton/Chris Byrne

Contract Title:	Cherry Orchard Sites 4 & 5
Date Received:	5/10/2022
Data Commanadu	5/10/2022

Date Commenced:5/10/2022Date Completed:21/10/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Director) R Berriman (Quality Manager) S Royle (Laboratory Manager)

EKT

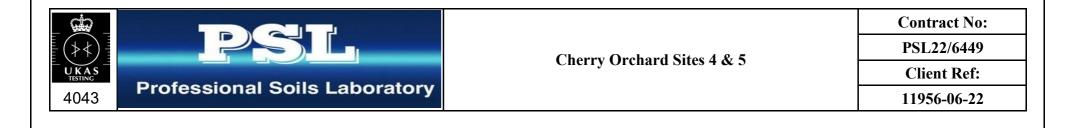
L Knight (Assistant Laboratory Manager) S Eyre (Senior Technician) T Watkins (Senior Technician)

Page 1 of

5 – 7 Hexthorpe Road, Hexthorpe, Doncaster DN4 0AR tel: +44 (0)844 815 6641 fax: +44 (0)844 815 6642 e-mail: rgunson@prosoils.co.uk awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP01		В	1.50		Brown slightly sandy slightly gravelly CLAY.
TP02		В	2.50		Grey slightly sandy gravelly CLAY.
TP03		В	1.50		Brown slightly sandy gravelly CLAY with cobbles.
TP04		В	1.50		Brown slightly sandy gravelly CLAY.
TP05		В	1.50		Brown slightly sandy slightly gravelly CLAY.
TP06		В	1.50		Brown slightly sandy slightly gravelly CLAY.
TP07		В	2.40		Grey slightly sandy gravelly CLAY.
TP08		В	2.50		Grey slightly sandy slightly gravelly CLAY.
TP09		В	0.50		Brown slightly sandy gravelly CLAY with many cobbles.
TP10		В	2.50		Brown slightly sandy gravelly CLAY.
TP11		В	2.50		Brown slightly sandy gravelly CLAY with many cobbles.
TP13		В	1.50		Brown slightly sandy gravelly CLAY.
TP14		В	1.50		Brown slightly sandy gravelly CLAY.



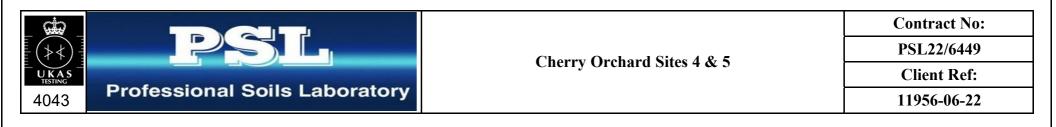
SUMMARY OF SOIL CLASSIFICATION TESTS

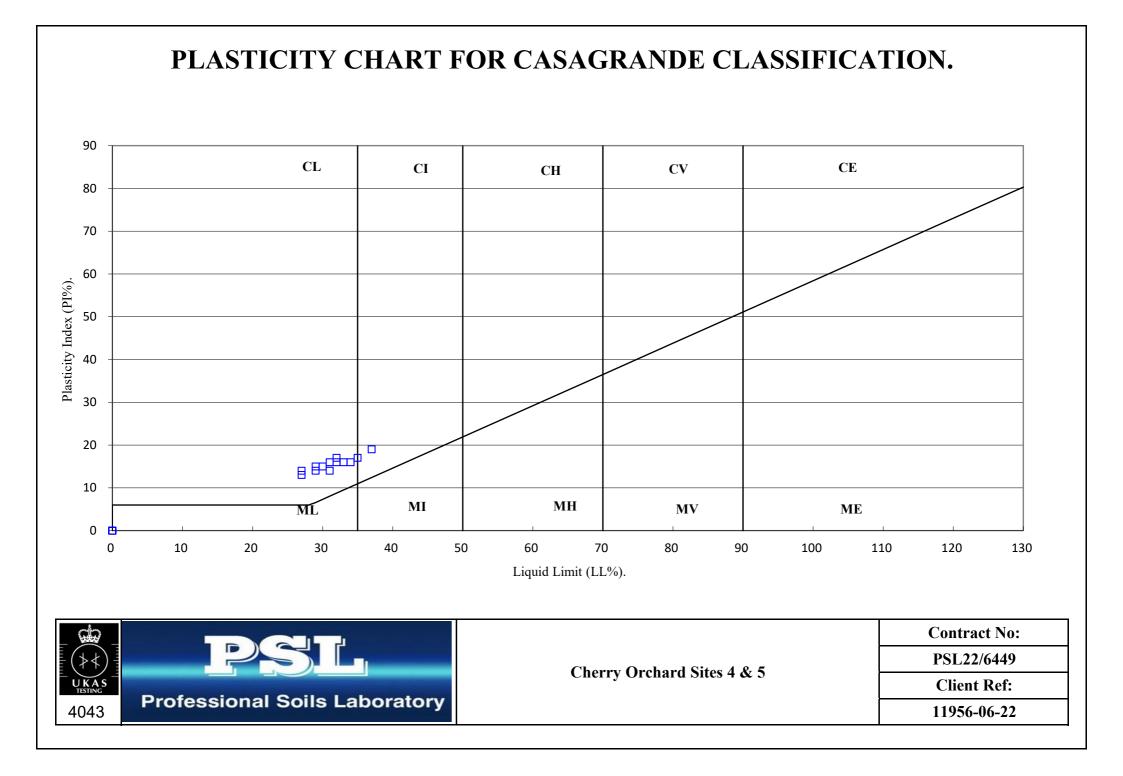
(BS1377 : PART 2 : 1990)

					Moisture	Linear	Particle	Liquid	Plastic	Plasticity	Passing	
Hole	Sample	Sample	Тор	Base	Content	Shrinkage	Density	Limit	Limit	Index	.425mm	Remarks
Number	Number	Туре	Depth	Depth	%	%	Mg/m ³	%	%	%	%	
			m	m	Clause 3.2	Clause 6.5	Clause 8.2	Clause 4.3/4	Clause 5.3	Clause 5.4		
TP01		В	1.50		9. 7			29	14	15	62	Low Plasticity CL
TP02		В	2.50		6.2			31	15	16	45	Low Plasticity CL
TP03		В	1.50		16			27	14	13	32	Low Plasticity CL
TP04		В	1.50		11			30	15	15	36	Low Plasticity CL
TP05		В	1.50		16			34	18	16	71	Low Plasticity CL
TP06		В	1.50		13			37	18	19	72	Intermediate Plasticity CI
TP07		В	2.40		10			32	15	17	52	Low Plasticity CL
TP08		В	2.50		19			33	17	16	63	Low Plasticity CL
TP09		В	0.50		20			35	18	17	31	Intermediate Plasticity CI
TP10		В	2.50		14			27	13	14	51	Low Plasticity CL
TP11		В	2.50		21			31	17	14	35	Low Plasticity CL
TP13		В	1.50		9.3			29	15	14	31	Low Plasticity CL
TP14		В	1.50		8.9			32	16	16	40	Low Plasticity CL

SYMBOLS : NP : Non Plastic

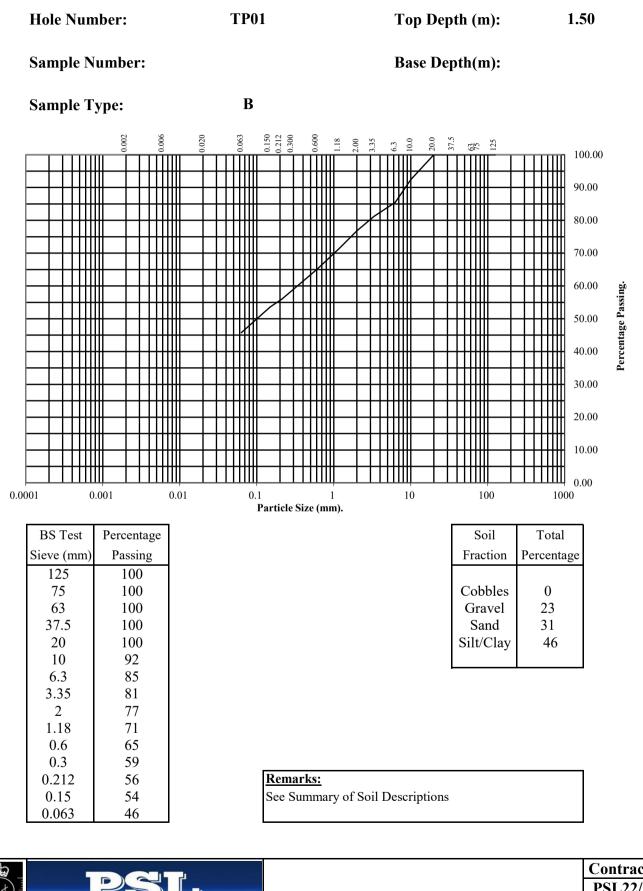
* : Liquid Limit and Plastic Limit Wet Sieved.

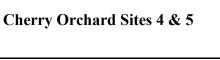




BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

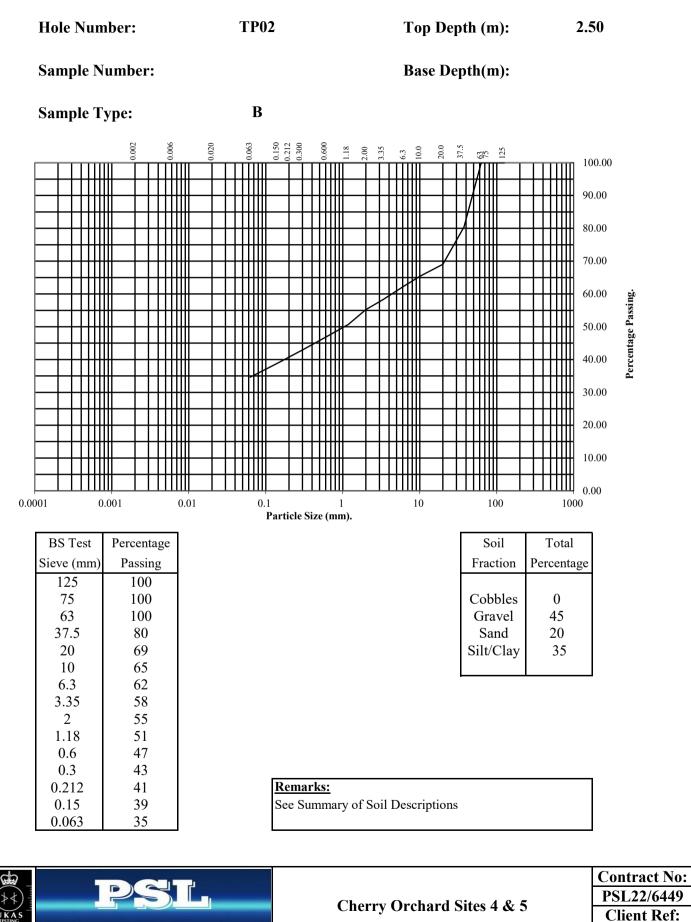




Professional Soils Laboratory

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

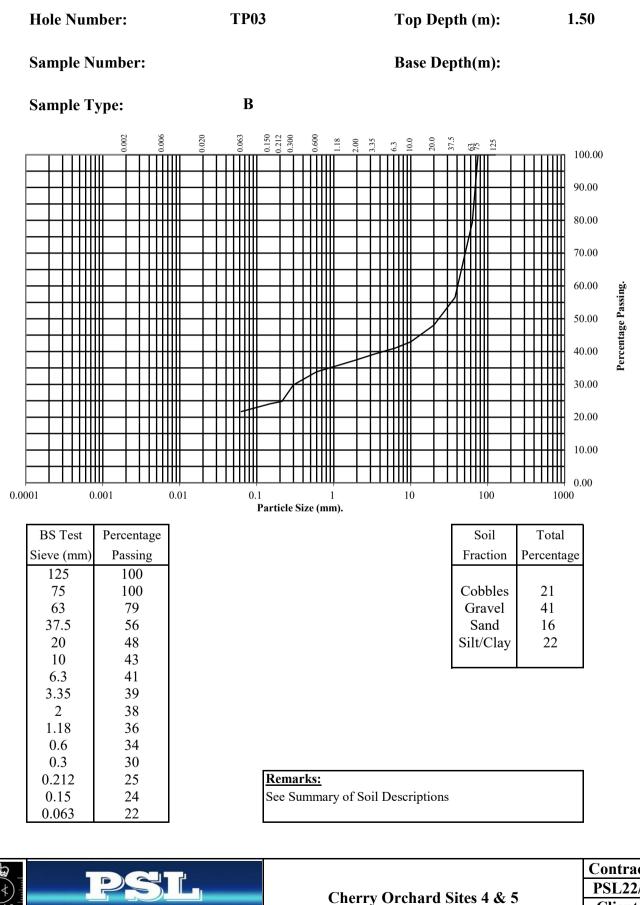


11956-06-22

Professional Soils Laboratory

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

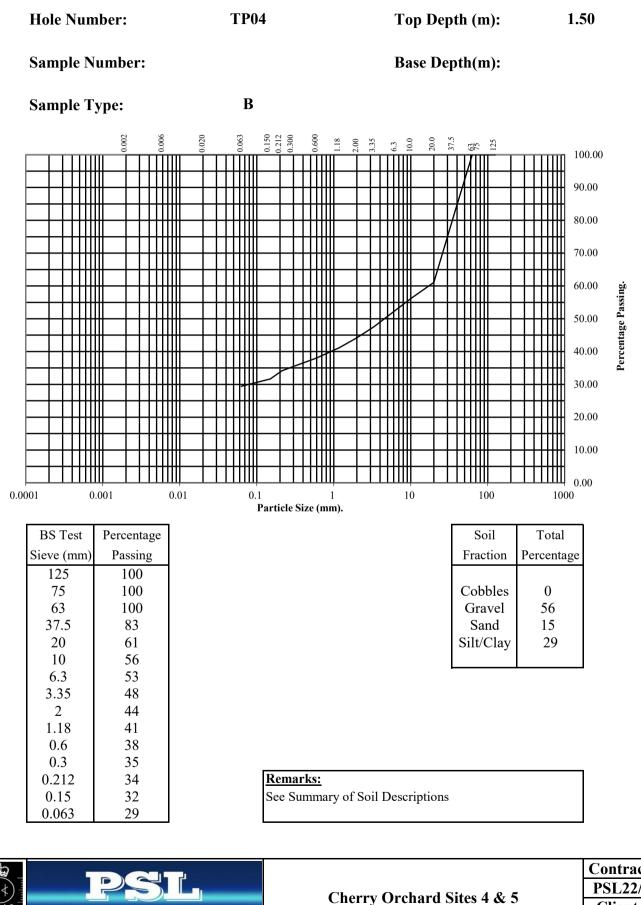


Professional Soils Laboratory

4043

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

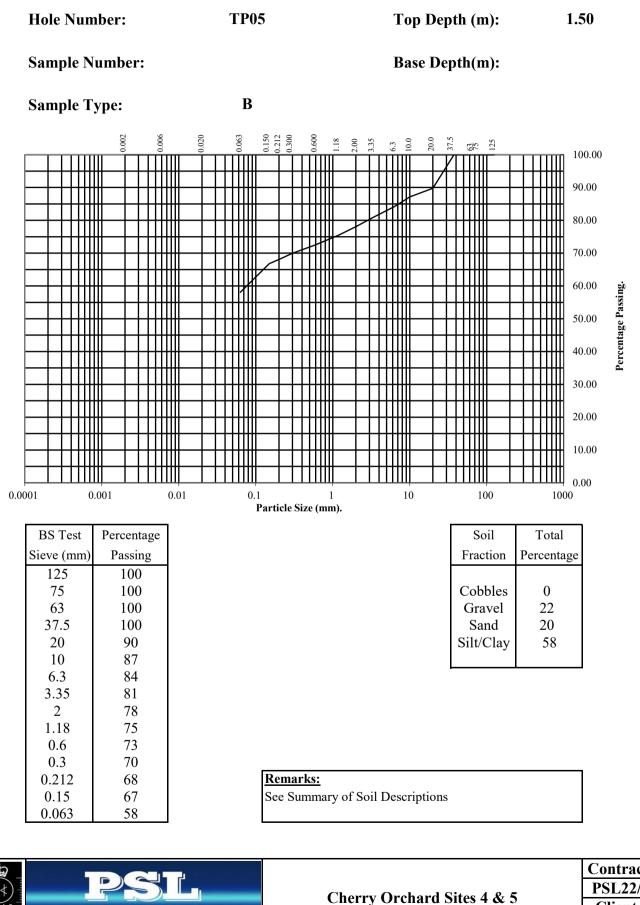


Professional Soils Laboratory

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BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

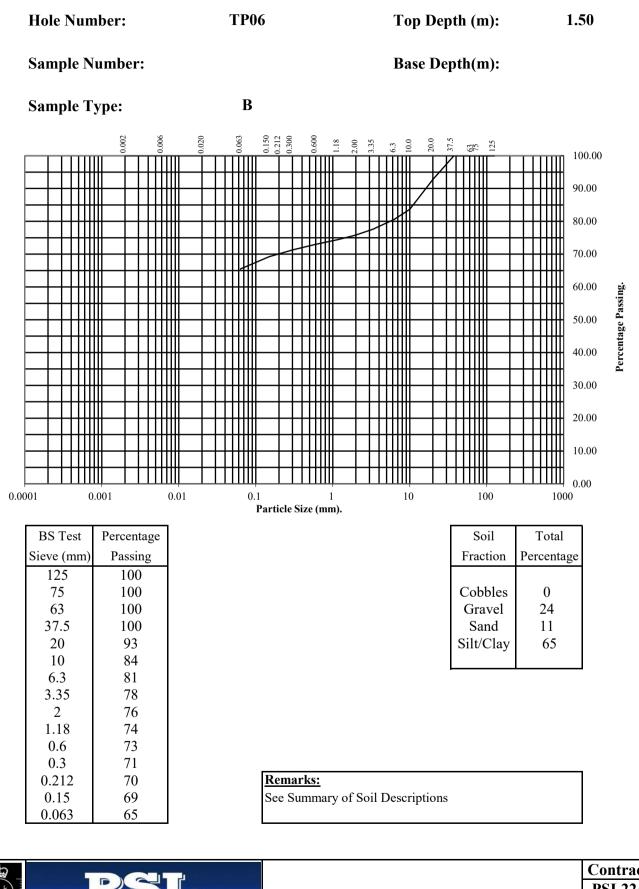


Professional Soils Laboratory

4043

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2



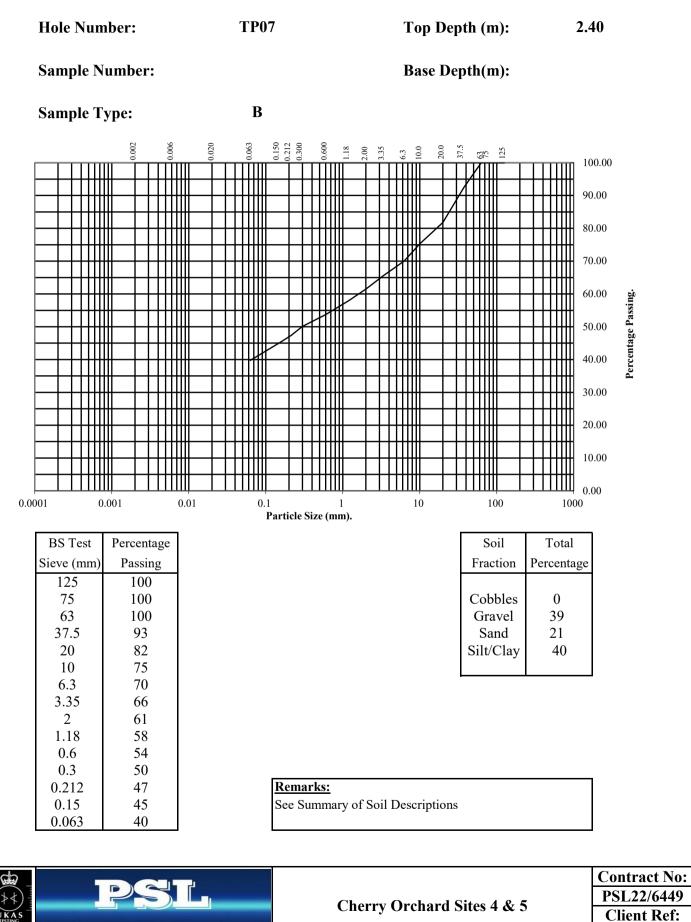
Professional Soils Laboratory

4043

Cherry Orchard Sites 4 & 5

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2



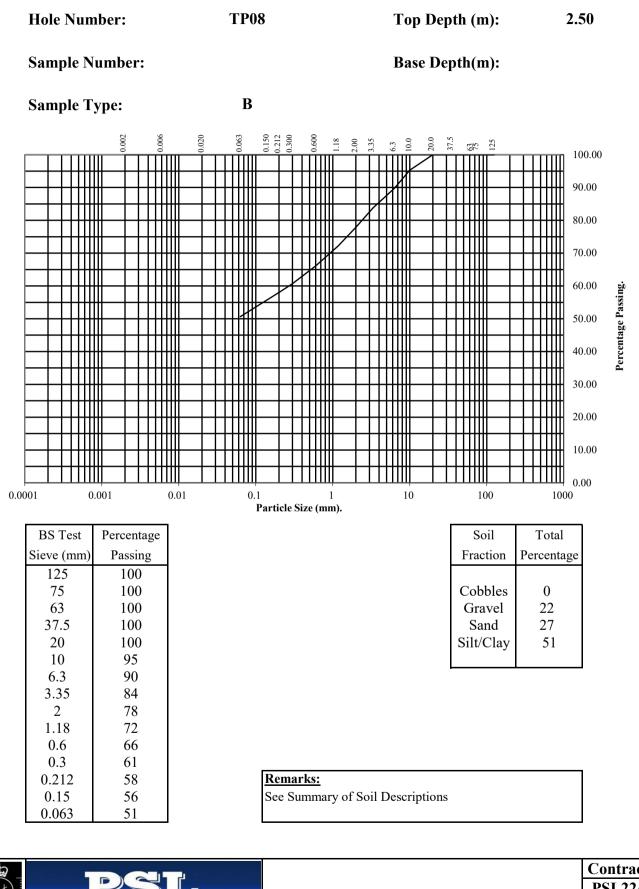
Professional Soils Laboratory

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11956-06-22

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2



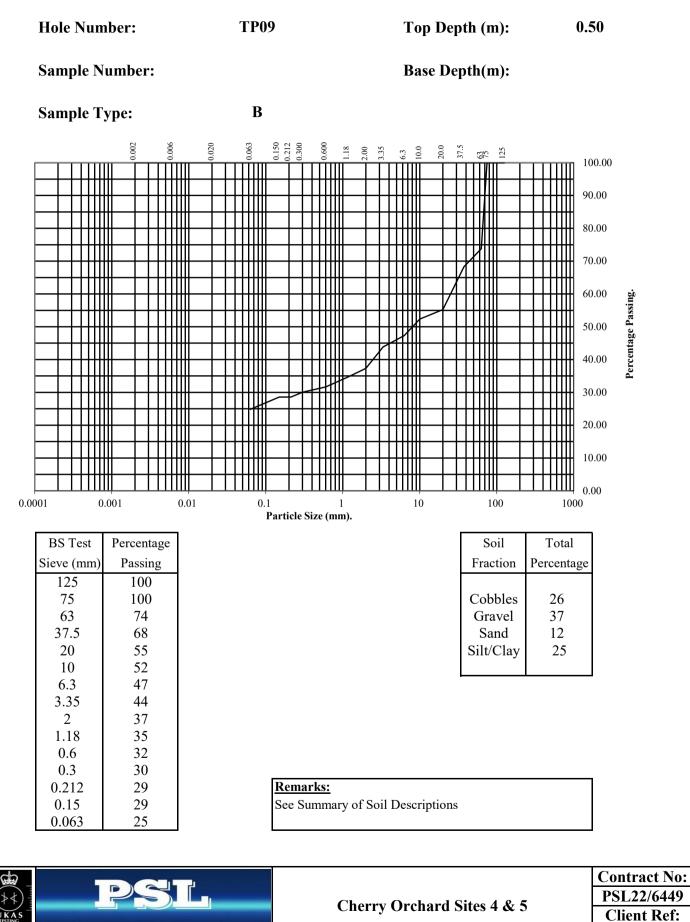
Professional Soils Laboratory

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Cherry Orchard Sites 4 & 5

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

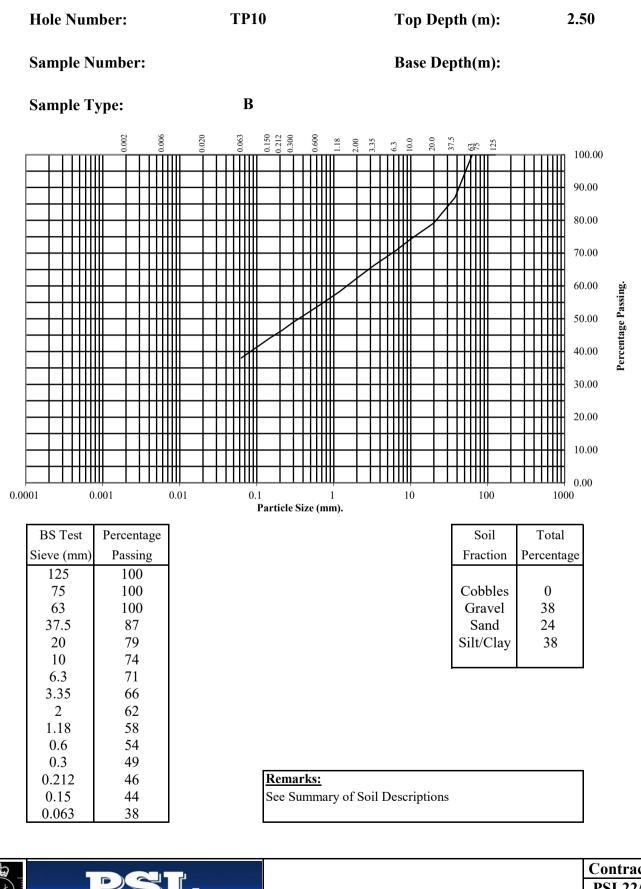


11956-06-22

Professional Soils Laboratory

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2



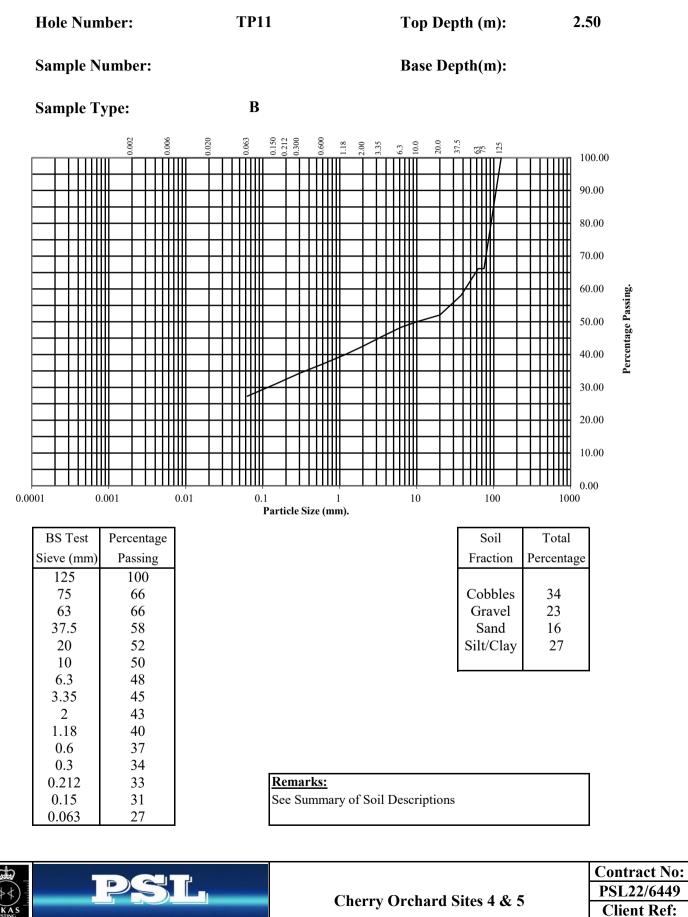
Cherry Orchard Sites 4 & 5



Professional Soils Laboratory

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

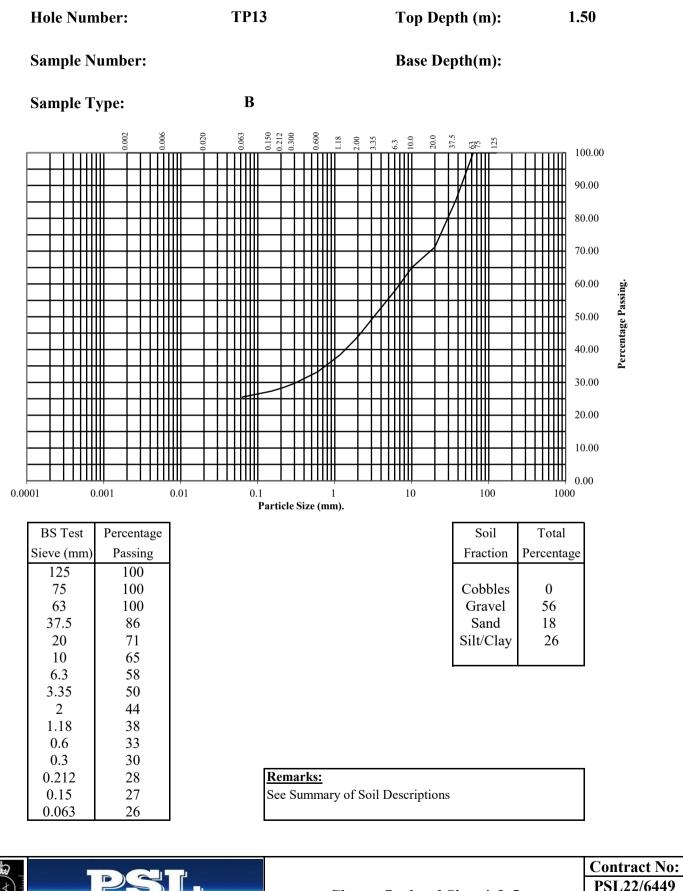


11956-06-22

Professional Soils Laboratory

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

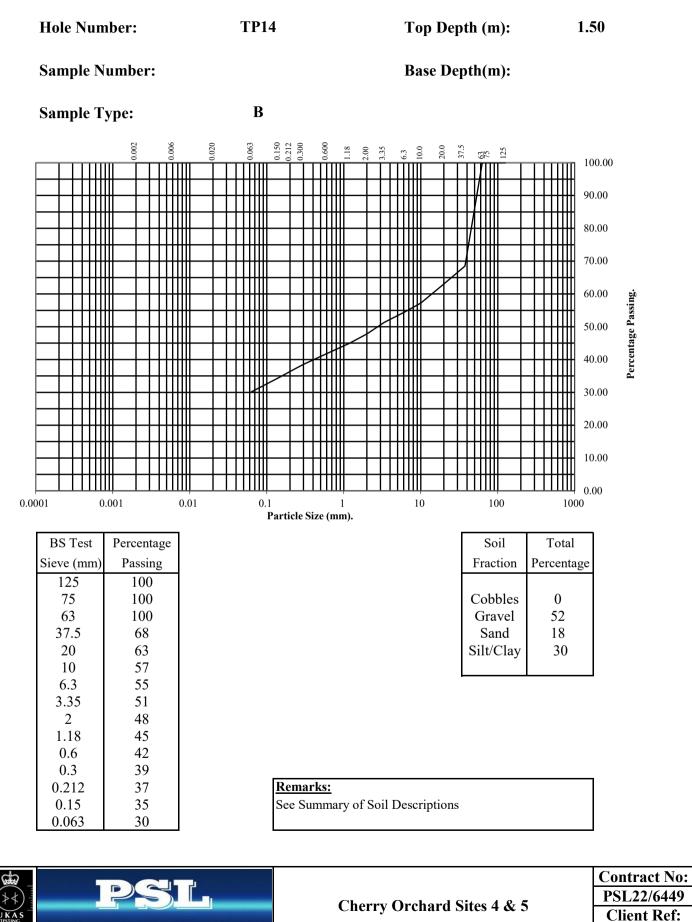


Professional Soils Laboratory

PSL22/6449 **Client Ref:** 11956-06-22

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2



Professional Soils Laboratory

4043

11956-06-22

APPENDIX 7 – Groundwater Monitoring





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GROUNDWATER MONITORING

Cherry Orchard Sites 4 & 5

BOREHOLE	DATE	ТІМЕ	GROUNDWATER (m BGL)	Comments
BH01	14/11/2022	14:01	2.78	
BH11	14/11/2022	13:53	3.28	
BH18	14/11/2022	14:12	5.24	



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Ground Investigations Ireland

Cherry Orchard Sites 4 & 5

Waterman Moylan

Waste Classification Report

October 2022



Directors: Fergal McNamara (MD), Conor Finnerty, Aisling McDonnell & Barry Sexton Ground Investigations Ireland Limited | Registered in Ireland Company Regsitration No.: 405726



Tel: 01 601 5175 / 5176 Email: info@gii.ie Web: www.gii.ie

DOCUMENT CONTROL SHEET

Project Title	Cherry Orchard Sites 4 & 5			
Engineer	Waterman Moylan			
Project No	11956-06-22			
Document Title	Waste Classification Report			

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
А	Final	B Sexton	M Sutton	B Sexton	Dublin	06 October 2022

Ground Investigations Ireland Ltd. present the results of the fieldworks and laboratory testing in accordance with the specification and related documents provided by or on behalf of the client. The possibility of variation in the ground and/or groundwater conditions between or below exploratory locations or due to the investigation techniques employed must be taken into account when this report and the appendices inform designs or decisions where such variation may be considered relevant. Ground and/or groundwater conditions may vary due to seasonal, man-made or other activities not apparent during the fieldworks and no responsibility can be taken for such variation. The data presented and the recommendations included in this report and associated appendices are intended for the use of the client and the client's geotechnical representative only and any duty of care to others is excluded unless approved in writing.





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1.0 Preamble

Ground Investigations Ireland (GII) was appointed by Waterman Moylan Consulting Engineers to carry out a Waste Classification Assessment for a proposed development in Cherry Orchard, Dublin 10. All site investigation works were carried out under the supervision of a GII Geo-Environmental Engineer. The site investigation works which facilitated the waste classification (trial pitting) were completed in August 2022.

2.0 Purpose & Scope

It is understood that as part of the proposed development there may be an excavation to accommodate foundations, services, pavements and carparking and as such the material which may be excavated and removed from site needs to be assessed in terms of waste disposal outlets.

The purpose of the waste classification exercise was as follows.

- Assess the site in terms of historical use; and
- Classification, in terms of waste management and final disposal outlets, of material that may require disposal following excavation during the construction phase.

The scope of the work undertaken to facilitate the waste classification exercise included the following:

- Site walkover;
- Historical desk study;
- Excavation of fourteen (14 No.) trial pits;
- Collection of subsoil samples for chemical analysis;
- Environmental laboratory testing; and
- Waste classification.

3.0 Limitations

GII has prepared this report for the sole use of Waterman Moylan. No other warranty, express or implied, is made as to the professional advice included in this report or other services provided by GII.

The conclusions and recommendations contained in this report are based upon information provided by others and the assumption that all relevant information has been provided by those bodies from whom it has been requested. Information obtained from third parties has not been independently verified by GII, unless otherwise stated in this report.

This report has been prepared in line with best industry standards and within the project's budgetary and time constraints. The methodology adopted and the sources of information used by GII in providing its services are outlined in this report.

The work described to facilitate this waste classification was undertaken in August 2022, this report is based on the conditions encountered and the information available during that period. The scope of this Report and the services are accordingly factually limited by these circumstances.

Site investigation locations were selected by the consultant engineer.

GII disclaim any undertaking or obligation to advise any person of any change in any matter affecting the Report, which may come or be brought to GII's attention after the date of the Report.

The conclusions presented in this report represent GII's best professional judgement based on review of site conditions observed during any site visit and the relevant information available at the time of writing. The opinions and conclusions presented are valid only to the extent that the information provided was accurate and complete.

The investigation was focused on a broad assessment of the subsoil quality across the site. The assessment did not extend to the identification of asbestos containing materials associated with any on-site structures, ground gases or groundwater.

The waste classification exercise is reflective of and applicable to the ground conditions on site at the time of the site investigation and sampling. Alterations to the ground conditions or any further excavations carried out on site following the investigation are not reflected in this report.

4.0 Site Location and Layout

The site is located at Cherry Orchard, Dublin 10 (Figure 1 Appendix 1). At the time of the assessment the site was comprised of two parcels of land. The parcels were separated by Park West Avenue. The larger western parcel of land was bounded to the west by the M50, to the north by Cedar Park Avenue, to the east by Park West Avenue and to the south by a railway line. The smaller eastern parcel of land was located to the east of Park West Avenue. This parcel was bounded by housing estates to the north and south, by Park West Avenue to the west and by New Cherry Orchard Park to the east.

5.0 Site History

GII reviewed the aerial photographs and historical maps maintained by the Ordnance Survey of Ireland (OSI) and the google imagery records. These included the 6-inch maps that were produced between 1829 and 1842, the 25-inch maps that were produced between 1888 and 1913 and the 6-inch Cassini Maps that were produced between the 1830's and 1930's. The site is undeveloped on all historical maps reviewed. Based on a review of the OSI and Google Imagery aerial photograph records the site has not been developed per se since at least 1995. However subsoils from adjoining developments appear to have been imported into the site during the construction of the various surrounding developments. The southern section of the larger parcel and the entirety of the smaller parcel appear to have had accepted ground deposits from the surrounding developments.

6.0 Subsurface Exploration

6.1. General

During the ground investigation a programme of intrusive investigation specified by the Consulting Engineer was undertaken to determine the sub surface conditions at the proposed site. Regular sampling and insitu testing was undertaken in the exploratory holes to facilitate the geotechnical descriptions and to enable laboratory testing to be carried out on the soil samples recovered during excavation and drilling. The procedures used in this site investigation are in accordance with Eurocode 7 Part 2: Ground Investigation and testing (ISEN 1997 – 2:2007) and B.S. 5930:2015.

6.2. Trial Pits

The trial pits were excavated using an 8.5T tracked excavator at the locations shown in Figure 5. The locations were checked using a CAT scan to minimise the potential for encountering services during the excavation. The trial pits were sampled, logged and photographed by a Geotechnical Engineer/Engineering Geologist prior to backfilling with arisings. Notes were made of any services, inclusions, pit stability, groundwater encountered and the characteristics of the strata encountered and are presented on the trial pit logs which are provided in Appendix 2 of this Report.

6.3. Surveying

The exploratory hole locations have been recorded using a KQGeo M8 GNSS System which records the coordinates and elevation of the locations to ITM or Irish National Grid as required by the project specification. The coordinates and elevations are provided on the exploratory hole logs in the appendices of this Report.

7.0 Ground Conditions

7.1. General

The ground conditions encountered during the investigation are summarised below with reference to insitu and laboratory test results. The full details of the strata encountered during the ground investigation are provided in the exploratory hole logs included in the appendices of this report.

The sequence of strata encountered was consistent across the site and generally comprised;

- Topsoil
- Made Ground
- Cohesive Deposits

TOPSOIL: Topsoil was encountered in all the exploratory holes and was present to a maximum depth of 0.30m BGL.

MADE GROUND: Made Ground deposits were encountered beneath the Topsoil and were present to depths ranging from 0.60m to 2.90m BGL. These deposits were described generally as *slightly sandy slightly gravelly Clay with occasional subangular to subrounded cobbles with fragments of ceramic, rope, metal, timber, wire, concrete, red brick, glass and plastic fragments.*

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Made Ground and were described typically as *greyish brown slightly sandy gravelly CLAY with occasional angular to subangular cobbles* underlain by *dark grey slightly sandy gravelly CLAY with occasional angular to subangular cobbles*. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. These deposits had some, occasional or frequent cobble and boulder content, where noted on the exploratory hole logs.

8.0 Laboratory Analysis

8.1. Analysis Suite

In order to assess materials, which may be excavated and removed from site, in terms of waste classification, a selection of samples collected were analysed for a suite of parameters which allows for the assessment of the soils in terms of total pollutant content for classification of materials as *hazardous* or *non-hazardous* (RILTA Suite). The suite also allows for the assessment of the soils in terms of suitability for placement at various categories of landfill. The parameter list for the RILTA suite includes analysis of the solid samples for arsenic, barium, cadmium, chromium, copper, cyanide, lead, nickel, mercury, zinc, speciated aliphatic and aromatic petroleum hydrocarbons, pH, sulphate, sulphide, moisture content, soil organic matter and an asbestos screen.

The RILTA suite also includes those parameters specified in the EU Council Decision establishing criteria for the acceptance of waste at Landfills (Council Decision 2003/33/EC), which for the solid samples are pH, total organic carbon (TOC), speciated aliphatic and aromatic petroleum hydrocarbons, BTEX, phenol, polychlorinated biphenyls (PCB) and PAH.

In line with the requirement of Council Decision 2003/33/EC a leachate was generated from the solid samples which was in turn analysed for antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, zinc, chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon (DOC) and total dissolved solids (TDS). The suite was selected due to the unknown origin of the material underlying the site and no evidence of specific contaminants of concern highlighted in the site history.

The laboratory testing was completed by Element Materials Technology (EMT) in the UK; EMT is a UKAS accredited laboratory. The full laboratory reports are included in Appendix 3.

8.2. Asbestos

Asbestos fibres were not detected in the samples. The laboratory did not identify asbestos containing materials (ACMs) in the samples.

9.0 Waste Classification

GII understands that any materials which may be excavated and removed from site would meet the definition of waste under the Waste Framework Directive. Due to the varying levels of anthropogenic materials encountered in the made ground there are potentially two sets of List of Waste (LoW)¹ codes with "mirror" entries which may be applied to excavated materials to be removed from site.

- 1. 17-05-03* (soil and stone containing dangerous substances, classified as hazardous) or 17-05-04 (soil and stone other than those mentioned in 17-05-03, not hazardous); or
- 17-09-03* (other construction and demolition wastes (including mixed wastes) containing hazardous substances) or 17-09-04 (mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03).

Where waste is a mirror entry in the LoW, it can be classified via a process of analysis against standard criteria set out in the Waste Framework Directive. The assessment process is described in detail in guidance published by the Irish (EPA Waste Classification, List of Waste & Determining if Waste is Hazardous or Non-Hazardous, June 2015) and UK regulatory authorities (Guidance on the Classification and Assessment of Waste: Technical Guidance WM3, 2015). The assessment involves comparison of the concentration of various parameters against defined threshold values.

The specific LoW code which should be applied to the material at each sample location is summarised in Table 2 below. These codes are only applicable where the material is being removed from a site as a waste.

GII use HazWasteOnline[™], a web-based commercial waste classification software tool which assists in the classification of potentially hazardous materials. This tool was used to determine whether the materials sampled are classified as hazardous or non-hazardous. The use of the online tool is accepted by the EPA (EPA 2014).

The conclusions presented in the report are based on GII's professional opinion. It should be noted that the environmental regulator (in this case the EPA) and the waste acceptor (in this case a landfill operator) shall decide whether a waste is hazardous or non-hazardous and suitable for disposal at their facility.

9.1. HazWasteOnLineTM Results

In total, fourteen (14 No.) samples were assessed using the HazWasteOnLine[™] Tool. All samples were classified as being non-hazardous. The complete HazWasteOnLine[™] report for all samples is included in Appendix 4. The specific LoW code which should be applied to the material at each SI location is summarised in Table 2 below. The assigning of the LoW code is based on observations recorded in the trial pits, an estimation of the % of anthropogenic material present and the results of the HazWasteOnline[™] output. The final LoW codes applied at the time of disposal may vary due to variations in % of anthropogenic

¹ Formerly European Waste Catalogue Codes (EWC Codes)

material observed in the excavation phase. Where there is in excess of 2%² anthropogenic material observed the LoW code 17 09 04 may be applied.

9.2. Landfill Waste Acceptance Criteria

Waste Acceptance Criteria (WAC) have been agreed by the EU (Council Decision 2003/33/EC) and are only applicable to material if it is to be disposed of as a waste at a landfill facility. Each individual member state and licensed operators of landfills may apply more stringent WAC. <u>WAC limits and the associated laboratory analysis are not suitable for use in the determination of whether a waste is hazardous or non-hazardous</u>. The data have been compared to the WAC limits set out in Council Decision 2003/33/EC as well as the specific WAC which the EPA have applied to the Walshestown and Integrated Materials Solutions (IMS) Landfills. The Walshestown and IMS landfills have higher limits for a range of parameters while still operating under an inert landfill licence. The WAC data considered in combination with the waste classification outlined in Section 9.1 allows the most suitable waste category to be applied to the WAC data is presented in Appendix 5. The waste categories are summarised in Table 1. A summary of the WAC data is presented in Appendix 5. The waste category assigned to each sample is summarised in Table 2.

Waste Category	Classification Criteria
Category A	Soil and Stone only which are free from ³ anthropogenic materials such
Unlined Soil Recovery	as concrete, brick, timber. Soil must be free from "contamination" e.g.
Facilities	PAHs, Hydrocarbons ⁴ .
Category B1	Reported concentrations within inert waste limits, which are set out by
Inert Landfill	the adopted EU Council Decision 2003/33/EC establishing criteria and
	procedures for the acceptance of waste at landfills pursuant to Article
	16 and Annex II of Directive 1999/31/EC (2002).
	Results also found to be non-hazardous using the HWOL ⁵ application.
Category B2	Reported concentrations greater than Category B1 criteria but less
Inert Landfill	than IMS Hollywood Landfill acceptance criteria, as set out in their
	Waste Licence W0129-02.
	Results also found to be non-hazardous using the HWOL application.
Category C	Reported concentrations greater than Category B2 criteria but within
Non-Haz Landfill	non-haz landfill waste acceptance limits set out by the adopted EU
	Council Decision 2003/33/EC establishing criteria and procedures for
	the acceptance of waste at landfills pursuant to Article 16 and Annex II
	of Directive 1999/31/EC (2002).
	Results also found to be non-hazardous using the HWOL application.

Table 1 Potential Waste Categories	for Disposal/Recovery
------------------------------------	-----------------------

² EPA (2020) - Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities.

³ Free from equates to less than 2%.

⁴ Total BTEX 0.05mg/kg, Mineral Oil 50mg/kg, Total PAHs 1mg/kg, Total PCBs 0.05mg/kg and Asbestos No Asbestos Detected – EPA Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities, 2020.

⁵ HazWasteOnLine[™] Tool.

Waste Category	Classification Criteria
Category C 1	As Category C but containing < 0.001% w/w asbestos fibres.
Non-Haz Landfill	
Category C 2	As Category C but containing >0.001% and <0.01% w/w asbestos
Non-Haz Landfill	fibres
Category C 3	As Category C but containing >0.01% and <0.1% w/w asbestos fibres.
Non-Haz Landfill	
Category D	Results found to be hazardous using HWOL Application.
Hazardous Treatment	
Category D 1	Results found to be hazardous due to the presence of asbestos
Hazardous Disposal	(>0.1%).

9.3. Final Waste Categorisation

All samples were assessed in terms of waste classification using the HazWasteOnLine[™] tool and also the WAC set out in Council Decision 2003/33/EC and the Walshestown/IMS specific WAC to give a final waste categorisation to determine the most appropriate disposal route for any waste generated. The final and most applicable waste category for each sample is summarised in Table 2.

Sample ID	Sample Depth (m)	Material Type	Sample Date	LoW Code	Waste Category
TP-01	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-03	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-03	1.50	Clay	23/08/2022	17 05 04	Category A
TP-06	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-07	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-09	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-10	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-10	1.50	Clay	23/08/2022	17 05 04	Category A
TP-11	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-11	1.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-12	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-13	0.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-13	1.50	Made Ground	23/08/2022	17 05 04	Category B1
TP-14	0.50	Made Ground	23/08/2022	17 05 04	Category B1

Table 2 Individual Sample Waste Category

10.0 Conclusions & Recommendations

The conclusions and recommendations given and opinions expressed in this report are based on the findings of the site investigation works and laboratory testing undertaken. Where any opinion is expressed on the classification of material between site investigation locations, this is for guidance only and no liability can be accepted for its accuracy. No responsibility can be accepted for conditions which have not been revealed by the findings at the site investigation locations.

10.1. Conclusions

10.1.1. Waste Classification

Based on the results of the HazWasteOnLine[™] tool the material sampled across the site if being considered a waste can be classified as non-hazardous.

10.1.2. Asbestos

Asbestos was not detected in the soil samples.

10.1.3. Waste Categories

The most applicable waste categories for each of the samples if being considered a waste have been presented in Table 2.

10.2. Recommendations

10.2.1. Waste Transfer

In the event that material is excavated for removal from site, any firm engaged to transport waste material from site and the operator of any waste facility that will accept subsoils excavated from this site should be furnished with, at a minimum, copies of the **full unabridged** laboratory reports and HazWasteOnLine[™] report for all samples presented in this report.

The material on site if excavated should be removed to the most appropriate facility under the waste categories and LoW codes identified in Table 2. Potential outlets for the various waste categories are presented in Appendix 6, this list is not exhaustive and applicable at the time of the writing this report.

The non-hazardous material across the site if excavated should be removed from site to an appropriate facility under either the LoW codes 17 05 04 or 17 09 04. Where during excavation there is noted to be in excess of 2% anthropogenic material the appropriate LoW code which should be applied is 17 09 04.

11.0 References

Environment Agency (2013). Waste Sampling and Testing for Disposal to Landfill.

Environment Agency (2015). *Technical Guidance WM3 - Guidance on the classification and assessment of waste (1st edition 2015) Technical Guidance WM3.*

Environmental Protection Agency (EPA) (2014). Letter to Licences *Re: Waste Classification & Haz Waste On-Line™*.

Environmental Protection Agency (EPA) (2015). Waste Classification List of Waste & Determining if Waste is Hazardous or Non-hazardous.

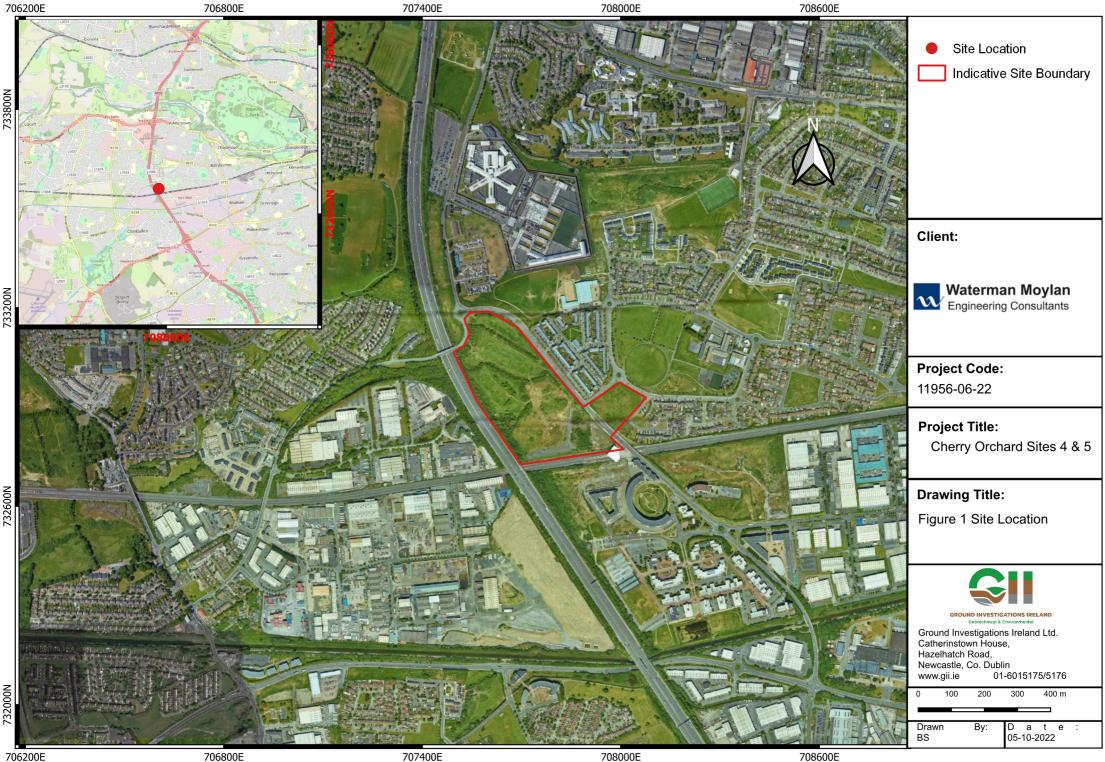
Environmental Protection Agency (EPA) (2020). Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities.

Environmental Protection Agency (EPA) (June 2019). Guidance on Soil and Stone By-products in the context of article 27 of the European Communities (Waste Directive) Regulations 2011 Version 3.

Association of Geotechnical and Geoenvironmental Specialists (2019). *Waste Classification for Soils – A Practitioners Guide.*

APPENDIX 1 - Figures



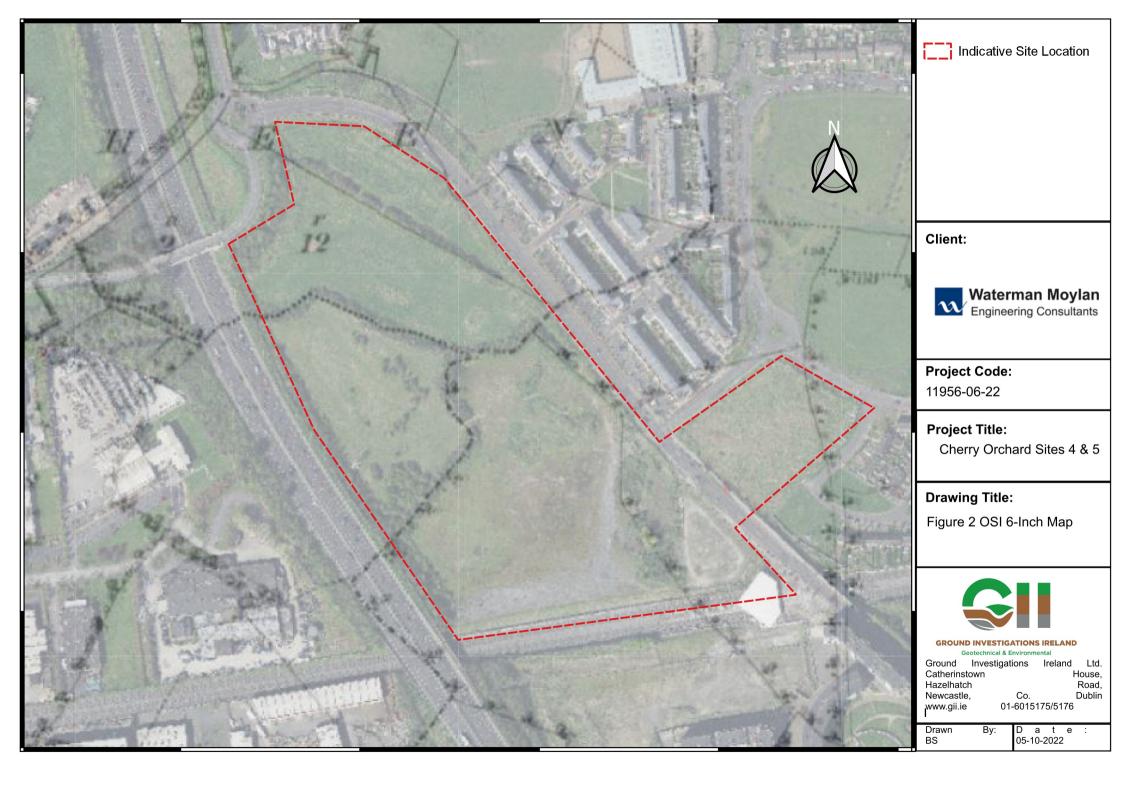


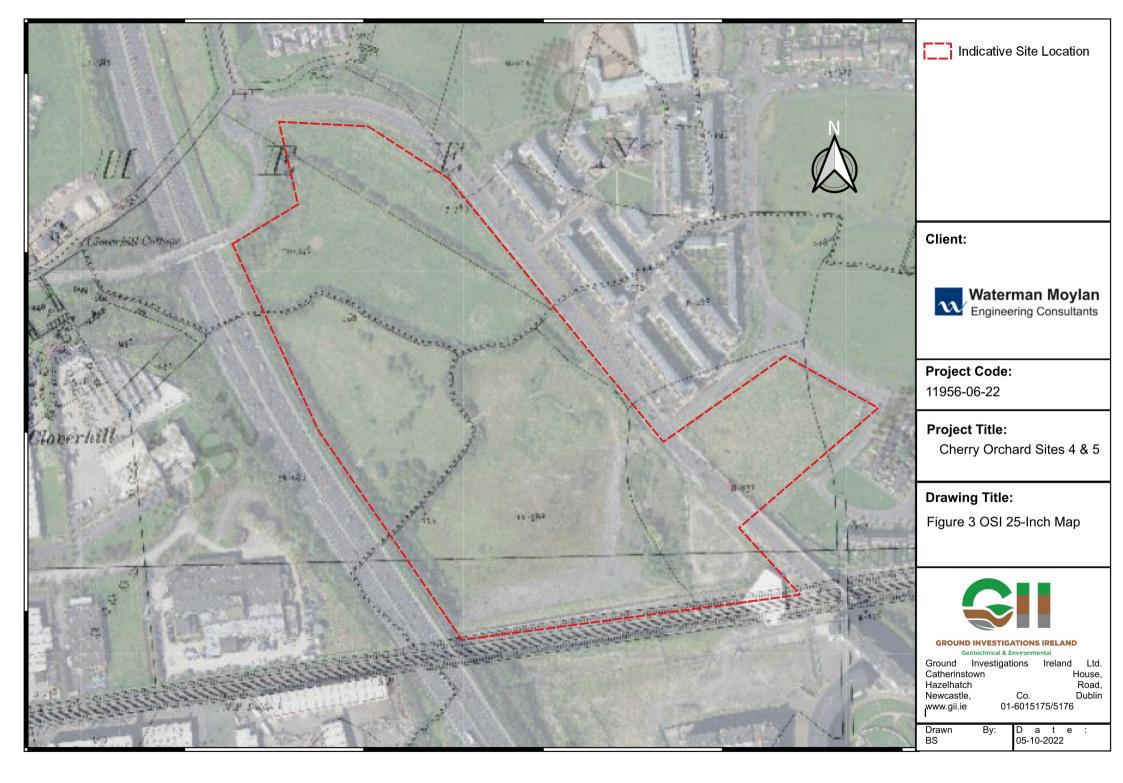
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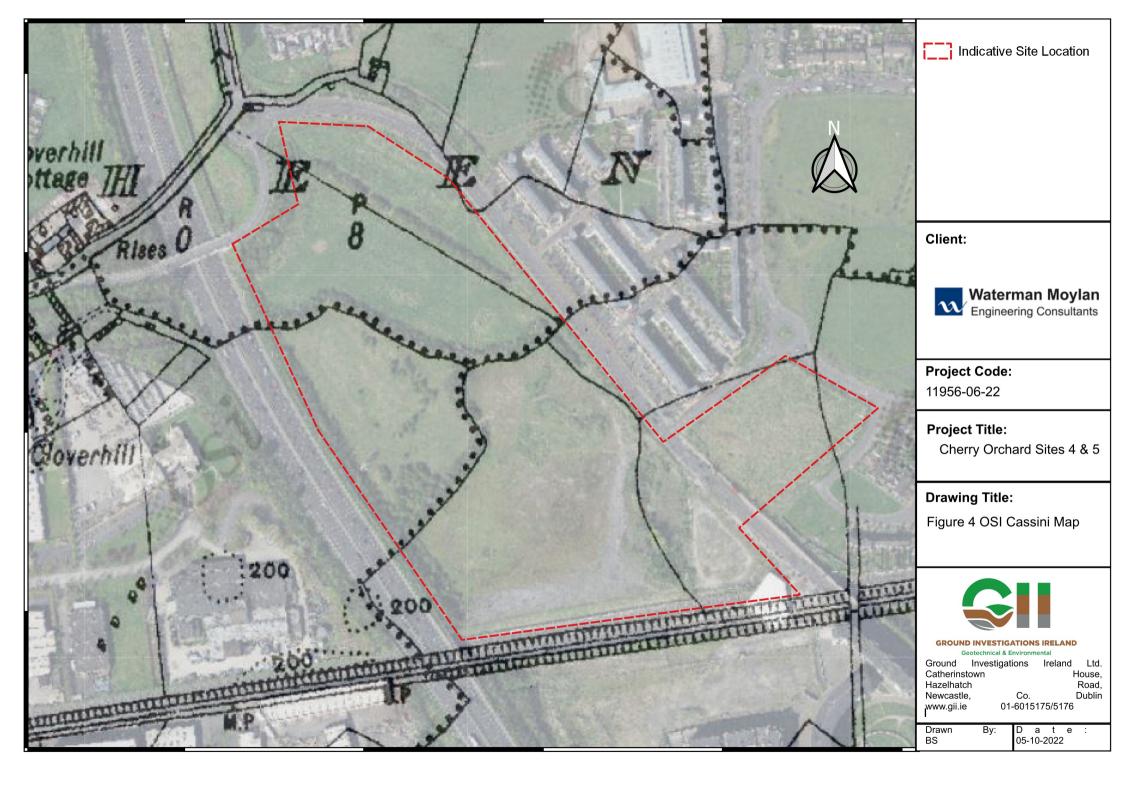
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APPENDIX 2 – Trial Pit Records

























ST04















































ST10









ST11





























TP04





























































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TP12
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APPENDIX 3 – Laboratory Testing





Issue :

Element Materials Technology Unit 3 Deeside Point Zone 3 Deeside Industrial Park Deeside CH5 2UA P: +44 (0) 1244 833780 F: +44 (0) 1244 833781

W: www.element.com

Ground Investigations Ireland Catherinestown House Hazelhatch Road Newcastle Co. Dublin Ireland diala TESTING 4225 Attention : Mike Sutton Date : 9th September, 2022 Your reference : 11956-6-22 Our reference : Test Report 22/13979 Batch 1 Cherry Orchard Location : Date samples received : 30th August, 2022 Status : Final Report

Fourteen samples were received for analysis on 30th August, 2022 of which fourteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

1

Authorised By:

h lun

Bruce Leslie Project Manager

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Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT	VJT			
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt		30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022		30/08/2022	30/08/2022	LOD/LOR	Units	Method No.
Antimony	2	3	3	2	3	2	2	4	3	1	<1	mg/kg	TM30/PM15
Arsenic [#]	7.6	15.4	11.2	11.1	12.4	7.8	8.7	15.0	11.5	7.8	<0.5	mg/kg	TM30/PM15
Barium [#]	51	135	92	82	56	50	51	106	85	105	<1	mg/kg	TM30/PM15
Cadmium [#]	1.4	3.1	2.3	1.7	2.1	1.7	1.6	1.9	1.0	0.7	<0.1	mg/kg	TM30/PM15
Chromium #	31.5	73.9	70.7	42.7	32.7	33.2	42.1	51.8	47.7	42.8	<0.5	mg/kg	TM30/PM15
Copper [#]	23	43	26	31	33	25	28	59	153	27	<1	mg/kg	TM30/PM15
Lead [#]	12	93	60	25	16	13	12	51	85	20	<5	mg/kg	TM30/PM15
Mercury [#]	<0.1	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Molybdenum [#]	3.8	7.2	5.5	5.5	4.1	4.4	4.8	5.3	3.8	3.8	<0.1	mg/kg	TM30/PM15
Nickel [#]	33.7	49.1	44.1	42.0	45.8	35.8	40.4	56.1	43.1	34.7	<0.7	mg/kg	TM30/PM15
Selenium [#]	<1	2	1	1	1	<1	<1	2	1	1	<1	mg/kg	TM30/PM15
Zinc [#]	67	158	97	115	100	80	94	159	282	90	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene [#]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene [#]	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	<0.03	0.08	0.07	0.14	<0.03	<0.03	<0.03	0.04	0.12	0.08	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	<0.03	0.14	0.11	0.16	< 0.03	<0.03	<0.03	0.07	0.21	< 0.03	< 0.03	mg/kg	TM4/PM8
Pyrene [#]	< 0.03	0.13	0.10	0.13	< 0.03	< 0.03	< 0.03	0.07	0.19	0.07	< 0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	<0.06	0.11	0.09	0.11	< 0.06	<0.06	< 0.06	0.08	0.14	<0.06	< 0.06	mg/kg	TM4/PM8
Chrysene [#]	<0.02 <0.07	0.09	0.08	0.07	<0.02 <0.07	<0.02 <0.07	<0.02 <0.07	0.06	0.12	0.04 <0.07	<0.02 <0.07	mg/kg	TM4/PM8 TM4/PM8
Benzo(bk)fluoranthene [#] Benzo(a)pyrene [#]	<0.07	0.13	0.06	0.05	<0.07	<0.07	<0.07	<0.03	0.22	<0.07	<0.07	mg/kg mg/kg	TM4/PM8
Indeno(123cd)pyrene [#]	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.03	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 6 Total [#]	<0.22	0.46	0.28	0.33	<0.22	<0.22	<0.22	<0.22	0.71	<0.22	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	0.87	<0.64	0.78	<0.64	<0.64	<0.64	<0.64	1.28	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	0.11	0.08	0.09	<0.05	<0.05	<0.05	0.06	0.16	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.04	0.03	0.03	<0.02	<0.02	<0.02	0.03	0.06	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	96	90	98	95	98	96	96	89	95	95	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	348	<30	mg/kg	TM5/PM8/PM16



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT	VJT											
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil	Soil											
Batch Number	1	1	1	1	1	1	1	1	1	1			
											LOD/LOR	Units	Method No.
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022			
Aliphatics													
>C5-C6 (HS_1D_AL) [#]	<0.1*	<0.1*	<0.1+	<0.1*	<0.1+	<0.1*	<0.1*	<0.1+	<0.1*	<0.1*	<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)*	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 <0.1 ^{SV}	<0.1 <0.1 ^{sv}	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS 1D AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 (EH CU 1D AL)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) [#]	<4	<4	<4	<4	<4	<4	<4	<4	<4	16	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) [#]	<7	<7	<7	<7	<7	<7	<7	<7	<7	158	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)*	<7	<7	<7	<7	<7	<7	<7	<7	23	174	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	348	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	256	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	23	82	<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{SV}	<0.1 ^{SV}	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4 <7	8 78	<4 <7	mg/kg	TM5/PM8/PM16 TM5/PM8/PM16								
>EC16-EC21 (EH_CU_1D_AR) [#] >EC21-EC35 (EH_CU_1D_AR) [#]	<7	<7	<7	<7	11	<7	<7	<7	71	88	<7	mg/kg mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR)	<7	<7	<7	<7	9	<7	<7	<7	17	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	<26	<26	<26	<26	<26	<26	88	174	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<52	<52	<52	<52	<52	<52	<52	<52	88	522	<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1 ^{sv}	<0.1 ^{sv}	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	127	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	66	49	<10	mg/kg	TM5/PM8/PM16
NTDE#	-5	-5	-5	-5	-5	-5	-5	-5	_sv	_sv	-5	1100	TM26/DM40
MTBE [#]	<5	<5	<5 <5	<5 <5	<5	<5 <5	<5 <5	<5	<5 ^{sv}	<5 ^{\$V}	<5	ug/kg	TM36/PM12 TM36/PM12
Benzene [#] Toluene [#]	<5 <5	<5 ^{sv}	<5 ^{sv}	<5 <5	ug/kg	TM36/PM12 TM36/PM12							
Ethylbenzene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{SV}	5 <5 ^{SV}	<5	ug/kg ug/kg	TM36/PM12
m/p-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{sv}	<5 9 sv	<5	ug/kg	TM36/PM12
o-Xylene [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5 <5 ^{SV}	9 11 ^{SV}	<5	ug/kg	TM36/PM12
y	-	-	-	-	-	-	-	-	-5		-	-58	
PCB 28 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180 [#]	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	ug/kg	TM17/PM8



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979										_		
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50		e attached n	
COC No / misc											abbrevi	ations and a	cronyms
Containers	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1	LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022			No.
Natural Moisture Content	10.2	21.8	16.9	6.3	7.3	11.9	8.7	9.4	10.5	8.5	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	9.3	17.9	14.4	6.0	6.8	10.6	8.0	8.6	9.5	7.9	<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1.0	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	31.5	73.9	70.7	42.7	32.7	33.2	41.1	51.8	47.7	42.8	<0.5	mg/kg	NONE/NONE
Total Organic Carbon [#]	0.26	1.75	0.91	0.53	0.41	0.21	0.27	1.00	0.96	0.66	<0.02	%	TM21/PM24
рН #	8.56	7.50	8.38	8.35	8.47	8.68	8.53	8.20	8.24	8.15	<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0941	0.1042	0.0979	0.0953	0.0934	0.0978	0.0946	0.0952	0.0963	0.0935		kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09		kg	NONE/PM17

Client Name:
Reference:
Location:
Contact:
EMT Job No:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56]		
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50				Plaasa sa	e attached n	otos for all
COC No / misc									ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date			23/08/2022							
-										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt		30/08/2022	30/08/2022							
Antimony	3	4	2	2				<1	mg/kg	TM30/PM15
Arsenic [#]	12.6 91	9.8	8.9 51	8.6 41				<0.5 <1	mg/kg	TM30/PM15 TM30/PM15
Barium [#] Cadmium [#]	1.7	94 2.3	1.1	1.6				<0.1	mg/kg mg/kg	TM30/PM15 TM30/PM15
Chromium #	47.2	35.6	38.2	30.2				<0.5	mg/kg	TM30/PM15
Copper [#]	43	32	31	25				<1	mg/kg	TM30/PM15
Lead #	36	17	27	11				<5	mg/kg	TM30/PM15
Mercury [#]	0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM30/PM15
Molybdenum [#]	4.7	5.8	3.3	3.6				<0.1	mg/kg	TM30/PM15
Nickel [#]	49.7	51.1	32.5	33.7				<0.7	mg/kg	TM30/PM15
Selenium [#]	2	2	<1	<1				<1	mg/kg	TM30/PM15
Zinc [#]	124	105	126	72				<5	mg/kg	TM30/PM15
PAH MS										
Naphthalene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03				<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05				<0.05	mg/kg	TM4/PM8
Fluorene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Phenanthrene [#]	0.04	<0.03	0.05	<0.03				<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Fluoranthene [#]	0.06	< 0.03	0.07	< 0.03				< 0.03	mg/kg	TM4/PM8
Pyrene [#] Benzo(a)anthracene [#]	0.04 <0.06	<0.03 <0.06	0.06	<0.03 <0.06				<0.03 <0.06	mg/kg	TM4/PM8 TM4/PM8
Chrysene [#]	0.04	<0.08	0.07	<0.08				<0.00	mg/kg mg/kg	TM4/PM8
Benzo(bk)fluoranthene [#]	<0.07	<0.02	0.07	<0.02				<0.02	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene#	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
PAH 6 Total [#]	<0.22	<0.22	<0.22	<0.22				<0.22	mg/kg	TM4/PM8
PAH 17 Total Benzo(b)fluoranthene	<0.64 <0.05	<0.64 <0.05	<0.64 0.05	<0.64 <0.05				<0.64 <0.05	mg/kg mg/kg	TM4/PM8 TM4/PM8
Benzo(k)fluoranthene	<0.03	<0.03	<0.02	<0.03				<0.03	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1	<1	<1				<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	69	86	88	92				<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30				<30	mg/kg	TM5/PM8/PM16

Client Name:
Reference:
Location:
Contact:
EMT Job No:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : Solid

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56						
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50				Disease	e attached n	
COC No / misc									ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date										
-										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method No.
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022						NO.
TPH CWG										
Aliphatics										
>C5-C6 (HS_1D_AL)#	<0.1	<0.1+	<0.1+	<0.1*				<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) [#]	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) [#]	<4	<4	<4	<4				<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) [#]	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)*	<7	<7	22	<7				<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_1D_AL)	<7	<7	<7	<7				<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH+HS_1D_AL)	<26	<26	<26	<26				<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_1D_AL)	<10	<10	<10	<10				<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_1D_AL)	<10	<10	22	<10				<10	mg/kg	TM5/PM8/PM16
Aromatics	-0.4	.0.1	sv	-0.4				.0.4		T1 400/D1 440
>C5-EC7 (HS_1D_AR) [#]	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	<0.2				<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)*	<4 <7	<4 <7	<4 8	<4 <7				<4 <7	mg/kg	TM5/PM8/PM16 TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) [#]	<7	<7	90	<7				<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)*	<7	<7		<7				<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_1D_AR) Total aromatics C5-40 (EH+HS_1D_AR)	<26	<26	18 116	<26				<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH+HS_CU_1D_Total)	<20	<20	116	<20				<20	mg/kg mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)*	<0.1	<0.1	<0.1 ^{SV}	<0.1				<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_1D_AR)	<10	<10	<0.1 17	<10				<10	mg/kg	TM50/TW12 TM5/PM8/PM16
>EC25-EC35 (EH_1D_AR)	<10	<10	74	<10				<10	mg/kg	TM5/PM8/PM16
2020 2000 (2.1_13_) **)										
MTBE [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Benzene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Toluene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
Ethylbenzene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
m/p-Xylene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
o-Xylene [#]	<5	<5	<5 ^{sv}	<5				<5	ug/kg	TM36/PM12
PCB 28 [#]	<5 ^{SV}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 52 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 101 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 118 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 138 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 153 [#]	<5 ^{\$V}	<5	<5	<5				<5	ug/kg	TM17/PM8
PCB 180 [#]	<5 ^{sv}	<5	<5	<5				<5	ug/kg	TM17/PM8
Total 7 PCBs [#]	<35 ^{sv}	<35	<35	<35				<35	ug/kg	TM17/PM8

	11956-6-2 Cherry Or Mike Sutte	chard	ns Ireland			Report : Solids: V=	r, J=250g gl	lass jar, T=p	lastic tub		
EMT Job No:	22/13979										
EMT Sample No.	41-44	45-48	49-52	53-56							
Sample ID	TP-06	TP-13	TP-12	TP-07							
Depth	0.50	0.50	0.50	0.50						e attached n	
COC No / misc									abbrevi	ations and a	cronyms
Containers	VJT	VJT	VJT	VJT							
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022							
Sample Type	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1					LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022					LOD/LOR	Units	No.
Natural Moisture Content	13.3	9.1	4.6	7.5					<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	11.7	8.3	4.4	7.0					<0.1	%	PM4/PM0
Hexavalent Chromium [#]	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Chromium III	47.2	35.6	38.2	30.2					<0.5	mg/kg	NONE/NONE
Total Organic Carbon [#]	0.91	0.24	0.55	0.34					<0.02	%	TM21/PM24
рН #	8.03	8.43	8.30	8.59					<0.01	pH units	TM73/PM11
Mass of raw test portion	0.0926	0.0946	0.0922	0.0929						kg	NONE/PM17
Mass of dried test portion	0.09	0.09	0.09	0.09						kg	NONE/PM17



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : CEN 10:1 1 Batch

EMT Job No:	22/13979												
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40			
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13			
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50	Please se	e attached n	otes for all
COC No / misc												ations and a	
Containers	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022			
Sample Type	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1			Martin
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022		30/08/2022	30/08/2022	LOD/LOR	Units	Method No.
Dissolved Antimony [#]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	<0.002	< 0.002	<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) [#]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic [#]	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) [#]	< 0.025	<0.025	<0.025	<0.025	< 0.025	< 0.025	< 0.025	<0.025	<0.025	< 0.025	< 0.025	mg/kg	TM30/PM17
Dissolved Barium [#]	< 0.003	0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.015	0.013	< 0.003	mg/l	TM30/PM17
Dissolved Barium (A10) [#]	<0.003	0.05	<0.003	<0.003	<0.03	<0.03	<0.03	<0.003	0.15	0.13	<0.003	mg/kg	TM30/PM17
Dissolved Cadmium [#]	<0.0005	< 0.0005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	mg/l	TM30/PM17
Dissolved Cadmium (A10) [#]	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	mg/kg	TM30/PM17
Dissolved Chromium [#]	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) [#]	< 0.015	< 0.015	< 0.015	<0.015	< 0.015	< 0.015	< 0.015	<0.015	<0.015	<0.015	< 0.015	mg/kg	TM30/PM17
Dissolved Copper [#]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.007	< 0.007	< 0.007	mg/l	TM30/PM17
Dissolved Copper (A10) [#]	<0.07	<0.07	<0.07	<0.07	< 0.07	< 0.07	<0.07	<0.07	0.07	<0.07	<0.07	mg/kg	TM30/PM17
Dissolved Lead #	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	mg/l	TM30/PM17
Dissolved Lead (A10)#	<0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum [#]	0.005	< 0.002	< 0.002	0.008	< 0.002	0.013	0.004	0.005	0.010	0.010	< 0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) [#]	0.05	<0.02	<0.02	0.08	<0.02	0.13	0.04	0.05	0.10	0.10	<0.02	mg/kg	TM30/PM17
Dissolved Nickel [#]	< 0.002	< 0.002	< 0.002	<0.002	< 0.002	<0.002	< 0.002	<0.002	<0.002	<0.002	< 0.002	mg/l	TM30/PM17
Dissolved Nickel (A10)#	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Selenium [#]	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) [#]	<0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	<0.03	< 0.03	mg/kg	TM30/PM17
Dissolved Zinc [#]	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.006	< 0.003	< 0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) [#]	<0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.06	< 0.03	< 0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF [#]	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF [#]	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	< 0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	TM26/PM0 TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	110120/P1010
Fluoride	0.3	<0.3	0.4	0.5	0.5	<0.3	<0.3	0.5	0.8	0.5	<0.3	mg/l	TM173/PM0
Fluoride	3	<3	4	5	5	<3	<3	5	8	5	<3	mg/kg	TM173/PM0
Sulphate as SO4 [#]	0.8	13.0	0.6	1.0	0.7	0.9	5.8	14.4	10.9	58.2	<0.5	ma/l	TM38/PM0
Sulphate as SO4	8	13.0	6	1.0	0.7	9	5.8	14.4	10.9	58.2	<0.5	mg/l mg/kg	TM38/PM0 TM38/PM0
Chloride [#]	0.5	0.6	0.4	0.6	0.5	0.7	0.4	0.5	0.9	0.5	<0.3	mg/l	TM38/PM0
Chloride [#]	5	6	4	6	5	7	4	5	9	5	<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	2	4	3	3	2	3	<2	4	3	2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	20	40	30	30	20	30	<20	40	30	<20	<20	mg/kg	TM60/PM0
pH	8.16	8.04	8.30	8.31	8.37	8.22	8.13	8.23	8.34	8.13	<0.01	pH units	TM73/PM0
Total Dissolved Solids [#]	48	74	65	52	46	39	54	67	70	121	<35	mg/l	TM20/PM0
Total Dissolved Solids [#]	480	740	650	520	460	390	540	670	700	1209	<350	mg/kg	TM20/PM0
													<u> </u>



Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton 22/13979

Report : CEN 10:1 1 Batch

EMT Job No:	22/13979							_		
EMT Sample No.	41-44	45-48	49-52	53-56						
Sample ID	TP-06	TP-13	TP-12	TP-07						
Depth	0.50	0.50	0.50	0.50						
COC No / misc									e attached n ations and a	
Containers	VJT	VJT	VJT	VJT						
Sample Date										
Sample Type	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1				LOD/LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022				LOD/LOR	Units	No.
Dissolved Antimony#	<0.002	<0.002	0.003	<0.002				<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10)#	<0.02	<0.02	0.03	<0.02				<0.02	mg/kg	TM30/PM17
Dissolved Arsenic [#]	<0.0025	<0.0025	<0.0025	<0.0025				<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) [#]	<0.025	<0.025	<0.025	<0.025				<0.025	mg/kg	TM30/PM17
Dissolved Barium [#]	<0.003	<0.003	<0.003	<0.003				<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) [#]	<0.03	<0.03	<0.03	<0.03				<0.03	mg/kg	TM30/PM17
Dissolved Cadmium [#]	<0.0005	<0.0005	<0.0005	<0.0005				<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) [#]	<0.005	<0.005	<0.005	<0.005				<0.005	mg/kg	TM30/PM17
Dissolved Chromium [#]	<0.0015	<0.0015	<0.0015	<0.0015				<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) [#]	<0.015	<0.015	<0.015	<0.015				<0.015	mg/kg	TM30/PM17
Dissolved Copper [#]	<0.007	<0.007	<0.007	<0.007				<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) [#]	<0.07	<0.07	<0.07	<0.07				<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005	<0.005	<0.005				<0.005	mg/l	TM30/PM17
Dissolved Lead (A10)#	<0.05	<0.05	<0.05	<0.05				<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum [#]	0.002	0.007	0.008	0.006				<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) [#]	<0.02	0.07	0.08	0.06				<0.02	mg/kg	TM30/PM17
Dissolved Nickel [#]	<0.002	<0.002	<0.002	<0.002				<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) [#]	<0.02	<0.02	<0.02	<0.02				<0.02	mg/kg	TM30/PM17
Dissolved Selenium [#]	< 0.003	< 0.003	< 0.003	< 0.003				< 0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) [#]	< 0.03	< 0.03	< 0.03	< 0.03				< 0.03	mg/kg	TM30/PM17
Dissolved Zinc [#]	< 0.003	< 0.003	< 0.003	< 0.003				< 0.003	mg/l	TM30/PM17
Dissolved Zinc (A10)#	< 0.03	< 0.03	< 0.03	< 0.03				< 0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF [#]	<0.00001	<0.00001	<0.00001	< 0.00001				<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01	<0.01	<0.01				<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1	<0.1	<0.1				<0.1	mg/kg	TM26/PM0
Fluoride	0.4	0.4	0.5	0.3				<0.3	mg/l	TM173/PM0
Fluoride	4	4	5	<3				<3	mg/kg	TM173/PM0
Sulphate as SO4 [#]	22.0	1.2	1.9	<0.5				<0.5	mg/l	TM38/PM0
Sulphate as SO4 [#]	220	12	19	<5				<5	mg/kg	TM38/PM0
Chloride [#]	0.6	0.5	0.6	<0.3				<0.3	mg/l	TM38/PM0
Chloride [#]	6	5	6	<3				<3	mg/kg	TM38/PM0
Dissolved Organic Carbon	3	<2	3	<2				<2	mg/l	TM60/PM0
Dissolved Organic Carbon	30	<20	30	<20				<20	mg/kg	TM60/PM0
pH	8.29	8.33	8.40	8.26				<0.01	pH units	TM73/PM0
Total Dissolved Solids [#]	82	39	45	56				<35	mg/l	TM20/PM0
Total Dissolved Solids [#]	820	390	450	560				<350	mg/kg	TM20/PM0
									5.5	

Client Name: Ground Investigations Ireland Reference: 11956-6-22 Location: Cherry Orchard Contact: Mike Sutton EMT Job No: 22/13979

Report : EN12457_2

EMT Job No:	22/13979															
EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40						
Sample ID	TP-03	TP-11	TP-01	TP-11	TP-09	TP-03	TP-10	TP-10	TP-14	TP-13						
Depth	0.50	1.50	0.50	0.50	0.50	1.50	0.50	1.50	0.50	1.50					e attached r ations and a	
COC No / misc														abbievi	auons anu a	Jonyms
Containers	VJT	VJT	VJT	VJT												
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022						
Sample Type	Soil	Soil	Soil	Soil												
Batch Number	1	1	1	1	1	1	1	1	1	1	Inert	Stable Non-	Hazardous	LOD LOR	Units	Method
Date of Receipt	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	30/08/2022	indit	reactive	Hazardodo	LOD LON	01110	No.
Solid Waste Analysis																
Total Organic Carbon [#]	0.26	1.75	0.91	0.53	0.41	0.21	0.27	1.00	0.96	0.66	3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025 ^{sv}	0.025 ^{sv}	6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs#	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	<30	<30	348	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	0.46	0.28	0.33	<0.22	<0.22	<0.22	<0.22	0.71	<0.22	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	0.87	<0.64	0.78	<0.64	<0.64	<0.64	<0.64	1.28	<0.64	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic [#]	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	0.05	<0.020	<0.020	<0.020	<0.03	<0.03	<0.020	0.15	0.13	20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	< 0.005	< 0.005	<0.005	<0.005	<0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.04	1	5	< 0.005	mg/kg	TM30/PM17
Chromium #	< 0.015	<0.015	<0.005	<0.005	<0.005	< 0.015	<0.005	<0.005	<0.005	<0.015	0.5	10	70	< 0.015	mg/kg	TM30/PM17
Copper [#]	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.07	<0.013	2	50	100	<0.013	mg/kg	TM30/PM17
	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Mercury#	0.05	<0.001	<0.001	0.08	<0.001	0.13	0.04	0.05	0.10	0.10	0.5	10	30	<0.02		TM30/PM17
Molybdenum #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.3	10	40	<0.02	mg/kg	TM30/PM17
Nickel [#]								<0.02							mg/kg	TM30/PM17 TM30/PM17
Lead#	<0.05 <0.02	<0.03	<0.05 <0.02	<0.05 <0.02	0.5	10 0.7	50 5	<0.05 <0.02	mg/kg	TM30/PM17 TM30/PM17						
Antimony [#]	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	7	<0.02	mg/kg	TM30/PM17 TM30/PM17
Selenium [#] Zinc [#]	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.06	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17 TM30/PM17
											4000	60000	100000		mg/kg	
Total Dissolved Solids	480	740	650	520	460	390 30	540	670 40	700	1209	500	800	100000	<350	mg/kg	TM20/PM0 TM60/PM0
Dissolved Organic Carbon	20	40	30	30	20	30	<20	40	30	<20	500	800	1000	<20	mg/kg	TM60/PM0
Dry Matter Content Ratio	95.7	86.1	91.7	94.7	96.6	92.3	95.2	94.5	93.3	96.2	-	-	-	<0.1	%	NONE/PM4
Moisture Content 105C (% Dry Weight)	4.5	16.2	9.1	5.6	3.6	8.4	5.1	5.8	7.2	4.0	-	-	-	<0.1	%	PM4/PM0
рН #	8.56	7.50	8.38	8.35	8.47	8.68	8.53	8.20	8.24	8.15	-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	3	<3	4	5	5	<3	<3	5	8	5	10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	8	130	6	10	7	9	58	144	109	582	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride [#]	5	6	4	6	5	7	4	5	9	5	800	15000	25000	<3	mg/kg	TM38/PM0

Client Name:	Ground In	vestigation	s Ireland			Report :	EN12457	2							
Reference: Location: Contact: EMT Job No:	11956-6-2 Cherry Or Mike Sutto 22/13979	2 chard						-	ass jar, T=p	lastic tub					
EMT Sample No.	41-44	45-48	49-52	53-56											
Sample ID	TP-06	TP-13	TP-12	TP-07											
Depth	0.50	0.50	0.50	0.50										e attached n ations and a	
COC No / misc Containers	VJT	VJT	VJT	VJT											-
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022											
Sample Type	Soil	Soil	Soil	Soil											1
Batch Number Date of Receipt	1	1 30/08/2022	1 30/08/2022	1 30/08/2022						Inert	Stable Non- reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis	00/00/2022	00/00/2022	00/00/2022	00/00/2022											
Total Organic Carbon #	0.91	0.24	0.55	0.34						3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025	<0.025 ^{sv}	<0.025						6	-	-	<0.025	mg/kg	TM36/PM1
Sum of 7 PCBs#	<0.035 ^{sv}	<0.035	<0.035	<0.035						1	-	-	<0.035	mg/kg	TM17/PM
Mineral Oil	<30	<30	<30	<30						500	-	-	<30	mg/kg	TM5/PM8/PM1
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22						-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64						100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate															
Arsenic #	<0.025	<0.025	<0.025	<0.025						0.5	2	25	<0.025	mg/kg	TM30/PM1
Barium #	<0.03	<0.03	<0.03	<0.03						20	100	300	<0.03	mg/kg	TM30/PM1
Cadmium #	<0.005	<0.005	<0.005	<0.005						0.04	1	5	<0.005	mg/kg	TM30/PM1
Chromium #	<0.015	<0.015	<0.015	<0.015						0.5	10	70	<0.015	mg/kg	TM30/PM1
Copper#	<0.07	<0.07	<0.07	<0.07						2	50	100	<0.07	mg/kg	TM30/PM1
Mercury#	<0.0001	<0.0001	<0.0001	<0.0001						0.01	0.2	2	<0.0001	mg/kg	TM61/PM
Molybdenum #	<0.02	0.07	0.08	0.06						0.5	10	30	<0.02	mg/kg	TM30/PM1
Nickel [#]	<0.02	<0.02	<0.02	<0.02						0.4	10	40	<0.02	mg/kg	TM30/PM1
Lead #	<0.05	<0.05	<0.05	<0.05						0.5	10	50	<0.05	mg/kg	TM30/PM1
Antimony [#]	<0.02	<0.02	0.03	<0.02						0.06	0.7	5	<0.02	mg/kg	TM30/PM1
Selenium #	<0.03	<0.03	<0.03	<0.03						0.1	0.5	7	<0.03	mg/kg	TM30/PM1
Zinc#	<0.03	<0.03	<0.03	<0.03						4	50	200	<0.03	mg/kg	TM30/PM1
Total Dissolved Solids#	820	390	450	560						4000	60000	100000	<350	mg/kg	TM20/PM
Dissolved Organic Carbon	30	<20	30	<20						500	800	1000	<20	mg/kg	TM60/PM
Dry Matter Content Ratio	96.8	95.0	97.7	97.3						-	-	-	<0.1	%	NONE/PM
Moisture Content 105C (% Dry Weight)	3.3	5.3	2.3	2.8						-	-	-	<0.1	%	PM4/PM0
pH #	8.03	8.43	8.30	8.59						-	-	-	<0.01	pH units	TM73/PM1
Phenol	<0.1	<0.1	<0.1	<0.1						1	-	-	<0.1	mg/kg	TM26/PM
Fluoride	4	4	5	<3						10	150	500	<3	malka	TM173/PM
	+	+	5	-0						10	150	500	~>	mg/kg	/WIT/S/FW
Sulphate as SO4 #	220	12	19	<5						1000	20000	50000	<5	mg/kg	TM38/PM
Chloride #	6	5	6	<3						800	15000	25000	<3	mg/kg	TM38/PM
															1
															1

Ground Investigations Ireland
11956-6-22
Cherry Orchard
Mike Sutton

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
22/13979	1	TP-03	0.50	1-4	No interpretation possible
22/13979	1	TP-11	1.50	5-8	No interpretation possible
22/13979	1	TP-01	0.50	9-12	No interpretation possible
22/13979	1	TP-11	0.50	13-16	No interpretation possible
22/13979	1	TP-09	0.50	17-20	No interpretation possible
22/13979	1	TP-03	1.50	21-24	No interpretation possible
22/13979	1	TP-10	0.50	25-28	No interpretation possible
22/13979	1	TP-10	1.50	29-32	No interpretation possible
22/13979	1	TP-14	0.50	33-36	Possible lubricating oil & naturally occurring compounds
22/13979	1	TP-13	1.50	37-40	Possible degraded diesel, lubricating oil & naturally occurring compounds
22/13979	1	TP-06	0.50	41-44	No interpretation possible
22/13979	1	TP-13	0.50	45-48	No interpretation possible
22/13979	1	TP-12	0.50	49-52	Possible lubricating oil & naturally occurring compounds
22/13979	1	TP-07	0.50	53-56	No interpretation possible

Asbestos Analysis

Element Materials Technology

Client Name:	Ground Investigations Ireland
Reference:	11956-6-22
Location:	Cherry Orchard
Contact:	Mike Sutton

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos subsamples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/13979	1	TP-03	0.50	4	Simon Postlewhite	01/09/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	01/09/2022	Asbestos Fibres	NAD
					Simon Postlewhite	01/09/2022	Asbestos ACM	NAD
					Simon Postlewhite	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-11	1.50	8	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-01	0.50	12	Anthony Carman	01/09/2022	General Description (Bulk Analysis)	Brown Soil/Stones
					Anthony Carman	01/09/2022	Asbestos Fibres	NAD
					Anthony Carman	01/09/2022	Asbestos ACM	NAD
					Anthony Carman	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-11	0.50	16	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-09	0.50	20	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-03	1.50	24	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-10	0.50	28	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-10	1.50	32	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD

Client Name:
Reference:
Location:

Ground Investigations Ireland 11956-6-22 Cherry Orchard Mike Sutton

Location Contact			Cherry O Mike Sut					
EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
2/13979	1	TP-14	0.50	36	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-13	1.50	40	Catherine Coles	01/09/2022	General Description (Bulk Analysis)	soil,stone
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-06	0.50	44	Catherine Coles	01/00/2022	Conserved Desceriminan (Bulk Analysia)	light brown coil/cond
22/139/9		11-00	0.50	44		01/09/2022	General Description (Bulk Analysis)	light brown soil/sand
					Catherine Coles	01/09/2022	Asbestos Fibres	NAD
					Catherine Coles	01/09/2022	Asbestos ACM	NAD
					Catherine Coles	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-13	0.50	48	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
					Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
								NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
22/13979	1	TP-12	0.50	52	Rebecca Collins	01/09/2022	General Description (Bulk Analysis)	brown soil and stone
			0.00	02	Rebecca Collins	01/09/2022	Asbestos Fibres	NAD
					Rebecca Collins	01/09/2022	Asbestos ACM	NAD
					Rebecca Collins	01/09/2022	Asbestos Type	NAD
					Rebecca Collins	01/09/2022	Aspestos Type	
22/13979	1	TP-07	0.50	56	Simon Postlewhite	01/09/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	01/09/2022	Asbestos Fibres	NAD
					Simon Postlewhite	01/09/2022	Asbestos ACM	NAD
					Simon Postlewhite	01/09/2022	Asbestos Type	NAD

Client Name:Ground Investigations IrelandReference:11956-6-22Location:Cherry Orchard

Contact: Mike Sutton

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
22/13979	1	TP-03	1.50	21-24	PCB	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

Notification of Deviating Samples

Matrix : Solid

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/13979

SOILS and ASH

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

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at $35^{\circ}C \pm 5^{\circ}C$ unless otherwise stated. Moisture content for CEN Leachate tests are dried at $105^{\circ}C \pm 5^{\circ}C$. Ash samples are dried at $37^{\circ}C \pm 5^{\circ}C$.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCI (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation. Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
В	Indicates analyte found in associated method blank.
DR	Dilution required.
М	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
СО	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
Ν	Client Sample
ТВ	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

[
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	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 22/13979

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes

EMT Job No: 22/13979

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.	Yes		AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co- elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co- elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SMEWW 5310B:1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM61	Determination of Mercury by Cold Vapour Atomic Fluorescence - WATERS: Modified USEPA Method 245.7, Rev 2, Feb 2005. SOILS: Modified USEPA Method 7471B, Rev.2, Feb 2007	PM0	No preparation is required.	Yes		AR	Yes

EMT Job No: 22/13979

Test Method No. Description		Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
ТМ73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377- 3:1990. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	Yes
ТМ73	73 Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377- 3:1990. Determination of pH by Metrohm automated probe analyser.		Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.			AR	
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

APPENDIX 4 – HazWasteOnLine[™] 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:

a) understand the origin of the waste

GROUND INVESTIGATIONS IRELAND

b) select the correct List of Waste code(s)



- d) select and justify the chosen metal species (Appendix B)
- e) correctly apply moisture correction and other available corrections
- f) add the meta data for their user-defined substances (Appendix A)
- g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)

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

Job name

Cherry Orchard Sites 4 & 5

Description/Comments

Project 11956-06-22

Classified by

Name:Company:Barry SextonGround Investigations Ireland LtdDate:Catherinestown House, Hazelhatch Road,05 Oct 2022 12:01 GMTNewcastle, Co. Dublin.Telephone:353 (01) 601 5175 / 5176

Site Cherry Orchard Site 4 & 5

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

HazWasteOnline[™] Certification: Course

CourseDateHazardous Waste Classification10 Apr 2019Most recent 3 year Refresher19 Apr 2022

Next 3 year Refresher due by Apr 2025

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP-03-23/08/2022-0.50m		Non Hazardous		2
2	TP-11-23/08/2022-1.50m		Non Hazardous		4
3	TP-01-23/08/2022-0.50m		Non Hazardous		6
4	TP-11-23/08/2022-0.50m		Non Hazardous		8
5	TP-09-23/08/2022-0.50m		Non Hazardous		10
6	TP-03-23/08/2022-1.50m		Non Hazardous		12
7	TP-10-23/08/2022-0.50m		Non Hazardous		14
8	TP-10-23/08/2022-1.50m		Non Hazardous		16
9	TP-14-23/08/2022-0.50m		Non Hazardous		18
10	TP-13-23/08/2022-1.50m		Non Hazardous		21
11	TP-06-23/08/2022-0.50m		Non Hazardous		24
12	TP-13-23/08/2022-0.50m		Non Hazardous		26
13	TP-12-23/08/2022-0.50m		Non Hazardous		28
14	TP-07-23/08/2022-0.50m		Non Hazardous		31

Related documents

#	Name	Description
1	Cherry Orchard Sites 4 & 5.HWOL	Element .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Barry Sexton

Created date: 05 Oct 2022 12:01 GMT

Appendices	Page
Appendix A: Classifier defined and non EU CLP determinands	33
Appendix B: Rationale for selection of metal species	34
Appendix C: Version	35





CERTIFIED



HazWasteOnline[™] Report created by Barry Sexton on 05 Oct 2022

Classification of sample: TP-03-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
FP-03-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
9.3%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 9.3% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	Licor optorod data		Conv. Factor	Compound conc.		Classification value		Conc. Not Used
1	æ	antimony { antimor	<mark>ny trioxide</mark> }			2	ma/ka	1.197	2.172	mg/kg	0.000217 %	MC	
1	-	051-005-00-X	215-175-0	1309-64-4		2	тту/ку	1.197	2.172	шу/ку	0.000217 %	~	
2	4	arsenic { arsenic trioxide }			7.6	mg/kg	1.32	9.101	mg/kg	0.00091 %	\checkmark		
Ĺ		033-003-00-0	215-481-4	1327-53-3				1.02			0.00001 /0	Ň	
3	4	cadmium {	<mark>m oxide</mark> }			1.4	ma/ka	1.142	1.451	mg/kg	0.000145 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0								·	
4	<pre>chromium in chromium(III) compounds { Chromium(III) oxide (worst case) }</pre>				31.5	mg/kg	1.462	41.757	mg/kg	0.00418 %	\checkmark		
			215-160-9	1308-38-9									
5	or compounds specified elsewhere in this Annex }			<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>		
		024-017-00-8										Ļ	
6	4		oxide; copper (I) oxi			23	mg/kg	1.126	23.487	mg/kg	0.00235 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1	_								
7	4	•		1	12	mg/kg	1.56	16.977	mg/kg	0.00109 %	\checkmark		
	-	082-004-00-2 231-846-0 7758-97-6 mercury { mercury dichloride }			-							-	
8	4	mercury { mercury 080-010-00-X	231-299-8	7407.04.7	4	<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
				-		mg/kg	1.5			0.000517 %	1		
9	4	042-001-00-9 215-204-7 1313-27-5			-			3.8	1.5 5.171		mg/kg	\checkmark	
	æ	nickel { nickel chromate }			+								
10		028-035-00-7	238-766-5	14721-18-7	-	33.7	mg/kg	2.976	90.972	mg/kg	0.0091 %	\checkmark	
	æ	selenium { nickel s	elenate }					0.554	0.554		0.000055.0/	Í.	1.00
11	~	028-031-00-5	239-125-2	15060-62-5	1	<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
12	4	zinc { zinc chromat 024-007-00-3	<mark>te</mark> } 236-878-9	13530-65-9		67	mg/kg	2.774	168.582	mg/kg	0.0169 %	\checkmark	
	8	TPH (C6 to C40) p	etroleum group		1				=0			Í.	
13	-				<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>	
14		tert-butyl methyl et 2-methoxy-2-methy		1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	1								
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-020-00-8	200-753-7	71-43-2									
16		toluene	000 005 0	400.000		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3			0 0			5.5			



HazWasteOnline[™] Report created by Barry Sexton on 05 Oct 2022

#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound cond	c.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLI							β	
17		ethylbenzene				<0.005	mg/kg		<0.005 m	g/kg	<0.0000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4						9/119			
		xylene											
18		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]		<0.01	mg/kg		<0.01 m	g/kg	<0.000001 %		<lod< td=""></lod<>
19	۰	рН				8.56	pН		8.56 pH	4	8.56 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3									
21	۵	acenaphthylene				<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_								
22	۲	acenaphthene	•			<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9	_								
23	9	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
24		phenanthrene				<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
			201-581-5	85-01-8						5 5			
25	•	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
26	۰	fluoranthene		·		<0.03	mg/kg		<0.03 m	a/ka	<0.000003 %		<lod< td=""></lod<>
20			205-912-4	206-44-0		<0.03	шу/ку		<0.05 m	y/ry	<0.000003 /0		LOD
27	0	pyrene				<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
			204-927-3	129-00-0	_							_	
28		benzo[a]anthracer			_	<0.06	mg/kg		<0.06 mg	g/kg	<0.000006 %		<lod< td=""></lod<>
		601-033-00-9	200-280-6	56-55-3									
29		chrysene			_	<0.02	mg/kg		<0.02 m	g/kg	<0.000002 %		<lod< td=""></lod<>
		601-048-00-0	205-923-4	218-01-9	_							-	
30		benzo[b]fluoranthe		005 00 0	_	<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
		601-034-00-4	205-911-9	205-99-2	_							-	
31		benzo[k]fluoranthe		607.00.0	_	<0.02	mg/kg		<0.02 m	g/kg	<0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9	+-								
32		benzo[a]pyrene; b		F0 00 0	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8	+-							\vdash	
33	۲	indeno[123-cd]pyr	205-893-2	193-39-5	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
_	-	dibenz[a,h]anthrac		130-03-0								\vdash	
34		601-041-00-2	200-181-8	53-70-3	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[ghi]perylen		0-10-3								-	[
35		Sourcolônibei Alem	205-883-8	191-24-2	_	<0.04	mg/kg		<0.04 mg/kg	g/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	1	191272	+-								
36		602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035 m	g/kg	<0.000035 %		<lod< td=""></lod<>
_	_			1000 00-0	+							-	
37	-	barium { 🧧 barium				51	mg/kg	1.117	51.646 m	g/kg	0.00516 %	\checkmark	
			215-127-9	1304-28-5									
38	۲	coronene				<0.04	mg/kg		<0.04 mg	g/kg	<0.000004 %		<lod< td=""></lod<>
			205-881-7	191-07-1	_					_		-	
39		benzo[j]fluoranthe				<1	mg/kg		<1 m	g/kg	<0.0001 %		<lod< td=""></lod<>
	1	601-035-00-X	205-910-3	205-82-3							0.0462 %		

Kev

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



HazWasteOnline[™] Report created by Barry Sexton on 05 Oct 2022

Classification of sample: TP-11-23/08/2022-1.50m

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

Sample details

Sample name:	LoW Code:	
TP-11-23/08/2022-1.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
17.9%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 17.9% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	Licor optorod data		Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
1	~	antimony { antimor		1		3	mg/kg	1.197	2.948	mg/kg	0.000295 %	\checkmark	
	-		215-175-0	1309-64-4									
2	4					15.4	mg/kg	1.32	16.693	mg/kg	0.00167 %	\checkmark	
┝	-	033-003-00-0 cadmium {	215-481-4	1327-53-3									
3	4	048-002-00-0	215-146-2	1306-19-0		3.1	mg/kg	1.142	2.907	mg/kg	0.000291 %	\checkmark	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	hium(III) compounds }	; { [•] <mark>chromium(III)</mark>		73.9	mg/kg	1.462	88.675	mg/kg	0.00887 %	~	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of	hromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }			<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< th=""></lod<>
		024-017-00-8											
6	4		oxide; copper (I) oxi			43	mg/kg	1.126	39.747	mg/kg	0.00397 %	\checkmark	
\vdash			215-270-7	1317-39-1									
7	4	lead { lead chroma		7750 07 0	1	93	mg/kg	1.56	119.097	mg/kg	0.00764 %	\checkmark	
		082-004-00-2 231-846-0 7758-97-6											
8		mercury { mercury dichloride } 080-010-00-X 231-299-8 7487-94-7				0.4	mg/kg	1.353	0.444 mg/k	mg/kg	0.0000444 %	\checkmark	
-		molybdenum { molybdenum(VI) oxide }											
9	~	042-001-00-9	215-204-7	1313-27-5	-	7.2	mg/kg	1.5	8.868	mg/kg	0.000887 %	\checkmark	
					┝								
10	~		238-766-5	14721-18-7		49.1	mg/kg	2.976	119.977	mg/kg	0.012 %	\checkmark	
11	æ	selenium { nickel s	elenate }	,		0		0.554	4 4 0 0		0.000440.00		
' '		028-031-00-5	239-125-2	15060-62-5		2	тід/кд	2.554	4.193	mg/kg	0.000419 %	\checkmark	
12	~	zinc { <mark>zinc chromat</mark> 024-007-00-3	t <mark>e</mark> } 236-878-9	13530-65-9		158	mg/kg	2.774	359.857	mg/kg	0.036 %	\checkmark	
	8	TPH (C6 to C40) p	etroleum group						=-				
13		· · · · ·		ТРН		<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy		1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>
		603-181-00-X	216-653-1	1634-04-4									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>
L		601-020-00-8	200-753-7	71-43-2									
16		toluene	000 005 0	400.000		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	+-								
		xylene	baa 400 0 [4]	65 47 0 (4)	_								
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	рН				7.5	pН		7.5	pН	7.5 pH		
				PH	_								
20		naphthalene	T			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_							-	
21	۲	acenaphthylene		000 00 0	_	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_							-	
22	۲	acenaphthene	bo4 400 0	60.00.0	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		<i>4</i> 1	201-469-6	83-32-9	_								
23	8	fluorene	201-695-5	86-73-7	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene	004 504 5			0.08	mg/kg		0.0657	mg/kg	0.00000657 %	\checkmark	
		anthragona	201-581-5	85-01-8	+								
25	0	anthracene	204-371-1	120-12-7	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26	۰	fluoranthene				0.14	malka		0 115	malka	0.0000115 %	,	
20			205-912-4	206-44-0		0.14	mg/kg		0.115	mg/kg	0.0000115 %	\checkmark	
27	0	pyrene				0.13	mg/kg		0.107	mg/kg	0.0000107 %	\checkmark	
			204-927-3	129-00-0	_								
28		benzo[a]anthracer		50.55.0	_	0.11	mg/kg		0.0903	mg/kg	0.00000903 %	\checkmark	
		601-033-00-9	200-280-6	56-55-3	+								
29		chrysene 601-048-00-0	205-923-4	b19 01 0	_	0.09	mg/kg		0.0739	mg/kg	0.00000739 %	\checkmark	
		benzo[b]fluoranthe		218-01-9	+								
30		601-034-00-4	205-911-9	205-99-2	_	0.11	mg/kg		0.0903	mg/kg	0.00000903 %	\checkmark	
		benzo[k]fluoranthe	1	205-55-2	-								
31		601-036-00-5	205-916-6	207-08-9	_	0.04	mg/kg		0.0328	mg/kg	0.00000328 %	\checkmark	
		benzo[a]pyrene; b			+								
32		601-032-00-3	200-028-5	50-32-8	_	0.07	mg/kg		0.0575	mg/kg	0.00000575 %	\checkmark	
33		indeno[123-cd]pyr	ene			0.05	ma/ka		0.041	mg/kg	0.0000041 %	,	
33			205-893-2	193-39-5		0.05	mg/kg		0.041	шу/ку	0.0000041 /8	\checkmark	
34		dibenz[a,h]anthrac	ene			<0.04	mg/kg		<0.04	ma/ka	<0.000004 %		<lod< td=""></lod<>
01		601-041-00-2	200-181-8	53-70-3		40.01	iiig/itg		40.01	ing/kg			
35	۰	benzo[ghi]perylen	e			0.05	mg/kg		0.041	mg/kg	0.0000041 %	\checkmark	
-			205-883-8	191-24-2	1					5.5		Ľ	
36	۲	polychlorobipheny				<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
	-	602-039-00-4	215-648-1	1336-36-3	+-							-	
37	4	barium { 🤎 barium	n oxide }			135	mg/kg	1.117	123.748	mg/kg	0.0124 %	\checkmark	
			215-127-9	1304-28-5								Ĺ	
38	۲	coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
			205-881-7	191-07-1	1		39			9		_	
39		benzo[j]fluoranthe		005 00 0		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
		601-035-00-X	205-910-3	205-82-3						Total:	0.0899 %	-	

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



Classification of sample: TP-01-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
TP-01-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
14.4%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 14.4% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	l data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
1	~	antimony { antimon				3	mg/kg	1.197	3.074	mg/kg	0.000307 %	\checkmark	
-	-		215-175-0	1309-64-4	-								
2	4	arsenic { arsenic tri 033-003-00-0	215-481-4	1327-53-3		11.2	mg/kg	1.32	12.658	mg/kg	0.00127 %	\checkmark	
\vdash	æ	cadmium { cadmiu		1327-33-3	+								
3			215-146-2	1306-19-0		2.3	mg/kg	1.142	2.249	mg/kg	0.000225 %	\checkmark	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	hium(III) compounds }	; { [•] <mark>chromium(III)</mark>		70.7	mg/kg	1.462	88.452	mg/kg	0.00885 %	~	
			215-160-9	1308-38-9	-								
5	4	compounds, with the of compounds spectrum of	hium(VI) compounds he exception of barin cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< th=""></lod<>
		024-017-00-8			-								
6	4		oxide; copper (I) oxi			26	mg/kg	1.126	25.058	mg/kg	0.00251 %	\checkmark	
-			215-270-7	1317-39-1									
7	~	lead { <mark>lead chroma</mark> 082-004-00-2	231-846-0	7758-97-6	1	60	mg/kg	1.56	80.112	mg/kg	0.00514 %	\checkmark	
			mercury { mercury dichloride }										
8			231-299-8	7487-94-7	-	0.1	mg/kg	1.353	0.116	mg/kg	0.0000116 %	\checkmark	
			vbdenum(VI) oxide								0.000700.0/		
9	~	, t <mark>.</mark>	215-204-7	1313-27-5		5.5	mg/kg	1.5	7.063	mg/kg	0.000706 %	\checkmark	
10	æ	nickel { nickel chror	mate }			44.4		0.070	440.050		0.0110.0/		
10		028-035-00-7	238-766-5	14721-18-7	1	44.1	тід/кд	2.976	112.353	mg/kg	0.0112 %	\checkmark	
11	æ	selenium {	elenate }			1	ma/ka	2.554	2.186	mg/kg	0.000219 %	\checkmark	
		028-031-00-5	239-125-2	15060-62-5	1		iiig/kg	2.004	2.100	iiig/itg	0.000210 /0	Ň	
12		zinc { <mark>zinc chromat</mark> 024-007-00-3	t <mark>e</mark> } 236-878-9	13530-65-9		97	mg/kg	2.774	230.343	mg/kg	0.023 %	\checkmark	
13		TPH (C6 to C40) p	etroleum group			<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
13				TPH		<02	тту/ку		<52	тту/ку	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>
			216-653-1	1634-04-4									
15		benzene	1	1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>
<u> </u>			200-753-7	71-43-2	_								
16		toluene	000 005 0	400.00.0		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	0	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_							-	
		xylene	600,400,0141	05 47 0 141	_								
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	pН				8.38	pН		8.38	pН	8.38 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_							-	
21	۲	acenaphthylene			_	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_								
22	۲	acenaphthene			_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9	_							-	
23	8	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene	004 504 5	05.04.0		0.07	mg/kg		0.0599	mg/kg	0.00000599 %	\checkmark	
		anthragana	201-581-5	85-01-8	+					_			
25	8	anthracene	204-371-1	120-12-7	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26		fluoranthene	·			0.11	malka		0.0042	malka	0.00000942 %	,	
20			205-912-4	206-44-0		0.11	mg/kg		0.0942	mg/kg	0.00000942 %	\checkmark	
27	۲	pyrene		,		0.1	mg/kg		0.0856	mg/kg	0.00000856 %	\checkmark	
			204-927-3	129-00-0									
28		benzo[a]anthracer				0.09	mg/kg		0.077	mg/kg	0.0000077 %	\checkmark	
		601-033-00-9	200-280-6	56-55-3	_							-	
29		chrysene	T	1		0.08	mg/kg		0.0685	mg/kg	0.00000685 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9	_								
30		benzo[b]fluoranthe			_	0.08	mg/kg		0.0685	mg/kg	0.00000685 %	\checkmark	
		601-034-00-4	205-911-9	205-99-2	_						<u>.</u>		
31		benzo[k]fluoranthe		0.07.00.0		0.03	mg/kg		0.0257	mg/kg	0.00000257 %	\checkmark	
		601-036-00-5	205-916-6	207-08-9	+-								
32		1 1 5	enzo[def]chrysene	50.00.0	_	0.06	mg/kg		0.0514	mg/kg	0.00000514 %	\checkmark	
		601-032-00-3	200-028-5	50-32-8									
33	8	indeno[123-cd]pyr	205-893-2	193-39-5	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		dibenz[a,h]anthrac		192-29-2									
34		601-041-00-2	200-181-8	53-70-3	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[ghi]perylen	1	00-10-0									
35		~ourofaulberhell	205-883-8	191-24-2	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	1	101 21 2									
36		602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
	4			,									
37	1	barium { 🧧 barium		1204 20 5	_	92	mg/kg	1.117	87.927	mg/kg	0.00879 %	\checkmark	
	-		215-127-9	1304-28-5	+-							\vdash	
38	8	coronene	DOE 904 7	101 07 4	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	bonzofilfluorenth	205-881-7	191-07-1	+-							-	
39		benzo[j]fluoranthe 601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
		001 000 00 X	F	-30 02 0						Total:	0.0677 %		

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)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP-11-23/08/2022-0.50m

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

Sample details

•		
Sample name:	LoW Code:	
TP-11-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
6%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 6% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
1	<u>a</u>	antimony { antimor	ny trioxide }			2	ma/ka	1.197	2.251	mg/kg	0.000225 %	1	
		051-005-00-X	215-175-0	1309-64-4		2	iiig/kg	1.197	2.231	шу/ку	0.000223 /8	~	
2	4	arsenic { arsenic tr	<mark>ioxide</mark> }			11.1	mg/kg	1.32	13.776	mg/kg	0.00138 %	\checkmark	
		033-003-00-0	215-481-4	1327-53-3								Ň	
3	×\$,			1.7	ma/ka	1.142	1.825	mg/kg	0.000183 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0						5 5		Ľ	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	s { [®] <mark>chromium(III)</mark>		42.7	mg/kg	1.462	58.664	mg/kg	0.00587 %	\checkmark	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of	nium(VI) compounds he exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8										_	
6	4		oxide; copper (I) oxi			31	mg/kg	1.126	32.808	mg/kg	0.00328 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1								-	
7	4			1	25	mg/kg	1.56	36.656	mg/kg	0.00235 %	\checkmark		
		082-004-00-2	231-846-0	7758-97-6									
8	4	mercury { mercury 080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
	æ		vbdenum(VI) oxide	1								1	
9	~	042-001-00-9	215-204-7	1313-27-5	$\left \right $	5.5	mg/kg	1.5	7.756	mg/kg	0.000776 %	\checkmark	
	æ	nickel { nickel chro											
10		028-035-00-7	238-766-5	14721-18-7		42	mg/kg	2.976	117.503	mg/kg	0.0118 %	\checkmark	
	æ	selenium { nickel s	elenate }					0.554	0.404		0.00004.0/		
11		028-031-00-5	239-125-2	15060-62-5		1	тід/кд	2.554	2.401	mg/kg	0.00024 %	\checkmark	
12	4	zinc { zinc chromat 024-007-00-3	<mark>te</mark> } 236-878-9	13530-65-9		115	mg/kg	2.774	299.885	mg/kg	0.03 %	\checkmark	
13	8	TPH (C6 to C40) p	etroleum group	1		50			50		0.0050.0/	Í.	
13				TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy		1		<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4									
15		benzene		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>		
		601-020-00-8	200-753-7	71-43-2									
16		toluene	000 005 0	1.00.00.0		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	0	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_							-	
		xylene	baa 400 0 [4]	05 47 0 (4)	_								
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	рН				8.35	pН		8.35	pН	8.35 pH		
				PH	_							-	
20		naphthalene	T	1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_							-	
21	۲	acenaphthylene			_	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_							-	
22	8	acenaphthene	bo4 400 0		_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		<i>(</i>)	201-469-6	83-32-9	+							-	
23	8	fluorene	201-695-5	86-73-7	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	8	phenanthrene	bo4 504 5			0.14	mg/kg		0.132	mg/kg	0.0000132 %	\checkmark	
			201-581-5	85-01-8	_					_			
25	8	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26		fluoranthene				0.16			0.15		0.000015.0/	,	
26			205-912-4	206-44-0	-	0.16	mg/kg		0.15	mg/kg	0.000015 %	\checkmark	
27		pyrene				0.13	malka		0.122	malka	0.0000122 %	,	
21			204-927-3	129-00-0		0.13	mg/kg		0.122	mg/kg	0.0000122 %	\checkmark	
28		benzo[a]anthracer	ne			0.11	mg/kg		0.103	mg/kg	0.0000103 %	\checkmark	
20		601-033-00-9	200-280-6	56-55-3	_	0.11	шу/ку		0.105	iiig/kg	0.0000103 /8	~	
29		chrysene				0.07	mg/kg		0.0658	mg/kg	0.00000658 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9								Ň	
30		benzo[b]fluoranthe	ene			0.09	mg/kg		0.0846	mg/kg	0.00000846 %	\checkmark	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthe				0.03	mg/kg		0.0282	mg/kg	0.00000282 %	\checkmark	
		601-036-00-5	205-916-6	207-08-9	_							_	
32			enzo[def]chrysene	1=0.000	_	0.05	mg/kg		0.047	mg/kg	0.0000047 %	\checkmark	
		601-032-00-3	200-028-5	50-32-8	_								
33	8	indeno[123-cd]pyr	205-893-2	193-39-5	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		dibenz[a,h]anthrac		193-39-3	_							-	
34		601-041-00-2	200-181-8	53-70-3	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[ghi]perylen	1	00-70-0									
35		201120[gin]poi yieli	205-883-8	191-24-2	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	6	polychlorobipheny	1		+								
36		602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<lod< td=""></lod<>
	4	barium {			+								
37	–	Danum ([–] Danum	215-127-9	1304-28-5	_	82	mg/kg	1.117	86.06	mg/kg	0.00861 %	\checkmark	
		coronene	F10-121-9	1304-20-3	+-							-	
38			205-881-7	191-07-1	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	benzo[j]fluoranthe		131-07-1	+								
39		601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
										Total:	0.0701 %		

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



Classification of sample: TP-09-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
TP-09-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
6.8%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 6.8% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound co	onc.	Classification value	MC Applied	Conc. Not Used
1	-	antimony { antimor				3	mg/kg	1.197	3.347	mg/kg	0.000335 %	\checkmark	
		051-005-00-X	215-175-0	1309-64-4	-							_	
2	4	arsenic { arsenic tr		1		12.4	mg/kg	1.32	15.259	mg/kg	0.00153 %	\checkmark	
		033-003-00-0	215-481-4	1327-53-3	-							-	
3	4	-		4000 10 0		2.1	mg/kg	1.142	2.236	mg/kg	0.000224 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0	-							-	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	s { [®] <mark>chromium(III)</mark>		32.7	mg/kg	1.462	44.543	mg/kg	0.00445 %	\checkmark	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spe	hium(VI) compounds he exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8										_	
6	4		oxide; copper (I) oxi			33	mg/kg	1.126	34.628	mg/kg	0.00346 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1	-							_	
7	4	·		1	16	mg/kg	1.56	23.26	mg/kg	0.00149 %	\checkmark		
-			231-846-0	7758-97-6	-								
8		mercury { mercury 080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
-			ybdenum(VI) oxide									1	
9	4	042-001-00-9	215-204-7	1313-27-5		4.1	mg/kg	1.5	5.733	mg/kg	0.000573 %	\checkmark	
	æ	nickel { nickel chro		1010 21 0									
10	•••	028-035-00-7	238-766-5	14721-18-7		45.8	mg/kg	2.976	127.044	mg/kg	0.0127 %	\checkmark	
11	æ	selenium { nickel s	elenate }	1				0.554			0.00000.0/		
11		028-031-00-5	239-125-2	15060-62-5	1	1	тg/кg	2.554	2.38	mg/kg	0.000238 %	\checkmark	
12	4	zinc { zinc chromat 024-007-00-3	<mark>te</mark> } 236-878-9	13530-65-9		100	mg/kg	2.774	258.55	mg/kg	0.0259 %	\checkmark	
-		TPH (C6 to C40) p	ļ									t i	
13	-	(J	ТРН		<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy		1		<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	1								
15		benzene		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>		
Ĺ		601-020-00-8	200-753-7	71-43-2			5.5			5.5			-
16		toluene	000 005 0	400.000		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound co	inc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	۲	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
	-	601-023-00-4	202-849-4	100-41-4	_								
		xylene			_								
18		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]		<0.01	mg/kg		<0.01 r	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	۲	рН				8.47	pН		8.47	рН	8.47 pH		
				PH							•		
20		naphthalene				<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_								
21	۲	acenaphthylene			_	<0.03	mg/kg		<0.03 1	mg/kg	<0.000003 %		<lod< td=""></lod<>
	-		205-917-1	208-96-8	_								
22	۲	acenaphthene			_	<0.05	mg/kg		<0.05 r	mg/kg	<0.000005 %		<lod< td=""></lod<>
	-	0	201-469-6	83-32-9	+-								
23	8	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04 1	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	۵	phenanthrene	1			<0.03	mg/kg		<0.03 1	mg/kg	<0.000003 %		<lod< td=""></lod<>
			201-581-5	85-01-8	_								
25	0	anthracene	204-371-1	120-12-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		fluoranthene											
26			205-912-4	206-44-0	-	<0.03	mg/kg		<0.03 1	mg/kg	<0.000003 %		<lod< td=""></lod<>
		pyrene											
27	-		204-927-3	129-00-0	-	<0.03	mg/kg		<0.03 r	mg/kg	<0.000003 %		<lod< td=""></lod<>
~~		benzo[a]anthracer	ne			0.00			0.00		0.000000.0/		1.00
28		601-033-00-9	200-280-6	56-55-3	-	<0.06	mg/kg		<0.06 1	mg/kg	<0.000006 %		<lod< td=""></lod<>
29		chrysene				<0.02	malka		<0.02	ma/ka	<0.000002 %		<lod< td=""></lod<>
29		601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 /8		<lod< td=""></lod<>
30		benzo[b]fluoranthe	ene		Τ	<0.05	mg/kg		<0.05 1	mg/kg	<0.000005 %		<lod< td=""></lod<>
00		601-034-00-4	205-911-9	205-99-2		<0.00	iiig/kg		<0.00	ing/kg	<0.000000 //		LOD
31		benzo[k]fluoranthe	ene			<0.02	mg/kg		<0.02 r	mg/kg	<0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; b	,			<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8						0 0			
33	۵	indeno[123-cd]pyr				<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
			205-893-2	193-39-5	_								
34		dibenz[a,h]anthrac			_	<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	601-041-00-2	200-181-8	53-70-3	_								
35	۲	benzo[ghi]perylen		404.04.0	_	<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	205-883-8	191-24-2								\vdash	
36		602-039-00-4	215-648-1	1336-36-3	_	<0.035	mg/kg		<0.035 r	mg/kg	<0.000035 %		<lod< td=""></lod<>
				1000-00-0	+							\square	
37	~	barium { 🧧 barium				56	mg/kg	1.117	58.273 i	mg/kg	0.00583 %	\checkmark	
	-		215-127-9	1304-28-5	+-							\square	
38	۲	coronene	605 004 -	404.07.4		<0.04	mg/kg		<0.04 r	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	have the state	205-881-7	191-07-1	_							Н	
39		benzo[j]fluoranthe 601-035-00-X		205-82.2		<1	mg/kg		<1 1	mg/kg	<0.0001 %		<lod< td=""></lod<>
		X-UU-CEU-100	205-910-3	205-82-3						Total:	0.0621 %	\vdash	

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



Classification of sample: TP-03-23/08/2022-1.50m

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

Sample details

Sample name:	LoW Code:	
TP-03-23/08/2022-1.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
10.6%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 10.6% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound con	IC.	Classification value	MC Applied	Conc. Not Used
	•	number	y triovida									2	
1	-	antimony { antimor 051-005-00-X	215-175-0	1309-64-4		2	mg/kg	1.197	2.14 m	ig/kg	0.000214 %	\checkmark	
2	4					7.8	mg/kg	1.32	9.207 m	ig/kg	0.000921 %	,	
2		033-003-00-0	215-481-4	1327-53-3		7.0	mg/kg	1.52	9.207	ig/kg	0.000921 %	\checkmark	
3	4	cadmium {	<mark>m oxide</mark> }			1.7	ma/ka	1.142	1.736 m	ig/kg	0.000174 %	\checkmark	
Ľ		048-002-00-0	215-146-2	1306-19-0	1					9/119	0.000111.00	Ň	
4	4	chromium in chrom oxide (worst case)	nium(III) compounds }	; { ^e chromium(III)		33.2	mg/kg	1.462	43.38 m	ig/kg	0.00434 %	~	
			215-160-9	1308-38-9	1								
5	4	compounds, with the of compounds spectrum of	nium(VI) compounds the exception of barin cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681 m	ig/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8											
6	4	copper { dicopper (029-002-00-X	oxide; copper (I) oxid 215-270-7	<mark>de</mark> } 1317-39-1		25	mg/kg	1.126	25.164 m	ig/kg	0.00252 %	\checkmark	
-		lead { lead chroma		1317-39-1	\vdash								
7	-	082-004-00-2	231-846-0	7758-97-6	1	13	mg/kg	1.56	18.128 m	ig/kg	0.00116 %	\checkmark	
	-												
8		080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135 m	ig/kg	<0.0000135 %		<lod< td=""></lod<>
9	æ	molybdenum { mol	ybdenum(VI) oxide	}		4.4		4.5	5 001		0.00050.0/		
9	~	042-001-00-9	215-204-7	1313-27-5	1	4.4	mg/kg	1.5	5.901 m	ig/kg	0.00059 %	\checkmark	
10	æ	nickel { nickel chro	mate }			35.8	ma/ka	2.976	95.256 m	iq/kq	0.00953 %	\checkmark	
		028-035-00-7	238-766-5	14721-18-7			ing/itg	2.570	33.230	9/119	0.00000 //	Ň	
11	4	selenium {	elenate }			<1	ma/ka	2.554	<2.554 m	ig/kg	<0.000255 %		<lod< td=""></lod<>
		028-031-00-5	239-125-2	15060-62-5]					55			
12	-	zinc { zinc chromat	<mark>e</mark> } 236-878-9	13530-65-9		80	mg/kg	2.774	198.407 m	ig/kg	0.0198 %	\checkmark	
		TPH (C6 to C40) p		10000-00-0									
13	8	1111 (00 to 040) p	0 1	ТРН		<52	mg/kg		<52 m	ig/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy	her; MTBE;			<0.005	mg/kg		<0.005 m	ig/kg	<0.000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	1								
15		benzene				<0.005	mg/kg		<0.005 m	ig/kg	<0.0000005 %		<lod< td=""></lod<>
Ĺ		601-020-00-8	200-753-7	71-43-2						59			
16		toluene	000 605 0	400 00 0		<0.005	mg/kg		<0.005 m	ig/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound co	onc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_								
		xylene											
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	۰	pН				8.68	pН		8.68	pН	8.68 pH		
				PH							•		
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_								
21	۲	acenaphthylene			_	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_							-	
22	8	acenaphthene			_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		<i>a</i>	201-469-6	83-32-9	+-							_	
23	Θ	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			201-581-5	85-01-8	_								
25	0	anthracene	204-371-1	120-12-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		fluoranthene											
26			205-912-4	206-44-0	-	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
		pyrene											
27			204-927-3	129-00-0	-	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
~~		benzo[a]anthracer	ne			0.00			0.00		0.000000.0/		1.00
28		601-033-00-9	200-280-6	56-55-3	-	<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<lod< td=""></lod<>
29		chrysene				<0.02	malka		<0.02	ma/ka	<0.000002 %		<lod< td=""></lod<>
29		601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 /8		LOD
30		benzo[b]fluoranthe	ene		Τ	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
00		601-034-00-4	205-911-9	205-99-2		<0.00	iiig/kg			ing/kg	<0.000000 //		LOD
31		benzo[k]fluoranthe	ene			<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
• ·		601-036-00-5	205-916-6	207-08-9									
32			enzo[def]chrysene			<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8	_								
33	۲	indeno[123-cd]pyr				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
			205-893-2	193-39-5	_							-	
34		dibenz[a,h]anthrac			_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-041-00-2	200-181-8	53-70-3	_							_	
35	۲	benzo[ghi]perylen		404.04.0	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	205-883-8	191-24-2									
36	۲	602-039-00-4	215-648-1	1336-36-3	_	<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
				1000-00-0	+							-	
37	~	barium { 🧧 barium				50	mg/kg	1.117	49.908	mg/kg	0.00499 %	\checkmark	
			215-127-9	1304-28-5	+-								
38	۲	coronene	605 004 -	404.07.4		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	hanna 190	205-881-7	191-07-1	_							-	
39		benzo[j]fluoranthe 601-035-00-X	ne 205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
		001-030-00-7	200-910-0	200-02-0						Total:	0.05 %	-	

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



Classification of sample: TP-10-23/08/2022-0.50m

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

Sample details

•		
Sample name:	LoW Code:	
TP-10-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
8%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 8% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	l data	Conv. Factor	Compound co	onc.	Classification value	MC Applied	Conc. Not Used
1	-	antimony { antimor		l		2	mg/kg	1.197	2.203	mg/kg	0.00022 %	1	
		051-005-00-X	215-175-0	1309-64-4								-	
2	4					8.7	mg/kg	1.32	10.568	mg/kg	0.00106 %	\checkmark	
		033-003-00-0	215-481-4	1327-53-3									
3	4	-				1.6	mg/kg	1.142	1.682	mg/kg	0.000168 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0	-								
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	; { ^e <mark>chromium(III)</mark>		41.1	mg/kg	1.462	55.264	mg/kg	0.00553 %	\checkmark	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spe	hium(VI) compounds he exception of barin cified elsewhere in t	um chromate and		1	mg/kg	2.27	2.088	mg/kg	0.000209 %	~	
		024-017-00-8											
6	4		oxide; copper (I) oxi			28	mg/kg	1.126	29.003	mg/kg	0.0029 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1	-								
7	-			b750.07.0	1	12	mg/kg	1.56	17.22	mg/kg	0.0011 %	\checkmark	
		082-004-00-2	231-846-0	7758-97-6	-								
8	4		mercury { mercury dichloride } 280-010-00-X 231-299-8 7487-94-7			<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
			ybdenum(VI) oxide										
9	4	042-001-00-9	215-204-7	1313-27-5	-	4.8	mg/kg	1.5	6.625	mg/kg	0.000662 %	\checkmark	
	-9	nickel { nickel chro		1010 21 0									
10	•••	028-035-00-7	238-766-5	14721-18-7	-	40.4	mg/kg	2.976	110.622	mg/kg	0.0111 %	\checkmark	
	æ	selenium { nickel s											
11		028-031-00-5	239-125-2	15060-62-5	1	<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
12	4		-	40500.05.0		94	mg/kg	2.774	239.908	mg/kg	0.024 %	\checkmark	
		024-007-00-3	236-878-9	13530-65-9	-								
13	Θ	TPH (C6 to C40) p	etroleum group	TOU		<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
		4		TPH	-								
14		tert-butyl methyl et 2-methoxy-2-methy	ylpropane			<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	\vdash								
15		benzene	000 750 7	74 40 0		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
-		601-020-00-8	200-753-7	71-43-2	+								
16		toluene	202 625 0	400 00 2		<0.005	mg/kg		<0.005	mg/kg	kg <0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound con	c.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	0	ethylbenzene				<0.005	mg/kg		<0.005 m	g/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_								
		xylene											
18		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]		<0.01	mg/kg		<0.01 m	g/kg	<0.000001 %		<lod< td=""></lod<>
19		рН				8.53	pН		8.53 pł	H	8.53 pH		
				PH					· · · · · · · · · · · · · · · · · · ·		•		
20		naphthalene				<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3									
21	۲	acenaphthylene				<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_							-	
22	8	acenaphthene				<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
		0	201-469-6	83-32-9	-							_	
23	8	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene	1			<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
			201-581-5	85-01-8	_								
25	8	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		fluoranthene											
26			205-912-4	206-44-0	-	<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
		pyrene											
27			204-927-3	129-00-0	-	<0.03	mg/kg		<0.03 m	g/kg	<0.000003 %		<lod< td=""></lod<>
~~		benzo[a]anthracer	ne			0.00			0.00	- //	0.000000.0/		1.00
28		601-033-00-9	200-280-6	56-55-3	-	<0.06	mg/kg		<0.06 m	g/kg	<0.000006 %		<lod< td=""></lod<>
29		chrysene				<0.02	malka		<0.02 m	a/ka	<0.000002 %		<lod< td=""></lod<>
29		601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02 III	g/kg	<0.000002 /8		LOD
30		benzo[b]fluoranthe	ene			<0.05	mg/kg		<0.05 m	g/kg	<0.000005 %		<lod< td=""></lod<>
00		601-034-00-4	205-911-9	205-99-2		<0.00	iiig/kg		<0.00 m	g/ng	<0.000000 //		LOD
31		benzo[k]fluoranthe	ene			<0.02	mg/kg		<0.02 m	g/kg	<0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9						33			
32			enzo[def]chrysene			<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8						0 0			
33	۲	indeno[123-cd]pyr				<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
			205-893-2	193-39-5								-	
34		dibenz[a,h]anthrac				<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		601-041-00-2	200-181-8	53-70-3	_							_	
35	8	benzo[ghi]perylen		401.04.0	_	<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	205-883-8	191-24-2	+							-	
36		602-039-00-4	215-648-1	1336-36-3	_	<0.035	mg/kg		<0.035 m	g/kg	<0.000035 %		<lod< td=""></lod<>
				1000-00-0	+							-	
37	~	barium { 🧧 barium				51	mg/kg	1.117	52.386 m	g/kg	0.00524 %	\checkmark	
			215-127-9	1304-28-5	+								
38	۲	coronene		404.07.4		<0.04	mg/kg		<0.04 m	g/kg	<0.000004 %		<lod< td=""></lod<>
			205-881-7	191-07-1	+							-	
39		benzo[j]fluoranthe 601-035-00-X		205 82 2	_	<1	mg/kg		<1 m	g/kg	<0.0001 %		<lod< td=""></lod<>
		X-00-660-100	205-910-3	205-82-3						otal:	0.0578 %	-	

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
0	Determinand defined or amended by HazWasteOnline (see Appendix A)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification
ND	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration Below limit of detection Not detected



Classification of sample: TP-10-23/08/2022-1.50m

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

Sample details

Sample name:	LoW Code:	
TP-10-23/08/2022-1.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
8.6%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 8.6% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
1	4	antimony { antimor	y trioxide }			4	ma/ka	1.197	4.377	mg/kg	0.000438 %	1	
Ľ		051-005-00-X	215-175-0	1309-64-4			ing/itg	1.107	4.017	iiig/kg	0.000400 /0	~	
2	ai a	arsenic { arsenic tr	<mark>ioxide</mark> }			15	mg/kg	1.32	18.102	mg/kg	0.00181 %	\checkmark	
_		033-003-00-0	215-481-4	1327-53-3				1.02	10.102	iiig/itg		Ŷ	
3	4	cadmium {	m oxide }			1.9	ma/ka	1.142	1.984	mg/kg	0.000198 %	\checkmark	
Ľ		048-002-00-0	215-146-2	1306-19-0								ř	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	s { [®] <mark>chromium(III)</mark>		51.8	mg/kg	1.462	69.198	mg/kg	0.00692 %	~	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of	hium(VI) compounds he exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8										Ļ	
6	4		oxide; copper (I) oxi			59	mg/kg	1.126	60.715	mg/kg	0.00607 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1	_				18				
7	4			1	51	mg/kg	1.56	72.709	mg/kg	0.00466 %	\checkmark		
		082-004-00-2	231-846-0	7758-97-6	-							-	
8	4					<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
		080-010-00-X	231-299-8	7487-94-7	-							-	
9	4	, , ,	ybdenum(VI) oxide		4	5.3	mg/kg	1.5	7.267	mg/kg	0.000727 %	\checkmark	
	•	042-001-00-9	215-204-7	1313-27-5	-							-	
10		nickel { nickel chro 028-035-00-7	238-766-5	14721-18-7	-	56.1	mg/kg	2.976	152.609	mg/kg	0.0153 %	\checkmark	
				14721-10-7								-	
11	4	028-031-00-5	239-125-2	15060-62-5	-	2	mg/kg	2.554	4.668	mg/kg	0.000467 %	\checkmark	
	æ			10000 02 0	-							1	
12	•••	024-007-00-3	236-878-9	13530-65-9		159	mg/kg	2.774	403.156	mg/kg	0.0403 %	\checkmark	
	8	TPH (C6 to C40) p										t i	
13		····(••••••)		ТРН		<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy		1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	1								
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
Ĺ		601-020-00-8	200-753-7	71-43-2]								
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3			0 0			0.0			



#			Determinand	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CL							Ř	
17	8	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4									
		xylene											
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	рН				8.2	pН		8.2	pН	8.2 pH		
				PH							•		
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3									
21	0	acenaphthylene				<0.03	mg/kg		< 0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_								
22	Θ	acenaphthene			_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9									
23	۵	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene				0.04	mg/kg		0.0366	mg/kg	0.00000366 %	\checkmark	
			201-581-5	85-01-8	_								
25	۵	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		fluoranthene			+								
26	-		205-912-4	206-44-0	-	0.07	mg/kg		0.064	mg/kg	0.0000064 %	\checkmark	
		pyrene											
27	-		204-927-3	129-00-0	_	0.07	mg/kg		0.064	mg/kg	0.0000064 %	\checkmark	
		benzo[a]anthracer	ie	1					0.070/				
28		601-033-00-9	200-280-6	56-55-3	-	0.08	mg/kg		0.0731	mg/kg	0.00000731 %	\checkmark	
		chrysene	1		1								
29		601-048-00-0	205-923-4	218-01-9	-	0.06	mg/kg		0.0548	mg/kg	0.00000548 %	\checkmark	
		benzo[b]fluoranthe	ene										
30		601-034-00-4	205-911-9	205-99-2	-	0.06	mg/kg		0.0548	mg/kg	0.00000548 %	\checkmark	
		benzo[k]fluoranthe	ne	1		0.00			0.0074		0.0000074.0/		
31		601-036-00-5	205-916-6	207-08-9	-	0.03	mg/kg		0.0274	mg/kg	0.00000274 %	\checkmark	
~		benzo[a]pyrene; b	enzo[def]chrysene			0.04			0.04		0.000004.0/		1.00
32		601-032-00-3	200-028-5	50-32-8	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
33		indeno[123-cd]pyr	ene	·		-0.04	malka		-0.04	malka	<0.000004 %		<lod< td=""></lod<>
33			205-893-2	193-39-5		<0.04	mg/kg		<0.04	тту/ку	<0.000004 %		<lod< td=""></lod<>
34		dibenz[a,h]anthrac	ene			<0.04	mg/kg		<0.04	ma/ka	<0.000004 %		<lod< td=""></lod<>
54		601-041-00-2	200-181-8	53-70-3		<0.04	ing/kg		<0.04	mg/kg	<0.000004 %		
35		benzo[ghi]perylene	Э		T	<0.04	mg/kg		<0.04	ma/ka	<0.000004 %		<lod< td=""></lod<>
			205-883-8	191-24-2		10.04	ing/kg		NO.04	ing/kg			~200
36		polychlorobipheny	ls; PCB			<0.035	mg/kg		<0.035	ma/ka	<0.000035 %		<lod< td=""></lod<>
		602-039-00-4	215-648-1	1336-36-3			ing/itg			ing/itg			.200
37	4	barium { 🏾 barium	oxide }			106	ma/ka	1.117	108.172	mg/kg	0.0108 %	\checkmark	
-			215-127-9	1304-28-5			.					ľ	
38		coronene				-0.04	malka		-0.04	ma/ka	<0.000004 %		<lod< td=""></lod<>
50			205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		
39		benzo[j]fluoranther	ne			<1	mg/kg		<1	ma/ka	<0.0001 %		<lod< td=""></lod<>
00		601-035-00-X	205-910-3	205-82-3			ing/kg			ing/kg			~200
-					_					Total:	0.0932 %		

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



Classification of sample: TP-14-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
TP-14-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
9.5%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 9.5% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	l data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
		number			0							2	
1	-	antimony { antimor 051-005-00-X	1 trioxide } 215-175-0	1309-64-4		3	mg/kg	1.197	3.25	mg/kg	0.000325 %	\checkmark	
-	æ			1309-64-4	+							+	
2		033-003-00-0	215-481-4	1327-53-3		11.5	mg/kg	1.32	13.741	mg/kg	0.00137 %	\checkmark	
	æ	cadmium { cadmiu						4.4.40	4 00 4		0.000100.0/		
3		048-002-00-0	215-146-2	1306-19-0		1	mg/кg	1.142	1.034	mg/kg	0.000103 %	\checkmark	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	·			47.7	mg/kg	1.462	63.093	mg/kg	0.00631 %	\checkmark	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of	hium(VI) compounds he exception of barin cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8			1								
6	4	copper { dicopper (029-002-00-X	<mark>oxide; copper (I) oxi</mark> 215-270-7	<mark>de</mark> } 11317-39-1		153	mg/kg	1.126	155.896	mg/kg	0.0156 %	\checkmark	
	æ	<pre>23002-00-X 210-270-7 1017-00-1 20 lead { lead chromate }</pre>		1.									
7	~	082-004-00-2	231-846-0	7758-97-6	1	85	mg/kg	1.56	119.989	mg/kg	0.00769 %	\checkmark	
8	æ	mercury { mercury dichloride }			<0.1	ma/ka	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>	
0		080-010-00-X	231-299-8	7487-94-7		<0.1	шу/ку	1.555	<0.155	шу/ку	<0.0000133 /8		LOD
9	4	molybdenum {	ybdenum(VI) oxide	}		3.8	mg/kg	1.5	5.159	mg/kg	0.000516 %	1	
		042-001-00-9	215-204-7	1313-27-5				-				ľ	
10	-	nickel { nickel chro				43.1	mg/kg	2.976	116.091	mg/kg	0.0116 %	\checkmark	
		028-035-00-7	238-766-5	14721-18-7									
11	4					1	mg/kg	2.554	2.311	mg/kg	0.000231 %	\checkmark	
	•	028-031-00-5	239-125-2	15060-62-5									
12		zinc { zinc chromat	1 <mark>e</mark> } 236-878-9	13530-65-9		282	mg/kg	2.774	707.99	mg/kg	0.0708 %	\checkmark	
-	8	TPH (C6 to C40) p		13330-03-9	\vdash							+	
13				ТРН		88	mg/kg		79.64	mg/kg	0.00796 %	\checkmark	
14		tert-butyl methyl et 2-methoxy-2-methy				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	1								
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-020-00-8	200-753-7	71-43-2									
16		toluene	000.005.0	400.00.0		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound of	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLI							MC	
17	۲	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4									
		xylene											
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	۰	рН				8.24	pН		8.24	pН	8.24 pH		
				PH							•		
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3									
21	۵	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8									
22	۲	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9									
23	Θ	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	۲	phenanthrene				0.12	mg/kg		0.109	mg/kg	0.0000109 %	\checkmark	
			201-581-5	85-01-8	_						-		
25	0	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26		fluoranthene				0.21	mg/kg		0.19	mg/kg	0.000019 %		
20			205-912-4	206-44-0		0.21	шу/ку		0.15	шу/ку	0.000013 /8	\checkmark	
27	۰	pyrene		·		0.19	mg/kg		0.172	mg/kg	0.0000172 %	\checkmark	
			204-927-3	129-00-0								*	
28		benzo[a]anthracer	ie			0.14	mg/kg		0.127	mg/kg	0.0000127 %	\checkmark	
		601-033-00-9	200-280-6	56-55-3						5.5		•	
29		chrysene				0.12	mg/kg		0.109	mg/kg	0.0000109 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9								-	
30		benzo[b]fluoranthe				0.16	mg/kg		0.145	mg/kg	0.0000145 %	\checkmark	
		601-034-00-4	205-911-9	205-99-2								-	
31		benzo[k]fluoranthe				0.06	mg/kg		0.0543	mg/kg	0.00000543 %	\checkmark	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; be				0.11	mg/kg		0.0995	mg/kg	0.00000995 %	\checkmark	
		601-032-00-3	200-028-5	50-32-8	_								
33	۲	indeno[123-cd]pyr				0.09	mg/kg		0.0814	mg/kg	0.00000814 %	\checkmark	
			205-893-2	193-39-5	_								
34		dibenz[a,h]anthrac		F0 70 0		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	<u> </u>	601-041-00-2	200-181-8	53-70-3	_								
35	۲	benzo[ghi]perylene		404.04.0		0.08	mg/kg		0.0724	mg/kg	0.00000724 %	\checkmark	
	-	polyphorphishes	205-883-8	191-24-2	+								
36	۲	polychlorobipheny 602-039-00-4		1226 26 2	_	<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
	0		215-648-1	1336-36-3	_								
37	4	barium { 🤎 barium				85	mg/kg	1.117	85.887	mg/kg	0.00859 %	\checkmark	
			215-127-9	1304-28-5									
38	۰	coronene				<0.04	mg/kg		<0.04	mg/ka	<0.000004 %		<lod< td=""></lod<>
			205-881-7	191-07-1	_								
~~		benzo[j]fluoranther 601-035-00-X	ne 205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
39		004 005 00 V					5 0	ı		5 5		1	

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)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00796%)



Classification of sample: TP-13-23/08/2022-1.50m



Sample details

Sample name:	LoW Code:	
TP-13-23/08/2022-1.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
7.9%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 7.9% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
		number			μ							2	
1	4	antimony { antimor 051-005-00-X	1 <mark>9 trioxide</mark> } 1215-175-0	1309-64-4	-	1	mg/kg	1.197	1.103	mg/kg	0.00011 %	\checkmark	
	<u>a</u>	arsenic { arsenic tr		1303-04-4									
2	-	•	215-481-4	1327-53-3	-	7.8	mg/kg	1.32	9.485	mg/kg	0.000948 %	\checkmark	
3	2	cadmium { cadmiu	m oxide }			0.7	ma/ka	1.142	0.736	mg/kg	0.0000736 %	\checkmark	
3		048-002-00-0	215-146-2	1306-19-0		0.7	mg/kg	1.142	0.730	тту/ку	0.0000736 %	~	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	s {		42.8	mg/kg	1.462	57.613	mg/kg	0.00576 %	~	
		-	215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of compounds spectrum of the spectru	nium(VI) compounds the exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< th=""></lod<>
		024-017-00-8											
6	4		oxide; copper (I) oxi			27	mg/kg	1.126	27.997	mg/kg	0.0028 %	\checkmark	
-	-	029-002-00-X lead { lead chroma	215-270-7	1317-39-1									
7	4		231-846-0	7758-97-6	1	20	mg/kg	1.56	28.732	mg/kg	0.00184 %	\checkmark	
	æ							0.405					
8			231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
9	2	molybdenum {	ybdenum(VI) oxide	}		3.8	mg/kg	1.5	5.25	mg/kg	0.000525 %	\checkmark	
		042-001-00-9	215-204-7	1313-27-5		5.0	iiig/kg	1.5	5.25	iiig/kg	0.000323 /8	~	
10	4	nickel { <mark>nickel chro</mark>	mate }			34.7	ma/ka	2.976	95.118	mg/kg	0.00951 %	\checkmark	
			238-766-5	14721-18-7								Ľ	
11	4	selenium { nickel s				1	mg/kg	2.554	2.352	mg/kg	0.000235 %	\checkmark	
	-		239-125-2	15060-62-5									
12	4	zinc { zinc chromat 024-007-00-3	e } 236-878-9	13530-65-9		90	mg/kg	2.774	229.949	mg/kg	0.023 %	\checkmark	
	6	TPH (C6 to C40) p		10000-00-3	-								
13				ТРН		522	mg/kg		480.762	mg/kg	0.0481 %	\checkmark	
14		tert-butyl methyl et 2-methoxy-2-methy		,		<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< th=""></lod<>
			216-653-1	1634-04-4									
15	benzene		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>			
		601-020-00-8	200-753-7	71-43-2	-								
16						0.005	mg/kg		0.0046	mg/kg	0.000000461 %	\checkmark	
		601-021-00-3	203-625-9	108-88-3									



#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
		number		CAS Number	5							ĕ	
17	Θ	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_								
18		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]		0.02	mg/kg		0.0184	mg/kg	0.00000184 %	~	
19		рН	210 000 7 [4]	1000 20 7 [4]		8.15			8.15	~U	8.15 pH		
19				PH		0.15	рН		0.15	рН	0.13 pri		
20		naphthalene				0.11	mg/kg		0.101	mg/kg	0.0000101 %	\checkmark	
		601-052-00-2	202-049-5	91-20-3								ľ	
21	0	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_								
22	8	acenaphthene	0.01 100 0			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9	_								
23	Θ	fluorene	201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	8	phenanthrene	201-581-5	85-01-8		0.08	mg/kg		0.0737	mg/kg	0.00000737 %	\checkmark	
25	8	anthracene	201 001 0	00 01 0		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
_			204-371-1	120-12-7									
26	۲	fluoranthene	205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
27	0	pyrene				0.07	mg/kg		0.0645	mg/kg	0.00000645 %	~	
			204-927-3	129-00-0	_							\square	
28		benzo[a]anthracen 601-033-00-9		EC EE 0	_	<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<lod< td=""></lod<>
		chrysene	200-280-6	56-55-3	+							H	
29		601-048-00-0	205-923-4	218-01-9	_	0.04	mg/kg		0.0368	mg/kg	0.00000368 %	\checkmark	
		benzo[b]fluoranthe	1	210 01 3	+								
30		601-034-00-4	205-911-9	205-99-2	-	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		benzo[k]fluoranthe		200 00 2	+	0.00						H	1.00
31		601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
32		benzo[a]pyrene; be	enzo[def]chrysene	1		-0.04			<0.04		-0.000004.9/		<lod< td=""></lod<>
32		601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
33	8	indeno[123-cd]pyre				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
			205-893-2	193-39-5	_								
34		dibenz[a,h]anthrac				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-041-00-2	200-181-8	53-70-3	_								
35	8	benzo[ghi]perylene		404.04.0	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		nolyoplaratistic	205-883-8	191-24-2	+							\vdash	
36	8	polychlorobiphenyl 602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
			1	1000-00-0	+							Н	
37		barium { [®] barium		1.00 1.00 -		105	mg/kg	1.117	107.972	mg/kg	0.0108 %	\checkmark	
			215-127-9	1304-28-5	-							Н	
38	۲	coronene	005 004 7	404 07 4		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		honzofiltiuszat	205-881-7	191-07-1	+							Н	
39		benzo[j]fluoranther 601-035-00-X	ne 205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
		1	·							Total:	0.104 %	Γ	

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)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

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

Because of determinand:

toluene: (conc.: 4.61e-07%)

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

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0481%) xylene: (conc.: 1.84e-06%)



Classification of sample: TP-06-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
TP-06-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
11.7%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 11.7% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	l data	Conv. Factor	Compound co	nc.	Classification value	MC Applied	Conc. Not Used
1	4	antimony { antimor	ny trioxide }	l		3	ma/ka	1.197	3.171 r	ng/kg	0.000317 %	\checkmark	
		051-005-00-X	215-175-0	1309-64-4	1							ľ	
2	4	arsenic { arsenic tr	ioxide }			12.6	mg/kg	1.32	14.69 r	ng/kg	0.00147 %	\checkmark	
Ľ		033-003-00-0	215-481-4	1327-53-3	1						0.001.17.70	Ň	
3	4	cadmium {	m oxide }			1.7	ma/ka	1.142	1.715 r	ng/kg	0.000171 %	\checkmark	
Ľ		048-002-00-0	215-146-2	1306-19-0	1						0.00011170	ľ	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	s { [®] <mark>chromium(III)</mark>		47.2	mg/kg	1.462	60.914 r	ng/kg	0.00609 %	~	
			215-160-9	1308-38-9	1								
5	4	compounds, with the of compounds spectrum of	hium(VI) compounds he exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681 r	ng/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8											
6	4		oxide; copper (I) oxi			43	mg/kg	1.126	42.749 r	ng/kg	0.00427 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1								-	
7	4	•		1	36	mg/kg	1.56	49.583 r	ng/kg	0.00318 %	\checkmark		
		082-004-00-2	231-846-0	7758-97-6						0 0			
8	4					0.1	mg/kg	1.353	0.12 r	ng/kg	0.000012 %	\checkmark	
		080-010-00-X	231-299-8	7487-94-7									
9	4		ybdenum(VI) oxide			4.7	mg/kg	1.5	6.226 r	ng/kg	0.000623 %	\checkmark	
		042-001-00-9	215-204-7	1313-27-5									
10		nickel { nickel chro				49.7	mg/kg	2.976	130.614 r	ng/kg	0.0131 %	\checkmark	
		028-035-00-7	238-766-5	14721-18-7	-								
11	4	selenium { nickel s		45000 00 5		2	mg/kg	2.554	4.51 r	ng/kg	0.000451 %	\checkmark	
	_	028-031-00-5	239-125-2	15060-62-5	-								
12	4	zinc { zinc chromat 024-007-00-3	1 <mark>e</mark> } 236-878-9	13530-65-9		124	mg/kg	2.774	303.747 r	ng/kg	0.0304 %	\checkmark	
_		TPH (C6 to C40) p		13530-65-9	-								
13	Θ	ТРП (С6 10 С40) р	etroleum group	ТРН		<52	mg/kg		<52 r	ng/kg	<0.0052 %		<lod< td=""></lod<>
-		tort hut donothy dot		IPH	-								
14		tert-butyl methyl et 2-methoxy-2-methy	ylpropane	4004.04.4		<0.005	mg/kg		<0.005 r	ng/kg	<0.0000005 %		<lod< td=""></lod<>
-		603-181-00-X	216-653-1	1634-04-4	\vdash							\square	
15		benzene	000 750 7	74 42 2	-	<0.005	mg/kg		<0.005 r	ng/kg	<0.000005 %		<lod< td=""></lod<>
		601-020-00-8	200-753-7	71-43-2	-								
16		toluene	202 625 0	100 00 2		<0.005	mg/kg		<0.005 r	ng/kg	<0.000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound o	onc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	8	ethylbenzene	0000101	1.00.11.1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	-								
		xylene	000 400 0 [4]	05 47 6 [4]	_								
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19		pН				8.03	pН		8.03	pН	8.03 pH		
_				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3									
21	0	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_								
22	8	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		0	201-469-6	83-32-9	-							-	
23	8	fluorene	201-695-5	86-73-7	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	8	phenanthrene	DO4 504 5			0.04	mg/kg		0.0353	mg/kg	0.00000353 %	\checkmark	
			201-581-5	85-01-8	_					_			
25	8	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26		fluoranthene		_		0.06			0.052		0.0000052.0/		
26			205-912-4	206-44-0		0.06	mg/kg		0.053	mg/kg	0.0000053 %	\checkmark	
27		pyrene		·		0.04	mg/kg		0.0353	mg/kg	0.00000353 %	\checkmark	
21			204-927-3	129-00-0		0.04	шу/ку		0.0355	шу/ку	0.00000333 /8	~	
28		benzo[a]anthracer	ne			<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<lod< td=""></lod<>
20		601-033-00-9	200-280-6	56-55-3						ing/kg			.200
29		chrysene				0.04	mg/kg		0.0353	mg/kg	0.00000353 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9								ľ	
30		benzo[b]fluoranthe	ene			<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthe				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9	_								
32		benzo[a]pyrene; b	,	50.00.0		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8	-								
33	8	indeno[123-cd]pyr	205-893-2	193-39-5	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		dibenz[a,h]anthrac		193-39-3									
34		601-041-00-2	200-181-8	53-70-3	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[ghi]perylen		00700									
35			205-883-8	191-24-2	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	1										
36		602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<lod< td=""></lod<>
	4	barium {			\uparrow								
37			215-127-9	1304-28-5	_	91	mg/kg	1.117	89.715	mg/kg	0.00897 %	\checkmark	
	-	coronene	E10-121-3	1007-20-0	╋							\square	
38			205-881-7	191-07-1	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[j]fluoranthe			+								
39		601-035-00-X	205-910-3	205-82-3	-	<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
			1 -							Total:	0.0744 %	1	

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



Classification of sample: TP-13-23/08/2022-0.50m

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

Sample details

Sample name:	LoW Code:	
TP-13-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
8.3%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 8.3% Wet Weight Moisture Correction applied (MC)

#		EU CLP index	Determinand EC Number	CAS Number	CLP Note	User entered	l data	Conv. Factor	Compound cor	IC.	Classification value	MC Applied	Conc. Not Used
1	4	antimony { antimor	y trioxide }			4	ma/ka	1.197	4.391 n	ng/kg	0.000439 %	\checkmark	
Ľ		051-005-00-X	215-175-0	1309-64-4	1					.99		ľ	
2	arsenic { arsenic trioxide }			9.8	mg/kg	1.32	11.865 n	ng/kg	0.00119 %	1			
		033-003-00-0	215-481-4	1327-53-3	1					33		ř	
3	4					2.3	mg/kg	1.142	2.409 n	ng/kg	0.000241 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0						0 0		<u> </u>	
4	4	chromium in chrom <mark>oxide (worst case)</mark>	nium(III) compounds }	; { [●] <mark>chromium(III)</mark>		35.6	mg/kg	1.462	47.713 n	ng/kg	0.00477 %	\checkmark	
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of compounds spectrum of compounds spectrum of the other spectrum of	hium(VI) compounds he exception of barin cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681 n	ng/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8											
6	4		oxide; copper (I) oxi			32	mg/kg	1.126	33.038 n	ng/kg	0.0033 %	\checkmark	
		029-002-00-X	215-270-7	1317-39-1	-								
7	4	<pre>lead { lead chromate }</pre>		1	17	mg/kg	1.56	24.316 n	ng/kg	0.00156 %	\checkmark		
-		082-004-00-2	231-846-0	7758-97-6	-								
8	4		231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135 n	ng/kg	<0.0000135 %		<lod< td=""></lod<>
-		080-010-00-X			-							-	
9	~	molybdenum { molybdenum(VI) oxide } 042-001-00-9 215-204-7 1313-27-5				5.8	mg/kg	1.5	7.979 n	ng/kg	0.000798 %	\checkmark	
	æ	nickel { nickel chro		1010 21 0									
10		028-035-00-7	238-766-5	14721-18-7	1	51.1	mg/kg	2.976	139.464 n	ng/kg	0.0139 %	\checkmark	
11	æ	selenium { nickel s	elenate }			0		0.554	4.00.4	/	0.000460.0/		
11	~	028-031-00-5	239-125-2	15060-62-5	1	2	mg/kg	2.554	4.684 n	ng/kg	0.000468 %	\checkmark	
12	4	zinc { zinc chromat 024-007-00-3	t <mark>e</mark> } 236-878-9	13530-65-9		105	mg/kg	2.774	267.109 n	ng/kg	0.0267 %	\checkmark	
13	8	TPH (C6 to C40) p	etroleum group	1		50			50 -		0.0050.0/		
13				TPH		<52	mg/kg		<52 n	ід/кд	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy				<0.005	mg/kg		<0.005 n	ng/kg	<0.0000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4									
15		benzene				<0.005	mg/kg		<0.005 n	ng/kg	<0.0000005 %		<lod< td=""></lod<>
		601-020-00-8	200-753-7	71-43-2						2 0			
16		toluene	000 005 0			<0.005	mg/kg		<0.005 n	ng/kg	<0.000005 %		<lod< td=""></lod<>
		601-021-00-3	203-625-9	108-88-3									



#			Determinand		CLP Note	User entered	l data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF						MC	
17		ethylbenzene				<0.005	mg/kg		<0.005 mg	kg <0.0000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_							
		xylene			_							
18		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]		<0.01	mg/kg		<0.01 mg	kg <0.000001 %		<lod< td=""></lod<>
19		рН				8.43	pН		8.43 pH	8.43 pH		
				PH					· · · ·	·		ļ
20		naphthalene				<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_							
21	۲	acenaphthylene			_	<0.03	mg/kg		<0.03 mg	kg <0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8	_						_	
22	8	acenaphthene			_	<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
		0	201-469-6	83-32-9	+-						_	
23	8	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene				<0.03	mg/kg		<0.03 mg	kg <0.000003 %		<lod< td=""></lod<>
			201-581-5	85-01-8	_					-	_	
25	0	anthracene	204-371-1	120-12-7	_	<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
		fluoranthene										
26			205-912-4	206-44-0	_	<0.03	mg/kg		<0.03 mg	kg <0.000003 %		<lod< td=""></lod<>
		pyrene										
27			204-927-3	129-00-0	-	<0.03	mg/kg		<0.03 mg	kg <0.000003 %		<lod< td=""></lod<>
~~		benzo[a]anthracer	ne			0.00			0.00			1.00
28		601-033-00-9	200-280-6	56-55-3	-	<0.06	mg/kg		<0.06 mg	kg <0.000006 %		<lod< td=""></lod<>
29		chrysene				<0.02	malka		<0.02 mg	kg <0.000002 %		<lod< td=""></lod<>
29		601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02 mg	kg <0.000002 /8		LOD
30		benzo[b]fluoranthe	ene		Τ	<0.05	mg/kg		<0.05 mg	kg <0.000005 %		<lod< td=""></lod<>
00		601-034-00-4	205-911-9	205-99-2		<0.00	iiig/kg		<0.00 mg			LOD
31		benzo[k]fluoranthe	ene			<0.02	mg/kg		<0.02 mg	kg <0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9								
32			enzo[def]chrysene			<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
		601-032-00-3	200-028-5	50-32-8	_							
33	۲	indeno[123-cd]pyr				<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
			205-893-2	193-39-5	_							
34		dibenz[a,h]anthrac		50 70 0	_	<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
		601-041-00-2	200-181-8	53-70-3	_						_	
35	8	benzo[ghi]perylen		401.04.0	_	<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	205-883-8	191-24-2							_	
36	•	602-039-00-4	215-648-1	1336-36-3	_	<0.035	mg/kg		<0.035 mg	kg <0.000035 %		<lod< td=""></lod<>
				1000-00-0	+						-	
37	~	barium { 🧧 barium				94	mg/kg	1.117	96.241 mg	kg 0.00962 %	\checkmark	
			215-127-9	1304-28-5	+-							
38	۲	coronene	605 004 -	404.07.4		<0.04	mg/kg		<0.04 mg	kg <0.000004 %		<lod< td=""></lod<>
	-	have the state	205-881-7	191-07-1	_							
39		benzo[j]fluoranthe		005 82 2		<1	mg/kg		<1 mg	kg <0.0001 %		<lod< td=""></lod<>
		601-035-00-X	205-910-3	205-82-3					То	al: 0.0685 %	-	

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



Classification of sample: TP-12-23/08/2022-0.50m

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

Sample details

•		
Sample name:	LoW Code:	
TP-12-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
4.4%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

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

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound	conc.	Classification value	MC Applied	Conc. Not Used
1	4	antimony { antimor				2	mg/kg	1.197	2.289	mg/kg	0.000229 %	\checkmark	
		051-005-00-X	215-175-0	1309-64-4	-							-	
2	4	arsenic { arsenic tr 033-003-00-0	215-481-4	1327-53-3	-	8.9	mg/kg	1.32	11.234	mg/kg	0.00112 %	\checkmark	
	æ			1327-33-3									
3	•••	048-002-00-0	215-146-2	1306-19-0		1.1	mg/kg	1.142	1.201	mg/kg	0.00012 %	\checkmark	
4	4	chromium in chrom oxide (worst case)		s { ^e <mark>chromium(III)</mark>		38.2	mg/kg	1.462	53.375	mg/kg	0.00534 %	~	
			215-160-9	1308-38-9								-	
5	4	compounds, with the of compounds spe	nium(VI) compounds he exception of bari cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< td=""></lod<>
		024-017-00-8			-							ļ	
6	4	copper { dicopper { 029-002-00-X	<mark>oxide; copper (I) oxi</mark> 215-270-7	<mark>de</mark> } 1317-39-1		31	mg/kg	1.126	33.367	mg/kg	0.00334 %	\checkmark	
7	Read { lead chromate }		1	27	mg/kg	1.56	40.262	mg/kg	0.00258 %	\checkmark			
Ľ		082-004-00-2	231-846-0	7758-97-6		21	шу/ку	1.50	40.202	шу/ку	0.00238 /8	~	
8	4					<0.1	ma/ka	1.353	<0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
Ľ		080-010-00-X	231-299-8	7487-94-7									
9	4	molybdenum {				3.3	mg/kg	1.5	4.733	mg/kg	0.000473 %	\checkmark	
		042-001-00-9	215-204-7	1313-27-5									
10	4	nickel { nickel chro				32.5	mg/kg	2.976	92.473	mg/kg	0.00925 %	\checkmark	
		028-035-00-7	238-766-5	14721-18-7								-	
11	4	selenium { nickel s 028-031-00-5	elenate } 239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
-		zinc { zinc chromat		15060-62-5	-		-					t-	
12		024-007-00-3	236-878-9	13530-65-9	-	126	mg/kg	2.774	334.163	mg/kg	0.0334 %	\checkmark	
		TPH (C6 to C40) p							440.000		0.0444.0/		
13	-			ТРН		116	mg/kg		110.896	mg/kg	0.0111 %	\checkmark	
14		tert-butyl methyl et 2-methoxy-2-methy	ylpropane	1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		603-181-00-X	216-653-1	1634-04-4	_								
15		benzene	000 750 7	F <i>i</i> 10.0		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
	-	601-020-00-8	200-753-7	71-43-2	-								
16		toluene 601-021-00-3	203-625-9	108-88-3	-	<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
	L	001-021-00-3	200-020-3	100-00-5									



#			Determinand		CLP Note	User entered	d data	Conv. Factor	Compound o	conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number	CLF							MC	
17	8	ethylbenzene	1000 0 10 1	1.00.11.1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	+-								
		xylene	000 400 0 [4]	05 47 0 [4]	_								
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	рН				8.3	pН		8.3	pН	8.3 pH		
-				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3	_								
21	0	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8									
22	0	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
			201-469-6	83-32-9	+-							-	
23	Θ	fluorene	201-695-5	86-73-7	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
24	0	phenanthrene	201-581-5	85-01-8	_	0.05	mg/kg		0.0478	mg/kg	0.00000478 %	\checkmark	
		anthracene	201-301-3	05-01-0	+								
25			204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
26		fluoranthene		_		0.07	malka		0.0660	malka	0.00000660.9/	,	
20			205-912-4	206-44-0		0.07	mg/kg		0.0669	mg/kg	0.00000669 %	\checkmark	
27		pyrene				0.06	mg/kg		0.0574	mg/kg	0.00000574 %	\checkmark	
21			204-927-3	129-00-0		0.00	iiig/kg		0.0074	iiig/kg	0.00000074 //	~	
28		benzo[a]anthracer	ne			0.07	mg/kg		0.0669	mg/kg	0.00000669 %	\checkmark	
		601-033-00-9	200-280-6	56-55-3								Ň	
29		chrysene				0.05	mg/kg		0.0478	mg/kg	0.00000478 %	\checkmark	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthe			_	0.05	mg/kg		0.0478	mg/kg	0.00000478 %	\checkmark	
		601-034-00-4	205-911-9	205-99-2	_							-	
31		benzo[k]fluoranthe			_	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
		601-036-00-5	205-916-6	207-08-9	_							_	
32		benzo[a]pyrene; b	,	50.00.0	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	601-032-00-3	200-028-5	50-32-8	_							-	
33	8	indeno[123-cd]pyr	205-893-2	193-39-5	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		dibenz[a,h]anthrac		193-39-3									
34		601-041-00-2	200-181-8	53-70-3	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		benzo[ghi]perylen	1	00700	+							-	
35		20120[gin]porylen	205-883-8	191-24-2	-	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobipheny	1										
36		602-039-00-4	215-648-1	1336-36-3	-	<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<lod< td=""></lod<>
	4	barium {			+								
37	–	Darium (- Darium	215-127-9	1304-28-5	_	51	mg/kg	1.117	54.436	mg/kg	0.00544 %	\checkmark	
		coronene	F10-121-9	1304-20-3	+-								
38			205-881-7	191-07-1	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
	-	benzo[j]fluoranthe		131-07-1	+								
39		601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
										Total:	0.0729 %		

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 Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
Below limit of detection
Not detected
Only the metal concentration has been used for classification



Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Solid waste without liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0111%)



Classification of sample: TP-07-23/08/2022-0.50m



Sample details

•		
Sample name:	LoW Code:	
TP-07-23/08/2022-0.50m	Chapter:	17: Construction and Demolition Wastes (including excavated soil
Moisture content:		from contaminated sites)
7%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05
(wet weight correction)		03)

Hazard properties

None identified

Determinands

Moisture content: 7% Wet Weight Moisture Correction applied (MC)

#		EU CLP index number	Determinand EC Number	CAS Number	CLP Note	User entered	d data	Conv. Factor	Compound c	onc.	Classification value	MC Applied	Conc. Not Used
1	4	antimony { antimor 051-005-00-X	1 1 trioxide } 215-175-0	1309-64-4		2	mg/kg	1.197	2.227	mg/kg	0.000223 %	\checkmark	
2	4	arsenic { arsenic tr	ioxide }			8.6	mg/kg	1.32	10.56	mg/kg	0.00106 %	~	
		033-003-00-0	215-481-4	1327-53-3									
3	4	cadmium { cadmiu				1.6	mg/kg	1.142	1.7	mg/kg	0.00017 %	\checkmark	
		048-002-00-0	215-146-2	1306-19-0							1		
4	4	<pre>chromium in chromium(III) compounds { chromium(III) oxide (worst case) }</pre>			30.2	mg/kg	1.462	41.049	mg/kg	0.0041 %	\checkmark		
			215-160-9	1308-38-9									
5	4	compounds, with the of compounds spectrum of	hium(VI) compounds the exception of barin cified elsewhere in t	um chromate and		<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<lod< th=""></lod<>
		024-017-00-8											
6	4		oxide; copper (I) oxi	de }		25	mg/kg	1.126	26.177	mg/kg	0.00262 %	\checkmark	
			215-270-7	1317-39-1								-	
7	4	· · ·		1	11	mg/kg	1.56	15.957	mg/kg	0.00102 %	\checkmark		
			231-846-0	7758-97-6									
8	4	mercury { mercury	•			<0.1	mg/kg	<mark>g</mark> 1.353	1.353 <0.135	mg/kg	<0.0000135 %		<lod< td=""></lod<>
	-		231-299-8	7487-94-7									
9	4		ybdenum(VI) oxide			3.6	mg/kg	1.5	5.023	mg/kg	0.000502 %	\checkmark	
			215-204-7	1313-27-5									
10	4	nickel { nickel chro 028-035-00-7	mate } 238-766-5	44704 40 7		33.7	mg/kg	2.976	93.279	mg/kg	0.00933 %	\checkmark	
				14721-18-7	\vdash								
11	4	selenium { nickel s 028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<lod< td=""></lod<>
		zinc { zinc chromat	1	13000-02-3									
12	44		236-878-9	13530-65-9		72	mg/kg	2.774	185.757	mg/kg	0.0186 %	\checkmark	
		TPH (C6 to C40) p		10000 00 0	\vdash								
13	ľ	····(••••••)		TPH	-	<52	mg/kg		<52	mg/kg	<0.0052 %		<lod< td=""></lod<>
14		tert-butyl methyl et 2-methoxy-2-methy	, ,	1		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<lod< th=""></lod<>
		603-181-00-X	216-653-1	1634-04-4									
15		benzene			<0.005	mg/kg		<0.005	ma/ka	<0.0000005 %		<lod< th=""></lod<>	
		601-020-00-8 200-753-7 71-43-2											
16		toluene				<0.005	mg/kg		<0.005	mg/ka	<0.0000005 %		<lod< th=""></lod<>
Ľ		601-021-00-3	203-625-9	108-88-3									



#		Determinand		CLP Note	User entered	l data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number	CLP			. aoto:				MC	0000
17	8	ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.000005 %		<lod< td=""></lod<>
		601-023-00-4	202-849-4	100-41-4	_							H	
18		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]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<lod< td=""></lod<>
19	0	pН				8.59	pН		8.59	рН	8.59 pH	Π	
				PH							•		
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-052-00-2	202-049-5	91-20-3			0.0			0 0			
21	۲	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
			205-917-1	208-96-8			5.5			5.5		Ц	-
22		acenaphthene	201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %	Π	<lod< td=""></lod<>
24		phenanthrene	201-695-5	86-73-7	+	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %	Η	<lod< td=""></lod<>
27			201-581-5	85-01-8		_0.00	ing/kg		NO.00	/ng/kg			
25	0	anthracene	204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
00		fluoranthene		1		0.00			0.00		0.00000.0/	H	1.00
26			205-912-4	206-44-0	-	<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<lod< td=""></lod<>
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %	Π	<lod< td=""></lod<>
			204-927-3	129-00-0									
28		benzo[a]anthracen 601-033-00-9	e 200-280-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<lod< td=""></lod<>
		chrysene	200-200-0	00-00-0								H	
29		601-048-00-0	205-923-4	218-01-9	_	<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
	_	benzo[b]fluoranthe	J	210 01 0	+							H	
30		601-034-00-4	205-911-9	205-99-2	_	<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<lod< td=""></lod<>
24		benzo[k]fluoranthe		205-33-2	+	0.00			0.00		0.00000.0%	H	1.00
31		601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<lod< td=""></lod<>
32		benzo[a]pyrene; be	enzo[def]chrysene	1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
02			200-028-5	50-32-8		40.01	iiig/itg			iiig/itg			
33		indeno[123-cd]pyre		400.00 5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		dihanala hisath	205-893-2	193-39-5	_							$\left \cdot \right $	
34		dibenz[a,h]anthrac		52 70 2	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		601-041-00-2	200-181-8	53-70-3	_							\square	
35	۲	benzo[ghi]perylene		101 24 2	_	<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
		polychlorobiphenyl	205-883-8	191-24-2								$\left - \right $	
36	۲		s; PCB 215-648-1	1336-36-3	_	<0.035	mg/kg		<0.035	mg/kg	<0.000035 %		<lod< td=""></lod<>
$\left - \right $				1000-00-0								H	
37	44	barium { 🤎 barium				41	mg/kg	1.117	42.572	mg/kg	0.00426 %	\checkmark	
			215-127-9	1304-28-5								H	
38	۲	coronene		404 07 1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<lod< td=""></lod<>
			205-881-7	191-07-1	_							\square	
39		benzo[j]fluoranther 601-035-00-X	e 205-910-3	205-82-3	-	<1	mg/kg		<1	mg/kg	<0.0001 %		<lod< td=""></lod<>
				1				l		Total:	0.0476 %	Г	

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)
4	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<lod< th=""><th>Below limit of detection</th></lod<>	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Appendix A: Classifier defined and non 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

pH (CAS Number: PH)

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

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

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

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

Description/Comments: Data from C&L Inventory Database Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database Data source date: 17 Jul 2015 Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

Iluorene (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

[•] barium oxide (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20 Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825 Data source date: 02 Apr 2020 Hazard Statements: Acute Tox. 3; H301, Skin Corr. 1B; H314, Eye Dam. 1; H318, Acute Tox. 1; H332

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

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic. Data source: http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en

Data source date: 16 Jun 2014 Hazard Statements: STOT SE 2; H371

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)

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)



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lead -	{lead	chromate}	
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Woi	Worst case CLP species based on hazard statements/molecular weight (edit as required)												
mei	cury	(mercury	dic	hlori	de}								

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)

nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc chromate}

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

barium {barium oxide}

Cr VI either not detected or detected at extremely low levels

Appendix C: Version

HazWasteOnline Classification Engine: EU WM3 1st Edition v1.1.NI using the EU LoW HazWasteOnline Classification Engine Version: 2022.263.5340.9974 (20 Sep 2022) HazWasteOnline Database: 2022.273.5362.10003 (03 Oct 2022)

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

APPENDIX 5 – WAC Summary Data



Waste Categorisation Summary Table

	TP-01	TP-03	TP-03		TP-07							
Sample ID				TP-06	-	TP-09	TP-10					
Sample Depth (m) Material Description	0.50 Made Ground	0.50 Made Ground	1.50 Clay	0.50 Made Ground	0.50 Made Ground	0.50 Made Ground	0.50 Made Ground	-	-	ETIGATIONS INELAND		
								-	GROUND INV	ESTIGATIONS IRELAND		
Sample Date LoW Code	23/08/2022 17 05 04		Walshestown /	Hazardous		1						
Waste Category	Category B1	Category B1	Category A	Category B1	Category B1	Category B1	Category B1	Inert Criteria	IMS* Criteria	Criteria	LOD LOR	Units
Metals	outogory Dr	outogory D1	outogory A	outogory Dr	outogory Di	outogory D1	outogory Dr					
Antimony	3	2	2	3	2	3	2	-	-	HazWaste	<1	mg/kg
Arsenic	11.2	7.6	7.8	12.6	8.6	12.4	8.7	-	-	HazWaste	<0.5	mg/kg
Barium	92	51	50	91	41	56	51	-	_	HazWaste	<1	mg/kg
Cadmium	2.3	1.4	1.7	1.7	1.6	2.1	1.6	-	-	HazWaste	<0.1	mg/kg
Chromium	70.7	31.5	33.2	47.2	30.2	32.7	42.1	-	-	HazWaste	<0.5	mg/kg
Copper	26	23	25	43	25	33	28	-	-	HazWaste	<1	mg/kg
Lead	60	12	13	36	11	16	12	-	-	HazWaste	<5	mg/kg
Mercury	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	-	-	HazWaste	<0.1	mg/kg
Molybdenum	5.5	3.8	4.4	4.7	3.6	4.1	4.8	-	-	HazWaste	<0.1	mg/kg
Nickel	44.1	33.7	35.8	49.7	33.7	45.8	40.4	-	-	HazWaste	<0.7	mg/kg
Selenium	1	<1	<1	2	<1	1	<1	-	-	HazWaste	<1	mg/kg
Zinc	97	67	80	124	72	100	94	-	-	HazWaste	<5	mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	1	-	-	HazWaste	<0.3	mg/kg
Tiexavalent Onionium	-0.5	-0.5	-0.0	-0.0	-0.5	-0.0		-	-	1102110310	-0.0	ing/kg
pH (solid sample)	8.38	8.56	8.68	8.03	8.59	8.47	8.53	_	-	HazWaste	<0.01	pH units
alkali reserve				-	-	-		-	-	-	<0.000	gNaOH/100
aikaii feserve	-	-	-	-	-	-	-	-	-	-	<0.000	givaOH/100
A-4												
Asbestos	NAD	-		-		0/						
Asbestos (Dry Weight)	NAD	-	-			%						
bestos (Moisture Corrected Weight)	-	-	-	-	-	-	-	-	-	0.1	<0.001	%
ACM Detected	-	-	-	-	-	-	-	-	-	-	Presence	Presence
				l			l					I
PAHs							l					
Naphthalene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	-	-	HazWaste	<0.03	mg/kg
Acenaphthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	HazWaste	<0.05	mg/kg
Fluorene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Phenanthrene	0.07	< 0.03	<0.03	0.04	<0.03	<0.03	< 0.03	-	-	HazWaste	< 0.03	mg/kg
Anthracene	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	-	-	HazWaste	<0.04	mg/kg
Fluoranthene	0.11	<0.03	<0.03	0.06	<0.03	<0.03	<0.03	-	-	HazWaste	< 0.03	mg/kg
Pyrene	0.1	< 0.03	<0.03	0.04	< 0.03	<0.03	< 0.03	-	-	HazWaste	< 0.03	mg/kg
Benzo(a)anthracene	0.09	<0.06	<0.06	< 0.06	< 0.06	<0.06	<0.06	-	-	HazWaste	<0.06	mg/kg
Chrysene	0.08	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	0.11	<0.07	<0.07	< 0.07	< 0.07	<0.07	<0.07	-	-	HazWaste	<0.07	mg/kg
Benzo(a)pyrene	0.06	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Indeno(123cd)pyrene	< 0.04	<0.04	< 0.04	< 0.04	< 0.04	<0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Dibenzo(ah)anthracene	< 0.04	< 0.04	< 0.04	< 0.04	<0.04	< 0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Benzo(ghi)perylene	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Coronene	<0.04	<0.04	< 0.04	< 0.04	<0.04	< 0.04	< 0.04	-	-	HazWaste	< 0.04	mg/kg
PAH 6 Total	0.28	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene	0.08	<0.05	<0.05	< 0.05	<0.05	<0.05	<0.05		-	HazWaste	<0.05	mg/kg
Benzo(k)fluoranthene	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	-	HazWaste	< 0.02	mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Hydrocarbons												
TPH (C5-40)	<52	<52	<52	<52	<52	<52	<52	-	-	HazWaste	<52	mg/kg
MTBE	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	
m/p-Xylene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
	<5 <5	-	-	HazWaste HazWaste	<5	ug/kg						
o-Xylene Total 7 PCBs												ug/kg
TOTAL / FODS	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WACtt Polid Comet- Commen				+			+				-	
WAC** Solid Sample Summary	0.04	0.00	0.04	0.04	0.24	0.44	0.07	0	C		<0.00	0/
Total Organic Carbon *	0.91	0.26	0.21	0.91	0.34	0.41	0.27	3	6	-	<0.02	%
Sum of BTEX	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	6		-	<0.025	mg/kg
Sum of 7 PCBs	< 0.035	< 0.035	<0.035	< 0.035	<0.035	< 0.035	< 0.035	1	1	-	<0.035	mg/kg
Mineral Oil	<30	<30	<30	<30	<30	<30	<30	500	500	-	<30	mg/kg
PAH Sum of 6	0.28	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	100	100	-	<0.64	mg/kg
	_											
WAC** Leachate Data											1	
Arsenic	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	1.5	-	<0.025	mg/kg
Barium	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	20	20	-	<0.03	mg/kg
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	<0.005	mg/kg
Chromium	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Copper	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	2	-	<0.07	mg/kg
Mercury	< 0.0001	<0.0001	<0.0001	<0.0001	<0.0001	< 0.0001	< 0.0001	0.01	0.01	-	< 0.0001	mg/kg
Molybdenum	<0.02	0.05	0.13	<0.02	0.06	<0.02	0.04	0.5	1.5	-	<0.02	mg/kg
Nickel	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	0.4	-	<0.02	mg/kg
Lead	< 0.05	<0.05	< 0.05	<0.05	< 0.05	<0.05	<0.05	0.5	0.5	-	< 0.05	mg/kg
Antimony	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.18		<0.02	mg/kg
Selenium	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.18	-	<0.02	
Zinc	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.3	-	<0.03	mg/kg
												mg/kg
Total Dissolved Solids	650	480	390	820	560	460	540	4000	12,000	-	<350	mg/kg
Dissolved Organic Carbon	30	20	30	30	<20	20	<20	500	500	-	<20	mg/kg
Phenol	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	1	-	<0.1	mg/kg
Fluoride	4	3	<3	4	<3	5	<3	10	10	-	<3	mg/kg
Sulphate as SO4	6	8	9	220	<5	7	58	1000	3,000	-	<0.5	mg/kg
Chloride	4	5	7	6	<3	5	4	800	2,400	-	<3	mg/kg

Chionole 4 5 / NAD- no asketos detected
 * - Integrated Materials Solutions Landfill, Hollywood Great, Nag's Head, The Naul, Co. Dublin
 ** - limits as specified in Council Decision 2003/33/EC

Waste Categorisation Summary Table

erry Orchard Sites 4 & 5								т				
Sample ID	TP-10	TP-11	TP-11	TP-12	TP-13	TP-13	TP-14					
Sample Depth (m)	1.50	0.50	1.50	0.50	0.50	1.50	0.50		-			
Material Description	Clay	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground		GROUND INVI	ESTIGATIONS INSLAND		
Sample Date	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022	23/08/2022					1
LoW Code	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	17 05 04	Inert Criteria	Walshestown / IMS* Criteria	Hazardous Criteria	LOD LOR	Units
Waste Category	Category A	Category B1	Category B1	Category B1	Category B1	Category B1	Category B1		INIS CITERIA	Citteria		
Metals		2		<u>^</u>	4		â	-	-			
Antimony Arsenic	4	11.1	3 15.4	2 8.9	4 9.8	1 7.8	3 11.5	-	-	HazWaste HazWaste	<1 <0.5	mg/kg
Barium	106	82	135	51	94	105	85	-	-	HazWaste	<0.5	mg/kg
Cadmium	1.9	1.7	3.1	1.1	2.3	0.7	1	-	-	HazWaste		mg/kg
	51.8	42.7	73.9	38.2	2.3	42.8	47.7	-	-	HazWaste	<0.1 <0.5	mg/kg
Chromium	51.6	42.7	43	38.2	35.6	42.6	47.7	-	-	HazWaste	<0.5	mg/kg
Copper Lead	59	25	43 93	27	32	20	85	-		HazWaste	<5	mg/kg
	<0.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1	-	-	HazWaste	<0.1	mg/kg
Mercury								-	-			mg/kg
Molybdenum Nickel	5.3 56.1	5.5 42	7.2 49.1	3.3 32.5	5.8 51.1	3.8 34.7	3.8 43.1	-	-	HazWaste HazWaste	<0.1 <0.7	mg/kg
	2	42	49.1	<1	2	1	43.1	-	-	HazWaste	<1	mg/kg
Selenium Zinc	159	115	158	126	105	90	282	-	-	HazWaste	<5	mg/kg
	<0.3				<0.3				-			mg/kg
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	HazWaste	<0.3	mg/kg
		0.05	7.6		0.40	0.45						
pH (solid sample)	8.2	8.35	7.5	8.3	8.43	8.15	8.24	-	-	HazWaste	< 0.01	pH units
alkali reserve	-	-	-	-	-	-	-	-	-	-	<0.000	gNaOH/100
Ashasta												
Asbestos	NICO	NAG	NES	NAS	NH D	NAG	NHO	-		-	-	
Asbestos (Dry Weight) Asbestos (Moisture Corrected Weight)	NAD	NAD	NAD	NAD	NAD	NAD	NAD	-	-		- <0.001	%
(,	-	-	-	-	-	-	-	-	-	0.1		% Brosoneo
ACM Detected	-	-	-		-	-	-	-	-	-	Presence	Presence
DALL-												
PAHs		-0.01	-0.01	-0.01	-0.01		-0.01			11	10.01	
Naphthalene	< 0.04	<0.04	< 0.04	<0.04	< 0.04	0.11	<0.04	-	-	HazWaste	<0.04 <0.03	mg/kg
Acenaphthylene	< 0.03	<0.03	< 0.03	<0.03	< 0.03	<0.03	<0.03	-	-	HazWaste		mg/kg
Acenaphthene	< 0.05	<0.05	<0.05	<0.05	< 0.05	<0.05	<0.05	-	-	HazWaste	< 0.05	mg/kg
Fluorene	< 0.04	<0.04	< 0.04	<0.04	< 0.04	< 0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Phenanthrene	0.04	0.14	0.08	0.05	< 0.03	0.08	0.12	-	-	HazWaste	< 0.03	mg/kg
Anthracene	< 0.04	< 0.04	<0.04	<0.04	< 0.04	<0.04	<0.04			HazWaste	< 0.04	mg/kg
Fluoranthene	0.07	0.16	0.14	0.07	< 0.03	< 0.03	0.21	-	-	HazWaste	< 0.03	mg/kg
Pyrene	0.07	0.13	0.13	0.06	< 0.03	0.07	0.19	-	-	HazWaste	< 0.03	mg/kg
Benzo(a)anthracene	0.08	0.11	0.11	0.07	<0.06	<0.06	0.14	-	-	HazWaste	< 0.06	mg/kg
Chrysene	0.06	0.07	0.09	0.05	<0.02	0.04	0.12	-	-	HazWaste	<0.02	mg/kg
Benzo(bk)fluoranthene	0.09	0.12	0.15	0.07	<0.07	<0.07	0.22			HazWaste	<0.07	mg/kg
Benzo(a)pyrene	< 0.04	0.05	0.07	<0.04	< 0.04	<0.04	0.11	-	-	HazWaste	<0.04	mg/kg
Indeno(123cd)pyrene	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	0.09	-	-	HazWaste	<0.04	mg/kg
Dibenzo(ah)anthracene	< 0.04	< 0.04	< 0.04	<0.04	< 0.04	<0.04	<0.04	-	-	HazWaste	< 0.04	mg/kg
Benzo(ghi)perylene	< 0.04	<0.04	0.05	<0.04	< 0.04	<0.04	0.08	-	-	HazWaste	<0.04	mg/kg
Coronene	<0.04	< 0.04	< 0.04	<0.04	< 0.04	< 0.04	< 0.04	-	-	HazWaste	< 0.04	mg/kg
PAH 6 Total	<0.22	0.33	0.46	<0.22	<0.22	<0.22	0.71	-	-	-	<0.22	mg/kg
PAH 17 Total	<0.64	0.78	0.87	<0.64	<0.64	<0.64	1.28	100	100	-	<0.64	mg/kg
Benzo(b)fluoranthene Benzo(k)fluoranthene	0.06	0.09	0.11	0.05	<0.05	<0.05	0.16	-	-	HazWaste HazWaste	<0.05	mg/kg
								-	-			mg/kg
Benzo(j)fluoranthene	<1	<1	<1	<1	<1	<1	<1	-	-	HazWaste	<1	mg/kg
Usedan analysis a												
Hydrocarbons	-50				-50	500		-				
TPH (C5-40) MTBE	<52 <5	<52 <5	<52 <5	116 <5	<52 <5	522 <5	88 <5	-	-	HazWaste HazWaste	<52 <5	mg/kg
												ug/kg
Benzene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
Toluene	<5	<5	<5	<5	<5	5	<5	-	-	HazWaste	<5	ug/kg
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	-	-	HazWaste	<5	ug/kg
m/p-Xylene	<5	<5	<5	<5	<5	9	<5	-	-	HazWaste	<5	ug/kg
o-Xylene	<5	<5	<5	<5	<5	11	<5			HazWaste	<5	ug/kg
Total 7 PCBs	<35	<35	<35	<35	<35	<35	<35	1,000	1,000	HazWaste	<35	ug/kg
WAC** Solid Sample Summer												
WAC** Solid Sample Summary	1.00	0.52	4.75	0.55	0.24	0.66	0.96		6		<0.02	%
Total Organic Carbon * Sum of BTEX	1.00 <0.025	0.53	1.75	0.55	<0.24	0.66 <0.025	0.96 <0.025	3	6	-	<0.02	
										-		mg/kg
Sum of 7 PCBs Mineral Oil	< 0.035	<0.035	<0.035	<0.035	< 0.035	<0.035	<0.035	1	1	-	< 0.035	mg/kg
Mineral Oil PAH Sum of 6	<30	<30	<30 0.46	<30	<30	348	<30	500	500	-	<30	mg/kg
	<0.22	0.33		<0.22	<0.22	<0.22	0.71	-	-	-	<0.22	mg/kg
PAH Sum of 17	<0.64	0.78	0.87	<0.64	<0.64	<0.64	1.28	100	100	-	<0.64	mg/kg
WAC** Loophate Date				+			<u> </u>					
WAC** Leachate Data	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.5	15		10.005	
Arsenic Barium	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	1.5	-	<0.025	mg/kg
	< 0.03	< 0.03	0.05	< 0.03	< 0.03	0.13	0.15	20	20	-	< 0.03	mg/kg
	< 0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.04	0.04	-	< 0.005	mg/kg
Cadmium		< 0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	0.5	-	<0.015	mg/kg
Cadmium Chromium	<0.015			< 0.07	<0.07	<0.07	0.07	2	2	-	<0.07	mg/kg
Cadmium Chromium Copper	<0.07	<0.07	<0.07			< 0.0001	< 0.0001	0.01				mg/kg
Cadmium Chromium Copper Mercury	<0.07 <0.0001	<0.0001	<0.0001	<0.0001	<0.0001				0.01	-	< 0.0001	
Cadmium Chromium Copper Mercury Molybdenum	<0.07 <0.0001 0.05	<0.0001 0.08	<0.0001 <0.02	<0.0001 0.08	0.07	0.10	0.10	0.5	1.5	-	<0.02	mg/kg
Cadmium Chromium Copper Mercury Molybdenum Nickel	<0.07 <0.0001 0.05 <0.02	<0.0001 0.08 <0.02	<0.0001 <0.02 <0.02	<0.0001 0.08 <0.02	0.07 <0.02	0.10 <0.02	0.10 <0.02	0.5 0.4	1.5 0.4	-	<0.02 <0.02	mg/kg mg/kg
Cadmium Chromium Copper Mercuny Molybdenum Nickel Lead	<0.07 <0.0001 0.05 <0.02 <0.05	<0.0001 0.08 <0.02 <0.05	<0.0001 <0.02 <0.02 <0.05	<0.0001 0.08 <0.02 <0.05	0.07 <0.02 <0.05	0.10 <0.02 <0.05	0.10 <0.02 <0.05	0.5 0.4 0.5	1.5 0.4 0.5	-	<0.02 <0.02 <0.05	mg/kg mg/kg mg/kg
Cadmium Chromium Copper Mercury Molybdenum Nickel	<0.07 <0.0001 0.05 <0.02	<0.0001 0.08 <0.02	<0.0001 <0.02 <0.02	<0.0001 0.08 <0.02	0.07 <0.02	0.10 <0.02	0.10 <0.02	0.5 0.4	1.5 0.4	-	<0.02 <0.02	mg/kg mg/kg
Cadmium Chromium Copper Mercuny Molybdenum Nickel Lead	<0.07 <0.0001 0.05 <0.02 <0.05	<0.0001 0.08 <0.02 <0.05	<0.0001 <0.02 <0.02 <0.05	<0.0001 0.08 <0.02 <0.05	0.07 <0.02 <0.05	0.10 <0.02 <0.05	0.10 <0.02 <0.05	0.5 0.4 0.5	1.5 0.4 0.5	-	<0.02 <0.02 <0.05	mg/kg mg/kg mg/kg
Cadmium Chronium Copper Mercury Molybdenum Nickel Lead Antimony	<0.07 <0.0001 0.05 <0.02 <0.05 <0.02	<0.0001 0.08 <0.02 <0.05 <0.02	<0.0001 <0.02 <0.02 <0.05 <0.02	<0.0001 0.08 <0.02 <0.05 0.03	0.07 <0.02 <0.05 <0.02	0.10 <0.02 <0.05 <0.02	0.10 <0.02 <0.05 <0.02	0.5 0.4 0.5 0.06	1.5 0.4 0.5 0.18	-	<0.02 <0.02 <0.05 <0.02	mg/kg mg/kg mg/kg mg/kg
Cadmium Chronium Copper Mercury Mołybdenum Nickel Lead Antimony Selenium	<0.07 <0.0001 0.05 <0.02 <0.05 <0.02 <0.02 <0.03	<0.0001 0.08 <0.02 <0.05 <0.02 <0.02 <0.03	<0.0001 <0.02 <0.02 <0.05 <0.02 <0.03	<0.0001 0.08 <0.02 <0.05 0.03 <0.03	0.07 <0.02 <0.05 <0.02 <0.03	0.10 <0.02 <0.05 <0.02 <0.03	0.10 <0.02 <0.05 <0.02 <0.03	0.5 0.4 0.5 0.06 0.1	1.5 0.4 0.5 0.18 0.3	- - - -	<0.02 <0.02 <0.05 <0.02 <0.02	mg/kg mg/kg mg/kg mg/kg
Cadmium Chromium Copper Mercuny Molybdenum Nickel Lead Antimony Selenium Zinc	<0.07 <0.0001 0.05 <0.02 <0.05 <0.02 <0.03 <0.03	<0.0001 0.08 <0.02 <0.05 <0.02 <0.03 <0.03	<0.0001 <0.02 <0.02 <0.05 <0.02 <0.03 <0.03	<0.0001 0.08 <0.02 <0.05 0.03 <0.03 <0.03	0.07 <0.02 <0.05 <0.02 <0.03 <0.03	0.10 <0.02 <0.05 <0.02 <0.03 <0.03	0.10 <0.02 <0.05 <0.02 <0.03 0.06	0.5 0.4 0.5 0.06 0.1 4	1.5 0.4 0.5 0.18 0.3 4	- - - - -	<0.02 <0.02 <0.05 <0.02 <0.03 <0.03	mg/kg mg/kg mg/kg mg/kg mg/kg
Cadmium Chronium Copper Mercury Nokyldenum Nickel Lead Antimony Selenium Zinc Total Dissolved Solids Dissolved Organic Carbon	<0.07 <0.0001 0.05 <0.02 <0.02 <0.02 <0.03 <0.03 670 40	<0.0001 0.08 <0.02 <0.05 <0.02 <0.03 <0.03 520 30	<0.0001 <0.02 <0.02 <0.05 <0.02 <0.03 <0.03 <0.03 740 40	<0.0001 0.08 <0.02 <0.05 0.03 <0.03 <0.03 <0.03 450 30	0.07 <0.02 <0.05 <0.02 <0.03 <0.03 <0.03 390 <20	0.10 <0.02 <0.05 <0.02 <0.03 <0.03 1209 <20	0.10 <0.02 <0.05 <0.02 <0.03 0.06 700 30	0.5 0.4 0.5 0.06 0.1 4 4000 500	1.5 0.4 0.5 0.18 0.3 4 12,000 500	- - - - - -	<0.02 <0.02 <0.05 <0.02 <0.03 <0.03 <350 <20	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg
Cadmium Chronium Copper Mercury Molybdenum Nickel Lead Antimony Selenium Zinc Tota Dissolved Solids	<0.07 <0.0001 0.05 <0.02 <0.05 <0.02 <0.03 <0.03 <0.03 670	<0.0001 0.08 <0.02 <0.05 <0.02 <0.03 <0.03 520	<0.0001 <0.02 <0.02 <0.05 <0.02 <0.03 <0.03 <0.03 740	<0.0001 0.08 <0.02 <0.05 0.03 <0.03 <0.03 <0.03 450	0.07 <0.02 <0.05 <0.02 <0.03 <0.03 390	0.10 <0.02 <0.05 <0.02 <0.03 <0.03 1209	0.10 <0.02 <0.05 <0.02 <0.03 0.06 700	0.5 0.4 0.5 0.06 0.1 4 4000	1.5 0.4 0.5 0.18 0.3 4 12,000	- - - - - -	<0.02 <0.02 <0.05 <0.02 <0.03 <0.03 <350	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg
Cadmium Chromium Copper Mercury Mołybdenum Nickel Lead Antimory Selenium Zinc Tota Dissolved Solids Dissolved Organic Carbon Phenol	<0.07 <0.0001 0.05 <0.02 <0.05 <0.02 <0.03 <0.03 <70 0.03 670 40 <0.1	<0.0001 0.08 <0.02 <0.05 <0.02 <0.03 <0.03 520 30 <0.1	<0.0001 <0.02 <0.02 <0.05 <0.02 <0.03 <0.03 740 40 <0.1	<0.0001 0.08 <0.02 <0.05 0.03 <0.03 <0.03 450 30 <0.1	0.07 <0.02 <0.05 <0.02 <0.03 <0.03 <0.03 390 <20 <0.1	0.10 <0.02 <0.05 <0.02 <0.03 <0.03 1209 <20 <0.1	0.10 <0.02 <0.05 <0.02 <0.03 0.06 700 30 <0.1	0.5 0.4 0.5 0.06 0.1 4 4000 500 1	1.5 0.4 0.5 0.18 0.3 4 12,000 500 1	- - - - - - - - -	<0.02 <0.02 <0.05 <0.02 <0.03 <0.03 <350 <20 <0.1	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg

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 ## **APPENDIX 6** – Potential Material Outlets



Waste Category	Classification Criteria	Potential Outlets
Category A Unlined Soil Recovery Facilities	Soil and Stone only which are free from ⁶ anthropogenic materials such as concrete, brick, timber. Soil must be free from "contamination" e.g. PAHs, Hydrocarbons ⁷ .	Soil Recovery Facilities, Waste Facility Permitted Sites, COR Sites or potential by-product if deemed not to be a waste and complying with requirements under Article 27 of European Waste Directive Regulations (2011). ⁸
Category B1 Inert Landfill	Reported concentrations within inert waste limits, which are set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002). Results also found to be non-hazardous using the HWOL application.	Integrated Materials Solutions Limited Partnership (IMS), Naul, County Dublin W0129-02 Walshestown Landfill Walshestown, Blackhall, Tipperkevin & Bawnoge, Naas, County Kildare W0254-01
Category B2 Inert Landfill	Reported concentrations greater than Category B1 criteria but less than IMS Hollywood Landfill acceptance criteria, as set out in their Waste Licence W0129-02. Results also found to be non-hazardous using the HWOL application.	Integrated Materials Solutions Limited Partnership (IMS), Naul, County Dublin W0129-02 Walshestown Landfill Walshestown, Blackhall, Tipperkevin & Bawnoge, Naas, County Kildare W0254-01 ⁹
Category C Non-Haz Landfill	Reported concentrations greater than Category B2 criteria but within non-haz landfill waste acceptance limits set out by the adopted EU Council Decision 2003/33/EC establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 and Annex II of Directive 1999/31/EC (2002). Results also found to be non-hazardous using the HWOL application.	Walshestown Landfill Walshestown, Blackhall, Tipperkevin & Bawnoge, Naas, County Kildare W0254-01 ¹⁰ Ballynagran Landfill, Co. Wicklow. W165-02 Drehid Landfill, Co. Kildare. W0201-01 East Galway Landfill, Co. Galway. W0178-02 Knockharley Landfill, Co. Meath. W0146-02
Category C 1 Non-Haz Landfill	As Category C but containing < 0.001% w/w asbestos fibres.	RILTA Environmental LTD. W0192-03

 ⁶ Free from equates to less than 2%.
 ⁷ Total BTEX 0.05mg/kg, Mineral Oil 50mg/kg, Total PAHs 1mg/kg, Total PCBs 0.05mg/kg and Asbestos No Asbestos Detected – EPA Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilities, 2020.
 ⁸ S.I. No. 126/2011 - European Communities (Waste Directive) Regulations 2011 (Article 27).
 ⁹ Licenced to accept Category B2 material for recovery.
 ¹⁰ Licenced to accept Category C material for recovery.

		Enva Portlaoise. W0184-02
Category C 2 Non-Haz Landfill	As Category C but containing >0.001% and <0.01% w/w asbestos fibres.	RILTA Environmental LTD. W0192-03
		Enva Portlaoise. W0184-02
Category C 3	As Category C but containing >0.01%	RILTA Environmental LTD.
Non-Haz Landfill	and <0.1% w/w asbestos fibres.	W0192-03
		Enva Portlaoise. W0184-02
Category D	Results found to be hazardous using	RILTA Environmental LTD.
Hazardous Treatment	HWOL Application.	W0192-03
		Enva Portlaoise. W0184-02
Category D 1	Results found to be hazardous due to	RILTA Environmental LTD.
Hazardous Treatment	the presence of asbestos (>0.1%).	W0192-03