



Phase 2 Site Investigation Report Bignor Street Park, Cheetham Hill

Prepared for Conlon Construction Ltd

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Executive Summary

Client	Conlon Construction Ltd
Location	Bignor Street Park, Cheetham Hill, Manchester, M8 0TZ
Description	The site covers an approximate area of 1.22 ha and is currently occupied by a public park comprising soft landscaped areas with a number of trees along the southern, eastern and western site boundaries, hard surfaced play areas to the north and Brentfield Avenue forms the northern site boundary. Surrounding land uses are typical of a sub-urban area including housing estates, schools and public open space.
Development	The proposal is for the redevelopment of the site with a new two storey primary school building in the central northern area with associated play areas and playing fields along with an access road and car parking in the northern part of the site.
Site History	The site comprised rural agricultural land until the late 1800s when it was developed with rows of terraced houses with associated roads until the 1970s when it was cleared and became a public park. Surrounding land saw extensive residential development from the late 1890s with a small number of commercial and light industrial activities over the years including brick works, allotment gardens, fabric works and garages.
Geology	British Geological Survey mapping indicates the site to be underlain Glaciofluvial Sheet deposits comprising sand and gravel across the majority of the site with Devensian Till -Diamicton in the south western corner of the site. Solid bedrock comprises sandstone of the Chester Formation. Made Ground is also anticipated to be present across the site associated with the construction and demolition of historical buildings and infrastructure across the site. Available ground investigation information for the site identified variable Made Ground over interbedded cohesive and granular natural deposits. The depth to bedrock was not confirmed.
UXO	The site is an area of medium UXO risk and therefore mitigation measures are required during any intrusive works. An EOD engineer was present on site for the duration of all intrusive investigation works.
Site Investigations	The site investigation comprised two cable percussion boreholes (BH1 and BH2) to depths of approximately 20.00m bgl, four window sampler boreholes (WS1 to WS4) to depths up to 5.45m bgl and ten machine excavated trial pits (TP1 to TP10) to depths of up to approximately 3.10m bgl. Groundwater and ground gas monitoring wells were installed in boreholes BH1, BH2, WS1 and WS2 and SPTs were undertaken throughout the depth of each borehole. In addition, soakaway tests were carried out in three trial pits (TP1 to TP3) to assist with drainage design and four DCP tests (DCP1 to DCP4) were carried out in areas of proposed hardstanding to provide indicative CBR values.
Ground Conditions	Made Ground was recorded in all exploratory locations to depths between 1.00m and 1.90m bgl underlain by Glaciofluvial Sheet Deposits, comprising interbedded soft to stiff cohesive soils and very loose to medium dense granular deposits. This was in turn underlain by Devensian Till from circa 16.30m bgl comprising stiff and very stiff clay to a maximum proven depth of 20.45m bgl.
Contamination	Concentrations of beryllium, benzo(a)pyrene, benzo(b)fluoranthene and naphthalene were recorded in samples of Made Ground collected from TP6, TP3 and TP10, in excess of their adopted AC. Following redevelopment, the pathways of direct contact, ingestion and inhalation of contaminated particulates would not be

active in areas of hard surfacing or within the building footprint. However, should these be located in areas of proposed soft landscaping then pathways may remain active. As such it is recommended that a 300mm thickness of clean capping layer, comprising a minimum 100mm thickness of topsoil and 200mm thickness of subsoil, be placed in areas of proposed new soft landscaping to form a barrier between recorded contaminants of concern and future site users.

Elevated concentrations of PAH compounds were recorded in a Made Ground sample in trial pit TP3. The elevated concentrations are likely to be related to slag and clinker present in the sample analysed. Due to the sensitive nature of the proposed development the contaminated Made Ground soils in the vicinity of TP3 to be locally excavated and disposed of appropriately off-site to ensure the protection of human health and groundwater resource receptors.

The site is underlain by a Secondary A Aquifer and an Undifferentiated Secondary Aquifer relating to the Glaciofluvial Sheet Deposits and Devensian Till respectively. The underlying Chester Formation is classified as a Principal Aquifer. The site is not located within a groundwater SPZ and there are no groundwater abstraction points recorded within 500m from the site. On this basis the localised beryllium and remaining PAH contamination in the shallow Made Ground soils is not deemed to represent a significant risk to controlled waters.

Ground Gas

Based on monitoring undertaken at the site to date, the ground gas regime corresponds to CIRIA Characteristic Situation 1 (CS1). On this basis, basic ground gas protection measures would not be required beneath new buildings.

Geotechnical

Given the depth of the Made Ground across the site and the variable strength characteristics of the shallow natural deposits, it is considered that a piled foundation will be required for the proposed new structures.

Testing indicates that a Design Sulphate Class of DS1 and an ACEC Classification of AC-2z would be suitable for buried concrete structures in contact with the Made Ground only. A Design Sulphate Class of DS1 and an ACEC Classification of AC-1 would be suitable for buried concrete structures in contact with natural soils.

Soakaway testing has recorded a worst case infiltration rate of 1.3×10^{-7} m/s. On this basis the use of soakaways may not be a suitable method to discharge surface water runoff from the proposed development.

Waste

Based on available information, it is considered likely that the majority of the Made Ground and natural soils beneath the site would be suitable for disposal to a Non-Hazardous Waste landfill (if it needed to be removed from site). Any material sent to landfill should be accompanied by the appropriate duty of care documentation and the chemical data should be forwarded to the accepting landfill for approval prior to removal of the soil from site.

Further Works / Considerations

Based on the results of our assessment, the following should be considered:

- Placement of a 300mm clean cover system in all proposed new soft landscaped areas, the suitability and depth of which will require independent verification.
- Hydrocarbon impacted soils in the vicinity of trial pit TP3 should be excavated for appropriate disposal off-site.
- A suitable selection of verification samples should be collected from the walls and base of resulting excavations for analysis by a UKAS accredited laboratory.

- Contamination mitigation measures discussed in this report should be formalised in a Remediation Method Statement. This should also set out the verification requirements for the specified remedial measures.

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Proposed Development Plan
Landscape Masterplan
Borehole Location Plan

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Appendix III	Chemical Laboratory Test Results
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Appendix V	Ground Gas Monitoring Records
Appendix VI	Soakaway Results
Appendix VII	Waste Soil Classification

1.0 Introduction

1.1 Background

Clancy Consulting Ltd has been instructed by Conlon Construction Ltd to carry out a Phase 2 Site Investigation for the Bignor Street Park site in Cheetham Hill, Manchester, M8 0TZ. The site currently comprises a public park including grassland with a number of mature and semi-mature trees and a hard surfaced play area to the north of the site.

The site is proposed to be developed with Olive Primary School comprising a new two storey school building with associated play areas, playing fields, access and car parking.

Clancy Consulting Ltd has previously completed a Phase 1 Desk Study for the site (reference 10/2204/001), which should be read in conjunction with this report. The previous assessment is summarised within Section 2 of this report.

A site location plan and proposed development plan are presented in Appendix I.

1.2 Objectives

The objectives of this investigation are summarised below:

- Undertake intrusive site investigation works to establish the ground conditions across the proposed development area.
- Carry out a geotechnical assessment of the ground conditions and provide preliminary recommendations for foundation, floor slab, infiltration drainage and pavement design.
- Carry out chemical testing of soil samples to determine the contamination status of the site and potential risk posed to human health and environmental receptors.
- Carry out chemical testing of soil samples to determine their waste classification for potential disposal to landfill.
- Refine the preliminary risk assessment and conceptual site model undertaken as part of the Phase 1 assessment.
- Provide recommendations regarding the requirement for further investigations or remedial works, if required, to satisfy the Local Planning Authority and to inform detailed civil and structural design.

1.3 Limitations of the Study

Clancy Consulting Ltd cannot be held responsible for any omissions, misrepresentation, errors or inaccuracies with the supplied third-party report information. The report is written in the context of an agreed scope of work and budget and should not be used in a different context. New information or improved practices and changes in legislation may require a reinterpretation of the report in whole or in part.

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The report may not be relied upon by any other party without prior written consent of Clancy Consulting Ltd. Those using this information in subsequent assessments or evaluations do so at their own risk.

It must be noted that whilst this investigation aims to characterise the general ground conditions beneath the proposed development site, Clancy Consulting Ltd cannot be held accountable for variations in ground and groundwater conditions, unidentified contamination or the presence of below ground structures present.

2.0 Summary of Previous Phase 1 Desk Study

The previous Phase 1 Desk Study completed for the site by Clancy Consulting Ltd in December 2022 (reference 10/2204/001) is summarised below:

The site comprised rural agricultural land until early 1900s when the site was developed with rows of terraced houses and associated roads until circa 1978 when it was cleared and has been used as a public park since. Surrounding land saw extensive residential development from the late 1890s with a small number of commercial and light industrial activities over the years including brick works, allotment gardens, fabric works and garages.

British Geological Survey mapping indicates the site to be underlain Glaciofluvial Sheet deposits comprising sand and gravel across the majority of the site with Devensian Till - Diamicton in the south western corner of the site. Solid bedrock comprises sandstone of the Chester Formation. Made Ground is also anticipated to be present across the site associated with the construction and demolition of historical buildings and infrastructure across the site. Available ground investigation information for the site identified variable Made Ground over interbedded cohesive and granular natural deposits. The depth to bedrock was not confirmed.

The Glaciofluvial Sheet and Devensian Till deposits indicated to be present beneath the site, are classified by the EA as a Secondary A Aquifer and an Undifferentiated Secondary Aquifer respectively. The underlying Chester Formation is classified as a Principal Aquifer. The site is not located within a groundwater SPZ and there are no groundwater abstraction points recorded within 500m from the site.

The radon guidance on protective measures for new dwellings indicates that the site is in a 'low' probability radon area where less than 1% of homes are estimated to be at or above the Action Level. Radon gas protection measures are therefore not required in the construction of new dwellings or extensions.

The site is located within coal mining reporting area; however, it is not within a Development High Risk Area and there are no recorded shallow mine workings or mine entries within 1km of the site. Therefore, no further assessment of the risk posed by historic coal mining considered to be required.

According to the Flood Map for Planning site is located within Flood Zone 1, whereby there is less than a 0.1% (1 in 1000) chance of flooding from rivers or the sea occurring each year. However, given the site is in excess of 1 hectare and may be located within a critical drainage area, the Lead Local Flood Authority (LLFA) may still require a flood risk assessment to be carried out.

The site is indicated to be at medium risk from UXO. Therefore, further action will be required during intrusive activities to reduce risk to site operatives including the presence of an EOD engineer to supervise the works.

On the basis of the above, the following further works were recommended:

- Carry out a flood risk assessment (reported under separate cover).
- Carry out an intrusive site investigation to confirm ground conditions, including the depth and nature of the Made Ground soils and underlying natural strata.
- All intrusive works to be supervised by an EOD Engineer.
- Installation of ground gas and groundwater monitoring wells in boreholes and post fieldwork monitoring program comprising a minimum 6 visits over a minimum three month period.
- In-situ testing and geotechnical soil sampling should be carried out during intrusive investigation to provide adequate recommendations for foundation design.
- Trial pitting to provide a good visual assessment of the shallow soils and to allow initial observations of relic structures present beneath the site.
- Soil samples should be recovered from across the site to be tested for potential contaminants. This should include as a minimum pH, metals, asbestos screening, speciated PAH and speciated TPH.
- Soakaway testing will be required to assess soil infiltration rates and assist with preparation of a detailed drainage strategy.

3.0 Site Investigation

3.1 Investigation Design & Objectives

Pollutant linkages identified within the Preliminary Conceptual Site Model are currently active or will be made active upon redevelopment of the site. The investigation design approach was based on guidance provided in BS 10175 Code of Practice for Investigation of Potentially Contaminated Land (2011). The investigation also provided information on ground conditions and data for the assessment geotechnical properties of the strata underlying the site.

It must be noted that whilst this investigation aims to characterise the general ground conditions beneath the proposed development site, Clancy Consulting Ltd cannot be held accountable for variations in ground and groundwater conditions, unidentified contamination or the presence of below ground structures in areas of the site which fall outside our borehole locations.

3.2 Fieldwork

Site investigation works were carried out from 9th to 13th January 2023 and comprised:

- Two cable percussion boreholes (BH1 and BH2) drilled to depths of approximately 20.00m below ground level (bgl).
- Four window sample boreholes (WS1 to WS4) drilled to depths of up to approximately 5.00m bgl.
- Standard penetration tests (SPTs) throughout the depth of each borehole.
- Ten machine excavated trial pits (TP1 to TP10) were carried out to depths ranging from approximately 2.20m to 3.10m bgl.
- Three soakaway tests (SA1 to SA3) carried out within trial pits TP1 to TP3.
- Four TRL Dynamic Cone Penetrometer tests (DCP1 to DCP4) were carried out in order to provide an indication of CBR and modulus of subgrade reaction value for the proposed hardstanding area.
- Installation of groundwater and ground gas monitoring wells in four boreholes (BH1, BH2, WS1 and WS2).
- Soil samples were collected at regular intervals from the borehole for chemical and geotechnical laboratory analysis.

A plan indicating the positions of the exploratory hole locations is provided in Appendix I. Exploratory hole logs are provided as Appendix II.

3.3 Laboratory Testing

3.3.1 Environmental Laboratory Testing – Soil

Ten samples of Made Ground and five samples of the Glaciofluvial Sheet Deposits were submitted to a UKAS/MCERTS accredited laboratory and analysed for a number of determinands including:

Inorganic Determinands:

pH, arsenic, beryllium, cadmium, chromium, hexavalent chromium, copper, lead, mercury, nickel, sulphate, selenium, vanadium, zinc and asbestos.

Organic Determinands:

Polycyclic aromatic hydrocarbons (PAH) and total petroleum hydrocarbons (TPH).

One sample of Made Ground and one sample of the Glaciofluvial Sheet Deposits were also submitted for Waste Acceptance Criteria (WAC) analysis.

Chemical Laboratory Certificates are presented as Appendix III.

3.3.2 Geotechnical Laboratory Testing

Disturbed and undisturbed soil samples collected from the Made Ground and Glaciofluvial Sheet Deposits were analysed by a UKAS accredited laboratory for Atterberg Limits, particle size distribution (PSD), undrained shear strength, pH and water-soluble sulphate content.

Geotechnical Laboratory Certificates are presented as Appendix IV.

4.0 Site Investigation Findings

4.1 Ground Conditions & Geotechnical Testing Parameters

The strata encountered during the intrusive investigation are summarised in the table below and described in the following section.

Table 1 – Encountered Strata

Strata	Depth to Top of Strata m bgl	Thickness (m)
Hardstanding	Ground level	0.10 to 0.20 (WS1, WS2 and WS4)
Made Ground	Ground level to 0.20	0.95 to 1.90
Glaciofluvial Sheet Deposits	1.00 to 1.90	14.70 to 14.90 (proven in BH1 and BH2 only)
Devensian Till	16.30 to 16.60 (BH1 and BH2)	Not proven to a maximum depth of 20.45m in BH1 and BH2

General descriptions of the strata encountered during the intrusive investigation are summarised below. Reference should be made to the borehole logs within Appendix II of this report for full descriptions of ground conditions underlying the site.

4.1.1 Made Ground

Made Ground was recorded in all exploratory locations and ranged in thickness from approximately 1.00m to 1.90m across the site. A thin layer of macadam hardstanding was recorded in three locations, boreholes WS1, WS2 and WS4, located in the northern part of the site, with the rest of the exploratory holes carried out in grassed areas. The stratum was variable in nature, but generally comprised dark brown and brown clayey, sandy gravel of sandstone, brick, concrete, clinker and slag with fragments of metal, plastic and glass with cobbles of brick, sandstone and concrete. In four trial pits, TP5, TP7, TP8 and TP10, slightly gravelly clay with cobbles was encountered.

No visual or olfactory evidence of contamination was noted within this stratum.

Two samples of the Made Ground, collected at depths ranging from approximately 0.90m to 1.20m bgl were tested for PSD. The constituents of the samples are summarised below:

- Gravel: 49% to 55%
- Sand: 29% to 30%
- Silt/Clay: 15% to 22%

4.1.2 Glaciofluvial Sheet Deposits

Glaciofluvial Sheet Deposits were encountered beneath the Made Ground and proven to a maximum depth of 16.60 in borehole BH2. This stratum comprised interbedded cohesive and granular deposits of dark brown and dark bluish grey slightly gravelly slightly sandy clay and light brown, dark brown and orangish brown sand, with rare fragments of coal.

Atterberg Limit testing was undertaken on four soil samples collected from the Glaciofluvial Sheet Deposits at depths ranging from approximately 1.30m to 2.20m bgl. The results for Liquid Limit ranged from 34% to 48%. The results for Plastic Limit ranged from 18% to 24%. The results for Plasticity Index ranged from 16% to 29%. This is indicative of a variable material, ranging from a low to high plasticity clay. Modified plasticity index values indicate that these samples have a low to moderate-volume change potential. The natural moisture content of these samples ranged from 23% to 38%.

30 SPTs were undertaken within the predominantly granular layers of the Glaciofluvial Deposits at depths ranging from 2.00m to 15.50m bgl and gave results ranging from N = 2 to in excess of N = 50. This is indicative of very loose to very dense granular material.

7 SPTs were undertaken within the predominantly cohesive layers of the Glaciofluvial Sheet Deposits at depths ranging from 1.20m to 11.00m bgl and gave results ranging from $N = 4$ to $N = 27$.

Approximate undrained shear strengths were calculated from the SPT results using the correlation by Stroud:

$$C = f_1 \times N$$

Where, a conservative value for $f_1 = 4.5$.

The SPT results correspond approximately to undrained shear strength values ranging from 18kN/m^2 to in excess of 121.5kN/m^2 , which is indicative of soft, ranging to stiff cohesive material.

One quick undrained triaxial compression test was undertaken on a sample recovered from 2.00 to 2.45m bgl in BH1, which gave result of 51kN/m^2 indicative of firm cohesive material.

Four samples of the Glaciofluvial Sheet Deposits, collected at depths ranging from approximately 3.00m to 6.50m bgl were tested for PSD. The constituents of the samples are summarised below:

- Gravel: 0% to 32%
- Sand: 85% to 96%.
- Silt/Clay: 4% to 15%

4.1.3 Devensian Till

The Devensian Till was encountered beneath the Glaciofluvial Sheet Deposits in two boreholes, BH1 and BH2, at depths between 16.30m and 16.60m and proven to a maximum depth of approximately 20.45m bgl. This typically comprised dark brown slightly gravelly clay. Gravel comprised fine to coarse sandstone and mudstone.

4 SPTs were undertaken in the cohesive deposits of the Devensian Till at depths ranging from approximately 17.00m to 20.00m bgl. The results ranging from $N = 25$ to in excess of $N = 50$. SPT results generally increased with depth.

Approximate undrained shear strengths were calculated from the SPT results using the correlation by Stroud:

$$C = f_1 \times N$$

Where, a conservative value for $f_1 = 4.5$.

The SPT results correspond approximately to undrained shear strength values ranging from 112.5kN/m^2 to in excess of 225kN/m^2 , which is indicative of a stiff, ranging to a very stiff cohesive material.

One quick undrained triaxial compression test was undertaken on a sample recovered from 18.50m to 18.95m bgl in BH2, which gave result of 31kN/m^2 indicative of soft cohesive material. Shear strength result was significantly lower than those derived from SPTs. This may be due to the granular content of the soil creating preferential failure planes in the sample.

4.2 Groundwater

Groundwater strikes were recorded at depths of approximately 6.20m bgl in BH1 and 10.60m bgl in BH2 during intrusive works. Groundwater strikes were not recorded in other boreholes.

During subsequent monitoring visits, groundwater levels were recorded in the installed wells, and are summarised in the table below:

Table 2 – Groundwater Level Data

Monitoring Well ID	Well Screen Depth (m bgl)	Strata	Depth to Water (m bgl)						
			Fieldwork	23/01/23	07/02/23	21/02/23	21/04/23	19/04/23	26/04/23
BH1	3.00 to 9.00	Glaciofluvial Sheet Deposits	6.20	3.30	3.10	2.80	2.61	2.84	2.80
BH2	2.00 to 12.00		10.60	4.20	4.25	4.12	3.63	3.71	3.62
WS1	0.50 to 1.50	Made Ground	DRY	DRY	DRY	DRY	DRY	DRY	DRY
WS2	1.00 to 2.00	Glaciofluvial Sheet Deposits	DRY	DRY	DRY	DRY	DRY	DRY	DRY

5.0 Hazardous Ground Gas Assessment

5.1 Introduction

Made Ground was recorded at each exploratory hole position, ranging in thickness from approximately 1.00m to 1.90m bgl generally comprising granular fill of sandy clayey gravel and cobbles of concrete, sandstone and brick with fragments of clinker, slag, plastic and glass. No evidence of degradable material was observed.

Main source of hazardous ground gases from the site and immediate surrounding area, based on the desk study information, is considered to be the potential Made Ground from development and demolition took place over the years.

5.2 Scope of Works

Monitoring wells were installed in boreholes BH1, BH2, and WS2 screened across the Glaciofluvial Sheet Deposits. A monitoring well was also installed in borehole WS1, screened across the Made Ground. A monitoring programme comprising six monitoring visits over a period of three months will be carried out in accordance with the guidance within CIRIA Report C665 'Assessing risks posed by hazardous ground gases to buildings.

5.3 Monitoring Results

Six gas monitoring visits have been carried out over a three month period, from 23rd January to 26th April 2023. Atmospheric pressure ranged from 996mb to 1036mb during the visits, with falling pressures recorded on one visit. Copies of the results are presented in Appendix V and summarised in the table below.

Table 3 – Gas Monitoring Results

Hole ID	Max Methane (%v/v)	Max Carbon Dioxide (%v/v)	Flow Rate (l/hr)	Gas Screening Value (l/hr)	Characteristic Situation
BH1	0.0	4.1	0.1	0.0041	CS1
BH2	0.0	3.7	0.1	0.0037	CS1
WS1	0.0	3.6	0.3	0.0108	CS1
WS2	0.0	3.7	0.3	0.0111	CS1

Installations were monitored for concentrations of methane, carbon dioxide, hydrogen sulphide and oxygen. In addition, the flow rate and barometric pressure were recorded.

Methane was absent during the six monitoring visits.

Carbon dioxide was recorded at a maximum concentration of 4.10% v/v in monitoring well BH1 on 7th February 2023.

Ground gas flow rates were generally low up to -0.4 litre per hour recorded in monitoring well BH2 on 7th February 2023.

Depleted oxygen was recorded in all boreholes in two visits to date with the lowest recorded oxygen concentration of 0.1% v/v in monitoring wells BH1 and WS1 on 7th February 2023.

5.4 Discussion

Gas concentrations and flow rates recorded to date are generally low. However, very low oxygen concentrations have been recorded during two gas monitoring visits. It is considered likely that the depleted oxygen is due to microbial respiration. At this stage, it is recommended that any proposed confined spaces would need to be ventilated and care should be taken by construction workers to not enter excavations without necessary precautions due to potential anoxic conditions beneath the ground level.

The CIRIA Report C665 outlines indicative guideline concentrations for carbon dioxide and methane in association with gas flow rates for which gas protection measures may be required in new residential or

commercial developments. The methodology is based on the Modified Wilson and Card approach that characterises the gas regime into a series of Characteristic Situations (1 to 5), with corresponding indicative gas protection measures.

Using this methodology, the ground gas regime corresponds to CIRIA Characteristic Situation1 (CS1) based on the available ground gas monitoring results. On this basis, ground gas protection measures would not be required beneath new buildings.

6.0 Tier 1 Contamination Analysis

The field investigation findings indicate that pathways are present by which contaminants of concern can impact identified receptors. Chemical analysis has been carried out on soils sampled from beneath the site. The concentrations of contaminants of concern within soil can be compared to assessment criteria (AC) to determine whether these represent an unacceptable risk to identified receptors. The derivation of AC to be used and the comparison of these criteria to the results of the chemical analyses are presented below.

6.1 Human Health Assessment Criteria

In order to assess risks to future site users, concentrations of contaminants of concern have been compared to Suitable 4 Use Levels (S4UL) generic AC published by Land Quality Management: Chartered Institute of Environmental Health (LQM:CIEH) in 2015.

The assessment has been based upon the use of the site for residential purposes without plant uptake, based on the proposed redevelopment of the site as a school.

As a conservative measure, concentrations of contaminants of concern have been compared to the S4UL (1.00% Soil Organic Matter) values.

A notable exclusion from the S4ULs is lead. In the absence of a S4UL for lead, the Category 4 Screening Level (C4SL) has been selected, published by DEFRA in 2014. It is noted that the C4SL are based on the acceptance of a low level of toxicological concern, rather than the more conservative standard adopted in the derivation of S4ULs, which are based on a tolerable or minimal level of risk.

The potential risk posed to controlled waters from contaminants of concern within soils beneath the site is not addressed by these screening criteria.

6.2 Comparison of Soil Analyses to Human Health Assessment Criteria

Chemical analysis was undertaken on ten samples of Made Ground and five samples of the Glaciofluvial Sheet Deposits. A comparison of soil analyses to the adopted AC is presented below.

6.2.1 Inorganic Determinands

One elevated beryllium concentration was recorded in a sample of Made Ground collected from trial pit TP6 at 0.60m bgl (1.9mg/kg) at concentration in excess of its adopted AC (1.7mg/kg).

No other contaminants of concern were recorded within soil samples analysed from beneath the site at concentrations in excess of adopted AC.

6.2.2 Organic Determinands

Benzo(a)pyrene was recorded in two samples of Made Ground collected from TP3 at 0.50m bgl (9.5mg/kg) and TP10 at 0.90m bgl (4.7mg/kg) at concentrations in excess of adopted AC (3.2mg/kg).

Benzo(b)fluoranthene was recorded in two samples of Made Ground collected from TP3 at 0.50m bgl (11.1mg/kg) and TP10 at 0.90m bgl (5.4mg/kg) at concentrations in excess of adopted AC (3.9mg/kg).

Naphthalene was recorded in a sample of Made Ground collected from TP3 at 0.50m bgl (20.8mg/kg) at concentration in excess of its adopted AC (2.6mg/kg).

TPH contaminants of concern were not recorded within soil samples analysed from beneath the site at concentrations in excess of adopted AC.

6.2.3 Asbestos

Amosite loose fibres were recorded in a sample of Made Ground collected from borehole WS3 at a depth of approximately 0.50m bgl. Quantification analysis indicated that asbestos containing materials made up <0.001% of the soil sample by weight.

Asbestos containing materials (ACMs) were not identified in any of the other soil samples submitted for screening.

7.0 Contamination Assessment

7.1 Introduction

Based on the information obtained during the ground investigation and laboratory testing, the 'Preliminary Conceptual Site Model' has been amended accordingly. The Conceptual Site Model is used as a basis to identify contamination sources, pathways and receptors and is subject to constant refinement as more information becomes available.

7.2 Human Health Receptors

Beryllium, benzo(a)pyrene, benzo(b)fluoranthene and naphthalene were recorded in samples of Made Ground collected from TP6, TP3 and TP10, in excess of their adopted AC. These could be attributed to the presence of slag and clinker recorded in the Made Ground soils. Amosite asbestos fibres were also recorded in a sample of Made Ground collected from borehole WS3, however, quantification analysis confirmed a concentration of <0.001% which is below laboratory detection limits and not considered to pose a risk to human health.

Following redevelopment, the pathways of direct contact, ingestion and inhalation of contaminated particulates from contamination recorded in samples analysed from the Made Ground would not be active in areas of hard surfacing or within the building footprint. However, these pathways would remain active in areas of soft landscaping. It is recommended that a 300mm clean capping layer be provided in areas of soft landscaping comprising a minimum 100mm of topsoil and 200mm of subsoil as set out in the NHBC Technical Standards 2022. The clean cover layer will form a barrier between recorded contaminants of concern and future site users.

The areas requiring clean soil cover are referred to as "*amenity turf*", "*sports turf*" and "*ornamental shrub planting*" as shown on the Savill's Landscape Masterplan drawing presented in Appendix I. Areas of wildflower seeding and tree root protection zones are excluded given these areas will remain undisturbed and to avoid potential damage to the existing tree root systems.

Any material imported to site for use within the clean cover system will require laboratory testing to demonstrate it is suitable for use. Typical testing frequencies accepted by local planning authorities are 1 sample per 50m³ for topsoil and 1 sample per 250m³ for subsoil.

Naphthalene, which is typically of high volatility and mobile in the environment, will require additional remediation measures due to the sensitive nature of the proposed development (primary school) and presence of a Secondary Aquifer beneath the site. It is therefore recommended that in the area around TP3 the Made Ground soils are excavated and disposed of appropriately off site and replaced with demonstrably clean inert material.

Following removal of the contamination, verification soil samples will be required from the base and sidewalls of the resultant excavations to confirm that all contaminants of concern have successfully been removed. It is recommended that a PID meter be used to assist in 'chasing out' the volatile material for completeness.

7.3 Construction / Maintenance Workers

S4UL screening criteria cannot be used to assess the acute (short term exposure) risk that personnel in close contact with exposed soils may experience during construction/site maintenance duties.

Potential risks to construction/maintenance workers can be controlled by the use of appropriate personal protection equipment (e.g. disposable coveralls, gloves and particulate/vapour masks) and by adopting high levels of personal hygiene.

Construction/maintenance workers are however at risk from anoxic conditions in confined spaces or excavations. Therefore, appropriate ventilation should be incorporated in any confined spaces and appropriate mitigation measures should be used if excavations would need to be entered.

7.4 Groundwater

Elevated concentrations of PAH compounds were recorded in a sample collected from the Made Ground in trial pit TP3. It is recommended that the contaminated Made Ground soils in the vicinity of TP3 are excavated and disposed of appropriately off site to remove any risk to controlled groundwater resource receptors.

7.5 Surface Water

Given the distance to the nearest surface watercourse (The River Irk, approximately 1km to the east of the site), this is not considered to be at significant risk from potential contaminants of concern beneath the site and has therefore not been considered further as a receptor.

7.6 Polymeric Utility Pipes

Concentrations of hydrocarbon contaminants considered potentially harmful to potable water supply pipes were recorded in samples of Made Ground collected from beneath the site. Standard polymeric utility pipes are therefore unlikely to be suitable for the proposed development. Barrier pipe will be required, or potable water supply pipes laid in dedicated trenches and backfilled with clean, inert material.

Requirements for buried utility pipes should be discussed with service providers before the development stage.

7.7 Revised Conceptual Site Model

The potential source-pathway-receptor linkages and associated risks upon completion of the proposed development at the site, as identified following completion of the assessment, are summarised in the table below.

Table 4 – Revised Conceptual Site Model

Potential Source	Via	Potential Pathways	Linkage Potentially Active? (Yes/No)	Receptors
On site: Made Ground and organic and inorganic contaminants recorded in samples of Made Ground.	Soil	Direct contact/ingestion	Yes	Site users
		Inhalation of volatiles	No	
		Airborne migration of soil or dust	No	Off-site users
		Leaching of mobile contaminants	Yes	Glaciofluvial Sheet Deposits Secondary A Aquifer, Devensian Till Undifferentiated Secondary Aquifer and Chester Formation Principal Aquifer
	Groundwater	Direct contact/ingestion	No	Site users
			No	Off-site users
		Inhalation of volatiles	No	Site users
			No	Off-site users
Off site: No potentially significant sources except potential Made Ground.	Groundwater	Vertical and lateral migration in permeable strata	No	River Irk
				Glaciofluvial Sheet Deposits Secondary A Aquifer, Devensian Till Undifferentiated Secondary Aquifer and Chester Formation Principal Aquifer
	Service conduits	Direct contact/ingestion	No	Site users
		Inhalation of volatiles	No	Site users
		Direct contact/ingestion	No	Site users

Potential Source	Via	Potential Pathways	Linkage Potentially Active? (Yes/No)	Receptors
		Inhalation of volatiles	No	Site users
On and off-site: Potential hazardous ground gas and vapours from Made Ground	Ground Gas	Inhalation of ground gas	No	Site users
			No	Off-site users
		Explosive risks	No	Site users
			No	Off-site users

The risk assessment is based upon the available information relating to the site and recommended mitigation measures being put in place. Should ground conditions inconsistent with those outlined in this report be encountered CCL should be contacted to enable further assessment. The findings of the CSM should be confirmed upon finalisation of the proposed redevelopment plans.

Prior to development a Remediation Method Statement will be required setting out the contamination sources and how these are to be dealt with by the contractor to ensure the site is in a suitable condition for the proposal development.

8.0 Geotechnical Assessment

8.1 Introduction

It is proposed to construct a two storey school building with associated access road, car parking, play areas and playing fields.

8.2 Preliminary Geotechnical Risk Register

The table below summarises the potential geotechnical hazards associated with the development. The table provides an assessment of whether the site is likely to be affected by the hazard and the possible consequences and engineering considerations.

Table 5 – Geotechnical Risk Register

Hazard Description	Is hazard likely to be present / affect the site?	Comments/possible engineering requirements where hazard present
Sudden lateral/vertical changes in ground conditions	M	Made Ground was present beneath the site, ranging from approximately 1.00m to 1.90m bgl. The main variations in ground conditions are likely to be associated with the thickness of the Made Ground and composition and strength characteristics of the underlying Glaciofluvial Sheet Deposits.
Highly compressible/low bearing capacity soils, (including peat and soft clay)	M	The Made Ground would not be considered a suitable bearing stratum to support traditional foundations. However, it is understood that the building will be supported on piled foundation, terminating the deeper layers of the Glaciofluvial Sheet Deposits and/or Devensian Till.
Ground dissolution features/natural cavities	L	Ground conditions recorded beneath the site are not susceptible to these hazards.
Shrinking and swelling clays	M	Laboratory analysis indicates that the shallow Glaciofluvial Sheet Deposits are of low to moderate volume change potential. If adopted, traditional foundations should be designed in accordance with the Chapter 4.2H of the NHBC guidance: Building near trees.
Slope stability/Retaining wall issues	L	No slopes or retaining walls are understood to be proposed as part of the development. However, any temporary or permanent slopes or retaining walls created as part of the development should be subject to appropriate geotechnical design based on site-specific site investigation information.
High groundwater table (including waterlogged ground)	L	Perched groundwater was not recorded during fieldwork. During subsequent groundwater monitoring visits groundwater was recorded standing in two monitored boreholes at depths between 2.80m and 4.12m bgl. If groundwater is encountered during excavations, it is considered that this may be controlled via pumping from a localised sump.
Filled and Made Ground (including embankments)	L/M	Made Ground was recorded in all exploratory locations to depths ranging from 1.00m to 1.90m bgl, generally comprising demolition material associated with the historical development on site.
Obstructions (including foundations, services, basements, tunnels and adjacent sub-structures)	M	The site has been developed in the past and buried structures are likely to require removal to facilitate the proposed development. Concrete, brick and sandstone cobbles were recorded within the Made Ground.

Hazard Description	Is hazard likely to be present / affect the site?	Comments/possible engineering requirements where hazard present
Underground mining	L	The site is located within a Coal Mining Reporting Area. However, following a review of the CON29M Coal Mining Report obtained for the site, ground stability risks associated with coal mining or other mineral extraction processes were not considered to be present and no further assessment considered to be required.
Concrete classification	L/M	Testing indicates that that a Design Sulphate Class of DS-1 and an Aggressive Chemical Environment for Concrete (ACEC) Classification of AC-2z would be suitable for buried concrete structures in the Made Ground and a Design Sulphate Class of DS-1 and an Aggressive Chemical Environment for Concrete (ACEC) Classification of AC-1 would be suitable for buried concrete structures in the underlying Glaciofluvial Sheet Deposits
Seismic Activity	L	The Eurocode 8 seismic hazard zoning maps for the UK (Musson and Sargeant, 2007) indicate that horizontal Peak Ground Acceleration (PGA) values with 10% probability of being exceeded in 50 years (475 year return period) are between 0.00g and 0.02g, which is considered very low.
NOTES: H – High Risk; M – Medium Risk; L – Low risk		

8.3 Foundation Solution

We understand that a new two storey school building is proposed to be constructed in the northern and central parts of the site with associated access and car parking further to the north, playing fields to the south and soft and hardscaped areas.

The ground investigation recorded Made Ground across the exploratory locations to depths ranging from 1.00m to 1.90m bgl, overlying Glaciofluvial Sheet Deposits comprising interbedded very loose to medium dense granular deposits and soft ranging to stiff cohesive deposits. These were in turn underlain by stiff ranging to very stiff Devensian Till from depths of approximately 16.30m bgl to a maximum proven depth of 20.45m bgl.

Given the thickness of the Made Ground and the weak and variable nature of the shallow drift deposits, we would not recommend the use of traditional shallow foundations. Instead, we would recommend a piled foundation solution be adopted transferring the structural loads to the deeper more competent strata.

A piling contractor should be consulted with regard to detailed pile design, since the type of pile and method of installation adopted will affect capacity. An appropriate piling platform should be designed and constructed in accordance with BRE Digest 470 (Working platforms for Tracked Plant).

As an alternative to piles the ground conditions beneath the site maybe suitable for vibro ground improvement, though this would need to be confirmed by a specialist vibro contractor.

8.4 Floor Slabs

Made Ground is anticipated to be present at floor slab formation level beneath the proposed development at depths in excess of 0.60m bgl. On this basis, suspended floor slabs would likely be required in order to prevent excessive total or differential settlement.

8.5 Pavements – Dynamic Cone Penetrometer Testing

DCP testing was undertaken in four locations in areas of proposed hard surfacing (DCP1 to DCP4) in order to derive California Bearing Ratio (CBR) and Modulus of Subgrade values for the soil beneath the slab. It should be noted that the locations for these tests were restricted by existing public road. The positions of DCP tests are indicated on the exploratory hole location plan, presented in Appendix I.

CBR results were calculated for each test location using the method set out by the Transport Research Laboratory (TRL):

$$\text{Log}^{10}(\text{CBR}) = 2.48 - 1.057\text{Log}^{10}(\text{mm/blow})$$

Modulus of subgrade reaction was derived from CBR values using the method specified within the Concrete Society Technical Report 34 'Concrete Industrial Ground Floors – A Guide to Their Design and Construction', 2003. The results recorded were as follows:

- DCP1 recorded CBR values of 2.3% and 55.1%
- DCP2 recorded CBR values of 2.3% and 55.1%
- DCP3 recorded CBR values of 2.3% and 32.1%
- DCP4 recorded CBR values of 2.3% and 32.0%

A more detailed summary of the results obtained are presented in the table below:

Table 6 – Results of DCP Testing

Location	Depth (m bgl)	Penetration (mm)	Blows	Penetration per blow (mm)	Average CBR%
DCP1	GL to 1.00	1000	55	40.5	16.1
DCP2	GL to 1.00	1000	56	21.4	10.0
DCP3	GL to 0.40	530	23	42.7	15.0
DCP4	GL to 1.00	1000	63	25.0	16.4

On this basis it is considered that a conservative CBR value of 5% may be adopted for design purposes given the presence of variable Made Ground conditions. The formation layer should be proof rolled prior to placing subgrade materials and any soft spots excavated and replaced with well compacted granular materials.

It should be noted that values for CBR derived from DCP testing are considered to be indicative. If more accurate values for these parameters are required, it is recommended that plate bearing tests are undertaken.

8.6 Temporary Works and Excavations

The site has been developed in the past and buried structures are likely to require removal to facilitate the proposed development.

If perched groundwater is encountered during excavations, it is considered that this may be controlled via pumping from a localised sump.

If groundwater is encountered during excavation, degradation of the formation may occur. The formation should therefore be adequately protected from seepages and protected from adverse weather conditions. If the formation layer becomes wet resulting in softening or loosening of the surface materials, then excavation may have to be taken deeper in order to find a suitable bearing layer. Instability of excavations in granular material should be expected, especially during periods of adverse weather. Suitable shoring measures or battering back of slopes may be required for any excavations greater than 1.20m bgl. All temporary excavations should be undertaken in accordance with CIRIA Report 97 'Trenching Practice'.

8.7 Chemical Attack on Buried Concrete

Samples of the Made Ground and Glaciofluvial Sheet Deposits were tested for pH and for sulphate content. The results are presented below:

Table 7 – Results of pH and sulphate testing

Stratum	No. Samples	Range of pH	Characteristic pH	Range of Sulphate (mg/kg)	Characteristic Sulphate (mg/kg)	Design Sulphate Class	ACEC Class
Made Ground	9	5.89 – 8.71	5.89	10 to 140	80	DS-1	AC-2z
Glaciofluvial Sheet Deposits	12	6.83 – 9.11	6.94	10 to 50	50	DS-1	AC-1

The data was used to assess appropriate concrete classification for buried concrete in accordance with BRE Special Digest 1, based on the following assumptions:

- Brownfield ground conditions.
- Mobile groundwater conditions.
- For a dataset of between five and nine samples, the characteristic value for soluble sulphate has been taken as the average of the two highest results.
- For a dataset of 10 or more samples, the characteristic value for soluble sulphate has been taken as the mean of the highest 20%.
- The characteristic value for pH is taken as the mean of the lowest 20% of the pH results.

Based on the above, it is considered that a Design Sulphate Class of DS-1 and an Aggressive Chemical Environment for Concrete (ACEC) Classification of AC-2z would be suitable for buried concrete structures in the Made Ground and a Design Sulphate Class of DS-1 and an Aggressive Chemical Environment for Concrete (ACEC) Classification of AC-1 would be suitable for buried concrete structures in the underlying Glaciofluvial Sheet Deposits

8.8 Soakaway Testing

Soakaway testing was undertaken in three trial pits, TP1, TP2 and TP3 (SA1 to SA3) in accordance with the methodology specified by BRE Special Digest 365.

Infiltration results varied in the three locations between 2.6×10^{-5} m/s in TP1 (SA1) and 1.3×10^{-7} m/s in TP3 (SA3) indicating that infiltration drainage may be suitable in parts of the site. However, it should be considered that during subsequent groundwater monitoring visits, groundwater was recorded to be standing at depths of circa 2.80m and 4.12m in BH1 and BH2.

A copy of the infiltration test results is presented in Appendix VI.

9.0 Waste Characterisation

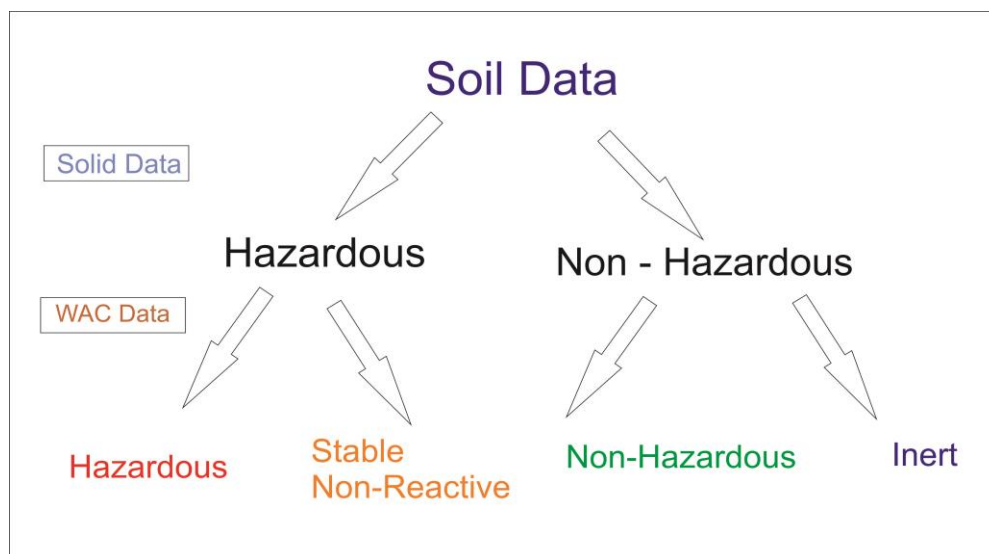
9.1 Assessment Criteria

It is likely that soil arisings generated through piling or any other excavation associated with the development will require removal from site, since there is limited potential for on-site re-use of this material. Should no suitable off site re-use options be available, disposal to landfill may need to be considered. However, if contaminated material is to be disposed of, use of soil treatment facilities should also be considered.

If disposal to landfill is required, the excavated material would be considered as waste and should be classified in line with the Hazardous Waste Directive - HWD, Council Directive 91/689/EC. This legislation divides waste into two categories, hazardous and non-hazardous. These two categories can then be subdivided into a number of classes relating to the type of landfill/cell to which the material can be sent; these are illustrated below.

In order to provide an indication of the likely waste characterisation of soils excavated from the site, should disposal be required, a waste characterisation exercise has been carried out. This is summarised in Sections 9.2 to 9.5 below. Any material sent to landfill should be accompanied by the appropriate duty of care documentation and the chemical data should be forwarded to the accepting landfill for approval prior to removal of the soil from site.

Figure 1 - Waste Characterisation Categories



9.2 Soil Sampling and Testing

9.2.1 Solid Suite of Analysis

Chemical analysis was undertaken ten samples of the Made Ground and five samples of the Glaciofluvial Sheet Deposits. Soil samples were analysed for the following solid suite of analysis:

pH, arsenic, asbestos, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, sulphide, sulphate, cyanide, and PAH.

9.2.2 WAC Testing

One sample of Made Ground collected from borehole BH1 at 0.50m bgl and one sample of Glaciofluvial Sheet Deposits collected from borehole BH1 at 1.50m bgl were also submitted for the solid WAC suite of analysis.

The solid WAC suite of analysis included testing for the following determinands:

Total organic carbon (TOC), loss on ignition (LOI), BTEX, sum of PCBs, mineral oil and total PAH, acid neutralisation capacity and pH.

WAC single stage leachate analysis was also carried out on the above samples. The analysis included testing for the following determinands:

Arsenic, barium, cadmium, chromium, copper, mercury, molybdenum, nickel, lead, antimony, selenium, zinc, chloride, fluoride, sulphate, total dissolved solids (TDS), phenol index and dissolved organic carbon.

All soil analysis and WAC results are provided in Appendix III.

9.3 Solid Soil Data

Results of the solid suite were analysed using HazWasteOnline Software which allows users to classify waste as defined in the EWC (European Waste Catalogue 2002) based on the regulatory framework for the Classification Labelling and Packaging of Substances and mixtures Regulation, (EC) No 172/2008 and the latest Environment Agency guidance (Technical Guidance WM3).

The results of the analysis show that all the samples of Made Ground and Glaciofluvial Sheet Deposits would be suitable for disposal as non-hazardous waste.

9.4 WAC Data

9.4.1 Solid Data

One sample of Made Ground collected from borehole BH1 at 0.50m bgl and one sample of Glaciofluvial Sheet Deposits collected from borehole BH1 at 1.50m bgl were subject to the WAC solid suite of analysis.

Concentration of TOC exceeded threshold levels for Inert Waste in the sample of Made Ground from borehole BH1.

Contaminants of concern did not exceed threshold levels for Inert Waste in the sample of Glaciofluvial Sheet Deposits from borehole BH1.

9.4.2 Leachate Data

The samples of Made Ground and Glaciofluvial Sheet Deposit were also subject to the WAC leachate suite of analysis.

Contaminants of concern did not exceed threshold levels for Inert Waste in both soil samples.

9.5 Summary of Results

The results of the waste characterisation exercise are provided in Appendix VII and summarised in the table below.

Table 8– Summary of Waste Characterisation Exercise

Position	Depth (m bgl)	Strata	Solid Suite of Analysis	Exceedance of Corresponding Inert, SNRHW and Hazardous waste WAC Limit Value?	WAC Analysis Results
WS1	0.40	Made Ground	Non-Hazardous	N/A	N/A
WS2	0.60	Made Ground	Non-Hazardous	N/A	N/A
WS2	1.30	Glaciofluvial Sheet Deposits	Non-Hazardous	N/A	N/A
WS3	0.50	Made Ground	Non-Hazardous	N/A	N/A
WS3	1.30	Glaciofluvial Sheet Deposits	Non-Hazardous	N/A	N/A
TP1	0.50	Made Ground	Non-Hazardous	N/A	N/A
TP3	0.50	Made Ground	Non-Hazardous	N/A	N/A
TP3	1.80	Glaciofluvial Sheet Deposits	Non-Hazardous	N/A	N/A
TP6	0.60	Made Ground	Non-Hazardous	N/A	N/A
TP9	0.60	Made Ground	Non-Hazardous	N/A	N/A
TP9	1.20	Glaciofluvial Sheet Deposits	Non-Hazardous	N/A	N/A
TP10	0.90	Made Ground	Non-Hazardous	N/A	N/A
BH1	0.50	Made Ground	Non-Hazardous	N/A	N/A
BH1	1.50	Glaciofluvial Sheet Deposits	Non-Hazardous	N/A	N/A
BH2	0.80	Made Ground	Non-Hazardous	N/A	N/A

Based on available information, it is considered likely that the Made Ground beneath the site would be suitable for disposal as a Non-Hazardous Waste landfill.

Any material sent to landfill should be accompanied by the appropriate duty of care documentation and the chemical data should be forwarded to the accepting landfill for approval prior to removal of the soil from site.

It should be noted that ground conditions are often variable, particularly Made Ground. To manage disposal costs, we recommend that Made Ground soils generated during construction works be stockpiled separately, sorted by location and composition and subjected to further testing to confirm final waste classification with the receiving landfill. As such, the advice provided in this report should be considered preliminary at this stage and is subject to change depending on the actual waste materials generated during the construction works.

9.6 Waste Management

Arisings generated from excavations for foundations and service trenches etc. may be classified as waste and it is the responsibility of the holder of such material to form a view as to whether or not it constitutes waste.

Guidance on how this can be achieved is set out in the Development Industry Code of Practice (CoP) (CL:AIRE, March 2011).

The handling, re-use or disposal of waste materials is regulated by the Environment Agency, who take into account the CoP in determining whether materials are classified as waste. If materials are handled in accordance with the CoP it is considered unlikely that they will be considered waste at the point when they are used during development. This might be because the materials were never formally discarded or because they have been processed as part of a 'recovery' operation and therefore ceased to be waste.

Should site won material be intended for re-use on site a Materials Management Plan will be required from a suitably qualified environmental consultant in order to comply with the CoP.

10.0 Conclusions and Recommendations

Clancy Consulting Limited was instructed by Conlon Construction Ltd to carry out a Phase 2 Site Investigation for the site of the proposed new Olive School in Cheetham Hill, currently occupied by Bignor Street Park. The site had historically been developed with terraced housing and has been cleared and used as a playing field since late 1970s.

The site investigation comprised two cable percussion boreholes (BH1 and BH2) to depths of approximately 20.00m bgl, four window sampler boreholes (WS1 to WS4) to depths up to 5.45m bgl and ten machine excavated trial pits (TP1 to TP10) to depths of up to approximately 3.10m bgl. Groundwater and ground gas monitoring wells were installed in boreholes BH1, BH2, WS1 and WS2 and SPTs were undertaken throughout the depth of each borehole. In addition, soakaway tests were carried out in three trial pits (TP1 to TP3) to assist with drainage design and four DCP tests (DCP1 to DCP4) were carried out in areas of proposed hardstanding to provide indicative CBR values.

Made Ground was recorded in all exploratory locations to depths between 1.00m and 1.90m bgl underlain by Glaciofluvial Sheet Deposits, comprising interbedded soft to stiff cohesive and very loose to medium dense granular deposits. This was in turn underlain by Devensian Till from circa 16.30m bgl comprising stiff and very stiff clays to a maximum proven depth of 20.45m bgl.

Concentrations of beryllium, benzo(a)pyrene, benzo(b)fluoranthene and naphthalene were recorded in samples of Made Ground collected from TP6, TP3 and TP10, in excess of their adopted AC. Following redevelopment, the pathways of direct contact, ingestion and inhalation of contaminated particulates would not be active in areas of hard surfacing or within the building footprint. However, should these be located in areas of proposed soft landscaping then pathways may remain active. We would recommend provision of a 300mm clean soil capping layer be provided, where necessary, in soft landscaped areas. The cover material should comprise at least 100mm of topsoil and 200mm of subsoil. The site includes large areas of soft end use, some of which are occupied by existing trees with root protection zones and wildflower seeding. Given the sensitivity of these areas and to avoid damage to tree roots, they will not be subject to clean cover requirements. All other soft landscaping i.e. amenity turf, sports turf and ornamental shrub planting areas as will require 300mm of clean soil cover as described above.

Elevated concentrations of PAH compounds were recorded in a Made Ground sample collected from the Made Ground in trial pit TP3. Even though it is considered that the elevated concentrations are related to slag and clinker recorded in the sample analysed, due to the sensitive nature of the proposed development it is considered prudent for the contaminated Made Ground soils in the vicinity of TP3 to be excavated and disposed of appropriately off site for the protection of human health and groundwater resource receptors.

The site is underlain by a Secondary A Aquifer and an Undifferentiated Secondary Aquifer relating to the Glaciofluvial Sheet Deposits and Devensian Till respectively. The underlying Chester Formation is classified as a Principal Aquifer. The site is not located within a groundwater SPZ and there are no groundwater abstraction points recorded within 500m from the site. On this basis the localised beryllium and PAHs contamination in the shallow Made Ground soils is not deemed to represent a significant risk to controlled waters.

Based on the ground gas monitoring undertaken at the site to date, the ground gas regime corresponds to CIRIA CS1. On this basis, basic ground gas protection measures would not be required beneath new buildings.

Given the depth of the Made Ground across the site and the variable and weak nature of the shallow natural deposits, it is considered that a piled foundation into the deeper Glaciofluvial Sheet Deposits / Devensian Till deposits are likely to be most suitable for the proposed development from a geotechnical viewpoint.

Testing indicates that a Design Sulphate Class of DS1 and an ACEC Classification of AC-2z would be suitable for buried concrete structures in contact with the Made Ground only. A Design Sulphate Class of DS1 and an ACEC Classification of AC-1 would be suitable for buried concrete structures in contact with natural soils.

Soakaway testing carried out on site recorded s worst case infiltration rate of 1.3×10^{-7} m/s. On this basis the use of soakaways may not be a suitable method to discharge surface water runoff from the proposed development. Further advice should be sought form the appointed drainage engineer.

Based on available information, it is considered likely that the majority of the Made Ground and natural soils beneath the site would be suitable for disposal to a Non-Hazardous Waste landfill (if it needed to be removed from site). Any material sent to landfill should be accompanied by the appropriate duty of care documentation and the chemical data should be forwarded to the accepting landfill for approval prior to removal of the soil from site.

Based on the results of our assessment, the following should be considered:

- Placement of a 300mm clean cover system in all soft landscaped areas, the suitability and depth of which will require independent verification.
- Hydrocarbon impacted soils in the vicinity of trial pit TP3 should be excavated for appropriate disposal off-site.
- A suitable selection of verification samples should be collected from the walls and base of resulting excavations for analysis by a UKAS accredited laboratory.
- Contamination mitigation measures discussed in this report should be formalised in a Remediation Method Statement. This should also set out the verification requirements for the specified remedial measures.

APPENDIX I
DRAWINGS





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00 Proposed Site Plan - Roof

1 : 500

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Project
Olive Primary School,
Manchester

Client
Conlon Construction Limited

Drawing
Proposed Site Plan - Roof

Scale 1 : 500	Sheet Size @ A1	Drawn SW	Checked AC	Date 8.12.22
Project No. FS0766	Originator -BSA-	Zone XX	Level -XX-	Form D -
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Planning



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3. This drawing is to be read in conjunction with all others relating to the project & all information derived accordingly, any amendments to be reported to the client & contract administrator.
4. Work shown on this drawing to be carried out in accordance with current British Standards & Codes of Practice.
5. © This drawing is the Copyright of Saville Landscape Design Ltd & may not be reproduced in any form without prior written consent from Saville Landscape Design Ltd.

KEY

- Existing tree or vegetation to be retained & protected in line with Arboriculturalist proposals
- Existing tree or vegetation to be removed in line with Arboriculturalist proposals
- Native Tree Species
- Fruit Tree
- Native hedge mix
- Tarmac/ rubber crumb surfacing
- Bark mulch surfacing
- Hoggin/ sealed surface
- Block paving
- Non permeable Tarmac - Pedestrian
- Amenity Turf
- Sports Turf
- Ornamental shrub planting
- Wildflower mix 1
- Wildflower mix 2
- Permeable Tarmac - Pedestrian
- Non permeable Tarmac - Vehicular
- MUGA Permeable Sports pitch surfacing
- Permeable Sports pitch surfacing - Cricket
- Artificial grass surfacing
- 2400mm high welded mesh security fence
- 2100mm high welded mesh security fence
- Security fence 1800mm high welded mesh security fence
- Metal railings 1200mm high bow top railings
- Timber fence 1800mm high timber close boarded fence
- Sports perimeter fence 1500mm high welded mesh fence
- 4000mm high cricket netting & cage
- 1000-1300mm high pedestrian door barrier
- 1000-1200mm high pedestrian guard rail
- Hand rail
- Flag on edge retaining wall
- FOE RTW

LANDSCAPE IMAGE EXAMPLES



Security & sports fencing



Bow top fencing



Block paving



Rubber crumb path



Outdoor teaching zone



Native tree planting



Native hedge mix



Low maintenance ornamental planting & wildflower meadow



Raised vegetable beds



Willow tunnel

Rev	Description	Initial	Date
E	Amended to latest site plan	KAS	May23
D	Parking updated, bins & benches added	KAS	Mar23
C	Amended to latest site plan	KAS	Mar23
B	Updated to site plan & detailed planting props	KAS	Jan23
A	Amended to latest site plan	KAS	Nov22

saville LANDSCAPE DESIGN

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M : 07502 289193 W : www.savillelandscape.co.uk

CLIENT
Conlon Construction Ltd

PROJECT TITLE
Olive Primary School, Manchester

DRAWING TITLE
Landscape Masterplan

STATUS
PLANNING

SCALE	SHEET SIZE	DRAWN	CHECKED	DATE
1:250	A1	KAS	-	May23

PROJECT NO.	DRAWING NO.	REV.
406	01	E



- Key
-  Cable Percussion Borehole
 -  Window Sampler Borehole
 -  TRL Dynamic Cone Penetrometer Test (CBR)
 -  Machine Excavated Trial Pit
 -  Machine Excavated Trial Pit + Soakaway Location

A	JAN 2023	Original Drawing	SP	CHK.	APP.
Rev	Date	Description	By	Check	App.

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Client	Conlon Construction Ltd		
Project	Olive Primary School. Manchester		
Office	Manchester		
Discipline	GeoEnvironmental		
Title	Exploratory Hole Location Plan		
Drawn	SP	Date	Nov 2022
Checked		Scale @ A3	NTS
Approved		Status	LIVE



clancy
consulting

www.clancy.co.uk

Job number	Drawing number	Revision
10/2204	002	A

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APPENDIX II
EXPLORATORY HOLE LOGS



Project Title: Olive School Cheetham Hill

Project Number: 10/2204

GL (mAOD):

Client: Conlon Construction Ltd

N Coord: 53.503403

BH1

Sheet 1 Of 3

E Coord: -2.240305

Date: 10/01/2023-11/01/2023

Method: Cable Percussion

Driller: LSI Ltd

Logged By: SP

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.15	ES				0.15	MADE GROUND: Grass over dark brown silt with abundant rootlets.		
0.90 - 1.20	B				1.00	MADE GROUND: Dark brown clayey slightly sandy gravel with a moderate cobble content. Gravel is angular to sub-rounded fine to coarse of brick, concrete, slag, metal, plastic, sandstone and mudstone. Cobbles are angular to subangular of concrete and brick.		
1.20 - 1.65	SPT	N=9			1.40	Soft to firm orangish brown mottled grey blue sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)		
1.50 - 2.00	B				2.00			
1.50	ES				2.50			
	U				2.80	2.50 - 2.80 Becoming firm.		
2.00					3.00	Medium dense dark brown silty fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
2.50	D				4.00	Medium dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
3.00 - 3.45	B	N=17			5.00			
3.00 - 3.45	SPT				6.00			
4.00 - 4.45	SPT	N=9			7.00			
5.00 - 5.45	SPT	N=26			8.00			
6.50 - 6.95	SPT	N=25				Borehole Continues		
8.00 - 8.45	B	N=21						
8.00 - 8.45	SPT							

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane kPa
 - Groundwater Strike
 - Groundwater Level



REMARKS

Groundwater encountered at 6.20m bgl. Borehole installed with a gas and groundwater monitoring well.

Scale: 1:50

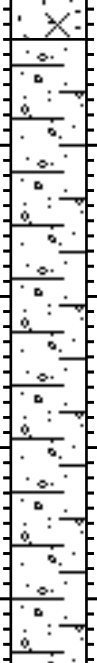
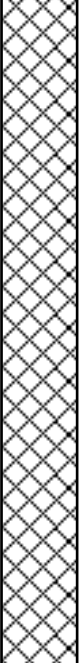
Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed
16/01/2023	6.2	6.2	20		

Daily Log Of Depths

Chiselling					
Date	Casing	Water	From	To	Hours

			Project Title: Olive School Cheetham Hill			BH1		
			Project Number: 10/2204		Client: Conlon Construction Ltd			
			GL (mAOD):		N Coord: 53.503403	E Coord: -2.240305		
Date: 10/01/2023-11/01/2023			Method: Cable Percussion		Driller: LSI Ltd	Logged By: SP		
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
9.50 - 9.95 9.50 - 9.95	B U				9.00 9.10	Medium dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
11.00 - 11.45	SPT	N=13			10.00 11.00	Soft to firm dark brown sandy laminated CLAY. (Glaciofluvial Sheet Deposits, Devensian)		
12.50 - 12.95	SPT	N=33			12.00 12.10	Dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
14.00 - 14.45	SPT	N=31			13.00 14.00			
15.50 - 15.95 15.80 - 16.30	SPT B	N=29			15.00 15.80 16.00	Dense dark brown slightly silty fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian) Borehole Continues		
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 			REMARKS Groundwater encountered at 6.20m bgl. Borehole installed with a gas and groundwater monitoring well. Scale: 1:50			Water Strikes		
						Date	Strike	Level
						16/01/2023	6.2	6.2
						Daily Log Of Depths		
						Chiselling		
						Date	Casing	Water

		Project Title: Olive School Cheetham Hill				<h1>BH1</h1>		
		Project Number: 10/2204		Client: Conlon Construction Ltd				
		GL (mAOD):		N Coord: 53.503403		E Coord: -2.240305		
Date: 10/01/2023-11/01/2023		Method: Cable Percussion		Driller: LSI Ltd		Logged By: SP		
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
17.00 - 17.45	U	pp 50/295mm			16.30	Dense dark brown slightly silty fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian) Stiff dark brown slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone and mudstone. (Till, Devensian)		
17.30	SPT		17.00					
17.50	D		18.00					
18.50 - 18.95	SPT	N=42			18.00	End Of Borehole At 20.45 m		
20.00 - 20.45	SPT		19.00					
			20.00					
					20.45			
					21.00			
					22.00			
					23.00			
					24.00			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed
- W - Water Sample
- S - Standard Penetration Test
- C - Cone Penetration Test
- N - Penetration Test 'N' Value
- V - Hand Shear Vane kPa
-  - Groundwater Strike
-  - Groundwater Level



REMARKS

Groundwater encountered at 6.20m bgl. Borehole installed with a gas and groundwater monitoring well.

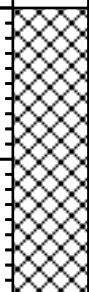
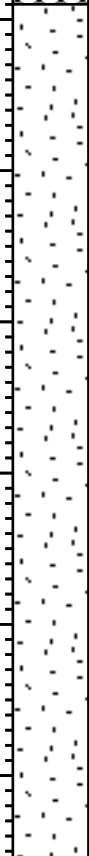
Scale: 1:50

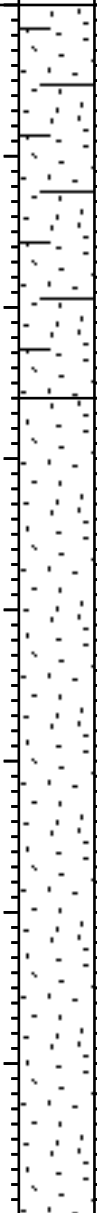
Water Strikes

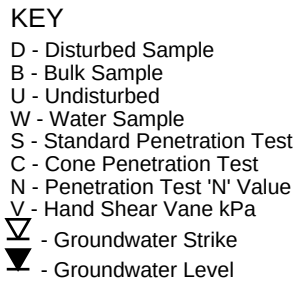
Date	Strike	Level	Minutes	Casing	Sealed
16/01/2023	6.2	6.2	20		

Daily Log Of Depths

Date	Casing	Water	From	To	Hours

<div></div>			Project Title: Olive School Cheetham Hill			BH2																																															
			Project Number: 10/2204		Client: Conlon Construction Ltd				Sheet 1 Of 3																																												
			GL (mAOD):		N Coord: 53.503976		E Coord: -2.239782																																														
Date: 12/01/2023-13/01/2023			Method: Cable Percussion		Driller: LSI Ltd		Logged By: SP																																														
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe																																													
0.15	D					MADE GROUND: Grass over dark brown clayey gravel with a high cobble content. Gravel is angular to sub-rounded fine to coarse of brick, concrete, slag, metal, clinker, sandstone and mudstone. Cobbles are angular to subangular of brick.																																															
0.80	ES				1.00																																																
1.20 - 1.65 1.20 - 1.65 1.50	B SPT ES	N=19			1.90 2.00																																																
1.90 2.00 - 2.45 2.00 - 2.45	D B SPT	N=14			2.00	Medium dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)																																															
3.00 - 3.45	SPT	N=16			3.00																																																
4.00 - 4.45 4.00 - 4.45	B SPT	N=18			4.00																																																
5.00 - 5.45	SPT	N=23			5.00																																																
6.50 - 6.95	SPT	N=19			6.00 7.00																																																
7.70 8.00 - 8.45 8.00 - 8.45	D B SPT	N=19			7.70 8.00	Medium dense dark brown very clayey fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian) Borehole Continues																																															
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa ▽ - Groundwater Strike ▼ - Groundwater Level			REMARKS Groundwater encountered at 10.60m bgl. Borehole installed with a gas and groundwater monitoring well.			Water Strikes <table><tr><th>Date</th><th>Strike</th><th>Level</th><th>Minutes</th><th>Casing</th><th>Sealed</th></tr><tr><td>16/01/2023</td><td>10.6</td><td>10.6</td><td>20</td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> Daily Log Of Depths <table><tr><th colspan="3">Chiselling</th></tr><tr><th>Date</th><th>Casing</th><th>Water</th><th>From</th><th>To</th><th>Hours</th></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>			Date	Strike	Level	Minutes	Casing	Sealed	16/01/2023	10.6	10.6	20															Chiselling			Date	Casing	Water	From	To	Hours												
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Chiselling																																																					
Date	Casing	Water	From	To	Hours																																																
			AGS			Scale: 1:50																																															

			Project Title: Olive School Cheetham Hill				<h1>BH2</h1>																																		
			Project Number: 10/2204		Client: Conlon Construction Ltd																																				
			GL (mAOD):		N Coord: 53.503976		E Coord: -2.239782																																		
Date: 12/01/2023-13/01/2023			Method: Cable Percussion		Driller: LSI Ltd		Logged By: SP																																		
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe																																	
9.50 - 9.95	SPT	N=20			9.00	Medium dense dark brown very clayey fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)																																			
11.00 - 11.45	SPT	N=2	10.00		10.60				Very loose becoming loose dark brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)																																
12.50 - 12.95	B SPT	N=5	11.00		12.00	Borehole Continues																																			
12.50 - 12.95			13.00		15.00																																				
14.00 - 14.45	SPT	N=16	14.00		16.00																																				
15.50 - 15.95	SPT	N=10																																							
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 			REMARKS Groundwater encountered at 10.60m bgl. Borehole installed with a gas and groundwater monitoring well. Scale: 1:50			Water Strikes <table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr> <td>16/01/2023</td> <td>10.6</td> <td>10.6</td> <td>20</td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Date	Strike	Level	Minutes	Casing	Sealed	16/01/2023	10.6	10.6	20																							
Date	Strike	Level	Minutes	Casing	Sealed																																				
16/01/2023	10.6	10.6	20																																						
Daily Log Of Depths <table border="1"> <thead> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Date	Casing	Water	From	To	Hours													Chiselling <table border="1"> <thead> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Date	Casing	Water	From	To	Hours												
Date	Casing	Water	From	To	Hours																																				
Date	Casing	Water	From	To	Hours																																				

			Project Title: Olive School Cheetham Hill				<h1>BH2</h1>		
			Project Number: 10/2204		Client: Conlon Construction Ltd				
			GL (mAOD):		N Coord: 53.503976		E Coord: -2.239782		
Date: 12/01/2023-13/01/2023			Method: Cable Percussion		Driller: LSI Ltd		Logged By: SP		
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe	
16.40	D	N=25			16.60	Very loose becoming loose dark brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)			
17.00 - 17.45	SPT				17.00	Firm to stiff becoming very stiff dark brown slightly gravelly CLAY. Gravel is subangular to rounded, fine to coarse of sandstone and mudstone. (Till, Devensian)			
18.50 - 18.95	U				18.00				
		19.00							
20.00 - 20.45	SPT	pp 50/235mm			20.00	End Of Borehole At 20.45 m			
			20.45						
			21.00						
			22.00						
					23.00				
					24.00				

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed
- W - Water Sample
- S - Standard Penetration Test
- C - Cone Penetration Test
- N - Penetration Test 'N' Value
- V - Hand Shear Vane kPa
- ∇ - Groundwater Strike
- ▼ - Groundwater Level



REMARKS

Groundwater encountered at 10.60m bgl. Borehole installed with a gas and groundwater monitoring well.

Scale: 1:50

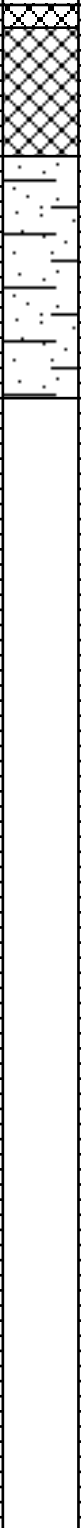
Water Strikes

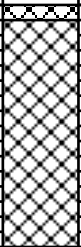
Date	Strike	Level	Minutes	Casing	Sealed
16/01/2023	10.6	10.6	20		

Daily Log Of Depths

Date	Casing	Water	From	To	Hours

<div></div>			Project Title: Olive School Cheetham Hill			TP1		
			Project Number: 10/2204		Client: Conlon Construction Ltd			Sheet 1 Of 1
			GL (mAOD):		N Coord: 53.503502		E Coord: -2.24049	
Date: 10/01/2023			Method: Excavator		Logged By: SP		Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	
0.50	ES	V=32			0.20	MADE GROUND: Grass over dark brown silt with abundant rootlets.		
1.30	ES				1.00	MADE GROUND: Dark brown sandy gravel with a high cobble and boulder content. Gravel is angular to rounded fine to coarse of sandstone, slag, metal, brick, concrete and clinker. Cobbles are angular and subangular of brick, sandstone and concrete, boulders are subangular of sandstone blocks.		
					1.25			
2.00	V				2.00	Firm light brown mottled grey blue slightly gravelly CLAY. Gravel is angular to sub-rounded fine to coarse of coal. (Glaciofluvial Sheet Deposits, Devensian)		
					2.30			
					2.70	Firm light brown sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)		
					3.00	End Of Trial Pit At 2.70 m		
					4.00			
					5.00			
					6.00			
				7.00				
				8.00				
				9.00				
				10.00				
KEY						REMARKS		
D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa						No Groundwater Encountered Trial pit backfilled with arisings.		
<div> - Groundwater Strike  - Groundwater Level</div>						<div></div>		

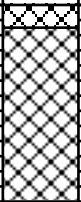
			Project Title: Olive School Cheetham Hill			TP2/SA01	
			Project Number: 10/2204		Client: Conlon Construction Ltd		
			GL (mAOD):		N Coord: 53.503239	E Coord: -2.240321	
Date: 10/01/2023-11/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.40	ES				0.15	<p>MADE GROUND: Grass over dark brown silt with abundant rootlets.</p> <p>MADE GROUND: Light brown sandy gravel with a high cobble content. Gravel is angular to sub-rounded fine to coarse of sandstone, metal, brick, concrete and clinker. Cobbles are of brick and sandstone blocks.</p> <p>Firm light brown mottled grey blue slightly sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)</p> <p>End Of Trial Pit At 2.60 m</p>	
1.10	ES				1.00		
1.50	V	V=40					
2.00	D	V=65			2.00		
2.00	V				2.60		
					3.00		
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pits used to facilitate soakaway testing. Trial pit backfilled with arisings.	

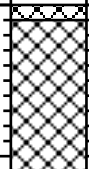
			Project Title: Olive School Cheetham Hill			<h1>TP3/SA02</h1>		
			Project Number: 10/2204		Client: Conlon Construction Ltd			
			GL (mAOD):		N Coord: 53.503485		E Coord: -2.239806	
Date: 10/01/2023-11/01/2023			Method: Excavator		Logged By: SP		Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	
0.50	ES				0.10	MADE GROUND: Grass over dark brown silt with abundant rootlets.		
					1.00	MADE GROUND: Dark brown sandy gravel with a high cobble content. Gravel is angular to sub-rounded fine to coarse of slag, polystyrene, sandstone, metal, brick, concrete and clinker. Cobbles are subangular of brick and concrete.		
1.80	ES				1.60			
					2.00	Light yellowish brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
2.50	D				2.50	End Of Trial Pit At 2.50 m		
					3.00			
					4.00			
					5.00			
					6.00			
					7.00			
					8.00			
					9.00			
					10.00			
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa						REMARKS No Groundwater Encountered Trial pit used to facilitate soakaway. Trial pit backfilled with arisings.		

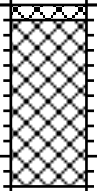


			Project Title: Olive School Cheetham Hill			TP4/SA03	
			Project Number: 10/2204		Client: Conlon Construction Ltd		
			GL (mAOD):		N Coord: 53.503735	E Coord: -2.240573	
Date: 10/01/2023-11/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.30	ES	V=25		 	0.10	MADE GROUND: Grass over dark brown silt with abundant rootlets.	
1.30	ES				1.00	MADE GROUND: Dark brown sandy slightly clayey gravel with a high cobble content. Gravel is angular to sub-rounded fine to coarse of sandstone, glass, polystyrene, metal, clay, brick, concrete and plastic. Cobbles are angular to subangular of brick and concrete.	
1.50	V				1.20		
		V=30		 	1.40	Soft to firm light brown mottled grey sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
2.20	D				2.00	Soft to firm dark brown mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
2.20	V				2.20	End Of Trial Pit At 2.20 m	
					3.00		
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pit used to facilitate. Trial pit backfilled with arisings.	

<div></div>			Project Title: Olive School Cheetham Hill			TP5		
			Project Number: 10/2204		Client: Conlon Construction Ltd			Sheet 1 Of 1
			GL (mAOD):		N Coord: 53.503		E Coord: -2.240018	
Date: 10/01/2023			Method: Excavator		Logged By: SP		Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	
0.40	ES	V=40			0.20 0.30	<p>MADE GROUND: Grass over dark brown slightly gravelly silt with abundant rootlets. Gravel is subrounded to rounded, fine to coarse of sandstone.</p> <p>MADE GROUND: Dark brown sandy gravel with a moderate cobble content. Gravel is angular to subrounded, fine to coarse of sandstone, metal, concrete, clinker and brick. Cobbles are angular to subangular of brick and concrete.</p> <p>MADE GROUND: Light brownish orange slightly gravelly clay with a low cobble content. Gravel is angular to rounded fine to coarse of sandstone, concrete and brick. Cobbles are of brick and concrete.</p> <p>Firm light brown sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)</p> <p>Firm becoming firm to stiff dark bluish grey mottled grey dark brown CLAY with rare siltstone and coal fragments. (Glaciofluvial Sheet Deposits, Devensian)</p> <p>End Of Trial Pit At 2.80 m</p>		
1.10 1.20	ES V				1.00 1.40			
1.90 2.00	V D	V=85			2.00			
2.80	V	V=88			2.80 3.00			
					4.00 5.00 6.00 7.00 8.00 9.00 10.00			
KEY					REMARKS			
D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa					No Groundwater Encountered Trial pit backfilled with arisings.			
<div> - Groundwater Strike  - Groundwater Level</div>					<div></div>			

			Project Title: Olive School Cheetham Hill			TP6	
			Project Number: 10/2204		Client: Conlon Construction Ltd		
			GL (mAOD):		N Coord: 53.50299	E Coord: -2.240418	
Date: 10/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.60	ES				0.15	MADE GROUND: Grass over dark brown silt with frequent rootlets.	
1.40	ES				1.00	MADE GROUND: Dark brown sandy gravel with a moderate cobble content. Gravel is angular to sub-rounded fine to coarse of sandstone, concrete, metal, plastic, slag, clinker and brick. Cobbles are of sandstone blocks, concrete and brick.	
1.40	V	V=25			1.30		
2.00	V	V=50			1.70	Soft to firm dark bluish grey CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
2.20	D				2.00	Firm dark brown mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
					2.50	End Of Trial Pit At 2.50 m	
					3.00		
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pit backfilled with arisings.	

			Project Title: Olive School Cheetham Hill			<h1>TP7</h1>	
			Project Number: 10/2204		Client: Conlon Construction Ltd		
			GL (mAOD):		N Coord: 53.503051	E Coord: -2.240788	
Date: 10/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
1.20	ES	V=55			0.10	MADE GROUND: Grass over, dark brown silt with abundant rootlets.	
1.60	ES				1.00 1.10	MADE GROUND: Dark brown slightly clayey slightly sandy gravel with a moderate cobble content. Gravel is angular to sub-rounded fine to coarse of concrete, brick, sandstone, clay, metal and clinker. Cobbles are angular to subangular of brick, concrete and sandstone blocks.	
1.60	V				1.50	MADE GROUND: Dark brown black ashy slightly gravelly clay. Gravel is angular to rounded, fine to medium of clinker and sandstone.	
					2.00	Firm to stiff light brown mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
					2.50	End Of Trial Pit At 2.50 m	
					3.00		
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pit terminated due to heavy water ingress. Trial pit backfilled with arisings.	

			Project Title: Olive School Cheetham Hill			<h1>TP8</h1>	
			Project Number: 10/2204		Client: Conlon Construction Ltd		
			GL (mAOD):		N Coord: 53.503349	E Coord: -2.240769	
Date: 10/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.50	ES				0.10	MADE GROUND: Grass over, dark brown silt with a moderate rootlet content. MADE GROUND: Dark brown slightly gravelly clay with a high cobble content. Gravel is angular to sub-rounded fine to coarse of sandstone, concrete and brick. Cobbles are angular to subangular of brick.	
1.30	ES				1.00 1.20		
2.20 2.30	V D	V=65			2.00	Firm to stiff dark mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
3.00	V	V=55			3.00		
						End Of Trial Pit At 3.00 m	
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pit backfilled with arisings.	

			Project Title: Olive School Cheetham Hill			TP9	
			Project Number: 10/2204		Client: Conlon Construction Ltd	Sheet 1 Of 1	
			GL (mAOD):		N Coord: 53.503611	E Coord: -2.240732	
Date: 12/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.60	ES				0.15	MADE GROUND: Grass over dark brown silt with a moderate rootlet content.	
1.20	ES				1.00 1.10	MADE GROUND: Light greyish brown sandy gravel with a high cobble content. Gravel is angular to rounded, fine to coarse of metal, sandstone, brick, concrete and clinker. Cobbles are angular to subangular, fine to coarse of sandstone blocks, concrete and bricks.	
1.50	V	V=52			1.60	Firm light orangish brown mottled grey blue slightly sandy CLAY.	
2.00	D				2.00	(Glaciofluvial Sheet Deposits, Devensian)	
2.20	V	V=50				Firm dark brown mottled greyish blue slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of sandstone and mudstone.	
3.00	V	V=52			3.00	(Glaciofluvial Sheet Deposits, Devensian)	
						End Of Trial Pit At 3.00 m	
					4.00		
					5.00		
					6.00		
					7.00		
					8.00		
					9.00		
					10.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS No Groundwater Encountered Trial pit backfilled with arisings.	

<div></div>			Project Title: Olive School Cheetham Hill			TP10	
			Project Number: 10/2204		Client: Conlon Construction Ltd	Sheet 1 Of 1	
			GL (mAOD):		N Coord: 53.503958	E Coord: -2.240828	
Date: 12/01/2023			Method: Excavator		Logged By: SP	Scale: 1:50	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.10	ES	V=20			0.15	MADE GROUND: Grass over, dark brown silt with a moderate rootlet content.	
					0.60	MADE GROUND: Light brown slightly gravelly clay with a high cobble content. Gravel is angular to sub-rounded fine to coarse of sandstone, concrete and brick. Cobbles are angular to subangular of brick.	
0.90	ES				0.80		
1.10	ES				1.00		
1.20	V					MADE GROUND: Red slightly gravelly clay. Gravel is angular to subrounded, fine to medium of clinker, sandstone and brick.	
1.60	D				1.50	MADE GROUND: Dark grey silt.	
					2.00	Soft orangish brown mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)	
					3.00	Orangish brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)	
					3.10	End Of Trial Pit At 3.10 m	
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							
							

KEY			REMARKS	
D - Disturbed Sample			No Groundwater Encountered	
B - Bulk Sample			Trial pit backfilled with arisings.	
W - Water Sample		Groundwater Strike		
V - Hand Shear Vane kPa		Groundwater Level		





Project Title: Olive School Cheetham Hill

Project Number: 10/2204

GL (mAOD):

Client: Conlon Construction Ltd

N Coord: 53.503952

Driller: Boreworx Ltd

WS1

Sheet 1 Of 1

E Coord: -2.240659

Date: 11/01/2023

Method: Window Sampler

Logged By: SP

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.40	ES				0.10	<div>MADE GROUND: Macadam and sub base.</div> <div>MADE GROUND: Dark brown becoming light brown sandy gravel with a low cobble content. Gravel is angular to sub-rounded fine to coarse of slag, brick, concrete, sandstone and clinker. Cobbles are angular to subangular of brick.</div> <div>MADE GROUND: Light brown clayey gravel with a low cobble content. Gravel is angular to sub-rounded fine to coarse of brick, concrete, sandstone and clinker. Cobbles are angular to subangular of sandstone blocks and brick.</div>		
0.90	ES				0.60			
1.20 - 1.65	SPT	N=6			1.00			
1.80	D				1.60	<div>Soft becoming soft to firm dark brown mottled grey blue CLAY. (Glaciofluvial Sheet Deposits, Devensian)</div> <div>2.00 - 3.00 Poor recovery.</div> <div>3.00 - 4.00 Poor recovery.</div>		
2.00 - 2.45	SPT	N=4			2.00			
3.00 - 3.45	SPT	N=8			3.00			
4.00 - 4.45	SPT	N=36			3.70	<div>Dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)</div>		
5.00 - 5.45	SPT	N=40			4.00			
					5.00	<div>End Of Borehole At 5.45 m</div>		
					5.45			
					6.00			
					7.00			
					8.00			

KEY

D - Disturbed Sample
B - Bulk Sample
U - Undisturbed
W - Water Sample
S - Standard Penetration Test
C - Cone Penetration Test
N - Penetration Test 'N' Value
V - Hand Shear Vane kPa
 - Groundwater Strike
 - Groundwater Level



REMARKS

No Groundwater Encountered
Borehole installed with ground gas monitoring well.

Scale: 1:50

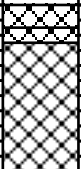
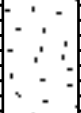
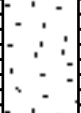
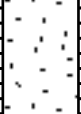
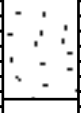
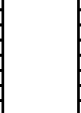
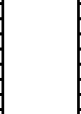
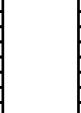
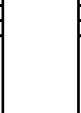
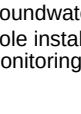
Water Strikes

Date	Strike	Level	Minutes	Casing	Sealed

Daily Log Of Depths

Date	Casing	Water	From	To	Hours

		Project Title: Olive School Cheetham Hill				<h1>WS2</h1>	
		Project Number: 10/2204		Client: Conlon Construction Ltd			
		GL (mAOD):		N Coord: 53.503761		E Coord: -2.240359	
Date: 11/01/2023		Method: Window Sampler		Driller: Boreworx Ltd		Logged By: SP	

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.60	ES				0.15 0.25	MADE GROUND: Macadam and sub base.		
1.20 - 1.65	SPT	N=7			1.00 1.10	MADE GROUND: Yellowish brown sandy gravel. Gravel is angular to subrounded, fine to coarse of limestone and sandstone.		
1.30	ES							
2.00 - 2.45	SPT	N=27			2.00 2.20	MADE GROUND: Dark brown clayey gravel with a low cobble content. Gravel is angular to sub-rounded fine to coarse of clinker, slag, metal, brick, concrete and sandstone. Cobbles are angular to subangular of concrete, brick and sandstone blocks.		
2.50	D					Soft to firm dark bluish grey sandy CLAY. (Glaciofluvial Sheet Deposits, Devensian)		
3.00 - 3.45	SPT	N=34			3.00	1.20 - 2.20 Slight organic odour.		
						2.00 - 3.00 Dense		
4.00 - 4.45	SPT	N=26			4.00	Medium dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
5.00 - 5.45	SPT	N=26			5.00 5.45			
						End Of Borehole At 5.45 m		
					6.00			
					7.00			
					8.00			

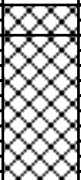
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level		REMARKS No Groundwater Encountered Borehole installed with ground gas monitoring well.	Water Strikes <table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Strike	Level	Minutes	Casing	Sealed																								
Date	Strike	Level	Minutes	Casing	Sealed																												
		Scale: 1:50	Daily Log Of Depths <table border="1"> <thead> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	Date	Casing	Water	From	To	Hours																								
Date	Casing	Water	From	To	Hours																												

		Project Title: Olive School Cheetham Hill				<h1>WS3</h1>	
		Project Number: 10/2204		Client: Conlon Construction Ltd			
		GL (mAOD):		N Coord: 53.503636		E Coord: -2.240321	
Date: 11/01/2023		Method: Window Sampler		Driller: Boreworx Ltd		Logged By: SP	

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.50	ES				0.10	MADE GROUND: Grass over dark brown silt with abundant rootlets.		
1.20 - 1.65	SPT	N=9			1.00	MADE GROUND: Dark brown sandy gravel with a low cobble content. Gravel is angular to sub-rounded fine to coarse of plastic, metal, brick, concrete and sandstone. Cobbles are angular to subangular of brick and concrete.		
1.30	ES				1.20		0.40 - 0.70 Mild hydrocarbon odour.	
2.00 - 2.45	SPT	N=18			1.70	Soft to firm dark brown slightly gravelly slightly sandy CLAY. Gravel is sub-rounded to rounded fine to coarse of sandstone and mudstone. (Glaciofluvial Sheet Deposits, Devensian)		
					2.00			
3.00 - 3.45	SPT	N=24			3.00	Medium dense becoming very dense light brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
					4.00			
4.00 - 4.45	SPT	N=31			4.50	2.80 Rare coal fragments.		
4.50	D				5.00			
5.00 - 5.45	SPT	pp 50/265mm			5.45	End Of Borehole At 5.45 m		
					6.00			
					7.00			
					8.00			

KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level		REMARKS No Groundwater Encountered Borehole backfilled with arisings.	Water Strikes																																
			<table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						Date	Strike	Level	Minutes	Casing	Sealed																					
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		Scale: 1:50	Daily Log Of Depths																																
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Date	Casing	Water	From	To	Hours																														

		Project Title: Olive School Cheetham Hill				<h1>WS4</h1>	
		Project Number: 10/2204		Client: Conlon Construction Ltd			
		GL (mAOD):		N Coord: 53.504041		E Coord: -2.240402	
Date: 11/01/2023		Method: Window Sampler		Driller: Boreworx Ltd		Logged By: SP	

Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe
0.40	ES				0.20	MADE GROUND: Macadam and sub base.		
1.20 - 1.65	SPT	N=4			1.00 1.20 1.40	MADE GROUND: Dark brown clayey gravel with a moderate cobble content. Gravel is angular to sub-rounded fine to coarse of glass, metal, plastic, brick, concrete, sandstone and clinker. Cobbles are angular to subangular of brick and concrete.		
2.00 - 2.45	SPT	N=6			2.00	Soft dark brown slightly gravelly CLAY. Gravel is angular to subrounded, fine to coarse of sandstone and mudstone. (Glaciofluvial Sheet Deposits, Devensian)		
3.00 - 3.45	SPT	N=14			3.00 3.45	Loose becoming medium dense dark orangish brown fine to medium SAND. (Glaciofluvial Sheet Deposits, Devensian)		
					4.00 5.00 6.00 7.00 8.00	End Of Borehole At 3.45 m		

KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level		REMARKS No Groundwater Encountered Borehole terminated due to well collapse. Borehole backfilled with arisings.	Water Strikes																										
			<table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						Date	Strike	Level	Minutes	Casing	Sealed															
Date	Strike	Level	Minutes	Casing	Sealed																								
		Scale: 1:50	Daily Log Of Depths																										
			<table border="1"> <thead> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						Date	Casing	Water	From	To	Hours															
Date	Casing	Water	From	To	Hours																								

APPENDIX III
CHEMICAL LABORATORY TEST RESULTS

Final Test Report

Envirolab Job Number: 23/00380
Issue Number: 1

Date: 25-Jan-23

Client: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
UK, WA14 4NX

Project Manager: Desy Korai/Sean Pilling
Project Name: Olive School
Project Ref: 10/01/2204
Order No: 31972

Date Samples Received: 17-Jan-23
Date Instructions Received: 18-Jan-23
Date Analysis Completed: 25-Jan-23

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:



Gemma Berrisford
Client Manager

Sample Details								
Lab Sample ID	Method	ISO17025	MCERTS	23/00380/15	Landfill Waste Acceptance Criteria Limits			
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				BH1				
Depth to Top				0.5				
Depth to Bottom								
Date Sampled				10/01/2023				
Sample Type				Soil				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N	8.09	-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.05	-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.01	-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	N	N	6.8	-	-	10	
Total Organic Carbon (%) _D	A-T-032	N	N	5.36	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	0.31	100	-	-	
Mineral Oil (mg/kg) _{A EH_CU_1D_AL}	A-T-007	N	N	<10	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-	
Eluate Analysis				10:1	10:1	Limit values for compliance leaching test using		
				mg/l	mg/kg	BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.002	0.020	0.5	2	25
Barium	A-T-025	N	N	0.059	0.590	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.01	0.5	10	70
Copper	A-T-025	N	N	0.009	0.090	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.006	0.060	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.02	0.4	10	40
Lead	A-T-025	N	N	0.011	0.110	0.5	10	50
Antimony	A-T-025	N	N	0.001	0.010	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.008	0.080	4	50	200
Chloride	A-T-026	N	N	6	59	800	15000	25000
Fluoride	A-T-026	N	N	0.6	6.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	12	119	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	59	590	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	<200	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	8.0				
Conductivity (µS/cm)	A-T-037	N	N	118				
Mass Sample (kg)				0.224				
Dry Matter (%)	A-T-044	N	N	78				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

Sample Details						Landfill Waste Acceptance Criteria Limits		
Lab Sample ID	Method	ISO17025	MCERTS	23/00380/16				
Client Sample Number						Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Client Sample ID				BH1				
Depth to Top				1.5				
Depth to Bottom								
Date Sampled				10/01/2023				
Sample Type				Soil				
Sample Matrix Code				3				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N	7.20		-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.01		-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.01		-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N	4.9		-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	0.83		3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	<0.08		100	-	-
Mineral Oil (mg/kg) _{A EH, CU, ID, AL}	A-T-007	N	N	16		500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007		1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01		6	-	-
Eluate Analysis				10:1 mg/l	10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	<0.001	<0.01	0.5	2	25
Barium	A-T-025	N	N	0.012	0.120	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.01	0.5	10	70
Copper	A-T-025	N	N	<0.004	<0.04	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	<0.001	<0.01	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.02	0.4	10	40
Lead	A-T-025	N	N	<0.001	<0.01	0.5	10	50
Antimony	A-T-025	N	N	<0.001	<0.01	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.002	0.020	4	50	200
Chloride	A-T-026	N	N	1	11	800	15000	25000
Fluoride	A-T-026	N	N	0.7	7.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	24	242	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	57	570	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<2.0	<200	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	7.7				
Conductivity (µS/cm)	A-T-037	N	N	113				
Mass Sample (kg)				0.223				
Dry Matter (%)	A-T-044	N	N	78.5				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

FINAL ANALYTICAL TEST REPORT SUPPLEMENT TO TEST REPORT 23/00380/1

Amendments: Request for project/sample information change

Envirolab Job Number: 23/00380
Issue Number: 2

Date: 14 February, 2023

Client: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
UK
WA14 4NX

Project Manager: Desy Korai/Sean Pilling
Project Name: Olive School
Project Ref: 01/10/2204
Order No: 31972
Date Samples Received: 17/01/23
Date Instructions Received: 18/01/23
Date Analysis Completed: 25/01/23

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/1	23/00380/3	23/00380/4	23/00380/5	23/00380/6	23/00380/8	23/00380/9	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS2	WS3	WS3	TP1	TP3			
Depth to Top	0.40	0.60	1.30	0.50	1.30	0.50	0.50			
Depth To Bottom										
Date Sampled	11-Jan-23	11-Jan-23	11-Jan-23	09-Jan-23	11-Jan-23	09-Jan-23	09-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AB	4AB	5A	4AB	6A	4ABE	4AB			
% Stones >10mm _A	36.8	17.0	<0.1	<0.1	<0.1	55.6	16.5	% w/w	0.1	A-T-044
pH _D ^{M#}	8.71	8.36	7.49	8.11	6.83	8.18	8.31	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Total Organic Carbon _D ^{M#}	-	3.40	3.74	6.24	3.05	-	-	% w/w	0.03	A-T-032s
Arsenic _D ^{M#}	5	11	10	32	9	8	11	mg/kg	1	A-T-024s
Beryllium _D	<0.5	0.7	1.3	1.2	1.0	0.5	1.1	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	4.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	0.8	1.6	0.6	2.8	0.7	0.7	1.3	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	29	56	26	160	33	40	66	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	96	250	44	282	45	91	251	mg/kg	1	A-T-024s
Mercury _D	1.21	0.83	<0.17	0.50	0.30	0.64	0.56	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	12	19	16	42	13	14	21	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	16	22	26	34	22	12	25	mg/kg	1	A-T-024s
Zinc _D ^{M#}	71	180	44	179	39	75	215	mg/kg	5	A-T-024s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/1	23/00380/3	23/00380/4	23/00380/5	23/00380/6	23/00380/8	23/00380/9	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS2	WS3	WS3	TP1	TP3			
Depth to Top	0.40	0.60	1.30	0.50	1.30	0.50	0.50			
Depth To Bottom										
Date Sampled	11-Jan-23	11-Jan-23	11-Jan-23	09-Jan-23	11-Jan-23	09-Jan-23	09-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AB	4AB	5A	4AB	6A	4ABE	4AB			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	-	Amosite	-	NAD	NAD			A-T-045
Asbestos Matrix (visual) ₀	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) ₀	-	-	-	Loose Fibres	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? ₀	N/A	N/A	-	N/A	-	N/A	N/A			A-T-045
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) ₀	-	-	-	<0.001	-	-	-	% w/w	0.001	A-T-054

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/1	23/00380/3	23/00380/4	23/00380/5	23/00380/6	23/00380/8	23/00380/9	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS2	WS3	WS3	TP1	TP3			
Depth to Top	0.40	0.60	1.30	0.50	1.30	0.50	0.50			
Depth To Bottom										
Date Sampled	11-Jan-23	11-Jan-23	11-Jan-23	09-Jan-23	11-Jan-23	09-Jan-23	09-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AB	4AB	5A	4AB	6A	4ABE	4AB			
PAH-16MS										
Acenaphthene _A ^{M#}	0.17	0.77	1.62	0.43	0.03	0.05	19	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.02	0.03	0.01	0.02	<0.01	0.02	0.18	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.31	0.77	1.25	0.56	<0.02	0.09	13.5	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.17	2.35	2.65	2.03	<0.04	0.35	16.3	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	2.21	2.08	2.09	1.69	<0.04	0.32	9.50	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.26	2.20	2.42	1.90	<0.05	0.35	11.1	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	1.34	1.11	0.98	0.83	<0.05	0.15	3.55	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.68	0.68	0.74	0.58	<0.07	0.11	3.63	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	2.19	2.29	2.50	2.01	<0.06	0.40	14.4	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.30	0.25	0.20	0.19	<0.04	<0.04	0.88	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	4.07	5.75	7.86	4.97	0.13	0.86	42.2	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.10	0.42	0.83	0.24	<0.01	0.04	10.4	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.56	1.27	1.13	0.97	<0.03	0.16	4.72	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.03	0.19	0.74	0.12	<0.03	0.04	20.8	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	1.29	3.13	5.07	2.43	0.09	0.48	59.4	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	3.78	5.09	6.30	4.21	0.13	0.84	31.4	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	22.5	28.4	36.4	23.2	0.38	4.26	261	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/1	23/00380/3	23/00380/4	23/00380/5	23/00380/6	23/00380/8	23/00380/9	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS2	WS3	WS3	TP1	TP3			
Depth to Top	0.40	0.60	1.30	0.50	1.30	0.50	0.50			
Depth To Bottom										
Date Sampled	11-Jan-23	11-Jan-23	11-Jan-23	09-Jan-23	11-Jan-23	09-Jan-23	09-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4AB	4AB	5A	4AB	6A	4ABE	4AB			
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	<1	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	-	<1	-	<1	-	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	-	3	-	2	-	-	-	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	-	10	-	5	-	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	-	222	-	106	-	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	-	235	-	113	-	-	-	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	-	<2	-	<2	-	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	-	1	-	1	-	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	18	-	17	-	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	68	-	105	-	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	-	258	-	336	-	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	-	345	-	459	-	-	-	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	-	580	-	572	-	-	-	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s
MTBE _A [#]	-	<0.01	-	<0.01	-	-	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/10	23/00380/11	23/00380/12	23/00380/13	23/00380/14	23/00380/15	23/00380/16	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP6	TP9	TP9	TP10	BH1	BH1			
Depth to Top	1.80	0.60	0.60	1.2	0.90	0.50	1.50			
Depth To Bottom										
Date Sampled	09-Jan-23	09-Jan-23	12-Jan-23	12-Jan-23	12-Jan-23	10-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4A	4AE	6A	5A	4A	4AB	3			
% Stones >10mm _A	1.0	15.4	<0.1	<0.1	3.7	36.0	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.85	8.12	5.89	7.45	6.28	8.09	7.20	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01	0.02	0.14	<0.01	-	0.01	0.05	g/l	0.01	A-T-026s
Total Organic Carbon _D ^{M#}	-	-	-	-	-	5.36	0.83	% w/w	0.03	A-T-032s
Arsenic _D ^{M#}	<1	25	5	3	13	16	7	mg/kg	1	A-T-024s
Beryllium _D	<0.5	1.9	0.8	0.7	0.6	1.2	1.5	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	<0.5	2.1	1.3	1.2	0.9	1.3	1.3	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	5	124	20	4	56	72	25	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	5	209	25	13	104	86	22	mg/kg	1	A-T-024s
Mercury _D	<0.17	0.45	<0.17	<0.17	1.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	4	36	21	14	17	26	42	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	5	36	29	23	26	26	34	mg/kg	1	A-T-024s
Zinc _D ^{M#}	13	235	41	23	44	78	51	mg/kg	5	A-T-024s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/10	23/00380/11	23/00380/12	23/00380/13	23/00380/14	23/00380/15	23/00380/16	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP6	TP9	TP9	TP10	BH1	BH1			
Depth to Top	1.80	0.60	0.60	1.2	0.90	0.50	1.50			
Depth To Bottom										
Date Sampled	09-Jan-23	09-Jan-23	12-Jan-23	12-Jan-23	12-Jan-23	10-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4A	4AE	6A	5A	4A	4AB	3			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	-	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	-	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/10	23/00380/11	23/00380/12	23/00380/13	23/00380/14	23/00380/15	23/00380/16	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP6	TP9	TP9	TP10	BH1	BH1			
Depth to Top	1.80	0.60	0.60	1.2	0.90	0.50	1.50			
Depth To Bottom										
Date Sampled	09-Jan-23	09-Jan-23	12-Jan-23	12-Jan-23	12-Jan-23	10-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4A	4AE	6A	5A	4A	4AB	3			
PAH-16MS										
Acenaphthene _A ^{M#}	0.04	0.34	0.04	<0.01	3.21	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	0.01	<0.01	<0.01	0.15	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.06	0.38	0.04	<0.02	3.70	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.11	0.58	0.10	<0.04	7.00	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.08	0.42	0.08	<0.04	4.79	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.08	0.50	0.10	<0.05	5.39	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	0.19	<0.05	<0.05	1.55	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	0.14	<0.07	<0.07	1.67	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.13	0.65	0.11	<0.06	7.35	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	0.04	<0.04	<0.04	0.39	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.26	2.04	0.30	<0.08	18.3	0.10	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.04	0.26	0.03	<0.01	2.43	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	0.20	0.04	<0.03	1.65	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	0.28	<0.03	<0.03	0.31	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.33	1.99	0.24	<0.03	15.4	0.07	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.26	1.77	0.28	<0.07	18.6	0.10	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	1.39	9.79	1.36	<0.08	91.9	0.27	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/10	23/00380/11	23/00380/12	23/00380/13	23/00380/14	23/00380/15	23/00380/16	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP3	TP6	TP9	TP9	TP10	BH1	BH1			
Depth to Top	1.80	0.60	0.60	1.2	0.90	0.50	1.50			
Depth To Bottom										
Date Sampled	09-Jan-23	09-Jan-23	12-Jan-23	12-Jan-23	12-Jan-23	10-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	4A	4AE	6A	5A	4A	4AB	3			
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	-	-	-	-	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	-	-	-	-	-	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	-	-	-	-	-	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	-	-	-	-	-	2	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	-	-	-	-	-	8	9	mg/kg	1	A-T-055s
Total Aliphatics _A	-	-	-	-	-	11	9	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	-	-	-	-	-	<2	<2	mg/kg	1	A-T-055s
Aro >C10-C12 _A	-	-	-	-	-	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	-	-	-	-	2	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	-	-	-	-	7	1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	-	-	-	-	-	19	2	mg/kg	1	A-T-055s
Total Aromatics _A	-	-	-	-	-	29	4	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	-	-	-	-	-	39	12	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	-	-	-	-	-	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/17	23/00380/18	23/00380/19	23/00380/20	23/00380/21	23/00380/22	23/00380/23	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH2	BH1	BH2	WS1	WS2	WS3	BH1			
Depth to Top	0.80	2.50	16.40	1.80	2.50	4.50	5.00			
Depth To Bottom							5.45			
Date Sampled	12-Jan-23	10-Jan-23	13-Jan-23	09-Jan-23	11-Jan-23	11-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6ABE	6A	3	3	4A	4A	4			
% Stones >10mm _A	6.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.22	7.32	9.11	8.72	7.05	7.50	7.90	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.02	0.02	0.05	<0.01	<0.01	<0.01	<0.01	g/l	0.01	A-T-026s
Arsenic _D ^{M#}	12	-	-	-	-	-	-	mg/kg	1	A-T-024s
Beryllium _D	0.8	-	-	-	-	-	-	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	-	-	-	-	-	-	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	1.1	-	-	-	-	-	-	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	43	-	-	-	-	-	-	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	-	-	-	-	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	194	-	-	-	-	-	-	mg/kg	1	A-T-024s
Mercury _D	0.98	-	-	-	-	-	-	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	19	-	-	-	-	-	-	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	-	-	-	-	-	-	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	23	-	-	-	-	-	-	mg/kg	1	A-T-024s
Zinc _D ^{M#}	126	-	-	-	-	-	-	mg/kg	5	A-T-024s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/17	23/00380/18	23/00380/19	23/00380/20	23/00380/21	23/00380/22	23/00380/23	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH2	BH1	BH2	WS1	WS2	WS3	BH1			
Depth to Top	0.80	2.50	16.40	1.80	2.50	4.50	5.00			
Depth To Bottom							5.45			
Date Sampled	12-Jan-23	10-Jan-23	13-Jan-23	09-Jan-23	11-Jan-23	11-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6ABE	6A	3	3	4A	4A	4			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	-	-	-	-	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	-	-	-	-	-	-			A-T-045

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/17	23/00380/18	23/00380/19	23/00380/20	23/00380/21	23/00380/22	23/00380/23	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH2	BH1	BH2	WS1	WS2	WS3	BH1			
Depth to Top	0.80	2.50	16.40	1.80	2.50	4.50	5.00			
Depth To Bottom							5.45			
Date Sampled	12-Jan-23	10-Jan-23	13-Jan-23	09-Jan-23	11-Jan-23	11-Jan-23	10-Jan-23			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Sample Matrix Code	6ABE	6A	3	3	4A	4A	4			
PAH-16MS										
Acenaphthene _A ^{M#}	0.15	-	-	-	-	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	-	-	-	-	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.12	-	-	-	-	-	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.32	-	-	-	-	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.27	-	-	-	-	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.35	-	-	-	-	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.12	-	-	-	-	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.09	-	-	-	-	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.41	-	-	-	-	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	-	-	-	-	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.08	-	-	-	-	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.07	-	-	-	-	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.14	-	-	-	-	-	-	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.05	-	-	-	-	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.63	-	-	-	-	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.94	-	-	-	-	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	4.74	-	-	-	-	-	-	mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/00380

Client Project Name: Olive School

Client Project Ref: 01/10/2204

Lab Sample ID	23/00380/24							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH2									
Depth to Top	10.60									
Depth To Bottom										
Date Sampled	12-Jan-23									
Sample Type	Soil									
Sample Matrix Code	4									
% Stones >10mm _A	<0.1							% w/w	0.1	A-T-044
pH _D ^{M#}	8.65							pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	<0.01							g/l	0.01	A-T-026s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

Soil chemical analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Subscript "A" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.

EPH CWG results have humics mathematically subtracted through instrument calculation

TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Clancy Consulting, Dunham Court, 2 Dunham Road, Altrincham, Cheshire, UK, WA14 4NX

Project No: 23/00380

Date Received: 18/01/2023 (am)

Project: Olive School

Cool Box Temperatures (°C): 4.2, 4.1, 4.4

Clients Project No: 01/10/2204

Lab Sample ID	23/00380/4
Client Sample No	
Client Sample ID/Depth	WS2 1.30m
Date Sampled	11/01/23
Deviation Code	
D (no glass)	✓

Key

D (no glass) *Glass container not provided for extractable organics analysis*

Note: If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3 (for water samples $5 \pm 3^{\circ}\text{C}$), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/00380/1	23/00380/3	23/00380/4	23/00380/5	23/00380/6	23/00380/8	23/00380/9	23/00380/10	23/00380/11	23/00380/12	23/00380/13	23/00380/14
Client Sample No												
Client Sample ID/Depth	WS1 0.40m	WS2 0.60m	WS2 1.30m	WS3 0.50m	WS3 1.30m	TP1 0.50m	TP3 0.50m	TP3 1.80m	TP6 0.60m	TP9 0.60m	TP9 1.2m	TP10 0.90m
Date Sampled	11/01/23	11/01/23	11/01/23	09/01/23	11/01/23	09/01/23	09/01/23	09/01/23	09/01/23	12/01/23	12/01/23	12/01/23
A-T-004s												
A-T-007s												
A-T-019s	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023
A-T-022s		20/01/2023		20/01/2023								
A-T-024s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-025w												
A-T-026s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	
A-T-026w												
A-T-027s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-030s												
A-T-031s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-031w												
A-T-032s		23/01/2023	23/01/2023	23/01/2023	23/01/2023							
A-T-032w												
A-T-037w												
A-T-040s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-044	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023
A-T-045	19/01/2023	19/01/2023		19/01/2023		19/01/2023	19/01/2023	19/01/2023	19/01/2023	19/01/2023		19/01/2023
A-T-050w												
A-T-054				24/01/2023								
A-T-055s		23/01/2023		23/01/2023								
A-T-ANCs												
Calc-As Recd		23/01/2023		23/01/2023								
Calc-no stones												
Probe (w)												

Lab Sample ID	23/00380/15	23/00380/16	23/00380/17	23/00380/18	23/00380/19	23/00380/20	23/00380/21	23/00380/22	23/00380/23	23/00380/24
Client Sample No										
Client Sample ID/Depth	BH1 0.50m	BH1 1.50m	BH2 0.80m	BH1 2.50m	BH2 16.40m	WS1 1.80m	WS2 2.50m	WS3 4.50m	BH1 5.00-5.45m	BH2 10.60m
Date Sampled	10/01/23	10/01/23	12/01/23	10/01/23	13/01/23	09/01/23	11/01/23	11/01/23	10/01/23	12/01/23
A-T-004s	23/01/2023	23/01/2023								
A-T-007s	23/01/2023	23/01/2023								
A-T-019s	20/01/2023	20/01/2023	20/01/2023							
A-T-022s	20/01/2023	20/01/2023								
A-T-024s	23/01/2023	23/01/2023	23/01/2023							
A-T-025w	25/01/2023	25/01/2023								
A-T-026s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-026w	25/01/2023	25/01/2023								
A-T-027s	23/01/2023	23/01/2023	23/01/2023							
A-T-030s	23/01/2023	23/01/2023								
A-T-031s	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023	23/01/2023
A-T-031w	25/01/2023	25/01/2023								
A-T-032s	23/01/2023	23/01/2023								
A-T-032w	25/01/2023	25/01/2023								
A-T-037w	25/01/2023	25/01/2023								
A-T-040s	23/01/2023	23/01/2023	23/01/2023							
A-T-044	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023	20/01/2023
A-T-045	19/01/2023	19/01/2023	19/01/2023							
A-T-050w	25/01/2023	25/01/2023								
A-T-054										
A-T-055s	23/01/2023	23/01/2023								
A-T-ANCs	23/01/2023	23/01/2023								
Calc-As Recd	23/01/2023	23/01/2023								
Calc-no stones	25/01/2023	25/01/2023								
Probe (w)	25/01/2023	25/01/2023								

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

APPENDIX IV
GEOTECHNIAL LABORATORY TEST RESULTS



LABORATORY REPORT



Contract Number: PSL23/0349

Report Date: 26 January 2023
Client's Reference: 10 2204
Client Name: Clancy Consulting
Dunham Court
2 Dunham Road
Altrincham
Cheshire
WA144NX

For the attention of: Sean Pilling

Contract Title: Olive
Date Received: 18/1/2023
Date Commenced: 18/1/2023
Date Completed: 26/1/2023

Notes: Opinions and Interpretations are outside the UKAS Accreditation

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

Checked and Approved Signatories:

A Watkins
(Director)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

S Eyre
(Senior Technician)

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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH1		U	2.00	2.45	Firm brown mottled grey slightly gravelly sandy CLAY.
BH2		U	18.50	18.95	Soft brown slightly gravelly very sandy CLAY.
TP4		D	2.20		Brown mottled grey sandy CLAY.
TP1		D	1.30		Brown mottled grey sandy CLAY.
WS2		D	1.30		Brown slightly gravelly very sandy CLAY.
BH1		B	0.90		Dark brown very sandy very clayey GRAVEL.
BH2		B	1.20	1.65	Brown very sandy very clayey GRAVEL.
BH2		B	4.00	4.45	Brown slightly silty SAND.
BH1		B	3.00	3.45	Brown slightly clayey silty SAND.
WS2		D	3.50		Brown slightly clayey silty SAND.
BH1		D	6.50	6.95	Brown silty SAND.



Olive

Contract No:

PSL23/0349

Client Ref:

10 2204

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

[illegible]

SYMBOLS : NP : Non Plastic

*** : Liquid Limit and Plastic Limit Wet Sieved.**



Olive

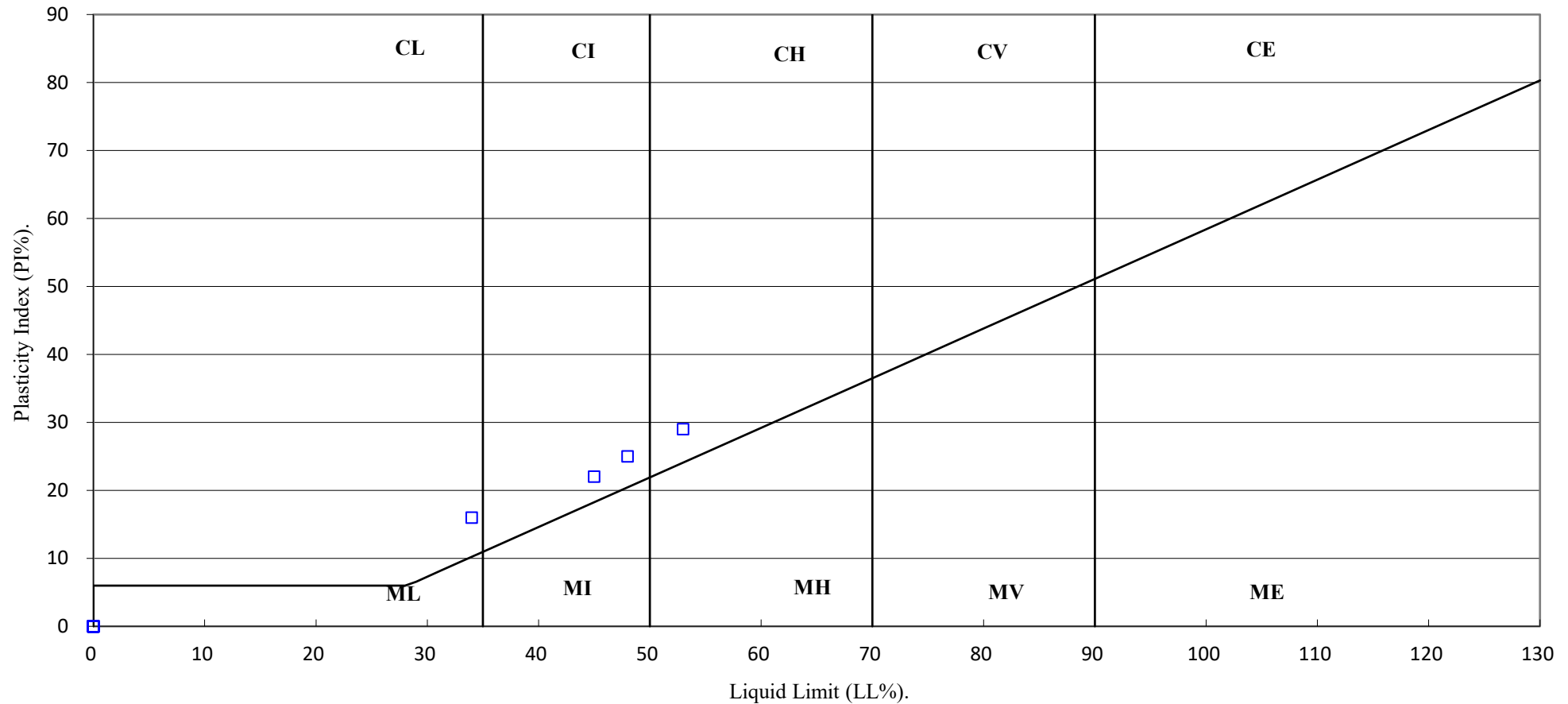
Contract No:

PSL23/0349

Client Ref:

10 2204

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



Olive

Contract No:

PSL23/0349

Client Ref:

10 2204

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number:

BH1

Top Depth (m):

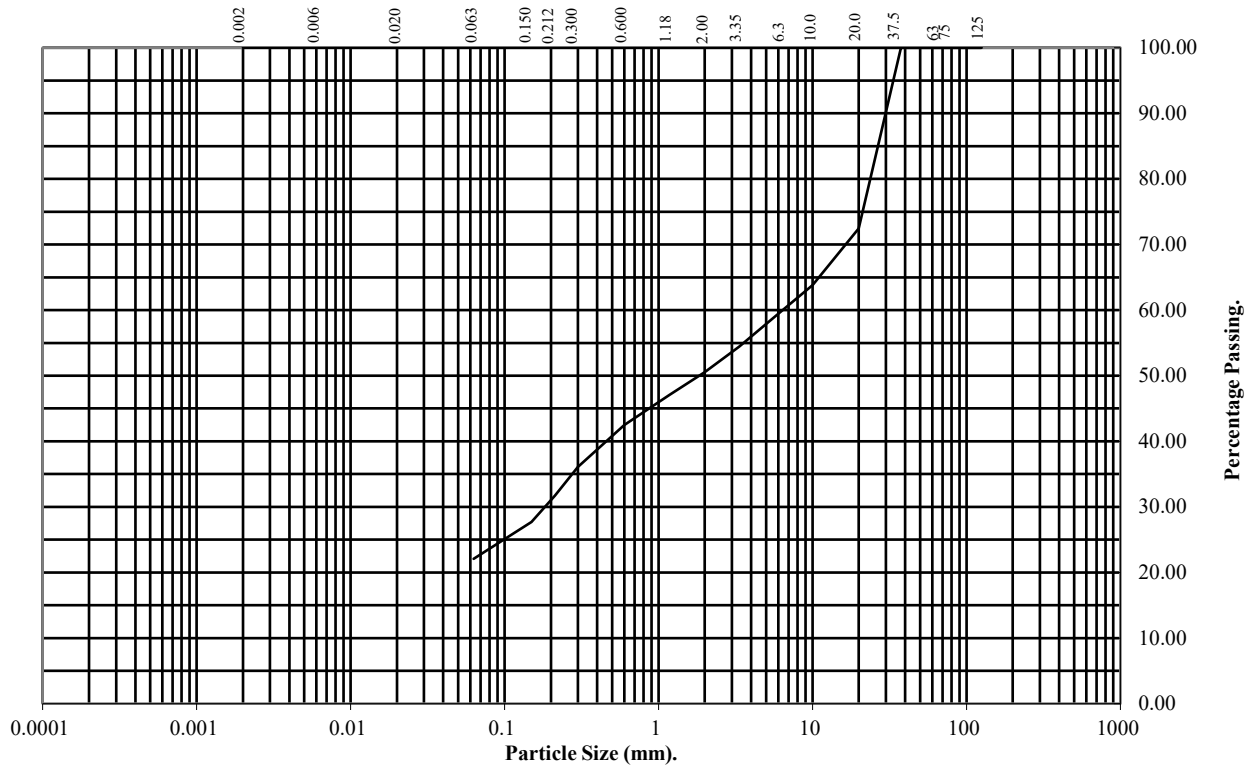
0.90

Sample Number:

Base Depth(m):

Sample Type:

B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	72
10	64
6.3	60
3.35	54
2	51
1.18	47
0.6	42
0.3	36
0.212	32
0.15	28
0.063	22

Soil Fraction	Total Percentage
Cobbles	0
Gravel	49
Sand	29
Silt/Clay	22

Remarks:

See Summary of Soil Descriptions



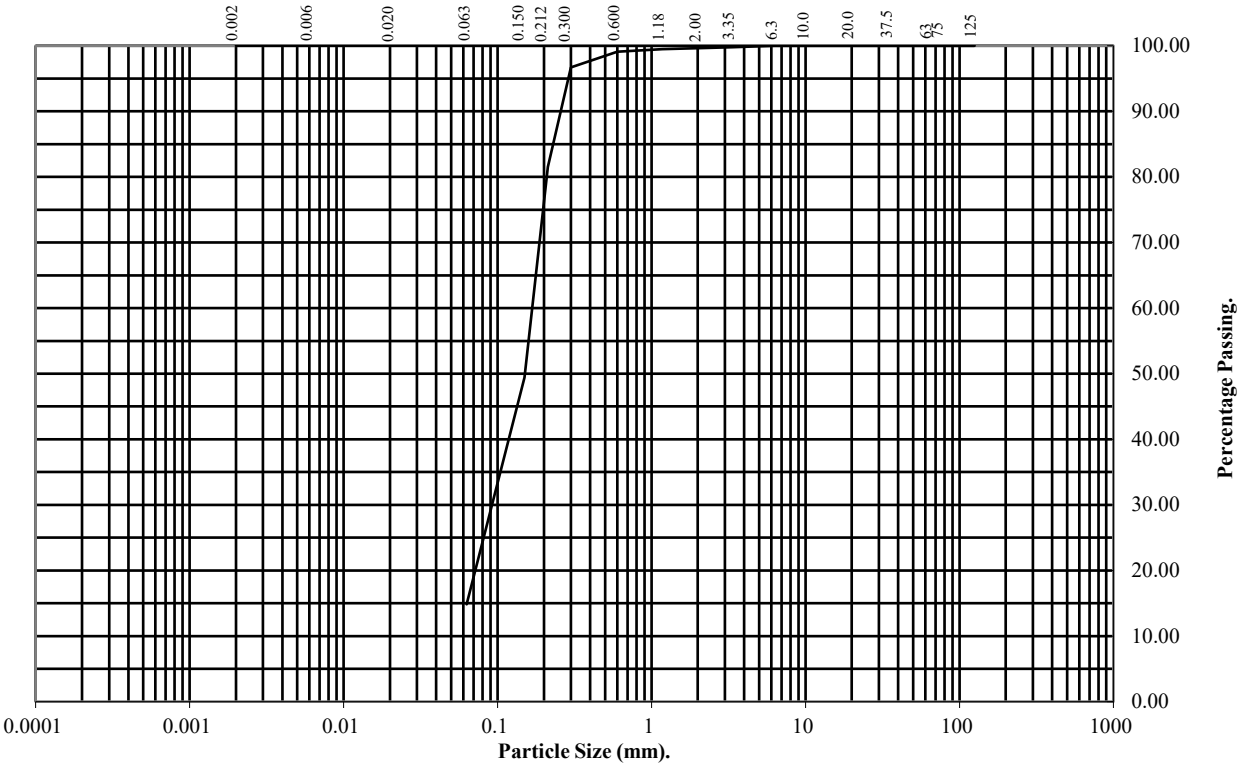
Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990
Wet Sieve, Clause 9.2

Hole Number: BH1 Top Depth (m): 3.00
Sample Number: Base Depth(m): 3.45
Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.6	99
0.3	97
0.212	82
0.15	49
0.063	15

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	85
Silt/Clay	15

Remarks:
See Summary of Soil Descriptions



Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

PARTICLE SIZE DISTRIBUTION TEST

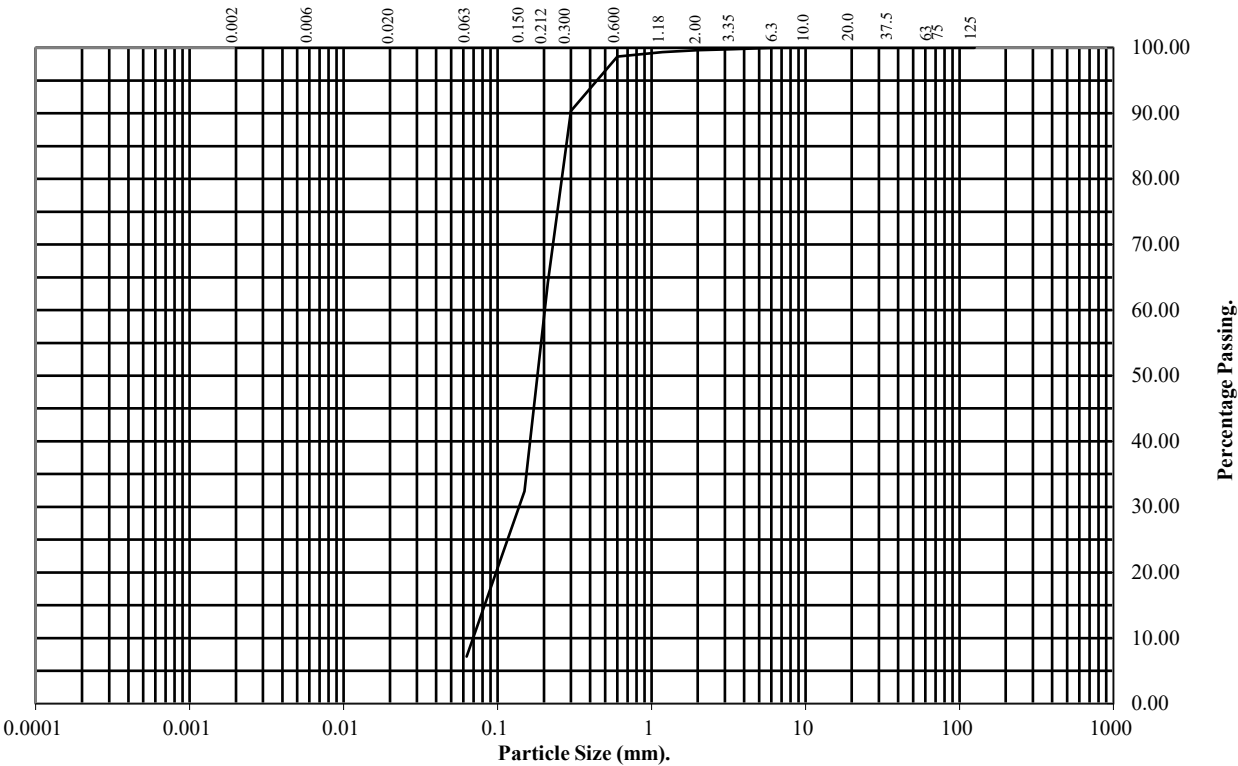
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH1 Top Depth (m): 6.50

Sample Number: Base Depth(m): 6.95

Sample Type: D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.6	99
0.3	90
0.212	64
0.15	32
0.063	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	93
Silt/Clay	7

Remarks:
See Summary of Soil Descriptions



Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

PARTICLE SIZE DISTRIBUTION TEST

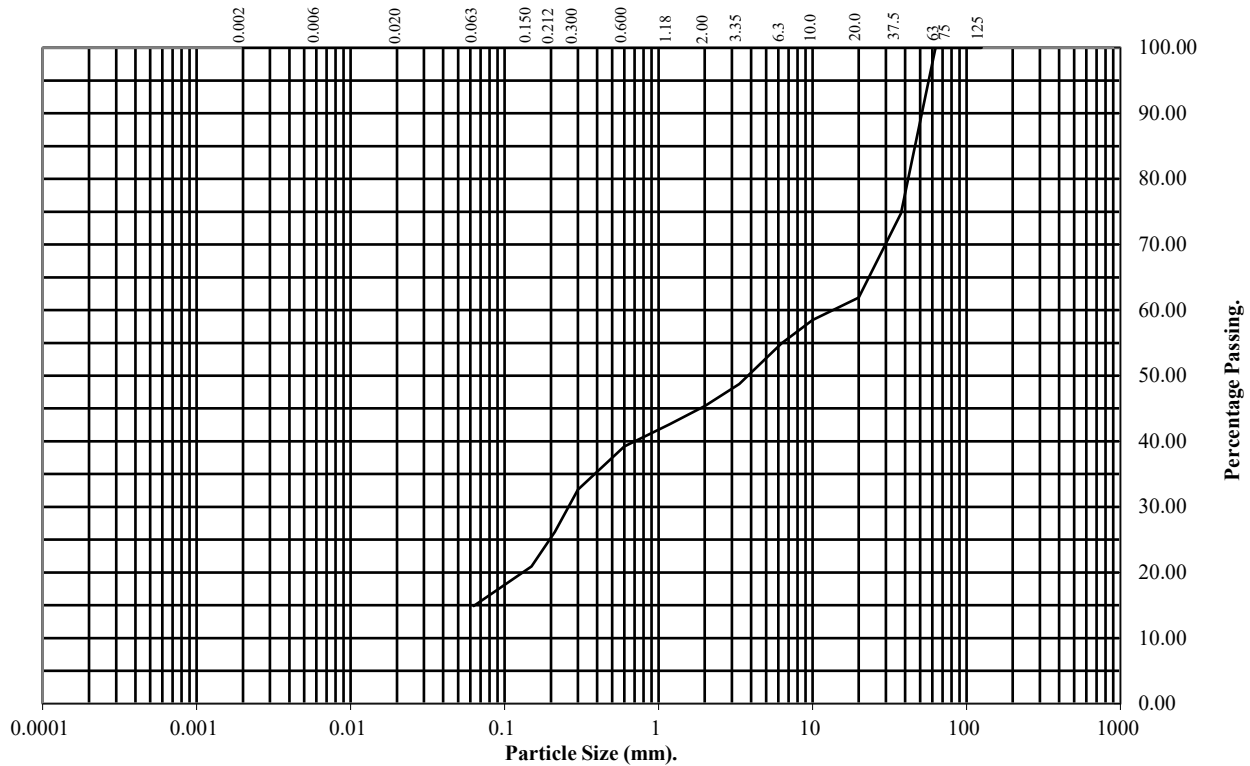
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH2 Top Depth (m): 1.20

Sample Number: Base Depth(m): 1.65

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	75
20	62
10	58
6.3	55
3.35	49
2	45
1.18	43
0.6	39
0.3	33
0.212	26
0.15	21
0.063	15

Soil Fraction	Total Percentage
Cobbles	0
Gravel	55
Sand	30
Silt/Clay	15

Remarks:

See Summary of Soil Descriptions



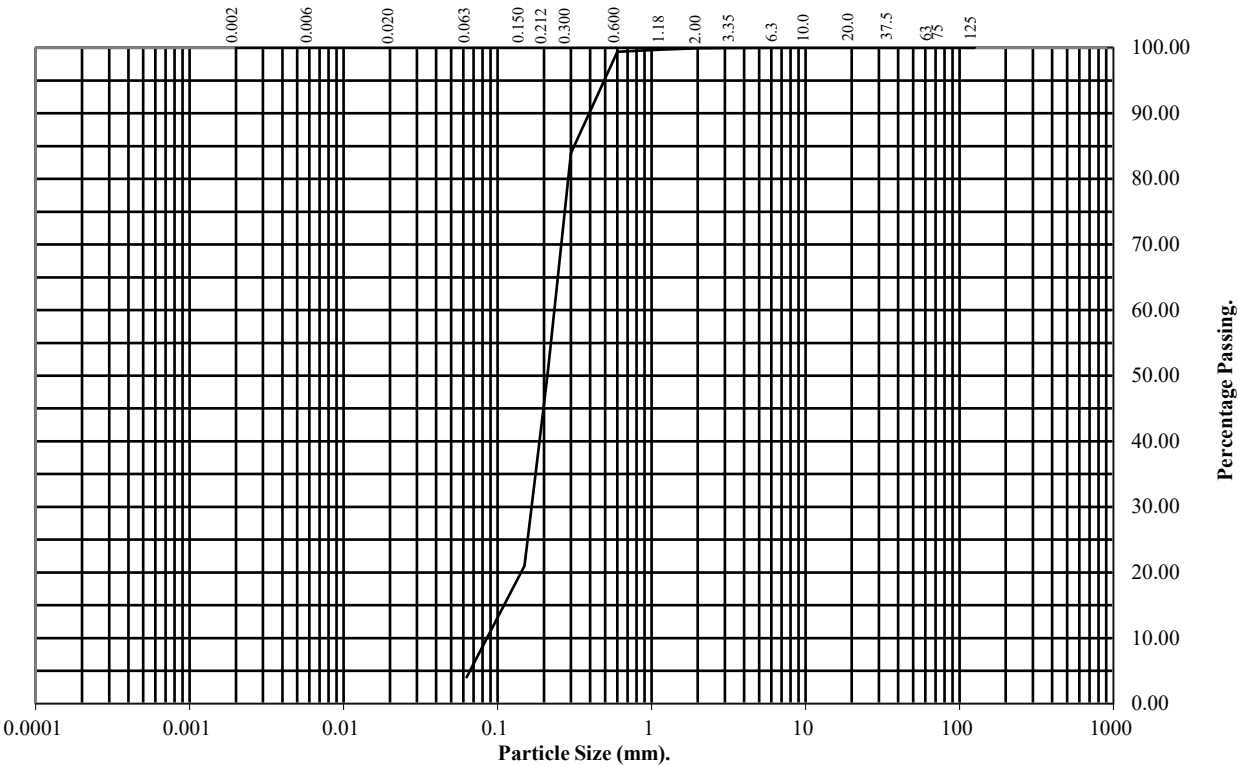
Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990
Wet Sieve, Clause 9.2

Hole Number: BH2 Top Depth (m): 4.00
Sample Number: Base Depth(m): 4.45
Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	100
0.6	99
0.3	84
0.212	51
0.15	21
0.063	4

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	96
Silt/Clay	4

Remarks:
See Summary of Soil Descriptions



Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

PARTICLE SIZE DISTRIBUTION TEST

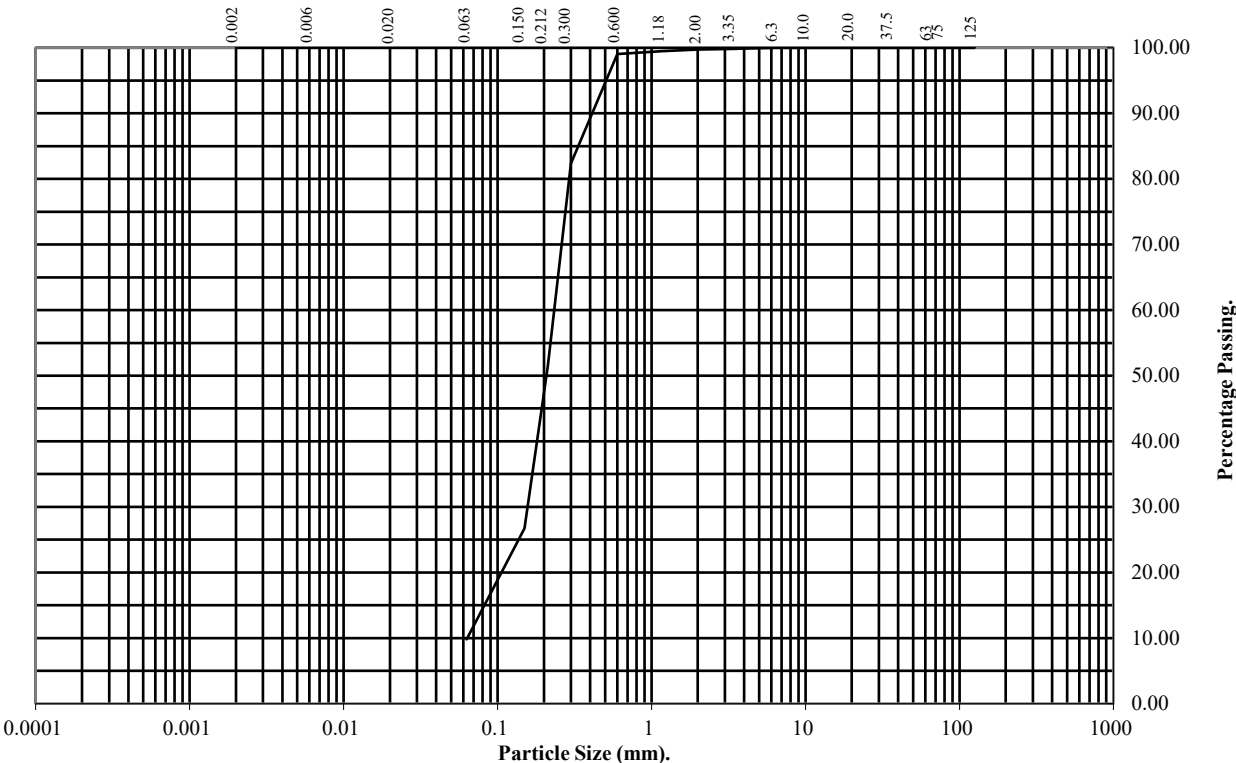
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: WS2 Top Depth (m): 3.50

Sample Number: Base Depth(m):

Sample Type: D



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.6	99
0.3	82
0.212	52
0.15	27
0.063	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	90
Silt/Clay	10

Remarks:
See Summary of Soil Descriptions



Olive

Contract No:
PSL23/0349
Client Ref:
10 2204

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

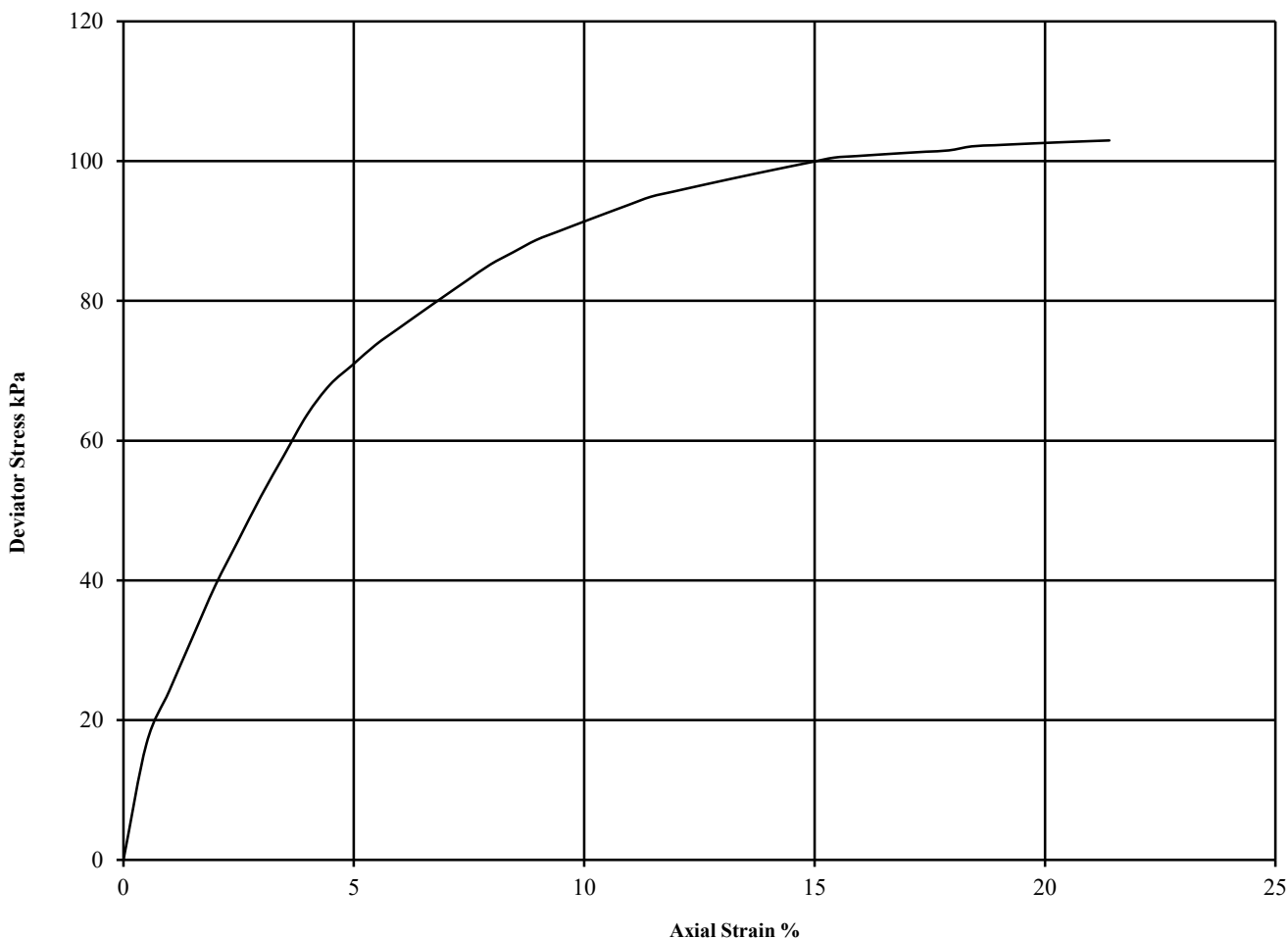
Hole Number: BH1

Top Depth (m): 2.00

Sample Number:

Base Depth (m): 2.45

Sample Type U



Diameter (mm):		103		Height (mm):		207		Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample Sample taken from top of tube Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.33 See summary of soil descriptions		
				θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$					
1	26	1.98	1.57	40	103	51	21.4	Plastic			



Olive

Contract No:

PSL23/0349

Client Ref:

10 2204

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

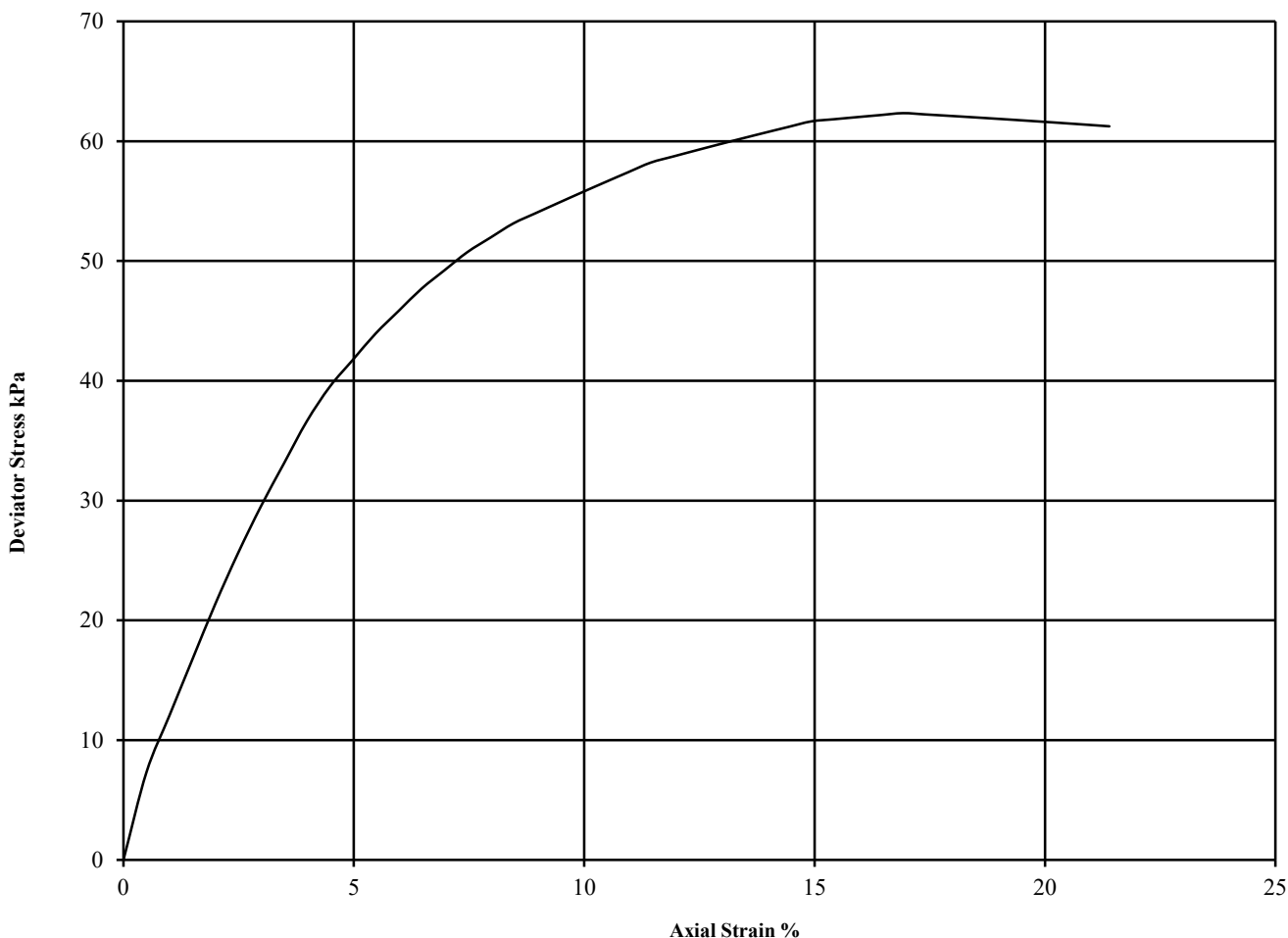
Hole Number: BH2

Top Depth (m): 18.50

Sample Number:

Base Depth (m): 18.95

Sample Type U



Diameter (mm):		103	Height (mm):		207	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m3)	Dry Density (Mg/m3)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Undisturbed Sample
				θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$			Sample taken from top of tube
									Rate of strain = 2 %/min
									Latex Membrane used 0.2 mm thick,
									Correction applied 0.34
1	18	2.20	1.87	370	62	31	16.9	Plastic	See summary of soil descriptions



Olive

Contract No:

PSL23/0349

Client Ref:

10 2204

APPENDIX V
GROUND GAS MONITORING RESULTS

MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 1 of 6

DATE: 23/01/2023

Ambient Concentration (% Volume)												
			CH4		0.0		CO2		0.1			
			O2		19.9							
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest		Steady		Lowest	H2S				
Ref	GWL	Depth	CH4		CO2	CH4			CO2	O2		
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	3.30	9	0.00	0.00	3.60	0.00	0.00	3.50	3.50	0	0.10	
BH2 - #New#	4.20	12	0.00	0.00	3.20	0.00	0.00	3.20	15.40	0	-0.10	
WS1 - #New#	Dry	1.5	0.00	0.00	3.60	0.00	0.00	3.00	2.80	0	0.20	
WS2 - #New#	Dry	2	0.00	0.00	0.60	0.00	0.00	3.10	1.00	0	0.20	

Barometric Pressure (mb):	1031	Monitoring Equipment:	GFM436
Barometric Trend:	Rising	Date Of Last Calibration:	08/04/2022
Weather:	Overcast	Operator:	SP
Ground Condition:	Dry		

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked:	Approved:
-----------------	------------------

MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 2 of 6

DATE: 07/02/2023

Ambient Concentration (% Volume)			CH4		0.0		CO2		0.0			
			O2		20.6							
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest		Steady		Lowest	H2S				
Ref	GWL	Depth	CH4		CO2	CH4			CO2	O2		
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	3.10	9	0.00	0.00	4.10	0.00	0.00	4.10	-0.10	0	0.00	0.4 l/hr initial peak
BH2 - #New#	4.25	12	0.00	0.00	3.70	0.00	0.00	3.70	15.30	0	-0.40	
WS1 - #New#	Dry	1.5	0.00	0.00	1.00	0.00	0.00	0.90	-0.10	0	0.00	0.4 l/hr initial peak
WS2 - #New#	Dry	2	0.00	0.00	3.70	0.00	0.00	3.70	3.10	0	0.30	0.7 l/hr initial peak

Barometric Pressure (mb):	1036	Monitoring Equipment:	GFM436
Barometric Trend:	Steady	Date Of Last Calibration:	08/04/2022
Weather:	Overcast	Operator:	SP
Ground Condition:	Dry		

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked: DK	Approved: DK
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MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 3 of 6

DATE: 21/02/2023

Ambient Concentration (% Volume)												
			CH4		0.0		CO2		2.0			
			O2		17.2							
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest		Steady		Lowest	H2S				
Ref	GWL	Depth	CH4		CO2	CH4			CO2	O2		
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	2.80	9	0.00	0.00	3.10	0.00	0.00	2.40	16.3	0.00	0.00	
BH2 - #New#	4.12	12	0.00	0.00	1.40	0.00	0.00	0.80	17.8	0.00	0.00	
WS1 - #New#	Dry	1.5	0.00	0.00	3.40	0.00	0.00	3.10	17.3	0.00	0.30	
WS2 - #New#	Dry	2	0.00	0.00	3.10	0.00	0.00	3.10	16.8	0.00	0.00	

Barometric Pressure (mb):	1010	Monitoring Equipment:	GFM436
Barometric Trend:	Steady	Date Of Last Calibration:	08/04/2022
Weather:	Overcast	Operator:	TB
Ground Condition:	Dry		

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked: SP	Approved: NR
--------------------	---------------------

MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 4 of 6

DATE: 21/03/2023

Ambient Concentration (% Volume)			CH4		0.0		CO2		0.0			
			O2		19.6							
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest		Steady		Lowest	H2S				
Ref	GWL	Depth	CH4		CO2	CH4			CO2	O2		
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	2.61	9	0.00	0.00	1.30	0.00	0.00	1.10	17.20	0	0.10	
BH2 - #New#	3.63	12	0.00	0.00	0.40	0.00	0.00	0.40	18.40	0	0.10	
WS1 - #New#	Dry	1.5	0.00	0.00	0.90	0.00	0.00	0.20	16.30	0	0.10	
WS2 - #New#	Dry	2	0.00	0.00	2.30	0.00	0.00	2.10	17.20	0	-0.10	

Barometric Pressure (mb): 997	Monitoring Equipment: GFM436
Barometric Trend: Falling	Date Of Last Calibration: 08/04/2022
Weather: Overcast	Operator: TB
Ground Condition: Wet	

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked: SP	Approved: NR
--------------------	---------------------

MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 5 of 6

DATE: 19/04/2023

Ambient Concentration (% Volume)			CH4	0.0	CO2	0.0	O2	20.3				
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest			Steady			Lowest	H2S		
Ref	GWL	Depth	CH4		CO2	CH4		CO2	O2			
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	2.84	9	0.00	0.00	0.30	0.00	0.00	0.10	18.40	0	0.00	
BH2 - #New#	Dry	12	0.00	0.00	0.20	0.00	0.00	0.20	19.10	0	0.00	
WS1 - #New#	3.71	1.5	0.00	0.00	0.00	0.00	0.00	0.00	19.30	0	-0.10	
WS2 - #New#	Dry	2	0.00	0.00	0.00	0.00	0.00	0.00	18.90	0	0.00	

Barometric Pressure (mb):	1021	Monitoring Equipment:	GFM436
Barometric Trend:	Rising	Date Of Last Calibration:	05/04/2023
Weather:	overcast	Operator:	TB
Ground Condition:	Wet		

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked: SP	Approved: NR
-------------	--------------

MONITORING RESULTS

CLIENT: Conlon Construction Ltd

JOB NO: 10/2204

SITE: Olive School Cheetham Hill

SHEET: 6 of 6

DATE: 26/04/2023

Ambient Concentration (% Volume)												
			CH4		0.0		CO2		0.0			
			O2		19.8							
Monitoring Point			Gas Concentration								Gas Flow Rate	Remarks
			Highest		Steady		Lowest	H2S				
Ref	GWL	Depth	CH4		CO2	CH4			CO2	O2		
	(m)BGL	(m) BGL	% LEL	% v/v	(%)	% LEL	% v/v	(%)	(%)	ppm	l/hr	
BH1 - #New#	2.80	9	0.00	0.00	0.80	0.00	0.00	0.20	17.90	0	0.00	
BH2 - #New#	3.62	12	0.00	0.00	0.00	0.00	0.00	0.00	18.80	0	0.00	
WS1 - #New#	Dry	1.5	0.00	0.00	0.20	0.00	0.00	0.00	18.30	0	0.00	
WS2 - #New#	Dry	2	0.00	0.00	0.10	0.00	0.00	0.10	19.10	0	0.00	

Barometric Pressure (mb):	1012	Monitoring Equipment:	GFM436
Barometric Trend:	Steady	Date Of Last Calibration:	05/04/2023
Weather:	Overcast with sunny spells	Operator:	TB
Ground Condition:	Dry		

KEY	Remarks
ND - None Detected NR - Not Recorded POS - Positive Flow NEG - Negative Flow	-

Checked: SP	Approved: NR
--------------------	---------------------

APPENDIX VI
SOAKAWAY RESULTS



Dunham Court, 2 Dunham Road
Altrincham, Cheshire, WA14 4NX
TEL: 0161 613 6000
FAX: 0161 613 6099

Site Name	Job Number	Date
Olive School	10/2204	Jan-23
Calculations For	Calcs By	Checked By
SA01	SP	SHP

Soil Infiltration Rate Calculations

Width of trial pit;	ltrial =	0.70	m
Length of trial pit;	btrial =	2.10	m
Depth of trial pit	dpit =	2.60	m
Depth of trial pit (below invert);	dtrial =	1.14	m

Free volume (if fill used);	Vtrial =	100	%	1.00	Decimal
-----------------------------	----------	-----	---	------	---------

		Water Remaining		Water Depth BGL	
Depth of water at start of test	dstart =	1.120	m	1.480	m
Depth of water at end of test	dend =	1.260	m	1.340	m
Total water hight	dtest = (dstart-dend) =	-0.140			

		Water Remaining		Water Depth BGL	
75% depth of pit;	d75 = (dtrial X 0.75) =	0.855	m	1.745	m
50% depth of pit;	d50 = (dtrial X 0.50) =	0.570	m	2.030	m
25% depth of pit;	d25 = (dtrial X 0.25) =	0.285	m	2.315	m

Test Incomplete - Failed to Drain to 25%

Indication of Soil Infiltration Rate (NOT TO BRE Digest 365)

Base area	baria = (ltrial X btrial) =	1.47	m ²
Storage volume from start test to end test	Vtest = (baria X dtest) X Vtrial =	-0.2058	m ³
Average wetted area	waria = (((ltrial X 2) + (btrial X 2)) X (dstart-dtest / 2)) + baria) =	8.134	m ²
Duration of test	T =	240	mins
Soil infiltration rate;	f = ((Vtest / waria) / T) / 60 =	-1.75703E-06	m/s



Dunham Court, 2 Dunham Road
Altrincham, Cheshire, WA14 4NX
TEL: 0161 613 6000
FAX: 0161 613 6099

Site Name	Job Number	Date
Olive School	10/2204	Jan-23
Calculations For	Calcs By	Checked By
SA02	SP	SHP

Soil Infiltration Rate Calculations

Width of trial pit;	lttrial =	1.20	m
Length of trial pit;	btrial =	2.70	m
Depth of trial pit	dpit =	2.50	m
Depth of trial pit (below invert);	dttrial =	0.85	m

Free volume (if fill used);	Vtrial =	40	%	0.40	Decimal
-----------------------------	----------	----	---	------	---------

		Water Remaining		Water Depth BGL	
Depth of water at start of test	dstart =	1.000	m	1.500	m
Depth of water at end of test	dend =	0.090	m	2.410	m
Total water hight	dtest = (dstrat-dend) =	0.910 m			

		Water Remaining		Water Depth BGL	
75% depth of pit;	d75 = (dttrial X 0.75) =	0.638	m	1.863	m
50% depth of pit;	d50 = (dttrial X 0.50) =	0.425	m	2.075	m
25% depth of pit;	d25 = (dttrial X 0.25) =	0.213	m	2.288	m

Test Complete BRE 365 Compliant

Test 1 - time to fall from 75% depth to 25% depth;	T1 =	37	mins	2220	sec
Test 2 - time to fall from 75% depth to 25% depth;	T2 =	38	mins	2280	sec
Test 3 - time to fall from 75% depth to 25% depth;	T3 =	53	mins	3180	sec
Longest time to fall from 75% depth to 25% depth;	tlg = max(T1, T2, T3) =	53	mins	3180	sec

Storage volume from 75% to 25% depth;	Vp75_25 = (lttrial X btrial X (d75 - d25)) X Vtrial =	0.551	m3
Internal surface area to 50% depth;	ap50 = ((lttrial X btrial) + (lttrial + btrial) X 2 X d50) =	6.555	m2
Surface area of soakaway to 50% storage depth;	As50 = 2 X (lttrial + btrial) X dttrial / 2 =	3.315	m2

Soil infiltration rate;	f = Vp75_25 / (ap50 X tlg) =	2.64237E-05	m/s
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Dunham Court, 2 Dunham Road
Altrincham, Cheshire, WA14 4NX
TEL: 0161 613 6000
FAX: 0161 613 6099

Site Name	Job Number	Date
Olive School	10/2204	Jan-23
Calculations For	Calcs By	Checked By
SA03	SP	SHP

Soil Infiltration Rate Calculations

Width of trial pit;	ltrial =	0.70	m
Length of trial pit;	btrial =	2.60	m
Depth of trial pit	dpit =	2.20	m
Depth of trial pit (below invert);	dtrial =	1.00	m

Free volume (if fill used);	Vtrial =	100	%	1.00	Decimal
-----------------------------	----------	-----	---	------	---------

		Water Remaining		Water Depth BGL	
Depth of water at start of test	dstart =	0.850	m	1.350	m
Depth of water at end of test	dend =	0.860	m	1.340	m
Total water height	dtest = (dstart-dend) =	-0.010			

		Water Remaining		Water Depth BGL	
75% depth of pit;	d75 = (dtrial X 0.75) =	0.750	m	1.450	m
50% depth of pit;	d50 = (dtrial X 0.50) =	0.500	m	1.700	m
25% depth of pit;	d25 = (dtrial X 0.25) =	0.250	m	1.950	m

Test Incomplete - Failed to Drain to 25%

Indication of Soil Infiltration Rate (NOT TO BRE Digest 365)

Base area	baria = (ltrial X btrial) =	1.82	m ²
Storage volume from start test to end test	Vtest = (baria X dtest) X Vtrial =	-0.0182	m ³
Average wetted area	waria = (((ltrial X 2) + (btrial X 2)) X (dstart-dtest / 2)) + baria =	7.463	m ²
Duration of test	T =	300	mins
Soil infiltration rate;	f = ((Vtest / waria) / T) / 60 =	-1.35483E-07	m/s

APPENDIX VII
WASTE SOIL CLASSIFICATION

Waste Classification Report

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

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



HIWMB-UAR36-6WGDB

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

Job name

10/2204 Olive School

Description/Comments

Project

Site

Classified by

Name: **Robert Philip**
Company: **Clancy Consulting Limited**
Date: **02 Mar 2023 10:57 GMT**
Telephone:

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

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

2 - Material Characterisation

Address of the waste

Olive School, Manchester

Post Code N/A

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Redevelopment of site

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

Soil arisings from foundation excavations

Description of the waste

Made Ground

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS1	0.40	Non Hazardous		3
2	WS2	0.60	Non Hazardous		5
3	WS2[2]	1.30	Non Hazardous		7
4	WS3	0.50	Non Hazardous		9
5	WS3[2]	1.30	Non Hazardous		11
6	TP1	0.50	Non Hazardous		13
7	TP3	0.50	Non Hazardous		15
8	TP3[2]	1.80	Non Hazardous		17
9	TP6	0.60	Non Hazardous		19
10	TP9	0.60	Non Hazardous		21
11	TP9[2]	1.2	Non Hazardous		23
12	TP10	0.90	Non Hazardous		25
13	BH1	0.50	Non Hazardous		27
14	BH1[2]	1.50	Non Hazardous		29
15	BH2	0.80	Non Hazardous		31

Related documents

#	Name	Description
1	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Robert Philip

Created date: 02 Mar 2023 10:57 GMT

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

Classification of sample: WS1

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

Sample details

Sample name:	LoW Code:
WS1	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				5 mg/kg	1.32	6.602	mg/kg	0.00066 %		
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				<0.5 mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<LOD
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.8 mg/kg	1.142	0.914	mg/kg	0.0000914 %		
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				29 mg/kg	1.126	32.651	mg/kg	0.00327 %		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	96 mg/kg	1.56	149.742	mg/kg	0.0096 %		
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				1.21 mg/kg	1.5	1.815	mg/kg	0.000182 %		
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				12 mg/kg	2.976	35.715	mg/kg	0.00357 %		
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				71 mg/kg	2.774	196.964	mg/kg	0.0197 %		
	024-007-00-3	236-878-9	13530-65-9								
12	pH				8.71 pH		8.71	pH	8.71 pH		
13	naphthalene				0.03 mg/kg		0.03	mg/kg	0.000003 %		
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				0.02 mg/kg		0.02	mg/kg	0.000002 %		
		205-917-1	208-96-8								
15	acenaphthene				0.17 mg/kg		0.17	mg/kg	0.000017 %		
		201-469-6	83-32-9								
16	fluorene				0.1 mg/kg		0.1	mg/kg	0.00001 %		
		201-695-5	86-73-7								
17	phenanthrene				1.29 mg/kg		1.29	mg/kg	0.000129 %		
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		0.31 mg/kg		0.31 mg/kg	0.000031 %		
19	fluoranthene	205-912-4	206-44-0		4.07 mg/kg		4.07 mg/kg	0.000407 %		
20	pyrene	204-927-3	129-00-0		3.78 mg/kg		3.78 mg/kg	0.000378 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6		2.17 mg/kg		2.17 mg/kg	0.000217 %		
22	chrysene	601-048-00-0	205-923-4		2.19 mg/kg		2.19 mg/kg	0.000219 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		2.26 mg/kg		2.26 mg/kg	0.000226 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.68 mg/kg		0.68 mg/kg	0.000068 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		2.21 mg/kg		2.21 mg/kg	0.000221 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		1.56 mg/kg		1.56 mg/kg	0.000156 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.3 mg/kg		0.3 mg/kg	0.00003 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		1.34 mg/kg		1.34 mg/kg	0.000134 %		
Total:								0.0403 %		

Key

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

Classification of sample: WS2

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

Sample details

Sample name:	LoW Code:
WS2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				0.7	mg/kg	2.775	1.943	mg/kg	0.000194 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				1.6	mg/kg	1.142	1.828	mg/kg	0.000183 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				56	mg/kg	1.126	63.05	mg/kg	0.0063 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	250	mg/kg	1.56	389.954	mg/kg	0.025 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				0.83	mg/kg	1.5	1.245	mg/kg	0.000125 %		
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				19	mg/kg	2.976	56.549	mg/kg	0.00565 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				180	mg/kg	2.774	499.346	mg/kg	0.0499 %		
	024-007-00-3	236-878-9	13530-65-9									
12	TPH (C6 to C40) petroleum group				580	mg/kg		580	mg/kg	0.058 %		
			TPH									
13	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
14	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
15	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
16	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]									

#	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							
17	• pH		PH		8.36 pH		8.36 pH	8.36 pH		
18	naphthalene				0.19 mg/kg		0.19 mg/kg	0.000019 %		
	601-052-00-2	202-049-5	91-20-3							
19	• acenaphthylene				0.03 mg/kg		0.03 mg/kg	0.000003 %		
		205-917-1	208-96-8							
20	• acenaphthene				0.77 mg/kg		0.77 mg/kg	0.000077 %		
		201-469-6	83-32-9							
21	• fluorene				0.42 mg/kg		0.42 mg/kg	0.000042 %		
		201-695-5	86-73-7							
22	• phenanthrene				3.13 mg/kg		3.13 mg/kg	0.000313 %		
		201-581-5	85-01-8							
23	• anthracene				0.77 mg/kg		0.77 mg/kg	0.000077 %		
		204-371-1	120-12-7							
24	• fluoranthene				5.75 mg/kg		5.75 mg/kg	0.000575 %		
		205-912-4	206-44-0							
25	• pyrene				5.09 mg/kg		5.09 mg/kg	0.000509 %		
		204-927-3	129-00-0							
26	benzo[a]anthracene				2.35 mg/kg		2.35 mg/kg	0.000235 %		
	601-033-00-9	200-280-6	56-55-3							
27	chrysene				2.29 mg/kg		2.29 mg/kg	0.000229 %		
	601-048-00-0	205-923-4	218-01-9							
28	benzo[b]fluoranthene				2.2 mg/kg		2.2 mg/kg	0.00022 %		
	601-034-00-4	205-911-9	205-99-2							
29	benzo[k]fluoranthene				0.68 mg/kg		0.68 mg/kg	0.000068 %		
	601-036-00-5	205-916-6	207-08-9							
30	benzo[a]pyrene; benzo[def]chrysene				2.08 mg/kg		2.08 mg/kg	0.000208 %		
	601-032-00-3	200-028-5	50-32-8							
31	• indeno[123-cd]pyrene				1.27 mg/kg		1.27 mg/kg	0.000127 %		
		205-893-2	193-39-5							
32	dibenz[a,h]anthracene				0.25 mg/kg		0.25 mg/kg	0.000025 %		
	601-041-00-2	200-181-8	53-70-3							
33	• benzo[ghi]perylene				1.11 mg/kg		1.11 mg/kg	0.000111 %		
		205-883-8	191-24-2							
Total:								0.15 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Unlikely to be flammable at concentrations of less than 0.1%.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.058%)

Classification of sample: WS2[2]

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

Sample details

Sample name:	LoW Code:
WS2[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				10	mg/kg	1.32	13.203	mg/kg	0.00132 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				1.3	mg/kg	2.775	3.608	mg/kg	0.000361 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				0.6	mg/kg	1.142	0.685	mg/kg	0.0000685 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				26	mg/kg	1.126	29.273	mg/kg	0.00293 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	44	mg/kg	1.56	68.632	mg/kg	0.0044 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				<0.17	mg/kg	1.5	<0.255	mg/kg	<0.0000255 %		<LOD
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				16	mg/kg	2.976	47.62	mg/kg	0.00476 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				44	mg/kg	2.774	122.062	mg/kg	0.0122 %		
	024-007-00-3	236-878-9	13530-65-9									
12	pH				7.49	pH		7.49	pH	7.49 pH		
13	naphthalene				0.74	mg/kg		0.74	mg/kg	0.000074 %		
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				0.01	mg/kg		0.01	mg/kg	0.000001 %		
		205-917-1	208-96-8									
15	acenaphthene				1.62	mg/kg		1.62	mg/kg	0.000162 %		
		201-469-6	83-32-9									
16	fluorene				0.83	mg/kg		0.83	mg/kg	0.000083 %		
		201-695-5	86-73-7									
17	phenanthrene				5.07	mg/kg		5.07	mg/kg	0.000507 %		
		201-581-5	85-01-8									

#	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							
18	anthracene	204-371-1	120-12-7		1.25 mg/kg		1.25 mg/kg	0.000125 %		
19	fluoranthene	205-912-4	206-44-0		7.86 mg/kg		7.86 mg/kg	0.000786 %		
20	pyrene	204-927-3	129-00-0		6.3 mg/kg		6.3 mg/kg	0.00063 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	2.65 mg/kg		2.65 mg/kg	0.000265 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	2.5 mg/kg		2.5 mg/kg	0.00025 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	2.42 mg/kg		2.42 mg/kg	0.000242 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.74 mg/kg		0.74 mg/kg	0.000074 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	2.09 mg/kg		2.09 mg/kg	0.000209 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		1.13 mg/kg		1.13 mg/kg	0.000113 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.2 mg/kg		0.2 mg/kg	0.00002 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		0.98 mg/kg		0.98 mg/kg	0.000098 %		
Total:								0.0305 %		

Key

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

Classification of sample: WS3

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

Sample details

Sample name:	LoW Code:
WS3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				32	mg/kg	1.32	42.25	mg/kg	0.00423 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				1.2	mg/kg	2.775	3.33	mg/kg	0.000333 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				2.8	mg/kg	1.142	3.199	mg/kg	0.00032 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				160	mg/kg	1.126	180.142	mg/kg	0.018 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	282	mg/kg	1.56	439.868	mg/kg	0.0282 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				0.5	mg/kg	1.5	0.75	mg/kg	0.000075 %		
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				42	mg/kg	2.976	125.003	mg/kg	0.0125 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				179	mg/kg	2.774	496.572	mg/kg	0.0497 %		
	024-007-00-3	236-878-9	13530-65-9									
12	TPH (C6 to C40) petroleum group				572	mg/kg		572	mg/kg	0.0572 %		
			TPH									
13	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
14	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
15	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
16	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]									

#	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							
17	• pH		PH		8.11 pH		8.11 pH	8.11 pH		
18	naphthalene				0.12 mg/kg		0.12 mg/kg	0.000012 %		
	601-052-00-2	202-049-5	91-20-3							
19	• acenaphthylene				0.02 mg/kg		0.02 mg/kg	0.000002 %		
		205-917-1	208-96-8							
20	• acenaphthene				0.43 mg/kg		0.43 mg/kg	0.000043 %		
		201-469-6	83-32-9							
21	• fluorene				0.24 mg/kg		0.24 mg/kg	0.000024 %		
		201-695-5	86-73-7							
22	• phenanthrene				2.43 mg/kg		2.43 mg/kg	0.000243 %		
		201-581-5	85-01-8							
23	• anthracene				0.56 mg/kg		0.56 mg/kg	0.000056 %		
		204-371-1	120-12-7							
24	• fluoranthene				4.97 mg/kg		4.97 mg/kg	0.000497 %		
		205-912-4	206-44-0							
25	• pyrene				4.21 mg/kg		4.21 mg/kg	0.000421 %		
		204-927-3	129-00-0							
26	benzo[a]anthracene				2.03 mg/kg		2.03 mg/kg	0.000203 %		
	601-033-00-9	200-280-6	56-55-3							
27	chrysene				2.01 mg/kg		2.01 mg/kg	0.000201 %		
	601-048-00-0	205-923-4	218-01-9							
28	benzo[b]fluoranthene				1.9 mg/kg		1.9 mg/kg	0.00019 %		
	601-034-00-4	205-911-9	205-99-2							
29	benzo[k]fluoranthene				0.58 mg/kg		0.58 mg/kg	0.000058 %		
	601-036-00-5	205-916-6	207-08-9							
30	benzo[a]pyrene; benzo[def]chrysene				1.69 mg/kg		1.69 mg/kg	0.000169 %		
	601-032-00-3	200-028-5	50-32-8							
31	• indeno[123-cd]pyrene				0.97 mg/kg		0.97 mg/kg	0.000097 %		
		205-893-2	193-39-5							
32	dibenz[a,h]anthracene				0.19 mg/kg		0.19 mg/kg	0.000019 %		
	601-041-00-2	200-181-8	53-70-3							
33	• benzo[ghi]perylene				0.83 mg/kg		0.83 mg/kg	0.000083 %		
		205-883-8	191-24-2							
Total:								0.174 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Unlikely to be flammable at concentrations of less than 0.1%.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0572%)

Classification of sample: WS3[2]

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

Sample details

Sample name:	LoW Code:
WS3[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.30 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				9 mg/kg	1.32	11.883 mg/kg	0.00119 %			
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				1 mg/kg	2.775	2.775 mg/kg	0.000278 %			
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				4 mg/kg	3.22	12.88 mg/kg	0.00129 %			
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.7 mg/kg	1.142	0.8 mg/kg	0.00008 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %			<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				33 mg/kg	1.126	37.154 mg/kg	0.00372 %			
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	45 mg/kg	1.56	70.192 mg/kg	0.0045 %			
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				0.3 mg/kg	1.5	0.45 mg/kg	0.000045 %			
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				13 mg/kg	2.976	38.691 mg/kg	0.00387 %			
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				39 mg/kg	2.774	108.192 mg/kg	0.0108 %			
	024-007-00-3	236-878-9	13530-65-9								
12	pH				6.83 pH		6.83 pH	6.83 pH			
			PH								
13	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		205-917-1	208-96-8								
15	acenaphthene				0.03 mg/kg		0.03 mg/kg	0.000003 %			
		201-469-6	83-32-9								
16	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-695-5	86-73-7								
17	phenanthrene				0.09 mg/kg		0.09 mg/kg	0.000009 %			
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
19	fluoranthene	205-912-4	206-44-0		0.13 mg/kg		0.13 mg/kg	0.000013 %		
20	pyrene	204-927-3	129-00-0		0.13 mg/kg		0.13 mg/kg	0.000013 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
22	chrysene	601-048-00-0	205-923-4	218-01-9	<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
25	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
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
27	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
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0263 %		

Key

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

Classification of sample: TP1

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

Sample details

Sample name: **TP1** LoW Code: **17: Construction and Demolition Wastes (including excavated soil from contaminated sites)**
Sample Depth: **0.50 m** Chapter: **17 05 04 (Soil and stones other than those mentioned in 17 05 03)**
Entry:

Hazard properties

None identified

Determinands

Moisture content: **0% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				8 mg/kg	1.32	10.563 mg/kg	0.00106 %			
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				0.5 mg/kg	2.775	1.388 mg/kg	0.000139 %			
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				0.7 mg/kg	1.142	0.8 mg/kg	0.00008 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %			<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				40 mg/kg	1.126	45.036 mg/kg	0.0045 %			
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	91 mg/kg	1.56	141.943 mg/kg	0.0091 %			
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				0.64 mg/kg	1.5	0.96 mg/kg	0.000096 %			
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				14 mg/kg	2.976	41.668 mg/kg	0.00417 %			
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				75 mg/kg	2.774	208.061 mg/kg	0.0208 %			
	024-007-00-3	236-878-9	13530-65-9								
12	pH				8.18 pH		8.18 pH	8.18 pH			
13	naphthalene				0.04 mg/kg		0.04 mg/kg	0.000004 %			
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				0.02 mg/kg		0.02 mg/kg	0.000002 %			
		205-917-1	208-96-8								
15	acenaphthene				0.05 mg/kg		0.05 mg/kg	0.000005 %			
		201-469-6	83-32-9								
16	fluorene				0.04 mg/kg		0.04 mg/kg	0.000004 %			
		201-695-5	86-73-7								
17	phenanthrene				0.48 mg/kg		0.48 mg/kg	0.000048 %			
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		0.09 mg/kg		0.09 mg/kg	0.000009 %		
19	fluoranthene	205-912-4	206-44-0		0.86 mg/kg		0.86 mg/kg	0.000086 %		
20	pyrene	204-927-3	129-00-0		0.84 mg/kg		0.84 mg/kg	0.000084 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.35 mg/kg		0.35 mg/kg	0.000035 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.4 mg/kg		0.4 mg/kg	0.00004 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.35 mg/kg		0.35 mg/kg	0.000035 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.11 mg/kg		0.11 mg/kg	0.000011 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.32 mg/kg		0.32 mg/kg	0.000032 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.16 mg/kg		0.16 mg/kg	0.000016 %		
27	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
28	benzo[ghi]perylene	205-883-8	191-24-2		0.15 mg/kg		0.15 mg/kg	0.000015 %		
Total:								0.0412 %		

Key

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

Classification of sample: TP3

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

Sample details

Sample name:	LoW Code:
TP3	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				11	mg/kg	1.32	14.524	mg/kg	0.00145 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				1.1	mg/kg	2.775	3.053	mg/kg	0.000305 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				1.3	mg/kg	1.142	1.485	mg/kg	0.000149 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				66	mg/kg	1.126	74.309	mg/kg	0.00743 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	251	mg/kg	1.56	391.514	mg/kg	0.0251 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				0.56	mg/kg	1.5	0.84	mg/kg	0.000084 %		
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				21	mg/kg	2.976	62.502	mg/kg	0.00625 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				215	mg/kg	2.774	596.442	mg/kg	0.0596 %		
	024-007-00-3	236-878-9	13530-65-9									
12	pH				8.31	pH		8.31	pH	8.31 pH		
13	naphthalene				20.8	mg/kg		20.8	mg/kg	0.00208 %		
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				0.18	mg/kg		0.18	mg/kg	0.000018 %		
		205-917-1	208-96-8									
15	acenaphthene				19	mg/kg		19	mg/kg	0.0019 %		
		201-469-6	83-32-9									
16	fluorene				10.4	mg/kg		10.4	mg/kg	0.00104 %		
		201-695-5	86-73-7									
17	phenanthrene				59.4	mg/kg		59.4	mg/kg	0.00594 %		
		201-581-5	85-01-8									

#	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							
18	anthracene	204-371-1	120-12-7		13.5 mg/kg		13.5 mg/kg	0.00135 %		
19	fluoranthene	205-912-4	206-44-0		42.2 mg/kg		42.2 mg/kg	0.00422 %		
20	pyrene	204-927-3	129-00-0		31.4 mg/kg		31.4 mg/kg	0.00314 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6		16.3 mg/kg		16.3 mg/kg	0.00163 %		
22	chrysene	601-048-00-0	205-923-4		14.4 mg/kg		14.4 mg/kg	0.00144 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		11.1 mg/kg		11.1 mg/kg	0.00111 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		3.63 mg/kg		3.63 mg/kg	0.000363 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		9.5 mg/kg		9.5 mg/kg	0.00095 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		4.72 mg/kg		4.72 mg/kg	0.000472 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.88 mg/kg		0.88 mg/kg	0.000088 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		3.55 mg/kg		3.55 mg/kg	0.000355 %		
Total:								0.127 %		

Key

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

Classification of sample: TP3[2]

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

Sample details

Sample name:	LoW Code:
TP3[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.80 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				<1	mg/kg	1.32	<1.32	mg/kg	<0.000132 %		<LOD
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<LOD
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				<0.5	mg/kg	1.142	<0.571	mg/kg	<0.0000571 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				5	mg/kg	1.126	5.629	mg/kg	0.000563 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	5	mg/kg	1.56	7.799	mg/kg	0.0005 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				<0.17	mg/kg	1.5	<0.255	mg/kg	<0.0000255 %		<LOD
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				4	mg/kg	2.976	11.905	mg/kg	0.00119 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				13	mg/kg	2.774	36.064	mg/kg	0.00361 %		
	024-007-00-3	236-878-9	13530-65-9									
12	pH				8.85	pH		8.85	pH	8.85 pH		
13	naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8									
15	acenaphthene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
		201-469-6	83-32-9									
16	fluorene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
		201-695-5	86-73-7									
17	phenanthrene				0.33	mg/kg		0.33	mg/kg	0.000033 %		
		201-581-5	85-01-8									

#	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							
18	anthracene	204-371-1	120-12-7		0.06 mg/kg		0.06 mg/kg	0.000006 %		
19	fluoranthene	205-912-4	206-44-0		0.26 mg/kg		0.26 mg/kg	0.000026 %		
20	pyrene	204-927-3	129-00-0		0.26 mg/kg		0.26 mg/kg	0.000026 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.11 mg/kg		0.11 mg/kg	0.000011 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.13 mg/kg		0.13 mg/kg	0.000013 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.08 mg/kg		0.08 mg/kg	0.000008 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.08 mg/kg		0.08 mg/kg	0.000008 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
27	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
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.00718 %		

Key

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

Classification of sample: TP6

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

Sample details

Sample name:	LoW Code:
TP6	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				25 mg/kg	1.32	33.008	mg/kg	0.0033 %		
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				1.9 mg/kg	2.775	5.273	mg/kg	0.000527 %		
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				2.1 mg/kg	1.142	2.399	mg/kg	0.00024 %		
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				124 mg/kg	1.126	139.61	mg/kg	0.014 %		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	209 mg/kg	1.56	326.001	mg/kg	0.0209 %		
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				0.45 mg/kg	1.5	0.675	mg/kg	0.0000675 %		
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				36 mg/kg	2.976	107.146	mg/kg	0.0107 %		
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				235 mg/kg	2.774	651.924	mg/kg	0.0652 %		
	024-007-00-3	236-878-9	13530-65-9								
12	pH				8.12 pH		8.12	pH	8.12 pH		
13	naphthalene				0.28 mg/kg		0.28	mg/kg	0.000028 %		
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				0.01 mg/kg		0.01	mg/kg	0.000001 %		
		205-917-1	208-96-8								
15	acenaphthene				0.34 mg/kg		0.34	mg/kg	0.000034 %		
		201-469-6	83-32-9								
16	fluorene				0.26 mg/kg		0.26	mg/kg	0.000026 %		
		201-695-5	86-73-7								
17	phenanthrene				1.99 mg/kg		1.99	mg/kg	0.000199 %		
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		0.38 mg/kg		0.38 mg/kg	0.000038 %		
19	fluoranthene	205-912-4	206-44-0		2.04 mg/kg		2.04 mg/kg	0.000204 %		
20	pyrene	204-927-3	129-00-0		1.77 mg/kg		1.77 mg/kg	0.000177 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.58 mg/kg		0.58 mg/kg	0.000058 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.65 mg/kg		0.65 mg/kg	0.000065 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.5 mg/kg		0.5 mg/kg	0.00005 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.14 mg/kg		0.14 mg/kg	0.000014 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.42 mg/kg		0.42 mg/kg	0.000042 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.04 mg/kg		0.04 mg/kg	0.000004 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		0.19 mg/kg		0.19 mg/kg	0.000019 %		
Total:								0.117 %		

Key

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

Classification of sample: TP9

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

Sample details

Sample name:	LoW Code:
TP9	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.60 m	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				5 mg/kg	1.32	6.602	mg/kg	0.00066 %		
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				0.8 mg/kg	2.775	2.22	mg/kg	0.000222 %		
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.3 mg/kg	1.142	1.485	mg/kg	0.000149 %		
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				20 mg/kg	1.126	22.518	mg/kg	0.00225 %		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	25 mg/kg	1.56	38.995	mg/kg	0.0025 %		
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				<0.17 mg/kg	1.5	<0.255	mg/kg	<0.0000255 %		<LOD
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				21 mg/kg	2.976	62.502	mg/kg	0.00625 %		
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				41 mg/kg	2.774	113.74	mg/kg	0.0114 %		
	024-007-00-3	236-878-9	13530-65-9								
12	pH				5.89 pH		5.89	pH	5.89 pH		
13	naphthalene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8								
15	acenaphthene				0.04 mg/kg		0.04	mg/kg	0.000004 %		
		201-469-6	83-32-9								
16	fluorene				0.03 mg/kg		0.03	mg/kg	0.000003 %		
		201-695-5	86-73-7								
17	phenanthrene				0.24 mg/kg		0.24	mg/kg	0.000024 %		
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		0.04 mg/kg		0.04 mg/kg	0.000004 %		
19	fluoranthene	205-912-4	206-44-0		0.3 mg/kg		0.3 mg/kg	0.00003 %		
20	pyrene	204-927-3	129-00-0		0.28 mg/kg		0.28 mg/kg	0.000028 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.1 mg/kg		0.1 mg/kg	0.00001 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.11 mg/kg		0.11 mg/kg	0.000011 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.1 mg/kg		0.1 mg/kg	0.00001 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.08 mg/kg		0.08 mg/kg	0.000008 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.04 mg/kg		0.04 mg/kg	0.000004 %		
27	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
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0244 %		

Key

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

Classification of sample: TP9[2]

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

Sample details

Sample name:	LoW Code:
TP9[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.2 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				3 mg/kg	1.32	3.961 mg/kg	0.000396 %			
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %			
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.2 mg/kg	1.142	1.371 mg/kg	0.000137 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %			<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				4 mg/kg	1.126	4.504 mg/kg	0.00045 %			
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	13 mg/kg	1.56	20.278 mg/kg	0.0013 %			
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				<0.17 mg/kg	1.5	<0.255 mg/kg	<0.0000255 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				14 mg/kg	2.976	41.668 mg/kg	0.00417 %			
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				23 mg/kg	2.774	63.805 mg/kg	0.00638 %			
	024-007-00-3	236-878-9	13530-65-9								
12	pH				7.45 pH		7.45 pH	7.45 pH			
13	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		205-917-1	208-96-8								
15	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-469-6	83-32-9								
16	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-695-5	86-73-7								
17	phenanthrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
19	fluoranthene	205-912-4	206-44-0		<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
20	pyrene	204-927-3	129-00-0		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
21	benzo[a]anthracene	601-033-00-9	200-280-6		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
22	chrysene	601-048-00-0	205-923-4		<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
23	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
26	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
28	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0139 %		

Key

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

Classification of sample: TP10

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

Sample details

Sample name:	LoW Code:
TP10	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.90 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				13	mg/kg	1.32	17.164	mg/kg	0.00172 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				0.6	mg/kg	2.775	1.665	mg/kg	0.000167 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				0.9	mg/kg	1.142	1.028	mg/kg	0.000103 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				56	mg/kg	1.126	63.05	mg/kg	0.0063 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	104	mg/kg	1.56	162.221	mg/kg	0.0104 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				1.17	mg/kg	1.5	1.755	mg/kg	0.000176 %		
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				17	mg/kg	2.976	50.597	mg/kg	0.00506 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				44	mg/kg	2.774	122.062	mg/kg	0.0122 %		
	024-007-00-3	236-878-9	13530-65-9									
12	pH				6.28	pH		6.28	pH	6.28 pH		
13	naphthalene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				0.15	mg/kg		0.15	mg/kg	0.000015 %		
		205-917-1	208-96-8									
15	acenaphthene				3.21	mg/kg		3.21	mg/kg	0.000321 %		
		201-469-6	83-32-9									
16	fluorene				2.43	mg/kg		2.43	mg/kg	0.000243 %		
		201-695-5	86-73-7									
17	phenanthrene				15.4	mg/kg		15.4	mg/kg	0.00154 %		
		201-581-5	85-01-8									

#	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							
18	anthracene	204-371-1	120-12-7		3.7 mg/kg		3.7 mg/kg	0.00037 %		
19	fluoranthene	205-912-4	206-44-0		18.3 mg/kg		18.3 mg/kg	0.00183 %		
20	pyrene	204-927-3	129-00-0		18.6 mg/kg		18.6 mg/kg	0.00186 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	7 mg/kg		7 mg/kg	0.0007 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	7.35 mg/kg		7.35 mg/kg	0.000735 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	5.39 mg/kg		5.39 mg/kg	0.000539 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	1.67 mg/kg		1.67 mg/kg	0.000167 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	4.79 mg/kg		4.79 mg/kg	0.000479 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		1.65 mg/kg		1.65 mg/kg	0.000165 %		
27	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.39 mg/kg		0.39 mg/kg	0.000039 %		
28	benzo[ghi]perylene	205-883-8	191-24-2		1.55 mg/kg		1.55 mg/kg	0.000155 %		
Total:								0.0461 %		

Key

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

Classification of sample: BH1

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

Sample details

Sample name:	LoW Code:
BH1	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				16	mg/kg	1.32	21.125	mg/kg	0.00211 %		
	033-003-00-0	215-481-4	1327-53-3									
2	beryllium { beryllium oxide }				1.2	mg/kg	2.775	3.33	mg/kg	0.000333 %		
	004-003-00-8	215-133-1	1304-56-9									
3	boron { diboron trioxide; boric oxide }				<1	mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
4	cadmium { cadmium oxide }				1.3	mg/kg	1.142	1.485	mg/kg	0.000149 %		
	048-002-00-0	215-146-2	1306-19-0									
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8											
6	copper { dicopper oxide; copper (I) oxide }				72	mg/kg	1.126	81.064	mg/kg	0.00811 %		
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	86	mg/kg	1.56	134.144	mg/kg	0.0086 %		
	082-004-00-2	231-846-0	7758-97-6									
8	molybdenum { molybdenum(VI) oxide }				<0.17	mg/kg	1.5	<0.255	mg/kg	<0.0000255 %		<LOD
	042-001-00-9	215-204-7	1313-27-5									
9	nickel { nickel chromate }				26	mg/kg	2.976	77.383	mg/kg	0.00774 %		
	028-035-00-7	238-766-5	14721-18-7									
10	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									
11	zinc { zinc chromate }				78	mg/kg	2.774	216.383	mg/kg	0.0216 %		
	024-007-00-3	236-878-9	13530-65-9									
12	TPH (C6 to C40) petroleum group				39	mg/kg		39	mg/kg	0.0039 %		
			TPH									
13	benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
14	toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
15	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
16	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]									

#	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							
17	• pH		PH		8.09 pH		8.09 pH	8.09 pH		
18	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
19	• acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
20	• acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
21	• fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
22	• phenanthrene				0.07 mg/kg		0.07 mg/kg	0.000007 %		
		201-581-5	85-01-8							
23	• anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
24	• fluoranthene				0.1 mg/kg		0.1 mg/kg	0.00001 %		
		205-912-4	206-44-0							
25	• pyrene				0.1 mg/kg		0.1 mg/kg	0.00001 %		
		204-927-3	129-00-0							
26	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
27	chrysene				<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
28	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
29	benzo[k]fluoranthene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
30	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							
31	• indeno[123-cd]pyrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		205-893-2	193-39-5							
32	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							
33	• benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2							
Total:								0.0535 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Unlikely to be flammable at concentrations of less than 0.1%.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0039%)

Classification of sample: BH1[2]

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

Sample details

Sample name:	LoW Code:
BH1[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				7 mg/kg	1.32	9.242 mg/kg	0.000924 %			
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				1.5 mg/kg	2.775	4.163 mg/kg	0.000416 %			
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22 mg/kg	<0.000322 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.3 mg/kg	1.142	1.485 mg/kg	0.000149 %			
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %			<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				25 mg/kg	1.126	28.147 mg/kg	0.00281 %			
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	22 mg/kg	1.56	34.316 mg/kg	0.0022 %			
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				<0.17 mg/kg	1.5	<0.255 mg/kg	<0.0000255 %			<LOD
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				42 mg/kg	2.976	125.003 mg/kg	0.0125 %			
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				51 mg/kg	2.774	141.481 mg/kg	0.0141 %			
	024-007-00-3	236-878-9	13530-65-9								
12	TPH (C6 to C40) petroleum group				12 mg/kg		12 mg/kg	0.0012 %			
			TPH								
13	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
14	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
15	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
16	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]								

#	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							
17	• pH		PH		7.2 pH		7.2 pH	7.2 pH		
18	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
19	• acenaphthylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8							
20	• acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9							
21	• fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7							
22	• phenanthrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		201-581-5	85-01-8							
23	• anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
24	• fluoranthene				<0.08 mg/kg		<0.08 mg/kg	<0.000008 %		<LOD
		205-912-4	206-44-0							
25	• pyrene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
		204-927-3	129-00-0							
26	benzo[a]anthracene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
27	chrysene				<0.06 mg/kg		<0.06 mg/kg	<0.000006 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
28	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
29	benzo[k]fluoranthene				<0.07 mg/kg		<0.07 mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
30	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							
31	• indeno[123-cd]pyrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
		205-893-2	193-39-5							
32	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							
33	• benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2							
Total:								0.0353 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Unlikely to be flammable at concentrations of less than 0.1%.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0012%)

Classification of sample: BH2

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

Sample details

Sample name:	LoW Code:
BH2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.80 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				12 mg/kg	1.32	15.844	mg/kg	0.00158 %		
	033-003-00-0	215-481-4	1327-53-3								
2	beryllium { beryllium oxide }				0.8 mg/kg	2.775	2.22	mg/kg	0.000222 %		
	004-003-00-8	215-133-1	1304-56-9								
3	boron { diboron trioxide; boric oxide }				<1 mg/kg	3.22	<3.22	mg/kg	<0.000322 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								
4	cadmium { cadmium oxide }				1.1 mg/kg	1.142	1.257	mg/kg	0.000126 %		
	048-002-00-0	215-146-2	1306-19-0								
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
6	copper { dicopper oxide; copper (I) oxide }				43 mg/kg	1.126	48.413	mg/kg	0.00484 %		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	194 mg/kg	1.56	302.604	mg/kg	0.0194 %		
	082-004-00-2	231-846-0	7758-97-6								
8	molybdenum { molybdenum(VI) oxide }				0.98 mg/kg	1.5	1.47	mg/kg	0.000147 %		
	042-001-00-9	215-204-7	1313-27-5								
9	nickel { nickel chromate }				19 mg/kg	2.976	56.549	mg/kg	0.00565 %		
	028-035-00-7	238-766-5	14721-18-7								
10	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								
11	zinc { zinc chromate }				126 mg/kg	2.774	349.542	mg/kg	0.035 %		
	024-007-00-3	236-878-9	13530-65-9								
12	pH				8.22 pH		8.22	pH	8.22 pH		
13	naphthalene				0.05 mg/kg		0.05	mg/kg	0.000005 %		
	601-052-00-2	202-049-5	91-20-3								
14	acenaphthylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8								
15	acenaphthene				0.15 mg/kg		0.15	mg/kg	0.000015 %		
		201-469-6	83-32-9								
16	fluorene				0.07 mg/kg		0.07	mg/kg	0.000007 %		
		201-695-5	86-73-7								
17	phenanthrene				0.63 mg/kg		0.63	mg/kg	0.000063 %		
		201-581-5	85-01-8								

#	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							
18	anthracene	204-371-1	120-12-7		0.12 mg/kg		0.12 mg/kg	0.000012 %		
19	fluoranthene	205-912-4	206-44-0		1.08 mg/kg		1.08 mg/kg	0.000108 %		
20	pyrene	204-927-3	129-00-0		0.94 mg/kg		0.94 mg/kg	0.000094 %		
21	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.32 mg/kg		0.32 mg/kg	0.000032 %		
22	chrysene	601-048-00-0	205-923-4	218-01-9	0.41 mg/kg		0.41 mg/kg	0.000041 %		
23	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.35 mg/kg		0.35 mg/kg	0.000035 %		
24	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.09 mg/kg		0.09 mg/kg	0.000009 %		
25	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.27 mg/kg		0.27 mg/kg	0.000027 %		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		0.14 mg/kg		0.14 mg/kg	0.000014 %		
27	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
28	benzo[ghi]perylene	205-883-8	191-24-2		0.12 mg/kg		0.12 mg/kg	0.000012 %		
Total:								0.0682 %		

Key

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

Appendix A: Classifier defined and non GB MCL determinands

• 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

• **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)

GB MCL index number: 601-023-00-4

Description/Comments:

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

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

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

beryllium {beryllium oxide}

Reasonable case CLP species based on hazard statements/molecular weight. Industrial sources include: most common (non alloy) form, used in ceramics (edit as required)

boron {diboron trioxide; boric oxide}

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

cadmium {cadmium oxide}

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

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

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

copper {dicopper oxide; copper (I) oxide}

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

lead {lead chromate}

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

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)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021

HazWasteOnline Classification Engine Version: 2023.51.5529.10230 (20 Feb 2023)

HazWasteOnline Database: 2023.51.5529.10230 (20 Feb 2023)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 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

GB MCL List - version 1.1 of 09 June 2021