December 2024

Site Investigation Summary Report

Proposed Large-Scale Residential Development at LDA Wilton, Sarsfield Road, Cork

On Behalf of

The Land Development Agency

(‘LDA’)

MALONE O'REGAN ENVIRONMENTAL

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MALONE O'REGAN ENVIRONMENTAL

Ground Floor – Unit 3
Bracken Business Park
Bracken Road, Sandyford
Dublin 18, D18 V32Y
Tel: +353- 1- 567 76 55
Email: enviro@mores.ie

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Prepared By: Mark Day **Signed:** _____

Checked By: Laura McGrath **Signed:** _____

Approved By: Martin Kearns **Signed:** _____

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Site Investigation Summary Report

Proposed Large-Scale Residential Development at LDA Wilton, Sarsfield Road, Cork

The Land Development Agency ('LDA')

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1 INTRODUCTION

Malone O'Regan Environmental ('MOR Environmental') was commissioned by Reddy Architecture + Urbanism to undertake works on behalf of the Land Development Agency ('LDA') ('the Applicant') for the proposed Large-Scale Residential Development ('the Proposed Development') at Sarsfield Road, Wilton, Cork ('the Site'). The project aims to establish a residential development featuring associated infrastructure such as roads, parking areas, and utility connections. The Proposed Development will be located on an area that is circa ('ca.') 2.61 hectares ('ha') in size. Ground Investigation Ireland ('GII') were commissioned by the Applicant to conduct intrusive site investigations at the Site to assess ground conditions.

This report will present a comprehensive analysis of laboratory results derived from soil samples collected and presented by GII in their *"Ground Investigations Ireland Wilton ESB site Cork Land Development Agency Ground Investigation Report November 2024* [1]" ('GII Report'). The findings of the GII Report will be evaluated against established soil assessment criteria to identify potential environmental concerns. The data will be organized into tabular formats to facilitate clear interpretation and precise application. This report will also address the classification and categorization of waste materials potentially encountered during excavation, ensuring adherence to applicable regulatory frameworks and standards.

1.1 Scope of Work

GII conducted the site investigation, aimed to assess subsurface conditions using various investigative methods in accordance with the project specifications. The scope of work included visiting the project site to observe existing conditions, excavating fifteen (15No.) trial pits up to 2.5 metres below ground level ('mbgl'), conducting three (3No.) soakaway tests to determine soil infiltration rates per BRE Digest 365 [1], and drilling eight (8No.) rotary core boreholes to a depth of 9.8mbgl. Additionally, four (4No.) plate bearing tests were performed to evaluate the modulus of subgrade reaction and equivalent California Bearing Ratio ('CBR') [1] values. The investigation also involved installing three (3No.) groundwater monitoring wells, performing geotechnical and environmental laboratory testing, and preparing a report with recommendations.

The focus of the MOR Environmental report will be the analysis interpretation and presentation of the findings related to the soil samples collected onsite from the 15 trial pits.

The scope of the work includes the following, as proposed in the email submission by MOR Environmental to Reddy Architecture + Urbanism Re: Contaminated Land Consultancy at ESBN Site, Wilton, Co. Cork[1]

- Screening the results against specific soil assessment criteria;
- Tabulating and reviewing the results; and,
- Drafting an interpretative report designed to inform contractors during the tendering and construction phases of the Proposed Development.

1.2 Limitations

This report is based on the data and information provided in the GII Report. Our analysis and interpretations are limited to the findings presented therein, and we are bound by the scope and methodologies employed by GII during their site investigation. Any assumptions, recommendations, or conclusions drawn are dependent on the accuracy and completeness of the data provided by GII. Should any additional site investigations, testing, or information become available, our findings and recommendations may need to be reassessed.

[1] Email submission by Martin Kearns (MOR Environmental) to Sean Kearns (Reddy Architecture + Urbanism) on 02nd April 2024.

Additionally, we are not responsible for any unforeseen site conditions or factors that may arise after the investigation, which were not included or identified in the GII report.

1.3 Disclaimer

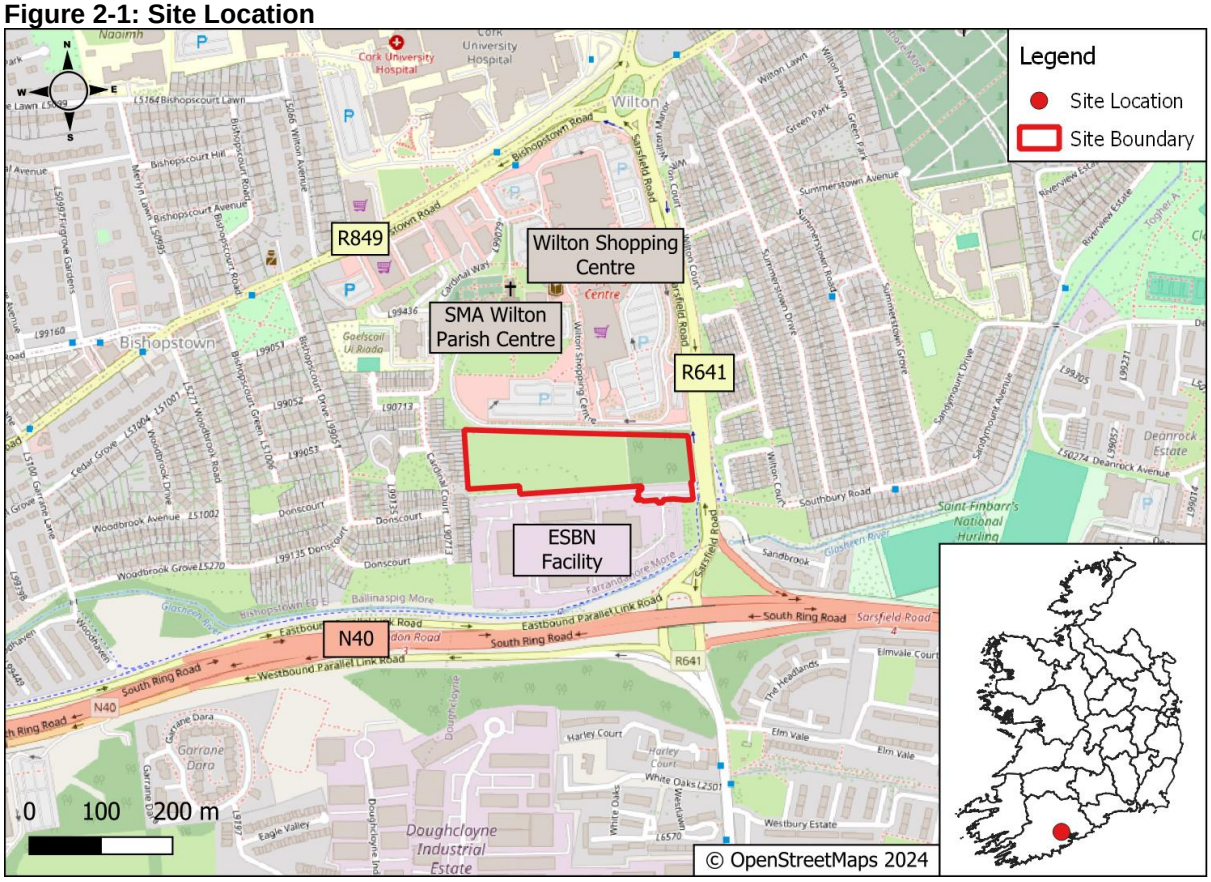
The conclusions presented in this report are professional opinions based solely on the tasks outlined herein and the information made available to MOR Environmental. They are intended for the purpose outlined herein and for the indicated Site and project. The report is for the sole use of the Client. This report may not be relied upon by any other party without explicit agreement from MOR Environmental. Opinions and recommendations presented herein apply to the supplied information and conditions existing at the time of the assessment. They cannot apply to changes of which MOR Environmental is not aware and has not had the opportunity to evaluate. This report is intended for use in its entirety; no excerpt may be taken to be representative of this assessment. All work carried out in preparing this report has utilised and is based on MOR Environmental professional knowledge and understanding of the current relevant Irish and European Community standards, codes, and legislation.

2 SITE DESCRIPTION

2.1 Site Location

The Proposed Development will be located on ca. 2.61ha green field site situated between the Wilton Shopping Centre and Energy Supply Board ('ESB') Networks near Sarsfield Road, Wilton, Cork (OS ITM Reference 564999 569684) shown in Figure 2-1.

Figure 2-1: Site Location

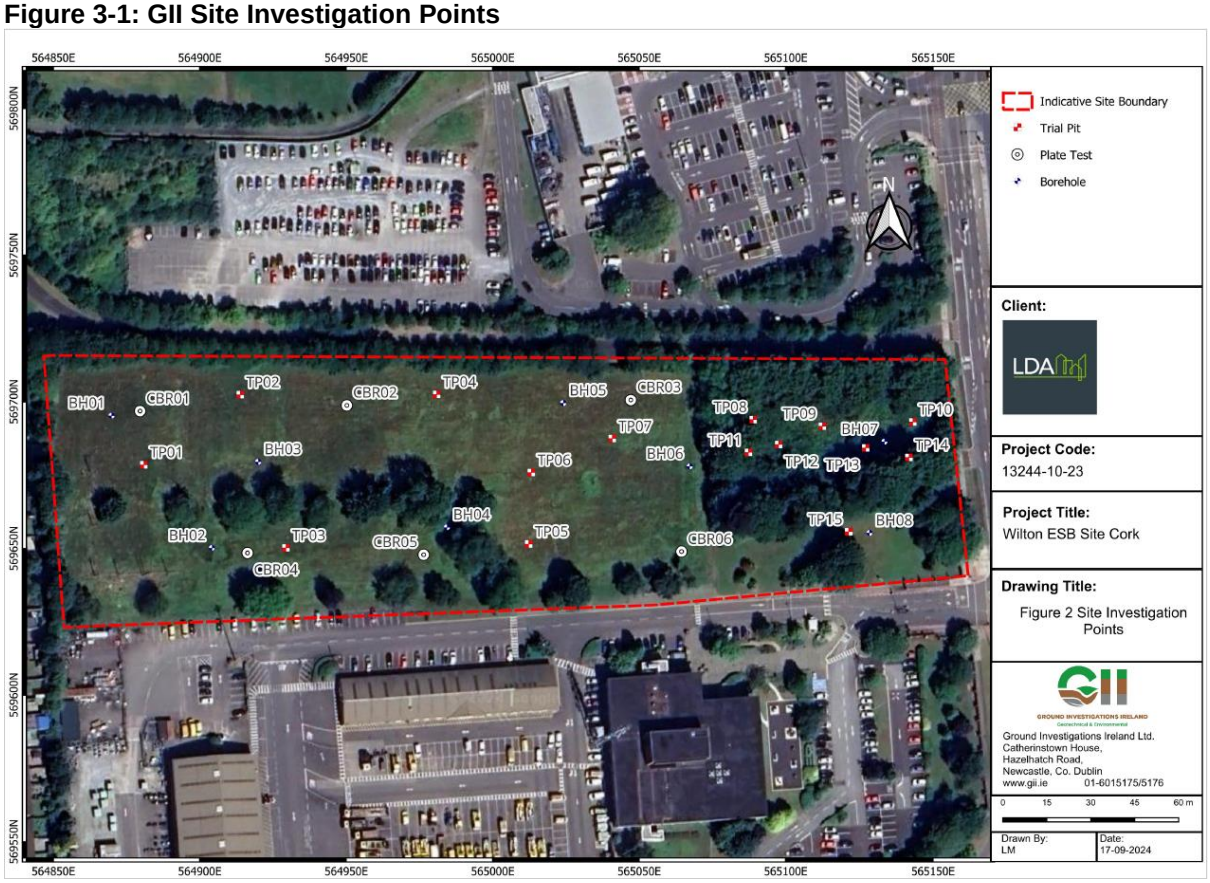


3 METHODOLOGY

3.1 Intrusive site Investigation

A comprehensive ground investigation was conducted by GII which is outlined within the attached GII Report in Appendix C and shown below in Figure 3-1. The focus of the MOR Environmental report will be on the soil samples collected and the fifteen (15No.) TPs that were advanced at the Site between 30th November 2023 (TP-01 and TP-02), and 4th September 2024 (TP-03 – TP-15). No soil samples were collected from any of the 8 boreholes advanced at the Site.

Figure 3-1: GII Site Investigation Points



3.2 Ground Conditions

The ground investigation revealed a consistent sequence of strata across the site, including topsoil, made ground, cohesive deposits, granular deposits, weathered bedrock, and bedrock. Topsoil was generally present to a depth of 0.30mbgl. Made ground, found in specific trial pits, (TP-09, TP-10, TP-12, TP-13, TP-14 and TP-15) which extended to depths between 0.70m and 2.50mbgl and included clay with occasional anthropogenic inclusions and noted evidence of hydrocarbon contamination in one location (TP-10). The made ground was found within the eastern section of the site.

Anecdotal evidence suggests the possible presence of a buried tank in the vicinity of TP-10 and TP-14, supported by the hydrocarbon contamination observed in these locations. The analytical results, including elevated TPH concentrations and the detection of degraded diesel in TP-10, further reinforce the likelihood of a historical tank or related subsurface feature in this area.

Cohesive deposits, typically reddish-brown clay, were identified beneath the made ground and topsoil, increasing in strength with depth. Granular deposits were encountered below the

cohesive strata, characterized by sandy, slightly clayey gravel. Weathered bedrock, composed of limestone gravel and cobbles, was observed in some trial pits, transitioning into stronger, intact bedrock at shallow depths. Core drilling confirmed the presence of medium-strong to strong limestone typical of the Waulsortian Formation, with karst features and varying degrees of weathering. The depth to bedrock ranged from 1.25m to 4.60mbgl.

3.3 Groundwater

Perched groundwater was observed in TP-10 at a depth of 2.5mbgl, marking the only instance of groundwater encountered during the trial pit excavations. TP-10 was advanced in the northeastern section of the Site and showed the second high ground elevation at 15.81 metres above ordnance datum ('mAOD'). There is anecdotal evidence that there may be a buried tank in this location; however, this has yet to be confirmed. It should be noted that the trial pits were open for a limited time before being backfilled, which may have restricted the opportunity for further groundwater observations.

3.4 Trial Pitting

Fifteen (15No.) TPs were advanced at locations selected to minimize vegetation disruption and avoid impacts to nesting birds. The TPs were excavated using a 5-tonne (5T) tracked excavator at depths ranging between 0.70mbgl (TP-09 and TP-13) to 2.50mbgl (TP-10), with their precise locations as shown in the GII Report. Prior to excavation, a service clearance was conducted to minimize the potential for encountering underground services. TP locations were recorded using a KQGeo M8 GNSS System which records the coordinates and elevation of the locations to Irish Transverse Mercator ('ITM') or Irish National Grid. The TP locations are included in **Appendix 1** of the attached GII Report

The TPs were logged and photographed and in total, 22 soil samples were collected from depths ranging between 0.50mbgl to 2.50mbgl before being backfilled with the excavated arisings. Observations were recorded regarding the presence of any services, inclusions, pit stability, groundwater conditions and the characteristics of the encountered strata. These detailed records are presented in the TP logs, which are included in **Appendix 2** of the attached GII Report.

3.5 Laboratory Analysis

The ground investigation included laboratory testing to assess the concentration of selected parameters for sampled materials for classification as hazardous or non-hazardous, as well as for their suitability for disposal in licensed landfills.

All soil samples collected during the investigation were analysed at Element Materials Technology ('Element'), an accredited laboratory recognized for its high standards in testing and analysis. Element is accredited to ISO/IEC 17025, which ensures competence in testing and calibration laboratories and operates under the United Kingdom Accreditation Service ('UKAS'). This accreditation demonstrates their adherence to stringent quality assurance and technical standards, providing reliable and accurate results for the analysis conducted.

The 22 soil analytical results from the samples collected by a GII representative during the intrusive investigations were assessed as per the Generic Assessment Criteria ('GAC') referenced in Section 3.6.1, as well as relative to the industry standard criteria outlined in the document 'Establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC (2003/33/EC)' [2]. The criteria used were as follows:

- Criteria for landfills for inert waste;
- Criteria for landfills for non-hazardous waste; and,
- Criteria for landfills for hazardous waste.

The 22 soil samples were analysed for a range of selected parameters (refer to section 3.5.1 below). The results are described in detail below, and soil analytical results are presented in Table 1 and Table 2 at the end of the report. Refer to Appendix A for laboratory results (Element).

3.5.1 Laboratory Parameters

All samples were analysed as per the Rilta suite:

- Solid Sample Analysis:
    - Soil Characteristic Parameters: Natural moisture content and pH;
    - Indicators; Sulphate as SO_4, soil organic matter ('SOM') and total organic carbon ('TOC');
    - Metals: Antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc;
    - Total Petroleum Hydrocarbons ('TPH'): Speciated aliphatic and aromatic petroleum hydrocarbons, Extractable Petroleum Hydrocarbons ('EPH'), benzene, ethylbenzene, toluene, xylene ('BTEX'), phenols, polychlorinated biphenyls ('PCBs'), polycyclic aromatic hydrocarbon ('PAHs'); and,
    - Asbestos screening.
- Leachate Analysis:
    - Metals: Antimony, arsenic, barium, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc; and,
    - Non-metals: Chloride, fluoride, soluble sulphate, sulphide, phenols, dissolved organic carbon ('DOC') and total dissolved solids ('TDS').

This comprehensive suite of tests ensures an in-depth evaluation of materials for landfill acceptance and contamination risks. The MOR Environmental report provides further discussion in the environmental assessment.

3.6 Environmental Assessment

3.6.1 Soil Assessment Criteria

Analytical results for soil samples collected from the Site were compared to GAC for human health risk assessment and waste acceptance at soil recovery facilities. These generic assessment criteria for soil apply in the United Kingdom and are used for guideline purposes. They have no statutory basis but are recommended in the Environmental Protection Agency ('EPA') Guidance [3]. The GAC used included the following:

- EPA Guidance on Waste Acceptance Criteria at Authorised Soil Recovery Facilitates [4];
- Generic Assessment Criteria (S4ULs) LQM/CIEH [5];
- Development of Category 4 Screening Levels (C4SL) for Assessment of Land Affected by Contamination [6]; and,
- Soil Generic Assessment Criteria ('GAC') Contaminated Land: Applications in Real Environments (CL:AIRE) [7].

Based on the land use for the Proposed Development is in a residential setting and laboratory analysis yields soil SOM results between 0.05% and 4.71%. The GAC for Public Open Space for residential without plant uptake use – 2.5% SOM [5] was utilised to screen all soil analytical results.

Soil constituent levels are identified as potentially significant where they exceed a GAC. These criteria are intended for preliminary screening of concentrations and should not be interpreted as a direct requirement for remediation. Instead, they highlight the potential for additional analysis. Since there is no standardized scale, any exceedances are classified based on the framework outlined in Table 3-1 below.

Table 3-1: Exceedance Quantification

GAC Multiplier	Exceedances	Potential Risk
<1x GAC	None	Negligible
1x to 2x GAC	Marginal Exceedance	Low
2x to 10x GAC	Minor Exceedance	Low
10x to 100x GAC	Moderate Exceedance	Moderate
>100x GAC	Significant Exceedance	Significant

All samples were also analysed for the Waste Classification Suite. This suite is based on a broad range of parameters required by HazWasteOnline™ tool [8], a web-based software that is used to determine whether the soil is classified as hazardous or non-hazardous. This software follows the latest guidance and European regulations and is approved by the EPA to provide an accurate and auditable tool for the classification of waste material. Results from this exercise confirm the List of Waste ('LoW') Code to be assigned to a material (in accordance with the List of Wastes Decision 2002/532/EC).

4 RESULTS

4.1 Trial Pits and Boreholes

The ground investigation revealed consistent strata across the site, including topsoil, made ground, cohesive deposits, granular deposits, weathered bedrock, and bedrock. Topsoil was observed in most exploratory holes, extending to a maximum depth of 0.30mbgl. Made Ground deposits were present in the northeast of the site (TP-09, TP-10, TP-12, TP-13, TP-14, and TP-15), reaching depths between 0.70m and 2.50mbgl, with the extent at TP10 undetermined. These deposits consisted of slightly sandy and gravelly clay containing some anthropogenic materials such as fragments of concrete, plastic, metal, red brick, and clay pipe. Hydrocarbon contamination was identified in TP-10 at 2.00mbgl, noted by a strong odour and discoloration.

Cohesive deposits were encountered beneath the Made Ground, characterized as reddish-brown, slightly sandy and gravelly clay with varying cobble and boulder content. Granular lenses were occasionally present within this matrix. Material recovered from BH01, BH02, BH03, and BH05 included grey, slightly clayey and sandy gravel or brown, slightly sandy, gravelly clay. The cohesive strata varied in thickness across the Site, as reflected in the exploratory hole logs, and transitioned into granular deposits at greater depths.

Granular deposits were encountered below the cohesive layer and were described as grey slightly clayey and sandy subangular to subrounded gravel with low cobble content. These deposits were observed in multiple exploratory locations, including TP-03, TP-05, TP-08, BH01, BH03, BH06, and BH07. The composition and thickness of these deposits varied with location and depth, with secondary sand and fines constituents recorded in the exploratory logs.

Weathered bedrock was identified in TP08, where excavation reached up to 0.30mbgl before encountering more competent bedrock, which was unrecoverable through excavation. Similar material was encountered in BH02 and BH05 as grey gravel of limestone with clay infill. The bedrock, identified in rotary core boreholes such as BH02, BH04, BH05, BH06, and BH07, was medium-strong grey limestone typical of the Waulsortian Formation. Features such as cavities and possible karst dissolution zones with significant clay infill were observed. The depth to bedrock varied across the site, ranging from 1.25mbgl in BH07 to 4.60mbgl in BH05.

4.2 Soil Analytical Results

Soil Characteristic Parameters

The natural moisture content of the soil samples ranged from 4.30% in TP-11 to 22.40% in TP-01, indicating variability in the water retention capacity across the site. The pH levels also varied, with the highest recorded at pH 8.72 in TP03 and the lowest at pH 5.36 in TP-01, suggesting differences in soil acidity and alkalinity that may influence geochemical properties and potential material interactions.

Indicators

Sulphate concentrations in the soil samples ranged from 0.0028 g/l in TP-03 to 0.2116 g/l in TP-09, indicating variability in sulphate levels across the site. SOM content ranged between 0.05% in TP-11 and 4.71% in TP-09, while TOC content varied from 0.03% in TP-11 to 2.73% in TP-09. These results highlight differences in organic material and chemical composition, which could influence soil behaviour and potential interactions with surrounding materials.

Asbestos

No asbestos was identified at any of the fifteen sampled locations.

Metals

Chromium VI was not reported above the laboratory Method Detection Limits ('MDLs') in any of the soil samples analysed on 13th September 2024. No soil metal concentrations exceeded corresponding GAC (see Table 1).

Trial Pit concentration ranges of metals detected in soils above MDLs are summarised in Table 4-1 below, with the most stringent GAC provided for comparison.

Table 4-1: Soil Metals Results Range

Parameter	GAC (mg/kg)	MDL (mg/kg)	Range (mg/kg)	
			Min	Max
Antimony	-	<1	TP-03 (1)	TP-01 (2)
Arsenic	40	<0.5	TP-03 (2.5)	TP-14 (23.5)
Barium	-	<1	TP-03 (22)	TP-14 (127)
Cadmium	120	<0.1	TP-15 (0.2)	TP-12 (1.1)
Chromium III	1500	<0.5	TP-03 (29.1)	TP-10 (99.5)
Chromium (Total)	-	<0.5	TP-03 (29.1)	TP-10 (99.5)
Copper	7100	<1	TP-03 (8)	TP-10 (55)
Lead	-	<5	TP-03 (13)	TP-15 (76)
Mercury	120	<0.1	TP-04 (0.1)	TP-14 (1.4)
Molybdenum	-	<0.1	TP-03 (1.3)	TP-10 (6.2)
Nickel	230	<0.7	TP-13 (13.8)	TP-05 (56)
Selenium	1100	<1	TP-01 (1)	TP-05 (2)
Zinc	81000	<5	TP-15 (44)	TP-14 (339)

Petroleum Hydrocarbons

TPH aliphatic and aromatics were only detected in TP-10 at 2.50mbgl and TP-14 at 0.50mbgl. All references to hydrocarbons in this section correspond exclusively to these respective depths in the identified trial pits.

TPH/EPH/Mineral oil

Mineral oil concentrations were <30mg/kg at all sampling locations except at locations TP-14 (36mg/kg) and TP-10 (866 mg/kg) and did not exceed the relevant WAC for inert landfills [4] (500mg/kg).

The interpretation of EPH only possible at sampling location TP-10 as no EPH was reported above the MDL at any other sampled locations. The EPH reported at TP-10 was identified by Element as "Trace of degraded Diesel".

Reported aliphatic and aromatics were reported below the laboratory MDLs at all sampling locations, except for TP-10 and TP-14, and all concentrations were below the respective human health GAC for all 22 soil samples analysed. There is no WAC for aliphatic and aromatics.

Trial Pit concentration ranges of TPH aliphatic and aromatics detected in soils above MDLs are summarised in Table 4-2 below, with the most stringent GAC provided for comparison.

Table 4-2: Soil Aliphatic and Aromatics Results Range

Parameter	GAC (mg/kg)	MDL (mg/kg)	Range (mg/kg)	
			Min	Max
Aliphatics				
>C8-C10	13000	<0.1	<MDL	TP-10 (0.6)
>C10-C12	13000	<0.2	<MDL	TP-10 (18)
>C12-C16	13000	<4	<MDL	TP-10 (192)
>C16-C21	250000	<7	<MDL	TP-10 (375)
>C21-C35	-	<7	TP-14 (36)	TP-10 (264)
>C35-C40	-	<7	<MDL	TP-10 (17)
Total aliphatics C5-40	-	<26	TP-14 (36)	TP-10 (867)
Aromatics				
>EC10-EC12	5000	<0.2	<MDL	TP-10 (1.4)
>EC12-EC16	5100	<4	<MDL	TP-10 (48)
>EC16-EC21	3800	<7	<MDL	TP-10 (207)
>EC21-EC35	3800	<7	TP-14 (18)	TP-10 (153)
Total aromatics C5-40	-	<26	<MDL	TP-10 (409)
Total aliphatics and aromatics(C5-40)	-	<52	<MDL	TP-10 (1276)

BTEX and MTBE

Reported concentrations for BTEX and MTBE for all soil samples were below the MDL except for m/p-Xylene at TP-10 at 2.50 mbgl (20mg/kg) and all 22 soil samples were below the respective human health GAC. BTEX concentrations did not exceed the inert WAC (6000ug/kg) at any sample locations. There is no WAC limit for MTBE.

PCBs

Reported PCBs concentrations for individual parameters analysed were reported below the MDL and the respective human health GAC for all 22 soil samples locations and did not exceed the inert WAC limit (1000ug/kg) at any sampling location.

PAHs

Reported concentrations of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Dibenzo(ah)anthracene, Coronene and Benzo(j)fluoranthene were all below the MDL.

Trial Pit concentration ranges of PAH detected in soils above MDLs are summarised in Table 4-3 below, with the most stringent GAC provided for comparison.

Table 4-3: PAH Results Range

Parameter	GAC (mg/kg)	MDL (mg/kg)	Range (mg/kg)	
			Min	Max
Phenanthrene	3100	<0.03	TP-15 (0.03)	TP-13 (0.11)
Anthracene	74000	<0.04	<MDL	TP-10 (0.07)
Fluoranthene	3100	<0.03	TP-10 (0.04)	TP-13 (0.2)
Pyrene	7400	<0.03	TP-09 (0.04)	TP-13 (0.16)
Benzo(a)anthracene	29	<0.06	<MDL	TP-13 (0.13)
Chrysene	57	<0.02	TP-10 (0.03)	TP-13 (0.13)
Benzo(bk)fluoranthene	-	<0.07	TP-14 (0.09)	TP-13 (0.22)
Benzo(a)pyrene	5.7	<0.04	<MDL	TP-13 (0.14)
Indeno(123cd)pyrene	82	<0.04	<MDL	TP-13 (0.1)
Benzo(ghi)perylene	0.57	<0.04	<MDL	TP-13 (0.1)
PAH 6 Total	640	<0.22	<MDL	TP-13 (0.76)
PAH 17 Total	-	<0.64	<MDL	TP-13 (1.29)
Benzo(b)fluoranthene	7.2	<0.05	TP-14 (0.06)	TP-13 (0.16)
Benzo(k)fluoranthene	190	<0.02	TP-14 (0.03)	TP-13 (0.06)

4.3 Hazardous Waste Online tool

Based on an evaluation of hazardous compounds using the approved tool (HazWasteOnline™) 21 of the 22 samples were classified as Non-Hazardous. One sample (TP-10 at 2.50 mbgl) was classified as Hazardous under the following descriptions:

- HP 7: Carcinogenic "waste which induces cancer or increases its incidence". Hazard Statements hit:
    - Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."Because of determinant: TPH (C6 to C40) petroleum group (conc.: 0.107%).
- HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell" Hazard Statements hit:
    - Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]." Because of determinand: TPH (C6 to C40) petroleum group (conc.: 0.107%).

Copies of the Classification Reports can be found in Appendix B.

5 DISCUSSION OF RESULTS

5.1 Conceptual Site Model

A Risk Assessment was conducted to evaluate the potential risks associated with any contaminating materials or historical activities on the site. The Conceptual Site Model ('CSM') identified potential contamination sources, migration pathways, and receptors that could interact within the site.

The assessment has identified a localized risk at 2.50mbgl in TP-10, where hydrocarbons (TPH C6–C40) were detected at concentrations exceeding thresholds for carcinogenicity and mutagenicity, as defined by hazardous waste classifications. This contamination forms a viable source-pathway-receptor linkage and may present a risk to human health and the environment if mobilized or disturbed (e.g., during groundworks or development activities).

Beyond this specific location and depth, no other significant risks have been identified. The remaining pollutant linkages were found to be incomplete, as there are no viable pathways for exposure to site users or the environment under current site conditions.

5.2 Tier 1 Ris Assessment

This preliminary Tier 1 risk assessment takes account of the current condition and the proposed future use of the material.

5.3 Tier 1 – Soil

Human Health: Direct Contact and Inhalation

Soil analysis results at all monitoring locations, except TP-10, were below the relevant assessment criteria for the human health exposure pathways (direct contact and inhalation of vapours).

Environmental: Leaching

Soil leachate analysis results were below groundwater assessment criteria at all monitored locations.

Hazard Classification (HazWasteOnline™)

Out of the soil samples analysed, 21 of the 22 soil samples were classified as Non-Hazardous. However, one sample—TP-10 at 2.50mbgl—was classified as Hazardous due to the following factors:

- HP 7: Carcinogenic – "Waste which induces cancer or increases its incidence.":
    - Hazard Statement: Carc. 1B; H350: "May cause cancer."; and,
    - Determinant: Total Petroleum Hydrocarbons (TPH C6–C40) with a concentration of 0.107%.
- HP 11: Mutagenic – "Waste which may cause genetic defects.":
    - Hazard Statement: Muta. 1B; H340: "May cause genetic defects."; and,
    - Determinant: Total Petroleum Hydrocarbons (TPH C6–C40) with a concentration of 0.107%.

5.4 Review of the Conceptual Site Model

Based on the findings of the risk assessment, the material present at the site generally does not pose a significant risk to human health or the environment, except for localized contamination at depth.

- A localized risk has been identified in TP-10 at 2.50mbgl, where hydrocarbons exceed hazardous waste thresholds for carcinogenic and mutagenic properties. This contamination presents a potential risk if mobilized or if pathways for exposure are created (e.g., during site development or excavation); and,
- Outside of this location and depth, soil and leachate analytical results were below relevant assessment criteria, and no other pollutant linkages have been identified.

5.5 Data Gaps

While the available data generally indicate no immediate cause for concern, certain data gaps remain that may limit a complete understanding of site conditions:

Soil Conditions and Contamination:

- The trial pits revealed a consistent stratigraphy consisting of topsoil, made ground, cohesive deposits, and weathered bedrock, with variations in the depth and composition of the made ground; and,
- Contamination was localized in TP-10, where strong hydrocarbon odors and discoloration were observed at 2.00mbgl, and hydrocarbons were detected at 2.50mbgl. Additionally, TP-14 indicated hydrocarbons, although to a lesser degree.

Groundwater Observations:

- Groundwater was observed only in TP-10 at 2.5mbgl. Limited observation time prevented a comprehensive assessment of groundwater flow, quality, and potential interactions with contaminants. The absence of further groundwater data introduces uncertainty regarding site hydrology.

Spatial Coverage and Variability:

- Soil analytical results indicated no asbestos and no exceedances of human health or inert landfill GAC for metals, hydrocarbons, PAHs, BTEX, MTBE, or PCBs; and,
- However, the spatial distribution and number of samples may not fully represent site-wide variability, particularly in areas with made ground or contamination indicators.

6 REVIEW OF TRIAL PIT DATA ACCURACY AND CONTRACTOR CLARIFICATIONS

During the review of the GII Report, several discrepancies were identified regarding the trial pit excavation dates, sample collection dates, and labelling conventions. Clarification was sought[2], and the contractor provided the following response[3]:

For TP-01 and TP-02, the trial pits were stated in the logs as excavated in November 2023 during the contractor's first site visit. However, excavation was halted partway through by ESB, despite all inductions and health and safety checks having been completed. As a result, during a second site visit, the contractor re-excavated adjacent to the original pit locations to the required sampling depths to collect the necessary samples.

For TP-03 to TP-15, the trial pits were stated in the logs as being developed on 4th September 2024, with notes indicating that the pits were backfilled upon completion. However, the corresponding Element laboratory results listed the sample collection dates as 13th September 2024. The contractor clarified that this discrepancy was due to a scheduling error, whereby the date the samples were dispatched to the laboratory was mistakenly recorded instead of the actual sample collection date.

Additionally, inconsistencies in the naming conventions were noted: the trial pits were referred to as TP01–TP15 in the GII report, while the Element laboratory results used the format TP-01–TP-15. The contractor confirmed that these two naming formats refer to the same trial pits and associated samples, and there is no discrepancy in the data itself.

[2] Email on 4th December 2024, from Henry Tennyson (MOR Environmental) to Adam Browne (GII) Re: LDA – Wilton – SI Update.
[3] Email on 16th December 2024, from Adam Browne (GII) to Henry Tennyson (MOR Environmental) Re: LDA – Wilton – SI Update.

7 CONCLUSIONS

The ground investigation revealed a consistent sequence of strata across the site, including topsoil, made ground, cohesive deposits, and weathered bedrock, with occasional granular deposits. The key findings from the fifteen (15No.) TPs, eight (8No.) boreholes and twenty-two (22No.) soil samples analyses are summarized below:

- Strata Observations:
    - Made ground deposits were encountered in multiple trial pits, typically ranging from 0.70m to 2.50mbgl. These deposits consisted of slightly sandy, slightly gravelly clay and fragments of construction debris such as concrete, metal, red brick, and plastic;
    - Hydrocarbon contamination was observed in TP-10 at 2.50mbgl, with a strong odour and discoloration, and also detected in TP-14 at 0.50mbgl;
    - Cohesive deposits, described as reddish-brown, slightly sandy, slightly gravelly clay, were present beneath the topsoil and made ground, increasing in strength with depth. These deposits occasionally contained granular lenses;
    - Weathered bedrock was encountered in TP-08, identified as clayey gravelly cobbles of limestone, transitioning to competent bedrock at a depth of 0.30m; and,
    - Granular deposits, where present, were typically grey, slightly clayey, slightly sandy subangular to subrounded fine to coarse gravel with varying cobble content.
- Soil Characteristics:
    - **Moisture Content**: Ranged from 4.30% (TP-11) to 22.40% (TP-01), reflecting variability in soil water retention capacity;
    - **pH**: Varied from pH 5.36 (TP-01) to pH 8.72 (TP-03), indicating a range of acidity and alkalinity across the site;
    - **Sulphate**: Concentrations ranged between 0.0028g/l (TP-03) and 0.2116g/l (TP-09); and,
    - **SOM**: Soil organic matter ranged from 0.05% (TP-11) to 4.71% (TP-09), with TOC values varying between 0.03% (TP-11) and 2.73% (TP-09).
- Contaminants:
    - Asbestos: No asbestos was detected at any of the fifteen (15No.) sampling locations;
    - **Hydrocarbons**: TPH aliphatic and aromatics were only detected in TP-10 at 2.50mbgl and TP-14 at 0.50mbgl. EPH analysis at TP-10 was identified as degraded diesel. The maximum Mineral oil was reported at TP-10 (866 mg/kg); Hydrocarbon concentrations of all soil samples were below the corresponding GAC for human health, with no exceedances of landfill thresholds;
    - **Metals**: Concentrations of all soil samples were below the corresponding GAC for human health, with no exceedances of landfill thresholds;
    - **PAHs**: Key compounds, including naphthalene, acenaphthylene, and fluoranthene, were reported below MDL at most locations, with negligible

detections observed for certain compounds in TP-09, TP-10, TP-13, TP-14 and TP-15;

- **BTEX and MTBE**: Concentrations were below MDLs at all locations except for m/p-Xylene in TP-10 (20 mg/kg), remaining below GAC and landfill limits; and,
- **PCBs**: Concentrations were below the MDL at all soil sample locations, meeting human health and inert landfill thresholds.

These findings confirm the presence of localised contamination, particularly in made ground and specific trial pits (TP-10 and TP-14).

8 RECOMMENDATIONS

The site investigation findings highlight the need for targeted remediation and further assessment of ground conditions, particularly in the area of TP10 and TP14, where anecdotal evidence and analytical results suggest the potential presence of a buried tank. Hydrocarbon-contaminated soils in these locations should be carefully excavated and either treated on-site or disposed of at a licensed facility to ensure compliance with environmental standards and the safety of future site users. Additional geophysical surveys or exploratory excavations are recommended to confirm the presence of a buried tank and determine its extent, condition, and contents.

A comprehensive soil management plan should be implemented to handle and dispose of soils with potential contamination, adhering to regulatory thresholds. Geotechnical assessments of cohesive deposits should confirm adequate load-bearing capacity and settlement characteristics, especially in areas with granular lenses. Environmental monitoring during site works will be essential to mitigate the risk of contaminant migration, while dust and water runoff controls will help prevent the spread of hydrocarbons or other pollutants. Worker health and safety protocols, including appropriate PPE and training, should also be prioritized. Environmental monitoring and validation of contaminant levels across the site will ensure ongoing compliance with regulatory criteria.

9 REFERENCES

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[3] EPA, "Guidance On The Management Of Contaminated Land And Groundwater At EPA Licensed Sites," Environmental Protection Agency, 2013.

[4] EPA, "EPA Guidance on Waste Acceptance at Authorised Soil Recovery Facilities," 2020.

[5] C. e. a. Nathanail, "S4ULs for Human Health Risk Assessment - Generic Assessment Criteria," 2015.

[6] DEFRA, "Development of Category 4 Screening Levels (C4SL) for Assessment of Land Affected by Contamination - Policy Companion Document," 2014.

[7] CL:AIRE, "Soil Generic Assessment Criteria (GAC) Contaminated Land: Applications in Real Environments," CL:AIRE, 2009.

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APPENDICES

APPENDIX A

E2170 - Wilton LDA, Co. Cork
Table 1: Soils Analytical Results

Sample No.	Units	MDL	CL:AIRE Generic Assessment Criteria[1]	*LQM/CIEH (Generic Assessment Criteria) - S4UL*	Category 4 Screening Levels - C4SL	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	80-83	84-87
Sample ID			Public Open Space 1 (Res) 2.5%SOM	*Public Open Space 1 (Res) 2.5%SOM*	Public Open Space 1 (Res) 2.5%SOM	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14	TP-15	TP-15
Depth (mbgl)						0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	1.30
Sample Date						13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024
Sample Type						Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Soil Characteristic Parameters																											
Natural Moisture Content	%	<0.1	-	-	-	22.4	14.8	7.8	8	15.2	17.3	13.8	10.7	9.2	5.6	7.8	10.6	12.4	19.8	7.8	4.3	19.2	10.9	6.4	15	13.7	6.8
pH	pH Units	<0.01	-	-	-	5.36	7.06	8.62	8.72	8.22	8.14	7.81	8.48	8.28	8.07	8.23	8.63	8.46	7.54	7.94	8.59	8.2	8.46	8.34	8.6	7.44	8.56
Indicators																											
Total Organic Carbon	%	<0.02	-	-	-	1.93	1.17	0.21	0.17	0.8	0.11	0.35	0.17	0.23	0.18	2.73	0.29	0.54	1.38	0.37	0.03	1.03	0.1	0.74	0.82	2.44	0.33
Fraction of Organic Carbon		0.001	-	-	-																						
Sulphate as SO_4	g/l	<0.0015	-	-	-	NA	NA	NA	0.0028	NA	NA	NA	NA	0.0033	NA	0.2116	NA	NA	NA	NA	NA	NA	0.0039	NA	NA	NA	NA
Soil Organic Matter (SOM)	%	-	-	-	-	3.33	2.02	0.36	0.29	1.38	0.19	0.60	0.29	0.40	0.31	4.71	0.50	0.93	2.38	0.64	0.05	1.78	0.17	1.28	1.41	4.21	0.57
Metals																											
Antimony	mg/kg	<1		-		2	2	1	<1	2	2	2	2	1	1	1	2	2	2	2	2	2	2	<1	1	2	1
Arsenic	mg/kg	<0.5	-	79	40	8.7	10	2.5	4.2	6.9	9.6	15.6	8.6	9.2	5.6	8.3	7.4	14.5	17.1	7.2	6.6	8.7	8.4	10.4	23.5	12.4	6.9
Barium	mg/kg	<1	1300	-	-	58	61	38	22	49	51	83	67	41	34	69	49	55	74	47	38	65	44	35	127	85	32
Cadmium	mg/kg	<0.1	-	120	150	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.9	0.4	0.5	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.1	<0.1	<0.1	0.2	<0.1
Chromium III	mg/kg	<0.5	-	1500	-	66.3	89.3	66.7	29.1	67.2	57.3	63.8	67.3	49.9	47.4	43.9	71.7	99.5	86	76.5	67.4	82.6	44.9	48.7	82.3	86.8	75.5
Chromium VI (Hexavalent)	mg/kg	<0.3	-	7.7	21	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium (Total)	mg/kg	<0.5	-	-	-	66.3	89.3	66.7	29.1	67.2	57.3	63.8	67.3	49.9	47.4	43.9	71.7	99.5	86	76.5	67.4	82.6	44.9	48.7	82.3	86.8	75.5
Copper	mg/kg	<1	-	7100	-	14	20	8	10	11	19	22	18	14	9	19	21	27	55	11	12	13	18	18	27	25	10
Lead	mg/kg	<5	-	-	310	46	51	13	14	30	21	35	28	25	15	31	23	33	72	19	17	17	40	37	32	30	76	18
Mercury	mg/kg	<0.1	-	120	-	<0.1	0.2	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.3	<0.1	0.2	0.2	<0.1	<0.1	<0.1	0.2	<0.1	1.4	0.5	0.1
Molybdenum	mg/kg	<0.1	-	-	-	3.8	4.9	3.3	1.3	4	2.7	3.3	3.7	2.9	2.5	2	4.1	6.2	5.2	4.2	3.8	4.7	1.9	2.8	5	4.7	3.5
Nickel	mg/kg	<0.7	-	230	-	21.8	39.8	21.4	17	16.5	38.7	56	34.6	34.1	23.2	24.7	26.4	23.5	21.3	26.6	36.2	24.9	39.7	13.8	21.1	26.2	17.3
Selenium	mg/kg	<1	-	1100	-	1	1	<1	<1	1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	1	<1	<1	2	<1
Zinc	mg/kg	<5	-	81000	-	67	104	46	53	68	89	171	105	80	64	83	69	68	89	75	67	89	104	50	339	89	44
Mineral Oil																											
C8-C40 Mineral Oil (Calculation)	mg/kg	<30	-		-	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	866	<30	<30	<30	<30	<30	36	<30	<30
TPH CWG																											
Aliphatics																											
>C5-C6	mg/kg	<0.1	-	590000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>C6-C8	mg/kg	<0.1	-	610000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>C8-C10	mg/kg	<0.1	-	13000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>C10-C12	mg/kg	<0.2	-	13000	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	18	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>C12-C16	mg/kg	<4	-	13000	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	192	<4	<4	<4	<4	<4	<4	<4	<4
>C16-C21	mg/kg	<7	-	250000	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	375	<7	<7	<7	<7	<7	<7	<7	<7
>C21-C35	mg/kg	<7	-	-	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	264	<7	<7	<7	<7	<7	36	<7	<7
>C35-C40	mg/kg	<7	-	-	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	17	<7	<7	<7	<7	<7	<7	<7	<7
Total aliphatics C5-40	mg/kg	<26	-	-	-	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	867	<26	<26	<26	<26	<26	36	<26	<26
Aromatics																											
>EC5-EC7	mg/kg	<0.1	-	56000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC7-EC8	mg/kg	<0.1	-	56000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC8-EC10	mg/kg	<0.1	-	5000	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC10-EC12	mg/kg	<0.2	-	5000	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>EC12-EC16	mg/kg	<4	-	5100	-	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	48	<4	<4	<4	<4	<4	<4	<4	<4
>EC16-EC21	mg/kg	<7	-	3800	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	207	<7	<7	<7	<7	<7	<7	<7	<7
>EC21-EC35	mg/kg	<7	-	3800	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	153	<7	<7	<7	<7	<7	18	<7	<7
>EC35-EC40	mg/kg	<7	-	-	-	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Total aromatics C5-40	mg/kg	<26	-	-	-	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	409	<26	<26	<26	<26	<26	<26	<26	<26
Total aliphatics and aromatics(C5-40)	mg/kg	<52	-	-	-	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	1276	<52	<52	<52	<52	<52	<52	<52	<52
PETROLEUM HYDROCARBONS																											
BTEX/MTBE																											
Methyl Tertiary Butyl Ether (MTBE)	mg/kg	<0.005	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	mg/kg	<0.005	-	72	140	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	mg/kg	<0.005	-	56000	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	mg/kg	<0.005	-	24000	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
m/p-Xylene	mg/kg	<0.005	-	42000	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	20	<5	<5	<5	<5	<5	<5	<5	<5
o-Xylene	mg/kg	<0.005	-	42000	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH Interpretation			-	-	-	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	Trace of degraded Diesel	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible	No interpretation possible
EU Indicator Polychlorinated Biphenyls (PCBs)																											
PCB 28	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 52	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 101	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 118	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 138	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 153	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
PCB 180	mg/kg	<5		10^4		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total 7 PCBs	mg/kg	<35		50^4		<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35	<35
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Naphthalene	mg/kg	<0.04	-	4900	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Acenaphthylene	mg/kg	<0.03	-	15000	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Acenaphthene	mg/kg	<0.05	-	15000	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	mg/kg	<0.04	-	9900	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Phenanthrene	mg/kg	<0.03	-	3100	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.04	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	0.11	0.05	0.03	<0.03
Anthracene	mg/kg	<0.04	-	74000	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	<0.03	-	3100	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.05	0.04	0.04	<0.03	<0.03	<0.03	0.04	<0.03	0.2	0.06	<0.03	<0.03
Pyrene	mg/kg	<0.03	-	7400	-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.04	0.04	0.04	<0.03	<0.03	<0.03	<0.03	<0.03	0.16	0.06	<0.03	<0.03
Benzo(a)anthracene	mg/kg	<0.06	-	29	-	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.13	<0.06	<0.06	<0.06
Chrysene	mg/kg	<0.02	-	57	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.13	0.06	<0.02	<0.02
Benzo(bk)fluoranthene	mg/kg	<0.07	-	-	-	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.22	0.09	<0.07	<0.07
Benzo(a)pyrene	mg/kg	<0.04	-	5.7	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.14	<0.04	<0.04	<0.04
Indeno(123cd)pyrene	mg/kg	<0.04	-	82	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.1	<0.04	<0.04	<0.04
Dibenzo(ah)anthracene	mg/kg	<0.04	-	0.57	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzo(ghi)perylene	mg/kg	<0.04	-	640	-	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.1	<0.04	<0.04	<0.04
Coronene	mg/kg	<0.04		-		<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.08	<0.04	<0.04
PAH 6 Total	mg/kg	<0.22	-	-	-	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.76	<0.22	<0.22	<0.22
PAH 17 Total	mg/kg	<0.64	-	-	-	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	1.29	<0.64	<0.64	<0.64
Benzo(b)fluoranthene	mg/kg	<0.05	-	7.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	0.06	<0.05	<0.05
Benzo(k)fluoranthene	mg/kg	<0.02	-	190	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.03	<0.02	<0.02
Benzo(j)fluoranthene	mg/kg	<1		-		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Asbestos Screen & Identification																											
General Description (Bulk Analysis)	None	-	-	-	-	Brown soil / stones	Brown soil, stones	Brown soil, stones	Brown soil/stones	brown soil,stone	Brown soil, stones	brown oil,stone	Brown soil / stones	brown soil/stones	Brown soil / stones	Brown soil, stones	brown soil,stone	Brown soil, stones	brown soil,stone	Brown soil/stones	Brown soil, stones	Brown soil, stones	Brown soil, stones	brown soil/stones	Brown soil / stones	Brown soil, stones	Brown soil / stones	Brown soil / stones
Asbestos Fibres	None	-	-	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM	None	-	-	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type	None	-	-	-	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD

Notes:

1 - Contaminated Land: Applications in Real Environments (CL:AIRE), December 2009: The Soil Generic Assessment Criteria for Human Health Risk Assessment.
2 - LQM/CIEH , December 2015: S4ULs for Human Health Risk Assessment) "Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL3548. All rights reserved."
3 - DEFRA, 2014: Development of Category 4 Screening Levels (C4SL) for Assessment of Land Affected by Contamination - Policy Companion Document.
4 - EPA, 2017: Local Authority PCB Contaminated Land Guidance, Section 6.2

(-) No Criteria Available
(mg/kg) milligram per kilogram
(NAD) No Asbestos Dectected
(MDL) Method Dection Limit
(<) Less than MDL
(mbgl) Metres Below Ground Level

APPENDIX B

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
b) select the correct List of Waste code(s)
c) confirm that the list of determinands, results and sampling plan are fit for purpose
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.

ZEWEL-LH4G5-9H473

Report is invalid if pages are removed.

Job name

EMT-24-15915-Batch-1-202411131502

Description/Comments

Soil and stone - Characterisation

Project

E2170

Site

Wilton Site

Classified by

Name:
Martin Kearns
Date:
11 Dec 2024 14:10 GMT
Telephone:
+353 1 260 2655

Company:
Malone O'Regan Environmental Services Ltd
Ground Floor - Unit 3
Bracken Business Park
Dublin 18
D18 V32Y

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

HazWasteOnline™ Certification: **CERTIFIED**

Course	Date
Hazardous Waste Classification	21 Apr 2022

Next 3 year Refresher due by Apr 2025

Purpose of classification

2 - Material Characterisation

Address of the waste

Carrigaline Road, Douglas, Co. Cork **Post Code** N/A

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Baseline Survey

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

Baseline Survey

Description of the waste

Mixture of made ground and soil and stone

Job summary

Related documents

#	Name	Description
1	EMT-24-15915-Batch-1-202411131502.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: Martin Kearns

Created date: 11 Dec 2024 14:10 GMT

Classification of sample: TP-01-13/09/2024-0.50m

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

Sample details

Sample name:
TP-01-13/09/2024-0.50m
Moisture content:
18.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 18.3% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2	mg/kg		1.634	mg/kg	0.000163 %	✓	
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.7	mg/kg	1.895	13.466	mg/kg	0.00135 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		66.3	mg/kg	1.462	79.168	mg/kg	0.00792 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		14	mg/kg	3.929	44.941	mg/kg	0.00449 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		46	mg/kg	1.56	58.621	mg/kg	0.00586 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.8	mg/kg	1.5	4.657	mg/kg	0.000466 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21.8	mg/kg	2.976	53.009	mg/kg	0.0053 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1	mg/kg	2.554	2.086	mg/kg	0.000209 %	✓	
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		67	mg/kg	2.774	151.854	mg/kg	0.0152 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				5.36	pH		5.36	pH	5.36 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				58	mg/kg	1.623	76.93	mg/kg	0.00769 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0541 %		

Key

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

Classification of sample: TP-02-13/09/2024-0.50m

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

Sample details

Sample name:
TP-02-13/09/2024-0.50m
Moisture content:
12.9%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.9% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.742 mg/kg	0.000174 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				10 mg/kg	1.895	16.501 mg/kg	0.00165 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		89.3 mg/kg	1.462	113.68 mg/kg	0.0114 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		20 mg/kg	3.929	68.444 mg/kg	0.00684 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		51 mg/kg	1.56	69.289 mg/kg	0.00693 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2 mg/kg	1.353	0.236 mg/kg	0.0000236 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.9 mg/kg	1.5	6.403 mg/kg	0.00064 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		39.8 mg/kg	2.976	103.175 mg/kg	0.0103 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.224 mg/kg	0.000222 %	✓	
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		104 mg/kg	2.774	251.293 mg/kg	0.0251 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.06	pH		7.06	pH	7.06 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				61	mg/kg	1.623	86.257	mg/kg	0.00863 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0774 %		

Key

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

Classification of sample: TP-03-13/09/2024-0.50m

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

Sample details

Sample name:
TP-03-13/09/2024-0.50m
Moisture content:
7.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				1 mg/kg		0.928 mg/kg	0.0000928 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				2.5 mg/kg	1.895	4.395 mg/kg	0.00044 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		66.7 mg/kg	1.462	90.467 mg/kg	0.00905 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		8 mg/kg	3.929	29.169 mg/kg	0.00292 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		13 mg/kg	1.56	18.818 mg/kg	0.00188 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.3 mg/kg	1.5	4.594 mg/kg	0.000459 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21.4 mg/kg	2.976	59.106 mg/kg	0.00591 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		46 mg/kg	2.774	118.423 mg/kg	0.0118 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.62	pH		8.62	pH	8.62 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				38	mg/kg	1.623	57.25	mg/kg	0.00573 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-881-7	191-07-1									
										Total:	0.044 %		

Key

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

Classification of sample: TP-03-13/09/2024-1.50m

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

Sample details

Sample name:
TP-03-13/09/2024-1.50m
Moisture content:
7.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				4.2 mg/kg	1.895	7.368 mg/kg	0.000737 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		29.1 mg/kg	1.462	39.384 mg/kg	0.00394 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		10 mg/kg	3.929	36.383 mg/kg	0.00364 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		14 mg/kg	1.56	20.221 mg/kg	0.00202 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		1.3 mg/kg	1.5	1.806 mg/kg	0.000181 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		17 mg/kg	2.976	46.852 mg/kg	0.00469 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		53 mg/kg	2.774	136.15 mg/kg	0.0136 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
16		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
17		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
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**
19		pH			PH		8.72	pH		8.72	pH	8.72 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
21		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
22		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23		fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
24		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		anthracene		204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
26		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
27		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
33		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
35		benzo[ghi]perylene		205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
37		barium { barium diboron tetraoxide }	056-005-00-3	237-222-4	13701-59-2		22	mg/kg	1.623	33.073	mg/kg	0.00331 %	✓	
38		benzo[j]fluoranthene	601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
39		coronene		205-881-7	191-07-1		<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
											Total:	0.038 %		

Key

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

Classification of sample: TP-04-13/09/2024-0.50m

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

Sample details

Sample name:
TP-04-13/09/2024-0.50m
Moisture content:
13.2%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13.2% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.736 mg/kg	0.000174 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				6.9 mg/kg	1.895	11.347 mg/kg	0.00113 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		67.2 mg/kg	1.462	85.252 mg/kg	0.00853 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		11 mg/kg	3.929	37.515 mg/kg	0.00375 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		30 mg/kg	1.56	40.618 mg/kg	0.00406 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.117 mg/kg	0.0000117 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4 mg/kg	1.5	5.209 mg/kg	0.000521 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16.5 mg/kg	2.976	42.626 mg/kg	0.00426 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.217 mg/kg	0.000222 %	✓	
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		68 mg/kg	2.774	163.741 mg/kg	0.0164 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.22	pH		8.22	pH	8.22 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				49	mg/kg	1.623	69.05	mg/kg	0.0069 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0514 %		

Key

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

Classification of sample: TP-04-13/09/2024-1.50m

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

Sample details

Sample name:
TP-04-13/09/2024-1.50m
Moisture content:
14.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 14.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.706 mg/kg	0.000171 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				9.6 mg/kg	1.895	15.514 mg/kg	0.00155 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		57.3 mg/kg	1.462	71.436 mg/kg	0.00714 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		19 mg/kg	3.929	63.678 mg/kg	0.00637 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		21 mg/kg	1.56	27.941 mg/kg	0.00279 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.7 mg/kg	1.5	3.455 mg/kg	0.000346 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		38.7 mg/kg	2.976	98.25 mg/kg	0.00982 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		89 mg/kg	2.774	210.605 mg/kg	0.0211 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.14	pH		8.14	pH	8.14 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				51	mg/kg	1.623	70.626	mg/kg	0.00706 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0621 %		

Key

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

Classification of sample: TP-05-13/09/2024-0.50m

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

Sample details

Sample name:
TP-05-13/09/2024-0.50m
Moisture content:
12.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.758 mg/kg	0.000176 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				15.6 mg/kg	1.895	25.978 mg/kg	0.0026 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.9 mg/kg	1.855	1.467 mg/kg	0.000147 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		63.8 mg/kg	1.462	81.964 mg/kg	0.0082 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		22 mg/kg	3.929	75.98 mg/kg	0.0076 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		35 mg/kg	1.56	47.988 mg/kg	0.0048 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.119 mg/kg	0.0000119 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.3 mg/kg	1.5	4.352 mg/kg	0.000435 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		56 mg/kg	2.976	146.504 mg/kg	0.0147 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2 mg/kg	2.554	4.49 mg/kg	0.000449 %	✓	
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		171 mg/kg	2.774	416.979 mg/kg	0.0417 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.81	pH		7.81	pH	7.81 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				83	mg/kg	1.623	118.444	mg/kg	0.0118 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.098 %		

Key

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

Classification of sample: TP-06-13/09/2024-0.50m

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

Sample details

Sample name:
TP-06-13/09/2024-0.50m
Moisture content:
9.7%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.7% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.806 mg/kg	0.000181 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.6 mg/kg	1.895	14.712 mg/kg	0.00147 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.4 mg/kg	1.855	0.67 mg/kg	0.000067 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		67.3 mg/kg	1.462	88.822 mg/kg	0.00888 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18 mg/kg	3.929	63.863 mg/kg	0.00639 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		28 mg/kg	1.56	39.438 mg/kg	0.00394 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.7 mg/kg	1.5	5.012 mg/kg	0.000501 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34.6 mg/kg	2.976	92.99 mg/kg	0.0093 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		105 mg/kg	2.774	263.031 mg/kg	0.0263 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.48	pH		8.48	pH	8.48 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				67	mg/kg	1.623	98.222	mg/kg	0.00982 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0726 %		

Key

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

Classification of sample: TP-07-13/09/2024-0.50m

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

Sample details

Sample name:
TP-07-13/09/2024-0.50m
Moisture content:
8.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.4% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				1	mg/kg		0.916	mg/kg	0.0000916 %	✓	
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				9.2	mg/kg	1.895	15.966	mg/kg	0.0016 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.5	mg/kg	1.855	0.849	mg/kg	0.0000849 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		49.9	mg/kg	1.462	66.805	mg/kg	0.00668 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		14	mg/kg	3.929	50.386	mg/kg	0.00504 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		25	mg/kg	1.56	35.72	mg/kg	0.00357 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1	mg/kg	1.353	0.124	mg/kg	0.0000124 %	✓	
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.9	mg/kg	1.5	3.985	mg/kg	0.000399 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34.1	mg/kg	2.976	92.965	mg/kg	0.0093 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		80	mg/kg	2.774	203.289	mg/kg	0.0203 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.28	pH		8.28	pH	8.28 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				41	mg/kg	1.623	60.971	mg/kg	0.0061 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0589 %		

Key

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

Classification of sample: TP-08-13/09/2024-0.50m

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

Sample details

Sample name:
TP-08-13/09/2024-0.50m
Moisture content:
5.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 5.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				1 mg/kg		0.947 mg/kg	0.0000947 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				5.6 mg/kg	1.895	10.047 mg/kg	0.001 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.4 mg/kg	1.855	0.703 mg/kg	0.0000703 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		47.4 mg/kg	1.462	65.606 mg/kg	0.00656 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		9 mg/kg	3.929	33.487 mg/kg	0.00335 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		15 mg/kg	1.56	22.157 mg/kg	0.00222 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.5 mg/kg	1.5	3.552 mg/kg	0.000355 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23.2 mg/kg	2.976	65.39 mg/kg	0.00654 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		64 mg/kg	2.774	168.135 mg/kg	0.0168 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.07	pH		8.07	pH	8.07 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				34	mg/kg	1.623	52.273	mg/kg	0.00523 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0479 %		

Key

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

Classification of sample: TP-09-13/09/2024-0.50m

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

Sample details

Sample name:
TP-09-13/09/2024-0.50m
Moisture content:
7.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.3% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }				1	mg/kg		0.927	mg/kg	0.0000927 %	✓	
		051-003-00-9											
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				8.3	mg/kg	1.895	14.577	mg/kg	0.00146 %	✓	
		033-005-00-1											
3		cadmium { cadmium sulfate }				<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
		048-009-00-9	233-331-6	10124-36-4									
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				43.9	mg/kg	1.462	59.478	mg/kg	0.00595 %	✓	
			215-160-9	1308-38-9									
5		chromium 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**
		024-017-00-8											
6		copper { copper sulphate pentahydrate }				19	mg/kg	3.929	69.202	mg/kg	0.00692 %	✓	
		029-023-00-4	231-847-6	7758-99-8									
7		lead { lead chromate }				31	mg/kg	1.56	44.824	mg/kg	0.00448 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
8		mercury { mercury dichloride }				0.3	mg/kg	1.353	0.376	mg/kg	0.0000376 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
9		molybdenum { molybdenum(VI) oxide }				2	mg/kg	1.5	2.781	mg/kg	0.000278 %	✓	
		042-001-00-9	215-204-7	1313-27-5									
10		nickel { nickel chromate }				24.7	mg/kg	2.976	68.147	mg/kg	0.00681 %	✓	
		028-035-00-7	238-766-5	14721-18-7									
11		selenium { nickel selenate }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
		028-031-00-5	239-125-2	15060-62-5									
12		zinc { zinc chromate }				83	mg/kg	2.774	213.446	mg/kg	0.0213 %	✓	
		024-007-00-3	236-878-9	13530-65-9									
13		TPH (C6 to C40) petroleum group				<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
				TPH									
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		603-181-00-X	216-653-1	1634-04-4									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.23	pH		8.23	pH	8.23 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.04	mg/kg		0.0371	mg/kg	0.00000371 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.05	mg/kg		0.0464	mg/kg	0.00000464 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.04	mg/kg		0.0371	mg/kg	0.00000371 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.04	mg/kg		0.0371	mg/kg	0.00000371 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				69	mg/kg	1.623	103.842	mg/kg	0.0104 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0635 %		

Key

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

Classification of sample: TP-10-13/09/2024-0.50m

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

Sample details

Sample name:
TP-10-13/09/2024-0.50m
Moisture content:
9.6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.6% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.808 mg/kg	0.000181 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				7.4 mg/kg	1.895	12.674 mg/kg	0.00127 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		71.7 mg/kg	1.462	94.733 mg/kg	0.00947 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		21 mg/kg	3.929	74.589 mg/kg	0.00746 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		23 mg/kg	1.56	32.432 mg/kg	0.00324 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.1 mg/kg	1.5	5.56 mg/kg	0.000556 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26.4 mg/kg	2.976	71.03 mg/kg	0.0071 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		69 mg/kg	2.774	173.04 mg/kg	0.0173 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
16		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
17		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
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**
19		pH			PH		8.63	pH		8.63	pH	8.63 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
21		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
22		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
23		fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
24		phenanthrene		201-581-5	85-01-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
25		anthracene		204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
26		fluoranthene		205-912-4	206-44-0		0.04	mg/kg		0.0362	mg/kg	0.00000362 %	✓	
27		pyrene		204-927-3	129-00-0		0.04	mg/kg		0.0362	mg/kg	0.00000362 %	✓	
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<**LOD**
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
33		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
35		benzo[ghi]perylene		205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
36		polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
37		barium { barium diboron tetraoxide }	056-005-00-3	237-222-4	13701-59-2		49	mg/kg	1.623	71.913	mg/kg	0.00719 %	✓	
38		benzo[j]fluoranthene	601-035-00-X	205-910-3	205-82-3		<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
39		coronene		205-881-7	191-07-1		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
											Total:	0.0595 %		

Key

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

Classification of sample: TP-10-13/09/2024-1.50m

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

Sample details

Sample name:
TP-10-13/09/2024-1.50m
Moisture content:
11.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11.1% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2	mg/kg		1.778	mg/kg	0.000178 %	✓	
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				14.5	mg/kg	1.895	24.421	mg/kg	0.00244 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		99.5	mg/kg	1.462	129.283	mg/kg	0.0129 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		27	mg/kg	3.929	94.309	mg/kg	0.00943 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		33	mg/kg	1.56	45.76	mg/kg	0.00458 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2	mg/kg	1.353	0.241	mg/kg	0.0000241 %	✓	
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		6.2	mg/kg	1.5	8.269	mg/kg	0.000827 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23.5	mg/kg	2.976	62.179	mg/kg	0.00622 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		68	mg/kg	2.774	167.703	mg/kg	0.0168 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.46	pH		8.46	pH	8.46 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.04	mg/kg		0.0356	mg/kg	0.00000356 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.04	mg/kg		0.0356	mg/kg	0.00000356 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.03	mg/kg		0.0267	mg/kg	0.00000267 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				55	mg/kg	1.623	79.38	mg/kg	0.00794 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.067 %		

Key

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

Classification of sample: TP-10-13/09/2024-2.50m

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

Sample details

Sample name:
TP-10-13/09/2024-2.50m
Moisture content:
16.5%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.107%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.107%)

Determinands

Moisture content: 16.5% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.67 mg/kg	0.000167 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				17.1 mg/kg	1.895	27.051 mg/kg	0.00271 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		86 mg/kg	1.462	104.954 mg/kg	0.0105 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		55 mg/kg	3.929	180.442 mg/kg	0.018 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		72 mg/kg	1.56	93.776 mg/kg	0.00938 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2	mg/kg	1.353	0.226	mg/kg	0.0000226 %	✓	
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5.2	mg/kg	1.5	6.514	mg/kg	0.000651 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21.3	mg/kg	2.976	52.934	mg/kg	0.00529 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		89	mg/kg	2.774	206.161	mg/kg	0.0206 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		1276	mg/kg		1065.46	mg/kg	0.107 %	✓	
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
15		benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
16		toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
17		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
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		0.0167	mg/kg	0.00000167 %	✓	
19		pH			PH		7.54	pH		7.54	pH	7.54 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
22		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
23		fluorene		201-695-5	86-73-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24		phenanthrene		201-581-5	85-01-8		0.07	mg/kg		0.0585	mg/kg	0.00000585 %	✓	
25		anthracene		204-371-1	120-12-7		0.07	mg/kg		0.0585	mg/kg	0.00000585 %	✓	
26		fluoranthene		205-912-4	206-44-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
27		pyrene		204-927-3	129-00-0		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
33		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
35		benzo[ghi]perylene		205-883-8	191-24-2		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				74	mg/kg	1.623	100.314	mg/kg	0.01 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.184 %		

Key

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

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"
Force this Hazardous Property to non-hazardous for cumulative determinand results below the threshold of: 1500 mg/kg (0.15%) because: No liquid phase so not flammable at this concentration.

Hazard Statements hit:

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

Because of determinands:

TPH (C6 to C40) petroleum group (conc.: 0.107%)
xylene (conc.: 1.67e-06%)

Classification of sample: TP-11-13/09/2024-0.50m

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

Sample details

Sample name:
TP-11-13/09/2024-0.50m
Moisture content:
7.3%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 7.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.854 mg/kg	0.000185 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				7.2 mg/kg	1.895	12.645 mg/kg	0.00126 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<**LOD**
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		76.5 mg/kg	1.462	103.647 mg/kg	0.0104 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		11 mg/kg	3.929	40.065 mg/kg	0.00401 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		19 mg/kg	1.56	27.473 mg/kg	0.00275 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<**LOD**
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.2 mg/kg	1.5	5.841 mg/kg	0.000584 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26.6 mg/kg	2.976	73.389 mg/kg	0.00734 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<**LOD**
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		75 mg/kg	2.774	192.873 mg/kg	0.0193 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.94	pH		7.94	pH	7.94 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				47	mg/kg	1.623	70.733	mg/kg	0.00707 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0586 %		

Key

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

Classification of sample: TP-11-13/09/2024-1.50m

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

Sample details

Sample name:
TP-11-13/09/2024-1.50m
Moisture content:
4.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 4.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.918 mg/kg	0.000192 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				6.6 mg/kg	1.895	11.991 mg/kg	0.0012 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		67.4 mg/kg	1.462	94.47 mg/kg	0.00945 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		12 mg/kg	3.929	45.216 mg/kg	0.00452 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		17 mg/kg	1.56	25.43 mg/kg	0.00254 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.8 mg/kg	1.5	5.467 mg/kg	0.000547 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		36.2 mg/kg	2.976	103.323 mg/kg	0.0103 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		67 mg/kg	2.774	178.247 mg/kg	0.0178 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.59	pH		8.59	pH	8.59 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				38	mg/kg	1.623	59.163	mg/kg	0.00592 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0582 %		

Key

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

Classification of sample: TP-12-13/09/2024-0.50m

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

Sample details

Sample name:
TP-12-13/09/2024-0.50m
Moisture content:
16.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 16.1% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2	mg/kg		1.678	mg/kg	0.000168 %	✓	
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.7	mg/kg	1.895	13.829	mg/kg	0.00138 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		82.6	mg/kg	1.462	101.288	mg/kg	0.0101 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		13	mg/kg	3.929	42.854	mg/kg	0.00429 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		40	mg/kg	1.56	52.347	mg/kg	0.00523 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.7	mg/kg	1.5	5.916	mg/kg	0.000592 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		24.9	mg/kg	2.976	62.177	mg/kg	0.00622 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1	mg/kg	2.554	2.143	mg/kg	0.000214 %	✓	
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		89	mg/kg	2.774	207.148	mg/kg	0.0207 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.2	pH		8.2	pH	8.2 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.04	mg/kg		0.0336	mg/kg	0.00000336 %	✓	
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				65	mg/kg	1.623	88.536	mg/kg	0.00885 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0633 %		

Key

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

Classification of sample: TP-12-13/09/2024-1.50m

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

Sample details

Sample name:
TP-12-13/09/2024-1.50m
Moisture content:
9.8%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.8% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2 mg/kg		1.804 mg/kg	0.00018 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				8.4 mg/kg	1.895	14.354 mg/kg	0.00144 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		1.1 mg/kg	1.855	1.84 mg/kg	0.000184 %	✓	
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		44.9 mg/kg	1.462	59.193 mg/kg	0.00592 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<**LOD**
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18 mg/kg	3.929	63.792 mg/kg	0.00638 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		37 mg/kg	1.56	52.057 mg/kg	0.00521 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.2 mg/kg	1.353	0.244 mg/kg	0.0000244 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		1.9 mg/kg	1.5	2.571 mg/kg	0.000257 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		39.7 mg/kg	2.976	106.578 mg/kg	0.0107 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1 mg/kg	2.554	2.304 mg/kg	0.00023 %	✓	
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		104 mg/kg	2.774	260.237 mg/kg	0.026 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<**LOD**
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.46	pH		8.46	pH	8.46 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				44	mg/kg	1.623	64.432	mg/kg	0.00644 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0684 %		

Key

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

Classification of sample: TP-13-13/09/2024-0.50m

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

Sample details

Sample name:
TP-13-13/09/2024-0.50m
Moisture content:
6%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

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

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				10.4	mg/kg	1.895	18.521	mg/kg	0.00185 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1	mg/kg	1.855	<0.185	mg/kg	<0.0000185 %		<**LOD**
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		48.7	mg/kg	1.462	66.907	mg/kg	0.00669 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		18	mg/kg	3.929	66.48	mg/kg	0.00665 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		32	mg/kg	1.56	46.919	mg/kg	0.00469 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<**LOD**
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		2.8	mg/kg	1.5	3.948	mg/kg	0.000395 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		13.8	mg/kg	2.976	38.608	mg/kg	0.00386 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<**LOD**
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		50	mg/kg	2.774	130.385	mg/kg	0.013 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.34	pH		8.34	pH	8.34 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.11	mg/kg		0.103	mg/kg	0.0000103 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.2	mg/kg		0.188	mg/kg	0.0000188 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.16	mg/kg		0.15	mg/kg	0.000015 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.13	mg/kg		0.122	mg/kg	0.0000122 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.13	mg/kg		0.122	mg/kg	0.0000122 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.16	mg/kg		0.15	mg/kg	0.000015 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.06	mg/kg		0.0564	mg/kg	0.00000564 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.14	mg/kg		0.132	mg/kg	0.0000132 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				0.1	mg/kg		0.094	mg/kg	0.0000094 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.1	mg/kg		0.094	mg/kg	0.0000094 %	✓	
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				35	mg/kg	1.623	53.412	mg/kg	0.00534 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0484 %		

Key

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

Classification of sample: TP-14-13/09/2024-0.50m

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

Sample details

Sample name:
TP-14-13/09/2024-0.50m
Moisture content:
13%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				1 mg/kg		0.87 mg/kg	0.000087 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				23.5 mg/kg	1.895	38.734 mg/kg	0.00387 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		82.3 mg/kg	1.462	104.649 mg/kg	0.0105 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		27 mg/kg	3.929	92.293 mg/kg	0.00923 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		30 mg/kg	1.56	40.711 mg/kg	0.00407 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1.4 mg/kg	1.353	1.649 mg/kg	0.000165 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		5 mg/kg	1.5	6.526 mg/kg	0.000653 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21.1 mg/kg	2.976	54.635 mg/kg	0.00546 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		339 mg/kg	2.774	818.179 mg/kg	0.0818 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.6	pH		8.6	pH	8.6 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			201-695-5	86-73-7									
24		phenanthrene				0.05	mg/kg		0.0435	mg/kg	0.00000435 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			204-371-1	120-12-7									
26		fluoranthene				0.06	mg/kg		0.0522	mg/kg	0.00000522 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.06	mg/kg		0.0522	mg/kg	0.00000522 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.06	mg/kg		0.0522	mg/kg	0.00000522 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.06	mg/kg		0.0522	mg/kg	0.00000522 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.03	mg/kg		0.0261	mg/kg	0.00000261 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<**LOD**
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<**LOD**
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				127	mg/kg	1.623	179.377	mg/kg	0.0179 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<**LOD**
			205-881-7	191-07-1									
										Total:	0.139 %		

Key

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

Classification of sample: TP-15-13/09/2024-0.50m

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

Sample details

Sample name:
TP-15-13/09/2024-0.50m
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

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

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				2	mg/kg		1.76	mg/kg	0.000176 %	✓	
2		arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				12.4	mg/kg	1.895	20.673	mg/kg	0.00207 %	✓	
3		cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.2	mg/kg	1.855	0.326	mg/kg	0.0000326 %	✓	
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		86.8	mg/kg	1.462	111.639	mg/kg	0.0112 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3	mg/kg	2.27	<0.681	mg/kg	<0.0000681 %		<**LOD**
6		copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		25	mg/kg	3.929	86.439	mg/kg	0.00864 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		76	mg/kg	1.56	104.32	mg/kg	0.0104 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.5	mg/kg	1.353	0.596	mg/kg	0.0000596 %	✓	
9		molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		4.7	mg/kg	1.5	6.205	mg/kg	0.00062 %	✓	
10		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26.2	mg/kg	2.976	68.621	mg/kg	0.00686 %	✓	
11		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		2	mg/kg	2.554	4.495	mg/kg	0.000449 %	✓	
12		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		89	mg/kg	2.774	217.271	mg/kg	0.0217 %	✓	
13		TPH (C6 to C40) petroleum group			TPH		<52	mg/kg		<52	mg/kg	<0.0052 %		<**LOD**
14		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				7.44	pH		7.44	pH	7.44 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				0.03	mg/kg		0.0264	mg/kg	0.00000264 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				85	mg/kg	1.623	121.436	mg/kg	0.0121 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0798 %		

Key

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

Classification of sample: TP-15-13/09/2024-1.30m

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

Sample details

Sample name:
TP-15-13/09/2024-1.30m
Moisture content:
6.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 6.4% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	antimony { antimony compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex }	051-003-00-9				1 mg/kg		0.936 mg/kg	0.0000936 %	✓	
2	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }	033-005-00-1				6.9 mg/kg	1.895	12.236 mg/kg	0.00122 %	✓	
3	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		<0.1 mg/kg	1.855	<0.185 mg/kg	<0.0000185 %		<LOD
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		75.5 mg/kg	1.462	103.285 mg/kg	0.0103 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.3 mg/kg	2.27	<0.681 mg/kg	<0.0000681 %		<LOD
6	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		10 mg/kg	3.929	36.776 mg/kg	0.00368 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6		18 mg/kg	1.56	26.28 mg/kg	0.00263 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.127 mg/kg	0.0000127 %	✓	
9	molybdenum { molybdenum(VI) oxide }	042-001-00-9	215-204-7	1313-27-5		3.5 mg/kg	1.5	4.915 mg/kg	0.000491 %	✓	
10	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		17.3 mg/kg	2.976	48.194 mg/kg	0.00482 %	✓	
11	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
12	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		44 mg/kg	2.774	114.25 mg/kg	0.0114 %	✓	
13	TPH (C6 to C40) petroleum group			TPH		<52 mg/kg		<52 mg/kg	<0.0052 %		<LOD
14	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		benzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
16		toluene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
17		ethylbenzene				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
18		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
19		pH				8.56	pH		8.56	pH	8.56 pH		
				PH									
20		naphthalene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-469-6	83-32-9									
23		fluorene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			201-695-5	86-73-7									
24		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
25		anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
27		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.06	mg/kg		<0.06	mg/kg	<0.000006 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-883-8	191-24-2									
36		polychlorobiphenyls; PCB				<0.035	mg/kg		<0.035	mg/kg	<0.0000035 %		<LOD
		602-039-00-4	215-648-1	1336-36-3									
37		barium { barium diboron tetraoxide }				32	mg/kg	1.623	48.626	mg/kg	0.00486 %	✓	
		056-005-00-3	237-222-4	13701-59-2									
38		benzo[j]fluoranthene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-035-00-X	205-910-3	205-82-3									
39		coronene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
			205-881-7	191-07-1									
										Total:	0.0453 %		

Key

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

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

- **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

- **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 17 Jul 2015
Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 21 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 06 Aug 2015
Hazard Statements: Carc. 2; H351

- **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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

EU CLP index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
29 Sep 2015 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

- **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 compounds, with the exception of the tetroxide (Sb2O4), pentoxide (Sb2O5), trisulphide (Sb2S3), pentasulphide (Sb2S5) and those specified elsewhere in this Annex}

Most likely determinand species

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worse case

cadmium {cadmium sulfate}

Worse case

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 {copper sulphate pentahydrate}

Worst case

lead {lead chromate}

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

mercury {mercury dichloride}

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

molybdenum {molybdenum(VI) oxide}

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

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 diboron tetraoxide}

Next worst case as it is not barium chromate due to the non detection of CrIII

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1.NI - Jan 2021
HazWasteOnline Classification Engine Version: 2024.341.6398.11690 (07 Dec 2024)
HazWasteOnline Database: 2024.341.6398.11690 (07 Dec 2024)

This classification utilises the following guidance and legislation:
WM3 v1.1.NI - Waste Classification - 1st Edition v1.1.NI - Jan 2021
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
17th ATP - Regulation (EU) 2021/849 of 11 March 2021
18th ATP - Regulation (EU) 2022/692 of 16 February 2022
19th ATP - Regulation (EU) 2023/1434 of 25 April 2023
20th ATP - Regulation (EU) 2023/1435 of 2 May 2023
21st ATP - Regulation (EU) 2024/197 of 19 October 2023
22nd ATP - Regulation (EU) 2024/2564 of 19th June 2024

APPENDIX C

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

Ground Investigations Ireland

Wilton ESB site Cork

Land Development Agency

Ground Investigation Report

November 2024

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

DOCUMENT CONTROL SHEET

Project Title	Wilton ESB site Cork
Engineer	Barrett Mahony
Client	Land Development Agency
Project No	13244-10-23
Document Title	Ground Investigation Report

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
A	Final	L Moriarty	A Browne	C Finnerty	Dublin	07 November 2024

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.

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

CONTENTS

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

APPENDICES

1.0 Preamble

On the instructions of Barrett Mahony Consulting Engineers Limited, a site investigation was carried out by Ground Investigations Ireland Ltd. (GII) between November 2023 and September 2024 at the site of the proposed residential development in Wilton, County Cork.

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. At the time of the site investigation the site was greenfield. The site is situated on Sarsfield Road, Wilton, Cork City. The proposed construction is envisaged to consist of conventional foundations and pavement make up with some local excavations for services and plant.

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 fifteen (15 No.) Trial Pits to a maximum depth of 2.50m BGL
- Carry out three (3 No.) Soakaways to determine a soil infiltration value to BRE Digest 365
- Carry out eight (8 No.) Rotary Core Boreholes to a maximum depth of 9.80m BGL
- Carry out four (4 No.) Plate bearing tests to determine the modulus of subgrade reaction and equivalent CBR values
- 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 were 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+A1:2020.

3.2. Trial Pits

The trial pits were excavated using a 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. 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.
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 4 of this Report.

3.5. In-situ Plate Bearing Test

The plate bearing tests were carried out using a 457mm diameter plate at the locations shown on the site plan in Appendix 1. The plate was loaded in increments using a hydraulic jack and an excavator to provide

a reaction and the displacement was monitored in accordance with BS1377 Part 9 using independently mounted digital strain gauges. The constrained modulus and equivalent CBR are calculated in accordance with HD29/75 and are provided on the test reports in Appendix 5 of this Report.

3.6. 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.

3.7. Groundwater Monitoring Installations

Groundwater Monitoring Installations were installed upon the completion of the 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.

3.8. 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 United Kingdom (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) and hydrometer tests were carried out in NMTL's Geotechnical Laboratory in Carlow
Rock strength testing including Point Load (Is_{50}) and Unconfined Compressive Strength (UCS) testing was carried out in by Geotechnical and Soil Testing Services Limited, County Meath.
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 in-situ 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 were consistent across the site and generally comprised;

- Topsoil
- Made Ground
- Cohesive Deposits
- Granular Deposits
- Weathered Bedrock
- Bedrock

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

MADE GROUND: Made Ground deposits were encountered in TP09, TP10, TP12, TP13, TP14 and TP15 and were present to a depth of 0.70m to 2.50m BGL. The extent of the Made ground was not determined at TP10. These deposits were described generally as *brown slightly sandy slightly gravelly Clay with low cobble content* and contained *rare fragments of concrete, plastic, metal, red brick and clay pipe.* A strong hydrocarbon odour and discoloration was noted in the made ground deposit in TP-10 from 2.00m BGL.

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Made Ground and were described typically as reddish *brown slightly sandy slightly gravelly CLAY with low cobble and boulder content.* 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 1.5m BGL in the majority of the exploratory holes. These deposits had low (<5%), medium (5%-20%) or high (20%-50%) cobble and boulder content, where noted on the exploratory hole logs. As the rotary drilling uses water as a flush and is designed for recovery of very stiff cohesive deposits and bedrock only, much of the material in the upper runs was washed away. This can make it difficult to accurately determine the depths at which a change in strata in soft ground occurs and hence, may account for the variable depths given. Where limited recovery was achieved, the material encountered was described as either a *grey slightly clayey slightly sandy subrounded fine to coarse Gravel* or a *brown slightly sandy gravelly Clay with low cobble content.*

GRANULAR DEPOSITS: Granular deposits were encountered within the base of the cohesive deposits and were typically described as *grey slightly clayey slightly sandy subangular to subrounded fine to coarse*

GRAVEL with low cobble content. The secondary sand and fines constituents varied across the site and with depth, while low (<5%), medium (5%-20%) or high (20%-50%) cobble and boulder content was also present, where noted on the exploratory hole logs.
Based on the SPT N values the deposits are typically medium dense and become dense with depth.

WEATHERED BEDROCK: Weathered rock was encountered at TP08 which was diggable with an excavator to a depth of up to 0.30m below the top of the stratum. The trial pit was terminated upon encountering the more competent bedrock, in which further excavation became more difficult. This material was recovered as *clayey gravelly and COBBLES of Limestone*. In BH02 and BH05, Potential Weathered Bedrock was encountered and recovered as *grey slightly sandy subangular to subrounded fine to coarse Gravel of Limestone with low cobble content and brown slightly sandy Clay infill.*

BEDROCK: The rotary core boreholes recovered *medium strong to strong massive grey fine to medium grained LIMESTONE.* This is typical of the Waulsortian Formation, which is noted on the Geological Survey Ireland's (GSI) geological mapping of the site. Cavities and possible dissolution (Karst) features were noted during drilling and logging and are noted on the boreholes logs as significant clay infill. The degree of weathering ranged from unweathered to partially weathered.

The depth to rock varies from 1.25m BGL in BH07 to a maximum of 4.60m BGL in BH05. The total core recovery is good, typically 100% with some of the uppermost runs dropping to 30 or 40%. 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. It should be noted 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, BH04 and BH08 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

These results were not available at the time of writing this report.

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.

4.3.4. Rock Laboratory Testing

The rock testing carried out on samples recovered from the boreholes reported Unconfined Compressive Strength (UCS) values ranging between 15.90 and 26.50 MPa while the point load testing gave Is50 values ranging between 1.54 to 2.83 MPa. The Is_{50} results correlate to the UCS values using a factor of approximately 20, giving values of 30.8 MPa and 56.6 MPa. These results correlate to the strength descriptions ranging between of Moderately weak to Strong and confirming the variability of this stratum and the descriptions on the logs. The average of the UCS testing and associated correlated values from the point loading suggest the rock is typically medium strong.

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.

5.1. Karst

A review of the geological mapping in conjunction with the results of the ground investigation have highlighted the risk of karst features in the underlying Walsortion Limestone.

The depth to rock varies over the site with trial pits refusing shallow (in some cases less than 1m BGL) on possible bedrock and the rotary core boreholes recovery bedrock from of 1.25m BGL (14.28m OD) in BH07 to 4.60m BGL (11.08m OD) in BH05 at its deepest. Cavities and possible dissolution features were noted during drilling & logging and are noted on the boreholes logs as significant clay infill or potential cavities, in BH02 at 3.80m to 4.50m BGL and in BH05 at 6.70m to 7.30m BGL.

The karst risk is therefore high on this site with the associated hazards of undulating bedrock topography, possible dissolution features and changes in ground stiffness and strength recommended to be further assessed. The likelihood of karst related hazards is increased by changes in loading, groundwater level and surface water drainage (Rutty & Jennings 2012). Mitigation measures to reduce the development of karst features are recommended to be undertaken in conjunction with a practical risk assessment which takes into account the commercial, safety and technical risks specific to the proposed development on this site.

A geophysical Survey utilising 2D Electrical Resistivity Tomography (ERT) and Seismic Refraction profiling is recommended to

- map lateral and vertical variations in overburden type and thickness across the site,
- establish the depth to rockhead and estimate the mass characteristics of the rock, particularly rock quality, excavatability / rippability and rock strength,
- assess the location and possible extent of buried sub surface geologic features such as, karst solution features, faults, buried river channels, etc. and manmade features such as made ground.

Mitigation for load induced karst risk consists of measures to reduce the overloading of existing cavities where the overburden is self-supporting over a fissure or cavity in the underlying limestone. The use of piled foundations into intact bedrock combined with rock proving is the most effective measure however is an expensive solution for the relatively low loading from the proposed development. The presence of a

structure previously on this site, performing satisfactorily should also be borne in mind. Designing foundations and pavement to reduced loading or the use of a raft foundation are also effective in reducing the risk of karst related subsidence on the proposed building.

Mitigation for groundwater or surface water induced sinkhole development include the careful detailing of drainage and water services such that the groundwater surface will not be lowered or increased due to their installation. The impact of nearby construction causing dewatering or abstraction of groundwater should be considered in the design. Dewatering and excavations during construction are recommended to be carefully monitored if unavoidable or reduced if possible, to minimise the impact on the groundwater level. Surface water drainage measures that reduce the inflow of water into any potential karst features should be undertaken in the form of sealed drainage and the avoidance or soakaway drainage measures where they could impact on the proposed building.

Further ground investigation, consisting of rotary coring to determine the nature and depth of rock below specific high loadings may also be prudent.

5.2. Foundations

Subject to the assessment of the existing risk of karst features, a preliminary set of options are presented for the proposed scheme ranging from shallow foundations to piled foundations.

An allowable bearing capacity of 150 kN/m^2 is recommended for the design of conventional strip or pad foundations on the stiff cohesive deposits at a depth of 1.20m BGL with the exception of TP09, TP10, TP13 and TP14 due to the presence of Made Ground in the vicinity of these trial pits, where lean mix trench fill to the underlying stiff cohesive deposits is recommended to achieve the recommended allowable bearing capacity.

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.

Where shallow rock is present the allowable bearing capacity of 150 kN/m^2 is recommended to keep the design approach consistent and to avoid significant loading in areas where karst features may be present. The verification of the ground below the foundations is proposed to be carried out utilising measures such as rotary percussive drilling, dynamic probing (DPSH) and/or microgravity surveying on a regular closely spaced grid. Any karst features close to the surface are recommended to be excavated and replaced with well graded granular fill to facilitate ongoing drainage and to enable the fill to provide support through arching. Foundations should be designed to span areas where cavities are present and appropriately reinforced.

In any part of the site, should part of a 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. This may prove difficult where the depth to rock is variable.

Should shallow foundations prove impractical, piled foundations into the intact bedrock may be the most appropriate foundation solution for the proposed project. 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 floor slab is recommended be suspended and also supported on the building piles. Further rotary coring to prove the presence on a minimum of 5m of intact bedrock below proposed piles would be recommended.

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. External Pavements

The proposed pavements are recommended to be designed in accordance with the CBR test results included in the Appendices of this Report. At all locations except CBR-01, the CBR test results indicate that a capping layer or a sufficient depth of crushed stone fill may be required. Plate bearing tests are recommended at the time of construction to verify the design assumptions for the proposed pavement make up and to verify adequate compaction has been achieved.
The use of a geogrid and separation membrane may improve the performance of the proposed pavement and enable a more economical pavement design to be achieved, a specialist supplier is recommended to advise of the required strength, depth and type of geotextile for the proposed design.

5.4. Excavations

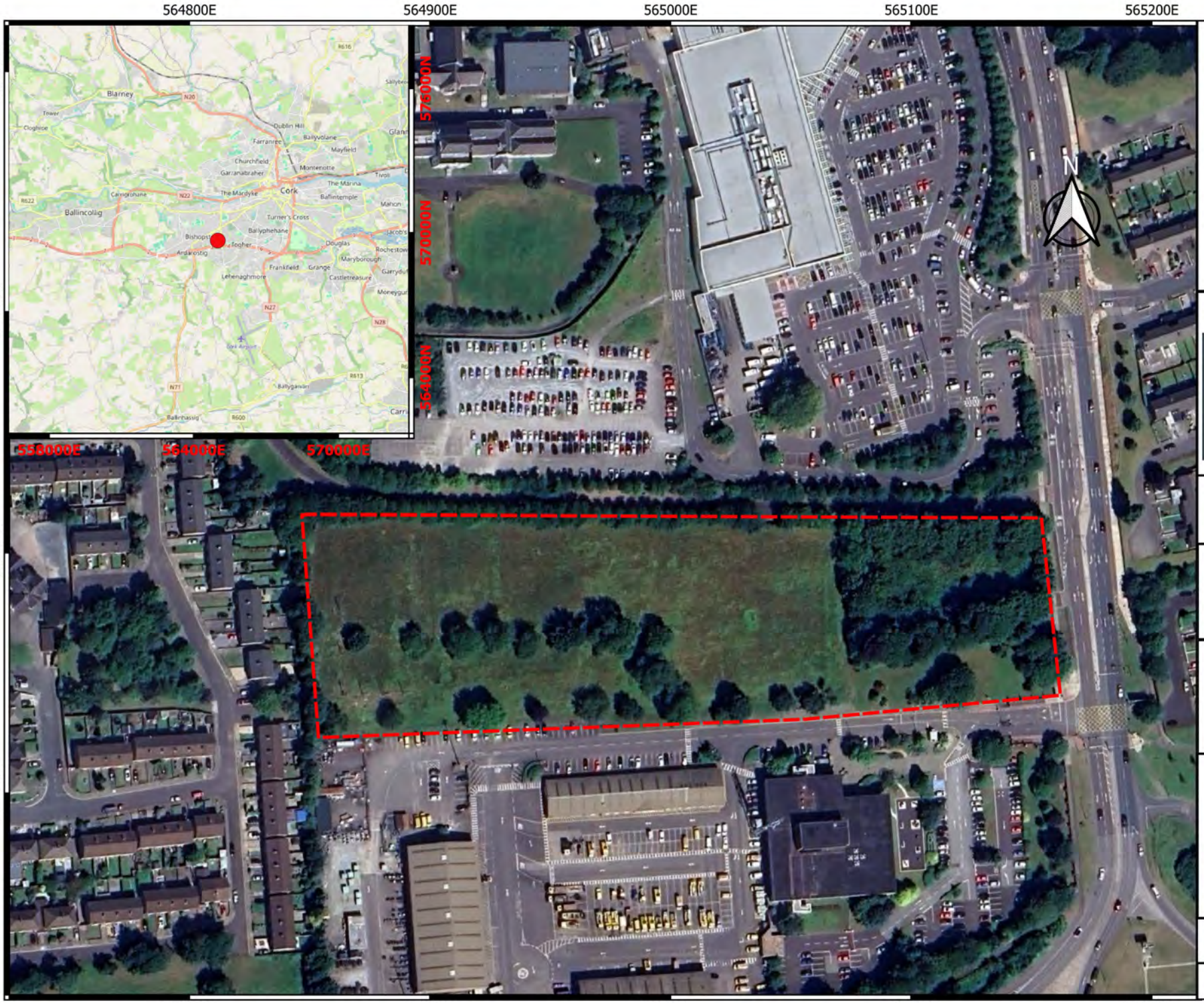
Short term temporary excavations in the cohesive deposits will remain stable for a limited time only and will require to be appropriately battered or the sides supported if the excavation is below 1.25m BGL or is required to permit man entry.
Excavations in the Made Ground deposits will require to be appropriately battered or the sides supported due to the low strength of these deposits.
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 testing and Pettifer & Fookes (1994) Revised Excavatability Graph, the Little Island Formation ranges from easy ripping to hard ripping.
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 Report.

5.5. Soakaway Design

Infiltration rates of f = 2.4 x 10^{-6} m/s was calculated for the soakaway location SA03. At the locations of SA04 and SA15 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 - Figures



Site Location

Indicative Site Boundary

Client:

LDA

Project Code:
13244-10-23

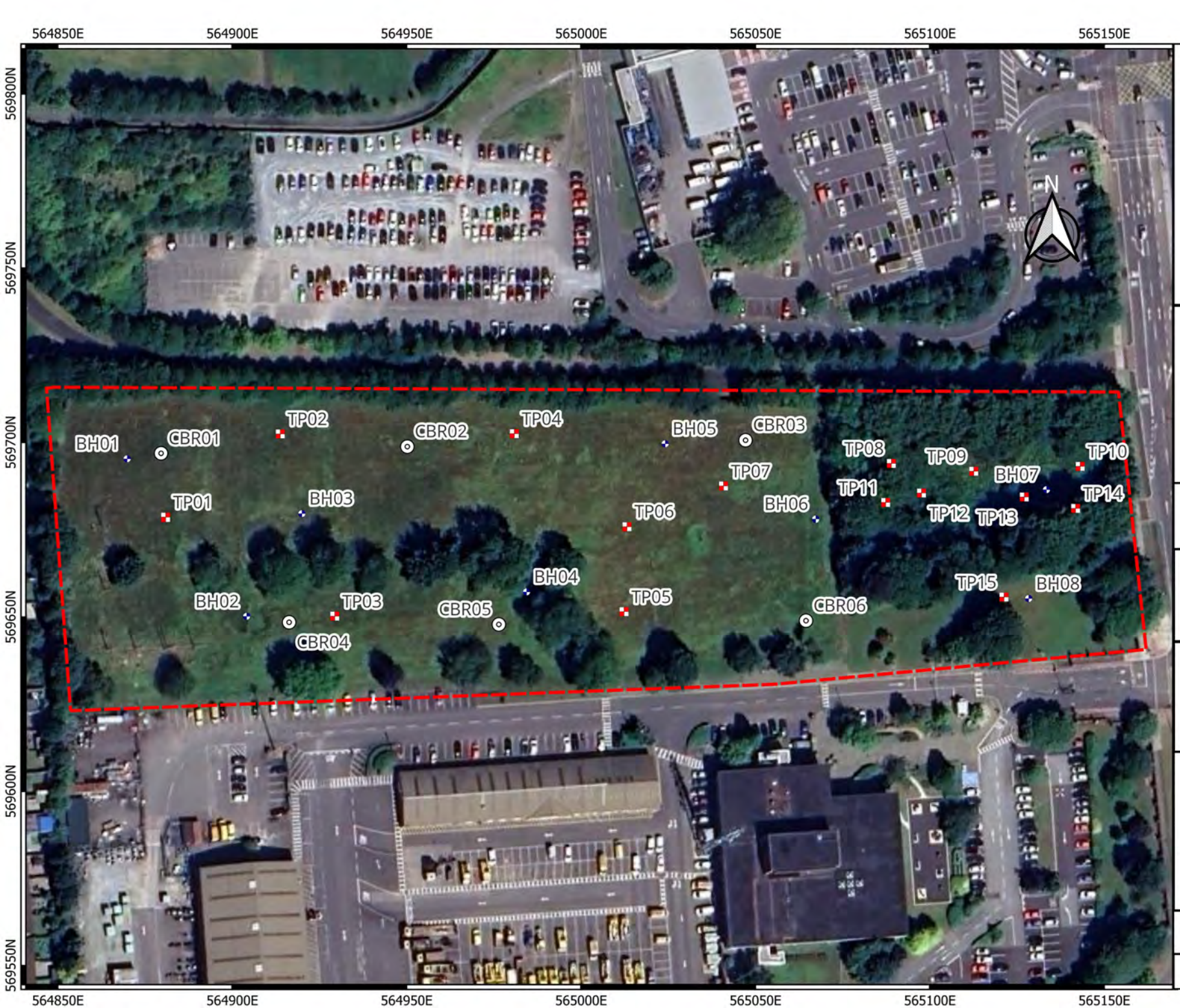
Project Title:
Wilton ESB Site Cork

Drawing Title:
Figure 1 Site Location

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 9 18 27 36 45 m

Drawn By:	Date:
LM	22-10-2024



Indicative Site Boundary

Trial Pit

Plate Test

Borehole

Client:

LDA

Project Code:

13244-10-23

Project Title:

Wilton ESB Site Cork

Drawing Title:

Figure 2 Site Investigation Points

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 15 30 45 60 m

Drawn By:	Date:
LM	17-09-2024

APPENDIX 2 – Trial Pit Records

Ground Investigations Ireland Ltd
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Site Wilton ESB Site Cork			**Trial Pit Number** TP01
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.50m x 0.60m x 1.80m L x W x D	**Ground Level (mOD)** 12.31	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564880.9 E 569678.4 N	**Dates** 30/11/2023	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				12.11	0.20			
0.50 0.50	B ES				(0.80)	Firm reddish brown mottled brown slightly sandy slightly gravelly CLAY with low cobble content		
				11.31	1.00			
1.50	B				(0.80)	Stiff reddish brown sandy gravelly CLAY with medium cobble and boulder content		
				10.51	1.80			
						Terminated at 1.80m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 1.80m BGL due to obstruction; presumed large boulders
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP01

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Site Wilton ESB Site Cork			**Trial Pit Number** TP02
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.20m x 0.60m x 1.00m L x W x D	**Ground Level (mOD)** 12.63	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564913.8 E 569702.3 N	**Dates** 30/11/2023	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				12.43	0.20	Firm light reddish brown slightly sandy slightly gravelly CLAY		
0.50 0.50	B ES				(0.60)			
				11.83	0.80	Stiff reddish brown slightly sandy gravelly CLAY with medium cobble and boulder content		
					(0.20)			
1.00	B			11.63	1.00	Terminated at 1.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 1.00m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP02

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Site Wilton ESB Site Cork			**Trial Pit Number** TP03
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 1.80m x 0.30m x 1.50m L x W x D	**Ground Level (mOD)** 12.46	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564929.4 E 569650.1 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				12.26	0.20	Firm reddish brown slightly sandy slightly gravelly CLAY with low cobble content		
0.50 0.50	B ES				(0.80)			
				11.46	1.00	Stiff reddish brown slightly sandy gravelly CLAY with medium cobble content		
					(0.50)			
1.50 1.50	B ES			10.96	1.50	Complete at 1.50m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Soakaway test carried out in trial pit in accordance with BRE Digest 365
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP03

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Site Wilton ESB Site Cork			**Trial Pit Number** TP04
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 1.50m x 0.30m x 1.50m L x W x D	**Ground Level (mOD)** 14.13	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564980.9 E 569702.3 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				13.93	0.20	Firm to sitff rediish brown slightly sandy slightly gravelly CLAY with low cobble content		
0.50 0.50	B ES				(1.30)			
1.50 1.50	B ES			12.63	1.50	Complete at 1.50m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Soakaway test carried out in trial pit in accordance with BRE Digest 365
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP04

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Site Wilton ESB Site Cork			**Trial Pit Number** TP05
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.00m x 0.70m x 1.00m L x W x D	**Ground Level (mOD)** 13.29	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565012.3 E 569651.4 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				13.09	0.20			
0.50 0.50	B ES				(0.80)	Firm reddish brown slightly sandy slightly gravelly CLAY with low cobble and boulder content		
				12.29	1.00			
						Terminated at 1.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 1.00m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP05

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Site Wilton ESB Site Cork			**Trial Pit Number** TP06
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.50m x 0.70m x 0.90m L x W x D	**Ground Level (mOD)** 14.27	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565013.2 E 569675.7 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	TOPSOIL		
				14.07	0.20			
0.50 0.50	B ES				(0.70)	Firm to stiff reddish brown slightly sandy slightly gravelly CLAY with medium cobble and boulder content		
				13.37	0.90	Terminated at 0.90m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.90m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP06

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Site Wilton ESB Site Cork			**Trial Pit Number** TP07
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.60m x 0.70m x 0.90m L x W x D	**Ground Level (mOD)** 14.51	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565040.8 E 569687.3 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	TOPSOIL		
				14.21	0.30	Firm reddish brown slightly sandy slightly gravelly CLAY with medium cobble and boulder content		
0.50 0.50	B ES				(0.60)			
				13.61	0.90	Terminated at 0.90m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.90m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP07

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Site Wilton ESB Site Cork			**Trial Pit Number** TP08
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.50m x 0.70m x 0.90m L x W x D	**Ground Level (mOD)** 15.70	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565088.9 E 569693.8 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				15.60	(0.10) 0.10	TOPSOIL		
						Stiff reddish brown slightly sandy slightly gravelly CLAY with low cobble and boulder content		
					(0.50)			
0.50 0.50	B ES			15.10	0.60	Weathered rock recovered as clayey gravelly COBBLES of Limestone		
					(0.30)			
				14.80	0.90	Terminated at 0.90m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.90m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP08

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Site Wilton ESB Site Cork			**Trial Pit Number** TP09
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.00m x 2.00m x 0.70m L x W x D	**Ground Level (mOD)** 15.82	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565112.6 E 569691.5 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	MADE GROUND: Brown slightly sandy gravelly Clay with rare fragments of concrete, plastic, metal, red brick and large concrete blocks		
0.50	ES			15.12	0.70	Terminated at 0.70m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.70m BGL due to obstruction; concrete slab
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP09

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Site Wilton ESB Site Cork			**Trial Pit Number** TP10
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.00m x 0.70m x 2.50m L x W x D	**Ground Level (mOD)** 15.81	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565143.1 E 569692.9 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	B ES					MADE GROUND: Reddish brown slightly sandy gravelly CLAY with low cobble and boulder content and rare fragments of red brick, concrete, metal and clay pipe		
					(2.50)			
1.50 1.50	B ES		Water strike(1) at 2.00m.			Strong hydrocarbon odour and discolouration		▽1
2.50 2.50	B ES			13.31	2.50	Terminated at 2.50m		

Plan

Remarks

Groundwater encountered at 2.50m BGL; fast ingress
Trial pit unstable; side walls spalling at 1.00m BGL
Trial pit terminated at 2.50m BGL due to groundwater ingress and side wall spalling
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP10

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Site Wilton ESB Site Cork			**Trial Pit Number** TP11
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.00m x 0.70m x 2.10m L x W x D	**Ground Level (mOD)** 14.66	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565087.3 E 569682.6 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				14.56	(0.10) 0.10	TOPSOIL		
						Stiff reddish brown slightly sandy slightly gravelly CLAY with low cobble and boulder content		
0.50 0.50	B ES				(0.90)			
				13.66	1.00	Stiff reddish brown slightly sandy slightly gravelly CLAY with medium cobble and boulder content		
1.50 1.50	B ES				(1.10)			
				12.56	2.10	Terminated at 2.10m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 2.10m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP11

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Site Wilton ESB Site Cork			**Trial Pit Number** TP12
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 3.00m x 0.70m x 1.50m L x W x D	**Ground Level (mOD)** 15.15	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565097.6 E 569685.3 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				15.05	(0.10) 0.10	TOPSOIL		
						MADE GROUND: Brown slightly sandy slightly gravelly Clay with rare fragments of tarmacadam and metal		
0.50 0.50	B ES				(0.70)			
				14.35	0.80	Stiff reddish brown slightly sandy gravelly CLAY with low cobble and boulder content		
					(0.70)			
1.50 1.50	B ES			13.65	1.50	Terminated at 1.50m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 1.50m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP12

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Site Wilton ESB Site Cork			**Trial Pit Number** TP13
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.00m x 1.20m x 0.70m L x W x D	**Ground Level (mOD)** 15.35	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565127.1 E 569684.1 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	ES				(0.70)	MADE GROUND: Brown slightly sandy gravelly Clay with rare frements of concrete, red brick, metal, plastic and tarmacadam		
				14.65	0.70	Terminated at 0.70m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.70m BGL due to obstruction; tarmacadam road
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP13

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Site Wilton ESB Site Cork			**Trial Pit Number** TP14
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 2.50m x 0.70m x 1.00m L x W x D	**Ground Level (mOD)** 14.63	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565141.8 E 569680.9 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	ES				(0.70)	MADE GROUND: Brown slightly sandy gravelly Clay with rare fragments of metal, red brick, concrete, rebar, tar and clay pipe		
				13.93	0.70	Terminated at 1.00m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Trial pit terminated at 0.70m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP14

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Site Wilton ESB Site Cork			**Trial Pit Number** TP15
Machine : 5T Tracked Excavator **Method :** Trial Pit	**Dimensions** 1.80m x 0.30m x 1.30m L x W x D	**Ground Level (mOD)** 12.50	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565121.3 E 569655.5 N	**Dates** 04/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				12.40	(0.10) 0.10	TOPSOIL		
						MADE GROUND: Brown slightly sandy slightly gravelly Clay with rare fragments of concrete and clay pipe		
0.50 0.50	B ES				(0.70)			
				11.70	0.80	Stiff reddish brown slightly sandy gravelly CLAY with medium to high cobble and boulder content		
					(0.50)			
1.30 1.30	B ES			11.20	1.30	Terminated at 1.30m		

Plan

Remarks

No groundwater encountered
Trial pit stable
Soakaway test carried out in trial pit in accordance with BRE Digest 365
Trial pit terminated at 1.30m BGL due to obstruction; presumed large boulders or bedrock
Trial pit backfilled upon completion

Scale (approx)	Logged By	Figure No.
1:25	AB	13244-10-23.TP15

Wilton ESB Site Cork
Trial Pit Photographs

TP01

TP01

Wilton ESB Site Cork
Trial Pit Photographs

TP01

TP01

Wilton ESB Site Cork
Trial Pit Photographs

TP02

TP02

Wilton ESB Site Cork
Trial Pit Photographs

TP02

TP02

Wilton ESB Site Cork
Trial Pit Photographs

TP03

TP03

Wilton ESB Site Cork
Trial Pit Photographs

TP03

TP03

Wilton ESB Site Cork
Trial Pit Photographs

TP04

TP04

Wilton ESB Site Cork
Trial Pit Photographs

TP04

TP04

Wilton ESB Site Cork
Trial Pit Photographs

TP05

TP05

Wilton ESB Site Cork
Trial Pit Photographs

TP05

TP05

Wilton ESB Site Cork
Trial Pit Photographs

TP06

TP06

Wilton ESB Site Cork
Trial Pit Photographs

TP06

TP06

Wilton ESB Site Cork
Trial Pit Photographs

TP07

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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
Trial Pit Photographs

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Trial Pit Photographs

TP12

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Wilton ESB Site Cork
Trial Pit Photographs

TP12

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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
Trial Pit Photographs

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Wilton ESB Site Cork
Trial Pit Photographs

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TP14

Wilton ESB Site Cork
Trial Pit Photographs

TP14

TP14

Wilton ESB Site Cork
Trial Pit Photographs

TP15

TP15

Wilton ESB Site Cork
Trial Pit Photographs

TP15

TP15

APPENDIX 3 – Soakaway Testing Records

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

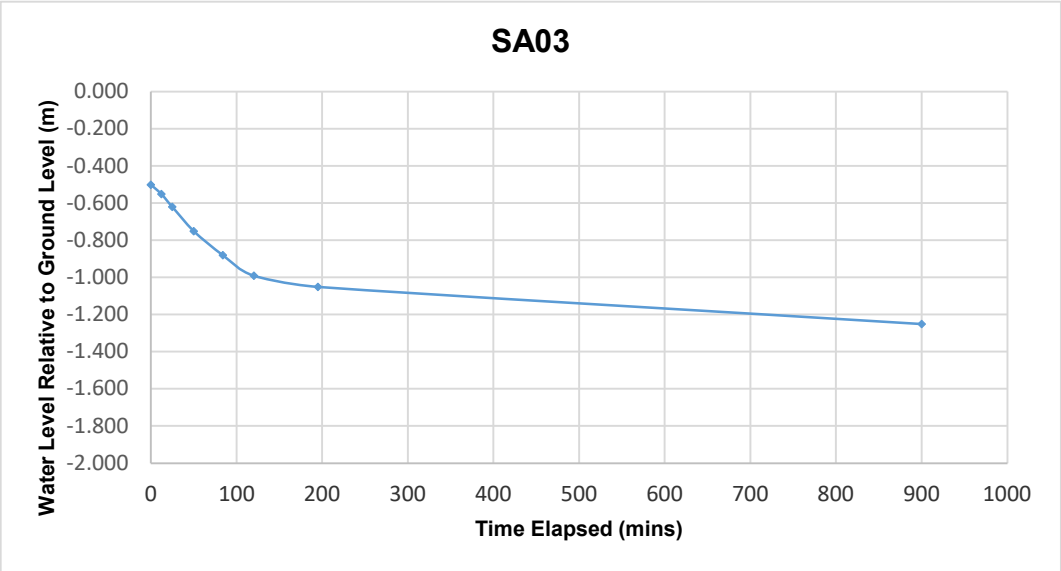
Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

SA03

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 1.80m x 0.30m x 1.50m (L x W x D)

Date	Time	Water level (m bgl)	
04/09/2024	0	-0.500	
04/09/2024	12	-0.550	
04/09/2024	25	-0.620	
04/09/2024	50	-0.750	
04/09/2024	84	-0.880	
04/09/2024	120	-0.990	
04/09/2024	195	-1.050	
04/09/2024	900	-1.250	***data extrapolated**

Start depth	Depth of Pit		Diff	75% full	25%full
0.50	**1.500**		**1.000**	**0.75**	**1.25**
Length of pit (m)	Width of pit (m)			75-25Ht (m)	Vp75-25 (m3)
1.800	0.300			0.500	0.27
Tp75-25 (from graph) (s)		**42000**		50% Eff Depth	ap50 (m2)
				0.500	2.64
f =	**2.435E-06**	**m/s**			



GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

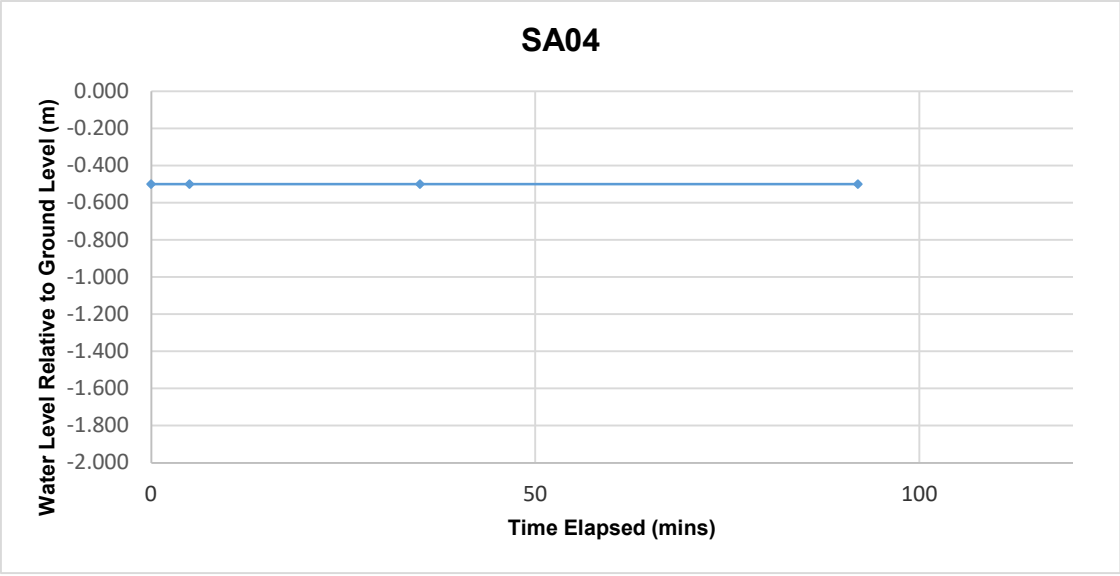
SA04

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 1.50m x 0.30m x 1.50m (L x W x D)

Date	Time	Water level (m bgl)
04/09/2024	0	-0.500
04/09/2024	5	-0.500
04/09/2024	35	-0.500
04/09/2024	92	-0.500

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
0.50	1.500	1.000	0.75	1.25



GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

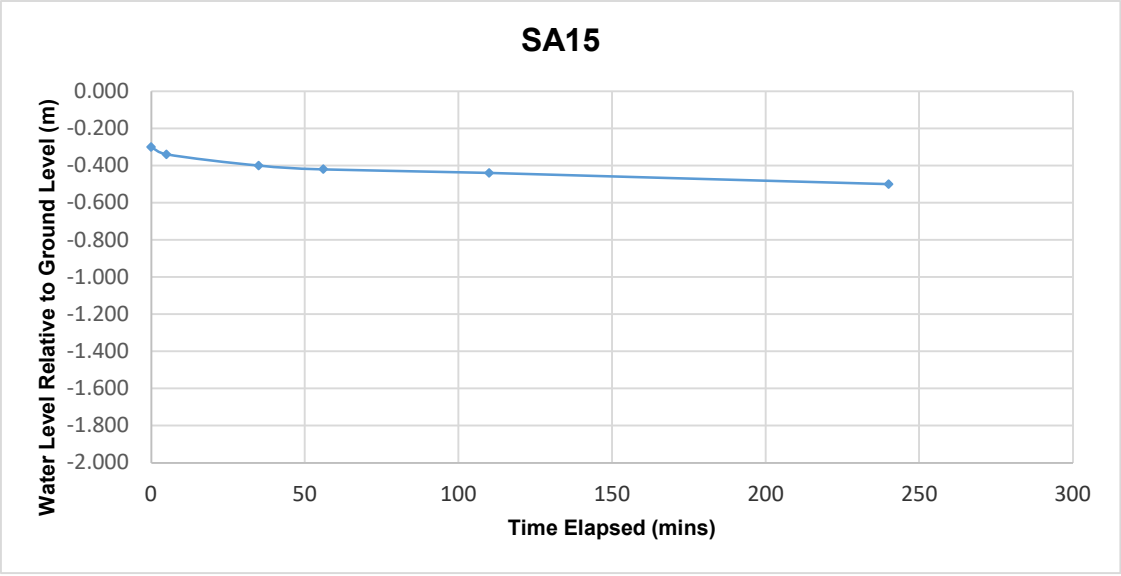
SA15

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 1.80m x 0.30m x 1.30m (L x W x D)

Date	Time	Water level (m bgl)
04/09/2024	0	-0.300
04/09/2024	5	-0.340
04/09/2024	35	-0.400
04/09/2024	56	-0.420
04/09/2024	110	-0.440
04/09/2024	240	-0.500

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
0.30	1.300	1.000	0.55	1.05



APPENDIX 4 - Rotary Borehole Records

Ground Investigations Ireland Ltd
www.gii.ie

Site Wilton ESB Site Cork			**Borehole Number** BH01
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 13.21	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564869.9 E 569695.1 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	32						(2.90)	Recovery consists of brown sandy gravelly Clay with low cobble content. Driller notes: Sandy gravelly Clay.			
2.30 2.30-2.75					14,20/50 SPT(C) N=50						
2.90	63	6	6	NI	C	10.31	2.90 (0.90)	Medium strong massive grey fine to medium grained LIMESTONE with clay infill 2.90m to 3.80m BGL: Mostly Non-intact, potential cavity			
3.55-3.70 3.80						9.41	3.80				
4.20-4.65	100	67	60		C			Medium strong to strong massive grey fine to medium grained LIMESTONE. Fresh to slightly weathered. 3.80m to 6.80m BGL - Two Fracture Sets - F1: 0 to 10 degree, close to medium spaced, undulating, rough. F2: 20 to 30 degree, medium spaced, undulating, rough.			
5.10-5.30 5.30	100	100	93	4	C		(3.00)				
6.80						6.41	6.80	Complete at 6.80m			

Remarks
Borehole complete at 6.80m BGL
50mm standpipe installed in borehole upon completion, slotted from 6.80m to 1.00m BGL with pea gravel surround, plain from 1.00m BGL to ground level with bentonite seal and raised cover.

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH06

Ground Investigations Ireland Ltd
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Site Wilton ESB Site Cork			**Borehole Number** BH02
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 11.94	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564904.1 E 569650.1 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						11.74	(0.20) 0.20	TOPSOIL		
	43						(2.10)	Recovery consists of grey clayey slightly sandy subangular to subrounded fine to coarse Gravel with low cobble content. Driller notes: sandy gravelly Clay with low cobble content.		
2.30 2.30-2.75	23				14,14/22,28 SPT(C) N=50	9.64	2.30	Recovery consists of dense grey slightly clayey slightly sandy subangular to subrounded fine to coarse Gravel with low cobble content. Driller notes: sandy GRAVEL with low boulder content.		
3.80 3.80-4.25	90	46			13,13/13,13,14,10 SPT(C) N=50	8.34	(1.30) 3.60	Possible Weathered Bedrock recovered as dense brown slightly clayey sandy subangular to subrounded fine to coarse Gravel of Limestone 3.80m to 4.50m BGL - Significant Clay infill		
4.50 4.50-4.85			46		C	7.44	(0.90) 4.50	Strong massive light grey fine to medium grained LIMESTONE. Fresh to slightly weathered.		
5.30	85	80	80	3			(3.80)	4.50m to 8.30m BGL - Two Fracture Sets - F1: 0 to 10 degree fractures, medium spaced, undulating, rough. F2: 20 to 30 degree fractures, widely spaced, undulating, rough.		
6.80	100	86	80							
8.30						3.64	8.30	Complete at 8.30m		

Remarks
Borehole complete at 8.30m BGL

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH06

Ground Investigations Ireland Ltd
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Site Wilton ESB Site Cork			**Borehole Number** BH03
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 12.20	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564919.9 E 569679.4 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						12.05	(0.15) 0.15	TOPSOIL		
	30						(2.15)	Recovery consists of brown sandy slightly gravelly Clay. Driller notes: brown Clay.		
2.30					5,5/6,44 SPT(C) N=50	9.90	2.30			
2.30-2.75	66	37					(0.85)	Recovery consists of dense brown slightly clayey slightly sandy subangular to subrounded fine to coarse Gravel. Driller notes: sandy Gravel with low boulder content (Dense)		
3.15						9.05	3.15			
3.30-3.45			37		C			Strong massive light grey fine to medium grained LIMESTONE. Fresh to slightly weathered		
3.80	100	56	40	5			(3.65)	3.15m to 6.80m BGL - Two Fracture Sets - F1: 0 to 20 degree, close to medium spaced, undulating, rough. F2: 30 to 50 degree, close to medium spaced, undulating, rough.		
5.30	77	73	73							
6.80						5.40	6.80	Complete at 6.80m		

Remarks
Borehole complete at 6.80m BGL

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH06

Ground Investigations Ireland Ltd
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Site Wilton ESB Site Cork			**Borehole Number** BH04
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 12.71	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 564984.4 E 569657.1 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						12.56	(0.15) 0.15	TOPSOIL			
	30						(2.15)	Recovery consists of grey slightly clayey slightly sandy subangular to subrounded fine to coarse Gravel with low cobble content. Driller notes: sandy Clay.			
2.30						10.41	2.30 (0.25)	Grey slightly clayey slightly sandy subangular to subrounded fine to coarse Gravel with low cobble content.			
2.55						10.16	2.55	Strong massive light grey fine to medium grained LIMESTONE. Fresh			
3.00-3.25	100	66	60		C						
3.45-3.70					C			2.55m to 5.30m BGL - Three Fracture Sets - F1: 10 to 20 degree, medium spaced, stepped, , rough. F2: 30 to 45 degree, medium to widely spaced, undulating, rough. F3: 70 to 90 degree, closely spaced, undulating, rough.			
3.80											
3.80-4.10				3	C		(2.75)				
	100	73	67								
5.30						7.41	5.30	Complete at 5.30m			

Remarks
Borehole complete at 5.30m BGL
50mm standpipe installed in borehole upon completion, slotted from 5.30m to 1.00m BGL with pea gravel surround, plain from 1.00m BGL to ground level with bentonite seal and raised cover

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH06

Ground Investigations Ireland Ltd
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Site Wilton ESB Site Cork			**Borehole Number** BH05
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 15.68	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565024.1 E 569699.5 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						15.53	(0.15) 0.15	TOPSOIL Recovery consists of brown slightly sandy gravelly Clay. Driller notes: Brown gravelly Clay.		
	60						(1.75)			
						13.78	1.90	Possible Weathered Bedrock recovered as grey slightly sandy subangular to subrounded fine to coarse Gravel of Limestone with low cobble content and brown slightly sandy Clay infill. Driller notes: Very broken rock with Clay bands (Very Stiff)		
2.30 2.30-2.75	30	6			16,27/50 SPT(C) N=50		(2.70)			
3.80 3.80-4.25	93	46			16/50 SPT(C) N=50					
4.60 4.60-4.90			46		C	11.08	4.60	Medium strong massive light grey fine to medium grained LIMESTONE with clay infill. Slightly weathered.		
5.30	87	53	43	10						
6.70 6.80				NI				6.70m to 7.30m BGL - Significant clay infill		
7.30	100	63	60				(5.20)	4.60m to 9.80m BGL - Three Fracture Sets - F1: 0 to 20 degree, close to medium spaced, undulating, rough. F2: 30 to 45 degree, medium spaced, undulating, rough. F3: 70 to 90 degree, medium spaced, undulating, rough.		
8.30	100	87	87	4						
9.80						5.88	9.80	Complete at 9.80m		

Remarks
Borehole complete at 9.80m BGL

Scale (approx)	Logged By
1:50	JK

Figure No.
13244-10-23.BH06

Ground Investigations Ireland Ltd
www.gii.ie

Site Wilton ESB Site Cork			**Borehole Number** BH06
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 7.00m	**Ground Level (mOD)** 13.44	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565067.3 E 569677.9 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						13.34	0.10	TOPSOIL.		
	57	4					(1.70)	Recovery consists of reddish brown slightly sandy gravelly Clay. Drillers notes: Brown sandy gravelly Clay with low boulder content		
1.80			4			11.64	1.80	Medium strong to strong light grey medium grained LIMESTONE with calcite veins. Slightly weathered.		
2.30										
2.85-3.20	100	83	57		C					
3.25-3.60					C					
3.80										
4.30-4.50	63	43	23	5	C		(5.00)	1.80 to 6.80m BGL - Three Fracture Sets. F1: 0 to 15 degree, closely spaced, undulating, rough. F2: 30 to 40 degree, closely to medium spaced, undulating, rough. F3: 75 to 90 degree, undulating, rough.		
5.30										
	100	67	60							
6.80						6.64	6.80	Complete at 6.80m		

Remarks
Borehole complete at 6.80m BGL

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH06

Ground Investigations Ireland Ltd
www.gii.ie

Site Wilton ESB Site Cork			**Borehole Number** BH07
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 6.00m	**Ground Level (mOD)** 15.53	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565133.4 E 569686.3 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							(1.25)	Recovery consists of grey subangular to subrounded fine to coarse Gravel. Driller notes: Brown gravelly Clay		
1.25	61	17				14.28	1.25			
				NI				Medium strong to strong light grey medium grained LIMESTONE with calcite veins. Slightly to moderately weathered.		
1.70			4					1.25m to 1.70m BGL - Non intact.		
1.95-2.05					C					
2.30							(2.55)			
2.90-3.00	100	60	18		C					
				9						
3.80						11.73	3.80	Strong light grey medium grained LIMESTONE with frequent calcite veins. Freshly to slightly weathered.		
	80	60	47				(1.50)	1.70 to 5.30m BGL - Three Fracture Sets. F1: 0 to 15 degree, closely spaced, planar to undulating, rough. F2: 60 to 70 degree, medium spaced, undulating, rough. F3: 80 to 90 degree, widely spaced, undulating, rough.		
5.30						10.23	5.30	Complete at 5.30m		

Remarks
Borehole complete at 5.30m BGL

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH07

Ground Investigations Ireland Ltd
www.gii.ie

Site Wilton ESB Site Cork			**Borehole Number** BH08
Machine : Beretta T-44 **Flush :** Water **Core Dia :** 63.5 mm **Method :** Rotary Cored	**Casing Diameter** 96mm cased to 6.00m	**Ground Level (mOD)** 12.51	**Client** Land Development Agency	**Job Number** 13244-10-23
	Location 565128.3 E 569655.2 N	**Dates** 20/09/2024	**Engineer** Barrett Mahony Consulting Engineers	**Sheet** 1/1

Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
	24					12.41	0.10	TOPSOIL Recovery consists of brown slightly sandy gravelly Clay. Driller notes: Brown Clay			
2.30 2.30-2.75 2.60-2.80	100	47	30	7	8/50 SPT(C) N=50 C	10.21	(2.20) 2.30	Strong light grey medium grained LIMESTONE with calcite veins. Fresh			
3.80	100	87	80				(3.00)	2.30 to 5.30m BGL - Two Fracture Sets. F1: 15 to 30 degree, closely to medium spaced, undulating, rough. F2: 80 to 90 degree, widely spaced, planar to undulating, rough.			
5.30						7.21	5.30	Complete at 5.30m			

Remarks
Borehole complete at 5.30m BGL
50mm standpipe installed in borehole upon completion, slotted from 5.30m to 1.00m BGL with pea gravel surround, plain from 1.00m BGL to ground level with bentonite seal and installed flush cover.

Scale (approx)	Logged By
1:50	JK

Figure No. 13244-10-23.BH08

Wilton ESB –
Rotary Core Photos

BH01

BH01

Wilton ESB –
Rotary Core Photos

BH02

BH02

Wilton ESB –
Rotary Core Photos

BH03

BH03

Wilton ESB –
Rotary Core Photos

BH04

BH04

Wilton ESB –
Rotary Core Photos

BH05

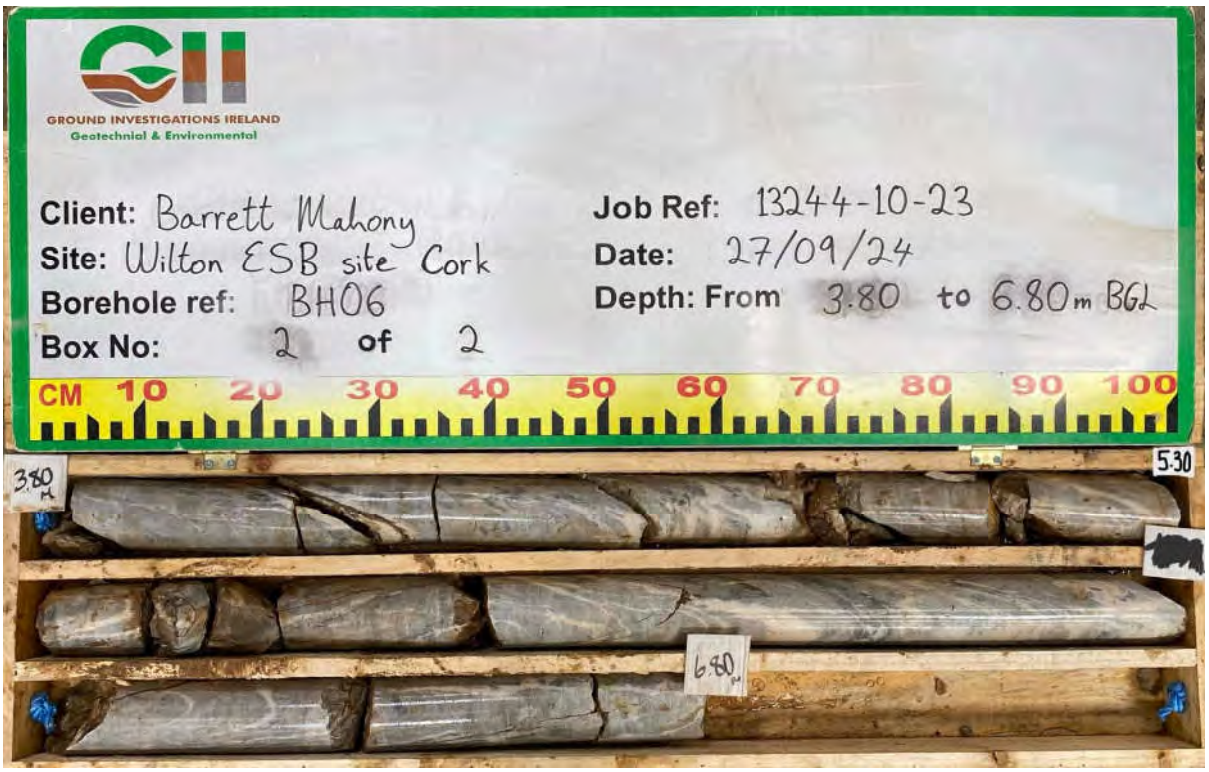
BH05

Wilton ESB –
Rotary Core Photos
BH05

Wilton ESB –
Rotary Core Photos

BH06

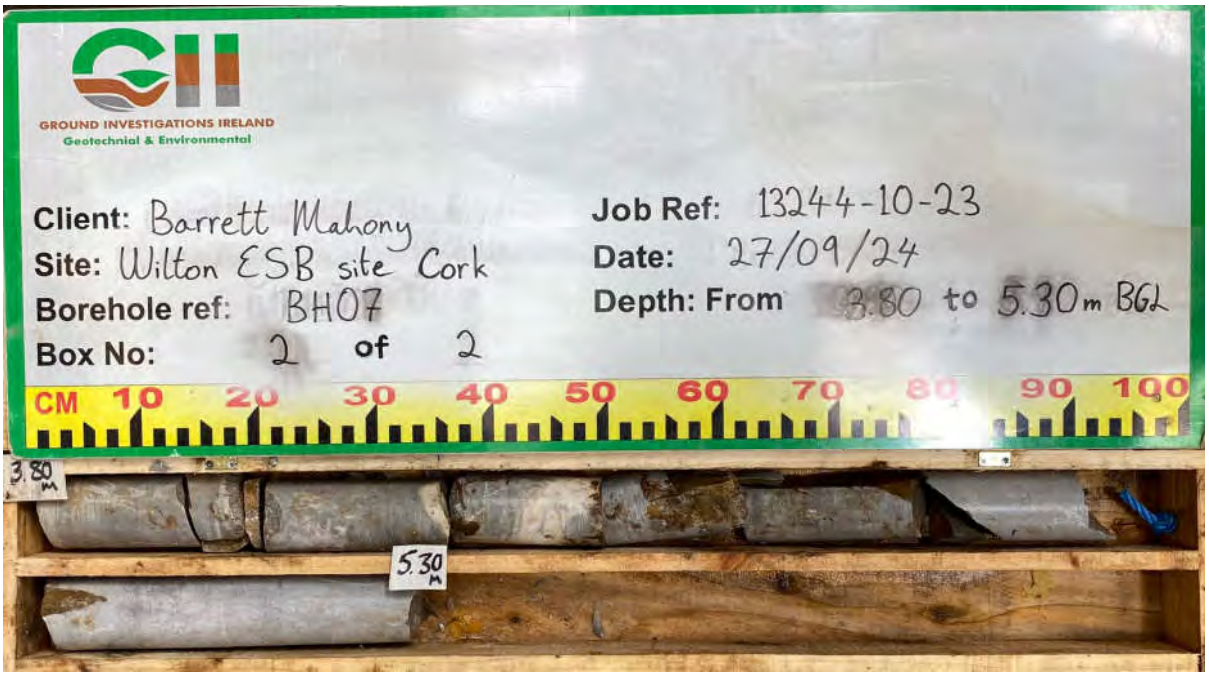
BH06



Wilton ESB –
Rotary Core Photos

BH07

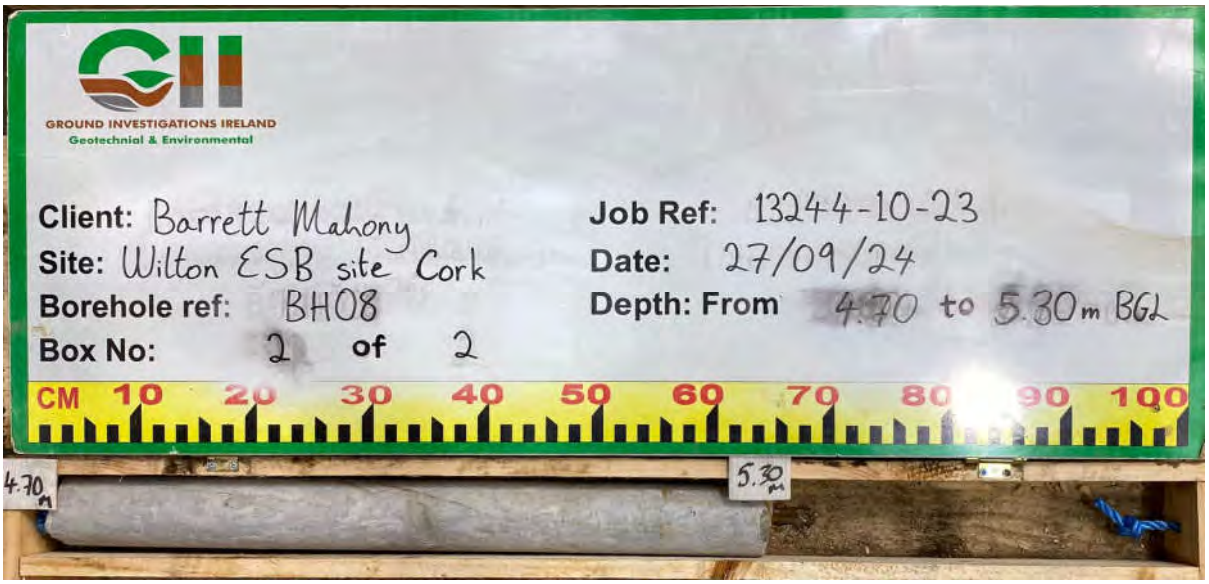
BH07



Wilton ESB –
Rotary Core Photos

BH08

BH08

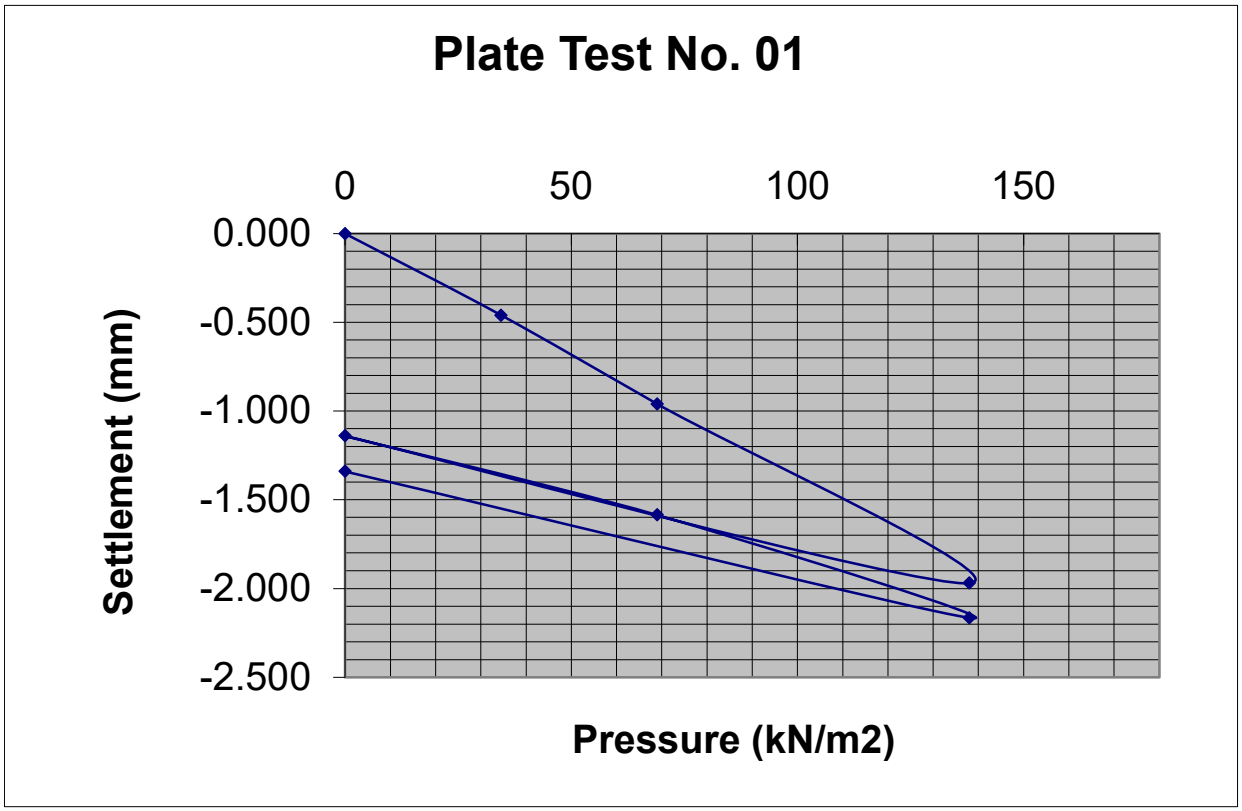


APPENDIX 5 – Plate Testing Records

Applied Load	Gauge settlement
0	**0.000**
34.5	-0.46
69	-0.96
138	-1.97
0	-1.14
69	-1.585
138	-2.165
0	-1.34

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Wilton ESB, Cork	**MATERIAL**	Firm brown slightly sandy gravelly CLAY with low cobble content
CONTRACT NO.	13244-20-23		
DATE	04/09/2024		
CLIENT	LDA	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-01	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **48.57 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **104.77 MN/m2/m**

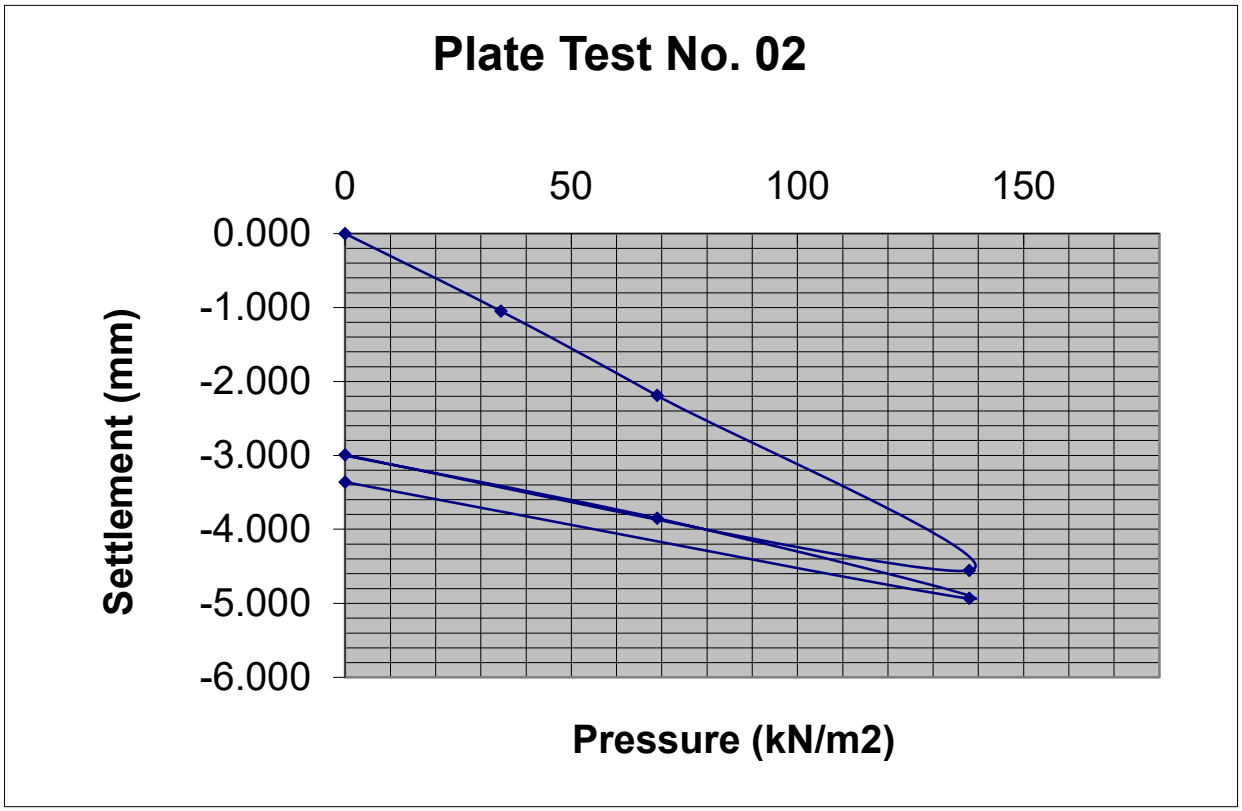
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **8.07 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **30.58 %**

Applied Load	Gauge settlement
0	**0.000**
34.5	-1.05
69	-2.19
138	-4.555
0	-2.995
69	-3.85
138	-4.935
0	-3.36

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Wilton ESB, Cork	**MATERIAL**	Soft to firm brown slightly sandy slightly gravelly CLAY with low cobble content
CONTRACT NO.	13244-20-23		
DATE	04/09/2024		
CLIENT	LDA	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-02	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **21.29 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **54.53 MN/m2/m**

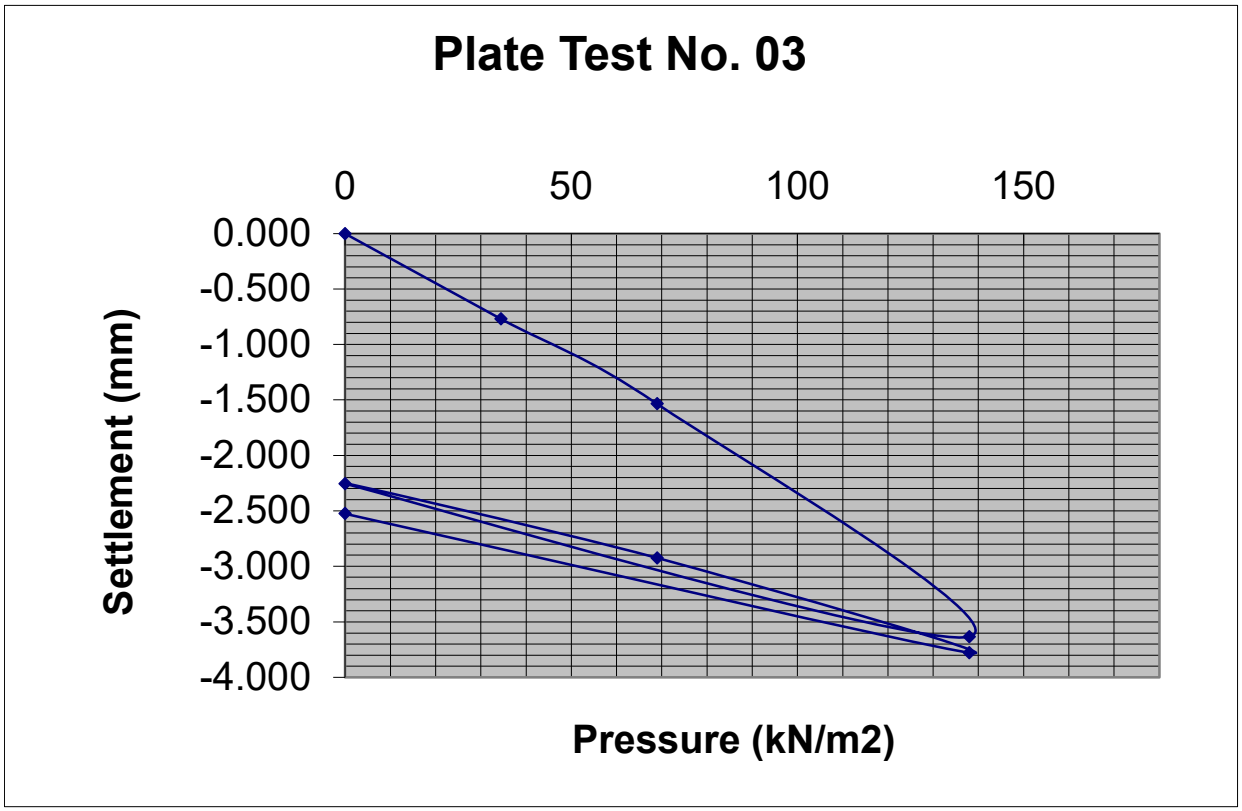
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **1.93 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **9.86 %**

Applied Load	Gauge settlement
0	**0.000**
34.5	-0.77
69	-1.535
138	-3.635
0	-2.255
69	-2.925
138	-3.78
0	-2.525

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Wilton ESB, Cork	**MATERIAL**	Firm brown slightly sandy slightly gravelly CLAY with low cobble content
CONTRACT NO.	13244-20-23		
DATE	04/09/2024		
CLIENT	LDA	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-03	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **30.37 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **69.59 MN/m2/m**

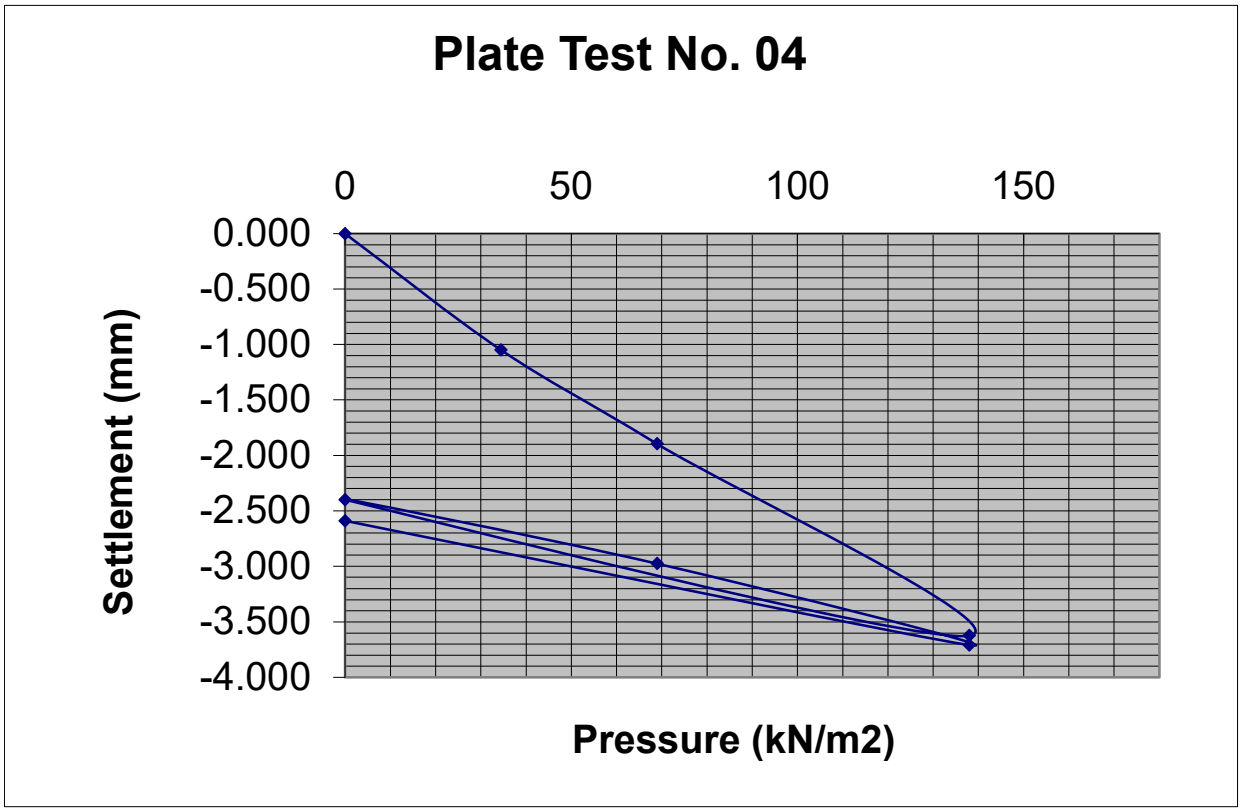
Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **3.58 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **15.05 %**

Applied Load	Gauge settlement
0	**0.000**
34.5	-1.05
69	-1.895
138	-3.625
0	-2.4
69	-2.975
138	-3.71
0	-2.59

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

LOCATION	Wilton ESB, Cork	**MATERIAL**	Firm brown slightly sandy slightly gravelly CLAY with low cobble content
CONTRACT NO.	13244-20-23		
DATE	04/09/2024		
CLIENT	LDA	**DEPTH**	0.50m
PLATE DIAMETER	457mm	**NOTES**	
TEST NO.	CBR-04	**SAMPLES**	



Modulus of subgrade reaction, K (Initial) = **24.60 MN/m2/m**

Modulus of subgrade reaction, K (Reload) = **81.08 MN/m2/m**

Equivalent CBR(initial)in accordance with HD25/94 volume7 section2 = **2.48 %**

Equivalent CBR(reload)in accordance with HD25/94 volume7 section2 = **19.61 %**

APPENDIX 6 – Laboratory Testing

Old School Building
Ughtyneill
Moynalty
Co.Meath

Geotechnical and Soil Testing Services Ltd

CONTRACT Wilton ESB
CLIENT NO. C028
CLIENT Ground Investigations Ireland
ADDRESS Catherinestown House
Hazelhatch Road
Newcastle D22 YD52

REPORT NO: **SA 2386 PLI**
JOB NO: **GII 336**

DATE: 18/10/2024

TEST REPORT FOR DETERMINATION OF POINT LOAD INDEX
Single Diametrical Determination in accordance with ISRM 1985

Sample Number		SA2386 to SA 2400
Sampled By		Client
Sampled Date		09/10/2024
Received Date		09/10/2024
Sample Source/Location	*	Wilton ESB
Depth /Location	*	Wilton ESB
Sample Description		Rock core
Rock Type tested		Core
Sample Ref / Identification		See table of Results
Date Start Test		26/09/24
Date Tested		26/09/24
Deviations from Standard		None

Test Results

Sample No.	BH No.	Average Diameter	Height/ Length	Distance between contact point and free end	Load at Failure (kN)	IS(50) Mpa	Density (Mg/M3)
2386	BH01 @3.55-3.70	64.10	100.00	>0.5	9.10	**2.05**	2.62
2388	BH01 @5.10-5.30	63.30	135.00	>0.5	11.43	**2.63**	2.63
2389	BH02 @4.50-4.85	63.30	220.00	>0.5	10.71	**2.46**	2.64
2390	BH03 @3.30-3.45	63.30	125.00	>0.5	6.69	**1.54**	2.64
2391	BH04 @3.00-3.25	63.30	100.00	>0.5	10.89	**2.51**	2.65
2393	BH04 @3.80-4.10	63.30	250.00	>0.5	9.75	**2.24**	2.65
2394	BH05 @4.60-4.90	63.30	250.00	>0.5	10.70	**2.46**	2.63
2395	BH06 @2.85-3.20	63.30	300.00	>0.5	13.60	**3.13**	2.65
2397	BH06 @4.30-4.50	63.30	120.00	>0.5	9.36	**2.15**	2.63
2398	BH07 @1.95-2.05	63.30	80.00	>0.5	8.59	**1.98**	2.65
2399	BH07 @2.90-3.00	63.30	50.00	>0.5	10.61	**2.44**	2.65
2400	BH08 @2.60-2.80	63.30	180.00	>0.5	12.28	**2.83**	2.64

Notes: *Specimens prepared and tested in accordance with suggested method from
International Society for Rock Mechanics (ISRM), 1985

Results relate only to the sample tested and apply to sample as receieved.

(*)Denotes sample information above has been provided by the client.

Signed: _ **Date:** ___ 18/10/2024

for Geotechnical and Soil Testing Services Ltd

Authorised signatories : G. Reilly

End of Report

Old School Building
Ughtyneill
Moynalty
Co.Meath

Geotechnical and Soil Testing Services Ltd

CONTRACT Wilton ESB
CLIENT NO. C028
CLIENT Ground Investigations Ireland
ADDRESS Catherinestown House
Hazelhatch Road
Newcastle D22 YD52

REPORT NO: **SA 2387 UCS**
JOB NO: **GII 336**

DATE: 18/10/2024

TEST REPORT FOR DETERMINATION OF UNCONFINED COMPRESSIVE STRENGTH
of Rock cores in accordance with ISRM 1985

Sample Number	SA2387	SA 2396
Sampled By	Client	
Sampled Date	09/10/2024	
Received Date	09/10/2024	
Sample Source/Location	* Wilton ESB	
Depth /Location	See table of Results	
Sample Description	Rock core	
Rock Type tested	Core	
Sample Ref / Identification	See table of Results	
Date Start Test	26/09/24	
Date Tested	26/09/24	
Deviations from Standard	None	

Test Results

Sample No.	BH No. / Depth	Average Diameter	Height/ Length	Length / Dia Ratio	Load at Failure (kN)	Unconfined Compressive Strength **(Mpa)**	Density (Mg/M3)
2387	BH01 @4.20-4.65	63.30	158.00	2.50	83.40	**26.50**	2.63
2392	BH04 @3.45-3.70	63.30	158.50	2.50	64.50	**20.50**	2.65
2396	BH06 @3.25-3.60	63.30	158.00	2.50	50.10	**15.90**	2.64

Notes: *Specimens prepared and tested in accordance with suggested method from
International Society for Rock Mechanics (ISRM), 1985

Results relate only to the sample tested and apply to sample as receieved.

(*)Denotes sample information above has been provided by the client.

Signed: _____ **Date:** ___ 18/10/2024

for Geotechnical and Soil Testing Services Ltd

Authorised signatories : G. Reilly

End of Report

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
D22 K5P8

Attention :	Adam Browne
Date :	27th September, 2024
Your reference :	13244-10-23
Our reference :	Test Report 24/15915 Batch 1
Location :	Wilton ESB Cork
Date samples received :	18th September, 2024
Status :	Final Report
Issue :	202409271237

Twenty two samples were received for analysis on 18th September, 2024 of which twenty two 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.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 106.211 kg of CO2

Scope 1&2&3 emissions - 251.004 kg of CO2

Authorised By:

Sean Anglish
Project Coordinator

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08			
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Antimony	2	2	1	<1	2	2	2	2	1	1	<1	mg/kg	TM30/PM15
Arsenic #	8.7	10.0	2.5	4.2	6.9	9.6	15.6	8.6	9.2	5.6	<0.5	mg/kg	TM30/PM15
Barium #	58	61	38	22	49	51	83	67	41	34	<1	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.9	0.4	0.5	0.4	<0.1	mg/kg	TM30/PM15
Chromium #	66.3	89.3	66.7	29.1	67.2	57.3	63.8	67.3	49.9	47.4	<0.5	mg/kg	TM30/PM15
Copper #	14	20	8	10	11	19	22	18	14	9	<1	mg/kg	TM30/PM15
Lead #	46	51	13	14	30	21	35	28	25	15	<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.2	<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	4.9	3.3	1.3	4.0	2.7	3.3	3.7	2.9	2.5	<0.1	mg/kg	TM30/PM15
Nickel #	21.8	39.8	21.4	17.0	16.5	38.7	56.0	34.6	34.1	23.2	<0.7	mg/kg	TM30/PM15
Selenium #	1	1	<1	<1	1	<1	2	<1	<1	<1	<1	mg/kg	TM30/PM15
Zinc #	67	104	46	53	68	89	171	105	80	64	<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	<0.04	<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	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<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	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene #	<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
Benzo(a)anthracene #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<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
Indeno(123cd)pyrene #	<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
Dibenzo(ah)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
Benzo(ghi)perylene #	<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
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	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<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
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<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	99	100	101	106	99	107	96	97	99	101	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08			
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
TPH CWG													
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	<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	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH_CU+HS_1D_AL)	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<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	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_CU_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_CU_1D_AL)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<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	<0.1	<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	<0.1	<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	<0.1	<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	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH_CU+HS_1D_AR)	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH_CU+HS_1D_Total)	<52	<52	<52	<52	<52	<52	<52	<52	<52	<52	<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	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_CU_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_CU_1D_AR)	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
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

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08			
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Natural Moisture Content	22.4	14.8	7.8	8.0	15.2	17.3	13.8	10.7	9.2	5.6	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	18.3	12.9	7.2	7.4	13.2	14.7	12.1	9.7	8.4	5.3	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	-	-	-	0.0028	-	-	-	-	0.0033	-	<0.0015	g/l	TM38/PM20
Chromium III	66.3	89.3	66.7	29.1	67.2	57.3	63.8	67.3	49.9	47.4	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	1.93	1.17	0.21	0.17	0.80	0.11	0.35	0.17	0.23	0.18	<0.02	%	TM21/PM24
pH #	5.36	7.06	8.62	8.72	8.22	8.14	7.81	8.48	8.28	8.07	<0.01	pH units	TM73/PM11

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	LOD/LOR	Units	Method No.
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14			
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Antimony	1	2	2	2	2	2	2	2	<1	1	<1	mg/kg	TM30/PM15
Arsenic #	8.3	7.4	14.5	17.1	7.2	6.6	8.7	8.4	10.4	23.5	<0.5	mg/kg	TM30/PM15
Barium #	69	49	55	74	47	38	65	44	35	127	<1	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Chromium #	43.9	71.7	99.5	86.0	76.5	67.4	82.6	44.9	48.7	82.3	<0.5	mg/kg	TM30/PM15
Copper #	19	21	27	55	11	12	13	18	18	27	<1	mg/kg	TM30/PM15
Lead #	31	23	33	72	19	17	40	37	32	30	<5	mg/kg	TM30/PM15
Mercury #	0.3	<0.1	0.2	0.2	<0.1	<0.1	<0.1	0.2	<0.1	1.4	<0.1	mg/kg	TM30/PM15
Molybdenum #	2.0	4.1	6.2	5.2	4.2	3.8	4.7	1.9	2.8	5.0	<0.1	mg/kg	TM30/PM15
Nickel #	24.7	26.4	23.5	21.3	26.6	36.2	24.9	39.7	13.8	21.1	<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	<1	<1	<1	<1	1	1	<1	<1	<1	mg/kg	TM30/PM15
Zinc #	83	69	68	89	75	67	89	104	50	339	<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	<0.04	<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 #	0.04	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	0.11	0.05	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.05	0.04	0.04	<0.03	<0.03	<0.03	0.04	<0.03	0.20	0.06	<0.03	mg/kg	TM4/PM8
Pyrene #	0.04	0.04	0.04	<0.03	<0.03	<0.03	<0.03	<0.03	0.16	0.06	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.13	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #	0.04	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.13	0.06	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.22	0.09	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.14	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.10	<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	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.10	<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	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.76	<0.22	<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	1.29	<0.64	<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	0.06	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.03	<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	99	97	92	96	97	98	99	101	99	100	<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30	<30	866	<30	<30	<30	<30	<30	36	<30	mg/kg	TM5/PM8/PM16

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	LOD/LOR	Units	Method No.
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14			
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
TPH CWG													
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	<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	0.6	<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	18.0	<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	192	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7	<7	375	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7	<7	264	<7	<7	<7	<7	<7	36	<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	<7	<7	17	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH_CU+HS_1D_AL)	<26	<26	<26	867	<26	<26	<26	<26	<26	36	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_CU_1D_AL)	<10	<10	<10	707	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_CU_1D_AL)	<10	<10	<10	157	<10	<10	<10	<10	<10	36	<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	<0.1	<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	<0.1	<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	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2	<0.2	1.4	<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	<4	<4	48	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7	<7	207	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7	<7	153	<7	<7	<7	<7	<7	18	<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH_CU+HS_1D_AR)	<26	<26	<26	409	<26	<26	<26	<26	<26	<26	<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH_CU+HS_1D_Total)	<52	<52	<52	1276	<52	<52	<52	<52	<52	<52	<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	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_CU_1D_AR)	<10	<10	<10	327	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_CU_1D_AR)	<10	<10	<10	68	<10	<10	<10	<10	<10	18	<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Benzene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Toluene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5	<5	20	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM36/PM12
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

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	LOD/LOR	Units	Method No.
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14			
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Natural Moisture Content	7.8	10.6	12.4	19.8	7.8	4.3	19.2	10.9	6.4	15.0	<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	7.3	9.6	11.1	16.5	7.3	4.1	16.1	9.8	6.0	13.0	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.2116	-	-	-	-	-	-	0.0039	-	-	<0.0015	g/l	TM38/PM20
Chromium III	43.9	71.7	99.5	86.0	76.5	67.4	82.6	44.9	48.7	82.3	<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	2.73	0.29	0.54	1.38	0.37	0.03	1.03	0.10	0.74	0.82	<0.02	%	TM21/PM24
pH #	8.23	8.63	8.46	7.54	7.94	8.59	8.20	8.46	8.34	8.60	<0.01	pH units	TM73/PM11

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	80-83	84-87									LOD/LOR	Units	Method No.
Sample ID	TP-15	TP-15											
Depth	0.50	1.30											
COC No / misc													
Containers	V J T	V J T											
Sample Date	13/09/2024	13/09/2024											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	18/09/2024	18/09/2024											
Antimony	2	1									<1	mg/kg	TM30/PM15
Arsenic #	12.4	6.9									<0.5	mg/kg	TM30/PM15
Barium #	85	32									<1	mg/kg	TM30/PM15
Cadmium #	0.2	<0.1									<0.1	mg/kg	TM30/PM15
Chromium #	86.8	75.5									<0.5	mg/kg	TM30/PM15
Copper #	25	10									<1	mg/kg	TM30/PM15
Lead #	76	18									<5	mg/kg	TM30/PM15
Mercury #	0.5	0.1									<0.1	mg/kg	TM30/PM15
Molybdenum #	4.7	3.5									<0.1	mg/kg	TM30/PM15
Nickel #	26.2	17.3									<0.7	mg/kg	TM30/PM15
Selenium #	2	<1									<1	mg/kg	TM30/PM15
Zinc #	89	44									<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.03	<0.03									<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Fluoranthene #	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06									<0.06	mg/kg	TM4/PM8
Chrysene #	<0.02	<0.02									<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	<0.07	<0.07									<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
PAH 6 Total #	<0.22	<0.22									<0.22	mg/kg	TM4/PM8
PAH 17 Total	<0.64	<0.64									<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02									<0.02	mg/kg	TM4/PM8
Benzo(j)fluoranthene	<1	<1									<1	mg/kg	TM4/PM8
PAH Surrogate % Recovery	102	100									<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	<30	<30									<30	mg/kg	TM5/PM8/PM16

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	80-83	84-87									LOD/LOR	Units	Method No.
Sample ID	TP-15	TP-15											
Depth	0.50	1.30											
COC No / misc													
Containers	V J T	V J T											
Sample Date	13/09/2024	13/09/2024											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	18/09/2024	18/09/2024											
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL)#	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL)#	<4	<4									<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>C35-C40 (EH_CU_1D_AL)	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-40 (EH_CU+HS_1D_AL)	<26	<26									<26	mg/kg	TM5/TM36/PM8/PM12/PM16
>C6-C10 (HS_1D_AL)	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>C10-C25 (EH_CU_1D_AL)	<10	<10									<10	mg/kg	TM5/PM8/PM16
>C25-C35 (EH_CU_1D_AL)	<10	<10									<10	mg/kg	TM5/PM8/PM16
Aromatics													
>C5-EC7 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR)#	<0.2	<0.2									<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR)#	<4	<4									<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR)#	<7	<7									<7	mg/kg	TM5/PM8/PM16
>EC35-EC40 (EH_CU_1D_AR)	<7	<7									<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-40 (EH_CU+HS_1D_AR)	<26	<26									<26	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-40) (EH_CU+HS_1D_Total)	<52	<52									<52	mg/kg	TM5/TM36/PM8/PM12/PM16
>EC6-EC10 (HS_1D_AR)#	<0.1	<0.1									<0.1	mg/kg	TM36/PM12
>EC10-EC25 (EH_CU_1D_AR)	<10	<10									<10	mg/kg	TM5/PM8/PM16
>EC25-EC35 (EH_CU_1D_AR)	<10	<10									<10	mg/kg	TM5/PM8/PM16
MTBE#	<5	<5									<5	ug/kg	TM36/PM12
Benzene#	<5	<5									<5	ug/kg	TM36/PM12
Toluene#	<5	<5									<5	ug/kg	TM36/PM12
Ethylbenzene#	<5	<5									<5	ug/kg	TM36/PM12
m/p-Xylene#	<5	<5									<5	ug/kg	TM36/PM12
o-Xylene#	<5	<5									<5	ug/kg	TM36/PM12
PCB 28#	<5	<5									<5	ug/kg	TM17/PM8
PCB 52#	<5	<5									<5	ug/kg	TM17/PM8
PCB 101#	<5	<5									<5	ug/kg	TM17/PM8
PCB 118#	<5	<5									<5	ug/kg	TM17/PM8
PCB 138#	<5	<5									<5	ug/kg	TM17/PM8
PCB 153#	<5	<5									<5	ug/kg	TM17/PM8
PCB 180#	<5	<5									<5	ug/kg	TM17/PM8
Total 7 PCBs#	<35	<35									<35	ug/kg	TM17/PM8

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	80-83	84-87									LOD/LOR	Units	Method No.
Sample ID	TP-15	TP-15											
Depth	0.50	1.30											
COC No / misc													
Containers	V J T	V J T											
Sample Date	13/09/2024	13/09/2024											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	18/09/2024	18/09/2024											
Natural Moisture Content	13.7	6.8									<0.1	%	PM4/PM0
Moisture Content (% Wet Weight)	12.0	6.4									<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3									<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	-	-									<0.0015	g/l	TM38/PM20
Chromium III	86.8	75.5									<0.5	mg/kg	NONE/NONE
Total Organic Carbon #	2.44	0.33									<0.02	%	TM21/PM24
pH #	7.44	8.56									<0.01	pH units	TM73/PM11

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08			
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
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	<0.003	<0.003	<0.003	<0.003	<0.003	<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	<0.03	<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	<0.0005	<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	<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 #	<0.002	<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 Molybdenum (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 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	<0.003	<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	<0.03	<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
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	TM26/PM0
Fluoride	<0.3	<0.3	0.3	<0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/l	TM173/PM0
Fluoride	<3	<3	3	<3	4	<3	<3	<3	<3	<3	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	<5	<5	<5	<5	<5	<5	<5	<5	<5	9	<5	mg/kg	TM38/PM0
Mass of raw test portion	0.1059	0.1051	0.0989	0.0997	0.1044	0.1114	0.103	0.1011	0.1017	0.0978		kg	NONE/PM17
Chloride #	0.5	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/l	TM38/PM0
Chloride #	5	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	mg/kg	TM38/PM0
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
Dissolved Organic Carbon	4	2	4	<2	<2	<2	<2	<2	<2	<2	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	40	20	40	<20	<20	<20	<20	<20	<20	<20	<20	mg/kg	TM60/PM0
pH	7.39	7.19	7.81	8.01	8.06	7.64	7.60	8.16	8.03	8.16	<0.01	pH units	TM73/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	33-36	37-40	LOD/LOR	Units	Method No.
Sample ID	TP-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08			
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Total Dissolved Solids #	<35	<35	50	<35	53	<35	<35	47	59	61	<35	mg/l	TM20/PM0
Total Dissolved Solids #	<350	<350	500	<350	530	<350	<350	470	590	610	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	LOD/LOR	Units	Method No.
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14			
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Dissolved Antimony #	<0.002	<0.002	<0.002	0.006	<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	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025	0.0041	0.0037	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	0.0250	<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025	0.041	0.037	<0.025	<0.025	<0.025	<0.025	<0.025	0.250	<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003	<0.003	0.018	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03	<0.03	0.18	<0.03	<0.03	<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	<0.0005	<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	<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	0.0101	<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	0.101	<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007	<0.007	0.011	<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	0.11	<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 #	<0.002	<0.002	<0.002	0.012	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	<0.02	<0.02	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<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	<0.003	<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	<0.03	<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	0.00002	<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	0.0002	<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
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	TM26/PM0
Fluoride	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/l	TM173/PM0
Fluoride	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	0.6	<0.5	<0.5	19.5	<0.5	<0.5	<0.5	<0.5	<0.5	16.2	<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	6	<5	<5	195	<5	<5	<5	<5	<5	162	<5	mg/kg	TM38/PM0
Mass of raw test portion	0.1008	0.1024	0.0991	0.1063	0.0994	0.0951	0.1064	0.1016	0.1022	0.1045		kg	NONE/PM17
Chloride #	<0.3	<0.3	<0.3	0.6	0.9	0.4	<0.3	<0.3	<0.3	1.2	<0.3	mg/l	TM38/PM0
Chloride #	<3	<3	<3	6	9	4	<3	<3	<3	12	<3	mg/kg	TM38/PM0
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
Dissolved Organic Carbon	5	3	<2	8	<2	<2	2	<2	<2	3	<2	mg/l	TM60/PM0
Dissolved Organic Carbon	50	30	<20	80	<20	<20	20	<20	<20	30	<20	mg/kg	TM60/PM0
pH	8.22	8.34	8.17	8.04	6.79	7.76	7.61	8.13	8.14	9.72	<0.01	pH units	TM73/PM0

Please see attached notes for all abbreviations and acronyms

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79	LOD/LOR	Units	Method No.
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14			
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T			
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024			
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024			
Total Dissolved Solids #	98	61	55	155	<35	<35	35	56	71	127	<35	mg/l	TM20/PM0
Total Dissolved Solids #	980	610	550	1550	<350	<350	350	560	710	1270	<350	mg/kg	TM20/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	80-83	84-87									LOD/LOR	Units	Method No.
Sample ID	TP-15	TP-15											
Depth	0.50	1.30											
COC No / misc													
Containers	V J T	V J T											
Sample Date	13/09/2024	13/09/2024											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	18/09/2024	18/09/2024											
Dissolved Antimony #	<0.002	<0.002									<0.002	mg/l	TM30/PM17
Dissolved Antimony (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Arsenic #	<0.0025	<0.0025									<0.0025	mg/l	TM30/PM17
Dissolved Arsenic (A10) #	<0.025	<0.025									<0.025	mg/kg	TM30/PM17
Dissolved Barium #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Barium (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Dissolved Cadmium #	<0.0005	<0.0005									<0.0005	mg/l	TM30/PM17
Dissolved Cadmium (A10) #	<0.005	<0.005									<0.005	mg/kg	TM30/PM17
Dissolved Chromium #	<0.0015	<0.0015									<0.0015	mg/l	TM30/PM17
Dissolved Chromium (A10) #	<0.015	<0.015									<0.015	mg/kg	TM30/PM17
Dissolved Copper #	<0.007	<0.007									<0.007	mg/l	TM30/PM17
Dissolved Copper (A10) #	<0.07	<0.07									<0.07	mg/kg	TM30/PM17
Dissolved Lead #	<0.005	<0.005									<0.005	mg/l	TM30/PM17
Dissolved Lead (A10) #	<0.05	<0.05									<0.05	mg/kg	TM30/PM17
Dissolved Molybdenum #	<0.002	<0.002									<0.002	mg/l	TM30/PM17
Dissolved Molybdenum (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Nickel #	<0.002	<0.002									<0.002	mg/l	TM30/PM17
Dissolved Nickel (A10) #	<0.02	<0.02									<0.02	mg/kg	TM30/PM17
Dissolved Selenium #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Selenium (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Dissolved Zinc #	<0.003	<0.003									<0.003	mg/l	TM30/PM17
Dissolved Zinc (A10) #	<0.03	<0.03									<0.03	mg/kg	TM30/PM17
Mercury Dissolved by CVAF #	<0.00001	<0.00001									<0.00001	mg/l	TM61/PM0
Mercury Dissolved by CVAF #	<0.0001	<0.0001									<0.0001	mg/kg	TM61/PM0
Phenol	<0.01	<0.01									<0.01	mg/l	TM26/PM0
Phenol	<0.1	<0.1									<0.1	mg/kg	TM26/PM0
Fluoride	<0.3	<0.3									<0.3	mg/l	TM173/PM0
Fluoride	<3	<3									<3	mg/kg	TM173/PM0
Sulphate as SO4 #	<0.5	<0.5									<0.5	mg/l	TM38/PM0
Sulphate as SO4 #	<5	<5									<5	mg/kg	TM38/PM0
Mass of raw test portion	0.1044	0.098										kg	NONE/PM17
Chloride #	0.4	<0.3									<0.3	mg/l	TM38/PM0
Chloride #	4	<3									<3	mg/kg	TM38/PM0
Mass of dried test portion	0.09	0.09										kg	NONE/PM17
Dissolved Organic Carbon	4	<2									<2	mg/l	TM60/PM0
Dissolved Organic Carbon	40	<20									<20	mg/kg	TM60/PM0
pH	8.00	8.03									<0.01	pH units	TM73/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : CEN 10:1 1 Batch

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	80-83	84-87											
Sample ID	TP-15	TP-15											
Depth	0.50	1.30									Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T											
Sample Date	13/09/2024	13/09/2024											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	18/09/2024	18/09/2024											
											LOD/LOR	Units	Method No.
Total Dissolved Solids #	76	59									<35	mg/l	TM20/PM0
Total Dissolved Solids #	760	590									<350	mg/kg	TM20/PM0

All solid results are expressed on a dry weight basis unless stated otherwise.

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

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-01	TP-02	TP-03	TP-03	TP-04	TP-04	TP-05	TP-06	TP-07	TP-08						
Depth	0.50	0.50	0.50	1.50	0.50	1.50	0.50	0.50	0.50	0.50						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024						
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis																
Total Organic Carbon #	1.93	1.17	0.21	0.17	0.80	0.11	0.35	0.17	0.23	0.18	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	<0.025	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	<30	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<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	<0.64	<0.64	<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	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	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	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<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
Molybdenum #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	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	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	<350	<350	500	<350	530	<350	<350	470	590	610	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	40	20	40	<20	<20	<20	<20	<20	<20	<20	500	800	1000	<20	mg/kg	TM60/PM0
Mass of raw test portion	0.1059	0.1051	0.0989	0.0997	0.1044	0.1114	0.103	0.1011	0.1017	0.0978	-	-	-		kg	NONE/PM17
Dry Matter Content Ratio	85.4	85.4	90.8	89.9	86.4	80.8	87.8	89.4	88.3	92.3	-	-	-	<0.1	%	NONE/PM4
Leachant Volume	0.885	0.885	0.891	0.89	0.886	0.879	0.887	0.889	0.888	0.892	-	-	-		l	NONE/PM17
Moisture Content 105C (% Dry Weight)	17.0	17.2	10.1	11.2	15.8	23.8	13.9	11.8	13.2	8.4	-	-	-	<0.1	%	PM4/PM0
pH #	5.36	7.06	8.62	8.72	8.22	8.14	7.81	8.48	8.28	8.07	-	-	-	<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	3	<3	4	<3	<3	<3	<3	<3	10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	<5	<5	<5	<5	<5	<5	<5	<5	<5	9	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	5	3	<3	<3	<3	<3	<3	<3	<3	<3	800	15000	25000	<3	mg/kg	TM38/PM0

Element Materials Technology

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	41-44	45-48	49-52	53-56	57-60	61-64	65-68	69-72	73-76	77-79						
Sample ID	TP-09	TP-10	TP-10	TP-10	TP-11	TP-11	TP-12	TP-12	TP-13	TP-14						
Depth	0.50	0.50	1.50	2.50	0.50	1.50	0.50	1.50	0.50	0.50						
COC No / misc																
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V T						
Sample Date	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024	13/09/2024						
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	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	18/09/2024	Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Solid Waste Analysis																
Total Organic Carbon #	2.73	0.29	0.54	1.38	0.37	0.03	1.03	0.10	0.74	0.82	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	<0.025	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	866	<30	<30	<30	<30	<30	36	500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.76	<0.22	-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64	1.29	<0.64	100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025	0.041	0.037	<0.025	<0.025	<0.025	<0.025	<0.025	0.250	0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03	<0.03	0.18	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	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	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	0.101	0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07	<0.07	0.11	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	<0.02	<0.02	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	980	610	550	1550	<350	<350	350	560	710	1270	4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	50	30	<20	80	<20	<20	20	<20	<20	30	500	800	1000	<20	mg/kg	TM60/PM0
Mass of raw test portion	0.1008	0.1024	0.0991	0.1063	0.0994	0.0951	0.1064	0.1016	0.1022	0.1045	-	-	-		kg	NONE/PM17
Dry Matter Content Ratio	89.0	88.3	91.0	85.1	91.0	94.7	84.8	88.4	87.8	86.0	-	-	-	<0.1	%	NONE/PM4
Leachant Volume	0.889	0.888	0.891	0.884	0.891	0.895	0.884	0.888	0.887	0.885	-	-	-		l	NONE/PM17
Moisture Content 105C (% Dry Weight)	12.3	13.2	9.9	17.5	9.9	5.6	18.0	13.2	13.9	16.3	-	-	-	<0.1	%	PM4/PM0
pH #	8.23	8.63	8.46	7.54	7.94	8.59	8.20	8.46	8.34	8.60	-	-	-	<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	<3	<3	<3	<3	<3	<3	<3	<3	10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	6	<5	<5	195	<5	<5	<5	<5	<5	162	1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	<3	<3	<3	6	9	4	<3	<3	<3	12	800	15000	25000	<3	mg/kg	TM38/PM0

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne
EMT Job No: 24/15915

Report : EN12457_2

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	80-83	84-87									Inert	Stable Non-reactive	Hazardous	LOD LOR	Units	Method No.
Sample ID	TP-15	TP-15														
Depth	0.50	1.30														
COC No / misc																
Containers	V J T	V J T														
Sample Date	13/09/2024	13/09/2024														
Sample Type	Soil	Soil														
Batch Number	1	1														
Date of Receipt	18/09/2024	18/09/2024														
Solid Waste Analysis																
Total Organic Carbon #	2.44	0.33									3	5	6	<0.02	%	TM21/PM24
Sum of BTEX	<0.025	<0.025									6	-	-	<0.025	mg/kg	TM36/PM12
Sum of 7 PCBs #	<0.035	<0.035									1	-	-	<0.035	mg/kg	TM17/PM8
Mineral Oil	<30	<30									500	-	-	<30	mg/kg	TM5/PM8/PM16
PAH Sum of 6 #	<0.22	<0.22									-	-	-	<0.22	mg/kg	TM4/PM8
PAH Sum of 17	<0.64	<0.64									100	-	-	<0.64	mg/kg	TM4/PM8
CEN 10:1 Leachate																
Arsenic #	<0.025	<0.025									0.5	2	25	<0.025	mg/kg	TM30/PM17
Barium #	<0.03	<0.03									20	100	300	<0.03	mg/kg	TM30/PM17
Cadmium #	<0.005	<0.005									0.04	1	5	<0.005	mg/kg	TM30/PM17
Chromium #	<0.015	<0.015									0.5	10	70	<0.015	mg/kg	TM30/PM17
Copper #	<0.07	<0.07									2	50	100	<0.07	mg/kg	TM30/PM17
Mercury #	<0.0001	<0.0001									0.01	0.2	2	<0.0001	mg/kg	TM61/PM0
Molybdenum #	<0.02	<0.02									0.5	10	30	<0.02	mg/kg	TM30/PM17
Nickel #	<0.02	<0.02									0.4	10	40	<0.02	mg/kg	TM30/PM17
Lead #	<0.05	<0.05									0.5	10	50	<0.05	mg/kg	TM30/PM17
Antimony #	<0.02	<0.02									0.06	0.7	5	<0.02	mg/kg	TM30/PM17
Selenium #	<0.03	<0.03									0.1	0.5	7	<0.03	mg/kg	TM30/PM17
Zinc #	<0.03	<0.03									4	50	200	<0.03	mg/kg	TM30/PM17
Total Dissolved Solids #	760	590									4000	60000	100000	<350	mg/kg	TM20/PM0
Dissolved Organic Carbon	40	<20									500	800	1000	<20	mg/kg	TM60/PM0
Mass of raw test portion	0.1044	0.098									-	-	-		kg	NONE/PM17
Dry Matter Content Ratio	86.2	92.0									-	-	-	<0.1	%	NONE/PM4
Leachant Volume	0.886	0.892									-	-	-		l	NONE/PM17
Moisture Content 105C (% Dry Weight)	16.0	8.7									-	-	-	<0.1	%	PM4/PM0
pH #	7.44	8.56									-	-	-	<0.01	pH units	TM73/PM11
Phenol	<0.1	<0.1									1	-	-	<0.1	mg/kg	TM26/PM0
Fluoride	<3	<3									10	150	500	<3	mg/kg	TM173/PM0
Sulphate as SO4 #	<5	<5									1000	20000	50000	<5	mg/kg	TM38/PM0
Chloride #	4	<3									800	15000	25000	<3	mg/kg	TM38/PM0

Client Name: Ground Investigations Ireland

Reference: 13244-10-23

Location: Wilton ESB Cork

Contact: Adam Browne

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
24/15915	1	TP-01	0.50	1-4	No interpretation possible
24/15915	1	TP-02	0.50	5-8	No interpretation possible
24/15915	1	TP-03	0.50	9-12	No interpretation possible
24/15915	1	TP-03	1.50	13-16	No interpretation possible
24/15915	1	TP-04	0.50	17-20	No interpretation possible
24/15915	1	TP-04	1.50	21-24	No interpretation possible
24/15915	1	TP-05	0.50	25-28	No interpretation possible
24/15915	1	TP-06	0.50	29-32	No interpretation possible
24/15915	1	TP-07	0.50	33-36	No interpretation possible
24/15915	1	TP-08	0.50	37-40	No interpretation possible
24/15915	1	TP-09	0.50	41-44	No interpretation possible
24/15915	1	TP-10	0.50	45-48	No interpretation possible
24/15915	1	TP-10	1.50	49-52	No interpretation possible
24/15915	1	TP-10	2.50	53-56	Trace of degraded Diesel
24/15915	1	TP-11	0.50	57-60	No interpretation possible
24/15915	1	TP-11	1.50	61-64	No interpretation possible
24/15915	1	TP-12	0.50	65-68	No interpretation possible
24/15915	1	TP-12	1.50	69-72	No interpretation possible
24/15915	1	TP-13	0.50	73-76	No interpretation possible
24/15915	1	TP-14	0.50	77-79	No interpretation possible
24/15915	1	TP-15	0.50	80-83	No interpretation possible
24/15915	1	TP-15	1.30	84-87	No interpretation possible

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne

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 sub-samples 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
24/15915	1	TP-01	0.50	4	Kieran Hunt	27/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	27/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	27/09/2024	**Asbestos ACM**	NAD
					Kieran Hunt	27/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-02	0.50	8	Michael Reilly	27/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	27/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	27/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	27/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-03	0.50	12	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-03	1.50	16	Simon Postlewhite	26/09/2024	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	26/09/2024	**Asbestos Fibres**	NAD
					Simon Postlewhite	26/09/2024	**Asbestos ACM**	NAD
					Simon Postlewhite	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-04	0.50	20	Catherine Coles	26/09/2024	**General Description (Bulk Analysis)**	brown soil,stone
					Catherine Coles	26/09/2024	**Asbestos Fibres**	NAD
					Catherine Coles	26/09/2024	**Asbestos ACM**	NAD
					Catherine Coles	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-04	1.50	24	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-05	0.50	28	Catherine Coles	26/09/2024	**General Description (Bulk Analysis)**	brown oil,stone
					Catherine Coles	26/09/2024	**Asbestos Fibres**	NAD
					Catherine Coles	26/09/2024	**Asbestos ACM**	NAD
					Catherine Coles	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-06	0.50	32	Kieran Hunt	26/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	26/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	26/09/2024	**Asbestos ACM**	NAD
					Kieran Hunt	26/09/2024	**Asbestos Type**	NAD

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
24/15915	1	TP-07	0.50	36	Charlotte Taylor	26/09/2024	**General Description (Bulk Analysis)**	brown soil/stones
					Charlotte Taylor	26/09/2024	**Asbestos Fibres**	NAD
					Charlotte Taylor	26/09/2024	**Asbestos ACM**	NAD
					Charlotte Taylor	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-08	0.50	40	Kieran Hunt	27/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	27/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	27/09/2024	**Asbestos ACM**	NAD
					Kieran Hunt	27/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-09	0.50	44	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-10	0.50	48	Catherine Coles	26/09/2024	**General Description (Bulk Analysis)**	brown soil,stone
					Catherine Coles	26/09/2024	**Asbestos Fibres**	NAD
					Catherine Coles	26/09/2024	**Asbestos ACM**	NAD
					Catherine Coles	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-10	1.50	52	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-10	2.50	56	Catherine Coles	26/09/2024	**General Description (Bulk Analysis)**	brown soil,stone
					Catherine Coles	26/09/2024	**Asbestos Fibres**	NAD
					Catherine Coles	26/09/2024	**Asbestos ACM**	NAD
					Catherine Coles	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-11	0.50	60	Simon Postlewhite	26/09/2024	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	26/09/2024	**Asbestos Fibres**	NAD
					Simon Postlewhite	26/09/2024	**Asbestos ACM**	NAD
					Simon Postlewhite	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-11	1.50	64	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-12	0.50	68	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-12	1.50	72	Charlotte Taylor	26/09/2024	**General Description (Bulk Analysis)**	brown soil/stones
					Charlotte Taylor	26/09/2024	**Asbestos Fibres**	NAD
					Charlotte Taylor	26/09/2024	**Asbestos ACM**	NAD
					Charlotte Taylor	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-13	0.50	76	Kieran Hunt	26/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	26/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	26/09/2024	**Asbestos ACM**	NAD

Client Name: Ground Investigations Ireland
Reference: 13244-10-23
Location: Wilton ESB Cork
Contact: Adam Browne

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
24/15915	1	TP-13	0.50	76	Kieran Hunt	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-14	0.50	79	Michael Reilly	26/09/2024	**General Description (Bulk Analysis)**	Brown soil, stones
					Michael Reilly	26/09/2024	**Asbestos Fibres**	NAD
					Michael Reilly	26/09/2024	**Asbestos ACM**	NAD
					Michael Reilly	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-15	0.50	83	Kieran Hunt	26/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	26/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	26/09/2024	**Asbestos ACM**	NAD
					Kieran Hunt	26/09/2024	**Asbestos Type**	NAD
24/15915	1	TP-15	1.30	87	Kieran Hunt	26/09/2024	**General Description (Bulk Analysis)**	Brown soil / stones
					Kieran Hunt	26/09/2024	**Asbestos Fibres**	NAD
					Kieran Hunt	26/09/2024	**Asbestos ACM**	NAD
					Kieran Hunt	26/09/2024	**Asbestos Type**	NAD

Client Name: Ground Investigations Ireland

Matrix : Solid

Reference: 13244-10-23

Location: Wilton ESB Cork

Contact: Adam Browne

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
24/15915	1	TP-14	0.50	77-79	EPH	Sample received in inappropriate container

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.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

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°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 35°C ±5°C.

Where Mineral Oil 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 HCl (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 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 requirement of our Accreditation Body 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.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	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 quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
CO	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
N	Client Sample
TB	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: 24/15915

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	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 degrees Celsius or 105 degrees Celsius. 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.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes

EMT Job No: 24/15915

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	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 degrees Celsius. 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 degrees Celsius. 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		AD	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

EMT Job No: 24/15915

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
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
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	
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.	PM0	No preparation is required.			AR	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
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.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35 degrees Celsius or 105 degrees Celsius. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

APPENDIX 7 – Groundwater Monitoring

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

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

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

GROUNDWATER MONITORING

Project Name

BOREHOLE	DATE	TIME	GROUNDWATER (m BGL)	Comments
BH08	03/10/2024	14:11:00	2.80	
BH04	03/10/2024	14:23:00	2.60	
BH01	03/10/2024	14:30:00	2.80	