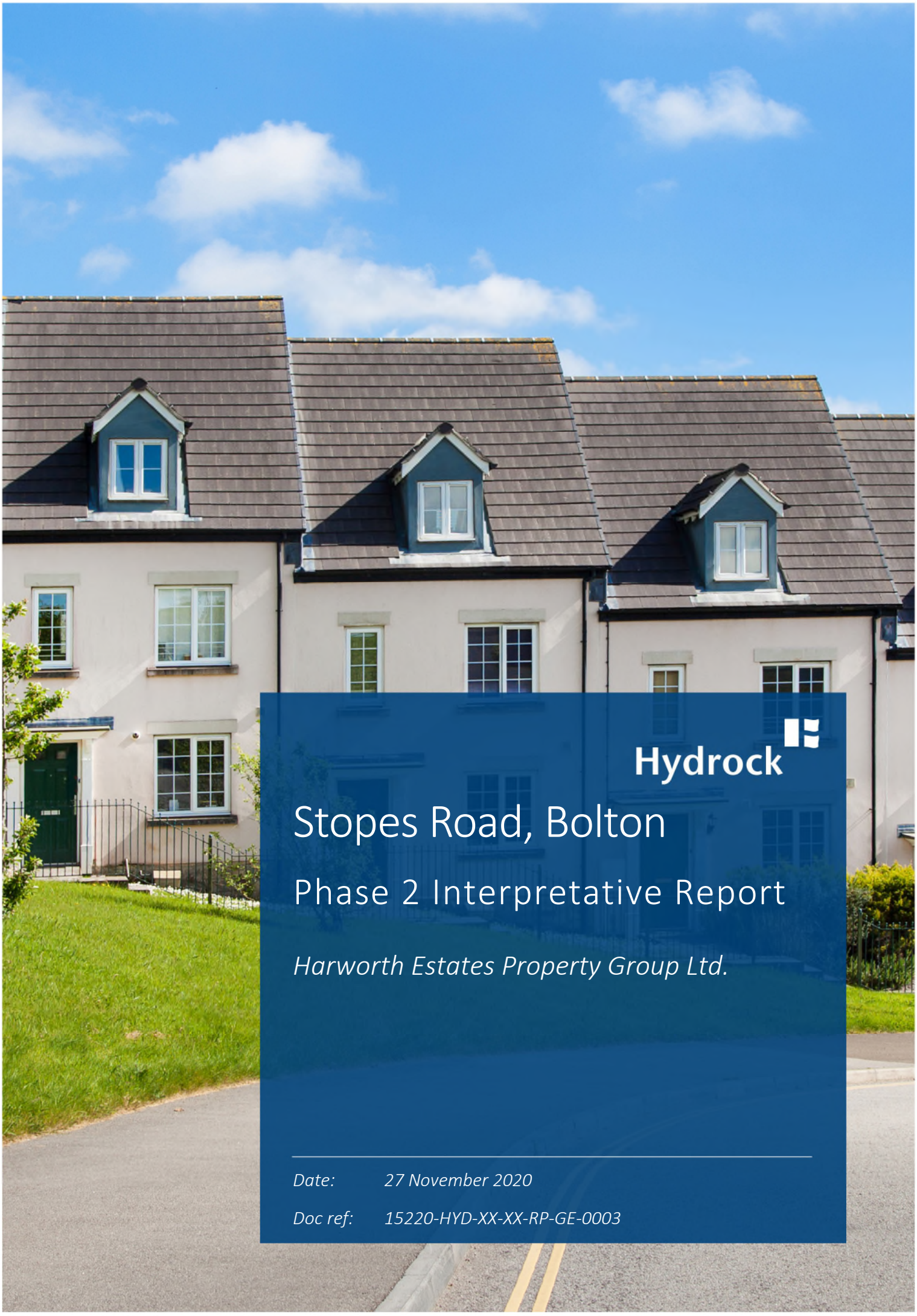


Hydrock

Stopes Road, Bolton

Phase 2 Interpretative Report

Harworth Estates Property Group Ltd.

Date: *27 November 2020*

Doc ref: *15220-HYD-XX-XX-RP-GE-0003*

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EXECUTIVE SUMMARY

SITE INFORMATION AND SETTING	
Objectives	Phase 2 Ground Investigation
Client	Harworth Estates
Site name and location	Land off Stopes Road, 4.4km southeast of Bolton, Greater Manchester, BL3 1NP
Proposed development	Hydrock understands that the proposed development is to comprise 140 residential houses of 2 to 3 storeys with associated gardens, parking and soft landscaping. The north of the site is to remain as public open space.
GROUND MODEL	
Desk study summary	The site currently consists of a Tarmac block manufacturing plant, comprising several buildings with associated areas of external storage of materials and finished products. There is a small field north of the manufacturing plant that also lies within the site boundary. The site is irregular in shape and has an area of approximately 6ha and slopes gently down towards the southwest at 105m Above Ordnance Datum (AOD) in the northeast to 100m AOD in the southwest. The current buildings appear to have used potentially asbestos containing building materials in their construction. Review of historical Ordnance Survey mapping indicates: • From 1850 to 2000 the southern two thirds of the site comprised a Tram Road, coal pit, Stopes Farm including a shaft and pit, Stopes Collieries Tramway near the southeast corner, Stopes Terra Cotta Works, pond near the western boundary and Stopes Work including an electrical substation, tanks and kilns. • By 2000 the site became a tarmac / cement facility and has remained the same since. • The northern third of the site has remained as open land, including present day. A non-specialist UXO assessment indicates a low bomb risk. Made Ground of varying deposits underlying the majority of the site due to the historical use as a colliery and brick works. There may be deep Made Ground associated with the old coal pit and shaft depending on if and how they were treated. The superficial geology comprises the Glacial Till, which predominantly comprises clay interbedded with silt, sand and gravel. The solid geology comprises the Pennine Middle Coal Measures (PMCM) Formation, comprising interbedded mudstone, siltstone and sandstone with coal seams. Three coal seams outcrop below the site including Rams in the north, Top Furnace in the centre and Roger in the south. Coal Seams in the area are dipping 16° towards the southwest, including Rams, Top Furnace and Roger which all outcrop below the site. The Stubbs Coal Seam outcrops northeast of the site boundary and is likely to underlie the site. There are five recorded mine entries within the site boundary and a further seven located outside of the site boundary. The superficial deposits are classed as an undifferentiated aquifer and the Pennine Middle Coal Measures Formation is a secondary A aquifer. The site is not within a groundwater Source Protection Zone and there are no groundwater abstractions within 1km of the site. There was an historic borehole used for abstraction of groundwater, uses included dust suppression and general use and was active from 1996 until approximately 2016. The nearest surface water features are two ponds located on the northern half of the western boundary and on the northern boundary.

	There are two historic landfill sites recorded within 250m of the site, the closest was located on site referred to as Crowthers Brickworks, which was an aggregate recycling facility.
	The ground conditions as proven by the investigation undertaken at the site comprise: • Surface covering of concrete or hardstanding or bituminous bound pavement between 0.00m and 0.60m bgl. • Topsoil (locally in north) average thickness of 0.37m bgl, comprising slightly gravelly clayey sand. • Made Ground – between 0.40m and 7.50m below ground level (bgl) associated with the seven different types including general, backfilled pits, furnace, organic, landfill, reworked, opencast and subbase. • Peat (locally encountered on the eastern boundary) between 2.40m and 3.10m bgl, comprising firm very clayey silty peat. • Glacial Till encountered at 0.30m and 7.10m bgl comprising soft to very stiff, although generally firm to stiff, sandy gravelly clay. • Pennine Middle Coal Measures Formation with the top of bedrock encountered between 4.00m and 8.50m bgl comprising interbedded extremely weak to strong mudstone, medium strong to very strong siltstone and strong to very strong sandstone with beds of coal. Several intact coal seams were encountered within the rotary cored and rotary open holes. The thickness of the coal seams varies between 0.25m and 1.70m. Voids were encountered within RO01 in the north of the site inferred as associated with workings in the Stubbs Coal Seam. Workings were encountered in the centre of the site in RO05 associated with the Rams Coal Seam and in the west of the site in RO06 associated with the Top Furnace Coal Seam. Voids within the south of the site in RO09, RO10 and RO11 are inferred as workings associated with the Roger Coal Seam. Trial trenches were undertaken, they did not encounter any evidence of a mine entry as they were not in the recorded locations. Further works will be required to delineate the location of the mine entries when the site is completely disused. Groundwater was encountered at depths between 1.10m bgl and 3.50m bgl during the investigation. Water levels recorded post-fieldwork ranged from 0.60m bgl to 15.15m bgl (101.77m OD to 84.91m OD). Perched groundwater was encountered during the investigation in the Made Ground. Post fieldwork monitoring recorded groundwater to be relatively shallow and to be of similar depths across the various stratums, suggesting groundwater in the Made Ground and Glacial Till are in hydraulic continuity. Groundwater in the PMCM Formation is generally deeper and typically associated with distinct bands of more permeable sandstones. Coal tar odours were noted in TP11, TP16 and TP21. Hydrocarbon odours were noted in TP04 and WS01. Suspected asbestos rope was encountered within TP11.
GEOTECHNICAL CONCLUSIONS	
Conclusions of geotechnical assessment	Buried obstructions were encountered during this investigation associated with the current and former site uses and there is a possibility of further such obstructions being encountered. It is recommended that the enabling works strategy considers the identification and removal of all below ground obstructions down to a predetermined depth to allow construction of foundations and services etc. Following breaking out of hardstanding and obstructions, excavation of shallow soils should be readily undertaken by conventional plant and equipment. Significant collapse and spalling of trial pit faces was noted during and following trial pit excavation. This was noted particularly in the Made Ground, low strength natural fine soils and where groundwater ingress occurred. Based on the groundwater levels excavation below 1.50m to 2.00m within the Made Ground is anticipated to be particularly problematic.

	Based on site observations, the rate of water ingress to the proposed excavations is likely to be slow to moderate. In these circumstances, groundwater control by sump pumping is likely to be sufficient. There are shallow mine workings beneath the site that pose an unacceptable risk, including a significant void recorded in CP06. As such, further works are recommended to determine the extent of the void. In addition, stabilisation of the abandoned mineworkings will be required as well as the treatment of the four recorded mine shafts on site. Foundations are recommended to comprise: • Northern and south-eastern sections of the site where Made Ground is less than 2.5m deep: Strip/trench fill foundations across the majority of the site (deepening due to trees as required) to a maximum depth of 2.5m bgl. • Central and eastern sections where the depth of Made Ground is in excess of 2.5m: piled foundations within the stiff Glacial Till or competent Pennine Middle Coal Measures. • The use of VSC could be considered to improve the bearing capacity of some of the Made Ground and low strength soils below proposed shallow foundations. However, VSC ground improvement is not considered suitable to the backfilled opencast workings due to the potential for on-going settlement and collapse inundation by fluctuating / infiltration of water. Assuming a lower bound characteristic undrained shear strength of the Glacial Till of 50kPa a safe allowable bearing pressure of 100kN/m² is considered appropriate. Deepening of foundations/heave protection is likely to be required to allow for the effects of trees. Suspended slabs with a void are likely to be required because of depth of Made Ground (>600mm thick) and for plots within the influence of trees. Slabs without a void such as ground bearing or suspended cast in situ onto the ground, may be suitable for parts of the development with shallow Made Ground, outside of the influence of trees and where it is proven that soils are not desiccated. A design CBR of <2.5% is recommended for roads, pavements and car parking. Soakaway drainage is considered unsuitable for this site. Design Sulphate Class - DS-1 and ACEC Class AC-2z for Made Ground. Glacial Till can be classified as Design Sulphate Class DS-2 and ACEC Class AC-3z. The Pennine Middle Coal Measures can be classified as Design Sulphate Class DS-2 and ACEC Class AC-2 (based on groundwater data only).
GEO-ENVIRONMENTAL CONCLUSIONS	
Conclusions of contamination Generic risk assessment	Human health: • Arsenic, vanadium, titanium and PAH in the Made Ground. • Petroleum hydrocarbons in WS01 between 1.20m bgl and 1.60m bgl. • Presence of asbestos containing materials and asbestos fibres in the Made Ground. Plant growth: • Copper, boron and nickel in the Made Ground. Controlled Waters: • There are concentrations of chemicals of potential concern elevated above the water quality criteria, However, based on the investigation works undertaken to date and subject to agreement with the Environment Agency, Hydrock does not believe the site poses a significant risk to Controlled Waters. Ground gases or vapours: • Characteristic situation (CS) 2 gas protection measures for carbon dioxide are required, and an allowance made for methane gas protection measures for plots within the Opencast

	Made Ground. However, additional monitoring is required to target the landfill in the west and peat deposits in the east. Radon: • The site is not in a Radon Affected Area. Construction materials: • Concentrations of PAH and are above 100mg/kg and the concentrations of petroleum hydrocarbons are above 200 mg/kg. Water supply pipes: • The site is brownfield and organic contamination (PAH and petroleum hydrocarbons) has been identified in exceedance of the threshold values and Hydrock believes barrier pipe is required • Should there be a requirement to install pipework in the greenfield, then it is envisaged that standard pipework will be suitable
Proposed mitigation measures	The mitigation measures proposed to remove unacceptable risks include: • The excavation and replacement of the petroleum hydrocarbon hotspots. • The installation of a 600mm cover system in gardens and 450mm in public open space, comprising subsoil beneath a topsoil thickness of between 150mm and 300mm • Installation of Protectaline pipework. • Installation of ground gas mitigation measures to comply with CS2 conditions. The methodology for the remediation should be presented in a Remediation Strategy, which will need to be submitted to the warranty provider and the regulatory authorities for approval. In addition, the production of a Materials Management Plan and its approval by a Qualified Person will be required to allow reuse of suitable material at the site. Verification reports by a competent independent geo-environmental specialist will be required following completion of any remedial works.
Waste management	Excavated soils which are surplus to requirements are to be disposed of as waste. The General Made Ground is likely to be classed as non-hazardous. The petroleum hydrocarbon hotspot in WS01 (samples at 1.30m and 1.40m) and WS05 at 0.60m are classified as hazardous waste. The natural strata is likely to be classified as inert. Testing on the bituminous bound pavement has indicated that coal tars are not present, or below hazardous waste limits (0.1%), and will likely be classified as non-hazardous waste.
FUTURE CONSIDERATIONS	
Further work	Following the ground investigation works undertaken to date, the following further works will be required: • demolition asbestos survey; • supplementary ground investigation to further define the hotspot of petroleum hydrocarbons in the vicinity of WS01; • Delineation of the landfill along the western boundary (TP21, TP22 and TT01), including installation of monitoring wells within the landfill and the localised area of peat encountered in TP18; • Re-investigation of the mine entries when all above ground structures and stockpiles have been removed; • further investigation to locate the highwall of the opencast site; • Probing in and around the vicinity of CP06 to determine the extent of the identified void; • It is recommended that further investigation is undertaken to determine the extent of the voiding and consideration may be given to concurrent treatment with the mine workings. • discussion and agreement with utility providers regarding the materials suitable for pipework;

	• discussions with regulatory bodies and the warranty provider regarding the conclusions of this report; • assessment of tree influence on foundations and design of foundations; • discussions with Vibro-Stone Column Contractors regarding the viability of, and potential improvement by, VSCs; • discussions with piling Contractors regarding the conclusions of this report and design of the piles; • provision of geotechnical design for the Category 2 structures (earthworks, retaining, floor slabs, foundations.); • locating the historical groundwater abstraction borehole and decommissioning in line with EA guidance; • production of a Remediation Strategy and Verification Plan (and agreement with the regulatory bodies and the warranty provider); • production of a Materials Management Plan relating to reuse of soils at the site and import of soils to the site; • remediation and mitigation works; and • verification of the earthworks, remediation and mitigation works.

This Executive Summary forms part of Hydrock Consultants Limited report number 15220-HYD-XX-XX-RP-GE-0003 and should not be used as a separate document.

1. INTRODUCTION

1.1 Terms of reference

In April 2020, Hydrock Consultants Limited (Hydrock) was commissioned by Harworth Estates Property Group Ltd (Harworth or the Client) to undertake a ground investigation at Stopes Road, Little Lever, Bolton, BL3 1NP. The desk study was undertaken by Hydrock in September 2020 (ref: 15220-HYD-XX-XX-RP-GE-0001_P03_S2).

The site currently consists of a Tarmac block manufacturing plant, comprising several buildings with associated areas of external storage of materials and finished products. There is a small field north of the manufacturing plant that also lies within the site boundary.

Hydrock understands that the proposed development is to comprise 140 residential houses of 2 to 3 storeys with associated gardens, parking and soft landscaping. The north of the site is to remain as public open space. A proposed development layout (Harworth Drawing HAR001MP01, Rev B), is presented in Appendix A

The works have been undertaken in accordance with Hydrock's proposal referenced (C-15220-FP-GE-0001 dated 20th March 2020) and the Client's instructions to proceed (email dated 7th April 2020).

1.2 Objectives

The works have been commissioned to assist with clearing anticipated planning conditions and to assist with the design of the development.

The objective of the Phase 2 Ground Investigation is:

- to resolve uncertainties identified in the Phase 1 Desk Study by refining and updating the preliminary Ground Model, determining geo-environmental and geotechnical site conditions and identifying key contamination risks by updating and finalising the Conceptual Model in accordance with the principles of LCRM;
- to identify geo-environmental mitigation requirements to enable development; and
- to provide preliminary geotechnical recommendations for design.

1.3 Scope

The scope of the Phase 2 Ground Investigation comprises:

- a detailed ground investigation including trial pitting, windowless sampling, cable percussive boring and rotary drilling (openhole and coring) to:
  - obtain data on the ground and groundwater conditions of the site;
  - investigating the presence of shallow mine-workings;
  - allow collection of samples for geotechnical and chemical laboratory analysis;
  - allow geotechnical field tests to be undertaken;
  - install gas and groundwater wells;
- gas concentration and groundwater level monitoring;
- gas and groundwater sampling;

- geotechnical and chemical laboratory analysis;
- updating of the preliminary Ground Model;
- preparation of a geotechnical risk register;
- presentation of an initial geotechnical design recommendations;
- formulation of an updated Conceptual Site Model (CM), including identification of plausible pollution linkages;
- completion of a generic quantitative risk assessment of potential chemical contaminants to establish 'suitability for use' under the current planning regime;
- discussion of potential environmental liabilities associated with land contamination (soil, water and gas); and
- identification of outline mitigation requirements to ensure the site is 'suitable for use'.

1.4 Available information

The following have been provided to Hydrock by Harworth for use in the preparation of this report:

- Harworth. 2nd July 2019. 'Redline Boundary', Ref: 003\BOL\ACQ\A3; and
- Harworth. August 2020. 'Illustrative Masterplan, Ref: HAR001MP01, Rev B.

It is assumed that the Client has commissioned or obtained assignment of the above documents and Hydrock is entitled to full reliance upon their contents.

To date, Hydrock has produced the following report:

- Hydrock. September 2020, Phase 1 Desk Study, ref: 15220-HYD-XX-XX-RP-GE-0001_P03_S2).

1.5 Regulatory context and guidance

The investigation work has been carried out in general compliance with recognised best practice, including (but not limited to) BS 5930:2015+A1:2020, BS 10175:2011+A2:2017 and the AGS (2006) 'Good Practice Guidelines for Site Investigations'.

The geo-environmental section of this report is written in broad accordance with BS 10175:2011+ A2:2017, 'Land Contamination: Risk Management' (LCRM, 2019) and the AGS (2006) 'Good Practice Guidelines for Site Investigations'.

The methods used follow a risk-based approach, the first stage of which is a Phase 1 desk study and field reconnaissance, with the potential geo-environmental risk assessed qualitatively using the 'source-pathway-receptor contaminant linkage' concept to assess risk as introduced in the Environmental Protection Act 1990 (EPA, 1990). Potential geotechnical risks are also assessed.

Phase 2 comprises intrusive ground investigation work and testing. The factual information from Phase 1 and Phase 2 are used to develop the Conceptual Model (CM). This CM is based on a ground model of the site physical conditions and an exposure model of the possible contaminant linkages. The CM forms the basis for Generic Quantitative Risk Assessment (GQRA) in accordance with current guidelines. This GQRA might lead to more Detailed Quantitative Risk Assessment (DQRA).

Professional judgement is then used to evaluate the findings of the risk assessments and to provide recommendations for the development.

The geotechnical section of this report is prepared in general accordance with BS EN 1997-1+A1: 2013, BS EN 1997-2:2007 and BS 8004:2015. This report constitutes a Ground Investigation Report (GIR) as described in Part 2 of Eurocode 7 (BS EN 1997-2) (EC7). However, it is not intended to fulfil the requirements of a Geotechnical Design Report (GDR) as specified in EC7.

Where relevant the NHBC Standards (2020), have also been applied.

The geo-environmental and geotechnical aspects are discussed in separate sections. Throughout the report the term 'geotechnical' is used to describe aspects relating to the physical nature of the site (such as foundation requirements) and the term 'geo-environmental' is used to describe aspects relating to ground-related environmental issues (such as potential contamination). However, it should be appreciated that this is an integrated investigation and these two main aspects are inter-related. Designers should take all aspects of the investigation into account.

Remaining uncertainties and recommendations for further work are listed in Section 10.

Reference to the details of the approach and the methodologies adopted are provided in Appendix I.

2. PHASE 1 STUDY (DESK STUDY REVIEW AND FIELD RECONNAISSANCE)

2.1 Site location

The site is located off Stopes Road, 4.4km southeast of Bolton, Greater Manchester, BL3 1NP (National Grid Reference 376262E, 407648N).

A site location plan (Hydrock Drawing 15220-HYD-XX-XX-DR-GE-1001) is presented in Appendix A.

2.2 Site description

The site at present is largely disused. The majority of the site is occupied by a Tarmac block manufacturing plant, which consists of several buildings in the south including an electricity substation, with areas of hardstanding for the storage of materials and an internal road. Stockpiles of materials and large stores of concrete blocks are located in the centre of the site, along the southern boundary and western boundary. These were in the process of being removed off site. The top northern third of the site includes a field, which is occasionally used by livestock for grazing.

The site is irregular in shape and has an area of approximately 6ha and slopes gently down towards the southwest at 105m Above Ordnance Datum (AOD) in the northeast to 100m AOD in the southwest.

2.3 Site history

The southern two thirds of the site between 1850 and 2000 has comprised a Tram Road, coal pit, Stopes Farm including a shaft and pit, Stopes Collieries Tramway near the southeast corner, Stopes Terra Cotta Works, pond near the western boundary and Stopes Work including an electrical substation, tanks and kilns. By 2000 the site became a tarmac / cement facility and has remained the same since.

The northern third of the site has remained as open land, including present day.

2.4 Geology

There is likely to be Made Ground of varying deposits underlying the majority of the site due to the historical use as a colliery and brick works. There may be deep Made Ground associated with the old coal pit and shaft depending on if and how they were treated.

The superficial geology comprises the Glacial Till, which predominantly comprises clay interbedded with silt, sand and gravel.

The solid geology comprises the Pennine Middle Coal Measures Formation, comprising interbedded mudstone, siltstone and sandstone with coal seams. There are three coal seams which are mapped to outcrop within the site boundary, which are inferred to include the Rams coal seam near the northern boundary, the Top Furnace coal seam running through the central section of the site and Roger coal seam along the southern boundary. Stubbs subcrops to the north east of the site and Ince New subcrops the south west of the site. The Pennine Middle Coal Measures Formation within the area dip 16° towards the southwest and therefore Stubbs could influence the north east of the site, including Rams, Top Furnace and Roger which all outcrop below the site.

There are numerous faults in the surrounding area, the nearest faults are located 185m northeast and 217m northeast.

2.5 Hydrogeology

The superficial deposits comprise a Secondary undifferentiated aquifer and the Pennine Middle Coal Measures Formation is classified as a Secondary A Aquifer. The site is not within a Source Protection Zone and there are no active potable groundwater abstractions within 1km of the site.

However, there was an historic borehole used for dust suppression and general use and was active from 1996 until approximately 2016. A review of BGS borehole records indicated this borehole was drilled in 1996 to 71.3m deep and abstracted water from between 34 – 71.3m bgl in the Pennine Middle Coal Measures, with a resting water level of 18.3m bgl.

The annual volume of groundwater abstracted was 30,000m^3. This borehole is understood not be to currently in use following the cessation of site activities, however there is no information as to whether it has been decommissioned in line with industry guidance.

2.6 Hydrology

The nearest surface water features are two ponds located on the northern half of the western boundary and on the northern boundary. There is also an inland river, which is presumed to be a drain, located 7m west and a pond 65m east. Further afield the Manchester Bolton and Bury Canal is 715m south with the River Irwell 790m south.

2.7 Flood risk

The desk study information indicates the proposed development is in Flood Zone 1 (with a low probability of flooding from rivers or the sea).

2.8 Mining or mineral extraction

There are 13 worked coal seams at depths beneath the site of between 28m and 280m, five recorded mine entries within the site boundary and a further seven located outside of the site boundary.

There are three distinct areas of historic opencast sites located north, southwest and south of the site. The two small opencast sites southwest of the site are associated with the former Atlas Brick Works, that was backfilled prior to 1955. The opencast site north of the site correlates to Wilton Collieries, with its associated 'Trial Shaft' located 200m north of the site.

Reference should be made to the Hydrock Coal Mining Risk Assessment report 15220-HYD-XX-XX-RP-GE-0002.

2.9 Waste management

There are two historic landfill sites recorded within 250m of the site, the closest was located on site referred to as Crowthers Brickworks, which was an aggregate recycling facility. The second landfill is a refuse tip 76m east (identified from historical mapping and suspected to be associated with an old coal shaft).

2.10 Regulatory information

There are several on-site and nearby industrial processes that may impact the site:

- There is one Local Authority Pollution Prevention and Control on site for the authorised use of bulk cement; and
- A total of 8 industrial land uses within 250m of the site, including an electrical substation and tarmac facility onsite, tanks, unspecified works, Stope Garages and vehicle cleaning services.

2.11 Radon

The radon risk is reported in the environmental report, which indicates that the site is not in a Radon Affected Area and no radon protection measures are required.

2.12 Unexploded ordnance (UXO)

The non-specialist UXO screening exercise has indicated a low risk with regards to UXO in relation to ground investigation.

3. OUTLINE CONCEPTUAL MODEL

3.1 Introduction

The outline Conceptual Model (oCM) incorporates evidence from the site walkover, the Desk Study and previous investigations carried out at the site. The formulation of an outline Conceptual Model is a key component of the LCRM methodology. The oCM incorporates a ground model of the site physical conditions and an exposure model of the possible contaminant linkages; it forms the basis for Generic Quantitative Risk Assessment (GQRA) in accordance with current guidelines.

3.2 Ground model

The preliminary ground model presented in Section 2 provides an understanding of the ground conditions and is the basis for preparing the preliminary geotechnical hazard assessment (Section 3.3) and the preliminary geo-environmental exposure model (Section 3.4).

3.3 Geotechnical hazard identification

3.3.1 Context

The preliminary geotechnical hazard identification has been undertaken in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622.

The following section sets out the identified geotechnical hazards and the development elements potentially affected (see Table G.1 in Appendix G for further information).

3.3.2 Plausible geotechnical hazards

Plausible geotechnical hazards identified at the site are:

- Uncontrolled Made Ground (variable strength and compressibility).
- Soft / loose compressible ground (low strength and high settlement potential).
- Shrinkage / swelling of the clay fraction of soils under the influence of existing or proposed vegetation.
- Variable lateral and vertical changes in ground conditions.
- Attack of buried concrete by aggressive ground conditions, such as burnt shale in the Made Ground associated with the historic terra cotta works.
- Obstructions.
- Shallow groundwater.
- Loose Made Ground and shallow groundwater, leading to difficulty with excavation and collapse of side walls.
- Slope stability issues – general slopes.
- Mining activity.

3.3.3 Potential development elements affected

Development elements potentially affected by geotechnical hazards are:

- Buildings – foundations.
- Buildings – floor Slabs.
- Roads and pavements.
- Services.
- General slopes (embankments).
- Gardens.
- Construction staff, vehicles and plant operators.
- Concrete below ground.

Health and safety risks to site Contractors and maintenance workers have not been assessed during these works and will need to be considered separately during design.

The above plausible geotechnical hazards and development elements affected have been carried forward for investigation and assessment. The investigation is presented in Section 5 and the assessment is presented in Section 0.

3.4 Geo-environmental exposure model

3.5 Context

The preliminary exposure model is used to identify geo-environmental hazards and to establish potential pollution linkages, based on the source-pathway-receptor (SPR) approach.

A viable pollution linkage requires all the components of an SPR to be present. If only one or two are present, there is no linkage and no further assessment is required.

3.6 Potential contaminants

For the purpose of this assessment the potential contaminants have been separated according to whether they are likely to have originated from an on-site or off-site source.

It should be noted the below on-site sources are primarily associated with the southern half of the site, which has undergone many historical transformations. The northern half of the site, currently a field, is considered to be a low risk and is likely to comprise virgin ground. Although this would need to be confirmed by an intrusive ground investigation.

Potential on-site sources of contamination

- Made Ground, associated with historical activities (brick works, backfilled ponds, mine entries) and existing use as a tarmac facility, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons (S01).
- Made Ground, potentially containing asbestos fibres and Asbestos Containing Materials from demolition of former buildings associated with the brick works (S02).
- Coal tar, potentially present in the bituminous bound pavements present in the form or roads, / car parks and associated with the current use as a tarmac facility (S03).
- Calcium oxide, calcium hydroxide, calcium carbonate, calcium chloride, hydrated calcium sulphate, manganese dioxide and titanium oxide associated with cement stored on site (S04).

- PCBs and oils from transformers in the electricity sub-station on site (S05).
- Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / mine emissions from coal seams in the Pennine Middle Coal Measures Formations (S06).
- Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks associated with historic tanks (S07).
- Asbestos within existing buildings (S08).

Potential off-site sources of contamination

- Petroleum hydrocarbons, VOCs and solvents associated with the tanks 19m east and vehicle repair units 28m east (S09).
- Ground gases (carbon dioxide and methane) from organic materials in the backfill of the nearby mine entries / adits, refuse tip 76m east, Atlas Brick Works 80m southwest and nearby historic opencast sites (S10).

3.7 Potential receptors

The following potential receptors in relation to the proposed land use have been identified.

- People (neighbours, site end users) (R01).
- Development end use (buildings, utilities and landscaping) (R02).
- Groundwater: Secondary Undifferentiated Aquifer status of the Till Deposits and Secondary A aquifer status of the Pennine Middle Coal Measures Formation (R03).
- Surface water: ponds along the northern and western boundaries, inland river (drainage ditch) 7m west and a pond 65m east (R04).

3.8 Potential pathways

The following potential pathways have been identified.

- Ingestion, skin contact, inhalation of dust and outdoor air by people (P01).
- Direct contact with substances deleterious to building materials (P02).
- Methane ingress via permeable soils and/or construction gaps (P03).
- VOC and petroleum hydrocarbon vapour ingress via permeable soils and/or construction gaps (P04).
- Root uptake by plant (P05).
- Migration of contaminant via leachate migration through the unsaturated zone in the Till Deposits (P06).
- Migration of contaminant from the groundwater within the Till Deposits to the groundwater within the Pennine Middle Coal Measures Formation aquifer (P07).
- Surface water via overland flow (P08).

Health and safety risks to site development contractors and maintenance workers have not been assessed as part of this study and will need to be considered separately.

The above sources, pathways and receptors have been considered as part of the Preliminary Risk Assessment in accordance with LCRM (2019), are considered to be plausible in the context of this site

and have been carried forward for investigation and assessment. The investigation is presented in Section 5 and the assessment is presented in Section 7. An assessment of the Source – Pathway – Receptor linkages is undertaken following the assessment (Section 7) and is presented in Appendix H (Table K.1).

A summary of the plausible linkages is presented on the Initial Conceptual Model provided in Appendix A (Hydrock Drawing 15220-HYD-XX-XX-DR-GE-1004).

4. GROUND INVESTIGATIONS

4.1 Investigation rationale

The ground investigation rationale was based on the findings of the preliminary risk assessment and is summarised in Table 4.1.

Table 4.1: Investigation rationale

Location	Purpose
Tarmac Topblock (southern two thirds of the site)	
Historic and Current Industrial Use	
CP01, 04-05 and 08-10	General characterisation of site conditions, investigating deeper ground conditions and to prove the thickness to bedrock. To allow collection of samples for contamination and geotechnical testing. Installation of gas and groundwater monitoring and sampling wells.
RC01-03	To undertake coring of the bedrock to take samples for geotechnical testing and characterisation.
TP02, 04-06 and 09-22	To assess shallow ground conditions. To allow collection of samples for contamination and geotechnical testing.
WS05 and 09-15	To assess shallow ground conditions and to allow SPTs to be undertaken. To allow collection of samples for contamination and geotechnical testing.
Mining Issues	
RO02-12	Possible unrecorded shallow workings associated with the Rams coal seam, Lower Leaf of Top Furnace coal seam, Upper Lear of Top Furnace coal seam and Roger coal seam. Installation of gas and groundwater monitoring and sampling wells.
TT01-03	To investigate the presence of recorded mine entries and whether treatment has been undertaken.
CP06 and WS07	Made Ground possibly associated with unlicensed opencast site recorded directly southwest of the site. To allow collection of samples for contamination and geotechnical testing. Installation of gas and groundwater monitoring and sampling wells.
Historic Brick Pit	
CP02-03, RO08 and TP07-08	Made Ground associated with backfilled brick pit. To allow collection of samples for contamination and geotechnical testing. Installation of gas and groundwater monitoring and sampling wells.
Historic Pond	
CP07 and WS08	Backfilled within former pond / marsh area. To allow collection of samples for contamination and geotechnical testing. Installation of gas and groundwater monitoring and sampling wells.
Historic Tanks	
TP01 and WS01-04	Investigate the presence of possible petroleum hydrocarbon associated with historic tanks. To allow collection of samples for contamination testing.
Electrical Substation	

Location	Purpose
CP01, TP03 and WS06	Investigation the possible presence of PCBs associated with the electrical substation. To allow collection of samples for contamination testing.
Greenfield (northern third of the site)	
TP23-28	To assess shallow ground conditions. To allow collection of samples for contamination and geotechnical testing.
WS16-19	To assess shallow ground conditions and to allow SPTs to be undertaken. To allow collection of samples for contamination and geotechnical testing.
CP11	To investigate deep ground conditions and to prove depth to bedrock. To allow collection of samples for contamination and geotechnical testing.
RO01	To investigate possible unrecorded shallow coal workings associated with Stubbs coal seam.

4.2 Constraints

The site is currently in use by Tarmac Topblock and there are multiple stockpiles of crushed material and stacked blocks located throughout the site. At present, these are being removed off site however due to their location they provide restricted access to some areas of the site.

There were initial plans to investigate inside the building in the centre of the site. However, the building was considered to be a health and safety hazard and boreholes WS09 and WS10 were re-positioned elsewhere on site.

There are four recorded mine entries within the site boundary which were unable to be fully investigated due to various site constraints. TT01 was restricted due to being adjacent to a large stockpile, TT02 and TT03 was relocated due to a live electricity cable connecting to the electrical substation. TT04, although not shown on the exploratory hole location plan, was marked out in the southeast corner. However, this could not be excavated due to restricted access for a machine and due to resident vehicles parked in the recorded location of the mine entry (376407-019).

There is a fifth mine entry (376407-002) located outside of the northwest corner of the greenfield. This was not investigated as it is unlikely to encroach into the field and the current proposed development plan is to retain this area as public open space.

As well as site conditions posing issues, there were problems encountered with the ground conditions. The Furnace Made Ground in the southern half of the site was very compacted, resulting in some hand pits refusing at shallow depth. Furthermore, the 13T tracked excavator could not excavate the material with a toothless bucket and had to revert to a toothed bucket, which was slow in progress. Obstructions were also encountered in numerous exploratory holes resulting in early termination, which is discussed further in Section 5.2.

The rotary openhole drilling in some instances was inhibited by broken and highly fractured ground, resulting in a total loss of water flush, which is crucial to maintain continuous drilling. One notable borehole is RO05, which was scheduled for 40m below ground level (bgl) but terminated at 34m bgl. This was due to losing 28,000 litres of water during drilling. Further information about the ground conditions and the boreholes that encountered a loss of water flush are discussed in Section 5.1.8.

4.3 Site works

The fieldwork took place between Monday 3rd August and Thursday 4th September 2020 and is summarised in Table 4.2. The ground investigation locations were surveyed in using a Total Station GPS survey instrument and are shown on the Exploratory Hole Location Plan (Hydrock Drawing 15220-HYD-XX-XX-DR-GE-1006) in Appendix A.

The logs, including details of ground conditions, soil sampling, *in situ* testing and any installations, are also presented in Appendix B.

The weather conditions during the Hydrock fieldwork and for the previous week were variable including periods of sunshine and heavy rain.

Table 4.2: Summary of site works

Activity	Method	No.	Depth Range (m bgl)	*In situ* tests	Notes (e.g. installations)
Drilling and Pitting					
Boreholes	Cable percussive	11	1.00 – 9.45	SPT	63mm HDPE wells with gas taps in 5 holes
	Rotary cored	3	12.00 – 14.00	-	-
	Rotary open hole	12	17.00 – 40.00	-	63mm HDPE wells with gas taps in 2 holes
	Windowless sampler	19	0.40 – 5.45	SPT Hand shear vane (HSV)	63mm HDPE wells with gas taps in 7 holes
Trial pits	Machine (13T tracked)	28	1.20 – 3.90	Hand shear vane (HSV)	-

Wells for monitoring groundwater levels and ground gas concentrations, and to facilitate the sampling of groundwater, were installed in a number of the windowless sampler, cable percussion boreholes and rotary open hole boreholes. A summary of the monitoring well installations is presented in Table 4.3.

Table 4.3: Summary of monitoring installations

Location	Ground level (m OD)	Standpipe diameter	Screen top and base depth (m bgl)	Screen top and base elevation (m OD)	Strata targeted
CP03	102.02	50	4.00 – 7.50	98.02 – 94.52	Glacial Till / PMCMF*
CP04	100.29	50	1.00 – 2.50	99.29 – 97.79	General Made Ground
CP06	100.38	50	1.00 – 4.00	99.38 – 96.38	Opencast Made Ground
CP07	100.35	50	1.00 – 5.50	99.35 – 94.85	Opencast Made Ground
CP09	101.25	50	4.00 – 7.00	97.25 – 94.25	Glacial Till
RO04	100.06	50	8.00 – 20.00	92.06 – 80.06	PMCMF
RO10	101.42	50	8.50 – 15.00	92.92 – 86.42	PMCMF
WS01	102.49	50	0.50 – 1.50	101.99 – 100.99	General Made Ground

Location	Ground level (m OD)	Standpipe diameter	Screen top and base depth (m bgl)	Screen top and base elevation (m OD)	Strata targeted
WS02	102.37	50	1.00 – 4.00	101.37 – 98.37	Glacial Till
WS05	101.70	50	1.00 – 2.50	100.70 – 99.20	Glacial Till
WS07	99.83	50	1.00 – 2.00	98.83 – 97.83	Opencast Made Ground
WS11	102.25	50	1.00 – 3.00	101.25 – 99.25	Furnace / General Made Ground
WS13	100.68	50	0.50 – 1.40	100.18 – 99.28	General / Organic Made Ground
WS14	101.34	50	0.50 – 1.50	100.84 – 99.84	General / Organic Made Ground
* Pennine Middle Coal Measures Formation					

Attempts were made to install WS10 and WS15 near the northern boundary of the Tarmac Topblock site. However, due to the very loose Made Ground in WS10 the material collapsed on removal of the sample barrel, as such it was not possible to install a monitoring well. In the location of WS15 there were multiple difficulties in attempting to drill including an excessive amount of water in the ground from the nearby rotary boreholes (RO02 and RC01). In addition, due to the high cobble content the sample barrel repeatedly kicked off at an angle despite multiple attempts to drill the borehole.

No monitoring wells were installed in the Greenfield. This is due to restricted access to the site as a result of a palisade fence that separates this field from Tarmac Topblock. Furthermore, based on geological logs there are considered to be no significant sources of ground gas and no development is proposed in this area.

4.4 Geo-environmental testing

4.4.1 Sampling strategy and protocols

Exploratory hole positions were determined by reference to the site conditions and uncertainties identified in the Initial Conceptual Model.

Certain specific features such as the existing electrical substation, and historical brick pit, opencast site, pond and tanks (see Table 4.1) were targeted for specific investigation, but a reasonably even spacing was used for the remainder of the site taking the existing site use into consideration.

Samples were taken, stored and transported in general accordance with BS 10175:2011+A2:2017.

4.4.2 Geo-environmental monitoring

Gas monitoring boreholes have been monitored on six occasions to date, which completes the monitoring programme as part of this commission. The results are presented in Appendix D.

4.4.3 Geo-environmental laboratory analyses

The chemical test certificates for testing undertaken by Hydrock are provided in Appendix E. Wherever possible, UKAS and MCERTS accredited procedures have been used.

The chemical test certificates for testing undertaken as part of historical investigations are provided in the relevant reports in Appendix C.

The geo-environmental analyses undertaken on soils are summarised in Table 4.4. Due to the different types of Made Ground recorded, Table 4.5 provides a breakdown of what analysis has been undertaken on the different types.

Table 4.4: Geo-environmental analyses of soils

Determinand Suite	Made Ground	Topsoil	Glacial Till
Hydrock minimum suite of determinands for solids*	40	1	4
Titanium Suite	4	-	-
Speciated aliphatic and aromatic banding Total petroleum hydrocarbons by HS-GC/MS and GC/FID (Hydrock Tier 2 TPH Suite)	13	-	2
Benzene, toluene, ethylbenzene and xylene (BTEX) by HS-GC/MS	13	-	2
MTBE (Methyl Tertiary Butyl Ether) by HS-GC/MS	13	-	2
Volatile organic compounds (VOC target list plus TIC) by HS-GC/MS	9	1	2
Semi-volatile organic compounds (SVOC target list plus TIC) by GC-MS	8	-	1
Polychlorinated biphenyls (PCB WHO 12)	3	-	-
Asbestos quantification	6	-	-
Asbestos hand picking	1	-	-
Pesticide screen	-	1	-
Coal Tar test suites (speciated polynuclear aromatic hydrocarbons (PAH, by GC-FID), speciated phenols and speciated creosols)	4	-	-
*Hydrock minimum soil suite comprises: As, B (water soluble), Be, Cd, Cr (total), Cr (VI), Cu, Hg, Ni, Pb, S (elemental), Se, V, Zn, cyanide (total), sulfide, pH, asbestos fibres, speciated polynuclear aromatic hydrocarbons (PAH, by GC-FID), total phenols and fraction of organic carbon			

Table 4.5: Geo-environmental analyses of Made Ground soils

	Made Ground							
Determinand Suite	General	Sub-base	Backfilled Pit	Furnace	Landfill	Opencast	Organic	Reworked Natural
Hydrock minimum suite	20	2	1	6	4	2	2	2
Titanium Suite	3	-	-	-	-	-	-	-
Hydrock Tier 2 TPH Suite	8	1	-	2	1	1	-	-
BTEX	8	1	-	2	1	1	-	-
MTBE	8	1	-	2	1	1	-	-
VOC	7	-	-	1	1	-	-	-
SVOC	6	-	-	1	1	-	-	-

	Made Ground							
Determinand Suite	General	Sub-base	Backfilled Pit	Furnace	Landfill	Opencast	Organic	Reworked Natural
PCB WHO 12	1	1	-	-	-	-	-	1
Asbestos quantification	2	-	-	1	-	-	-	-
Asbestos by hand picking	-	-	-	-	-	1	-	-

The soils chemical test data are interpreted and assessed in Sections 7.3 and 7.4.

The geo-environmental analyses undertaken on waters for testing undertaken by Hydrock are summarised in Table 4.6.

Table 4.6: Geo-environmental analyses of waters

Determinand Suite	Groundwater
Hydrock minimum suite of determinands for waters	7
Speciated aliphatic and aromatic banding Total petroleum hydrocarbons by HS-GC/MS and GC/FID (Hydrock Tier 2 TPH Suite)	4
Benzene, toluene, ethylbenzene and xylene (BTEX) by HS-GC/MS	4
Volatile organic compounds (VOC target list plus TIC) by HS-GC/MS	4
Semi-volatile organic compounds (SVOC target list plus TIC) by GC-MS	4
MTBE (Methyl Tertiary Butyl Ether) by HS-GC/MS	4
Polychlorinated biphenyls (PCB WHO 12)	1

The groundwater chemical test data are interpreted and assessed in Section 7.5.

4.5 Geotechnical testing

The geotechnical tests undertaken by Hydrock are summarised in Table 4.7 and the test certificates are provided in Appendix C. Wherever possible, UKAS accredited procedures have been used.

The geotechnical tests undertaken as part of historical investigations are provided in the relevant reports in Appendix C.

Table 4.7: Summary of sample numbers for geotechnical tests

Test	Made Ground	Glacial Till	PMCMF
Natural moisture content	21	14	-
Atterberg limits	8	9	-
Particle size distribution (wet)	5	1	-
Particle size distribution (dry)	1	-	-
Particle size distribution (sedimentation)	4	2	-
Sulphate and aggressive chemical environment classification for buried concrete classification (full BRE SD1 suite)	8	2	-
Single stage undrained triaxial compressive strength	2	8	-
One dimensional oedometer consolidation	1	2	-

Test	Made Ground	Glacial Till	PMCMF
Optimum Moisture Content / Maximum Dry Density Relationship (2.5kg rammer), with hand shear vane at each compaction point	2	1	-
Remoulded California Bearing Ratio at natural moisture content	6	1	-
Particle density	1	2	-
Organic Matter	3	2	-
Calorific Value	2	-	-
Uniaxial Compressive Strength (UCS)	-	-	3
Point Load Strength	-	-	7

The geotechnical test data are summarised in Section 5.6 and interpreted in Section 6.

5. GROUND INVESTIGATION RECORDS AND DATA

5.1 Physical ground conditions

5.1.1 Summary of strata encountered

The following presents a summary of the properties of the ground and groundwater conditions encountered, based on field observations, interpretation of the field data and laboratory test results, taking into account drilling, excavation and sampling methods, transport, handling and specimen preparation.

All relevant data from the Hydrock investigation discussed in Section 4 are used from this point forward.

Details of the Hydrock ground investigation works are provided in the logs in Appendix B, a summary of the ground model is presented in Table 5.1 and the individual strata are described in the sections below. Relevant cross-sections are presented in Appendix A.

Table 5.1: Strata encountered

Stratum	Depth to top (m bgl)	Depth to base (m bgl)	Thickness (m) (range)	Thickness (m) (average)
Made Ground (all types)	Ground Level	0.40 – 7.50	0.40 – 7.50	2.74
Surface Cover – Concrete hardstanding	Ground Level	0.20 – 0.60	0.20 – 0.60	0.27
Surface Cover – bituminous bound pavement hardstanding	Ground Level	0.10 – 0.15	0.10 – 0.15	0.12
'General' Made Ground	Ground Level – 1.30	0.20 – 4.30	0.20 – 3.50	1.31
'Backfilled Pit' Made Ground	Ground Level	1.30	1.30	1.30
'Furnace' Made Ground	Ground Level – 1.20	>1.20 – 6.20	>0.4 – 5.90	2.22
'Organic' Made Ground	1.20 – 3.30	1.40 – 3.90	0.20 – 1.10	0.39
'Landfill' Made Ground	0.50 – 0.90	>1.80 - >3.30	>1.90 – >3.00	>2.56
'Reworked Natural' Made Ground	0.90 – 2.20	1.80 – 5.00	0.30 – 3.30	1.34
'Opencast' Made Ground	Ground Level – 5.30	6.00 – 7.50	0.70 – 7.50	4.31
'Sub-Base' Made Ground	0.07 – 0.60	0.15 – 1.00	0.08 – 0.45	0.22
Topsoil (Greenfield only)	Ground Level	0.30 – 0.50	0.30 – 0.50	0.37
Peat	2.40	3.10	0.70	0.70
Glacial Till	0.30 – 7.10	4.00 – 8.50	0.50 – 6.20	>3.14
Pennine Middle Coal Measures Formation	4.00 – 8.50	>40	Not proven	Not proven

5.1.2 Surface covering

The following surface cover was identified during the field reconnaissance and the fieldworks:

- Localised areas of concrete hardstanding near the centre and eastern boundary;
- Bituminous bound pavement hardstanding present in the southern half of the site;
- Herringbone bone brick pavement surrounding and to the north of the large disused building in the centre of the site;
- Gravel / hardcore, which covers the majority of the Tarmac Topblock site; and
- Vegetation (grass) is the surface course of the greenfield.

5.1.3 Bituminous bound pavement

The thickness of the bituminous bound pavement was relatively consistent with an average thickness of 0.12m and was underlain by either a gravel sub-base of hardcore or directly onto Made Ground.

Coal tar testing has been undertaken on selected samples and the results are discussed in 7.3.3.

5.1.4 Made Ground

Below the surface covering, Made Ground was recorded across the majority of the site, with the exception of the greenfield. However, there were localised areas of Made Ground associated with a land drain running through the field. The distribution of Made Ground is shown on Hydrock Drawing 15220-HYD-XX-XX-DR-GE-1008 in Appendix A and in Figure 5.1.

In general, there are seven types of Made Ground, which are discussed in more detail below:

- 'General' Made Ground;
- 'Furnace' Made Ground;
- 'Organic' Made Ground;
- 'Landfill' Made Ground;
- 'Reworked Natural' Made Ground;
- 'Opencast' Made Ground; and
- 'Sub-base' Made Ground.

It should be noted that all the types of Made Ground listed above are within the Tarmac Topblock part of the site and only the 'General' Made Ground has been identified within the Greenfield. As such, this will be discussed separately to the 'General' Made Ground associated with Tarmac Topblock.

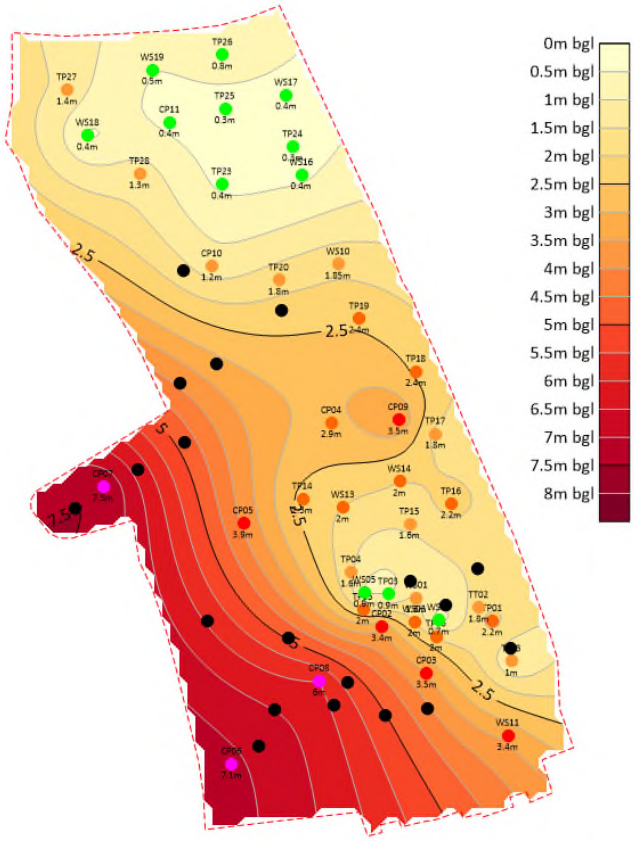


Figure 5.1: Base of all Made Ground (m bgl)

General Made Ground - Greenfield.

There was limited Made Ground encountered in the greenfield and where recorded this was associated with terracotta land drains in TP27 at 1.20m bgl and TP28 at 0.90m bgl, with gravel sized land drain fragments recorded in TP26 between 0.35m and 0.80m bgl. Generally speaking the topsoil/Made Ground in the greenfield was typically <0.5m thick.

The soils above the land drains were firm to very stiff desiccated sandy gravelly clay with gravel of mudstone, quartzite, coal and sandstone.

General Made Ground - Tarmac Topblock.

The distribution of General Made Ground was across the majority of the site with the exception of the southwest corner, which is the location of an historic opencast site. The composition of the fill consists of interbedded cohesive and granular strata. In addition, brick and concrete obstructions were commonly encountered within this Made Ground, which is discussed further in Section 5.2.

The cohesive deposits comprised very soft to very stiff sandy gravelly clay with gravel of sandstone, mudstone, brick, coal and clinker. The granular Made Ground consists of sandy gravel or gravelly sand with gravel of brick, concrete, metal, sandstone, mudstone, aggregates, plastic, quartzite, clinker, ceramic and timber. Cobbles and boulders were also recorded within the General Made Ground. Noteworthy encounters include RO03 which had a high boulder content of concrete blocks measuring 1m in length and 0.30m in width, and WS07 that had an abundance of cobble and boulder sized concrete blocks.

Furnace Made Ground

The Furnace Made Ground was predominantly encountered in the southern half of the site, with localised areas along the eastern boundary and northeast corner of the Tarmac Topblock site. The origin of the Furnace Made Ground in TP17 and TP18 along the eastern boundary, is considered to be associated with a railway siding which was encountered at 0.10m in TP18, cemented within the concrete. There is no clear indication from historic maps of the source for WS10. However, as a spoil heap formerly occupied this area it is possible this created the mixed fill recorded in WS10.

The composition comprised very loose to medium dense sandy gravel / gravelly sand of ash, cinders, clinker and red shale along with occasional brick, concrete, sandstone and coal. This material in the southern half of the site was considerably compacted, in particular within the top 1.20m bgl resulting in some hand pits and trial pits terminating at a shallow depth. A 13T tracked excavator with a toothless bucket could not excavate past 1.20m in TP08 due to how densely compacted the material was.

The Furnace Made Ground was primarily granular in nature, although some deposits of very soft to firm gravelly clay with gravel of ash, cinders, brick and sandstone were recorded in TP01, TP06, TP07 and WS11 near the southeast corner.

Organic Made Ground

This was commonly encountered at the boundary between the base of the Made Ground and the Glacial Till, with the exception of WS13 and WS14 where a band of Reworked Natural separates the two deposits. The distribution of the Organic Made Ground is largely within the centre of the site and towards the northeast corner.

The Organic Made Ground was identified as a very soft to stiff slightly gravelly very silty clay or clayey silt with occasional rootlets and a slight to moderate humic odour. A black slightly clayey silty gravel with a slight humic odour was recorded in TP16. This may be relict topsoil that has been buried during the historical development of the site.

Landfill Made Ground

The Landfill Made Ground was unanticipated as there is no recording of this feature on historic maps, but was encountered in TP21, TP22 and TT01 midway along the western boundary. The full extent of the landfill could not be proven to the east due to the presence of concrete blocks and a large stockpile preventing delineation.

The Landfill material was described as a sandy gravel / gravelly sand with gravel and cobbles of brick, concrete, timber, asphalt, aggregates, ash, clinker, tar, timber, plastic, glass, slate and fabric. Two large tractor tyres were recorded in TP21 at 2.10m bgl, which inhibited the ability to excavate beyond 2.80m bgl. No significant evidence of organic materials was found and the main constituents of the materials appear to be non-organic.

In addition, the base of the landfill was not proven in TP22 due to the limit of the machine terminating at 3.90m bgl in TP22. In TT01, Organic Made Ground was recorded at the base of Landfill Made Ground at 3.30m with the excavation terminating at 3.50m bgl due to difficulty digging. It is possible that TT01 was close to encountering natural based on the above findings of the location of Organic Made Ground. However, this will need to be re-visited with a larger machine to excavate beyond 4m and to prove the

extent of the landfill. Based on the minimum depth of fill, it is considered that the deepest part of the landfill is towards the western boundary.

Reworked Natural Made Ground

Reworked Natural was predominantly recorded in the eastern half of the site, with the exception of RO02 in the northwest corner. The deposits comprised very soft to stiff sandy silty clay with occasional gravel of mudstone. In TT02 between 0.90m and 1.20m a black clayey gravel of mudstone was recorded. Similar to Organic Made Ground, the Reworked Natural was encountered at the boundary between Made Ground and Glacial Till.

Opencast Made Ground

Historically, an opencast site was recorded directly southwest of the site, which was considered to only encroach on the southwest corner. However, the ground investigation has revealed that the opencast site extends much further towards the centre of the site as shown on drawing 15220-HYD-XX-XX-DR-GE-1008 in Appendix A.

The deepest Opencast Made Ground was recorded near the western boundary in CP06 at 7.10m and CP07 at 7.50m and becomes shallower towards the east-northeast. The deposits comprised interbedded cohesive and granular fill of soft to very stiff sandy gravelly clay and loose to dense sandy clayey gravel / gravelly sand with gravel of ash, clinker, mudstone, sandstone, brick, concrete, plastic, quartzite, ceramic, aggregates and a low to high cobble content.

In CP06 near the southwest corner a void was recorded between 4.90m and 7.10m bgl, where during drilling there was a noticeable drop of drilling gear when the void was encountered.

Sub-base Made Ground

The sub-base was encountered beneath areas of concrete and bituminous bound pavement and was encountered as a sandy gravel of aggregates including limestone and sandstone. The sub-base was generally 0.10m to 0.20m in thickness, with the exception of TP16 which had a 0.40m thick sub-base. However, this coincides with the 0.60m of reinforced concrete above.

5.1.5 Topsoil

Topsoil was only encountered in the Greenfield with an average thickness of 0.37m, and comprised slightly gravelly clayey sand with gravel of sandstone and quartzite with abundant rootlets.

For the purposes of this report, topsoil is defined as the upper layer of an *in situ* soil profile, usually darker in colour and more fertile than the layer below (subsoil), which is a product of natural chemical, physical, biological and environmental processes, but does not imply compliance with BS 3882:2015. Reuse of topsoil as a growing medium at the site should be determined by the landscape architect or the landscape Contractors.

5.1.6 Peat

There was a band of peat recorded in TP18 near the eastern boundary between 2.40m and 3.10m bgl, which was described as a firm very clayey silty peat with a strong humic odour and occasional rootlets 1-3mm in diameter. This is associated with a former marsh area, which can be best seen on the 1955 1:2,500 historic map as shown in Figure 5.2 below.

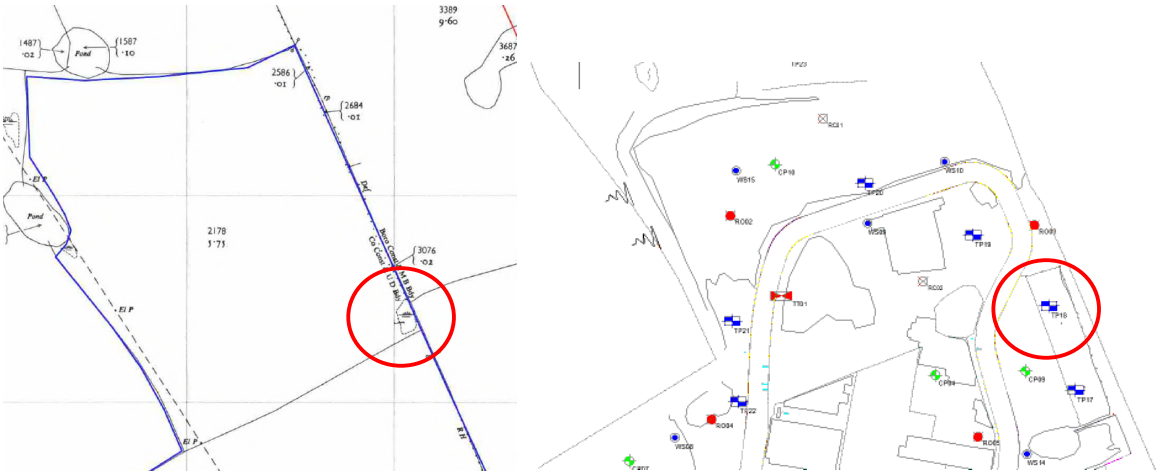


Figure 5.2: Historical location of marshland

5.1.7 Glacial Till

Glacial Till was encountered underlying the Made Ground and/or topsoil across the majority of the site, although this was not always encountered in the trial pits and windowless sample boreholes due to deep or compacted Made Ground. There is an absence of Glacial Till in CP07, RO04 and RO06 near the western boundary, where there is deep Opencast Made Ground overlying bedrock.

Where proven the Glacial Till comprises soft to very stiff, although generally firm to stiff, sandy gravelly clay with gravel of sandstone, mudstone, coal, siltstone and quartzite. Due to the Glacial Till being at a shallow depth in the Greenfield, it was commonly found to be desiccated due to being within the influence of trees and hedges. As a result, the clay was often recovered as a sand or gravel of clay.

5.1.8 Pennine Middle Coal Measures Formation (PMCMF)

The PMCMF was encountered underlying the Opencast Made Ground along the western boundary and/or Glacial Till across the rest of the site. The depth to the top of bedrock is shown on Hydrock Drawing 15220-HYD-XX-XX-DR-GE-1008 in Appendix A and in Figure 5.3. The base of which was never proven but the strata comprises interbedded extremely weak to strong mudstone, medium strong to very strong siltstone and strong to very strong sandstone with beds of coal.

Rotary coring was undertaken in three exploratory holes, which recorded discontinuities to be generally horizontal to sub-horizontal between 1 and 3 degrees, planar smooth and partially infilled.

Drilling operations were undertaken using water flush along with a gas monitor attached to the rig to monitor for ground gas emissions associated with mining activities. Throughout the works, ground gases were not detected. However, there were several instances where the water flush was lost due to voids and/or broken ground, which is summarised in Table 5.2.

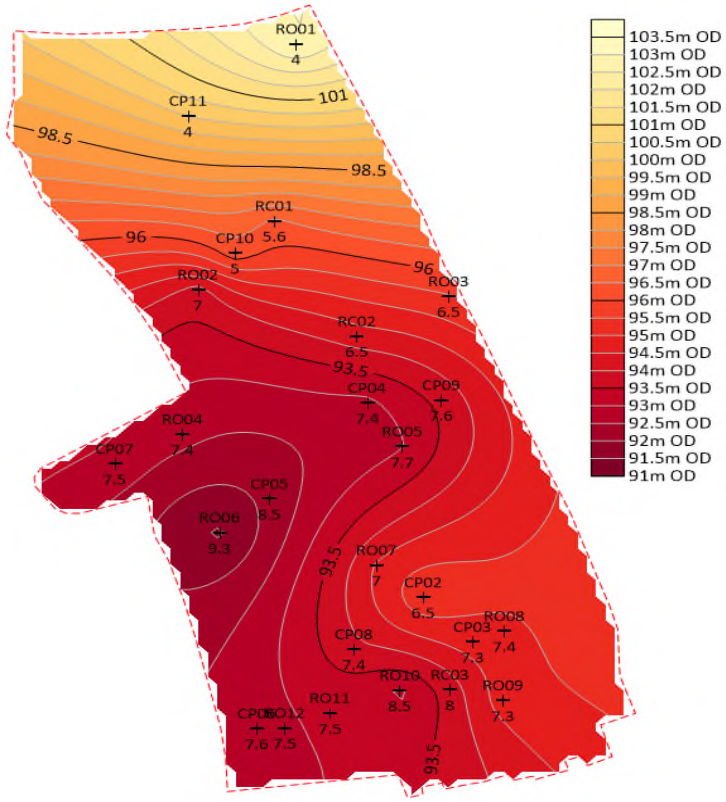


Figure 5.3: Top of rockhead (m OD)

Table 5.2: Area of lost flush

Exploratory Hole	Depth Water Flush Lost (m bgl)	Depth Range (mOD)	Comments
RO01	12.70 – 17.00	94.30 – 90.00	No returns, hole terminated at 17m. Inferred as workings in Stubbs Coal Seam.
RO05	20.00 – 25.50	80.68 – 75.18	No returns presumed to be worked ground. Hole terminated at 34m due to using 28,000 litres of water. Inferred as workings in Rams Coal Seam.
RO06	18.00 – 25.00	82.73 – 75.73	No returns therefore rock description based on colour of water flush only. Inferred as workings in the Top Furnace Coal Seam.
RO09	23.60 – 25.00	78.45 – 77.05	Void* no returns. Inferred as workings in the Roger Coal Seam.
	25.00 – 30.00	77.05 – 72.05	No returns, possibly lost down the void, rock description based on colour of water flush only. Possible workings in Roger Coal Seam
RO10	25.20 – 27.00	76.22 – 74.42	No returns presumed to be worked ground. Inferred as working in the Roger Coal Seam.
RO11	34.00 – 35.00	66.81 – 65.81	Void* no returns. Inferred as workings in the Roger Coal Seam.

* Void identification is based on drillers interpretation of the encountered ground conditions in relation to the drilling rate, including torque observations on the drill bit. Where a void was encountered there was a noticeable drop in torque and a very quick rate of drilling.

Coal Seams

There were several occurrences of coal within the exploratory holes, described as black coal, which is summarised in Table 5.3. The thickness of the coal seams varies between 0.25m and 1.70m.

Evidence of coal seams and voids are presented on drawing 15220-HYX-XX-XX-DR-GE-1011 in Appendix A.

Table 5.3: Coal seams encountered

Exploratory Hole	Depth Range (m bgl)	Depth Range (mOD)	Seam Thickness (m)
RC02	6.50 – 7.30	94.28 – 93.48	0.80
RO04	18.40 – 18.90	81.66 – 81.16	0.50
RO05	8.50 – 9.60	92.18 – 91.08	1.10
RO06	9.30 – 9.60	91.43 – 91.13	0.30
	9.85 – 10.60	90.88 – 90.13	0.75
	18.00 – 18.80	82.73 – 81.93	0.80
RO07	11.80 – 12.70	89.77 – 88.87	0.90
	35.50 – 36.70	66.07 – 64.87	1.20
RO08	9.50 – 11.20	92.78 – 91.08	1.70
RO11	12.80 – 13.10	88.01 – 87.71	0.30
	13.50 – 13.75	87.31 – 87.06	0.25
	33.50 – 36.00	67.31 – 64.81	1.50
RO12	17.60 – 18.30	82.73 – 82.03	0.70
	19.90 – 20.30	80.43 – 80.03	0.40

5.1.1 Mine Entries

Three trial trenches were undertaken in the recorded locations of the mine entries in attempt to locate their positions. TT01 (mine entry 376407-003) was located near the western boundary, TT02 (mine entry 376407-006) south of the electrical substation and TT03 (mine entry 376407-007) near the entrance of the site off Stopes Road.

Investigations at all three positions were constrained by current site conditions and as such had to be moved from the original positions based on the co-ordinates provided by the Coal Authority. A large stockpile prevented the excavation of TT01, which had to be moved to the edge of the stockpile, and an electrical cable resulted in the movement of TT02 and TT03 from their original positions as well. Therefore, although the trial trenches were undertaken, they did not encounter any evidence of a mine entry as they were not in the recorded locations. Further works will be required to delineate the location of the mine entries when the site is completely disused.

In addition to the above, mine entry 376407-002 is located off-site outside of the northwest corner of the Greenfield and was not investigated as part of this investigation as it is unlikely to lie within the site boundary. Mine entry 376407-008 in the southeast corner, near the entrance to Tarmac Topblock, could not be investigated due to vehicles parked in this area preventing access. Furthermore, there was insufficient room for a tracked excavator to operate safely.

5.2 Obstructions

Obstructions were encountered in a number of trial pits and boreholes during the investigation. These intrusive locations are summarised in Table 5.4 and illustrated on drawing 15220-HYD-XX-XX-DR-GE-0009 at Appendix A.

Table 5.4: Obstructions encountered

Stratum	Location	Depth (m bgl)	Description
General Made Ground	CP01	1.00	Concrete slab
	RO02	0.80 – 1.10	Brick and concrete obstruction
	RO04	0.50 – 0.60	Concrete
	TP01	0.40 – 0.45	Reinforced concrete
	TP04	0.40 – 0.80	Brick and concrete obstruction
Furnace Made Ground	TP08	1.20	Very compacted ash fill
General Made Ground	TP15	0.40 – 0.80	Concrete
	TP21	0.30 – 0.90	Concrete blocks
Landfill Made Ground		2.10	Two large tractor tyres
General Made Ground	TP22	0.40 – 0.90	Concrete blocks
	WS01	0.60 – 0.90	Brick obstruction
Backfilled Pit	WS03	1.10 – 1.30	Brick slab
General Made Ground	WS04	0.60	Potential service encased in concrete
	WS05	0.50	Metal pipe (possibly from historic tank)
Sub-base Made Ground	WS06	0.40	Very compact gravel
General Made Ground	WS08	0.50 – 0.60	Concrete
	WS09	0.50	Very compact sand
Sub-base Made Ground	WS12	0.50	Very compact gravel

5.3 Visual and olfactory evidence of contamination (soil)

In addition to the more common man-made constituents (ash, clinker, plastic, etc), described above in Section 5.1.4, visual and olfactory evidence of contamination was noted in a number of locations, summarised in Table 5.5, Visual and Olfactory Evidence of Contamination Plan in Appendix A.

Table 5.5: Visual and olfactory evidence of contamination - soils

Stratum	Location	Depth (m bgl)	Description
Opencast Made Ground	RO12	0.10 – 1.20	Suspected asbestos containing materials within the Made Ground

Stratum	Location	Depth (m bgl)	Description
General Made Ground	TP04	0.90	Pocket of clay with slight petroleum hydrocarbon odour and stained dark blue
Opencast Made Ground	TP11	1.60	Suspected asbestos Rope
Organic Made Ground	TP16	1.90 – 2.20	Slight tar odour
Landfill Made Ground	TP21	1.30 – 1.90	Asphalt gravel with moderate tar odour
General Made Ground	WS01	1.20 – 1.60	Moderate petroleum hydrocarbon odour
	WS08	1.00 – 1.20	Slight tar odour

5.4 Groundwater

5.4.1 Groundwater observations and levels

Groundwater encountered during the investigation is listed in Table 5.6. A groundwater observation represents the depth at which groundwater was first observed and is likely to be deeper than the actual water table level at that location.

Table 5.6: Groundwater occurrence

Stratum	Date	Location	Fieldwork	Comment
			Groundwater observation (m bgl)	
Made Ground / Glacial Till	04/08/2020	CP03	3.50	At the boundary between the two strata.
Made Ground	03/08/2020	CP07	4.00	-
Made Ground / Glacial Till	07/08/2020	CP09	3.50	At the boundary between the two strata.
Made Ground	04/08/2020	TP01	1.80	Moderate ingress
	06/08/2020	TP02	1.10	Slight ingress becoming moderate
Glacial Till	06/08/2020	TP04	2.80	Slight ingress associated with sand pocket
Made Ground	03/08/2020	TP05	1.80	Slight ingress
	06/08/2020	TT02	1.40	Moderate ingress becoming rapid

Groundwater levels recorded during post-fieldwork monitoring are summarised in Table 5.7.

Table 5.7: Groundwater level data summary

Stratum	Date range	Location	Post-fieldwork monitoring	
			Depth to groundwater (range) (m bgl)	Groundwater elevation (range) (m OD)
Glacial Till / PMCMF	28/08/20 – 01/10/20	CP03	2.08 – 2.83	99.94 – 99.19
General Made Ground	28/08/20 – 01/10/20	CP04	1.85 – 1.88	98.44 – 98.41

Stratum	Date range	Location	Post-fieldwork monitoring	
			Depth to groundwater (range) (m bgl)	Groundwater elevation (range) (m OD)
Opencast Made Ground	28/08/20 – 01/10/20	CP06	3.28 – 3.88	97.10 – 96.50
Opencast Made Ground	28/08/20 – 01/10/20	CP07	3.30 – 3.62	97.05 – 96.73
Glacial Till	28/08/20 – 01/10/20	CP09	3.89 – 3.93	97.36 – 97.32
PMCMF	28/08/20 – 01/10/20	RO04	4.85 – 15.15	95.21 - 84.91
PMCMF	28/08/20 – 01/10/20	RO10	5.43 – 5.58	95.99 – 95.84
General Made Ground	16/09/20 – 01/10/20	WS01	0.68 – 1.25	101.81 – 101.24
Glacial Till	28/08/20 – 01/10/20	WS02	0.60 – 1.27	101.77 – 101.10
Glacial Till	28/08/20 – 01/10/20	WS05	1.00 – 2.40	100.70 – 99.30
Opencast Made Ground	28/08/20 – 01/10/20	WS07	1.95 – 2.12	97.88 – 97.71
Furnace / General Made Ground	28/08/20 – 01/10/20	WS11	1.22 – 1.90	101.03 – 100.35
General / Organic Made Ground	28/08/20 – 01/10/20	WS13	1.20 – 1.92	99.48 – 98.76
General / Organic Made Ground	28/08/20 – 01/10/20	WS14	1.06 – 1.20	100.28 – 100.14

Based on the above monitoring data, groundwater in the superficial deposits/Made Ground is flowing from the east at 101.2mOD towards the west at 96.6mOD as shown on Hydrock drawing 15220-HYD-XX-XX-DR-GE-1010 in Appendix A.

5.4.2 Groundwater summary

In general, perched groundwater was encountered during the investigation in the Made Ground, in particular at the boundary between the Made Ground and Glacial Till, and within a sand pocket in the Glacial Till. Post fieldwork monitoring recorded groundwater to be relatively shallow and to be of similar depths across the various stratums, suggesting groundwater in the Made Ground and Glacial Till are in hydraulic continuity. Groundwater within the PMCMF is generally deeper and typically associated with distinct bands of more permeable sandstones.

5.5 Ground gases (carbon dioxide and methane)

Records from the gas monitoring boreholes are presented in Appendix D and summarised in Table 5.8.

Six monitoring visits have been undertaken and the monitoring programme is complete for this commission. The data are assessed in Section 7.6.

Table 5.8: Range of ground gas data

Stratum	Methane (%)	Carbon dioxide (%)	Oxygen (%)	Steady flow rate (l/hr)
Made Ground	<0.01 – 13	<0.1 – 11.1	0.1 – 20.5	-13.3 – 11
Glacial Till	<0.01	<0.1 – 4	15.7 – 21.2	-2.5 – 3.9
PMCMF	<0.01 – 0.5	0.1 – 1.9	0.2 – 20.9	-3.9 – 0.7

5.6 Geotechnical data

5.6.1 Introduction

Laboratory test results are contained in Appendix C with *in situ* test results shown on the relevant exploratory hole log or datasheet in Appendix C. The following sections summarise the main findings and provide interpretation where appropriate.

5.6.2 Plasticity

The volume change potentials in terms of NHBC Standard (Chapter 4.2) with respect to building near trees have been determined from the results of plasticity index tests on samples of soil. These are summarised in Table 5.9.

Table 5.9: Volume change potential

Stratum	No. of tests	Plasticity Index			Modified Plasticity Index			Plasticity designation	Volume Change Potential
		Min.	Max.	Av.	Min.	Max.	Av.		
Made Ground	8	11	21	16	4	21	12	Low to high	Low
Glacial Till	8	10	18	14	10	17	14	Low to intermediate	Low
Peat	1	58	58	58	58	58	58	Extremely high	High
* Sample excluded from rest of Glacial Till data set due to peat classification and having a moisture content of 72%.									

5.6.3 Particle size distribution

Particle Size Distribution test (PSDs) results are summarised in Table 5.10 and summary descriptions and PSD plots of the material analysed are presented in Appendix C.

Table 5.10: PSD results summary

Stratum	No. of tests	Silt/Clay %	Sand %	Gravel %	General description
Made Ground	10	2.10 – 58.70	4.10 – 43.3	5.30 – 93.80	Gravelly clayey sand / clayey very sandy gravel / slightly gravelly very sandy clay
Glacial Till	3	20.14 – 59.40	35.60 - 75	0.40 – 5.10	Slightly gravelly very sandy clay / clay and sand

5.6.4 Soil strength

Table 5.11 summarises information pertaining to the shear strength of the soils according to geological stratum. Factual results are summarised for laboratory tests, field tests (e.g. hand shear vane) and uncorrected Standard Penetration Tests (SPT). Where the SPT is used to infer shear strength by published correlation, this is also tabulated. Shear strength versus depth plots are presented in Appendix C.

Table 5.11: Soil strength results and derived values

Stratum	No. of tests	SPT (N-value) (range)	c_u (kPa)	Method
Made Ground	11	3 - 38	21- 266*	Derived from windowless sampler SPT assuming an f_1 value of 7.
	26	4 - 50	28 - 350	Derived from cable percussive SPT assuming an f_1 value of 7.
	4	-	37 - 43	Hand shear vane
	2	-	39 - 53	Laboratory triaxial test
Glacial Till	6	4 - 15	13 - 98	Derived from windowless sampler SPT assuming an f_1 value of 6.5.
	41	-	20 - 112	Hand shear vane
	5	-	50 - 90	Laboratory hand shear vane
	8	-	47 - 202	Laboratory triaxial test
*Correlation with Stroud and Butler (1975) based on 'average' modified plasticity				

5.6.5 Relative density

Table 5.12 summarises information pertaining to the relative density of the granular soils according to geological stratum. Factual results are summarised for laboratory tests, field tests (e.g. SPT, CPT, dynamic probe correlation). SPT 'N' value versus depth plots are presented in Appendix C.

Table 5.12: Relative density results and derived values

Stratum	No. of tests	Method	SPT (N-value) (Range)	phi' (°)
Glacial Till	19	SPT – cable percussion (Hatanaka and Uchida et al 1980).	4 - 50	26 - 34
	32	SPT – windowless sampler boreholes (Hatanaka and Uchida et al 1980).	2* - 50	26 - 34
* One SPT recorded a value of 0, however this has been discounted in the above table in order yield an undrained shear strength value				

5.6.6 Compressibility

Table 5.13 presents a summary of the derived parameters for coefficient of consolidation and compressibility. The data indicates that the material is generally of medium to high compressibility over the pressure ranges tested.

Table 5.13: Summary of compressibility

Stratum	No. of tests / results	Method	Pressure range (kN/m²)	Coefficient of volume compressibility (m_v) (m²/MN)	Coefficient of consolidation (C_v) (m²/yr)
Made Ground	37	Correlation with SPT*	-	0.25 - 0.015	-
	1	One Dimensional Oedometer Testing	60	0.18	53
			120	0.099	33
			240	0.068	56
			480	0.035	47
			Unload	0.0064	-
Glacial Till	57	Correlation with SPT*	-	0.34 - 0.0136	-
	2	One Dimensional Oedometer Testing	100	0.35	28
			200	0.16	6.7
			400	0.1	6.2
			800	0.06	5.1
			Unload	0.019	-
			30	0.73	2
			60	0.23	7.7
			120	0.19	9.7
			240	0.12	29
			Unload	0.021	-

* An f_2 value of 0.75 for Made Ground and 0.68 for Glacial Till has been used based on a plasticity index of 12 and 14 respectively. (Tomlinson (2001), after Stroud)).

5.6.7 Compaction and moisture content

Table 5.14 presents a summary of the moisture content tests and compaction studies undertaken at the site.

Table 5.14: Compaction study results

Stratum	No. tests	Method	Natural moisture content (%) (range)	Optimum moisture content (%) (range)	Particle density (Mg/m³) (range)	Maximum dry density (Mg/m³) (range)
Made Ground	2	2.5kg Rammer	9.6 - 16	15 - 17	2.24 - 2.39	1.56 - 1.78
Glacial Till	1	2.5kg Rammer	20	17	2.68	1.77

5.6.8 *Subgrade stiffness*

The subgrade stiffness (CBR and Modulus of Subgrade Reaction) results are summarised in Table 5.15.

Table 5.15: CBR results and derived values

Stratum	No. tests	Method	Subgrade Surface Modulus E (MPa)	CBR (%) (Range)
Made Ground (granular)	3	Laboratory remoulded sample at Natural Moisture Content (NMC)	>135	12 - 94
Made Ground (cohesive)	3	Laboratory remoulded sample at Natural Moisture Content (NMC)	9 - 37	0.8 – 3.3
Glacial Till	1	Laboratory remoulded sample at Natural Moisture Content (NMC)	7 - 8	0.6 – 0.7
Subgrade Surface Modulus (E) is calculated through the lower bound relationship for CBR values between 2 and 12% as stated within LR113 (1984) and CD225 Rev 1 (2009). Equation for conversion is $17.6(CBR)^{0.64}$				

5.6.9 *Sulphate content*

In accordance with BRE (Special Digest 1), the Design Sulfate (DS) classification and the Aggressive Chemical Environment for Concrete (ACEC) classification are presented in Table 5.16. The assessment summary sheets are presented in Appendix C.

Table 5.16: Aggressive chemical environment concrete classification

Stratum	No. tests	DS	ACEC
Made Ground	8	DS-1	AC-2z
Glacial Till	2	DS-2	AC-3z

5.6.10 *Intact material strength – rock*

Table 5.17 summarises information pertaining to the strength of the intact rock material (not rock mass) according to geological stratum and, if applicable, weathering zones or other variations within particular strata.

Factual results are summarised for laboratory and field tests. Where point load index tests are used to infer unconfined compressive strength (UCS), this is also tabulated. Rock strength terms follow the method of BS EN ISO 14689-1:2003.

Care should be exercised in using these assumed rock strength parameters for any purpose beyond the scope of this report because it may be that additional sampling and testing is required for certain purposes. The reader should refer to the original test results in Appendix C. Note also that rock mass properties, rather than intact rock material properties, may be more suitable for design purposes.

Table 5.17: Intact rock strength results and derived values

Stratum	No. of tests	Point load index (Range)		UCS (MPa) (range)	Method
		Is	$Is_{(50)}$		
PMCMF	7	0.31 – 2.11	0.35 – 2.84	-	Point load correlation
	3	-	-	30.4 – 66.3	UCS test

6. GEOTECHNICAL ASSESSMENT

6.1 Geotechnical categorization of the proposed development

Eurocode 7, Section 2 advocates the use of geotechnical categorization of the proposed structures to establish the design requirements.

The proposed development is to comprise in the order of 140 low rise (2 to 3 storey) residential dwellings, with associated gardens, Public Open Space and infrastructure. The results of the desk study and ground investigation indicate the presence of deep Made Ground associated with backfilled quarries, historic landfilling, underground workings and variable and shallow groundwater levels.

Based on the above, for the purposes of this investigation, the proposed structures have been classed as Geotechnical Category 2.

For Category 2 structures, the Geotechnical Category should be re-assessed at the design stage and specific geotechnical design (in addition to this investigation), is required.

Following ground investigation and as part of the assessment provided in the following section, the preliminary geotechnical hazard identification undertaken in Section 3.3 has been updated.

Assessment has been undertaken in accordance with the general requirements of ICE/DETR Document 'Managing Geotechnical Risk' and the HE documents HD 41/15 and CD 622. The preliminary Geotechnical Risk Register following investigation is provided in Appendix G (Table G.2) and will need to be updated during future design works.

6.2 Characteristic design values

In accordance with BS EN ISO 1997-1 (EC 7), Hydrock consider the proposed structures would be classified as Category 2 structures. As part of the separate geotechnical design, the designer should determine the geotechnical design values appropriate to the element under consideration.

Table 6.1 provides characteristic geotechnical values to assist the designer. These are based on laboratory testing, *in situ* testing and by professional judgement using published data together with knowledge and experience of the ground conditions. Care should be exercised in using these assumed soil strength parameters for any purpose beyond the scope of this report because it may be that additional sampling and testing are required for certain purposes. The reader should refer to the original test results summarised in Section 5 and provided in Appendix C.

Table 6.1: Characteristic geotechnical values

Parameter Stratum	Bulk unit weight kN/m³	Effective angle of internal friction °	Effective cohesion kN/m²	Undrained shear strength kN/m²	Coefficient of compressibility m²/MN	Modulus of Elasticity MN/m²
	γ [a]	ϕ' [b c]	c' [d]	c_u [e]	m_v [f]	k [g]
Made Ground	Highly variable and will require separate consideration specific to the design element under consideration					
Glacial Till (Cohesive) GL to 2.5m	21.0	26	0	30	0.25	4.0

Parameter Stratum	Bulk unit weight kN/m³	Effective angle of internal friction °	Effective cohesion kN/m²	Undrained shear strength kN/m²	Coefficient of compressibility m²/MN	Modulus of Elasticity MN/m²
	γ [a]	ϕ' [b c]	c' [d]	c_u [e]	m_v [f]	k [g]
Glacial Till (Cohesive)* Below 2.5m	21.0	27	0	50	0.20	5.0
Glacial Till (Granular)	20.0	30	0	-	0.05	20
Pennine Middle Coal Measures	24.0	27	300 (0.1UCS)	10.5 MPa (UCS)	-	-

a. Measured as part of the triaxial strength test and estimated based on the recommendations of BS 8004-2015.

b. Internal friction (φ') values for the granular in situ *material derived from SPT data following the recommendations of Peck et al., (1967).*

c. Internal friction (φ') values for the cohesive in-situ material derived from BS 8004-2015, where φcv' is derived from plasticity index. The use of φcv' in the analysis is considered to provide a conservative estimate of φ'.

d. BS 8002:1994 Code of practice for Earth retaining structures, British Standards institution.

e. Site measurements and laboratory data.

f. Laboratory data.

g. 1/mv

**not including peat and organic layers*

6.3 Groundwork

6.3.1 Site preparation

The redevelopment will involve demolition of the existing buildings. This should be undertaken to an appropriate Specification to ensure any asset materials generated are geotechnically suitable for use.

Buried obstructions were encountered during this investigation associated with the current and former site uses and there is a possibility of further such obstructions being encountered. Obstructions are listed in Table 5.4 and included brick and concrete slabs, metal and rubber and very dense granular fill.

It is recommended that the enabling works strategy considers the identification and removal of all below ground obstructions down to a predetermined depth to allow construction of foundations and services etc.

Additional over-excavation may be required to remove desiccated soils below ground bearing structures and shallow coal seams, which may impact proposed structures.

Topsoil should be removed from beneath all building and hardstanding areas.

6.3.2 Groundworks

Following breaking out of hardstanding and obstructions, excavation of shallow soils should be readily undertaken by conventional plant and equipment. However, excavation through any buried construction/intact rock quality strata may require heavy-duty excavation plant/ripping plant and the use of specialist breaking equipment.

Significant collapse and Spalling of trial pit faces was noted during and following trial pit excavation. This was noted particularly in the Made Ground, low strength natural fine soils and where groundwater ingress occurred. Based on the groundwater levels excavation below 1.5m to 2.0m within the Made Ground is anticipated to be particularly problematic.

Temporary trench support, or battering of excavation sides, is recommended for all excavations that are to be left open for any length of time and will definitely be required where man entry is required. Particular attention should be paid to excavation at, or close to, site boundaries/adjoining existing roads/structures/buildings, where collapse of excavation faces could have a disproportionate effect.

A risk assessment of the stability of any open excavation should be undertaken by a competent person and appropriate measures adopted to ensure safe working practise in and around open excavations. Further guidance on responsibilities and requirements for working near, and in, excavations can be obtained from the Construction Design and Management Regulations (2015); Construction Information Sheet 47: Inspections and Reports (2005) and HSG47: Avoiding Danger from Underground Services.

To ensure no loads are imposed on the sides of the excavation, spoil should not be placed immediately adjacent to the excavation. Spoil should be placed a suitable distance from the side of the excavation (as assessed by a competent person).

Based on site observations, the rate of water ingress to the proposed excavations is likely to be slow to moderate. In these circumstances, groundwater control by sump pumping is likely to be sufficient.

However, it should be recognised that groundwater levels may vary from those at the time of the investigation, for example in response to seasonal fluctuations and the timing of construction may dictate the extent of groundwater control required.

Any water pumped from excavations may need to be passed via settlement tanks (to reduce suspended solids) before being discharged to the sewer. Discharge consents may also be required.

6.3.3 Earthworks/reuse of site-won materials

At this stage, Hydrock is not aware of proposals for earthworks at the site. The site is relatively flat and therefore it is unlikely that major earthworks will be required to create the development platforms.

Should earthworks be required, supplementary earthworks testing and an earthworks Specification will be necessary to ensure the appropriate management and reuse of the existing soils.

If significant earthworks are required, the works may be Category 2 in accordance with BS EN ISO 1997-1 (EC 7) and further geotechnical design may be necessary. Once site proposals have been further defined more specific consideration will need to be given to the reuse of materials and reference should be made back to this office.

6.4 Mineworkings

The geological mapping indicates four coal outcrops below the site dipping in a southerly direction. These are inferred to be (from north to south):

- the Rams (Bottom Furnace) Coal;
- Top Furnace Coal;
- Brassey (Roger) Coal; and

- Ince New Coal.

The coal authority consultant's report (HYD-6740901) shows Ince New (Major, Stonedelph) Coal seam to outcrop onto the south west boundary. However, there is a discrepancy with the BGS geological mapping for Manchester (Sheet 85, 1:50 000) which show the Ince New (Major, Stonedelph) Coal seam to subcrop to the south west of the site. During the ground investigation voids encountered were associated with workings in the Roger Coal Seam, its therefore assumed that Ince New is present to the south west.

Furthermore, records from the Coal Authority indicate at least five mine entries within the site boundary.

A summary of the features associated with coal workings is shown on drawing reference 15220-HYD-XX-XX-DR-GE-1011 in Appendix A.

6.4.1 *Abandoned mineworkings*

The site is in a Development High Risk Area and abandoned mineworkings / voids have been proven to underlie the site at shallow depth.

Further detailed assessment of the potential mine workings below the site, including a strategy for any proposed treatment, will need to be included in a separate report. In this section more general comments are made in the context of the ground investigation.

The consultants mining report obtained at the desk study phase indicates past underground mining having been undertaken at the site and is summarised in Table 6.2.

Table 6.2: Summary of Previous Underground Workings within 100m bgl

Seam Worked	Depth (m)	Dip Direction	Extraction thickness (m)	Year last mined
Roger	28.0	South 16°	2.10	1903
Lower Florida	47.0	South 16°	1.90	1901
Top Shuttles	66.0	Southwest 16°	1.50	1894
Rams	82.0	South 14.9°	1.80	1898

Mine abandonment plans obtained from the Coal Authority show the layout of the Gingham Mine and Ten Feet Mine, which underlies the central eastern section of the site. These are inferred to be associated with the Rams or Top Shuttles and Lower Florida (inferred as representing the upper leaf and lower of the Top Furnace, which was mined).

As shown on drawing 15220-HYD-XX-XX-DR-GE-1011 in Appendix A voids were recorded in the south of the site in boreholes RO09, RO10 and RO11 at approximately 25 to 35m bgl. This is potentially indicative of workings within the Roger Coal seam. A void was encountered within RO05 at 20.00m and 25.5m bgl, based on its depth and dip direction in relation to the Rams Coal seam, this was inferred as unrecorded shallow workings possibly associated with the Rams seam.

The presence of mineworkings at shallow depth poses an unacceptable risk to the proposed development due to the potential for collapse and upward migration of voids. Deeper workings within the Rams Seam in order of >82m bgl are unlikely to pose a risk based on the depth indicated in Table 6.2.

Furthermore, a significant void was recorded in CP06 in the southwest corner of the site between 4.9m and 7.10m associated with the base of the backfilled quarry/opencast. It is recommended that further

investigation is undertaken to determine the extent of the voiding and consideration may be given to concurrent treatment with the mine workings.

It will be necessary to stabilise abandoned mineworkings where there is insufficient intact rock cover above the workings to prevent the upward migration of voids, the local premise for suitable rock cover typically being ten times the thickness of the worked seam, although this is dependent on the type and condition of the rock cover. Further information can be obtained from CIRIA Report C758D 'Abandoned Mine Workings Manual '(Parry and Chiverrell, 2019).

Once the proposed development layout has been finalised, the footprints of the new buildings should be treated by bulk infilling the underlying mineworkings with grout (drilling and grouting). Grout would be injected under pressure via an array of rotary boreholes (typically on a six-metre grid in the first instance, reducing to a tighter grid where grout takes are large).

A specification for stabilisation of mineworkings should be written, which should:

- demonstrate the site areas where shallow coal seams are present, where they are worked and where treatment is required;
- demonstrate the areas where there are sufficient intact strata exist above workings such that the risk of future instability occurring as a result of the workings can be reasonably discounted;
- detail how the mine stabilisation Contractor would delineate the extent of workings, which pose a risk to the development;
- detail how the mine stabilisation Contractor would stabilise the abandoned workings by bulk infilling;
- detail how the mine stabilisation Contractor would stabilise mineshafts by infilling or by consolidation of pre-existing infill material;
- detail the design and construction requirements of structural capping to mineshafts; and
- detail the verification requirements, which will, as a minimum, include hole locations, seams targeted, grout performance, grout takes etc.

It is recommended that Hydrock reviews, updates and amends the mine stabilisation works as they progress, and as the ground conditions require. It is cautioned that the scope of the investigation undertaken to date may not have identified all workings within the site boundary and additional investigation is likely to be required during the mine stabilisation works to verify the assumptions made in the design of the grouting scheme. This could be undertaken concurrently with the drilling and grouting operation.

It will be necessary to continue treatment to a satisfactory distance outside the footprint of proposed dwellings to ensure stability in the occurrence of collapse of adjacent ground that has not been subject to treatment. Difficulties may be experienced where this encroaches onto the boundary of adjacent properties; particularly where adjacent land is in the ownership of third parties.

A licence will be required from the Coal Authority to undertake the drilling and grouting works. The Coal Authority may have requirements in respect of control of emissions of gas and minewater as a condition of issue of a licence. The Coal Authority terms and conditions may pose restrictions on the choice of drilling flushing medium in response to recent public safety issues.

It should be noted that the mine stabilisation works may create nuisance to local residents including noise, traffic and dust, and this will need to be considered by the Contractor.

6.4.2 Mine shafts or entries

There are known to be four recorded mine shafts lying within or very close to the site boundary and a further shaft lying off-site to the north within influencing distance.

There is no record of any treatment having been undertaken on any of the shafts.

Site constraints prevented further investigation of these features during this phase of ground investigation.

Guidance on the potential zone of influence from a theoretical collapse of a mine shaft can be found in CIRIA Report C758D 'Abandoned Mine Workings Manual '(Parry and Chiverrell, 2019). It is recommended that all shafts within influencing distance of proposed structures are stabilised prior to development.

It is envisaged that this stabilisation can be undertaken in conjunction with the bulk infilling of the mineworkings. Where, however, mineshafts lie off-site there may be significant practical difficulties associated with gaining access to undertake stabilisation works. It must be cautioned that recorded shaft locations can vary significantly from the true positions and there is a high risk of unrecorded mineshafts being present.

Where mine shafts lie directly beneath or very close to a proposed structure it will be necessary to install a cap to a structural specification. The design will require agreement with the ground improvement Contractor, building control, the Coal Authority and the warranty provider. It is recommended that where possible the siting of structures over shafts is avoided.

It may also be possible to consider geophysical methods to locate abandoned shafts. Advice should be sought from a specialist Contractor on the application of geophysics in view of the recorded ground conditions. Probing or excavation of the shafts may be necessary to accurately locate them.

6.5 Foundations

This section provides recommendations for the foundations for houses, garages and related buildings as indicated on the current illustrative masterplan (HAR001MP01 Rev B).

The recommendations in this report are based on the current NHBC Standards (2020).

In accordance with EC7, BS EN 1997-1+A1 (2013) the foundations are considered to be Geotechnical Category 2. Recommendations for Geotechnical Category 2 structures are presented to aid development proposals only. A separate geotechnical design with appropriate verification in accordance with EC7 will be required at the design stage.

The allowable bearing pressures quoted in this report are for guidance only and are without the benefit of verification of the actual structure's loadings. Traditional factors of safety have been used in conjunction with the ultimate bearing capacity to indicate the likely maximum foundation pressure to ensure settlements are reduced. Serviceability limit state assessment will need to be undertaken as part of the separate geotechnical design.

6.5.1 Foundation type/ types

On the basis of the ground conditions indicated from the current investigations and with reference to Figure 5.1, the foundations recommended are as follows:

- Northern and southeastern sections of the site where Made Ground is less than 2.5m deep: Strip/trench fill foundations across the majority of the site (deepening due to trees as required) to a maximum depth of 2.5m bgl.
- Central and eastern sections where the depth of Made Ground is in excess of 2.5m: piled foundations within the stiff Glacial Till or competent Pennine Middle Coal Measures.

Further deepening of foundations may be required in the vicinity of existing or proposed trees.

6.5.2 Trench fill/strip foundations

The shallow soils at the site comprise variable thicknesses of Made Ground overlying Glacial Till. Foundations should be designed to fully penetrate the Made Ground and found within the firm to stiff Glacial Till.

Figure 6-1 presents a summary of the undrained shear strength of the shallow soils with depth.

Figure 6-1: Undrained Shear Strength of Shallow Soils

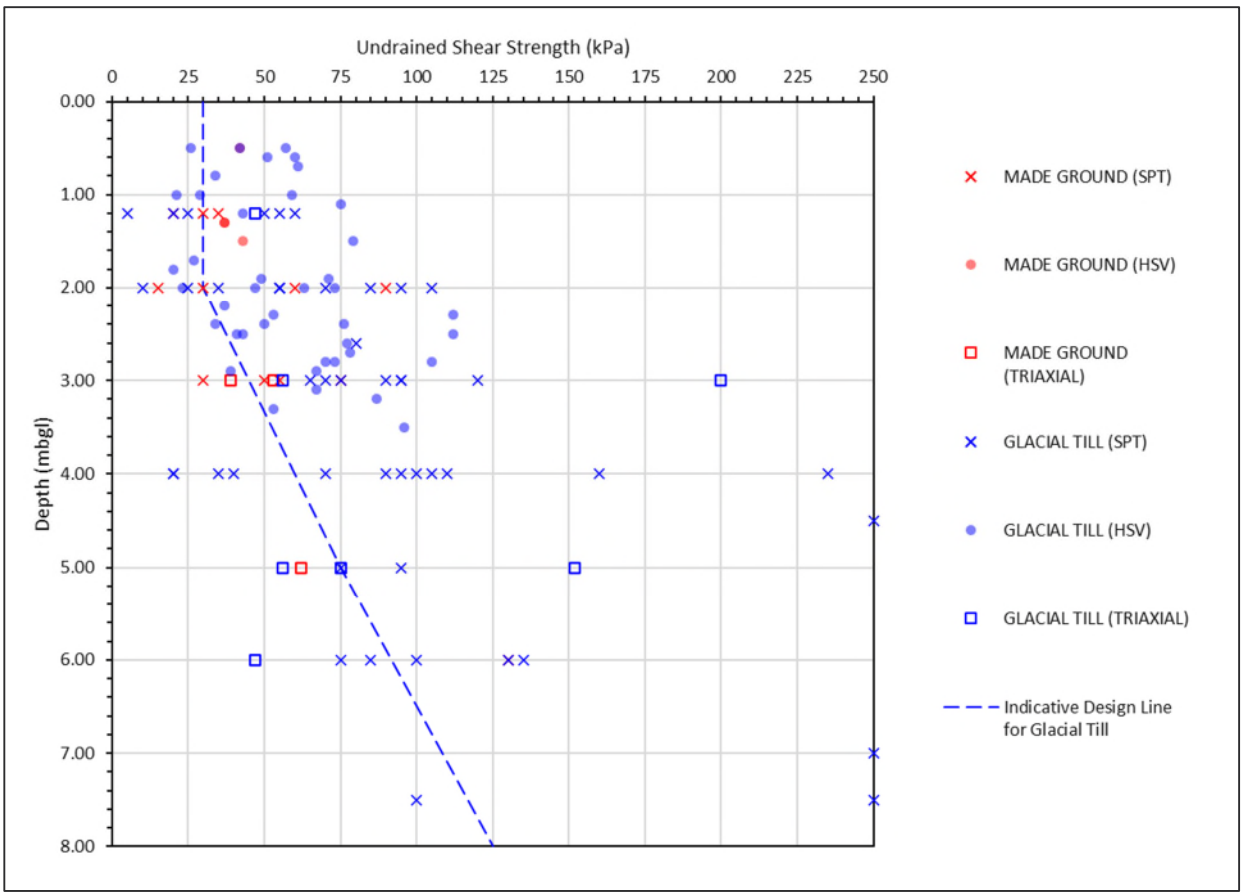


Figure 6-1 above indicates low strength Glacial Till in the upper 2.0m with undrained shear strengths in the order of 25 to 30kPa. Review of the borehole and trial pit logs suggests the low strength Glacial Till is associated with the base of the Made Ground and is associated with a perched water table in some

cases. The low shear strengths derived from SPT N values at 4.0m represent the base of the Made Ground.

On the basis of the above typical foundation depths will be at least 0.50m below the base of Made Ground at depths between 1.50m and 3.00m bgl. Assuming a lower bound characteristic undrained shear strength of the Glacial Till of 50kPa a safe allowable bearing pressure of 100kN/m² is considered appropriate

If enlarging the foundations is considered (for example because loads are such that the quoted safe allowable bearing pressure is inadequate for a standard strip foundation (up to 1.0m wide) this could lead to increased settlements and the above recommendations should be reviewed.

Based on the NHBC volume change potential (low), the minimum founding depth for strip or trench fill foundations is 1.0m below final ground level allowing for restricted new planting, and to below the base of the Made Ground, whichever is deeper.

In addition, the foundations may need to be deepened to below the depth of influence of trees from desiccation effects and roots. This should be undertaken in accordance with Chapter 4.2 of the latest version of the NHBC Standards.

Where foundation depths are stepped, for instance to match changes in depths due to trees or changes in ground conditions, the steps should be designed in accordance with the requirements of the NHBC Standards.

If trees are to be removed, the roots should be grubbed out and foundations extended to below the zone of disturbance created by this activity and to below any remaining root hairs. In addition, deepening of foundations in accordance with NHBC Standards will be required where strip or trench fill foundations are within the zone of influence of existing, removed or proposed trees and proposed shrub planting. A tree survey should be undertaken by an arboriculturist in accordance with BS 5837:2012 to identify the type, and height of existing trees on the site and including any off-site trees, which could have an effect on foundation design.

Where foundations are within the zone of potential desiccation from trees and are deeper than 1.5m bgl, a suitable compressible material or void former will be required on the inside faces of foundations to external walls and beneath ground bearing floor slabs.

Excavation of trench fill foundations in excess of 2.5m to 3.0m bgl is unlikely to be economic and may be impracticable to undertake due to loose Made Ground and water bearing sands, which may result in trench collapse. In addition, if foundations in excess of 2.5m depth are proposed, they should be designed by a Structural Engineer in accordance with the requirements of the NHBC Standards (Chapter 4.2.8) and NHBC Technical Requirement R5. In addition, Hydrock recommends when trench fill foundations are deeper than 2.5m due to trees, the design should take into account soil desiccation risk from plot specific testing if within the influencing distance of trees.

Foundation formations should be inspected by a geotechnical engineer or other suitably competent person to ensure the founding conditions are suitable and as indicated in this report. Any formation materials deemed as unsuitable should be excavated and replaced with lean mix concrete or deepened to suitable strata. If this is not possible, alternative solutions (such as piling) should be undertaken.

Foundation excavations should be protected from rainfall, inflow of surface water, frost and freezing conditions. They should also be protected from drying out in hot dry weather.

Groundwater monitoring indicates a sporadic, low flow groundwater table. Any water that collects at the base of the foundation excavations should be removed by pumping from a sump in the base.

Glacial Till is an over consolidated clay, which can swell and soften in contact with water. Therefore, care will be required to ensure that foundation excavations are kept as free of water as practicable and conversely are not allowed to dry excessively. Foundation concrete should be poured as soon as practicable after excavation.

6.5.3 Piled foundations

Piled foundations are recommended in the western half of the site, to deepen foundations to penetrate the deep Made Ground including that associated with the landfilling and backfilled quarry. The current assessment of Made Ground depth indicates a relatively shallow gradient. However, this is a function of the exploratory hole spacing. It is recommended that additional investigation is undertaken to better define the extent of the backfilled quarry and landfill areas. This additional investigation will assist infrastructure design to mitigate potentially unacceptable differential settlement and will help rationalise the extent of piled foundations.

Depending on column loads and layouts, piles should extend through the Made Ground and low strength Glacial Till and to a suitable depth into the underlying Pennine Middle Coal Measures. Based on the ground investigation typical pile depths will be in the order of 10m bgl, subject to required loadings.

Driven piles / bored piles with the use of casing / CFA piles should be suitable to support the foundations for the structures. However, the choice of piling system should be undertaken by a specialist piling Contractor and the design of piles is beyond the scope of this report. The decision on pile type and design should take into account the following factors relevant to the site:

- Obstructions in the ground are expected within the Made Ground especially the landfill area in the centre west. This could cause piles to stop shallower than the design depths, or to deviate from the vertical, thereby reducing their capacity. In some circumstances, obstructions can lead to pile breakage. It is recommended that the enabling works incorporates a strategy for identification and removal of obstructions prior to construction of foundations.
- Pile installation can create preferential pathways for the migration of contaminants to the groundwater.
- Boring of piles through coarse soils can result in loosening of the material, with resultant risk of shaft collapse prior to concreting and reduced shaft friction.
- Groundwater levels are approximately 1.5m to 4.0m within the Made Ground and temporary casing is likely to be required to depths of approximately 10m bgl for bored piles. If CFA piles are used, concrete is placed as the auger is withdrawn, which can balance the water pressure if the operation is undertaken carefully.
- Piles should extend a sufficient distance into the bearing stratum to mobilise sufficient shaft friction and end-bearing resistance to carry the required loads without unacceptable settlement.

- As the piles are to be constructed through compressible soils and soils potentially subject to on-going settlement, piles should also be designed to cater for the potential down-drag effects of negative skin friction.
- Collapse of the pile shaft can be caused by 'necking' of the pile in running sand conditions, leading to pile failure.
- Where foundations are constructed on clay soils within the influencing distance of trees design should include for the upper section of the pile to be sleeved or additional length allowed for to resist stresses from clay swelling or shrinkage. In addition, heave protection may be required on the inside faces and underside of the ground beams.

6.5.4 Vibro stone columns (VSC)

The use of VSC could be considered to improve the bearing capacity of some of the Made Ground and low strength soils below proposed shallow foundations. However, VSC ground improvement is not considered suitable to the backfilled opencast workings due to the potential for on-going settlement and collapse inundation by fluctuating / infiltration of water. Further investigation would be required to determine the location of any highwalls associated with the backfilled opencast so that an appropriate design can be undertaken.

Treatment by vibro-replacement stone columns (VSC) at suitable spacing should lead to significant improvement of the soils by the creation of stone columns, but also by the densification of the existing essentially granular soil. The depth and spacing of the VSC treatment should be determined by a specialist Contractor.

Full depth treatment of the deep Made Ground will be required and pre-boring may be required locally at least to ensure penetration through the denser Made Ground. Where penetration to full depth is not possible, obstructions can be removed where feasible, or the column layout can be redesigned and the foundations redesigned to span/cantilever over the untreated area.

Following treatment, a safe net bearing pressure of 100 kN/m² to 125 kN/m² is typically available for design of spread foundations. Confirmation of the allowable net bearing pressure should be confirmed by *in situ,* maintained plate load testing.

Foundations should be reinforced concrete strip or reinforced concrete raft/semi raft.

Shrinkable soil reinforced with stone columns is still susceptible to volume change and foundations should be designed accordingly, particularly where they are in the zone of influence of existing or proposed trees.

Different VSC Contractors use different methods of emplacing the stone columns and due to the presence of groundwater and weak soils (with the potential for collapse), it is recommended that bottom feed VSC is used.

The VSCs should be designed by a specialist in accordance with Chapter 4.5 of the NHBC Standards. In addition, Hydrock recommend a Specification for the use of VSCs is written in accordance with BRE 391 to assist with NHBC approvals and sign off.

6.5.5 *Foundation works risk assessment*

As there is a low risk to Controlled Waters, Hydrock believes that a foundation works risk assessment is not required as the proposed piling and the installation of VSCs, will not result in a significant increase in risk of pollution to Controlled Waters.

6.5.6 *Working platform*

A working platform will be required prior to the arrival on site of tracked piling and / or VSC installation plant. This should be designed and installed in accordance with BR470 (BRE 2004) based on data on the specific plant in accordance with an FPS certificate for the rig loadings.

6.6 Ground floor slabs

In accordance with the NHBC standards, as Made Ground greater than 600mm thick are present at the site, it is recommended that suspended floor slabs with a void be adopted. Suspended ground floor slabs should also be adopted for all structures supported by ground improved by VSC.

Slabs without a void (ground bearing or suspended cast *in situ* onto the ground) may be used if all of the following criteria are satisfied:

- the foundation depth (such as due to the influence of trees) is less than 1.5m;
- any fill is suitable, well-compacted granular material and less than 600mm thick. This will likely only be relevant where significant cut is proposed;
- it is demonstrated that the soils are not desiccated and are at their equilibrium moisture content; and
- ground floor construction is not undertaken when the surface soils are seasonally desiccated (i.e. during summer and autumn), unless NHBC is satisfied the soil is not desiccated.

Ground floor slabs should be designed to incorporate any gas mitigation measures that may be required, as discussed later within this report.

6.7 Roads and pavements

For the purposes of preliminary design a subgrade CBR of <2.5%, equivalent to a subgrade surface modulus of <30MPa should be assumed on account of the low strength Made Ground below the existing hard surfacing.

Where the CBR is found to be less than 2.5%, the sub-grade may be unsuitable for both the trafficking of site plant and as support for a permanent foundation, without improvement works being undertaken. In summary, consideration may be given to the following potential remedial techniques:

- excavation and re-engineering or replacement of weaker soils;
- the inclusion of geosynthetic reinforcement within the unbound layers of the capping and sub-grade;
- where cohesive soils are present and they are deemed suitable for treatment with hydraulic binders, to employ modification and/or stabilisation techniques on the formation; and
- where granular soils are present, de-watering and re-engineering the formation.

Proof rolling of the formation level will be required and any loose or soft spots should be removed and replaced with an engineered fill, in accordance with a suitable Specification. The formation level will also need to be protected during inclement weather from deterioration; all slopes should be trimmed to falls to shed rain water and the surface sealed to limit infiltration.

Prior to the placement of the founding materials and the construction of the road pavement, the sub-formation and formation will need to be inspected and checked in accordance with a suitable specification to ensure the ground conditions are as expected. It is recommended that testing is carried out in accordance with DMRB CD225 to confirm that the ground conditions at time of construction are consistent with the previous design parameters.

In addition, on account of the significant depth of Made Ground in the centre and west of the site, it is it is considered that ground improvement will be required even if suitable CBR values exist at the surface. Consideration could be given to:

- surface dynamic compaction at a lower excavation level resulting in either partial or full depth improvement. Suitable techniques include Rolling Dynamic Compaction (RDC) and High Energy Impact Compaction (HEIC); or
- Basal reinforcement in the form of a geogrid reinforced granular layer installed below the proposed drainage and services.

6.8 Drainage

Soakaways are considered unsuitable for the site based on the low permeability of the natural soils and the potential for inundation and collapse settlement of the infilled ground.

6.9 Buried concrete

Based on guidelines provided in BRE Special Digest 1 (BRE 2005) and the information presented in Section 5.6.9 (Table 5.16):

- The Made Ground can be classified as Design Sulphate Class DS-1 and ACEC Class AC-2z.
- The Glacial Till can be classified as Design Sulphate Class DS-2 and ACEC Class AC-3z.
- The Pennine Middle Coal Measures can be classified as Design Sulphate Class DS-2 and ACEC Class AC-2 (based on groundwater data only).

This equates to a Design Chemical Class[1] of:

- DC-2 for the Made Ground;
- DC-3z for the Glacial Till; and
- DC-3z for piles.

The designer should check and confirm the classification of concrete using the information presented in Section 5.6.9and Appendix C during the design.

[1] The calculated ACEC class can be used in accordance with BS 8500-1+A2 (2019), Table A.9 to select the Designated Concrete (DC) class for an intended working life of 50 years. However, the designer is referred to BS 8500-1+A2 (2019), for full details and notes to Table A.9, including any Additional Protective Measures (APMs).

7. GEO-ENVIRONMENTAL ASSESSMENT

7.1 Updated conceptual model

7.1.1 Updated ground model

The preliminary ground model developed from the desk study and field reconnaissance survey (Section 2) has been updated using the findings of the ground investigation and is presented in Section 5. This ground model is the basis for the geo-environmental assessment presented in this section.

7.1.2 Updated exposure model

Following the ground investigation, the plausible contaminant sources, receptors and pathways identified in the preliminary geo-environmental exposure model (Section 3), have been updated or confirmed as follows.

Sources

The following source has been added to the exposure model:

- Landfill (predominantly inorganic materials) identified near the western boundary in TP21, TP22 and TT01.

Receptors

No potential receptors have been removed from, or added to, the exposure model.

Pathways

No pathways have been removed from, or added to, the exposure model.

Using the updated ground model and updated exposure model, generic risk assessment is undertaken as presented below.

7.2 Risk assessment approach

Generic risk assessments have been undertaken in accordance with the principles of LCRM (Environment Agency, 2019) using the CM that has been updated following the ground investigation.

Firstly, the risks associated with the identified potential contaminant linkages have been estimated using standardised methods (typically involving comparison of site data with published 'screening values'). Secondly, where screening values are exceeded, the result has been evaluated in an authoritative review of the findings with other pertinent information to determine whether or not the exceedance is, or is not acceptable in the site-specific circumstances. Further explanation is presented in Appendix I.

The data sets used in the assessment comprise the analytical results obtained by Hydrock as listed in Section 4.

In cases where unacceptable risks are indicated, actions such as more advanced stages of risk assessment or remediation are proposed in Section 7.10.

7.3 Human health risk assessment

This is a Tier 2 assessment using soil screening values applicable to the residential with plant uptake CLEA land use scenario.

The soil screening values used are generic assessment criteria (GAC). It should be noted that Category 4 Screening Levels (C4SL) for lead have been used as there is no recognised GAC for lead and the use of the term 'GAC' in this report includes the C4SL for lead.

Statistical testing is used where data sets are suitable. The critical issue is sample numbers. For data sets with low sample numbers and / or where sampling is targeted at specific areas, individual sample test results are compared directly with the screening values. Larger and non-targeted data sets are subject to statistical testing.

The phrase 'further assessment required' is used to denote soil concentrations that are equal to, or exceed, a GAC. This does not necessarily mean that the soil is 'contaminated' or not otherwise suitable for use. The assessment and any mitigation required are to ensure the site does not pose an 'unacceptable risk'.

The results of the assessment are presented in Appendix E.

7.3.1 Averaging areas

The 'averaging areas' used in this report are based on the conceptual model and the proposed development, and are summarised as:

- 'General' Made Ground;
- 'Sub-base' Made Ground;
- 'Backfilled Pit' Made Ground;
- 'Furnace' Made Ground;
- 'Landfill' Made Ground;
- 'Opencast' Made Ground;
- 'Organic' Made Ground;
- 'Reworked Natural' Made Ground;
- Topsoil; and
- Natural soils of the Peat and Glacial Till.

7.3.2 Risk estimation (including statistical testing)

Outliers

There is one statistical outlier in the data set, which is considered potentially as arising from a different set of circumstances to those contributing to the remainder of the data. They may require further investigation and/or specific remedial measures and are discussed separately (see Section 7.3.4). The outlier removed from the data is listed in Table 7.1.

Table 7.1: Justification for removal of outliers

Location of outlier	Whole sample or particular substance removed (see note)	Reason for removal
WS01 (1.30m and 1.40m)	TPH	Visual and olfactory evidence of petroleum hydrocarbons associated with historical tank locations.
Note: Where it is clear that the particular sample is part of the same material as the surrounding ground, but that a particular contaminant has been introduced locally (such as by a diesel spill), the data relating only to the introduced CoPC have been removed from the data set.		

Statistical assessment

In accordance with the guidance provided by the CIEH (May 2008) the 95th upper confidence level on the true mean (US_{95}) has been calculated from the sample data. Reference to the methodology for statistical assessment is given in Appendix I.

Based on a US_{95} exceedance of the GAC, the pervasive chemicals of potential concern which require further assessment are summarised in Table 7.2.

Table 7.2: Pervasive chemicals of potential concern for which further assessment is required (human health)

Chemical of potential concern	Generic criterion (mg/kg)	Basis for generic criterion	No. samples	Min. (mg/kg)	Max. (mg/kg)	US_{95} (mg/kg)	No. samples exceeding generic criterion
General Made Ground							
Arsenic	37	GAC	20	3.2	76	39.61	7
Benzo(a)anthracene	6.7			<0.05	77	22.52	2
Benzo(a)pyrene	1.5			<0.05	62	18.06	5
Benzo(b)fluoranthene	9.4			<0.05	63	18.62	2
Chrysene	11			<0.05	62	17.75	2
Dibenz(a,h)anthracene	1.3			<0.05	6.7	1.85	1
Indeno(1,2,3,cd)pyrene	5.5			<0.05	21	6.2	1
Furnace Made Ground							
Arsenic	37	GAC	6	24	85	82.14	2
Benzo(a)pyrene	1.5			<0.05	5.4	5.13	2

The presence of arsenic and PAH in the Made Ground requires further consideration.

7.3.3 Risk estimation (without statistical testing)

Hydrock default list of determinands

Based on individual test results that exceed the GAC, the chemicals of potential concern which require further assessment are summarised in Table 7.3.

Table 7.3: Chemicals of potential concern for which further assessment is required (human health)

Chemical of potential concern	Generic criterion (mg/kg)	Basis for generic criterion	No. samples	Min. (mg/kg)	Max. (mg/kg)	No. samples exceeding generic criterion
Backfilled Pit Made Ground						
Nickel	130	GAC	1	130	130	1
Vanadium	410	GAC		780	780	1
Benzo(a)pyrene	1.5			2.7	2.7	1
Landfill Made Ground						
Arsenic	37	GAC	4	33	55	3
Benzo(a)anthracene	6.7			0.37	13	1
Benzo(a)pyrene	1.5			0.30	10	1
Dibenzo(a,h)anthracene	1.3			<0.05	1.5	1
Opencast Made Ground						
Arsenic	37	GAC	3	11	50	2
Organic Made Ground						
Arsenic	37	GAC	2	30	58	1
Lead	200			130	210	1
Reworked Natural Made Ground						
No exceedances						
Sub-base Made Ground						
No exceedances						
Topsoil						
No exceedances						

The presence of arsenic, vanadium and PAHs in Made Ground requires further consideration.

Titanium Suite

Three samples of the General Made Ground located at CP05 at 0.15m, RO06 at 0.30m and WS13 at 0.70m, which all lie within the vicinity of the former concrete processing area of Tarmac Topblock in the middle of the site was subjected to a Titanium Suite. The results yielded concentrations between 31mg/kg and 700mg/kg, with the highest concentration recorded in WS13 located northeast of the building.

Petroleum hydrocarbons (PHC)

Statistical analysis was undertaken on the General Made Ground, with a direct comparison with the GAC for all other Made Ground strata. With the exception of the outlier, there were no exceedances of petroleum hydrocarbons.

An outlier for WS01 at 1.30m (clay with moderate petroleum hydrocarbon odour) and 1.40m (sand with moderate petroleum hydrocarbon) was excluded from the General Made Ground statistical analysis as this is the only material that had visual and olfactory evidence of petroleum hydrocarbons. This has likely to have derived from historical tanks in this area. The following TPH fractions were exceeded for these samples:

- Aliphatic >C10 – 12 (190mg/kg at 1.30m vs a GAC of 120mg/kg);
- Aliphatic >C12 – 16 (450mg/kg at 1.30m and 170mg/kg at 1.40m vs a GAC of 59mg/kg);
- Aromatic >C16 – 21 (550mg/kg at 1.30m vs a GAC of 550mg/kg); and
- Aromatic >C21 – 35 (5,900mg/kg at 1.30m and 1,600mg/kg at 1.40m vs a GAC of 1,500mg/kg).

A sample from the Glacial Till in WS01 at 1.70m bgl shows no evidence of petroleum hydrocarbons.

The testing confirmed the hotspot of petroleum hydrocarbons is concentrated within the clay, with reduced concentrations within the sand. However, the permeability is likely to be greater within the sand, which could result in an increase in the horizontal migration of petroleum hydrocarbons yielding lower concentrations at 1.40m but may be more dispersed in the nearby area.

The presence of petroleum hydrocarbons at WS01 (between 1.20m bgl and 1.60m bgl) requires further consideration.

Coal Tar

Four samples of bituminous bound material were taken from near the surface, as shallow as 0.05m bgl, and near the base, as deep as 0.10m bgl. The results are summarised in Table 7.4.

Coal tar was not detected in any of the samples. However, there were some high concentrations of benzo(a)pyrene which will impact the waste classification. This is discussed further in Section 8.2.

Table 7.4: Coal Tar (laboratory testing)

Location	Depth (m bgl)	Coal Tar Present	Benzo(a)pyrene Concentration (mg/kg)	Total Residue (mg/kg)
TP07	0.05	No	<0.05	12,000
TP09	0.05	No	<0.05	20,000
TP13	0.05	No	<0.05	19,000
TT03	0.10	No	<0.05	3,900

Polychlorinated Biphenyls (PCB)

Three samples were tested for the presence of PCB in the Made Ground located in TT02 at 1m (Reworked Made Ground), WS01 at 0.10m (General Made Ground) and WS06 at 0.20m (Sub-base Made Ground) WS01 at 0.50m and TP03 at 1.00m. These are located northeast, southeast and southwest of the existing electricity substation. All samples were less than the detection limit of <0.007mg/kg.

Volatile and semi-volatile organic compounds - soils

There were no exceedances of VOCs or SVOCs within Made Ground or Glacial Till soil samples.

Pesticides - soils

One sample of topsoil from TP23 at 0.20m in the Greenfield was tested for the presence of pesticides, for which there were no exceedances.

Asbestos

There is visual evidence of Asbestos Containing Materials (ACM) in a number of exploratory hole locations. These locations are summarised in Table 7.5. In addition, asbestos has been identified by laboratory testing of soil samples as provided in Table 7.6.

Table 7.5: Visual evidence of Asbestos Containing Materials[2]

Location	Depth (m bgl)	Strata	Comment
RO12	0.20	Opencast Made Ground	Amosite sheeting/board debris

Table 7.6: Asbestos in soil samples (laboratory testing)

Location	Strata	Depth (m bgl)	% Asbestos (w/w)	Comment
TP01	General Made Ground	0.20	<0.001	Loose fibres (chrysotile and amosite)
WS09	General Made Ground	0.40	<0.001	Loose fibres (chrysotile)
WS10	Furnace Made Ground	1.30	<0.001	Loose fibres (amosite)

The presence of Asbestos Containing Materials and asbestos fibres in soil requires further consideration.

7.3.4 *Risk evaluation*

The screening exercise has identified asbestos, arsenic, vanadium, PAHs and a localised hotspot of petroleum hydrocarbons in the General, Furnace, Backfilled Pit, Landfill, Opencast and Organic Made Ground. These are considered further here to assess if the exceedance may be acceptable with respect to the proposed development. The phrase 'further assessment' does not necessarily mean that the soil is 'contaminated' or not fit for use.

There was a minor exceedance of nickel in the Backfilled Pit Made Ground (130mg/kg vs a GAC of 130mg/kg) and lead in the Organic Made Ground (210mg/kg vs a GAC of 200mg/kg). However, these are not considered to pose a risk to human health as they are very minor exceedances and will be discounted from any further assessment.

Asbestos

There is one exploratory hole location where Asbestos Containing Materials are present. In addition, asbestos fibres (<0.001%v/v of chrysotile and amosite) have been detected in three samples of the Made Ground (General, Furnace and Opencast Made Ground).

Hydrock consider it plausible for asbestos to be present in any of the Made Ground soils and asbestos, (even at low concentrations), represents an unacceptable risk and mitigation measures will be required in this area of the site.

[2] A sample of suspected asbestos rope from TP11 was confirmed not to contain asbestos.

PAHs in Made Ground

A range of PAHs, including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3,cd)pyrene were found to exceed the GAC across the majority of Made Ground types indicating this is pervasive throughout.

There is one sample in particular in WS05 at 0.60m of the General Made Ground, which had significantly exceeded PAHs (Total PAH of 733mg/kg). From the geological log for this borehole, an old metal pipe was recorded at 0.50m bgl, which may be from an historic tank based on historical maps of the area. Although there was no visual or olfactory evidence of contamination. Elevated PAHs can be associated with waste oil from tanks, furthermore this sample had positive concentrations of petroleum hydrocarbons, which did not exceed the GAC but were relatively higher than the limit of detection. It would be prudent to consider this location to be a hotspot of PAHs and to investigate this area further.

This significant exceedance, along with the other PAHs exceedances are considered to be an unacceptable risk, which requires mitigation for the proposed end use.

Arsenic in Made Ground

Arsenic concentrations in the General Made Ground only slightly exceed the GAC of US_{95} of 39.61mg/kg compared to 37mg/kg. However, the US_{95} in the Furnace Made Ground of 82.14mg/kg, along with the individual exceedances of arsenic in the Landfill Made Ground, Opencast Made Ground and Organic Made Ground is indicative that arsenic is pervasive, with fluctuations in concentrations across the site. Therefore, Hydrock considers there to be an unacceptable risk and similar to PAHs above, mitigation measures will be required.

Vanadium in Made Ground

Only one exceedance of vanadium was recorded in WS03 at 0.20m in the backfilled pit at a concentration of 780mg/kg compared to the GAC of 410mg/kg. This is double the GAC and although not identified within the geological description, it is possible this originated from historic mining activities on site such as slag that became incorporated into the backfilled material. At this concentration, vanadium is considered to pose an unacceptable risk and mitigation will be required.

Petroleum hydrocarbons

One hotspot of petroleum hydrocarbons has been identified, at WS01 between 1.20m bgl and 1.60m bgl. This present an unacceptable risk and requires mitigation.

Titanium

Three titanium suites were undertaken in vicinity of buildings which processed of cement, these included suites in RO06, CP05 and WS13. Concentration of titanium were 31, 100 and 700mg/kg respectively. There is come evidence of elevated titanium concertations, however there is no published toxicological data to compare concentration against. The installation of cover systems as discussed in section 7.10 will mitigate against the risk of dermal contact and ingestion of titanium.

7.4 Plant life risk assessment

7.4.1 Risk estimation

Priority phytotoxic chemical concentrations have been screened against published values to determine the likely risk to plant growth and the findings presented in Appendix E. As with human health, statistical testing is used where data sets are suitable, otherwise individual sample test results are compared directly with the screening values.

Based on a US_{95} exceedance of the GAC, the pervasive chemicals of potential concern which require further assessment are summarised in Table 7.7.

Table 7.7: Pervasive chemicals of potential concern for which further assessment is required (risk to plants)

Chemical of potential concern	Generic criterion (mg/kg)	Basis for generic criterion	No. samples	Min. (mg/kg)	Max. (mg/kg)	US_{95} (mg/kg)	No. samples exceeding generic criterion
General Made Ground							
Copper	135	BS:3882 (2015)	20	11	280	151.47	3
Furnace Made Ground							
Boron	3	New Zealand Timber (1997)	6	0.3	3.8	3.91	1

For Made Ground types that have not been subjected to statistical analysis but a direct comparison with the GAC; the chemicals of potential concern which require further assessment are summarised in Table 7.8.

Table 7.8: Chemicals of potential concern for which further assessment is required (risk to plants)

Chemical of potential concern	Generic criterion (mg/kg)	Basis for generic criterion	No. samples	Min. (mg/kg)	Max. (mg/kg)	No. samples exceeding generic criterion
Made Ground						
Boron	3	New Zealand Timber (1997)	15	0.2	7.6	3
Copper	135	BS:3882 (2015)		16	150	1
Nickel	75			19	130	1
Topsoil (Greenfield)						
No Exceedances						
Glacial Till						
No Exceedances						

7.4.2 Risk evaluation

With the exception of the topsoil in the Greenfield, there is no subsoil or topsoil growing medium on the site and this will require importation for proposed gardens and areas of soft landscaping.

The requirement for mitigation of risk to human health (as discussed in Section 7.3.4) will also serve to mitigate risks to plant life.

7.5 Pollution of controlled waters risk assessment

7.5.1 Risk estimation

The risks to groundwater and surface water from contaminants on site have been assessed in accordance with the Environment Agency (2006) Remedial Targets Methodology (RTM).

Site contaminant loadings are compared with relevant screening values (Water Quality Targets), which are linked to the Conceptual Model.

Acceptable WQT are defined for protection of human health (based on Drinking Water Standards (DWS)) and for protection of aquatic ecosystems (Environmental Quality Standards (EQS)).

As related specifically to this site, the data are compared with criteria selected in accordance with the methodology presented in Appendix I. This methodology involves selecting which of several alternative risk scenarios apply in this case. The assessment is presented in Table 7.9 below, with the justification for the scenarios selected explained in the following text:

- The groundwater in the Made Ground and Glacial Till are considered to be in hydraulic continuity, and may also be connected to the Pennine Middle Coal Measures Formation.
- There is a low risk of surface water runoff or contaminants leached from the Made Ground entering the ponds east of the site. However, there is a potential pathway to the inland river (drainage ditch) 7m west.
- There are no active groundwater abstraction points within 1000m, although a historic groundwater abstraction well is located on-site. This is disused and considered to be a very low risk, although future groundwater abstraction within the nearby area could be a possibility.

Table 7.9: Summary of water quality risk assessment protocol

Hydrock scenario	Water body receptors	Secondary receptors	Example contaminant linkages	RTM level and data used	Water quality targets
D	Groundwater. Surface water.	Human health (abstraction). Aquatic ecosystem.	Contaminants from site leach or seep into a groundwater body that feeds inland surface water by base flow. The surface water may be used for human consumption and is an aquatic ecosystem.	Direct comparison with groundwater (Level 2)	DWS EQS (inland)
Notes: Some EQS are water hardness dependent. This is measured either in the receiving surface water or in groundwater (if it is part of the pathway), or is estimated from national maps. Inland waters EQS applicable to freshwater. This table and the results of the assessment are considered as a first screening for potential risks of pollution of Controlled Waters. More specific requirements may be stipulated by the relevant Agency.					

The results of the screening assessment are presented in Appendix E and are summarised in Table 7.10.

There are no WQT for petroleum hydrocarbon fractions in water. However, because of the sensitivity of the water environment to petroleum hydrocarbons, an initial screening exercise is also included in Table 7.10 irrespective of the assessment scenario(s) stated in Table 7.9.

In some instances, the reporting limit (or detection limit) quoted by the laboratory may be greater than the WQT that it is being assessed against. As the current exercise is an initial screening assessment, further assessment of these elements has not been undertaken.

The assessment below has been undertaken based on two rounds of groundwater sampling, with wells being purged at a rate of three times the well volume before sampling.

Table 7.10: Chemicals of potential concern for which further assessment is required (controlled waters)

Chemical of potential concern	Water quality target (WQT) (µg/l)	Basis for water quality target	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Groundwater in the Made Ground and Glacial Till							
Aluminium	200	DWS	11	11	5.1	917	8
Arsenic	10	DWS		8	<0.15	18	1
Cadmium	0.08	EQS		11	0.03	0.19	4
Cobalt	3	EQS		11	0.5	33	4
Chromium III	4.7	EQS		11	2	8.1	1
Copper	1	EQS†		11	1.1	19	11
Iron	200 1000	DWS EQS		11	37	9,500	6 2
Mercury	0.07	EQS		1	<0.05	0.43	1
Manganese	50 123	DWS EQS†		11 11	3.2	10,000	8 7
Nickel	4	EQS		11	4.4	19	11
Lead	10 1.2	DWS EQS†		9	<0.2	29	2 6
Zinc	12.3	EQS†		11	1	42	2
Ammonium (NH_4^+)	500	DWS		7	<15	17,000	5
Ammoniacal Nitrogen as N	300	EQS		7	<15	13,000	5
Fluoride	1,000	EQS		11	120	1,200	1
Sulfate (SO_4^{2-})	250,000 400,000	DWS EQS		11	52,300	626,000	5 1
Groundwater in the PMCMF							
Aluminium	200	DWS	3	3	4.4	673	2
Cadmium	0.08	EQS		3	0.04	0.17	2
Cobalt	3	EQS		3	3	16	2
Chromium III	4.7	EQS		3	4.1	5.3	1

Chemical of potential concern	Water quality target (WQT) (µg/l)	Basis for water quality target	No. samples	No. samples above LoD	Min. (µg/l)	Max. (µg/l)	No. samples exceeding WQT and above LoD
Copper	1	EQS†		3	3.3	12	3
Iron	200	DWS		3	24	960	2
Manganese	50 123	DWS EQS†		3 3	550	4,900	3 3
Nickel	4	EQS		3	11	17	3
Lead	1.2	EQS†		3	<0.2	3.1	1
Tin	25	EQS		3	1.7	89	2
Zinc	12.3	EQS†		3	4.3	28	2
Ammonium (NH_4^+)	500	DWS		3	300	3,100	2
Ammoniacal Nitrogen as N	300	EQS		3	230	2,400	2
Sulfate (SO_4^{2-})	250,000 400,000	DWS EQS		3 3	408,000	1,290,000	2 2

Note: the maximum recorded value is compared with the water quality target.

† The EQS for these substances represents a bioavailable concentration, which will be a proportion of the actual dissolved concentrations in water. No site-specific bioavailablity testing was able to be undertaken at the site and therefore the EQS bioavailable represents a conservative screening approach.

There were no positive concentrations of VOCs, SVOCs or PCBs in the groundwater.

In addition, no petroleum hydrocarbons were detected, including in WS01 where positive concentrations of petroleum hydrocarbons have been recorded in the soils.

7.5.2 *Risk evaluation*

Heavy Metals

The site is characterised by generally marginal exceedances of heavy metals in both superficial groundwater (Made Ground and Glacial Till) and the deeper PMCMF. In the context of the historical industrialisation of the surrounding area, the observed concentrations are not particularly significant and unlikely to present a significant risk to Controlled Waters. The most significant exceedances are iron and manganese, which is explained by locally reducing conditions causing reduction of the iron (III) and manganese (IV) to iron (II) and manganese (III), which are more soluble and hence dissolve into solution.

Inorganics

Generally speaking, inorganics can be characterised in a similar manner to the heavy metals, with only marginal exceedances.

Two exceptions are sulphate which is elevated in all samples, however can be attributed back to the natural geology of the Glacial Till and PMCMF, and elevated ammonium associated with the opencast Made Ground in the west of the site where 17mg/l of ammonium was recorded. Notably, this location is

down-gradient from the areas of landfill Made Ground observed in TP22, TP21 and TT01, and is likely to represent a down-gradient impact from elevated ammonium in the landfill materials. In comparison with typical levels that may be expected in a fresh landfill leachate (i.e. 100mg/l +), the observed concentrations in CP07 represent relatively low levels and are unlikely to pose a significant risk to controlled waters. Furthermore, as the water moves further down-gradient, dilution and degradation of any contaminants is likely to be occurring.

Whilst not included in the assessment spreadsheets (due to their being not specific WQT to assess against), calcium has been monitored, and will act as a marker compound to see whether there has been any significant impact from the various calcium-based compounds associated with the on-site cement storage (S04). Calcium concentrations recorded in the groundwater range from 57 – 470mg/l, and are not considered to be particularly elevated above values that may be expected in natural groundwaters[3], and as such indicate no significant impact on groundwater from the cement storage.

Organics

As noted above, no organic substances have been detected in groundwater samples. Although WS01 could not be sampled on the first groundwater sampling visit due to an insufficient volume of water, this well was sampled on the second visit, which has confirmed there are no petroleum hydrocarbons within the groundwater.

Summary

On completion of two groundwater sampling visits, there are concentrations of Chemicals of Potential Concern elevated above the water quality criteria and that are consistently elevated on both sampling rounds. However, based on the investigation works undertaken to date and subject to agreement with the Environment Agency, Hydrock does not believe the site poses a significant risk to Controlled Waters.

7.6 Ground gases risk assessment

It is judged from the available evidence that the gas generation potential at the site is moderate (due to Organic Made Ground, deep Made Ground associated with the historic opencast and observed non-organic landfill materials, coal mining strata including back-filled mine-shafts and due to the presence of peat near the eastern boundary) and that the sensitivity of the development is high (due to residential development). Consequently, and in accordance with CIRIA C665 (Table 5.5a and 5.5b), an appropriate minimum monitoring regime is twelve readings over six months, provided other monitoring requirements are also met, such as prevailing atmospheric pressure conditions (for example, BS 8485:2015 +A1:2019 suggests monitoring should include a period of falling atmospheric pressure).

Hydrock has undertaken the six readings scheduled, and monitoring for this commission is complete. However, further monitoring will be required to assess the risks of ground gas emissions posed by the landfill located at the western boundary and peat deposits located at the eastern boundary.

7.6.1 Assessment

The risks associated with the ground gases methane (CH_4) and carbon dioxide (CO_2) have been assessed using BS 8485:2015 +A1:2019, which cites the guidelines published by CIRIA (Wilson et al 2007) (known as Situation A).

[3] BGS 2007, The natural (baseline) groundwater quality in England and Wales

There is an alternative assessment method described by the NHBC (Boyle and Witherington 2007) (known as Situation B). Whilst 'Situation B' may also be suitable for the assessment, it is Hydrock's opinion that the NHBC Guidelines are not at the current time fully aligned with current ground gas risk assessment principles (as described in BS 8485:2015 +A1:2019). As such, 'Situation A' has been chosen as the means by the gas risk will be assessed.

The assessment guidelines published by CIRIA are based on interpretation of the gas concentrations and the gas flow rates, amongst other variables, and are compliant with the model procedures of LCRM. The modified Wilson and Card assessment has been used by comparing the maximum gas concentrations and gas screening values (GSV[4]) in Appendix D with the published table (CIRIA Table 8.5) and the assessment is summarised in Table 7.11. The assessment is presented in Appendix D.

Table 7.11: Ground gas risk assessment

	Min	Max	Typical [(i)]	Comment
Steady Flow Rate (l/hr)	<0.1	2.2	<1	Typically, gas flows are <1 l/hr, with higher steady gas flows recorded on only a couple of occasions commonly associated with WS01 installed in the General Made Ground and WS02 installed in Glacial Till. However, on both occasions' groundwater was above the response zone and as such, the high flow rates are not reflective of the gas generation at the site.
Methane (%)	<0.1	13	<1	Elevated methane of 3.0, 10.60 and 13 % have been recorded on three separate visits and are associated with CP07, which is installed in the Opencast Made Ground.
Carbon Dioxide (%)	0.1	11.1	<5	Carbon dioxide has been recorded at elevated concentrations consistently in CP04 installed in General Made Ground (9.3, 9.5, 9.8, 10, 10.3 and 10.8 %). A slightly exceeded level of 5.2 and 5.8 % was recorded in WS11 installed in the Furnace / General Made Ground on two occasions, and between 7.5 and 8.3 % on two other visits. The highest concentration of 11.1 % was recorded in WS13 during falling atmospheric pressure, which is installed in the General/Organic Made Ground. This also coincided when groundwater level dropped from 1.22m to 1.92m bgl exposing the Organic Made Ground, which is the likely source of carbon dioxide.
Carbon Monoxide (ppm)	0	68	<5	There was only one reading in RO10 where carbon monoxide was recorded at 68ppm, which was during the first visit. Subsequent visits recorded CO at 0 and 7 ppm.
Hydrogen Sulphide (ppm)	0	1	<1	-
Oxygen (%)	0.1	21.2	>15	Very low oxygen concentrations of between 0.1% and 0.5% were recorded in, CP07 and RO04 during

[4] Note: GSV is synonymous with 'site characteristic hazardous gas flow rate' (Q_{hgs}) of BS 8485:2015 +A1:2019 Table.

	Min	Max	Typical [i]	Comment
				two separate rounds. CP07 is installed within the Opencast Made Ground, with RO04 installed in the PMCMF but still lies within the opencast site.
Carbon Dioxide GSV Maximum flow and Concentration Per Hole (l/hr)	<0.0001	0.242	0.7 - < 3.5	CS2 protection measures for carbon dioxide
Methane GSV **Maximum flow and Concentration Per Hole (l/hr) – Excluding Opencast Made Ground (CP07)**	<0.0001	0.011	<0.7	No protection measures required.
Methane GSV **Maximum flow and Concentration Per Hole (l/hr) – Opencast Made Ground (CP07)**	<0.0001	0.039	<0.7	CS2 protection measures may be required for methane as concentrations of 13 % have been recorded

[i] Hydrock assume that values are considered to be atypical if 95% or more of the remaining data are less than the value under consideration

As indicated in Table 7.11, the computed GSV for methane indicates CS1 conditions. However, it would be prudent to allow for CS2 protections measures in the vicinity of CP07 (installed in the Opencast Made Ground) due to concentrations of up to 13% of methane recorded. If additional monitoring wells are installed within the Opencast Made Ground, in particular, close to CP07, it may be possible to delineate this further.

The computed GSV for carbon dioxide indicates CS2 conditions, with the origin of this gas deriving from an amalgamation of sources primarily the General Made Ground and Organic Made Ground. Further monitoring is required to meet the minimum requirements of 12 visits over 6 months, including monitoring of the landfill at the western boundary and peat deposits on the eastern boundary, once additional monitoring wells have been installed. Therefore, at this stage it is assumed gas protection measures for carbon dioxide are required across the site.

7.6.2 Off-site risks from carbon dioxide and methane

The National Planning Policy Framework requires that a developed site should be incapable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990. This position includes a consideration of the potential for off-site migration of ground gases that may impact on adjacent properties.

The main potential source of ground gas off-site is the opencast site situated to the southwest. However, Hydrock's investigation has proven the opencast site underlies the southwestern corner of the site and is a source of methane. Therefore, there is considered to be no other nearby sources that could generate sufficient quantities of ground gas.

7.7 Construction materials risk assessment

7.7.1 Water pipelines

A formal water pipe investigation and risk assessment is beyond the scope of this report. However, the findings of this investigation have been compared to the threshold values in Water UK HBF (2014), Table 1 as far as is practicable, to give an indication of the possible restrictions to the use of plastic pipes for water supply to the site (see the reference in Appendix I for further information).

The site is brownfield and organic contamination (PAHs and petroleum hydrocarbons) has been identified in exceedance of the threshold values and Hydrock believes barrier pipe is required. Should there be a requirement to install pipework in the Greenfield, then it is envisaged that standard pipework will be suitable for this part of the site only. However, confirmation should be sought from the water supply company at the earliest opportunity.

7.7.2 Other construction materials

Plastic pipes for drains and sewers are manufactured from unplasticized poly (vinyl chloride) (PVC-U), polypropylene (PP) or polyethylene (PE). These materials may be affected by the presence of organic compounds in the soil.

In accordance with the British Plastics Federation Guidance (August, 2018), as the concentrations of PAH and are above 100mg/kg and the concentrations of petroleum hydrocarbons (TPH) are above 200 mg/kg, the pipework manufacturer should be consulted with regard the suitability of the pipework.

The implications for buried concrete are discussed in Section 6.9.

7.8 Contamination risks to ground workers

7.8.1 Introduction

Whilst risks to construction workers are not discussed in detail, the following section discusses potential risks that should be considered.

Information presented in this document is provided to assist in managing the risk associated with contamination in soil and groundwater at the site but is not definitive. The Contractors are responsible for undertaking their own assessments and assessing what risks are present and what control measures are required.

Task specific risk assessments and method statements should be in place, and risks and required mitigation measures communicated to all relevant personnel prior to the works commencing. Appropriate PPE and, if required, RPE should be provided and utilised.

7.8.2 Metals, metalloids, PAH and petroleum hydrocarbons

The Made Ground soils contain pervasive arsenic and PAHs, with a hotspot of petroleum hydrocarbons in WS01.

7.8.3 Ground Gas

It is noted that concentrations of carbon dioxide (an asphyxiant) in the soil exceed HSE Workplace Exposure Limits for personnel in the working environment of 1.5% for short term (15 minutes) exposure

and 0.5% for long term exposure. Furthermore, soil concentrations of oxygen are below the HSE recommendations of 18%.

Soil gas concentrations are not necessarily reflected by those in the breathing zone, as such, all Contractors and maintenance workers should be made aware of the possible presence of carbon dioxide and should take all necessary health and safety precautions when working in trenches or confined spaces.

7.8.4 Asbestos

A rare visible fragment of asbestos sheeting/board debris have been identified during the ground investigation and low concentrations of asbestos fibres (<0.001%) has been identified during the laboratory testing of soils.

All site staff should be made aware that there is a likelihood of encountering further asbestos containing materials within the Made Ground anywhere on the site, and at any stage of the development. It is advised that the Contractor should supply suitable and sufficient 'Asbestos Awareness' training (specific to asbestos in soils) to all site staff who could foreseeably encounter asbestos containing materials during the course of their work.

The Contractor for each stage of works must undertake a suitable and sufficient Risk Assessment in accordance the Regulation 6 of the Control of Asbestos Regulations 2012 (CAR2012). The results of the assessment should be used to compile a methodology in accordance with Regulation 7 of CAR2012, which limits potential exposure and spread of asbestos fibre. Appropriate training should be provided to all site staff identified within the risk assessment as having the potential to be exposed or encounter asbestos during their work in accordance with Regulation 10 of CAR2012.

It is the responsibility of the Contractor to ensure that mitigation measures are suitable and sufficient to prevent exposure to airborne asbestos so far as is reasonably practicable in accordance with Regulation 11 of CAR2012.

It is recommended that any asbestos cement sheeting encountered is handpicked under controlled conditions in accordance with HSG210 'Asbestos Essentials'. Hand picking needs to be undertaken by suitably qualified Contractors in accordance with HSE guidance and an Environmental Permit. All ACM must be suitably packaged, placed in a dedicated, covered and lockable skip pending off-site disposal to a suitably licensed waste facility.

In addition to the presence of rare visible fragments of suspected asbestos sheeting/board debris, the soils contain low concentrations of asbestos fibre (<0.001%). The Contractors for each stage of works must manage the risks in accordance with HSE Guidance and CAR 2012. However, the asbestos fibres detected at the site are within a soil matrix, and if this is kept damp, this should assist in minimising the risk of the release of airborne fibres.

7.9 Findings of the generic contamination risk assessments

The potential sources, pathways and receptors identified in the desk study (Section 2) have been investigated (Sections 4 and 5) and assessed (Sections 7.2 to 7.7). A Source-Pathway-Receptor linkage assessment has been undertaken and is presented in Appendix H (Table H.2).

A summary of the Source-Pathway-Receptor (SPR) contaminant linkages for which the risks may be unacceptable and require mitigation (those that are moderate or higher) are discussed in Table 7.12.

Table 7.12 assumes the following SPR linkages which have been discounted (subject to agreement) at the risk evaluation stage are confirmed by the regulators and the warranty provider as not requiring further consideration (mitigation). If these assumptions are not agreed during regulatory discussions, the conclusions as noted in Table 7.12 will need to be updated:

- There were no positive concentrations of Pesticides, PCBs or coal tar within the tested samples and as such are not considered to be a source.
- No VOCs or SVOCs were detected in Made Ground or natural soils and can be discounted.
- Slightly elevated concentrations of nickel in the Backfilled Pit Made Ground (130mg/kg vs a GAC of 130mg/kg) and lead in the Organic Made Ground (210mg/kg vs a GAC of 200mg/kg).
- Based on the observed groundwater concentrations, Hydrock considers there to be no significant risk from the site to controlled waters.

Table 7.12: Residual risks following risk evaluation

Contaminant Linkage				Comments	
Pollutant Linkage	Sources	Pathways	Receptors	General	Mitigation
PL 1.	Pervasive arsenic and PAHs in the Made Ground, and a hotspot of Vanadium.	Ingestion, inhalation or direct contact.	Human health.	Significant exceedance of the GAC.	Mitigation required in the form of an engineered cover system.
PL 2.	Hotspots of petroleum hydrocarbons in the Made Ground.	Ingestion, inhalation or direct contact.	Human health.	Significant exceedance of the GAC.	Further delineation of the extent of the hotspot required to inform risk assessment. Mitigation required in the form of excavation, disposal and verification may be required.
PL 3.	Boron, copper and nickel in the Made Ground soils.	Root uptake.	Plant life.	Exceedance of the GAC.	Imported growing medium will be required.
PL 4.	Asbestos fibres in soil and asbestos-containing materials in the Made Ground	Inhalation of fugitive dust.	Human health.	Made Ground seen to contain asbestos-containing materials. Asbestos fibres measured in soil samples.	Mitigation required in the form of an engineered cover system. In addition, any ACM encountered during earthworks will need to be handpicked and removed from site.
PL 5.	Asbestos fibres from insulation or asbestos-containing materials are assumed to be present in the existing buildings.	Inhalation of fugitive dust.	Human health (site neighbours).	Asbestos noted in old buildings.	Pre-demolition asbestos survey. Removal will be required. However, removal under controlled conditions should limit off-site emissions
PL 6.	Methane from historic opencast Made Ground.	Migration through soils or	End users of new buildings (asphyxiation).	Characteristic Situation 2 likely to be required.	Mitigation required by the construction of a subfloor void and installation of suitable

Contaminant Linkage				Comments	
Pollutant Linkage	Sources	Pathways	Receptors	General	Mitigation
PL 7.		groundwater to indoor air.	New buildings (damage by explosion).		gas resistant membrane. Further monitoring required to target the landfill at the western boundary and peat deposits at the eastern boundary.
P 8.			Neighbouring properties (damage by explosion).	Houses are located 15m south of the site.	Potential installation of a ground gas cut off trench around the former opencast site may be required.
PL 9.	Carbon dioxide from biodegradable matter in the General, Furnace and Organic Made Ground.	Migration through soils or groundwater to indoor air.	End users of new buildings (asphyxiation). Users of off-site properties (asphyxiation).	Characteristic Situation 2.	Mitigation required by the construction of a subfloor void and installation of suitable gas resistant membrane. Further monitoring required to target the landfill at the western boundary and peat deposits at the eastern boundary.
PL 10.	PAHs and TPH in soils	Direct contact	Water supply pipes.	The Made Ground contains contaminants of concern at levels in excess of the GAC across the majority of the site with the exception of the greenfield.	Installation of "Protectaline" (or similar) pipework for the entire site.

7.10 Mitigation measures

The outline remediation strategy presented below is provided for guidance only, and does not represent a 'Remediation Options Appraisal', or a 'Remediation Strategy', prepared in accordance with LCRM (2019).

As shown in Table 7.12 (and subject to regulatory (and NHBC) agreement), Hydrock consider the following mitigation is required to ensure the site is suitable for use for the proposed end use. The mitigation measures include:

- The excavation and replacement of the petroleum hydrocarbon hotspots (PL2) (subject to further risk assessment at delineation phase).
- The installation of a 600mm cover system in gardens and 450mm in public open space, comprising subsoil beneath a topsoil thickness of between 150mm and 300mm (PL1, PL2, PL3, PL4).
- Installation of Protectaline pipework (PL15).
- Installation of ground gas mitigation measures to comply with CS2 conditions (as described in Section 7.10.1) (PL6,PL7,PL8,PL9). However, this is a preliminary assessment until the gas monitoring programme is complete.

The methodology for the remediation should be set out in a Remediation Strategy (which will include the 'Implementation Plan', the 'Verification Plan' and the 'Long Term Monitoring and Maintenance Plan'), which will need to be submitted to the warranty provider and the regulatory authorities for approval.

In addition, the production of a Materials Management Plan and its approval by a Qualified Person will be required to allow reuse of suitable material at the site in accordance with waste regulations.

Verification reports by a competent independent geo-environmental specialist will be required following completion of any remedial works (including ground gas membrane installation).

7.10.1 Gas protection measures

Mitigation of the risk from ground gases needs to be undertaken in accordance with BRE 414, CIRIA 665, BS 8485:2015 +A1:2019 and CIRIA C735. In accordance with BS 8485:2015 +A1:2019, the design of gas protection measures needs to be undertaken in accordance with the Characteristic Situation and the building type:

- The site is provisionally classified as Characteristic Situation 2 until the gas monitoring is complete.
- The houses are classified as Type A buildings and should any flats form part of the proposed development then these would be classified as Type B buildings.

As such, the houses require 3.5 points of protection and the flats require 3.0 points of protection. This is illustrated in Table 7.13.

Table 7.13: Gas protection score by CS and type of building (after BS 8485:2015 +A1:2019)

Characteristic Situation	Minimum gas protection score (points)			
	High risk		Medium risk	Low risk
	Type A building	Type B building	Type C building	Type D building
1	0	0	0	0
2	3.5	3.5	2.5	1.5
3	4.5	4	3	2.5
4	6.5(A)	5.5(A)	4.5	3.5
5	_(B)	6.0(A)	5.5	4.5
6	_(B)	_(B)	_(B)	6.0

A) Residential buildings should not be built on CS4 or higher sites unless the type of construction or site circumstances allow additional levels of protection to be incorporated, e.g. high-performance ventilation or pathway intervention measures, and an associated sustainable system of management of maintenance of the gas control system, e.g. in institutional and/or fully serviced contractual situations.

Characteristic Situation	Minimum gas protection score (points)			
	High risk		Medium risk	Low risk
	Type A building	Type B building	Type C building	Type D building
B) The gas hazard is too high for this empirical method to be used to define the gas protection measures.				

The final design of ground gas protection measures is to be specified by the designer (in accordance with CIRIA 665) and BS 8485:2015 +A1:2019) and the protection will need to be achieved by a combination of two or more of the following three types of protection measures:

- the structural barrier of the floor slab;
- ventilation measures; and
- gas resistant membrane.

Where design elements are required to meet certain standards to qualify for the protection points (e.g. cast *in situ* monolithic reinforced floor slab), it is up to the designer to ensure the minimum requirements of the standards are met.

Where used, gas resistant membranes should be:

- sufficiently impervious to methane and carbon dioxide;
- capable, after installation, of providing a complete barrier to the entry of the relevant gas;
- sufficiently durable to remain serviceable for the anticipated life of the building and duration of gas emissions;
- sufficiently strong to withstand in service stresses (e.g. due to ground settlement if placed below a floor slab);
- sufficiently strong to withstand the installation process and following construction activities until covered (e.g. penetration from steel fibres in fibre reinforced concrete, penetration of reinforcement ties, tearing due to working above it, and dropping tools); and
- chemically resistant to degradation by other contaminants that might be present.

As preliminary guidance, Hydrock would suggest the following:

Either:

- Beam and block or pre-cast concrete floor slab (0 points);
- passive sub floor ventilation e.g. void (1.5 points); and
- 2000g gas resistant membrane (2.0 points).

Or:

- Cast *in situ* suspended floor slab (with only nominal mesh reinforcement) (0.5 points);
- passive sub floor ventilation e.g. void (good performance - 1.5 points); and
- 2000g gas resistant membrane (2.0 points).

Other variations are possible. It is up to the designer to design and specify ground gas protection measures.

Where a gas resistant membrane is required as part of the design, all joints and penetrations are to be sealed and the installation is to be verified in accordance with CIRIA C735 (Mallet et al 2014) or it will score zero points and will not be deemed to afford any protection. This verification will involve verification by the Contractor and independent verification on a selected number of plots by Hydrock or alternative qualified independent third-party.

Whilst tape can be utilised to seal the seams Hydrock would recommend the membranes are sealed using welded seams and the use of specialist seals around penetrations (top hats etc.). The installer is to present an installation methodology and a QA/QC plan for installation to Hydrock for comment, with particular attention given to sealing the membrane.

In order to achieve the points specified for ventilation, the architect is to design passive ventilation to meet at least 'good performance', as described in Annex B of BS 8485:2015 +A1:2019.

8. WASTE AND MATERIALS MANAGEMENT

8.1 Introduction

The Waste Framework Directive (WFD) (2009/98/EC) defines waste as '*any substance which the holder discards or intends to discard.*' In a geo-environmental context, the waste is most often 'soil' and the two main scenarios are offsite disposal of the material as a waste and/or reuse of the material on site. For cost and sustainability reasons, reuse is preferred to off-site disposal.

Section 8.2 below describes the key issues relating to off-site disposal to landfill and Section 8.3 considers requirements relating to reuse of soils and materials management.

8.2 Waste disposal

8.2.1 Principles

Based on the WFD, any material excavated on site may be classified as waste and it is the responsibility of the producer of a material to determine whether or not it is waste. Where off-site disposal is undertaken, the following guidance applies.

Classification is a staged process:

- A hazardous waste is defined under the WFD as one which possesses one or more of fifteen defined hazardous properties. If a waste is not defined as hazardous, then it is non-hazardous.
- Where the materials are soil, it is then be assigned using the 'List of Waste Codes', which classifies the material as either:
  - hazardous (17-05-03), which is defined as "*soil and stones containing hazardous substances*"; or
  - non-hazardous (17-05-04), which is defined as "*soil and stones other than those mentioned in 17-05-03*".
  - Hydrock utilise the proprietary assessment tool, HazWasteOnline™ to undertake this assessment.
- Waste Acceptance Criteria (WAC) testing is then undertaken if required, and are only applicable following classification of the waste, and only where the waste is destined for disposal to landfill. The WAC are both qualitative and quantitative. The WAC and the associated laboratory analyses (leaching tests) are not suitable for use in the determination of whether a waste is hazardous or non-hazardous.

It should be noted that some non-hazardous wastes may be suitable for disposal at an inert landfill as non-hazardous waste, subject to meeting the appropriate waste acceptance criteria.

It should be noted that classification must be undertaken on the waste produced, by the waste producer. Necessary sampling frequency to adequately characterise a soil population is defined within WM3.

Further discussion with regards to the characterisation process for different scenarios and waste types is provided below.

Topsoil and Peat

Topsoil and peat are biodegradable, therefore if they are surplus to requirements and cannot be re-used in accordance with a Materials Management Plan, they cannot be classified as inert. As such, topsoil and peat need to be classified by a staged assessment and sampling process and would either be classified as hazardous or non-hazardous, depending upon the results of the assessment.

Greenfield Sites

Waste from completely greenfield sites may be accepted at a landfill as inert waste if it meets the requirements of paragraph 10 (wastes acceptable without testing at landfills for inert waste) of the Landfill (England and Wales) (Amendment) Regulations (2005) ('the Regulations') can be met. Paragraph 10 of the Regulations states, "*soils may be able to be classified as inert waste without testing, if:*

- *they are single stream waste of a single waste type;*
- *there is no suspicion of contamination and they do not contain other material or substances such as metals, asbestos, plastics, chemicals, etc….."*

As such, where the site is greenfield and the waste producer is confident about the quality of a soil (i.e. naturally occurring and uncontaminated), further sampling and laboratory testing is not necessary for the Basic Characterisation and this can be undertaken on qualitative Waste Acceptance Criteria testing.

In this instance the waste producer can characterise the waste based on visual assessment and written description of the waste in addition to supporting evidence such as a desk study assessment of the greenfield status. However, it should be noted this characterisation is subject to agreement by the landfill operator who may require testing to be undertaken to confirm classification.

Contaminated or potentially contaminated sites

If the site is brownfield, contaminated or potentially contaminated, the waste must undergo an initial waste classification exercise using background information on the source and origin of the waste and assessment of chemical test data in accordance with Environment Agency Technical Guidance WM3.

If following the initial waste classification exercise, the soils are acceptable for disposal to a non-hazardous landfill, further qualitative Waste Acceptance Criteria (WAC) testing is not required.

However, if soils are potentially able to be disposed to an inert landfill as non-hazardous waste, or require testing to determine if they can be disposed of to a stable non-reactive hazardous or hazardous class of landfill, the next stage of assessment is to undertake qualitative WAC testing. This will determine the Basic Characterisation and the landfill category at which the soils can be accepted.

Hazardous material must be subjected to WAC testing to determine whether it requires treatment before it can be accepted at the hazardous landfill, while non-hazardous material can be tested to determine whether it may be suitable for placement in an inert landfill.

8.2.2 HazWasteOnline™ assessment

As the site is brownfield, in order to inform the preliminary waste characterisation process, Hydrock has undertaken an exercise using the proprietary web-based tool HazWasteOnline™. The output of the HazWasteOnline™ assessment is provided in Appendix F and a summary of the preliminary waste classification is provided below in Section 8.2.4.

It should be noted that some of the soil samples assessed as part of the HazWasteOnline™ are classified as potentially hazardous on account of the designation 'HP3i' (with regards to petroleum hydrocarbons). However, based upon carbon banding of the TPH, the findings of the investigation and the way the petroleum hydrocarbons are distributed within the soil, it is likely that the potential for the soil being hazardous on account of HP3i can be all but discounted and it would be reasonable to assume that the result would indicate that the soil, would be non-hazardous as a result of the TPH content.

8.2.3 WAC Testing

The site is brownfield. However, WAC testing has not been undertaken to date but will be required on the excavated soils that are to be disposed of, to assist with waste disposal options prior to disposal. A summary of the preliminary waste disposal options is provided below in Section 8.2.4.

8.2.4 Preliminary waste disposal options

The site is brownfield and based on the site history and the HazWasteOnline™ assessment, if suitable segregation of different types of waste is put in place, for soils to be disposed of, it is considered that:

- The 'General' Made Ground is likely to be classified as non-hazardous waste.
- The petroleum hydrocarbon hotspot associated with WS01 (samples at 1.30m and 1.40m) and WS05 at 0.60m is classified as hazardous waste.
- The natural strata is likely to be classified as 'inert' but this would need to be confirmed by WAC testing.
- Any soils containing > 0.1% asbestos or visible asbestos containing materials would be considered as hazardous.
- The screening and testing undertaken on bituminous bound pavement has indicated that coal tars are not present, or below hazardous waste limits (0.1%), and will likely be classified as non-hazardous waste.

8.2.5 General waste comments

It should be noted that:

- It is the waste producer's responsibility to segregate the waste at source and waste producers must not mix waste materials/streams or dilute hazardous components, for example by mixing with less or non-hazardous waste on site to meet WAC limit values.
- The above preliminary assessment has been made on the basis of the soils tested as part of the ground investigation, using the HazWasteOnline™ assessment. However, the formal classification of waste can only be undertaken on the material to be disposed of, and by the waste producer and the receiving landfill as license conditions vary from landfill to landfill.

- Basic Characterisation should be undertaken in accordance with Environment Agency guidance by the waste producer. Hydrock can assist if required and this report will assist the characterisation. However, Basic Characterisation does not form part of the current commission and would require further assessment and testing on the wastes actually to be disposed.
- Once the waste producer has undertaken an initial Basic Characterisation on each waste stream, they can manage the soils as part of the on-site processing programme (for example, stockpiling, treatment, screening and separation). The waste producer and landfill operator will then need to agree the suite of compliance testing for regularly generated waste to demonstrate compliance with the initial Basic Characterisation prior to disposal.
- At the time of disposal, additional testing on the excavated soils to be disposed of, will likely be necessary.
- Non-hazardous and hazardous soils require pre-treatment (separation, sorting and screening) prior to disposal.
- The costs for disposal of non-hazardous and hazardous soils are significant compared to disposal of inert material.
- In addition to disposal costs, landfill tax will be applicable. Non-hazardous and hazardous waste will generally be subject to the Standard Rate Landfill Tax. Inert or inactive waste will generally be subject to the Lower Rate Landfill Tax. The landfill tax value changes each April and can be found at https://www.gov.uk/government/publications/rates-and-allowances-landfill-tax/landfill-tax-rates-from-1-april-2013.
- Before a waste producer can move waste to a landfill site for disposal, they need to check the landfill site has the appropriate permit and must have completed the following[5]:
  - Duty of care transfer note / Hazardous Waste consignment note, including comment as to if pre-treatment has been undertaken; and
  - Basic Characterisation of the waste, to include: description of the waste; waste code (using list of wastes); composition of the waste (by testing, if necessary) and; WAC testing (if required).

8.3 Materials management

8.3.1 Introduction

Soils that are to remain on site, should be managed and reused in accordance with a Materials Management Plan (MMP), prepared in accordance with 'The Definition of Waste: Development Industry Code of Practice', Version 2 (CL:AIRE), known as the DoWCoP. Where all aspects of the DoWCoP are followed the soils are considered not to be waste, because they were never discarded in the first place.

Version 2 of the DoWCoP clearly sets out the principles and an outline of the requirements of a MMP. The following compliance criteria must be seen to apply to the MMP for the site:

- Factor 1: Protection of human health and protection of the environment.
- Factor 2: Suitability for use, without further treatment.

[5] ENVIRONMENT AGENCY. November 2010. Guidance on waste acceptance procedures and criteria. Waste acceptance at landfills. The Environment Agency.

- Factor 3: Certainty of Use.
- Factor 4: Fixed Quantity of Material.

The reuse of soils at sites should be considered during the planning and development design process so that compliance with issues such as fixed quantity and certainty of use clearly relate to agreed site levels. Suitability of Use is normally evident from the remediation strategy or the design statement, which form an integral part of a MMP. However, some soils may need to be tested post-excavation to prove they are suitable for use.

Once the MMP is finalised, it must be declared by a Qualified Person (QP). The Declaration is an on-line submission as part of which the QP is required to confirm that the declaration is being made before the relevant works have commenced (i.e. it is not a retrospective application).

Once all material movements have been completed in accordance with the MMP a verification report must be produced, kept for 2 years and provided to the EA on request.

It should be noted that failure to comply with the requirements of the DoWCoP when re-using materials has potentially significant consequences for the waste holder. The risk is that the reused materials are still regarded as a waste that has been illegally deposited. From 1 April 2018, the scope of Landfill Tax has been extended to sites operating without the appropriate environmental disposal permit, and operators of illegal waste sites will now be liable for Landfill Tax. Further information is available at: https://www.gov.uk/government/publications/landfill-tax-disposals-not-made-at-landfill-sites/landfill-tax-disposals-not-made-at-landfill-sites.

If soils are excavated and reused on sites (or moved to another site) without a MMP, exemption, or appropriate Permit in place, anyone who knowingly facilitates the disposal may be '*jointly and severally liable*' to any assessment of tax, fines or prosecution.

8.3.2 Materials management scenarios

The materials management scenarios present on site are discussed below.

It should be noted that more than one scenario may apply, dependent upon where the soils are proposed for reuse.

Clean, naturally occurring materials – reused on the site of origin

Where soils are naturally occurring, uncontaminated and are reused on the site they are excavated (i.e. greenfield site with documented site history, with no Made Ground), they will fall outside the Waste Framework Directive (WFD) (i.e. they will not be a waste when reused on the site of origin).

However, there needs to be certainty of that reuse, and evidence is necessary to support this strategy, for example through information provided during the planning process. The onus is on the developer to demonstrate that the materials are not a waste and will never become a waste. As such, a Materials Re-use Strategy is recommended to show certainty. Alternatively, if the volume of material is under 1,000 tonnes, then a U1 waste exemption may be applied for from the Environment Agency.

It may be noted that some 'clean naturally occurring materials' may still fail the 'suitable for use' test, for example, soils with a naturally high organic content may not be suitable for use because of their propensity to produce ground gases such as methane. Rules regarding other more unusual

circumstances such as where natural soils contain an unacceptably high mineral content are described in the DoWCoP.

Clean, naturally occurring materials – transferred to other sites

Where soils are naturally occurring, uncontaminated and are transferred to other sites (i.e. direct transfer), they will not become waste as long as the transfer is undertaken in accordance with the DoWCoP. A MMP must be prepared for the receiving site and the materials movement must be noted in the MMP of the Donor site. This movement must have been declared to CL:AIRE prior to the works commencing.

Made Ground and other contaminated soils

On sites where Made Ground or contaminated soils are present, any soils excavated will be a waste as soon as they are excavated (even if they are clean, naturally occurring materials), unless they are subject to reuse in accordance with the DoWCoP. As such, for any brownfield site or a site where Made Ground is present and soils are being moved and reused, the materials could be deemed a waste, subject to either:

- a Materials Management Plan (MMP), to prevent the material being classified as a waste following reuse; or
- an exemption (for limited volumes); or
- an environmental permit, dependant on its status.

Made Ground and other contaminated soils

All recycled materials (6F2 etc.) must be produced under the 2013 WRAP 'Quality Protocol: Aggregates from inert waste', whether on site or off-site. If they are not, they will be deemed a waste and can only be used on site under a permit. More information can be found at https://www.gov.uk/government/publications/quality-protocol-production-of-aggregates-frm-inert-waste.

Geotechnical improvement requirements

Construction activities carried out on uncontaminated soils solely for the purpose of improving geotechnical properties e.g. lime / cement modification, are not generally regarded as waste treatment operations and do not require a permit.

However, should processing be needed (such as screening, treatment or improvement), that would constitute a waste activity and require a mobile treatment permit. This may be as simple as removing oversize material with an excavator bucket, to using a riddle bucket to remove hardcore to full mechanical screening.

9. UNCERTAINTIES AND LIMITATIONS

9.1 Site-specific comments

The gas monitoring undertaken to date and included in this report is insufficient to fully characterise the site in accordance with CIRIA Report C665. Further monitoring will be required with a monitoring well targeting the Landfill Made Ground and peat deposits.

There were numerous limitations on site preventing intrusive investigation locations, in particular investigation of the mine entries. This was due to large stockpiles being present on site, extensive areas of stacked concrete blocks, live services such as the electrical cable connecting to the electrical substation, as well as other factors including existing buildings and vegetation. An additional ground investigation will be required at a later date and it would be beneficial for this to be undertaken when all above ground structures / stockpiles have been demolished and removed from site.

9.2 General comments

Hydrock Consultants Limited (Hydrock) has prepared this report in accordance with the instructions of Harworth Estates Property Group Ltd. (the Client), by e-mail dated 7th April 2020 under the terms of appointment for Hydrock, for the sole and specific use of the Client and parties commissioned by them to undertake work where reliance is placed on this report. Any third parties who use the information contained herein do so at their own risk. Hydrock shall not be responsible for any use of the report or its contents for any purpose other than that for which it was prepared or for use of the report by any parties not defined in Hydrock's appointment.

This report details the findings of work carried out in August and September 2020. The report has been prepared by Hydrock on the basis of available information obtained during the study period. Although every reasonable effort has been made to gather all relevant information, not all potential environmental constraints or liabilities associated with the site may have been revealed.

Hydrock has used reasonable skill, care and diligence in the design of the investigation of the site and in its interpretation of the information obtained. The inherent variation of ground conditions allows only definition of the actual conditions at the locations and depths of trial pits and boreholes at the time of the investigation. At intermediate locations, conditions can only be inferred.

Groundwater data are only representative of the dates on which they were obtained and both levels and quality may vary.

Plans that provide assessment of foundation types and depths are indicative and subject to further design. This design should incorporate a detailed assessment of the influence of trees, influence of cut to fill proposals and geological conditions.

Unless otherwise stated, the recommendations in this report assume that ground levels will remain as existing. If there is to be any re-profiling (e.g. to create development platforms or for flood alleviation) then the recommendations may not apply.

Information provided by third parties has been used in good faith and is taken at face value; however, Hydrock cannot guarantee its accuracy or completeness.

The work has been carried out in general accordance with recognised best practice. The various methodologies used are referenced in Appendix I. Unless otherwise stated, no assessment has been

made for the presence of radioactive substances or unexploded ordnance. Where the phrase 'suitable for use' is used in this report, it is in keeping with the terminology used in planning control and does not imply any specific warranty or guarantee offered by Hydrock.

The chemical analyses reported were scheduled for the purposes of risk assessment with respect to human health, plant life and controlled waters as discussed in the report. Whilst the results may be useful in applying the Hazardous Waste Assessment Methodology given in Environment Agency Technical Guidance WM3, they are not primarily intended for that purpose and additional analysis will be required at the time of disposal to fully classify waste. Discussion and comment with regards to waste classification are preliminary and do not form the requirements of 'Basic Characterisation' as required.

Assessment and testing for the presence of coal tar has only been completed at the locations of exploratory holes undertaken for risk assessment purposes. This investigation is not designed to provide a definitive assessment of the risk from coal tar, nor the waste classification for bituminous bound pavement arisings at the site.

Unless otherwise stated, at the time of this investigation the future routes of water supply pipes had not been established. This investigation and sampling strategy may not be fully compliant with UKWIR recommendations. Consequently, a targeted investigation and specific sampling and chemical testing may be required at a later date once the routes of the supply pipes are known. In addition, it is recommended that the relevant water supply company be contacted at an early stage to confirm its requirements for assessment, which may not necessarily be the same as those recommended by UKWIR.

Whilst the preliminary risk assessment process has identified potential risks to construction workers, consideration of occupational health and safety issues is beyond the scope of this report.

Please note that notwithstanding any site observations concerning the presence or otherwise of archaeological sites, asbestos-containing materials or invasive weeds, this report does not constitute a formal survey of these potential constraints and specialist advice should be sought.

Any site boundary line depicted on plans does not imply legal ownership of land.

10. RECOMMENDATIONS FOR FURTHER WORK

Following the ground investigation works undertaken to date, the following further works will be required:

- demolition asbestos survey;
- supplementary ground investigation to further define the hotspot areas of petroleum hydrocarbons in the vicinity of WS01;
- Delineation of the landfill along the western boundary (TP21, TP22 and TT01), including installation of monitoring wells within the landfill and the localised area of peat encountered in TP18;
- Re-investigation of the mine entries when all above ground structures and stockpiles have been removed;
- further investigation to locate the highwall of the opencast site;
- Probing in and around the vicinity of CP06 to determine the extent of the identified void;
- It is recommended that further investigation is undertaken to determine the extent of the voiding and consideration may be given to concurrent treatment with the mine workings.
- discussion and agreement with utility providers regarding the materials suitable for pipework;
- discussions with regulatory bodies and the warranty provider regarding the conclusions of this report;
- assessment of tree influence on foundations and design of foundations;
- discussions with Vibro-stone Column Contractors regarding the viability of, and potential improvement by, VSCs;
- discussions with piling Contractors regarding conclusions of this report and design of the piles;
- provision of geotechnical design for the Category 2 structures (earthworks, retaining, floor slabs, foundations.);
- locating the historical groundwater abstraction borehole and decommissioning in line with EA guidance;
- production of a Remediation Strategy and Verification Plan (and agreement with the regulatory bodies and the warranty provider);
- production of a Materials Management Plan relating to reuse of soils at the site and import of soils to the site;
- remediation and mitigation works; and
- verification of the earthworks, remediation and mitigation works.

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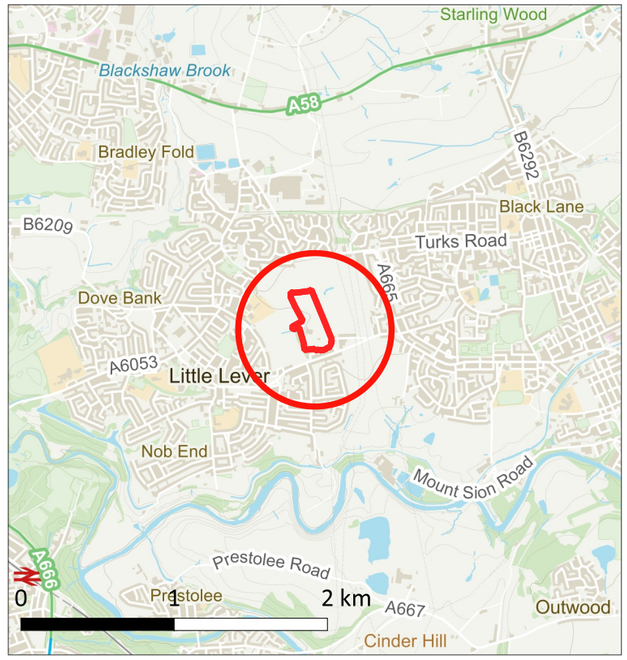
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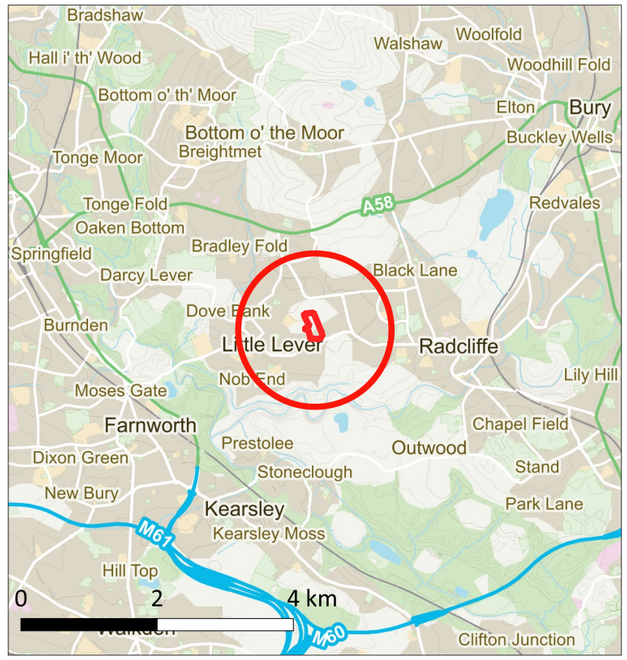
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Appendix A

Drawings







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KEY PLAN

Site Boundary

NOTES

REVISIONS

REV.				
P01	FIRST ISSUE EXAMPLE			
	DRAWN BY SH	CHECKED BY DH	APPROVED BY DH	01/05/20
REV.	REVISION NOTES/COMMENTS			
	DRAWN BY INITIALS	CHECKED BY INITIALS	APPROVED BY INITIALS	DATE

Hydrock

CLIENT
Harworth Estates Property Group Ltd

PROJECT
Stopes Road, Little Lever

TITLE
Site Location Plan

HYDROCK PROJECT NO.
C-15220

SCALE @ A3
1:3,529.834447

PURPOSE OF ISSUE
SUITABLE FOR INFORMATION

STATUS
S2

DRAWING NO.
15220-HYD-XX-XX-DR-GE-1001

REVISION
P01

ILLUSTRATIVE MASTERPLAN

Key

- Site boundary - 6.23Ha
- Total POS area - 2.17Ha
- Residential development of upto 140 dwellings
- Vehicular access via Stopes Road. This is subject to detailed design drawing ref: VN201653-D100
- Primary Route / Avenue
- Secondary Routes/Lanes
- Shared Surface
- Proposed Village Green
- Existing trees and hedgerows retained and enhanced
- Proposed development blocks
- Public Open Space 'no build zone'
- Exisitng substation
- Enhanced ecological planting & recreational corridor along western boundary
- Potential link to existing Public Right of Way

N

Shaft (disused)

Existing Public Right of Way

STOPES ROAD

Wellington Works

Depot

Builders Yard

BEXHILL CLOSE

156 150 187 185 101 95 93b 93a 93 85 83 11 10 9 8 7 170

Stopes Road Little Lever

1:500@A0 I August 2020 I HAR001MP01 / REV B / Drawn : MP

Harworth

apd

OS NORTH

Former Historic Wilton Collieries

Offsite Pond

Mature Trees

Former Coal Pit Location likely associated with mine shaft construction

376407-002

Access to northern field via farmers gate

Current Open Field

Mature Trees

Mature Trees

Offsite Pond

Field bound by a fence on all sides

Stubbs Coal Seam (Mine Abandonment Plan)

Currently no access to field from main site

Rams Coal Seam (inferred outcrop from geological maps)

Significant slopes to lower ground outside of the site boundary

Former Coal Pit Location likely associated with mine shaft construction

376407-003

Aggregate Bay (Empty)

Large stockpile of vegetated earth limits access to area

Lower leaf Top Furnace Coal Seam (inferred outcrop from geological maps)

Shed

Converyor Belt

Upper leaf Top Furnace Coal Seam (Mine Abandonment Plan)

Main Concrete Processing Works

Electrical Sub Station

Shed/Storage

Area of former Kilns

376407-006

Area of former Kilns

Mature Trees

Mature Trees

Significant slopes to lower ground outside of the site boundary

Building

376407-007

Approximate Offsite Location of Historic Atlas Brick Work Clay Pit and possible former Unlicensed Opencast

376407-008

Offshoots of Upper leaf of Top Furnace Coal Seam (Mine Abandonment Plan)

Embankments

Mature Trees

Site boundary fencing shared with residential neighbours

Roger Coal Seam (Mine Abandonment Plan)

KEY

- Approximate Site Boundary
- Approximate Mine Shaft Locations from CA report 51002283067001
- 8m departure from current location (CIRIA C758-2019)
- Approximate location of encroachment of Deep Fill from unlicensed opencast/clay pit
- Approximate location of Backfilled Pit and former Refuse heap
- Approximate location of Historic Tanks
- Approximate location of Backfilled Pond
- Historic Abstraction Well
- Concrete blocks waste stockpile
- Formal concrete block storage
- Approximate Location of Historic Refuse Tip
- Open field/Grassed area
- Sloping Ground

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. This drawing has been based on the following drawings and information:
Topographical Survey Reference 55335_01 dated 18-03-20.

4. Although the coordinates from the Coal Authority Report show the location of disused mine shaft 376407-002 to be offsite due the potential for departures (as per CIRIA C758-2019) it must be assumed to be onsite.

REV.						
P02	Amended following site walkover and provision of DWG					
	RS	02/06/20	DH	03/06/20	DH	03/06/20
P01	FIRST ISSUE					
	SH	02/05/20	DH	02/05/20	DH	03/06/20
REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

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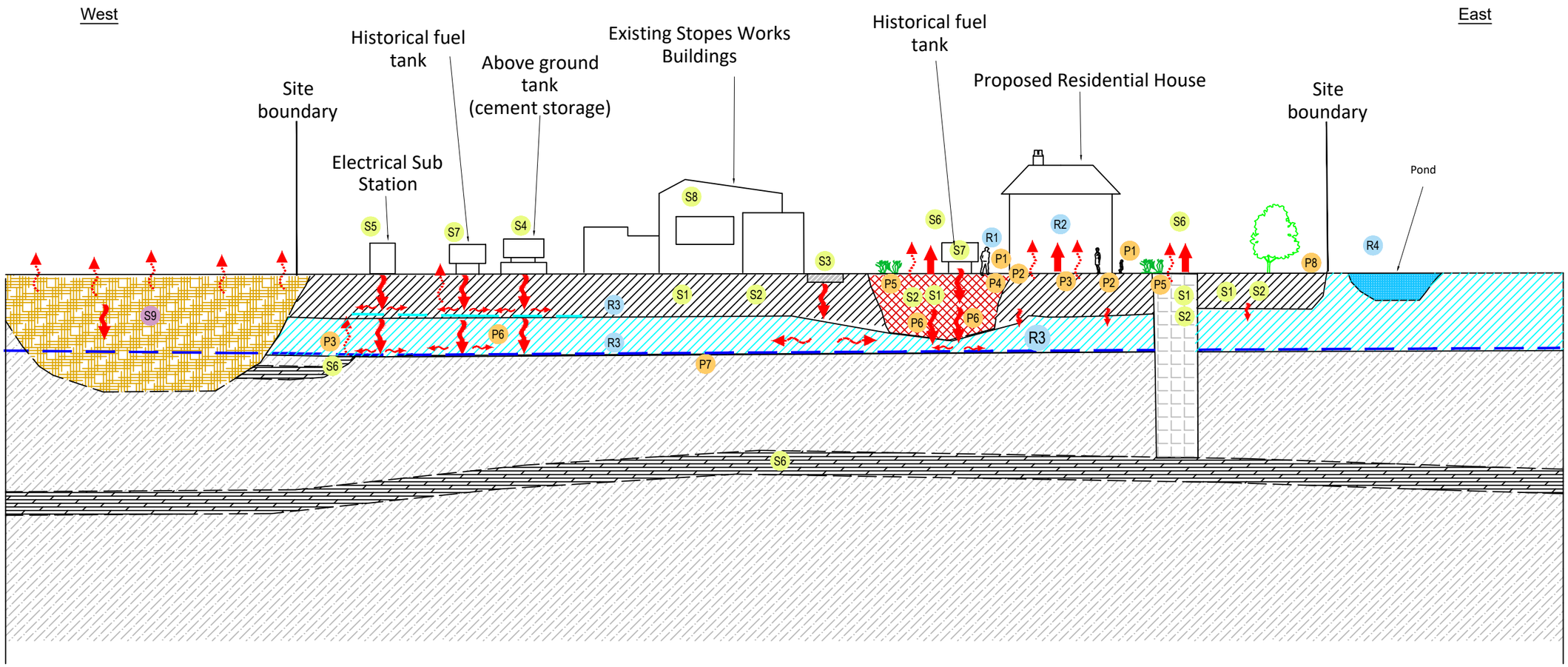
PROJECT

STOPES ROAD

TITLE

SITE FEATURES PLAN

HYDROCK PROJECT NO.	SCALE @ A3
C-15220-C	1:650
PURPOSE OF ISSUE: SUITABLE FOR INFORMATION	STATUS: S2
DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER): 15220-HYD-XX-XX-DR-GE-1002	REVISION: P02



KEY

- Backfilled pit (Terra Cotta Works and Brick Works)
- Made Ground associated with Backfilled Disused Mine Entry
- Backfilled Unlicensed Opencast and adjacent Backfilled Pond
- Coal Seams
- Middle Pennine Coal Measures Formation
- General Made Ground with possible Colliery Spoil
- Glacial Till
- Possible localised perched water at Made Ground/Till Interface
- Groundwater at the Glacial Till and Pennine Middle Coal Measures interface

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. This drawing is indicative only.

Potential Pathways

DERMAL CONTACT, INGESTION, INHALATION

LEACHING DISSOLUTION

DISSOLVED PHASE MIGRATION

VAPOUR/GAS

Potential on-site Sources of Contamination

- S1 Made Ground, associated with historical activities (brick works, backfilled ponds, mine entries) and existing use as a tarmac facility, possibly including elevated concentrations of metals, metalloids, asbestos fibres, Asbestos Containing Materials, PAH and petroleum hydrocarbons.
- S2 Made Ground, potentially containing asbestos fibres and Asbestos Containing Materials from demolition of former buildings associated with the brick works.
- S3 Coal tar, potentially present in the bituminous bound pavements present in the form or roads, / car parks and associated with the current use as a tarmac facility.
- S4 Calcium oxide, calcium hydroxide, calcium carbonate, calcium chloride, hydrated calcium sulphate, manganese dioxide and titanium oxide associated with cement stored on site.
- S5 PCBs and oils from transformers in the electricity sub-station on site.
- S6 Ground gases (carbon dioxide and methane) from organic materials in the Made Ground / mine emissions from coal seams in the Pennine Middle Coal Measures Formations.
- S7 Hydrocarbon vapours from potential VOC and petroleum hydrocarbon spillages/leaks associated with historic tanks.
- S8 Asbestos within existing buildings.

Potential off-site Sources of Contamination

- S9 Ground gases (carbon dioxide and methane) from organic materials in the backfill of nearby former clay pit / unlicensed open cast.

Potential Receptors

- R1 People (neighbours, site end users.
- R2 Development end use (buildings, utilities and landscaping).
- R3 Groundwater: Secondary Undifferentiated Aquifer status of the Till Deposits and Secondary A aquifer status of the Pennine Middle Coal Measures Formation.
- R4 Ponds along the northern and western boundaries, inland river (drainage ditch) 7m west and a pond 65m east.

Potential Pathways

- P1 Ingestion, skin contact, inhalation of dust and outdoor air by people.
- P2 Direct contact with substances deleterious to building materials.
- P3 Methane ingress via permeable soils and/or construction gaps.
- P4 VOC and petroleum hydrocarbon vapour ingress via permeable soils and/or construction gaps.
- P5 Root plant uptake.
- P6 Migration of contaminant via leachate migration through the unsaturated zone in the Made Ground or Till Deposits.
- P7 Migration of contaminant from the groundwater within the Till Deposits to the groundwater within the Pennine Middle Coal Measures Formation
- P8 Surface water via overland flow.

REV.						
P01	FIRST ISSUE					
	RS	02/06/20	DH	02/06/20	DH	02/06/20
REV.	REVISION NOTES/COMMENTS					
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

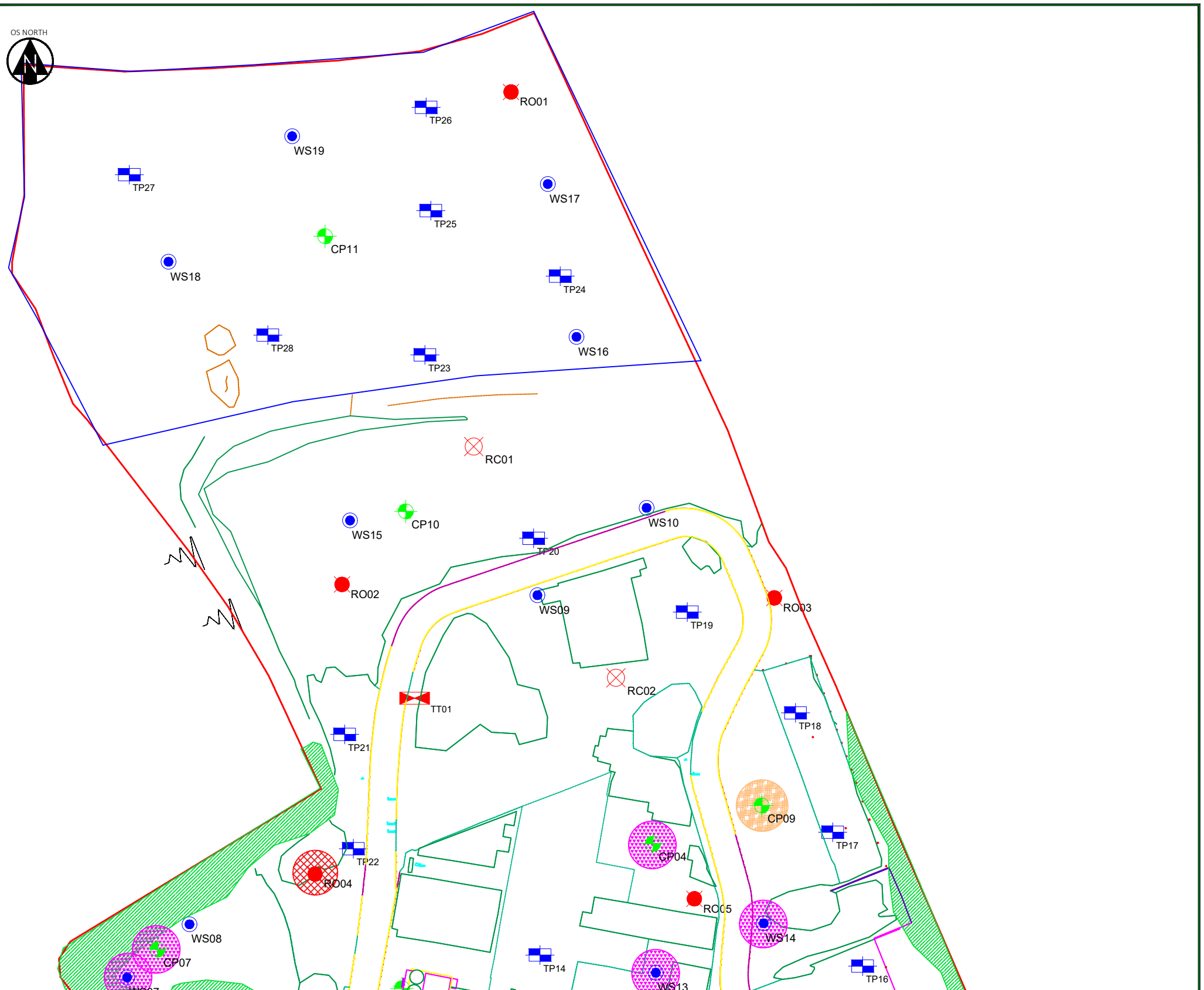
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or visit www.hydrock.com

CLIENT: HARWORTH ESTATES PROPERTY GROUP LTD

PROJECT: STOPES ROAD

TITLE: Conceptual Site Model (indicative)

HYDROCK PROJECT NO.	SCALE @ A3
C-15220-C	Not to scale
PURPOSE OF ISSUE: SUITABLE FOR INFORMATION	STATUS: S2
DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER): 15220-HYD-XX-XX-DR-GE-1004	REVISION: P01



KEY

- RQXX — Rotary Cored/Open hole Borehole
- TPXXX — Trial Pit
- BHXXX — Cable Percussive Borehole
- WSXXX — Window Sample Borehole
- TTXX — Trial Trench
- Monitoring well installed in Made Ground
- Monitoring well installed in Glacial Till
- Monitoring well installed in Pennine Middle Coal Measures Formation

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with Hydrock Phase 2 Interpretative Report (ref: 15220-HYD-XX-XX-RP-GE-0003).

3. There are no monitoring wells in the Greenfield due to long term access restrictions, and near the northern boundary of Tarmac Topblock. This was due to failed attempts at installing monitoring wells in WS10 and WS15, which had unstable ground.

REV.	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE	SH	09/10/20	AC	09/10/20	DH	09/10/20

Hydrock

CLIENT: HARWORTH ESTATES PROPERTY GROUP LTD.

PROJECT: STOPES ROAD, BOLTON

TITLE: GAS MONITORING PLAN

HYDROCK PROJECT NO.	SCALE @ A3
C-15220-C	1:900

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

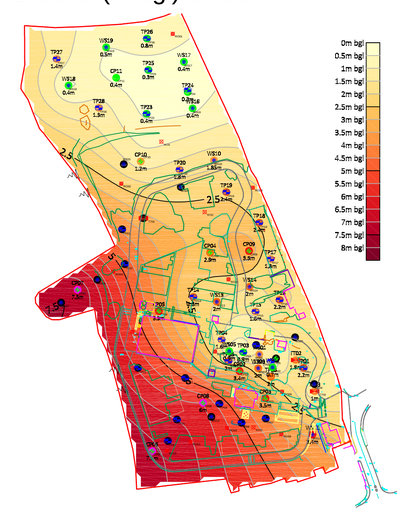
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REVISION: P1

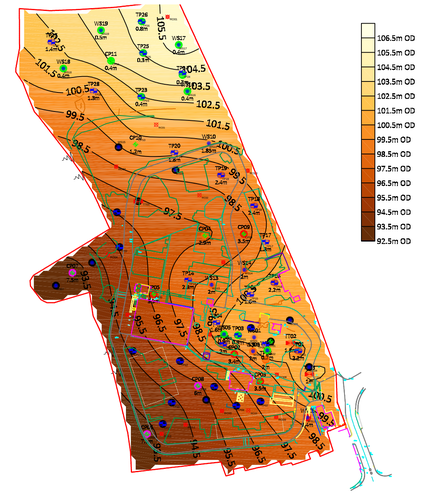
Site Layout and Exploratory Hole Locations 1:1250



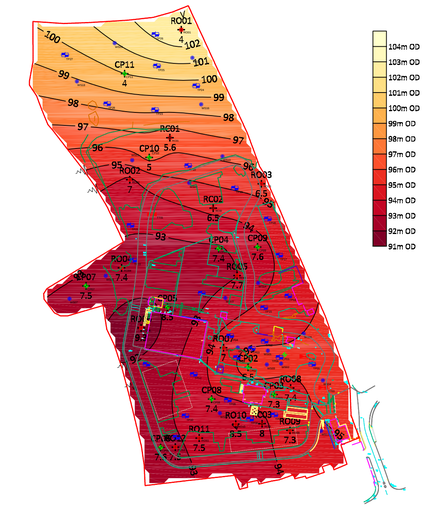
Depth to base of Made Ground (m bgl) 1:400



Depth to base of Made Ground (mOD) 1:400



Depth to base of Rockhead (mOD) 1:400



KEY

- BHXXX — Cable Percussive Borehole
- RCXX — Rotary Cored Borehole
- ROXX — Rotary Openhole Borehole
- TPXXX — Trial Pit
- TTXX — Trial Trench
- WSXXX — Windowless Sample Borehole

NOTES

1. This drawing should be read in conjunction with the Hydrock Phase 2 Interpretative Report 15220-HYD-XX-XX-DR-GE-0003.
2. All information is based in the Hydrock August and September 2020 ground investigation.
3. The depth to Made Ground (m bgl and mOD) exclude all points where the base of Made Ground was not proven. In addition, rotary boreholes were excluded as the base of Made Ground is not as accurately determined as other intrusive methods. All excluded exploratory holes are represented on the drawing as back dots.

REV	FIRST ISSUE / REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE	SH	09/10/20	AC	09/10/20	DH	09/10/20

Hydrock

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HARWORTH ESTATES PROPERTY GROUP LTD.

PROJECT
STOPES ROAD, BOLTON

TITLE
GEOLOGICAL GROUND MODEL

HYDROCK PROJECT NO.	SCALE @ A1
C-15220-C	AS SHOWN

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)
15220-HYD-XX-XX-DR-GE-1008

REVISION
P1

OS NORTH

RO01
TP26
WS19
TP27
WS17
TP25
CP11
WS18
TP24
TP28
WS16
TP23
RC01
CP10
WS15
WS10
Brick and concrete obstruction from 0.80m to 1.10m
TP20
RO02
Very compact sand at 0.5m
WS09
RO03
TP19
Concrete blocks from 0.30m to 0.90m
RC02
TT01
Two large tractor tyres at 2.1m
TP21
TP18
CP04
CP09
TP17
Concrete blocks from 0.40m to 0.90m
TP22
RO04
RO05
WS08
Concrete from 0.50m to 0.60m
WS14
CP07
Concrete from 0.50m to 0.60m
TP14
WS13
Concrete from 0.40m to 0.80m
TP16
WS07
CP05
TP15
Very compact gravel at 0.4
Brick and concrete obstruction from 0.40m to 0.80m
Brick obstruction from 0.60m to 0.90m
RO06
TP04
WS06
TP02
Concrete slab at 1.0m
Metal pipe at 0.5m (possibly from historic tank)
RO07
WS05
TP03
WS01
TP05
TP06
CP01
TT02
TP13
WS03
WS02
TP01
Reinforced concrete from 0.40m to 0.45m
CP02
TP12
Brick slab from 1.10m to 1.30m
WS04
TT03
RO08
Potential service encased in concrete at 0.6m
CP03
Very compact gravel at 0.5m
CP08
TP09
WS12
TP10
TP07
Very compacted ash fill at 1.2m
TP08
RO10
RC03
RO09
WS11
TP11
RO11
CP06
RO12

KEY

- BHXXX — Cable Percussive Borehole
- RCXX — Rotary Cored Borehole
- ROXX — Rotary Openhole Borehole
- TPXXX — Trial Pit
- TTXX — Trial Trench
- WSXXX — Windowless Sample Borehole

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. Exploratory holes are based on the August and September 2020 Hydrock investigation. All positions have been surveyed in with a Total Station GPS.

REV.	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE	SH	09/10/20	AC	09/10/20	DH	09/10/20

Hydrock

CLIENT: HARWORTH ESTATES PROPERTY GROUP LTD.

PROJECT: STOPES ROAD, BOLTON

TITLE: OBSTRUCTIONS PLAN

HYDROCK PROJECT NO.: C-15220-C

SCALE @ A3: 1:900

PURPOSE OF ISSUE: SUITABLE FOR INFORMATION

STATUS: S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER): 15220-HYD-XX-XX-DR-GE-1009

REVISION: P1

OS NORTH

RO01
TP26
WS19
TP27
WS17
TP25
CP11
WS18
TP24
TP28
TP23
WS16
RC01
WS15
CP10
WS10
TP20
RO02
WS09
TP19
RO03
RC02
TT01
TP21
TP18
CP04
TP22
TP17
RO04
RO05
WS08
CP07
TP14
TP16
CP05
TP15
WS06
TP04
RO07
TP03
TP05
TT02
TP13
WS03
TP01
CP02
TP12
WS04
TT03
RO08
CP08
TP09
TP07
TP10
TP08
RC03
RO10
RO09
RO11
TP11
RO12
CP06

102m OD
100.5m OD
99m OD
97.5m OD
96m OD

KEY

- Cable Percussive Borehole
- Rotary Cored Borehole
- Rotary Openhole Borehole
- Trial Pit
- Trial Trench
- Windowless Sample Borehole
- Monitoring well installed in Made Ground
- Monitoring well installed in Glacial Till
- Monitoring well installed in Pennine Middle Coal Measures Formation

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with the Hydrock Phase 2 Interpretative Report (ref: 15220-HYD-XX-XX-RP-GE-0003).

3. Groundwater levels taken from the gas and groundwater monitoring visit undertaken on 01/10/20.

4. Groundwater levels from the Pennine Middle Coal Measures Formation has been excluded due to limited data.

REV.	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE	SH	09/10/20	AC	09/10/20	DH	09/10/20

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CLIENT: HARWORTH ESTATES PROPERTY GROUP LTD.

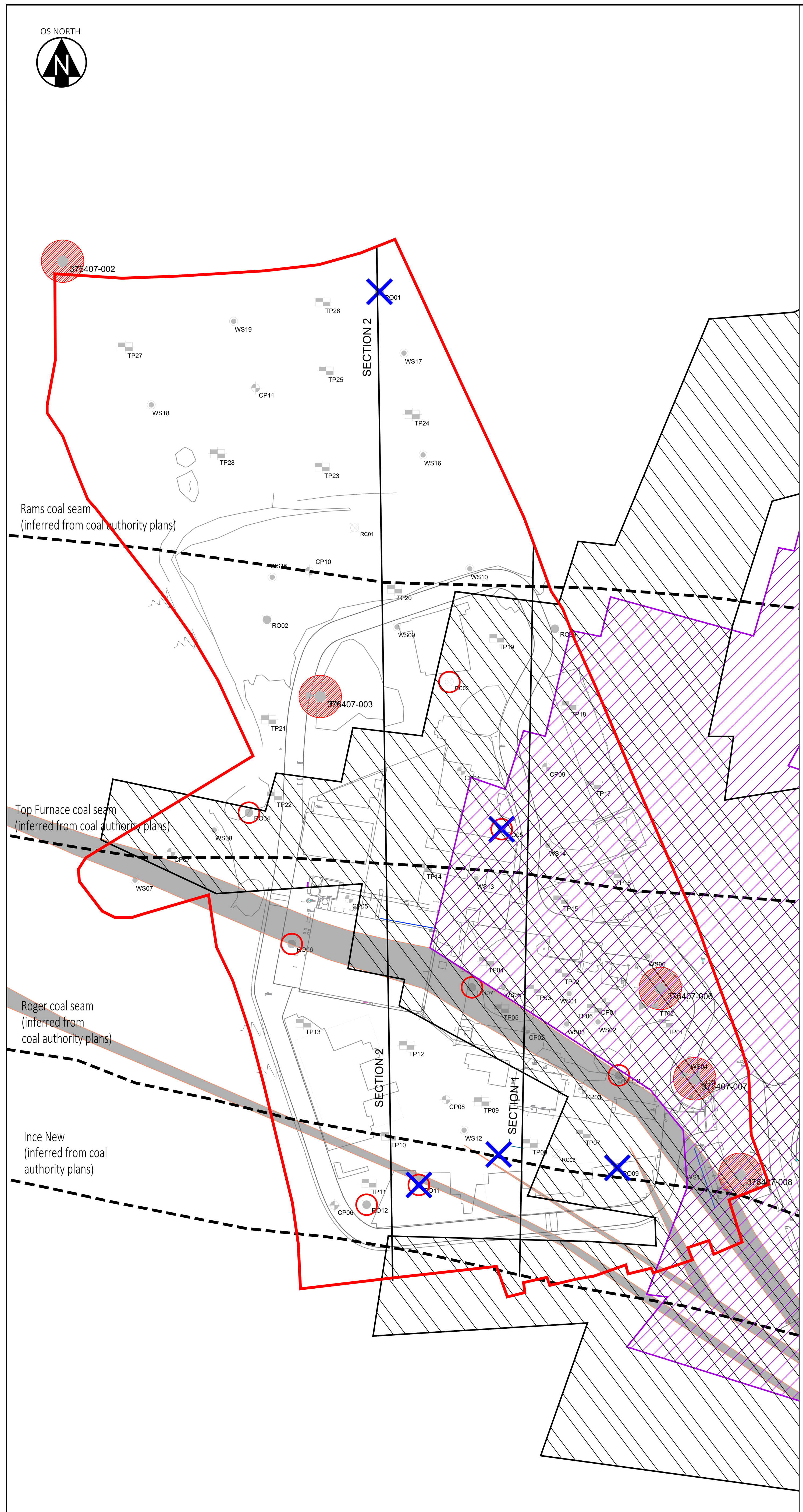
PROJECT: STOPES ROAD, BOLTON

TITLE: GROUNDWATER MODEL

HYDROCK PROJECT NO.	SCALE @ A3
C-15220-C	1:900

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

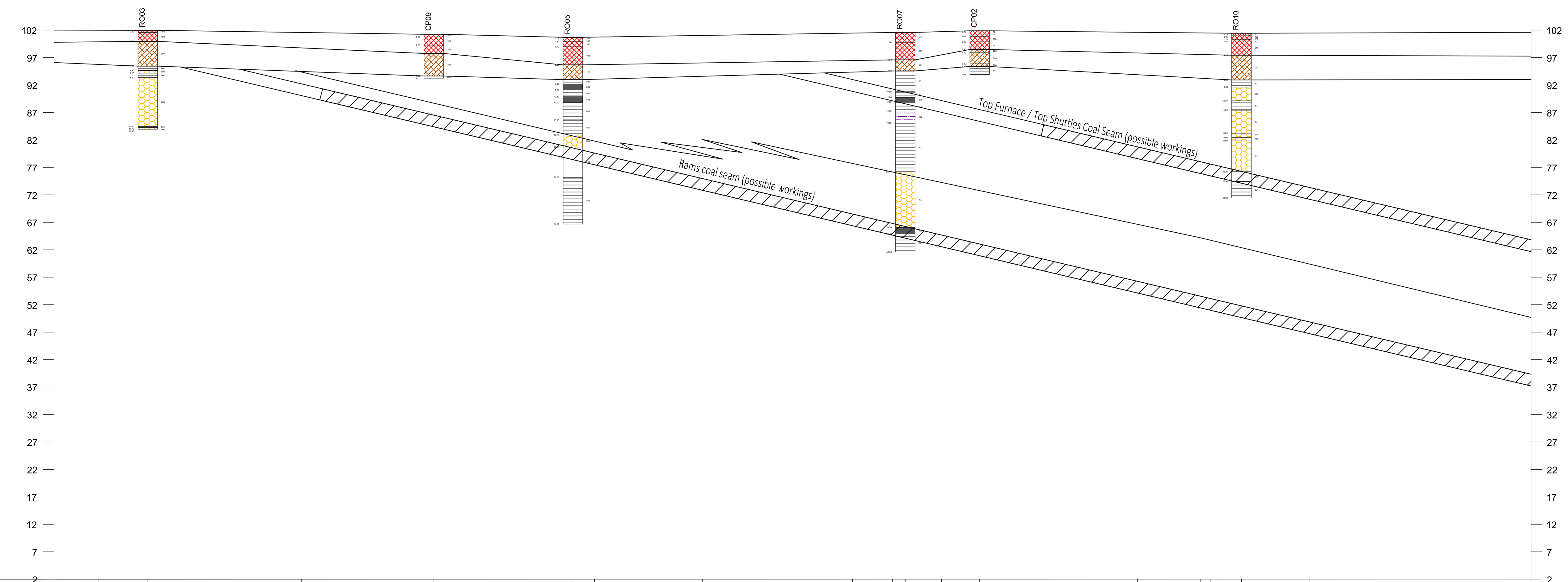
DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)	REVISION
15220-HYD-XX-XX-DR-GE-1010	P1



Legend Key

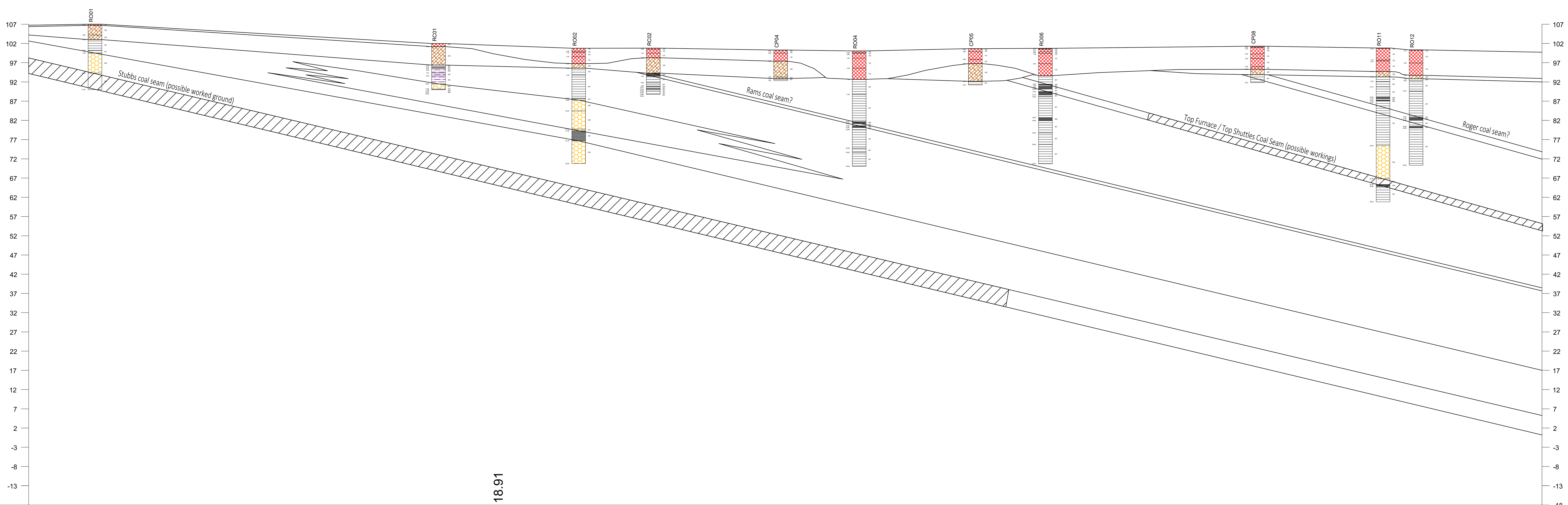
- Made Ground
- Glacial Till
- Pennine Middle Coal Measures (Mudstone)
- Pennine Middle Coal Measures (Siltstone)
- Pennine Middle Coal Measures (Sandstone)
- Coal
- Void

SECTION 1



Chainage (m)	Elevation (mAOD)	Offset (m)
0.00		
9.04	101.95	1.77
37.01	101.60	7.07
61.13	101.25	1.56
86.45	100.68	12.30
90.38	101.34	5.72
110.05	102.36	13.11
136.53	[illegible]	17.02
137.35	102.49	[illegible]
144.65	102.05	7.19
[illegible]	[illegible]	4.39
146.96	101.57	15.99
153.55	101.76	4.00
160.49	101.87	6.12
189.22	101.49	7.04
200.75	101.32	12.25
202.56	101.64	13.05
208.16	101.42	1.84
220.63		

SECTION 2



Chainage (m)	Elevation (mAOD)	Offset (m)
0.00		
9.22	107.00	2.95
14.31	105.63	23.99
31.75	106.52	7.58
40.11	104.84	21.29
56.37	104.47	12.16
69.61	103.52	17.00
76.34	102.89	20.67
98.58	101.98	7.12
111.42	102.17	37.07
115.82	101.32	23.17
120.68	100.94	37.00
118.91	101.43	9.23
		38.0711.00
154.43	100.78	31.87
162.48	100.18	18.24
172.56	100.16	35.22
187.55	100.29	38.30
201.08	100.16	31.37
207.98	100.07	40.60
224.85	100.68	26.60
238.19	100.65	1.04
256.44	100.73	21.64
285.93	100.76	15.50
292.02	101.26	23.82
311.58	101.28	39.75
326.60	100.79	19.03
344.24	100.81	32.47
344.67	100.61	12.67
352.94	100.33	12.22
353.79	100.38	6.13
374.13		

KEY

- BHXXX Cable Percussive Borehole
- RC01 Rotary Cored Borehole
- ROXX Rotary Openhole Borehole
- TPXXX Trial Pit
- TTXX Trial Trench
- WSXXX Windowless Sample Borehole
- Mine Shaft with 8m departure from current location (CIRIA C758-2019)
- Intact Coal Seams recorded in borehole
- Voids and possible worked ground
- Indicative location of Ten Feet Mine (Rams) MA Plan 5419 Sheet 8
- Indicative location of Ginham Mine (Top Furnace/Top Shuttle/Lower Florida) MA Plan 5419 Sheet 7

NOTES

1. Figured dimensions only are to be taken from this drawing.
2. This drawing is to be read in conjunction with the Ground Investigation Report and Coal Mining Risk Assessment.
3. This drawing has been based on information provided by the Coal Authority, BGS mapping and the findings of the ground investigation. Ground conditions are confirmed only at exploratory hole locations. Ground data between exploratory hole locations can only be inferred. This drawing is for information only and not for construction.
4. Interpretation of coal seams is indicative. Variation in seam reference and naming and presence of subordinate coal seams should be considered when interpreting data.
5. Additional ground investigation required to confirm location of voids, worked ground and areas which require treatment.

REV.	REVISION NOTES/COMMENTS					
P1	FIRST ISSUE					
	D. FRY	16/10/20	A. CHEERS	16/10/20	D. HOPE	16/10/20
	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE

Hydrock

CLIENT
HARWORTH ESTATES PROPERTY GROUP

PROJECT
STOPES ROAD, BOLTON

TITLE
COAL MINING FEATURES PLAN AND CROSS SECTIONS

HYDROCK PROJECT NO.
C-15220

SCALE @ A0
1:1000 (PLAN) 1:500

PURPOSE OF ISSUE
SUITABLE FOR INFORMATION

STATUS
S2

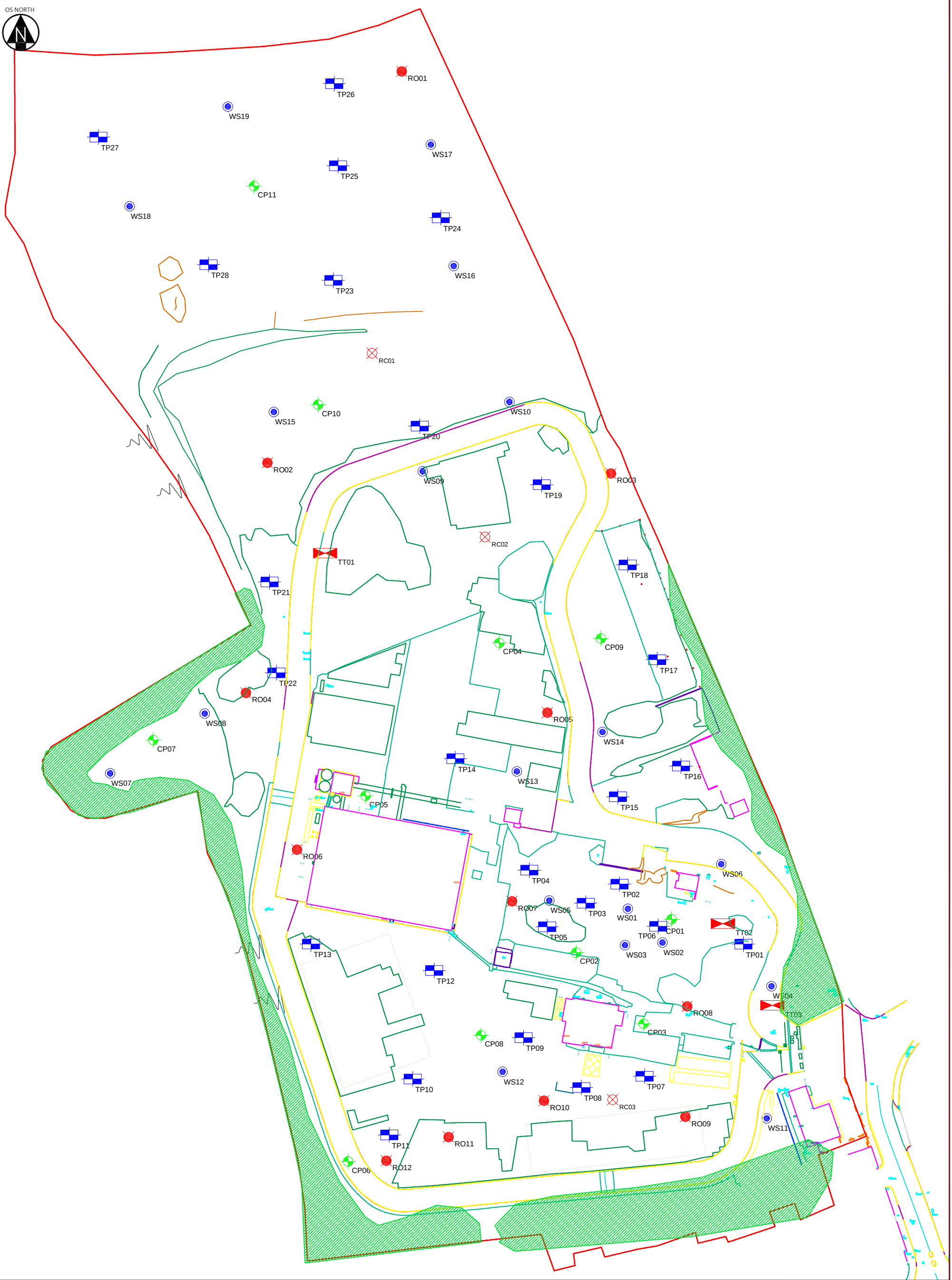
DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)
15220-HYD-XX-XX-DR-GE-1011

REVISION
P1

Appendix B

Exploratory Hole Location Plan and Exploratory Hole Logs

Exploratory Hole Location Plan



KEY

- BHXXX — Cable Percussive Borehole
- RCXX — Rotary Cored Borehole
- ROXX — Rotary Openhole Borehole
- TPXXX — Trial Pit
- TTXX — Trial Trench
- WSXXX — Windowless Sample Boreho

NOTES

1. All dimensions are to be checked on site before the commencement of works. Any discrepancies are to be reported to the Architect & Engineer for verification. Figured dimensions only are to be taken from this drawing.

2. This drawing is to be read in conjunction with all relevant Engineers' and Service Engineers' drawings and specifications.

3. Exploratory holes are based on the August and September 2020 Hydrock investigation. All positions have been surveyed in with a Total Station GPS.

REV.	REVISION NOTES/COMMENTS	DRAWN BY	DATE	CHECKED BY	DATE	APPROVED BY	DATE
P1	FIRST ISSUE	SH	09/10/20	AC	09/10/20	DH	09/10/20

Hydrock

CLIENT: HARWORTH ESTATES PROPERTY GROUP LTD.

PROJECT: STOPES ROAD, BOLTON

TITLE: EXPLORATORY HOLE LOCATION PLAN

HYDROCK PROJECT NO.	SCALE @ A3
C-15220-C	1:900

PURPOSE OF ISSUE	STATUS
SUITABLE FOR INFORMATION	S2

DRAWING NO. (PROJECT CODE-ORGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER): 15220-HYD-XX-XX-DR-GE-1006

REVISION: P1

Exploratory Hole Logs

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO01
Page No. 1 of 1

Method: Rotary Open	Date(s): 13/08/2020 - 14/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376246.29, 407853.47	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 107.00m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.30	(0.30)	106.70		
								Soft light brown slightly sandy CLAY. (GLACIAL TILL)	2.80	(2.50)	104.20		
								Stiff dark brown gravelly CLAY. (GLACIAL TILL)	4.00	(1.20)	103.00		
								Weak weathered light grey MUDSTONE banded with siltstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	6.80	(2.80)	100.20		
								Light brown gravelly MUDSTONE interbedded with sandstone, siltstone and red marl bands. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.50	(0.70)	99.50		
								Strong light brown and grey SANDSTONE with occasional quartzite bands. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.70	(5.20)	94.30		
								No returns presume to be worked ground. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.00	(4.30)	90.00		
								End of Borehole at 17.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	13/08	0000	17.00	4.00	140		Water	

General Remarks:
Rotary auger to 4m bgl, with rotary openhole to 17m bgl. Terminated at 17m bgl due to loss of water and no returns from 12.70m bgl, and difficult drilling within the quartzite bands.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO02 Page No. 1 of 2

Method: Rotary Open	Date(s): 14/08/2020 - 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376203.90, 407729.91	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.76m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	1.20	ES						Grey slightly sandy angular to subrounded fine to coarse GRAVEL of concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.80)	99.96		
								BRICK and CONCRETE obstruction. (MADE GROUND) [GENERAL MADE GROUND]	1.10	(0.30)	99.66		
								Dark grey very gravelly silty SAND. Gravel is angular to rounded fine to coarse of brick, concrete, plastic and clinker. (MADE GROUND) [GENERAL MADE GROUND]	2.20	(1.10)	98.56		
								Stiff dark brown ashy reworked CLAY. (MADE GROUND) [REWORKED NATURAL]	4.00	(1.80)	96.76		
								Dark brown and grey silty CLAY. (GLACIAL TILL)	5.20	(1.20)	95.56		
								Light brown sandy slightly clayey GRAVEL of coal, sandstone and siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.00	(1.80)	93.76		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	13.00	(6.00)	87.76		
								Light brown and grey GRAVEL of sandstone and mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	13.50	(0.50)	87.26		
								Grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	16.30	(2.80)	84.46		
								Strong grey and light brown with occasional reddish brown bands SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(4.70)			

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	14/08	0000	30.00	4.50	140		Water	

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO02 Page No. 2 of 2	
Method: Rotary Open	Date(s): 14/08/2020 - 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376203.90, 407729.91	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.76m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Strong grey and light brown with occasional reddish brown bands SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
									21.00		79.76		
								Light brown GRAVEL of siltstone, mudstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	21.50	(0.50)	79.26		
								Strong grey MUDSTONE interbedded with siltstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)		(2.60)			
									24.10		76.67		
								Light brown, reddish brown and grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(5.90)			
									30.00		70.76		
								End of Borehole at 30.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO03
Page No. 1 of 1

Method: Rotary Open	Date(s): 20/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376312.33, 407726.53	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.95m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.30 0.50	ES ES						Red slightly sandy subangular and subrounded fine and medium GRAVEL of aggregates and quartzite. Excavated as very loose and unstable. (MADE GROUND) [GENERAL MADE GROUND]	0.40	(0.40)	101.55		
								Grey slightly sandy angular to rounded fine to coarse GRAVEL of aggregates with a high boulder content of concrete (measuring 1m x 0.30m). (MADE GROUND) [GENERAL MADE GROUND]	2.00	(1.60)	99.95		
								Dark brown CLAY. (GLACIAL TILL)	6.50	(4.50)	95.45		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.30	(0.80)	94.65		
								Strong grey SANDSTONE with occasional gravel and quartzite bands. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.80	(0.50)	94.15		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.60	(0.80)	93.35		
								Strong grey SANDSTONE interbedded with siltstone and a light reddish brown clay. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.50	(8.90)	84.45		
								GRAVEL of quartzite. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.70	(0.20)	84.25		
								Strong SANDSTONE fractured to a gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.00	(0.30)	83.95		
								End of Borehole at 18.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	20/08	0000	18.00	6.50	140		Water	

General Remarks:
Rotary auger to 6m bgl, with rotary openhole to 18m bgl. Terminated at 18m bgl due to hard ground conditions and high risk of rods jamming.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO04 Page No. 1 of 2

Method: Rotary Open	Date(s): 17/08/2020 - 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376197.13, 407657.24	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.06m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.70	ES						Brown sandy angular to subrounded fine to coarse GRAVEL of brick, glass and concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.50	(0.50)	99.56		
								CONCRETE. (MADE GROUND) [GENERAL MADE GROUND]	0.60	(0.10)	99.46		
								Greyish brown slightly sandy angular to subrounded fine to coarse GRAVEL of concrete, brick, ceramic and aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	1.90	(1.30)	98.16		
								Dark brown gravelly reworked CLAY. (MADE GROUND) [OPENCAST MADE GROUND]	4.50	(2.60)	95.56		
								Light brown reworked MUDSTONE interbedded with gravel of coal, siltstone and brick. (MADE GROUND) [OPENCAST MADE GROUND]	7.40	(2.90)	92.66		
								Light grey MUDSTONE interbedded with siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.30	(3.90)	88.76		
								Light grey MUDSTONE with occasional coal fragments. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.40	(7.10)	81.67		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.90	(0.50)	81.17		
								Dark grey and black MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	19.50	(0.60)	80.56		
								Black COAL.	19.90	(0.40)	80.17		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	17/08	0000	30.00	6.00	140		Water	

General Remarks:
Rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO04
Page No. 2 of 2

Method: Rotary Open	Date(s): 17/08/2020 - 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376197.13, 407657.24	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.06m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	20.50	(0.60)	79.56		
								Dark grey and black MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
								Dark grey and black MUDSTONE interbedded with a light grey mudstone, coal and grey clay. (PENNINE MIDDLE COAL MEASURES FORMATION)		(4.80)			
								Light grey and dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	25.30	(1.10)	74.76		
								Strong light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	26.40	(3.60)	73.67		
								End of Borehole at 30.00m	30.00		70.06		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO05
Page No. 1 of 2

Method: Rotary Open	Date(s): 18/08/2020 - 19/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376292.27, 407651.03	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.68m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								BRICK paving. (MADE GROUND) [HARDSTANDING]	0.06 0.80	(0.06) (0.74)	100.62 99.88		
								Brown slightly sandy subangular to rounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND]	1.70	(0.90)	98.98		
								Black slightly gravelly slightly clayey SAND. Gravel is subangular and subrounded fine to coarse of mudstone, aggregates and coal. (MADE GROUND) [GENERAL MADE GROUND]					
								Dark brown reworked CLAY. (MADE GROUND) [REWORKED NATURAL]	5.00	(3.30)	95.68		
								Stiff dark brown gravelly CLAY. (GLACIAL TILL)	7.70	(2.70)	92.98		
								Light grey MUDSTONE interbedded with light brown siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.50	(0.80)	92.18		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.60	(1.10)	91.08		
								Light grey stained black MUDSTONE interbedded with clay bands. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.80	(1.20)	89.88		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.90	(1.10)	88.78		
								Weak black MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	15.10	(3.20)	85.58		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.80	(2.70)	82.88		
								Strong light grey SANDSTONE with occasional gravel of coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	20.00	(2.20)	80.68		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	18/08	0000	34.00	6.00	140		Water	

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 34m bgl. Terminated at 34m bgl instead of 40m bgl as 28,000 litres of water was lost during drilling.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO05 Page No. 2 of 2

Method: Rotary Open	Date(s): 18/08/2020 - 19/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376292.27, 407651.03	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.68m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								No returns presume to be worked ground. (PENNINE MIDDLE COAL MEASURES FORMATION)		(5.50)			
									25.50		75.18		
								Black and grey MUDSTONE (very weak returns). (PENNINE MIDDLE COAL MEASURES FORMATION)		(8.50)			
								End of Borehole at 34.00m	34.00		66.68		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 34m bgl. Terminated at 34m bgl instead of 40m bgl as 28,000 litres of water was lost during drilling.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO06 Page No. 1 of 2	
Method: Rotary Open	Date(s): 21/08/2020 - 25/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376213.24, 407607.77	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.73m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.10 0.30	ES ES						BRICK paving. (MADE GROUND) [HARDSTANDING]	0.07 0.25	(0.07) (0.18)	100.66 100.48		
								Orange SAND. (MADE GROUND) [SUB-BASE]	0.90 1.30	(0.65) (0.40)	99.83 99.43		
								Brown very sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND] *... From 0.40m bgl: Becoming grey.* Yellowish brown subangular and subrounded medium and coarse GRAVEL of sandstone. (MADE GROUND) [GENERAL MADE GROUND]	4.00	(2.70)	96.73		
								Gravelly ashy FILL. (MADE GROUND) [FURNACE MADE GROUND] Reworked CLAY. (MADE GROUND) [OPENCAST MADE GROUND]	7.10	(3.10)	93.63		
								Light brown and grey MUDSTONE with gravel of coal and siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.30	(2.20)	91.43		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.60	(0.30)	91.13		
								Grey clayey MUDSTONE interbedded with coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.85	(0.25)	90.88		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.60	(0.75)	90.13		
								Light grey clayey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.30	(0.70)	89.43		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.10	(0.80)	88.63		
								Dark grey stained black clayey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) Light grey clayey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.60	(0.50) (5.40)	88.13		
								Black water presumed to be COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.00 18.80	(0.80)	82.73 81.93		
								Dark grey water presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	21/08	0000	30.00	6.00	140		Water	

General Remarks:
Rotary auger to 4m bgl, with rotary openhole to 30m bgl. Loss of returns at 18m bgl, returned at 25m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO06
Page No. 2 of 2

Method: Rotary Open	Date(s): 21/08/2020 - 25/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376213.24, 407607.77	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.73m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Dark grey water presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(3.20)			
									22.00		78.73		
								Light grey water presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(3.00)			
									25.00		75.73		
								MUDSTONE and coal chippings. (PENNINE MIDDLE COAL MEASURES FORMATION)		(5.00)			
									30.00		70.73		
								End of Borehole at 30.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 4m bgl, with rotary openhole to 30m bgl. Loss of returns at 18m bgl, returned at 25m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO07 Page No. 1 of 2

Method: Rotary Open	Date(s): 25/08/2020 - 26/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376281.11, 407591.45	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.57m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Dark grey sandy fine to coarse angular to subrounded COBBLES of brick. Excvated as very loose and unstable. (MADE GROUND) [GENERAL MADE GROUND]	1.80	(1.80)	99.77		
								Reworked CLAY. (MADE GROUND) [REWORKED NATURAL]	5.00	(3.20)	96.57		
								Dark brown boulder CLAY. (GLACIAL TILL)	7.00	(2.00)	94.57		
								Light grey clayey MUDSTONE interbedded with siltstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.80	(3.80)	90.77		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.80	(1.00)	89.77		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.70	(0.90)	88.87		
								Dark grey and light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	14.30	(1.60)	87.27		
								Light grey SILTSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	16.50	(2.20)	85.07		
								Light grey and dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	25/08	0000	40.00	7.00	140		Water	

General Remarks:
Rotary auger to 7m bgl, with rotary openhole to 40m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO07 Page No. 2 of 2

Method: Rotary Open	Date(s): 25/08/2020 - 26/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376281.11, 407591.45	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.57m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Light grey and dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(8.90)			
									25.40		76.17		
								Strong very light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(10.10)			
									35.50		66.07		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.20)			
									36.70		64.87		
								Light grey and dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(3.30)			
									40.00		61.57		
								End of Borehole at 40.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 7m bgl, with rotary openhole to 40m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO08 Page No. 1 of 2

Method: Rotary Open	Date(s): 27/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376336.41, 407558.29	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 102.28m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.30	ES						Dark grey sandy angular to rounded fine to coarse GRAVEL of brick, concrete, aggregates, asphalt and timber with a high cobble content of brick and concrete and a medium boulder content of concrete. (MADE GROUND) [GENERAL MADE GROUND]	1.20	(1.20)	101.08		
	1.30	ES						Yellowish orange gravelly slightly clayey SAND interbedded with re-worked grey mudstone. Gravel is angular to subrounded fine to coarse of mudstone, brick and sandstone. (MADE GROUND) [GENERAL MADE GROUND]	4.30	(3.10)	97.98		
								Dark brown CLAY. (GLACIAL TILL)	7.40	(3.10)	94.88		
								Light grey clayey MUDSTONE interbedded with siltstone and sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.50	(2.10)	92.78		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.20	(1.70)	91.08		
								Dark grey and light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.80	(7.60)	83.48		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	20.00	(1.20)	82.28		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	27/08	0000	30.00	6.00	140		Water	

General Remarks:
Rotary auger to 6m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO08
Page No. 2 of 2

Method: Rotary Open	Date(s): 27/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376336.41, 407558.29	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 102.28m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	20.50	(0.50)	81.78		
								Light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	22.50	(2.00)	79.78		
								Light grey and dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	29.00	(6.50)	73.28		
								Light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	30.00	(1.00)	72.28		
								End of Borehole at 30.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 6m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO09
Page No. 1 of 2

Method: Rotary Open	Date(s): 11/08/2020 - 12/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376335.85, 407523.43	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 102.05m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								ASPHALT.	0.10	(0.10)	101.95		
								(MADE GROUND) [HARDSTANDING]	0.30	(0.20)	101.75		
								Grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND]					
								Dark grey sandy angular to subrounded fine to coarse GRAVEL of clinker, ash, brick and asphalt. (MADE GROUND) [FURNACE MADE GROUND]		(5.90)			
								Light grey silty CLAY. (GLACIAL TILL)	6.20		95.85		
										(1.10)			
								Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.30		94.75		
										(10.80)			
								Light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.10		83.95		
										(1.50)			
								Light grey MUDSTONE.	19.60		82.45		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	11/08	0000	30.00	6.00	140		Water	

General Remarks:
Rotary auger to 1.80m bgl, with rotary openhole to 30m bgl. Terminated at 30m bgl instead of 40m bgl due to no returns and constantly losing water.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO09 Page No. 2 of 2

Method: Rotary Open	Date(s): 11/08/2020 - 12/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376335.85, 407523.43	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 102.05m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(4.00)			
									23.60		78.45		
								VOID no returns. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.40)			
									25.00		77.05		
								No strata description as returns lost in the void, possibly mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)		(5.00)			
									30.00		72.05		
								End of Borehole at 30.00m					

21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 1.80m bgl, with rotary openhole to 30m bgl. Terminated at 30m bgl instead of 40m bgl due to no returns and constantly losing water.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO10 Page No. 1 of 2	
Method: Rotary Open	Date(s): 06/08/2020 - 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376291.19, 407528.50	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.42m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								ASPHALT.	0.12	(0.12)	101.30		
								(MADE GROUND) [HARDSTANDING]	0.35	(0.23)	101.07		
								Grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	1.10	(0.75)	100.32		
								Dark grey sandy angular to subrounded fine to coarse GRAVEL of clinker, ash, brick and asphalt. (MADE GROUND) [FURNACE MADE GROUND]	1.40	(0.30)	100.02		
								Red sandy GRAVEL. (MADE GROUND) [FURNACE MADE GROUND]		(2.60)			
								Dark brown and black CLAY. (MADE GROUND) [OPENCAST MADE GROUND]	4.00		97.42		
								Soft to firm dark brown slightly sandy silty laminated CLAY. (GLACIAL TILL)		(4.50)			
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.50		92.92		
								Light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.80	(1.30)	91.62		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.30	(2.50)	89.12		
								Light grey SANDSTONE interbedded with siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	14.00	(1.70)	87.42		
								Strong grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.20	(4.20)	83.22		
								Very strong grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	19.00	(0.80)	82.42		
								Grey SANDSTONE with occasional coal fragments.	19.60	(0.60)	81.82		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	06/08	0000	30.00	8.50	140		Water	

General Remarks:
Rotary auger to 8.50m, with rotary openhole to 30m bgl. Slow drilling rate between 19m and 19.30m bgl (1 hour) and between 19.30m and 19.60m bgl (45 minutes).

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO10 Page No. 2 of 2

Method: Rotary Open	Date(s): 06/08/2020 - 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376291.19, 407528.50	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.42m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Grey SANDSTONE with occasional coal fragments. (PENNINE MIDDLE COAL MEASURES FORMATION)					
										(5.60)			
								No returns presume to be worked ground. (PENNINE MIDDLE COAL MEASURES FORMATION)	25.20		76.22		
										(1.80)			
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	27.00		74.42		
										(3.00)			
								End of Borehole at 30.00m	30.00		71.42		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 8.50m, with rotary openhole to 30m bgl. Slow drilling rate between 19m and 19.30m bgl (1 hour) and between 19.30m and 19.60m bgl (45 minutes).

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO11 Page No. 1 of 2	
Method: Rotary Open	Date(s): 04/08/2020 - 05/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376261.08, 407517.02	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.81m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.20 0.30	ES ES						ASPHALT. (MADE GROUND) [HARDSTANDING]	0.12	(0.12)	100.69		
								Dark grey sandy angular to subrounded fine to coarse GRAVEL of clinker, brick and asphalt with a medium cobble content of brick (very unstable). (MADE GROUND) [OPENCAST MADE GROUND]		(2.98)			
								... At 2.80m bgl: Large sandstone boulder.	3.10		97.71		
								Interbedded SILTSTONE, MUDSTONE and SANDSTONE. (MADE GROUND) [OPENCAST MADE GROUND]	3.35	(0.25)	97.46		
								Soft dark grey silty CLAY. (MADE GROUND) [OPENCAST MADE GROUND]		(2.75)			
								Stiff dark brown silty CLAY. (GLACIAL TILL)	6.10		94.71		
										(1.40)			
								Very weak weathered MUDSTONE interbedded with sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.50		93.31		
										(1.20)			
								Light grey MUDSTONE interbedded with a reddish brown clay. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.70		92.11		
										(1.40)			
								Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.10		90.71		
										(2.70)			
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.80		88.01		
								Dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	13.10	(0.30)	87.71		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	13.50	(0.40)	87.31		
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	13.75	(0.25)	87.06		
										(11.65)			

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	04/08	0000	40.00	7.50	140		Water	

General Remarks:
Rotary auger to 2.80m bgl, with rotary openhole to 40m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO11 Page No. 2 of 2	
Method: Rotary Open	Date(s): 04/08/2020 - 05/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376261.08, 407517.02	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.81m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
									25.40		75.41		
								Very strong light grey SANDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
										(8.60)			
									34.00		66.81		
								VOID no returns. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.50)			
									35.50		65.31		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	36.00	(0.50)	64.81		
								Dark grey and black MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
										(4.00)			
									40.00		60.81		
								End of Borehole at 40.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 2.80m bgl, with rotary openhole to 40m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
RO12

Method: Rotary Open	Date(s): 03/08/2020 - 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376241.43, 407509.56	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.33m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
	0.10 - 0.50 0.20 0.20 0.20	B ASB B ES						ASPHALT. (MADE GROUND) [HARDSTANDING]	0.10	(0.10)	100.23		
								Dark grey slightly gravelly silty SAND with a low cobble content of concrete. Gravel is angular to subrounded fine to coarse of brick, asphalt, clinker and quartzite. (MADE GROUND) [OPENCAST MADE GROUND] *... At 0.20m bgl: Suspected asbestos fibres.* *... At 0.90m bgl: Occasional clay pockets.*	3.40	(3.30)	96.93		
								Soft dark grey silty CLAY. (MADE GROUND) [OPENCAST MADE GROUND]	6.60	(3.20)	93.73		
								Stiff dark brown and light grey laminated boulder CLAY. (GLACIAL TILL)	7.50	(0.90)	92.83		
								Dark grey SILTSTONE interbedded with light brown sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.00	(0.50)	92.33		
								Very weak light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.70	(2.70)	89.63		
								Strong light grey MUDSTONE interbedded with brown siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.40	(6.70)	82.93		
								Grey MUDSTONE with occasional coal fragments. (PENNINE MIDDLE COAL MEASURES FORMATION)	17.60	(0.20)	82.73		
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	18.30	(0.70)	82.03		
								Very weak dark grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	19.90	(1.60)	80.43		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	03/08	0000	30.00	7.50	140		Water	

General Remarks:
Rotary auger to 7.50m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RO12 Page No. 2 of 2

Method: Rotary Open	Date(s): 03/08/2020 - 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376241.43, 407509.56	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.33m OD		Scale: 1:100

Run (m)	Samples / Tests			Drilling Record			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	Weight (Kg)	Mins	Secs							
								Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	20.30	(0.40)	80.03		
								Grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
										(9.70)			
								End of Borehole at 30.00m	30.00		70.33		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 7.50m bgl, with rotary openhole to 30m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC01 Page No. 1 of 2

Method: Rotary Cored	Date(s): 28/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376236.93, 407764.51	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.98m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests: Depth (m)	Type	Results	Mechanical Log: TCR	SCR	RQD	If: Min Mean Max	Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
									Brown sandy angular to subrounded fine to coarse GRAVEL of concrete, brick, plastic, metal with a medium cobble content of brick and concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.80)	101.18		
									Firm grey mottled orange slightly sandy slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of coal, sandstone and mudstone. (GLACIAL TILL)	5.60	(4.80)	96.38		
6.00 - 7.50									Light grey MUDSTONE interbedded with reddish marl and siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	6.00	(0.40)	95.98		
									No recovery presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	6.30	(0.30)	95.68		
							NI		Red and yellowish brown coarse and medium subangular and subrounded GRAVEL of sandstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	6.50	(0.20)	95.48		
				80	66	28	40 68 100		Strong red, light grey and dark grey thinly laminated micaceous SILTSTONE. Discontinuities are horizontal between 2 and 3 degrees, closely spaced, planar smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.17)			
	7.00 - 7.20	C					30 98 230							
	7.25 - 7.38	C												
7.50 - 9.00							NI		*... Between 7.50m and 7.67m bgl: Recovered as a gravel.*	7.67		94.31		
							20 75 180		Very strong red and grey micaceous SILTSTONE. Discontinuties are horizontal to sub-horizontal between 2 and 20 degrees, closely spaced, planar smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.73)			
							NI		*... Between 7.90m and 8.05m bgl: Discontinuity is vertical at 15 degrees, planar smooth and clean.*	8.40		93.58		
				100	80	44	30 156 270		*... Between 8.10m and 8.22m bgl: Recovered as a clayey gravel.*					
	8.34 - 8.50	C												
	8.80 - 9.00	C												
9.00 - 10.50	9.00 - 9.60	C					60 241 600		Very strong light grey, dark grey and yellowish green micaceous SILTSTONE. Discontinuities are horizontal to sub-horizontal between 3 and 10 degrees, medium spaced, planar and undulating smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)		(2.10)			
				100	100	96								
	9.90 - 10.02	C							*... Between 9.80m and 9.90m bgl: Discontinuity is*					

Continued on Next Sheet

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	28/08	0000	12.00	6.00	140		Water	

General Remarks:
Rotary auger to 3m bgl, with rotary openhole to 6m bgl followed by rotary coring to 12m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC01 Page No. 2 of 2	
Method: Rotary Cored	Date(s): 28/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376236.93, 407764.51	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.98m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests			Mechanical Log				Water Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	Depth (m)	Type	Results	TCR	SCR	RQD	If: Min Mean Max							
	10.15 - 10.50	C							Very strong light grey, dark grey and yellowish green micaceous SILTSTONE. Discontinuities are horizontal to sub-horizontal between 3 and 10 degrees, medium spaced, planar and undulating smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)					
10.50 - 12.00							70 253 570		*... Between 9.80m and 9.90m bgl: Discontinuity is sub-vertical at 20 degrees, stepped smooth and clean.*	10.50		91.48		
				100	96	51			Very strong red fine grained SANDSTONE. Discontinuties are horizontal at 3 degrees, medium to closely spaced, planar and undulating smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.30)			
							20 78 100		*... Between 11.65m and 11.80m bg;: Discontinuity is vertical at 2 degrees, stepped smooth and clean.*	11.80		90.18		
	11.80 - 12.33	C					NI 50 70 90		Light grey and red clayey angular to subrounded fine to coarse GRAVEL of siltstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.86 12.00 12.00	(0.06) (0.20) (0.14)	90.12 89.98 89.98		
	12.33 - 12.45	C							Medium strong grey and red micaceous SILTSTONE. Discontinuities are horizontal at 2 degrees, closely spaced, planar smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)					
	12.45 - 12.58	C							Medium strong grey and red micaceous SILTSTONE. Discontinuities are horizontal at 2 degrees, closely spaced, planar smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)					
									End of Borehole at 12.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 3m bgl, with rotary openhole to 6m bgl followed by rotary coring to 12m bgl.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC02 Page No. 1 of 2	
Method: Rotary Cored	Date(s): 01/09/2020 - 03/09/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376272.59, 407706.48	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.78m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests: Depth (m)	Type	Results	Mechanical Log: TCR	SCR	RQD	If: Min Mean Max	Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
	0.10	ES							Yellowish brown slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [GENERAL MADE GROUND]	0.30	(0.30)	100.48		
	0.50	ES							Black very sandy angular to subrounded GRAVEL of brick. (MADE GROUND) [GENERAL MADE GROUND]	1.30	(1.00)	99.48		
									Dark greyish brown reworked CLAY. (MADE GROUND) [REWORKED NATURAL]	2.50	(1.20)	98.28		
									Dark brown and black slightly sandy slightly silty CLAY. (GLACIAL TILL)	6.50	(4.00)	94.28		
									Black COAL. (PENNINE MIDDLE COAL MEASURES FORMATION)	7.30	(0.80)	93.48		
									Dark grey and light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.00	(1.70)	91.78		
9.00 - 10.50				40	25	0			No recovery presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	9.85	(0.85)	90.93		
							NI		Grey very clayey angular to subrounded fine to coarse		(0.25)			

Continued on Next Sheet

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	01/09	0000	12.00	5.00	140		Water	

General Remarks:
Rotary auger to 6m bgl, geobore S to 13.50m bgl. Terminated at 12m bgl due to very slow coring rates.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC02 Page No. 2 of 2	
Method: Rotary Cored	Date(s): 01/09/2020 - 03/09/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376272.59, 407706.48	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 100.78m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests: Depth (m)	Type	Results	Mechanical Log: TCR	SCR	RQD	If: Min Mean Max	Water Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
10.50 - 12.00							20 41 90		Grey very clayey angular to subrounded fine to coarse GRAVEL of mudstone and coal. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.10		90.68		
									Medium strong grey MUDSTONE. Discontinuities are very closely spaced, horizontal at 2 degrees, planar clean and smooth. (PENNINE MIDDLE COAL MEASURES FORMATION)	10.50	(0.40)	90.28		
							NI			10.60	(0.10)	90.18		
	11.20 - 11.40	C		93	83	13	50 96 200			10.85	(0.35) (0.25)	89.93		
									No recovery presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION) *... Between 10.50m and 10.60m bgl: No recovery.*	10.85		89.93		
							20 41 70		Grey coarse angular and subangular fine to coarse GRAVEL of mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION) *... Between 10.50m and 10.60m bgl: No recovery.*		(1.15)			
									Grey coarse angular and subangular fine to coarse GRAVEL of mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.00		88.78		
									Strong grey MUDSTONE. Discontinuities are very close to closely spaced, horizontal between 2 and 3 degrees, planar smooth clean and partially infilled with clay. (PENNINE MIDDLE COAL MEASURES FORMATION) *... Between 10.90m and 11m bgl: Discontinuity is vertical at 1 degrees, planar smooth and clean.* *... Between 11m and 11.20m bgl: Discontinuity is sub-vertical at 30 degrees, stepped smooth and clean.* *... Between 11.60m and 11.80m bgl: Extremely weak.*					
									End of Borehole at 12.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 6m bgl, geobore S to 13.50m bgl. Terminated at 12m bgl due to very slow coring rates.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC03 Page No. 1 of 2	
Method: Rotary Cored	Date(s): 09/08/2020 - 10/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376312.86, 407528.84	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.74m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests: Depth (m)	Type	Results	Mechanical Log: TCR	SCR	RQD	If: Min Mean Max	Water Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
									ASPHALT.	0.12	(0.12)	101.62		
									(MADE GROUND) [HARDSTANDING]	0.30	(0.18)	101.44		
									Grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]					
									Dark grey sandy angular to subrounded fine to coarse GRAVEL of clinker, ash, brick and asphalt. (MADE GROUND) [FURNACE MADE GROUND]	1	(1.50)			
										1.80		99.94		
									Dark brown boulder CLAY. (GLACIAL TILL)	2				
										3	(3.20)			
										4				
										5.00		96.74		
									Dark brown slightly gravelly silty CLAY. (GLACIAL TILL)	5				
										6				
										7	(3.00)			
										8				
8.00 - 9.50									No recovery presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.00		93.74		
										8.40	(0.40)	93.34		
							NI		Brown clayey subangular to rounded fine to coarse GRAVEL of mudstone. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.67	(0.27)	93.06		
				73	37	0	100		Extremely weak light grey MUDSTONE. Discontinuities are closely spaced, horizontal at 2 degrees, planar smooth and clean. (PENNINE MIDDLE COAL MEASURES FORMATION)	9				
							80							
							60				(0.83)			
							NI							
							70							
							31							
9.50 - 11.00							10			9.50		92.24		
							NI		*... Between 8.85m and 9.08m bgl: Recovered as a gravel.*	9.70	(0.20)	92.04		
							90		*... Between 9.10m and 9.30m bgl: Discontinuity is vertical at 15 degrees, planar smooth and clean.* *... From 9.10m bgl: Becoming weak.*					
										10				

Continued on Next Sheet

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Premier 210	10/08	0000	14.00	8.00	140		Water	

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 8m bgl followed by rotary coring to 14m bgl. No rock core samples could be obtained due to hairline fractures within mudstone.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No RC03 Page No. 2 of 2	
Method: Rotary Cored	Date(s): 09/08/2020 - 10/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376312.86, 407528.84	Checked By: MC	Flush: Water
Hydrock Project No: C-15220-C	Ground Level: 101.74m OD		Scale: 1:50

Sample/Core Run (m) Smpl. Ø (mm) Smpl. rec. %	Samples / Tests: Depth (m)	Type	Results	Mechanical Log: TCR	SCR	RQD	If: Min Mean Max	Water Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
							48 ~~30~~ 40		No recovery presumed to be MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
				86	60	0	35 30 130		Extremely weak light grey MUDSTONE partially recovered as a gravel. Discontinutieis are very closely spaced, horizontal between 2 and 10 degrees, planar and undulating rough clean and partially infilled with clay. (PENNINE MIDDLE COAL MEASURES FORMATION)		(1.30)			
11.00 - 12.50							67 40 NI		*... From 10.35m bgl: Becoming medium strong and grey.* *... Between 10.65m and 10.75m bgl: Discontinuity is sub-vertical at 45 degrees, stepped mooth and clean.* *... From 10.75m bgl: Recovered as a gravel.*	11.00		90.74		
				100	53	0			Very soft light grey gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)	11.70	(0.70)	90.04		
									Extremely weak very thinly laminated grey MUDSTONE partially recovered as a gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.50	(0.80)	89.24		
12.50 - 14.00									Medium strong grey MUDSTONE recovered as a gravel. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.75	(0.25)	88.98		
							~~50~~		Extremely weak grey MUDSTONE. Discontinuities are very closely spaced, horizontal at 5 degrees, planar smooth and partially infilled. (PENNINE MIDDLE COAL MEASURES FORMATION)	12.95	(0.20)	88.78		
				100	76	26	~~50~~ 50 NI 70 49		*... Between 12.85m and 12.95m bgl: Recovered as a gravel.*		(1.05)			
							~~20~~ 280 140 40		Medium strong grey MUDSTONE with rare fossils. Discontinuities are very closely spaced and closely spaced, horizontal at 1 degrees, planar smooth clean and partially infilled with clay. (PENNINE MIDDLE COAL MEASURES FORMATION)	14.00		87.74		
									End of Borehole at 14.00m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

General Remarks:
Rotary auger to 5m bgl, with rotary openhole to 8m bgl followed by rotary coring to 14m bgl. No rock core samples could be obtained due to hairline fractures within mudstone.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
CP01
Page No. 1 of 1

Method: Cable Percussion	Date(s): 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376331.46, 407585.80	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 102.34m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			Brown sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, metal with a high cobble content of brick. (MADE GROUND) [GENERAL MADE GROUND]		(1.00)			
0.15	ES				1.00		101.34		
				End of Borehole at 1.00m					
5.00 - 5.45	U								

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:
Terminated at 1m bgl due to refusal on a concrete slab at the base of a backfilled pit.

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP02 Page No. 1 of 2

Method: Cable Percussion	Date(s): 05/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376301.36, 407575.27	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.87m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			CONCRETE. (MADE GROUND) [HARDSTANDING]	0.20	(0.20)	101.67		
0.20	ES			Black slightly sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, clinker and ash. (MADE GROUND) [GENERAL MADE GROUND]	1.00	(0.80)	100.87		
1.20	SPT	N=7 (2,2,3,2,1,1)		Very stiff dessicated grey CLAY. (MADE GROUND) [GENERAL MADE GROUND]	2.00	(1.00)	99.87		
1.20 - 1.65	B								
2.00	SPT	N=6 (1,2,2,2,1,1)		Loose black gravelly clayey SAND interbedded with a firm grey and orange sandy CLAY. Gravel is angular to subrounded fine to coarse of coal, sandstone, brick, mudstone and clinker. (MADE GROUND) [GENERAL MADE GROUND]	3.40	(1.40)	98.47		
2.00 - 2.24	B								
2.10	ES								
3.00	SPT	N=10 (4,4,3,3,2,2)		*... From 3m bgl: Becoming loose to medium dense.*					
3.00 - 3.45	B								
3.10	ES								
				Firm reddish brown mottled orange slightly gravelly sandy CLAY interbedded with sand. Gravel is subangular and subrounded fine and medium of sandstone and coal. (GLACIAL TILL)	4.00	(0.60)	97.87		
4.00	SPT	N=4 (1,0,1,1,1,1)		Stiff brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine of mudstone. (GLACIAL TILL)					
5.00 - 5.45	U	(19,100%)				(2.00)			

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	05/08	0000	7.95	7.50	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP02 Page No. 2 of 2

Method: Cable Percussion	Date(s): 05/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376301.36, 407575.27	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.87m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
				Stiff brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine of mudstone. (GLACIAL TILL)					
6.00	SPT	N=15 (4,4,3,4,4,4)			6.00		95.87		
6.00 - 6.45	B			Very stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)		(0.50)			
6.50	D				6.50		95.37		
				Weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
7.50	SPT	N=50 (5,9,10,11,13,16)				(1.45)			
					7.95		93.92		
				End of Borehole at 7.95m					

Progress and Observations									Chiselling			General Remarks:
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)	From (m)	To (m)	Duration (HH:MM)	
												Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP03 Page No. 1 of 2
Method: Cable Percussion	Date(s): 04/08/2020 - 05/08/2020	Logged By: SH / Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376322.68, 407552.84	Checked By: MC / Flush:
Hydrock Project No: C-15220-C	Ground Level: 102.02m OD	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			CONCRETE. (MADE GROUND) [HARDSTANDING]	0.20	(0.20)	101.82		
				Brown and red slightly sandy clayey angular to subrounded fine to coarse GRAVEL of concrete, brick, sandstone and mudstone. (MADE GROUND) [GENERAL MADE GROUND]	1.00	(0.80)	101.02		
1.20 1.20 - 1.65 1.30	SPT B ES	N=4 (3,3,1,1,1,1)		Very loose to loose grey very gravelly clayey SAND. Gravel is angular to subrounded fine to coarse of concrete, coal, brick and mudstone. (MADE GROUND) [GENERAL MADE GROUND]					
2.00 2.10	SPT ES	N=22 (2,2,3,5,5,9)		*... From 2m bgl: Becoming medium dense.*	3.00	(2.00)	99.02		
3.00 3.00 - 3.45	SPT B	N=15 (2,2,3,3,4,5)		Firm to stiff brown and grey slightly gravelly sandy CLAY interbedded with a clayey sand. Gravel is angular to subrounded fine to coarse of sandstone, mudstone and brick. (MADE GROUND) [GENERAL MADE GROUND]	3.50	(0.50)	98.52		
4.00 4.00 - 4.45 4.10	SPT B ES	N=14 (2,3,3,3,4,4)		Stiff to very stiff brown slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)					
5.00 - 5.45	U					(2.50)			

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	04/08	0000	7.95	7.50	150	3.50		

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: Groundwater stike at 3.50m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP03 Page No. 2 of 2

Method: Cable Percussion	Date(s): 04/08/2020 - 05/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376322.68, 407552.84	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 102.02m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00 - 5.45	U	(27,75%)		Stiff to very stiff brown slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)					
6.00	SPT	N=20 (3,3,4,5,5,6)			6.00		96.02		
6.00 - 6.45	B			Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone and sandstone. (GLACIAL TILL)		(1.30)			
					7.30		94.72		
7.50	SPT	50/135mm (10,15,28,22)		Weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.65)			
					7.95		94.07		
				End of Borehole at 7.95m					

Progress and Observations								
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling		
From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: Groundwater stike at 3.50m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP04 Page No. 1 of 2
Method: Cable Percussion	Date(s): 10/08/2020	Logged By: SH / Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376277.09, 407673.04	Checked By: MC / Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.29m OD	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			BRICK paving.	0.06	(0.06)	100.23		
0.10	ES			(MADE GROUND) [HARDSTANDING]					
				Brown slightly sandy subangular to rounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND]		(0.74)			
					0.80		99.49		
				Medium dense black slightly gravelly slightly clayey SAND. Gravel is subangular and subrounded fine to coarse of mudstone, aggregates and coal. (MADE GROUND) [GENERAL MADE GROUND]	1				
1.20	SPT	N=14 (3,4,5,5,2,2)							
1.20 - 1.65	B								
1.30	ES								
						(2.10)			
2.00	SPT	N=4 (2,2,1,1,1,1)		*... At 2m bgl: Becoming very loose to loose with occasional clay pockets.*	2				
2.00 - 2.45	B								
					2.90		97.39		
3.00 - 3.45	U			Firm brown slightly gravelly silty CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal, mudstone and siltstone. (GLACIAL TILL)	3				
3.00 - 3.45	U	(14,100%)							
4.00	SPT	N=8 (1,2,2,2,2,2)		*... From 4m bgl: Becoming stiff.*	4				
4.00 - 4.45	B								
5.00 - 5.45	U				5	(4.10)			

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	10/08	0000	7.50	7.50	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP04 Page No. 2 of 2

Method: Cable Percussion	Date(s): 10/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376277.09, 407673.04	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.29m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00 - 5.45	U	(16,100%)		Firm brown slightly gravelly silty CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal, mudstone and siltstone. (GLACIAL TILL)					
6.00	SPT	N=26 (2,5,6,6,7,7)		*... From 6m bgl: Becoming very stiff.*	6				
6.00 - 6.45	B								
					7	7.00	93.29		
				Very stiff blackish grey very gravelly CLAY. Gravel is angular to rounded fine to coarse of mudstone lithorelicts. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.40)			
					7.40		92.89		
7.50	SPT	50/105mm (8,13,28,22)		Weak blackish grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.55)			
7.50 - 7.95	B				7.95		92.34		
				End of Borehole at 7.95m	8				
					9				
					10				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP05 Page No. 1 of 2

Method: Cable Percussion	Date(s): 07/08/2020 - 10/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376234.86, 407624.78	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.65m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			BRICK paving.	0.06	(0.06)	100.59		
0.15	ES			(MADE GROUND) [HARDSTANDING]					
				Grey slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [GENERAL MADE GROUND]		(0.74)			
					0.80		99.85		
				Very dense black sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND]	1				
1.20	SPT	50/235mm (5,8,9,15,16,10)							
1.20 - 1.65	B								
1.30	ES					(2.00)			
2.00	SPT	N=33 (4,4,5,9,9,10)		*... From 2m bgl: Becoming dense.*	2				
2.00 - 2.45	B								
					2.80		97.85		
				Very soft dark grey mottled black very sandy CLAY with a slight humic odour. (MADE GROUND) [ORGANIC MADE GROUND]	3				
3.00	SPT	N=6 (2,2,1,1,2,2)							
3.00 - 3.45	B					(1.10)			
3.00 - 3.45	B								
					3.90		96.75		
				Firm brown slightly sandy slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of sandstone and coal. (GLACIAL TILL)	4				
4.00	SPT	N=7 (1,1,1,2,2,2)							
4.00 - 4.45	B								
5.00 - 5.45	U				5				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	07/08	0000	9.45	9.00	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP05 Page No. 2 of 2

Method: Cable Percussion	Date(s): 07/08/2020 - 10/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376234.86, 407624.78	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.65m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00 - 5.45	U	(15,100%)		Firm brown slightly sandy slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of sandstone and coal. (GLACIAL TILL)					
6.00	SPT	N=17 (2,4,4,4,4,5)		*... From 6m bgl: Becoming stiff.*	6	(4.60)			
6.00 - 6.45	B								
7.50	SPT	N=20 (3,4,4,5,5,6)		*... From 7.50m bgl: Becoming very stiff.*	7				
7.50 - 7.95	B				8				
					8.50		92.15		
				Weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)					
9.00	SPT	50/285mm (6,7,9,10,15,16)			9	(0.95)			
9.00 - 9.45	B								
					9.45		91.20		
				End of Borehole at 9.45m					
					10				

Progress and Observations								
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling		
From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP06 Page No. 1 of 2

Method: Cable Percussion	Date(s): 05/08/2020 - 06/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376229.35, 407509.31	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.38m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.12	(0.12)	100.26		
				Grey slightly sandy angular to rounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	1	(1.08)			
1.20	SPT	N=12 (3,2,2,2,4,4)			1.20		99.18		
1.20 - 1.65 1.30	B ES			Medium dense brown slightly sandy angular to subrounded fine to coarse GRAVEL interbedded with a very soft brown clay. Gravel is subangular to rounded fine to coarse of quartzite, brick, sandstone, concrete andn clinker. (MADE GROUND) [OPENCAST MADE GROUND]					
2.00	SPT	N=18 (3,4,4,4,5,5)		*... From 2m bgl: No clay and a medium cobble content of brick.*	2	(1.60)			
2.00 - 2.45	B				2.80		97.58		
				Medium dense black very sandy angular to subrounded GRAVEL of ash, clinker and mudstone. (MADE GROUND) [OPENCAST MADE GROUND]	3	(1.00)			
3.00	SPT	N=26 (5,6,6,6,6,8)			3.80		96.58		
3.00 - 3.45 3.10	B ES			Loose black and brown sandy slightly clayey angular to rounded fine to coarse GRAVEL of brick, mudstone, ash and clinker with occasional very soft clay pockets. (MADE GROUND) [OPENCAST MADE GROUND]	4	(1.10)			
4.00	SPT	N=8 (4,3,2,2,2,2)			4.90		95.48		
4.00 - 4.45	B			VOID.	5				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	05/08	0000	8.00	8.00	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP06 Page No. 2 of 2

Method: Cable Percussion	Date(s): 05/08/2020 - 06/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376229.35, 407509.31	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.38m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
				VOID. (MADE GROUND) [OPENCAST MADE GROUND]		(2.20)			
					7.10		93.28		
7.50 7.50 - 7.95	SPT B	110/225mm (10,15,60,23,26)		Very stiff brown and grey slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of mudstone, coal and sandstone. (GLACIAL TILL)	7.60	(0.50)	92.78		
				Weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	8.00	(0.40)	92.38		
				End of Borehole at 8.00m					

Progress and Observations									Chiselling			General Remarks:
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)	From (m)	To (m)	Duration (HH:MM)	
												Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP07 Page No. 1 of 2

Method: Cable Percussion	Date(s): 03/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376167.85, 407642.36	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.35m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50 0.10	B ES			Dark grey sandy angular to subrounded fine to coarse GRAVEL of concrete, sandstone, brick, quartzite and nails. (MADE GROUND) [OPENCAST MADE GROUND]		(0.50)			
0.50 - 1.00	B			Dark grey and black sandy slightly clayey angular to subrounded fine to coarse GRAVEL of slate, brick, concrete and sandstone. (MADE GROUND) [OPENCAST MADE GROUND]	0.50	(0.70)	99.85		
1.20	SPT	N=38 (6,7,7,9,10,12)			1.20		99.15		
1.20 - 1.65 1.20 - 1.65 1.30	B B ES			Dense dark brown gravelly clayey SAND. Gravel is angular to subrounded fine to coarse of brick and clinker with a low cobble content of brick. (MADE GROUND) [OPENCAST MADE GROUND]		(0.80)			
2.00	SPT	N=12 (2,3,3,3,3,3)			2.00		98.35		
2.00 - 2.45 2.20	B ES			Firm brown and dark brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of sandstone, brick and mudstone. (MADE GROUND) [OPENCAST MADE GROUND]		(1.80)			
3.00 - 3.45 3.00 - 3.45	U U	(24,100%)			3.80		96.55		
4.00	SPT	N=9 (3,2,1,2,3,3)	▼	Loose dark grey slightly sandy clayey angular to subrounded fine to coarse GRAVEL of mudstone, brick, sandstone and coal interbedded with a firm brown slightly gravelly clay. (MADE GROUND) [OPENCAST MADE GROUND]		(0.70)			
4.00 - 4.45 4.00 - 4.45 4.10	B D ES				4.50		95.85		
				Firm to stiff brown slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of mudstone, plastic and brick. (MADE GROUND) [OPENCAST MADE GROUND]					
5.00 - 5.45	U	(21,0%)							

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	03/08	0000	8.00	8.00	150	4.00		

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: Groundwater strike at 4m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP07 Page No. 2 of 2

Method: Cable Percussion	Date(s): 03/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376167.85, 407642.36	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 100.35m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
				Firm to stiff brown slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of mudstone, plastic and brick. (MADE GROUND) [OPENCAST MADE GROUND]		(1.50)			
6.00	SPT	N=26 (3,6,6,7,6,7)			6.00		94.35		
6.00 - 6.45	B			Very stiff brown slightly gravelly silty CLAY. Gravel is subangular to rounded fine and medium of mudstone, sandstone, coal and brick. (MADE GROUND) [OPENCAST MADE GROUND]		(1.50)			
6.10	ES				7.50		92.85		
7.50	SPT	50/210mm (7,8,10,12,28)		Extremely weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.50)			
7.50 - 7.95	B			End of Borehole at 8.00m	8.00		92.35		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: Groundwater strike at 4m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP08 Page No. 1 of 3

Method: Cable Percussion	Date(s): 03/08/2020 - 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376271.31, 407549.14	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.28m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.20	(0.20)	101.08		
0.20	ES			Light grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	0.30	(0.10)	100.98		
0.50 - 1.00	B			Medium dense black slightly gravelly SAND. Gravel is subangular and subrounded fine of ash and clinker. (MADE GROUND) [FURNACE MADE GROUND]					
0.60	ES				1				
1.20	SPT	N=27 (9,7,7,7,7,6)		*... From 1.20m bgl: Becoming slightly clayey and gravel of brick.*		(1.70)			
1.20 - 1.65	B								
2.00	SPT	N=29 (8,9,10,6,6,7)			2	2.00	99.28		
2.00 - 2.45	B			Medium dense black very gravelly silty SAND with a low cobble content of brick. Gravel is angular to subrounded fine to coarse of brick, concrete and clinker. (MADE GROUND) [FURNACE MADE GROUND]					
2.10	ES					(1.20)			
3.00	SPT	N=7 (1,2,2,2,2,1)			3				
3.00 - 3.45	B								
3.00 - 3.45	B				3.20		98.08		
3.20	ES			Loose red slightly sandy angular to subrounded fine to coarse GRAVEL of red shale and cinder. (MADE GROUND) [FURNACE MADE GROUND]					
4.00	SPT	N=12 (1,2,3,3,3,3)		*... From 4m bgl: Becoming medium dense.*	4				
4.00 - 4.45	B					(2.10)			
					5				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	03/08	0000	9.00	9.00	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP08 Page No. 2 of 3

Method: Cable Percussion	Date(s): 03/08/2020 - 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376271.31, 407549.14	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.28m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00	SPT	N=18 (5,4,4,4,5,5)		Loose red slightly sandy angular to subrounded fine to coarse GRAVEL of red shale and cinder. (MADE GROUND) [FURNACE MADE GROUND]	5.30		95.98		
5.00 - 5.45	B			Firm brown sandy gravelly CLAY interbedded with a gravelly slightly clayey sand. Gravel is subangular to rounded fine and medium of shale, sandstone, mudstone and coal. (MADE GROUND) [OPENCAST MADE GROUND]		(0.70)			
5.10	ES				6.00		95.28		
6.00 - 6.45	U			Stiff brown slightly gravelly sandy CLAY. Gravel is subangular and subrounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)		(1.40)			
6.00 - 6.45	U	(24,100%)			7.40		93.88		
7.50	SPT	50/200mm (9,16,17,19,14)		Extremely weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(2.05)			
7.50 - 7.95	B				9.45		91.83		
9.00	SPT	50/125mm (19,34,16)		End of Borehole at 9.45m					

Progress and Observations									Chiselling			General Remarks:
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)	From (m)	To (m)	Duration (HH:MM)	
												Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP08 Page No. 3 of 3

Method: Cable Percussion	Date(s): 03/08/2020 - 04/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376271.31, 407549.14	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.28m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrum-entation / Backfill
Depth (m)	Type	Results							
					11				
					12				
					13				
					14				
					15				

Progress and Observations								
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)

Chiselling		
From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP09 Page No. 1 of 2

Method: Cable Percussion	Date(s): 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376309.18, 407674.43	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.25m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50 0.10	B ES			Grey slightly sandy subangular to rounded fine and medium GRAVEL of brick, limestone and aggregates. (MADE GROUND) [GENERAL MADE GROUND]		(0.50)			
					0.50		100.75		
				Very dense dark grey slightly gravelly silty SAND. Gravel is subangular to rounded fine to coarse of limestone, concrete and brick. (MADE GROUND) [GENERAL MADE GROUND]					
1.20 1.20 - 1.65 1.30	SPT B ES	50/255mm (9,10,10,14,15,11)			1	(1.50)			
					2.00		99.25		
2.00 2.00 - 2.45 2.10	SPT B ES	N=18 (4,4,5,5,4,4)		Firm brown silty CLAY interbedded with a sandy gravel with gravel of angular to subrounded fine to coarse of coal, clinker and mudstone. (MADE GROUND) [GENERAL MADE GROUND]	2				
3.00 - 3.45 3.00 - 3.45	U U	(9,80%)			3	(1.50)			
					3.50		97.75		
				Firm brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL)					
4.00 4.00 - 4.45	SPT B	N=4 (1,0,1,1,1,1)		*... From 4m bgl: Becoming slightly gravelly and silty with no sand.*	4				
					5				

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	07/08	0000	8.00	8.00	150	3.50		

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: Groundwater strike at 3.50m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP09 Page No. 2 of 2

Method: Cable Percussion	Date(s): 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376309.18, 407674.43	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.25m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00	SPT	N=15 (1,2,3,4,4,4)		Firm brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL)					
5.00 - 5.45	B			*... From 5m bgl: Becoming stiff.*		(4.10)			
6.00	SPT	N=27 (2,4,5,5,8,9)		*... From 6m bgl: Becoming very stiff.*	6				
6.00 - 6.45	B								
7.00	SPT	50/200mm (4,5,9,12,29)			7				
7.00 - 7.50	B								
					7.60		93.65		
				Weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.40)			
					8.00		93.25		
				End of Borehole at 8.00m	8				
					9				
					10				

Progress and Observations									Chiselling			General Remarks:
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)	From (m)	To (m)	Duration (HH:MM)	
												Groundwater: Groundwater strike at 3.50m bgl.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
CP10
Page No. 1 of 2

Method: Cable Percussion	Date(s): 10/08/2020 - 11/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376219.90, 407748.23	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.32m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			Dark grey slightly sandy angular to subrounded fine to coarse GRAVEL of concrete, ash and aggregates. (MADE GROUND) [GENERAL MADE GROUND]		(1.20)			
1.20	SPT	N=5 (2,2,2,1,1,1)			1.20		100.12		
1.20	D			Firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone, coal and sandstone. (GLACIAL TILL)					
1.20	ES								
1.20 - 1.65	B								
2.00	SPT	N=5 (1,1,1,1,1,2)		*... From 2m bgl: Becoming stiff.*					
2.00 - 2.45	B								
3.00 - 3.45	U					(3.80)			
3.00 - 3.45	U	(47,80%)							
4.00	SPT	N=32 (4,4,6,7,9,10)		*... From 4m bgl: Becoming very stiff.*					
4.00 - 4.45	B								
					5.00		96.32		

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	10/08	0000	5.45	5.00	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP10 Page No. 2 of 2

Method: Cable Percussion	Date(s): 10/08/2020 - 11/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376219.90, 407748.23	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 101.32m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
5.00	SPT	50/220mm (6,9,15,17,18)		Extremely weak light grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.45)			
5.00 - 5.45	B				5.45		95.87		
				End of Borehole at 5.45m					

Progress and Observations									Chiselling			General Remarks:
Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)	From (m)	To (m)	Duration (HH:MM)	
												Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No CP11 Page No. 1 of 1

Method: Cable Percussion	Date(s): 11/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376199.65, 407817.26	Checked By: MC	Flush:
Hydrock Project No: C-15220-C	Ground Level: 104.02m OD		Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Depth (m)	Type	Results							
0.00 - 0.50	B			Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)		(0.40)			
0.40	ES				0.40		103.62		
				Firm brown mottled orange and grey slightly gravelly very sandy CLAY. Gravel is subangular to rounded fine and medium of coal, sandstone and mudstone. (GLACIAL TILL)					
1.20 - 1.65	U					(1.60)			
1.20 - 1.65	U	(10,100%)							
2.00	SPT	N=14 (2,2,3,3,3,5)			2.00		102.02		
2.00 - 2.45	B			Firm brown slightly gravelly very sandy CLAY. Gravel is subangular to rounded fine and medium of coal, sandstone and quartzite. (GLACIAL TILL)		(1.00)			
3.00	SPT	N=18 (2,4,6,4,4,4)			3.00		101.02		
3.00 - 3.45	B			Stiff brown slightly gravelly sandy CLAY. Gravel is subangular to rounded fine and medium of quartzite, mudstone and sandstone. (GLACIAL TILL)		(1.00)			
4.00	SPT	68/237mm (8,9,10,12,16,30)			4.00		100.02		
4.00 - 4.45	B			Extremely weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)		(0.30)			
					4.30	(0.45)	99.72		
				Extremely weak grey MUDSTONE. (PENNINE MIDDLE COAL MEASURES FORMATION)	4.45		99.57		
				End of Borehole at 4.45m					

Progress and Observations

Rig	Date	Time	Borehole Depth (m)	Casing Depth (m)	Casing Diam.(mm)	Water Depth (m)	Flush Type	Returns (colour)
Dando 2000	11/08	0000	4.45	4.00	150			

Chiselling

From (m)	To (m)	Duration (HH:MM)

General Remarks:

Groundwater: None encountered.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS01
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376317.68, 407589.09	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.49m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10	ES			Black slightly gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of brick, aggregates and clinker. (MADE GROUND) [GENERAL MADE GROUND]		(0.60)			
								0.60		101.89		
							BRICK OBSTRUCTION. (MADE GROUND) [GENERAL MADE GROUND]		(0.30)			
								0.90		101.59		
			1.00	D			Stiff brown mottled orange slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick, concrete, sandstone and coal. (MADE GROUND) [GENERAL MADE GROUND]		(0.30)			
			1.00	ES								
1.20 - 2.00	87mm	100%	1.20	SPT	N=6 (0,1,1,1,2,2)			1.20		101.29		
			1.20 - 1.65	D			Stiff brown stained grey slightly sandy slightly gravelly CLAY with a moderate petroleum hydrocarbon odour. Gravel is subangular and subrounded fine and medium of sandstone. (MADE GROUND) [GENERAL MADE GROUND]		(0.20)			
			1.30	ES				1.40		101.09		
			1.40	ES					(0.20)			
								1.60		100.89		
			1.70	ES			Brown stained grey fine and medium SAND with a moderate petroleum hydrocarbon odour. (MADE GROUND) [GENERAL MADE GROUND]		(0.40)		
			1.80	D								
			1.80	D								
2.00 - 3.00	87mm	100%	2.00	SPT	N=11 (3,3,2,2,4,3)		Firm orangish brown mottled yellow slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of coal, sandstone and mudstone. (GLACIAL TILL)	2				
			2.00 - 2.45	D			*... Between 1.70m and 1.75m bgl: Pocket of orange sand.* *... From 1.80m bgl: Becoming very silty.* Medium dense brown mottled orange and yellow very clayey fine and medium SAND. (GLACIAL TILL)					
								2.00		100.49		
									(0.60)			
								2.60		99.89		
			2.70	D			Firm brown slightly gravelly sandy CLAY. Gravel is subangular and subrounded fine and medium of sandstone, mudstone and coal. (GLACIAL TILL)		(0.40)			
								3.00		99.49		
3.00 - 4.00	77mm	100%	3.00	SPT	N=9 (2,3,2,2,3,2)		Loose brown fine and medium SAND. (GLACIAL TILL)	3				
			3.00 - 3.45	D								
							... Between 3.70m and 3.80m bgl: Very sandy clay pocket.		(1.45)			
			4.00	SPT	N=15 (2,2,3,3,4,5)		*... From 4m bgl: Becoming medium dense.*	4				
			4.00 - 4.45	D								
								4.45		98.04		
							End of Borehole at 4.45m					
								5				

General Remarks:
Termianted at 4.45m bgl due to hole collapsing in from 3m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS02
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376328.58, 407578.42	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.37m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10	ES			Light grey subangular to rounded fine and medium GRAVEL of limestone. (MADE GROUND) [GENERAL MADE GROUND]	0.20	(0.20)	102.17		
			0.30	ES			Very stiff dessicated black and light brown slightly sandy gravelly CLAY with a medium cobble content of brick. Gravel is angular to subrounded fine to coarse of brick, concrete and sandstone. (MADE GROUND) [GENERAL MADE GROUND]	0.70	(0.50)	101.67		
			0.80	ES			Soft yellowish brown mottled grey slightly sandy CLAY. (GLACIAL TILL)					
			0.80 - 0.90	B			*... From 0.90m bgl: Becoming sandy with occasional sand pockets.*	1	(0.50)			
			0.80 - 0.90	D								
			0.80	HSV	34kPa			1.20		101.17		
1.20 - 2.00	87mm	100%	1.20	SPT	N=4 (1,1,1,1,1,1)		Very loose to loose orange fine and medium SAND. (GLACIAL TILL)	1.40	(0.20)	100.97		
			1.20 - 1.65	D			Firm yellowish brown mottled grey slightly sandy CLAY. (GLACIAL TILL)					
							... Between 1.60m and 1.70m bgl: Silty orangish brown sand.	1.70	(0.30)	100.67		
			1.80	D			Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine and medium of coal, sandstone and mudstone. (GLACIAL TILL)	2.00	(0.30)	100.37		
2.00 - 3.00	87mm	100%	2.00	SPT	N=11 (3,2,2,3,3,3)		Medium dense orangish brown fine slightly silty SAND. (GLACIAL TILL)	2				
			2.00 - 2.45	D								
									(1.30)			
3.00 - 4.00	77mm	100%	3.00	SPT	N=13 (3,2,3,3,3,4)			3				
			3.00 - 3.45	D				3.30		99.07		
			3.50	D			Stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)					
									(1.15)			
			4.00	SPT	N=20 (3,3,5,4,6,5)			4				
			4.00 - 4.45	D				4.45		97.92		
							End of Borehole at 4.45m					
								5				

General Remarks:
Terminated in stiff clay at 4.45m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS03
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376316.76, 407577.64	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.25m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20	ES			Brown sandy angular to rounded fine to coarse GRAVEL of brick, concrete, metal and clinker with a high cobble content of brick and concrete. Brick walls down both sides of the excavation. Excavated as very loose and unstable. (MADE GROUND) [BACKFILLED PIT]	1.10	(1.10)	101.15		
							BRICK OBSTRUCTION. (MADE GROUND) [BACKFILLED PIT]	1.30	(0.20)	100.95		
			1.40 1.40	D ES			Firm reddish orange mottled white slightly sand silty CLAY. (MADE GROUND) [REWORKED NATURAL]	2.00	(0.70)	100.25		
			2.20 2.20	D ES			Brown fine and medium SAND with occasional pockets of firm grey clay. (GLACIAL TILL)	2.40	(0.40)	99.85		
							End of Borehole at 2.40m					

General Remarks:
Changed to a trial pit instead due to encountering a backfilled pit, which would have resulted in a refusal with a terrier rig. Significant side wall collapse from 1.30m bgl resulting in pit terminating at 2.40m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS04
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376363.02, 407564.64	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.98m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.50	ES			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.10	(0.10)	102.88		
							Brown sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [SUB-BASE]	0.40	(0.30)	102.58		
							Black sandy angular to subrounded fine to coarse GRAVEL of brick and aggregates. (MADE GROUND) [GENERAL MADE GROUND] *... At 0.59m bgl: Concrete (potential service).*	0.60	(0.20)	102.38		
							End of Borehole at 0.60m					

General Remarks:
Terminated at 0.60m bgl due to potential concrete service.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS05
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 20/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376292.87, 407591.68	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 101.70m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10	ES			Dark brown sandy angular to subrounded fine to coarse GRAVEL of brick and conrecte with a high cobble content of brick and low boulder content of concrete. (MADE GROUND) [GENERAL MADE GROUND]		(0.90)			
			0.60	ES			*... At 0.50m bgl: Old pipe (possibly from historic tank).*	0.90		100.80		
			1.00	D			Very soft light grey very sandy CLAY with occasional sand pockets. (GLACIAL TILL)	1	(0.30)			
			1.00	ES								
			1.00	HSV	21kPa							
1.20 - 2.00	87mm	100%	1.20	SPT	N=0 (0,0,0,0,0,0)			1.20		100.50		
			1.20 - 1.65	D			Very soft light grey and dark grey very sandy CLAY. (GLACIAL TILL)		(1.10)			
			1.50	ES								
2.00 - 2.50	87mm	100%	2.00	SPT	N=2 (6,2,1,0,0,1)			2				
2.00 - 2.60	87mm	100%	2.00 - 2.45	D			*... Between 2.10m and 2.20m bg: Wet.*	2.30		99.40		
			2.60	SPT	N=16 (4,4,3,4,4,5)		Stiff bluish grey and brown slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone. (GLACIAL TILL)		(0.75)			
			2.60 - 3.05	D				3				
							End of Borehole at 3.05m	3.05		98.66		
								4				
								5				

General Remarks:
Terminated at 3.05m bgl due to angle of drilling rods within the casingm preventing progression of the borehole.

Groundwater: Wet strata between 2.10m and 2.20m bgl.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No WS06 Page No. 1 of 1
Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	
Client: Harworth Estates Property Group Ltd	Co-ords: 376347.15, 407603.21	Checked By: MC
Hydrock Project No: C-15220-C	Ground Level: 103.71m OD	Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20 0.20	D ES			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.15	(0.15)	103.56		
							Yellowish brown sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [SUB-BASE]	0.40	(0.25)	103.31		
							End of Borehole at 0.40m					

General Remarks:
Terminated at 0.40m bgl due to refusal in hand pit, unable to dig due to very compact gravel.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No WS07 Page No. 1 of 1
Method: Dynamic (Windowless) Sampler	Date(s): 20/08/2020	
Client: Harworth Estates Property Group Ltd	Co-ords: 376154.23, 407631.84	Checked By: MC
Hydrock Project No: C-15220-C	Ground Level: 99.83m OD	Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.30 0.30	D ES			Dark grey sandy angular to subrounded fine to coarse GRAVEL of concrete, brick, quartzite, metal, plastic sheet with medium boulder content of concrete and high cobble content of brick and concrete. (MADE GROUND) [OPENCAST MADE GROUND]	1.20	(1.20)	98.63		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65	SPT D	N=13 (5,5,4,3,3,3)		Medium dense brown and grey slightly sandy very clayey angular to subrounded fine to coarse GRAVEL of sandstone and brick. (MADE GROUND) [OPENCAST MADE GROUND]	1.60	(0.40)	98.23		
			1.70	ES			Medium dense brown very clayey angular to subrounded fine to coarse GRAVEL of coal, clinker and cinder. (MADE GROUND) [OPENCAST MADE GROUND]	1.90	(0.30)	97.93		
			2.00 2.00 - 2.45	SPT D	N=13 (10,7,6,3,2,2)		Medium dense grey slightly gravelly fine and medium SAND. Gravel is subangular and subrounded fine and medium of mudstone. (MADE GROUND) [OPENCAST MADE GROUND]	2.00	(0.10)	97.83		
							End of Borehole at 2.00m					

General Remarks:
Terminated at 2m bgl due to casing at an angle and sample barrel at opposite angle resulting in regular jamming and breaking of gear.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No WS08 Page No. 1 of 1
Method: Dynamic (Windowless) Sampler	Date(s): 20/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376184.09, 407650.72	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 100.31m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20	ES			Brown sandy angular to subrounded fine to coarse GRAVEL of brick, glass and concrete. (MADE GROUND) [OPENCAST MADE GROUND]	0.50	(0.50)	99.81		
							CONCRETE. (MADE GROUND) [OPENCAST MADE GROUND]	0.60	(0.10)	99.71		
								0.70	(0.10)	99.61		
			0.80	ES			Red slightly sandy subangular and subrounded fine and medium GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	1.00	(0.30)	99.31		
			1.10	ES			Greyish brown slightly sandy angular to subrounded fine to coarse GRAVEL of concrete, brick, metal and plastic. (MADE GROUND) [OPENCAST MADE GROUND]	1.20	(0.20)	99.11		
1.20 - 2.00	87mm	100%	1.20	SPT	N=38 (5,7,6,10,10,12)		Dark grey slightly sandy angular to subrounded fine to coarse GRAVEL of brick and aggregates with a low cobble content of brick and slight tar odour. (MADE GROUND) [OPENCAST MADE GROUND]					
			1.20 - 1.65	D								
			1.30	ES					(0.50)			
							Dense dark grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	1.70		98.61		
							Dense light grey and black slightly sandy clayey angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	2.00	(0.30)	98.31		
2.00 - 3.00	77mm	100%	2.00	SPT	N=36 (2,10,13,12,6,5)		Dense yellowish brown and grey slightly sandy angular to rounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]					
			2.00 - 2.45	D					(0.90)			
								2.90		97.41		
							Dense dark grey very sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [OPENCAST MADE GROUND]	3.00	(0.10)	97.31		
							End of Borehole at 3.00m					

General Remarks:
Terminated at 3m bgl due to hole collapsing to 2m bgl. Unable to undertake SPT at 3m due to hole collapsing.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS09
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 20/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376252.90, 407727.21	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 101.18m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							Yellowish brown slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [GENERAL MADE GROUND]	0.30	(0.30)	100.88		
			0.40	ES			Dark grey very gravelly slightly clayey SAND. Gravel is angular to subrounded fine to coarse of brick and concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.50	(0.20)	100.68		
							End of Borehole at 0.50m					

General Remarks:
Terminated at 0.50m bgl due to refusal in hand pit, unable to dig due to very compact gravel.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS10
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376280.29, 407749.11	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.17m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20	ES			Brown very sandy angular to subrounded fine to coarse GRAVEL of brick, concrete and aggregates with a high cobble brick, concrete and rubber. Excavated as very loose and unstable. (MADE GROUND) [GENERAL MADE GROUND]	1.00	(1.00)	101.17		
1.20 - 2.00	87mm	100%	1.10 1.10 1.20	D ES SPT	N=3 (1,0,0,1,1,1)		Dark grey gravelly fine and medium SAND. Gravel is subangular to rounded fine to coarse of concrete, aggregates and quartzite. (MADE GROUND) [GENERAL MADE GROUND]	1.20	(0.20)	100.97		
			1.20 - 1.65 1.30	D ES			Very loose dark grey slightly gravelly fine and medium SAND. Gravel is subangular and subrounded fine to coarse of clinker and cinder. (MADE GROUND) [FURNACE MADE GROUND]	1.60	(0.40)	100.57		
			1.70	ES			Dark grey clayey SILT with occasional rootlets and moderate humic odour. (MADE GROUND) [ORGANIC MADE GROUND]	1.85	(0.25)	100.32		
			1.90	D			Firm light grey slightly sandy clayey SILT. (GLACIAL TILL)	2.00	(0.15)	100.17		
2.00 - 3.00	87mm	100%	2.00	SPT	N=11 (1,2,2,2,3,4)		Very soft greyish brown mottled orange CLAY. (GLACIAL TILL)	2.40	(0.40)	99.77		
			2.00 - 2.45	D			Firm grey and orange slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of sandstone. (GLACIAL TILL)	2.80	(0.40)	99.37		
			3.00	SPT	N=19 (3,2,4,4,5,6)		Very stiff bluish grey and brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)	3.45	(0.65)	98.72		
							End of Borehole at 3.45m					

General Remarks:
Terminated at 3.45m bgl due to angle of drilling restricting depth of borehole. Very loose and unstable between ground level and 1m bgl. Attempted to install but do to ground collapsing the borehole was backfilled with arisings.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS11
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376361.52, 407522.94	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.25m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							ASPHALT.	0.10	(0.10)	102.15		
							(MADE GROUND)					
							[HARDSTANDING]	0.20	(0.10)	102.05		
			0.30	ES			Yellowish brown slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone.					
			0.40	D			(MADE GROUND)		(0.30)			
							[SUB-BASE]	0.50		101.75		
			0.60	D			Black slightly sandy silty subangular and subrounded fine and medium GRAVEL of quartzite, ash, clinker, coal and cinder.					
			0.60	ES			(MADE GROUND)		(0.20)			
							[FURNACE MADE GROUND]	0.70		101.55		
							Light grey slightly sandy clayey angular to subrounded fine to coarse GRAVEL of mudstone, brick and coal.					
			0.90	D			(MADE GROUND)		(0.30)			
			0.90	ES			[FURNACE MADE GROUND]	1.00		101.25		
			1.00	ES			Soft to firm black slightly gravelly very sandy CLAY. Gravel is subangular and subrounded fine and medium of brick.	1				
1.20 - 2.00	87mm	100%	1.20	SPT	N=4 (1,1,1,1,1,1)		(MADE GROUND)		(0.30)			
			1.20 - 1.65	D			[FURNACE MADE GROUND]	1.30		100.95		
							Reddish brown slightly sandy angular to rounded fine to coarse GRAVEL of ash, clinker, cinder and coal.					
							(MADE GROUND)					
							[FURNACE MADE GROUND]					
							Soft locally firm brown mottled orange slightly sandy slightly gravelly silty CLAY. Gravel is angular to subrounded fine and medium of brick coal and sandstone.					
			1.70	D			(MADE GROUND)					
							[GENERAL MADE GROUND]					
2.00 - 3.00	87mm	40%	2.00	SPT	N=3 (0,3,3,0,0,0)			2	(1.40)			
			2.00 - 2.45	D								
								2.70		99.55		
			2.80	D			Very soft yellowish brown mottled grey slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of brick.					
							(MADE GROUND)					
							[GENERAL MADE GROUND]					
3.00 - 4.00	77mm	100%	3.00	SPT	N=11 (2,2,2,3,3,3)			3	(0.70)			
								3.40		98.85		
			3.50	D			Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine and medium of sandstone, mudstone and coal.					
							(GLACIAL TILL)		(0.60)			
									(1.05)			
			4.00	SPT	N=19 (3,4,4,4,5,6)			4				
							Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine and medium of sandstone, mudstone and coal.					
							(GLACIAL TILL)					
								4.45		97.80		
							End of Borehole at 4.45m					
								5				

General Remarks:
Terminated in stiff clay at 4.45m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS12
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376278.14, 407537.61	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 101.32m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.30 0.30	D ES			ASPHALT (MADE GROUND) [HARDSTANDING]	0.13	(0.13)	101.19		
							Dark grey sandy angular to subrounded fine to coarse GRAVEL of asphalt, sandstone and coal. (MADE GROUND) [SUB-BASE] *... From 0.40m bgl: Becoming brown and very sandy.*	0.50	(0.37)	100.82		
							End of Borehole at 0.50m					

General Remarks:
Terminated at 0.50m bgl due to refusal in hand pit, unable to dig due to very compact gravel.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS13
Page No. 1 of 2

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020 - 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376282.61, 407632.47	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 100.68m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20 0.20	D ES			PAVED BRICK. (MADE GROUND) [HARDSTANDING]	0.07 0.15	(0.07) (0.08)	100.61 100.53		
							Orange fine and medium SAND. (MADE GROUND) [SUB-BASE]		(0.35)			
							Grey slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone. (MADE GROUND) [GENERAL MADE GROUND]	0.50		100.18		
			0.70 0.70	D ES			Black subangular and subrounded fine GRAVEL of coal. (MADE GROUND) [GENERAL MADE GROUND]	1	(0.70)			
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65 1.50 1.60	SPT D ES D	N=4 (2,1,1,1,1,1)		Firm dark grey very silty CLAY with occasional organic matter and slight humic odour. (MADE GROUND) [ORGANIC MADE GROUND]	1.20 1.40	(0.20)	99.48 99.28		
							Soft light grey mottled yellow slightly sandy very silty CLAY. (MADE GROUND) [REWORKED NATURAL]		(0.60)			
2.00 - 3.00	87mm	100%	2.00 2.00 - 2.45 2.60	SPT D D	N=11 (2,2,3,2,3,3)		Firm brown mottled grey and orange slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine and medium of coal, sandstone and mudstone. (GLACIAL TILL)	2 2.00 2.40	(0.40)	98.68 98.28		
							Firm locally soft brown mottled grey slightly sandy slightly gravelly CLAY with occasional red sand pockets. Gravel is subangular to rounded fine to coarse of sandstone, mudstone, siltstone and coal. (GLACIAL TILL)		(0.60)			
3.00 - 4.00	77mm	100%	3.00 3.00 - 3.45	SPT D	N=15 (3,3,3,4,4,4)		Firm brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal, mudstone and siltstone. (GLACIAL TILL)	3 3.00		97.68		
4.00 - 5.00	67mm	100%	4.00 4.00 - 4.45	SPT D	N=21 (4,4,4,5,6,6)		*... From 4.70m bgl: Becoming stiff.*	4	(2.00) (2.45)			
								5 5.00		95.68		

General Remarks:
Terminated at 0.50m bgl due to refusal in hand pit, unable to dig due to very compact gravel.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS13
Page No. 2 of 2

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020 - 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376282.61, 407632.47	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 100.68m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			5.00 5.00 - 5.45	SPT D	N=19 (4,3,4,4,6,5)		Firm brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal, mudstone and siltstone. (GLACIAL TILL) *... From 4.70m bgl: Becoming stiff.*	5.45		95.23		
							End of Borehole at 5.45m					

General Remarks:
Terminated at 0.50m bgl due to refusal in hand pit, unable to dig due to very compact gravel.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS14
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 18/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376309.67, 407644.89	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 101.34m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.20	ES			Grey slightly sandy very silty angular to subrounded fine to coarse GRAVEL of sandstone and aggregates with a high cobble content of aggregates. (MADE GROUND) [GENERAL MADE GROUND]	0.70	(0.70)	100.64		
			0.80 0.80	D ES			Dark grey silty angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND]	1.20	(0.50)	100.14		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65 1.45 1.70 1.70	SPT D ES D D	N=4 (0,0,1,1,1,1)		Very loose to loose dark grey and brown very silty angular to subrounded fine to coarse GRAVEL of brick and sandstone. (MADE GROUND) [GENERAL MADE GROUND]	1.40	(0.20)	99.94		
							Black slightly gravelly clayey SILT with occasional rootlets and moderate humic odour. Gravel is angular to subrounded fine to coarse of brick and ceramic. (MADE GROUND) [ORGANIC MADE GROUND]	1.60	(0.20)	99.74		
							Very soft light grey and orange CLAY. (MADE GROUND) [REWORKED NATURAL]	2.00	(0.40)	99.34		
2.00 - 3.00	87mm	100%	2.00 2.00 - 2.45	SPT D	N=11 (2,2,2,3,3,3)		Firm brown mottled orange slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine to coarse of coal, sandstone and mudstone. (GLACIAL TILL)	2.60	(0.60)	98.74		
			2.70	D			Firm grey and yellowish brown slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, mudstone, coal and siltstone. (GLACIAL TILL)	3.45	(0.85)	97.89		
			3.00 3.00 - 3.45	SPT D	N=19 (3,3,3,5,5,6)							
							End of Borehole at 3.45m					

General Remarks:
Terminated at 3.45m bgl due to hole collapsing to 2.50m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Borehole No WS15 Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 07/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376205.91, 407745.96	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 100.94m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10	ES			Light grey sandy angular to subrounded fine to coarse GRAVEL of concrete and rebar with a high cobble and low boulder content of concrete. (MADE GROUND) [GENERAL MADE GROUND]		(1.00)			
								1.00		99.94		
			1.10	D			Dark grey very gravelly fine to coarse SAND. Gravel is angular to subrounded fine to coarse of brick and concrete. (MADE GROUND) [GENERAL MADE GROUND]		(0.20)			
			1.10	ES				1.20		99.74		
							End of Borehole at 1.20m					

General Remarks:
Pre-dug to 1.20m bgl with excavator and backfilled. Terminated at 1.20m bgl due to casing repeatedly kicking off at an angle, in addition there was a lot of water in the pit from the rotary borehole nearby also causing drilling difficulties.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS16
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376262.69, 407792.02	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 103.52m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
							Dark brown slightly gravelly slightly clayey SAND with abundant rootlets. Gravel is subangular and subrounded fine and medium of sandstone and quartzite. (TOPSOIL)	0.40	(0.40)	103.12		
							Firm very dessicated grey mottled brown slightly gravelly sandy CLAY with abundant rootlets. Gravel is subangular to rounded fine to coarse of mudstone and sandstone. (GLACIAL TILL) ... *At 0.60m bgl: Sandstone cobble.*	0.80	(0.40)	102.72		
			0.90	D			Brown clayey SAND with occasional rootlets. (GLACIAL TILL) 1	1.20	(0.40)	102.32		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65	SPT D	N=4 (1,1,1,1,1,1)		Firm orange mottled grey slightly sandy locally sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)	1.95	(0.75)	101.57		
2.00 - 3.00	77mm	100%	2.00 2.00 - 2.45	SPT D	N=7 (1,2,1,2,2,2)		Firm brown slightly gravelly sandy CLAY. Gravel is subangular and subrounded fine and medium of sandstone, mudstone and siltstone. (GLACIAL TILL) 2	2.70	(0.75)	100.82		
3.00 - 4.00	67mm	100%	3.00 3.00 - 3.45	SPT D	N=13 (3,3,3,3,3,4)		Very stiff brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL) 3 ... *From 3.40m bgl: Becoming stiff.*	4.00	(1.30) (1.75)	99.52		
			4.00 4.00 - 4.45	SPT D	N=47 (3,4,10,12,13,12)		Very stiff brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL) 4 ... *From 3.40m bgl: Becoming stiff.*	4.45		99.07		
							End of Borehole at 4.45m 5					

General Remarks:
Terminated in very stiff clay at 4.45m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS17
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Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376255.50, 407830.37	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 106.52m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10 0.10	D ES			Dark brown slightly gravelly clayey SAND with abundant rootlets. Gravel is subangular to rounded fine and medium of sandstone and quartzite. (TOPSOIL)	0.40	(0.40)	106.12		
			0.60 0.60	D HSV	51kPa		Firm locally soft grey mottled orange slightly gravelly silty CLAY with a medium cobble content of mudstone and occasional sand pockets. Gravel is subangular to rounded fine to coarse of mudstone, sandstone and coal. (GLACIAL TILL)	1.20	(0.80)	105.32		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65	SPT D	N=11 (2,3,2,3,3,3)		Stiff brown mottled orange slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of sandstone, coal, mudstone and siltstone. (GLACIAL TILL)	1.60	(0.40)	104.92		
2.00 - 3.00	77mm	100%	2.00 2.00 - 2.45	SPT D	N=17 (2,3,4,3,5,5)		Stiff brown mottled bluish grey slightly sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL) *... From 2.60m bgl: Becoming very stiff and slightly gravelly.*	3.45	(1.85)	103.07		
			3.00	SPT	N=51 (6,10,13,13,13,12)		End of Borehole at 3.45m					

General Remarks:
Terminated at 3.45m bgl due to refusal in very stiff clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS18
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376160.38, 407810.88	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 102.63m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.10	ES			Dark brown slightly gravelly clayey SAND with abundant rootlets. Gravel is subangular to rounded fine and medium of sandstone and quartzite. (TOPSOIL)	0.40	(0.40)	102.23		
			0.60 0.60	D HSV	60kPa		Firm grey mottled orange slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)	1.20	(0.80)	101.43		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65 1.70	SPT D D	N=10 (1,2,2,3,3,2)		Stiff brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of sandstone, mudstone, siltstone and coal. (GLACIAL TILL)					
2.00 - 3.00	77mm	100%	2.00 2.00 - 2.45	SPT D	N=19 (4,4,5,5,4,5)				(3.25)			
3.00 - 4.00	67mm	100%	3.00 3.00 - 3.45	SPT D	N=14 (2,2,2,3,4,5)		*... From 3.50m bgl: Becoming very stiff.*					
4.00 - 4.50	57mm	100%	4.00 4.00 - 4.45	SPT D	N=22 (5,5,6,5,6,5)			4.45		98.18		
							End of Borehole at 4.45m					

General Remarks:
Terminated in very stiff clay at 4.45m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Borehole No
WS19
Page No. 1 of 1

Method: Dynamic (Windowless) Sampler	Date(s): 17/08/2020	Logged By: SH	Drilled By: GSS
Client: Harworth Estates Property Group Ltd	Co-ords: 376191.39, 407842.38	Checked By: MC	Rig: Tracked Terrier Rig.
Hydrock Project No: C-15220-C	Ground Level: 104.29m OD		Scale: 1:25

Sample Run Info			Testing			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend	Instrumentation / Backfill
Sample Run	Run Ø	Recovery	Depth (m)	Type	Results							
			0.30	ES			Dark brown slightly gravelly clayey SAND with abundant rootlets. Gravel is subangular to rounded fine and medium of sandstone and quartzite. (TOPSOIL)	0.50	(0.50)	103.79		
			0.70 0.70	D HSV	61kPa		Firm grey mottled orange slightly sandy gravelly CLAY with a medium cobble content of mudstone and sandstone. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)	1.20	(0.70)	103.09		
1.20 - 2.00	87mm	100%	1.20 1.20 - 1.65	SPT D	N=12 (2,3,3,3,3,3)		Stiff dessicated brown mottled orange sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of sandstone, coal and mudstone. (GLACIAL TILL)	1.60	(0.40)	102.69		
2.00 - 3.00	77mm	100%	2.00 2.00 - 2.45	SPT D	N=21 (8,4,5,4,6,6)		Very stiff dessicated brown mottled bluish grey sandy gravelly CLAY. Gravel is subangular and subrounded fine to coarse of mudstone, sandstone, siltstone and coal. (GLACIAL TILL) *... At 2.20m bgl: Sandstone cobble.*	2.30	(0.70)	101.99		
3.00 - 4.00	67mm	100%	3.00 3.00 - 3.45	SPT D	N=24 (9,9,7,5,7,5)		Very stiff brown slightly sandy gravelly CLAY. Gravel is subangular to rounded fine to coarse of mudstone, sandstone, coal and siltstone. (GLACIAL TILL)	3.20	(0.90)	101.09		
4.00 - 4.50	57mm	100%	4.00 4.50 4.50	SPT SPT D	N=18 (3,3,4,5,4,5) 50/150mm (10,11,20,30)		Stiff dark grey slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone, coal and sandstone. (GLACIAL TILL) *... At 4.50m bgl: Sandstone cobble.*	4.65	(1.45)	99.64		
							End of Borehole at 4.65m					

General Remarks:
Terminated in stiff clay on a presuemd sandstone cobble at 4.65m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP01
Page No. 1 of 1

Method: Trial Pit	Date(s): 04/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376354.15, 407577.94	Stability: Stable.	Dimensions: 2.80m x 0.60m
Hydrock Project No: C-15220-C	Ground Level: 102.24m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.20	ES			Dark brownish black ashy sandy subangular fine to coarse COBBLES of brick and sandstone. (MADE GROUND) [GENERAL MADE GROUND]	0.40	(0.40)	101.84	
0.45	B			Reinforced CONCRETE. (MADE GROUND) [GENERAL MADE GROUND]	0.45	(0.05)	101.79	
0.65	ES			Black gravelly ASH. Gravel is angular and subangular fine and medium of clinker and cinders. (MADE GROUND) [FURNACE MADE GROUND]	0.65	(0.20)	101.59	
0.90 0.90	B B			Very soft brown mottled black gravelly CLAY with a low cobble content of brick. Gravel is subangular fine to coarse of ash, brick, cinders and sandstone. (MADE GROUND) [FURNACE MADE GROUND]	2.20	(1.55)	100.04	
2.30 2.30	B HSV	112kPa		Stiff brown gravelly slightly silty CLAY. Gravel is subangular and subrounded fine to coarse of sandstone. (GLACIAL TILL)	2.60	(0.40)	99.64	
				Base of Excavation at 2.60m				

General Remarks:
Terminated at 2.60m bgl due to stiffness of clay and groundwater ingress.

Groundwater: Moderate ingress at 1.80m bgl.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP02
Page No. 1 of 1

Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376315.05, 407596.88	Stability: Unstable.	Dimensions: 0.60m x 3.00m
Hydrock Project No: C-15220-C	Ground Level: 102.43m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 0.10	D ES			Red and brown slightly sandy angular to subrounded fine to coarse GRAVEL of burnt shale and coal. Excavated as very loose. (MADE GROUND) [FURNACE MADE GROUND]	0.40	(0.40)	102.03	
0.50	ES			Red and grey sandy angular to subrounded fine to coarse GRAVEL of burnt shale, concrete, brick, metal sheeting, timber and rebar with a high cobble content of brick and low boulder content of concrete. (MADE GROUND) [FURNACE MADE GROUND]	1.40	(1.00)	101.03	
				Base of Excavation at 1.40m				

General Remarks:
Highly unstable between ground level and 1.40m bgl. Terminated at 1.40m bgl due to being highly unstable leading to side walls collapse.

Groundwater: Slight water ingress from 1.10m bgl becoming moderate.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP03
Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376304.39, 407590.86	Stability: Unstable.	Dimensions: 0.60m x 2.90m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 102.04m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Reinforced CONCRETE. (MADE GROUND) [HARDSTANDING]	0.30	(0.30)	101.74	
0.40	ES			Brown slightly sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, metal and plastic with a high cobble content of brick. (MADE GROUND) [GENERAL MADE GROUND] *... At 0.50m bgl: Railway siding.*	0.90	(0.60)	101.14	
1.00 1.00 - 1.10 1.00 - 1.10 1.00 1.20	ES B B HSV HSV	 29kPa 43kPa		Very soft orange and grey sandy CLAY. (GLACIAL TILL) *... From 1.20m bgl: Becoming firm.*	1.50	(0.60)	100.54	
1.60 - 1.70 1.60 - 1.70	B B			Orange slightly gravelly fine to coarse SAND. Gravel is subangular and subrounded fine and medium of sandstone. (GLACIAL TILL)	1.90	(0.40)	100.14	
2.00 2.00	D HSV	 47kPa		Firm brown slightly mottled yellowish brown slightly gravelly very sandy CLAY. Gravel is subangular and subrounded fine to coarse of sandstone, siltstone and coal. (GLACIAL TILL)	2.80	(0.90)	99.24	
2.90 2.90	D HSV	 67kPa		Firm brown slightly gravelly very silty CLAY. Gravel is subangular and subrounded fine and medium of mudstone, coal and sandstone. (GLACIAL TILL)	3.20	(0.40)	98.84	
3.30	HSV	53kPa		Stiff greyish brown slightly sandy very silty CLAY. (GLACIAL TILL)	3.50	(0.30)	98.54	
				Base of Excavation at 3.50m				

General Remarks:
Terminated in stiff clay at 3.50m bgl. Unstable between 0.30m and 0.90m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP04
Page No. 1 of 1

Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376286.56, 407601.27	Stability: Unstable.	Dimensions: 0.60m x 2.90m
Hydrock Project No: C-15220-C	Ground Level: 101.56m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	ES			Greyish brown slighty sandy angular to subrounded fine to coarse GRAVEL of concrete, brick and timber with a low cobble content of brick. (MADE GROUND) [GENERAL MADE GROUND]	0.40	(0.40)	101.16	
				CONCRETE and BRICK obstruction. (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.40)	100.76	
0.90	ES			Drark greyish brown slightly sandy angular to subrounded fine to coarse GRAVEL of concrete, brick and metal with frequent clay pockets (MADE GROUND) [GENERAL MADE GROUND] *... At 0.90m bgl: Pocket of clay with slight petrolum hydrocarbon odour and stained dark blue.* *... At 1m bgl: Low boulder content of concrete.*	1.20	(0.40)	100.36	
1.30 1.30 - 1.40 1.30	ES B HSV	37kPa		Firm dark grey gravelly very silty CLAY with a moderate humic odour. Gravel is angular to subrounded fine and medium of brick, sandstone and mudstone. (MADE GROUND) [ORGANIC MADE GROUND]	1.60	(0.40)	99.96	
1.70 1.80 - 1.90 1.80 - 1.90 1.80	ES B B HSV	20kPa		Very soft brown very sandy slightly silty CLAY. (GLACIAL TILL)	2.30	(0.70)	99.26	
2.40 2.40	D HSV	50kPa		Firm brown mottled orange silghty gravelly sandy CLAY. Gravel is subangular to rounded fine and medium of sandstone, coal and mudstone. (GLACIAL TILL) *... From 2.40m bgl: Occasional sand pockets.*	2.70	(0.40)	98.86	
2.80	HSV	70kPa	▼	Stiff brown and grey slighty sandy slighty gravelly CLAY with occasional carbonaceous material and occasional sand pockets. Gravel is subangular to rounded fine and medium of sandstone, coal and mudstone. (GLACIAL TILL)	3.60	(0.90)	97.96	
				Base of Excavation at 3.60m				

General Remarks:
Terminated in stiff clay at 3.60m bgl. Unstable between 0.80m and 1.20m bgl.

Groundwater: Slight water ingress at 2.80m bgl associated with sand pocket.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP05
Page No. 1 of 1

Method: Trial Pit	Date(s): 03/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376292.18, 407583.42	Stability: Stable.	Dimensions: 0.60m x 3.20m
Hydrock Project No: C-15220-C	Ground Level: 101.76m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Grey sandy subangular fine to coarse GRAVEL of sandstone and concrete. (MADE GROUND) [GENERAL MADE GROUND]		(0.20)		
					0.20		101.56	
0.30	ES			Very soft brown mottled black gravelly CLAY with a low cobble content of brick and sandstone. Gravel is subangular fine to coarse ash, brick, cinders and sandstone. (MADE GROUND) [GENERAL MADE GROUND]				
0.60	B							
					1	(1.80)		
1.20	D							
					2			
2.00	D				2.00		99.76	
2.00	HSV	23kPa		Soft orangish brown mottled grey gravelly silty CLAY. Gravel is subangular and subrounded fine to coarse of sandstone. (GLACIAL TILL)				
2.50	HSV	41kPa				(1.00)		
2.90	D							
2.90	HSV	39kPa						
				Base of Excavation at 3.00m	3			
					3.00		98.76	
					4			
					5			

General Remarks:
Termianted at 3m bgl.

Groundwater: Slight water ingress at 1.80m bgl.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP06
Page No. 1 of 1

Method: Trial Pit	Date(s): 04/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376327.26, 407570.58	Stability: Stable.	Dimensions: 3.10m x 0.60m
Hydrock Project No: C-15220-C	Ground Level: 102.23m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Dark brownish black ashy sandy subangular fine to coarse COBBLES of brick and sandstone. (MADE GROUND) [FURNACE MADE GROUND]	0.30	(0.30)	101.93	
0.30	ES			Very soft brown mottled black gravelly CLAY with a low cobble content of brick. Gravel is subangular fine to coarse of ash, brick, cinders and sandstone. (MADE GROUND) [FURNACE MADE GROUND]				
0.50	D							
0.70	B							
0.90	B							
1.00	B				1	(1.70)		
					2			
					2.00		100.23	
				Soft orangish brown mottled grey gravelly slightly silty CLAY. Gravel is subangular and subrounded fine to coarse of sandstone. (GLACIAL TILL)				
2.40	D					(0.80)		
2.40	HSV	34kPa						
					2.80		99.43	
				Base of Excavation at 2.80m				
					3			
					4			
					5			

General Remarks:
Terminated in stiff clay at 2.80m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP07
Page No. 1 of 1

Method: Trial Pit	Date(s): 04/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376322.97, 407536.21	Stability: Stable.	Dimensions: 3.00m x 0.60m / Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 101.91m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.05	B			ASPHALT.	0.10	(0.10)	101.81	
				(MADE GROUND)				
0.20	ES			[HARDSTANDING]	0.20	(0.10)	101.71	
0.30	ES			Grey and yellowish brown sandy subangular fine to coarse GRAVEL of sandstone and limestone.				
0.40	D			(MADE GROUND)				
				[SUB-BASE]				
				Dark brown and black slightly sandy gravelly ASH. Gravel is angular and subangular fine to coarse of clinker, cliners and slag.		(0.90)		
0.80	B			(MADE GROUND)				
				[FURNACE MADE GROUND]	1.10		100.81	
1.20	B			Very soft orangish brown mottled black gravelly CLAY with low cobble content of sandstone. Gravel is angualr to subrounded fine to coarse of sandstone, clinker and cinders.				
1.20	D			(MADE GROUND)				
				[FURNACE MADE GROUND]		(2.20)		
3.00	D				3.30		98.61	
				Base of Excavation at 3.30m				

General Remarks:
Terminated at 3.30m bgl due to limits of excavator.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP08
Page No. 1 of 1

Method: Trial Pit	Date(s): 04/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376303.01, 407532.67	Stability: Stable.	Dimensions: 3.00m / 1.20m
Hydrock Project No: C-15220-C	Ground Level: 101.64m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				ASPHALT. (MADE GROUND) [HARDSTANDING]	0.10	(0.10)	101.54	
0.20	ES			Grey and yellowish brown sandy subangular fine to coarse GRAVEL of sandstone and limestone. (MADE GROUND) [SUB-BASE]	0.30	(0.20)	101.34	
0.30	ES			Dark brown and black slightly sandy gravelly ASH. Gravel is angular and subangular fine to coarse of clinker, cliners and slag. (MADE GROUND) [FURNACE MADE GROUND]		(0.90)		
0.40	B							
1.20	D			Base of Excavation at 1.20m	1.20		100.44	

General Remarks:
Terminated at 1.20m bgl due to refusal with excavator with toothless bucket.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP09
Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376256.55, 407569.60	Stability: Unstable.	Dimensions: 0.60m x 2.80m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 101.26m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.05	B			ASPHALT (MADE GROUND) [HARDSTANDING]	0.15	(0.15)	101.11	
0.20	ES			Light grey sandy angular to subrounded fine to coarse GRAVEL of concrete, brick and asphalt. (MADE GROUND) [SUB-BASE]	0.30	(0.15)	100.96	
0.35	ES			Grey very sandy angular to subrounded fine to coarse GRAVEL of ash and clinker. (MADE GROUND) [FURNACE MADE GROUND]	0.70	(0.40)	100.56	
0.50 0.50 - 0.60	B			Dark grey and black sandy angular to subrounded fine to coarse GRAVEL of ash and clinker with a low cobble content of brick and concrete. (MADE GROUND) [FURNACE MADE GROUND]	1.90	(1.20)	99.36	
0.80 0.80	D ES			Red and black slightly sandy angular to subrounded fine to coarse GRAVEL of ash, burnt shale and clinker with a medium cobble content of brick. (MADE GROUND) [FURNACE MADE GROUND]	2.90	(1.00)	98.36	
2.10	ES			Base of Excavation at 2.90m				

General Remarks:
Terminated at 2.90m bgl due to difficult digging and concrete obstruction in the short edge of the trial pit. Unstable from 1.90m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP10
Page No. 1 of 1

Method: Trial Pit	Date(s): 03/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376249.76, 407535.35	Stability: Stable.	Dimensions: 0.60m x 3.00m
Hydrock Project No: C-15220-C	Ground Level: 100.79m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.00 - 0.10	ES			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.11	(0.11)	100.68	
0.20	ES			Grey sandy subangular fine to coarse GRAVEL of concrete, sandstone, timber and metal. (MADE GROUND) [SUB-BASE]	0.40	(0.29)	100.39	
0.50 - 0.60	B			Dark grey mottled black sandy subangular fine to coarse GRAVEL of ash, sandstone, brick, concrete, clinker, cinder, timber, metal, ceramic and plastic with a low cobble content of sandstone, brick and concrete. (MADE GROUND) [FURNACE MADE GROUND]				
0.50 - 1.00	B							
0.70 - 0.80	B					(0.70)		
0.80	ES							
0.90 - 1.00	B				1			
					1.10		99.69	
				Grey gravelly fine to coarse SAND. Gravel is subangular fine and medium of ash, clinker, cinder and brick. (MADE GROUND) [FURNACE MADE GROUND]				
						(1.60)		
2.00	D				2			
2.50	ES							
2.70	D				2.70		98.09	
				Base of Excavation at 2.70m				
					3			
					4			
					5			

General Remarks:
Terminated at 2.70m bgl due to compact Made Ground making excavation very difficult.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP11
Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376242.35, 407517.68	Stability: Unstable.	Dimensions: 0.60m x 3.00m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 100.61m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				ASPHALT. (MADE GROUND) [HARDSTANDING]	0.10	(0.10)	100.51	
0.20	ES			Grey sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, metal, plastic and slate with a high cobble content of brick. (MADE GROUND) [OPENCAST MADE GROUND]	0.60	(0.50)	100.01	
0.70 - 0.80	B			Grey slightly sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, clinker, timber and metal with a high cobble content of brick. (MADE GROUND) [OPENCAST MADE GROUND]	1.40	(0.80)	99.21	
1.50 1.60 1.60 1.60	D ASB B ES			Black gravelly fine to medium SAND with a high cobble content of brick. Gravel is angular to subrounded fine to coarse of concrete, brick and sandstone. (MADE GROUND) [OPENCAST MADE GROUND] *... At 1.60m bgl: Rope of suspected asbestos containing material.*	2.40	(1.00)	98.21	
				Base of Excavation at 2.40m				

General Remarks:
Terminated at 2.40m bgl due to very loose material from 1.40m and side walls collapsing. Unstable from 0.10m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Trialpit No TP12 Page No. 1 of 1

Method: Trial Pit	Date(s): 03/08/2020	Logged By: JB	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376284.74, 407548.40	Stability: Unstable.	Dimensions: 2.60m x 1.20m
Hydrock Project No: C-15220-C	Ground Level: 101.49m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				ASPHALT. (MADE GROUND) [HARDSTANDING]	0.10	(0.10)	101.39	
0.20	ES			Grey and yellowish brown sandy subangular fine to coarse GRAVEL of sandstone and limestone. (MADE GROUND) [SUB-BASE]	0.20	(0.10)	101.29	
0.30 - 0.40	B			Yellowish brown sandy subangular fine to coarse GRAVEL of sandstone. (MADE GROUND) [SUB-BASE]	0.40	(0.20)	101.09	
0.50	ES			Grey mottled brown and black sandy angular and subangular fine to coarse GRAVEL of ash, clinker, cinders, slag, and brick with a medium cobble content of brick. (MADE GROUND) [FURNACE MADE GROUND]				
				... Between 1.20m and 1.50m bgl: Band of gravel of slag and clinker.				
1.50	D					(2.20)		
2.50 - 2.60	B				2.60		98.89	
				Base of Excavation at 2.60m				

General Remarks:
Terminated at 2.60m bgl due to unstable material from 1.50m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP13
Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376217.65, 407577.96	Stability: Unstable from 1.90m bgl.	Dimensions: 0.60m x 2.90m
Hydrock Project No: C-15220-C	Ground Level: 100.76m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.05	B			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.15	(0.15)	100.60	
0.25 0.25	D ES			Dark grey slightly gravelly fine SAND. Gravel is subangular to rounded fine to coarse of clinker, ash and brick. Excavated as a very loose material with a light density. (MADE GROUND) [FURNACE MADE GROUND]				
0.50 - 0.60 0.50 - 0.60	B D							
						(2.65)		
1.70	D			*... From 2m bgl: Medium cobble content of brick and unstable.*				
				Base of Excavation at 2.80m	2.80		97.96	

General Remarks:
Terminated at 2.80m bgl due to side walls collapsing from 1.90m bgl. Unstable from 1.90m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton			Trialpit No TP14 Page No. 1 of 1
Method: Trial Pit	Date(s): 07/08/2020	Logged By: SH	Checked By: MC	
Client: Harworth Estates Property Group Ltd	Co-ords: 376263.24, 407636.50	Stability: Stable.	Dimensions: 0.60m x 3.00m	Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 100.68m OD	Plant: Hitachi 135		

Samples / Tests Depth (m)	Type	Results	Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD
				CONCRETE with black membrane at base. (MADE GROUND) [HARDSTANDING]	0.25	(0.25)	100.43
0.30 0.40 - 0.50	ES B			Grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	0.70	(0.45)	99.98
0.80 0.80 0.80 0.90 - 1.00 0.90 - 1.00	B D ES B B			Dark grey slightly sandy gravelly SILT with a low cobble content of brick and concrete. Gravel is angular to subrounded fine to coarse of brick, clinker, quartzite, sandstone and aggregates. (MADE GROUND) [GENERAL MADE GROUND]	1.20	(0.50)	99.48
1.30	D			Dark grey slightly gravelly silty SAND. Gravel is subangular and subrounded fine to coarse of aggregates. (MADE GROUND) [GENERAL MADE GROUND] *... Between 1.90m and 2.10m bgl: Large gravel pocket of coal.*	2.30	(1.10)	98.38
2.40 2.40	D HSV	 76kPa		Firm light grey slightly gravelly very silty CLAY. Gravel is subangular to rounded fine to coarse of quartzite, sandstone and coal. (GLACIAL TILL)	2.70	(0.40)	97.98
2.80 2.80	D HSV	 105kPa		Stiff orange mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of siltstone, mudstone and coal. (GLACIAL TILL)	3.10	(0.40)	97.58
				Base of Excavation at 3.10m			

General Remarks:
Terminated in stiff clay at 3.10m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP15
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Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376314.56, 407624.45	Stability: Stable.	Dimensions: 0.60m x 2.80m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 102.36m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				CONCRETE. (MADE GROUND) [HARDSTANDING]	0.20	(0.20)	102.16	
				Grey sandy angular to subroundedfine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	0.40	(0.20)	101.96	
				CONCRETE. (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.40)	101.56	
0.85	ES			Green coarse SAND (MADE GROUND) [GENERAL MADE GROUND]	0.90	(0.10)	101.46	
				Dark grey slightly gravelly silty fine to coarse SAND. Gravel is subangular to rounded fine and medium of aggregates (very compacted). (MADE GROUND) [GENERAL MADE GROUND]	1.30	(0.40)	101.06	
1.40 1.40 1.40	D D ES			Black very clayey fine and medium SAND with occasional rootlets and moderate humic odour. (MADE GROUND) [ORGANIC MADE GROUND]	1.60	(0.30)	100.76	
1.70 1.70 1.90 - 2.00 1.90 - 2.00	ES HSV B B	27kPa		Soft grey slightly gravelly very silty CLAY with occasional carbonaceous material. Gravel is subangular and subrounded fine and medium of coal. (GLACIAL TILL)	2.10	(0.50)	100.26	
2.20 2.20	D HSV	37kPa		Firm greyish brown mottled orange slighty sandy CLAY with occasional sand pockets. (GLACIAL TILL)	2.60	(0.50)	99.76	
2.70	HSV	78kPa		Stiff brown mottled grey slighty sandy slighty gravelly CLAY. Gravel is subangular to rounded fine to coarse of coal, sandstone mudstone. (GLACIAL TILL)	3.20	(0.60)	99.16	
				Base of Excavation at 3.20m				

General Remarks:
Terminated in stiff clay at 3.20m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP16
Page No. 1 of 1

Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376334.47, 407634.15	Stability: Stable.	Dimensions: 0.60m / 3.00m — Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 103.07m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Reinforced CONCRETE. (MADE GROUND) [HARDSTANDING]	0.60	(0.60)	102.47	
				Brown sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	1.00	(0.40)	102.07	
1.10 1.10 - 1.20 1.10 - 1.20	ES B B			Dark grey sandy angular to subrounded fine to coarse GRAVEL of aggregates, clinker, coal and mudstone (very compacted). (MADE GROUND) [GENERAL MADE GROUND]	1.90	(0.90)	101.17	
2.00	ES			Black slightly clayey silty angular to subrounded fine to coarse GRAVEL of brick, clinker and mudstone with a slight humic and tar odour. (MADE GROUND) [ORGANIC MADE GROUND]	2.20	(0.30)	100.87	
2.30	HSV	53kPa		Firm orange and greyish brown slighty sandy CLAY. (GLACIAL TILL)	2.40	(0.20)	100.67	
2.50 2.50	D HSV	112kPa		Stiff brown mottled orange and grey slighty sandy slighty gravelly CLAY. Gravel is subangular to rounded fine and medium of quartzite, mudstone and sandstone. (GLACIAL TILL)	2.80	(0.40)	100.27	
				Base of Excavation at 2.80m				

General Remarks:
Terminated in stiff clay at 2.80m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP17
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Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376326.96, 407667.73	Stability: Stable.	Dimensions: 0.60m x 3.10m
Hydrock Project No: C-15220-C	Ground Level: 101.58m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				CONCRETE. (MADE GROUND) [HARDSTANDING]	0.25	(0.25)	101.33	
0.30 0.40 - 0.50	ES B			Black slighty sandy angular to rounded fine to coarse GRAVEL of brick, quartzite, ash and clinker. Excavated as very loose. (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.55)	100.78	
				Light grey angular to subrounded fine to coarse GRAVEL of limestone. (MADE GROUND) [GENERAL MADE GROUND]	0.90	(0.10)	100.68	
1.00 1.00	D ES			Dark grey very gravelly fine to coarse SAND with a medium cobble content of brick. Gravel is angular to subrounded fine to coarse of aggregates, ash and clinker. (MADE GROUND) [FURNACE MADE GROUND]	1.50	(0.60)	100.08	
1.60	D			Soft to firm dark grey very silty CLAY with slight humic odour and occasional rootlets. (MADE GROUND) [ORGANIC MADE GROUND]	1.80	(0.30)	99.78	
2.00 2.00	D HSV	63kPa		Firm grey and brown slighty gravelly very silty CLAY. Gravel is subangular to rounded fine and medium of coal, sandstone and siltstone. (GLACIAL TILL)				
2.80	HSV	73kPa		*... From 2.80m bgl: Becoming stiff.*	3.20	(1.40)	98.38	
				Base of Excavation at 3.20m				

General Remarks:
Terminated in stiff clay at 3.20m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP18
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Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376317.64, 407697.68	Stability: Unstable.	Dimensions: 0.60m x 3.10m / Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 101.60m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				CONCRETE.				
				(MADE GROUND)				
				[HARDSTANDING]		(0.20)		
				... At 0.10m bgl: Railway sidings.	0.20		101.40	
0.30	ES			Brown slightly sandy subangular to rounded fine and medium GRAVEL of aggregates. Excavated as very loose.				
				(MADE GROUND)		(0.30)		
				[SUB-BASE]	0.50		101.10	
0.60	ES			Dark grey sandy angular to rounded fine to coarse GRAVEL of quartzite, cinder, ash and clinker.				
0.60 - 0.70	B			(MADE GROUND)				
0.60 - 0.70	B			[FURNACE MADE GROUND]		(0.70)		
				1	1.20		100.40	
				Black slightly gravelly fine to medium SAND. Gravel is subangular to rounded fine and medium of ash and clinker.				
1.40	D			(MADE GROUND)				
				[FURNACE MADE GROUND]				
						(1.20)		
				2	2.40		99.20	
				Firm reddish brown very clayey silty PEAT with a strong humic odour and occasional rootlets 1-3mm in diameter.				
2.50 - 2.60	B			(PEAT)				
2.50 - 2.60	B					(0.70)		
				3	3.10		98.50	
3.10	D			Firm light grey slightly sandy slightly gravelly SILT. Gravel is subangular and subrounded fine and medium of mudstone and sandstone.				
3.10	HSV	67kPa		(GLACIAL TILL)		(0.30)		
					3.40		98.20	
3.50	HSV	96kPa		Stiff grey slightly gravelly silty CLAY. Gravel is subangular and subrounded fine and medium of mudstone, coal and sandstone.				
				(GLACIAL TILL)		(0.20)		
					3.60		98.00	
				Base of Excavation at 3.60m				
				4				
				5				

General Remarks:
Terminated in stiff clay at 3.60m bgl. Unstable between 0.20m and 0.50m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP19
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Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376290.49, 407722.98	Stability: Stable.	Dimensions: 0.60m x 2.90m
Hydrock Project No: C-15220-C	Ground Level: 101.43m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	ES			Yellowish brown slightly sandy angular to subrounded fine to coarse GRAVEL of sandstone with a high cobble content. (MADE GROUND) [GENERAL MADE GROUND]		(0.50)		
0.40 - 0.50	B				0.50		100.93	
0.40 - 0.50	B							
0.60	D			Grey very gravelly fine and medium SAND. Gravel is angular to subrounded fine to coarse of brick, sandstone, ceramic, aggregates and timber. (MADE GROUND) [GENERAL MADE GROUND]				
0.60	ES					(1.30)		
					1.80		99.63	
1.90	D			Grey slightly gravelly fine to coarse SAND. Gravel is subangular and subrounded fine to coarse of sandstone and brick. (MADE GROUND) [GENERAL MADE GROUND]				
1.90	ES					(0.60)		
					2.40		99.03	
2.50	D			Firm brown mottled grey and yellow slightly sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of mudstone and sandstone. (GLACIAL TILL)				
2.50	ES					(0.60)		
2.50	HSV	43kPa			3.00		98.43	
3.20	HSV	87kPa		Stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine and medium of coal, sandstone and mudstone. (GLACIAL TILL)		(0.50)		
					3.50		97.93	
				Base of Excavation at 3.50m				

General Remarks:
Terminated in stiff clay at 3.50m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP20
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Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376251.96, 407741.49	Stability: Stable.	Dimensions: 0.60m x 2.90m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 101.42m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	ES			Brown and grey sandy angular to subrounded fine to coarse GRAVEL of brick concrete and aggregates with a high cobble and boulder content of concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.40	(0.40)	101.02	
0.50 0.54 0.70 - 0.80	ES D B			Dark grey very sandy silty angular to subrounded fine to coarse GRAVEL of brick, concrete and plastic with a high cobble content of brick. (MADE GROUND) [GENERAL MADE GROUND]	1.20	(0.80)	100.22	
1.30 1.30 1.30 1.50	B D ES HSV	43kPa		Stiff black slightly gravelly silty CLAY with a silght humic odour. Gravel is subangular to subrounded fine to coarse of sandstone with a low cobble content of sandstone. (MADE GROUND) [ORGANIC MADE GROUND]	1.80	(0.60)	99.62	
1.90 1.90 - 2.00 1.90 - 2.00 1.90	ES B B HSV	49kPa		Soft to firm brown mottled orange and grey slightly sandy slighty gravelly CLAY. Gravel is subangular and subrounded fine to coarse of siltstone and sandstone. (GLACIAL TILL)	2.40	(0.60)	99.02	
2.60 2.60	D HSV	77kPa		Firm to stiff orange mottled grey slightly gravelly sandy CLAY. Gravel is subangular and subrounded fine and medium of sandstone. (GLACIAL TILL)	2.80	(0.40)	98.62	
2.90	D			Very stiff brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of coal, sandstone and mudstone. (GLACIAL TILL)	3.00	(0.20)	98.42	
				Base of Excavation at 3.00m				

General Remarks:
Terminated in very stiff clay at 3m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Trialpit No TP21 Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376204.56, 407692.29	Stability: Stable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 100.16m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	ES			Black slightly sandy angular to subrounded fine to coarse GRAVEL of brick, glass, asphalt, concrete and clinker. (MADE GROUND) [GENERAL MADE GROUND]	0.30	(0.30)	99.86	
				CONCRETE blocks. (MADE GROUND) [GENERAL MADE GROUND]	0.90	(0.60)	99.26	
				Grey slightly sandy angular to subrounded fine to coarse GRAVEL of brick, concrete and timber with a high cobble content of brick. (MADE GROUND) [LANDFILL MADE GROUND]	1.30	(0.40)	98.86	
1.40 1.40	B ES			Grey slightly sandy silty angular to subrounded fine to coarse GRAVEL of asphalt (with a moderate tar odour) and aggregates. (MADE GROUND) [LANDFILL MADE GROUND]	1.90	(0.60)	98.26	
2.00 2.10	B ES			Grey very gravelly fine and medium SAND. Gravel is angular to subrounded fine to coarse of brick, sandstone, ash, clinker, tar, timber and plastic. (MADE GROUND) [LANDFILL MADE GROUND] *... At 2.10m bgl: Two large tractor tyres.*	2.80	(0.90)	97.36	
				Base of Excavation at 2.80m				

General Remarks:
Terminated at 2.80m bgl due to tyre obstructions preventing excavation.

Groundwater: Moderate water ingress at 3m bgl.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP22
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Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376206.75, 407663.59	Stability: Stable.	Dimensions: 0.60m x 3.00m
Hydrock Project No: C-15220-C	Ground Level: 100.16m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.15	ES			Brown sandy angular to subrounded fine to coarse GRAVEL of glass, ceramic and concrete. (MADE GROUND) [GENERAL MADE GROUND]	0.40	(0.40)	99.76	
				CONCRETE blocks. (MADE GROUND) [GENERAL MADE GROUND]	0.90	(0.50)	99.26	
1.00	ES			Grey slightly sandy angular to subrounded fine to coarse GRAVEL of brick, timber and concrete. (MADE GROUND) [LANDFILL MADE GROUND]	1.50	(0.60)	98.66	
1.60 1.60	D ES			Yellow and grey very sandy slightly clayey angular to subrounded fine to coarse GRAVEL of brick, glass and aggregates. (MADE GROUND) [LANDFILL MADE GROUND]	1.80	(0.30)	98.36	
1.90	ES			Black slightly sandy slightly clayey angular to subrounded fine to coarse GRAVEL of slate, brick, sandstone, metal and timber with a medium cobble content of brick. (MADE GROUND) [LANDFILL MADE GROUND]	2.10	(0.30)	98.06	
2.20 2.20	D ES			Dark grey slightly sandy very silty angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [LANDFILL MADE GROUND] *... From 3m bgl: Medium cobble content of brick.* *... From 3.30m bgl: timber, metal and plastic sheeting.*	3.90	(1.80)	96.26	
3.40 3.40	D ES			Base of Excavation at 3.90m				

General Remarks:
Terminated at 3.90m bgl due to excavator limits.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP23
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Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376224.70, 407787.50	Stability: Stable.	Dimensions: 0.60m x 2.90m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 102.89m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.20 0.20	D ES			Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.40	(0.40)	102.49	
0.50 0.50 0.50	D ES HSV	26kPa		Very soft grey mottled orange slightly gravelly very sandy CLAY. Gravel is subrounded and rounded fine to coarse of sandstone and mudstone. (GLACIAL TILL)	0.90	(0.50)	101.99	
1.00 1.00 1.00	D D HSV	59kPa		Firm orange mottled grey slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded fine to coarse of sandstone and mudstone. (GLACIAL TILL) *... From 1.30m bgl: Becoming silty with occasional carbonaceous material.* *... At 1.40m bgl: Low cobble content of mudstone and sandstone.*	1.60	(0.70)	101.29	
1.70	D			Stiff brown mottled grey slightly sandy locally andy gravelly CLAY with a medium cobble content of sandstone and mudstone. Gravel is angular to subrounded fine to coarse of coal, mudstone and sandstone. (GLACIAL TILL)	2.30	(0.70)	100.59	
2.40	D			Very stiff brown mottled grey slightly sandy gravelly CLAY with a low cobble content of mudstone (recovered as a gravel). Gravel is subangular to rounded fine to coarse of coal, sandstone and mudstone. (GLACIAL TILL)	3.20	(0.90)	99.69	
				Base of Excavation at 3.20m				

General Remarks:
Terminated in very stiff clay at 3.20m bgl. Unable to hand shear vane from 1.70m bgl due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

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TP24
Page No. 1 of 1

Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376258.63, 407805.52	Stability: Stable.	Dimensions: 0.60m x 2.80m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 104.47m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.20	ES			Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.30	(0.30)	104.17	
0.50 - 0.60 0.50	B HSV	42kPa		Firm grey mottled orange slightly sandy slightly gravelly very silty CLAY with occasional sand pockets. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)	1.20	(0.90)	103.27	
1.30	D			Stiff grey and orange sandy gravelly CLAY with a medium cobble content of mudstone and sandstone. Gravel is subangular to rounded fine to coarse of sandstone, mudstone and coal. (GLACIAL TILL)	1.80	(0.60)	102.67	
1.90	D			Very stiff dark brown sandy gravelly CLAY with a low cobble content of mudstone and sandstone. Gravel is angular to rounded fine to coarse of coal, mudstone and sandstone. (GLACIAL TILL) *... At 2.10m bgl: Rare boulder of mudstone.*	3.00	(1.20)	101.47	
				Base of Excavation at 3.00m				

General Remarks:
Terminated in very stiff clay at 3m bgl. Unable to hand shear vane from 1.20m bgl due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP25
Page No. 1 of 1

Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376226.18, 407823.70	Stability: Stable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 104.84m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.30	(0.30)	104.54	
0.50 0.50	D HSV	57kPa		Firm grey mottled orange slightly sandy gravelly silty CLAY. Gravel is angular to subrounded fine to coarse of mudstone, sandstone and coal. (GLACIAL TILL)	1.40	(1.10)	103.44	
1.50 1.50	D HSV	79kPa		Stiff brown mottled bluish grey sandy gravelly CLAY with a low cobble content of mudstone. Gravel is subangular to rounded fine to coarse of mudstone, siltstone, coal and sandstone. (GLACIAL TILL)	2.30	(0.90)	102.54	
2.40	D			Very stiff dark brown sandy gravelly CLAY with a medium cobble content of mudstone. Gravel is angular to rounded fine to coarse of coal, mudstone and sandstone. (GLACIAL TILL)	3.10	(0.80)	101.74	
				Base of Excavation at 3.10m				

General Remarks:
Terminated in very stiff clay at 3.10m bgl. Unable to hand shear vane from 2.30m bgl due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP26
Page No. 1 of 1

Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376224.99, 407849.62	Stability: Stable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 105.63m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.35	(0.35)	105.28	
0.40	ES			Very stiff dessicated grey mottled orange slightly gravelly sandy CLAY. Gravel is subangular to rounded fine to coarse of sandstone, coal, mudstone and land drain (MADE GROUND) [GENERAL MADE GROUND]	0.80	(0.45)	104.83	
0.50	D							
0.90	D			Very stiff dessicated brown mottled grey and orange sandy gravelly CLAY with a low cobble content of mudstone and sandstone. Gravel is subangular to rounded fine to coarse of coal, mudstone and sandstone. (GLACIAL TILL)	1.90	(1.10)	103.73	
0.90	D							
				Very stiff dark brown mottled grey sandy gravelly CLAY with a low cobble content of mudstone. Gravel is subangular to rounded fine and medium of coal, mudstone and sandstone. (GLACIAL TILL)	3.00	(1.10)	102.63	
				Base of Excavation at 3.00m				

General Remarks:
Terminated in very stiff clay at 3m bgl. Unable to hand shear vane either due to desiccation or due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TP27
Page No. 1 of 1

Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376150.56, 407832.73	Stability: Stable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 103.65m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.15	ES			Dark brown slightly gravelly clayey SAND. Gravel is subangular to rounded fine and medium of sandstone and quartzite with abundant rootlets. (TOPSOIL)	0.30	(0.30)	103.35	
0.50 - 0.60 0.50	B HSV	42kPa		Firm orange mottled grey slightly sandy slightly gravelly silty CLAY with occasional sand pockets. Gravel is subangular to rounded fine to coarse of sandstone and mudstone. (MADE GROUND) [GENERAL MADE GROUND] *... At 1.20m bgl: Terracotta land drain.*	1.40	(1.10)	102.25	
1.60	D			Very stiff bluish grey mottled orange slightly gravelly sandy CLAY with a low cobble content of mudstone and sandstone (recovered as a gravel). Gravel is subangular to rounded fine to coarse of mudstone, sandstone and siltstone. (GLACIAL TILL)	2.10	(0.70)	101.55	
2.20	D			Very stiff dark brown sandy gravelly CLAY with a medium cobble content of mudstone and sandstone (recovered as a gravel). Gravel is subangular to rounded fine to coarse of mudstone and sandstone. (GLACIAL TILL) *... From 2.50m bgl: Becoming slightly sandy.*	3.00	(0.90)	100.65	
				Base of Excavation at 3.00m				

General Remarks:
Terminated in very stiff clay at 3m bgl. Unable to hand shear vane from 1.40m bgl due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Trialpit No TP28 Page No. 1 of 1

Method: Trial Pit	Date(s): 10/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376185.30, 407792.47	Stability: Stable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 101.42m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	ES			Dark brown gravelly slightly clayey SAND with a low cobble content of brick. Gravel is angular to subrounded fine to coarse of brick, sandstone, quartzite and ceramic. (MADE GROUND) [GENERAL MADE GROUND]	0.30	(0.30)	101.12	
0.40 0.40 - 0.50	ES B			Very stiff desiccated brown mottled grey and orange sandy locally very sandy gravelly CLAY with a low cobble content of mudstone (recovered as a sand). Gravel is angular to subrounded fine to coarse of mudstone, quartzite, coal and sandstone. (MADE GROUND) [GENERAL MADE GROUND] *... At 0.90m bgl: Rare boulder of terracotta drain.*	1.30	(1.00)	100.12	
1.40	D			Very stiff desiccated dark brown gravelly very sandy CLAY with a high cobble content of mudstone (recovered as a gravel). Gravel is subangular to rounded fine to coarse of coal, mudstone and sandstone. (GLACIAL TILL)				
2.40	D				3.10	(1.80)	98.32	
				Base of Excavation at 3.10m				

General Remarks:
Terminated in very stiff clay at 3.10m bgl. Unable to hand shear vane either due to desiccation or due to crumbly texture of clay.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock	Project: Stopes Road, Bolton	Trialpit No TT01 Page No. 1 of 1

Method: Trial Pit	Date(s): 05/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376222.11, 407701.37	Stability: Unstable.	Dimensions: 0.60m x 2.80m
Hydrock Project No: C-15220-C	Ground Level: 100.18m OD	Plant: Hitachi 135	Scale: 1:25

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10 0.10	D ES			Brown and grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates with a high cobble content. (MADE GROUND) [GENERAL MADE GROUND] *... From ground level: Very loose and unstable.*	0.50	(0.50)	99.68	
0.60 0.60	D ES			Black slightly sandy angular to subrounded fine to coarse GRAVEL of brick, concrete, sandstone, plastic, timber, fabric, plastic bottle with a high cobble content of brick. (MADE GROUND) [LANDFILL MADE GROUND]	2.00	(1.50)	98.18	
2.10 2.10 - 2.20 2.10 - 2.20	ES B B			Black gravelly SAND. Gravel is angular to subrounded fine to coarse of aggregates. (MADE GROUND) [LANDFILL MADE GROUND]	3.30	(1.30)	96.88	
				Firm dark grey and black slightly gravelly very sandy CLAY with slight humic odour. Gravel is subangular to subrounded fine and medium of brick. (MADE GROUND) [ORGANIC MADE GROUND]	3.50	(0.20)	96.68	
				Base of Excavation at 3.50m				

General Remarks:
Terminated at 3.50m bgl due to difficult digging. Unstable between ground level and 0.50m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TT02
Page No. 1 of 1

Method: Trial Pit	Date(s): 06/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376347.69, 407584.40	Stability: Stable.	Dimensions: 0.60m x 2.90m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 102.48m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
				Dark brown sandy angular to subrounded fine to coarse GRAVEL of glass, concrete and brick. (MADE GROUND) [GENERAL MADE GROUND]	0.20	(0.20)	102.28	
				Reinforced CONCRETE. (MADE GROUND) [HARDSTANDING] *... At 0.30m bgl: Railway sidings.*	0.90	(0.70)	101.58	
1.00	ES			Black clayey angular to subrounded fine to coarse GRAVEL of mudstone. (MADE GROUND) [REWORKED NATURAL]	1.20	(0.30)	101.28	
1.30 1.30 1.30 1.30	D D ES HSV	37kPa	▼	Soft to firm light and dark grey sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of mudstone. (MADE GROUND) [REWORKED NATURAL]	1.80	(0.60)	100.68	
1.90 1.90	D HSV	71kPa		Firm brown slightly sandy locally sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mudstone, sandstone and quartzite. (GLACIAL TILL)	2.30	(0.50)	100.18	
2.40 2.40	D D			Stiff brown slightly gravelly very silty CLAY. Gravel is subangular to subrounded fine to coarse of coal, mudstone and siltstone. (GLACIAL TILL) *... From 2.90m bgl: Becoming very stiff with a low cobble content of quartzite.*	3.00	(0.70)	99.48	
				Base of Excavation at 3.00m				

General Remarks:
Terminated in stiff clay at 3m bgl.

Groundwater: Moderate water ingress at 1.40m bgl becoming rapid.

Logged in general accordance with BS5930:2015

Hydrock

Project: Stopes Road, Bolton

Trialpit No
TT03
Page No. 1 of 1

Method: Trial Pit	Date(s): 07/08/2020	Logged By: SH	Checked By: MC
Client: Harworth Estates Property Group Ltd	Co-ords: 376363.29, 407558.61	Stability: Unstable.	Dimensions: 0.60m x 3.20m; Scale: 1:25
Hydrock Project No: C-15220-C	Ground Level: 102.87m OD	Plant: Hitachi 135	

Samples / Tests			Water-Strikes	Stratum Description	Depth mbgl	Thickness (m)	Level m OD	Legend
Depth (m)	Type	Results						
0.10	B			ASPHALT. (MADE GROUND) [HARDSTANDING]	0.14	(0.14)	102.73	
				Yellowish brown sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [SUB-BASE]	0.40	(0.26)	102.47	
0.50 0.50 - 0.60 0.50 - 0.60	ES B D			Black sandy angular to subrounded fine to coarse GRAVEL of aggregates. (MADE GROUND) [GENERAL MADE GROUND] *... At 0.60m bgl: Low cobble content of brick.*	0.70	(0.30)	102.17	
				Grey slightly sandy angular to subrounded fine to coarse GRAVEL of aggregates and brick with a high cobble content of brick and blue brick. (MADE GROUND) [GENERAL MADE GROUND]	1.00	(0.30)	101.87	
1.10 1.10 - 1.20 1.10	ES B HSV	75kPa		Firm brown mottled orange and grey slightly sandy locally sandy slightly gravelly CLAY. Gravel is subangular and subrounded fine and medium of sandstone, siltstone and coal. (GLACIAL TILL) *... At 1.80m bgl: Ceramic drain filled with soils.*	1.90	(0.90)	100.97	
2.00 2.00	D HSV	73kPa		Stiff brown mottled grey slighlty sandy gravelly CLAY. Gravel is angular to subrounded fine to coarse of coal, sandstone and siltstone. (GLACIAL TILL)	2.70	(0.80)	100.17	
2.80	D			Very stiff brown slightly gravelly silty CLAY. Gravel is subangular to rounded fine and medium of coal, mudstone and sandstone (GLACIAL TILL)	3.40	(0.70)	99.47	
				Base of Excavation at 3.40m				

General Remarks:
Terminated in very stiff clay at 3.40m bgl. Unstable between 0.70m and 1.00m bgl.

Groundwater: None.

Logged in general accordance with BS5930:2015

Appendix C

Geotechnical Test Results and Geotechnical Plots

Geotechnical Laboratory Test Results

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

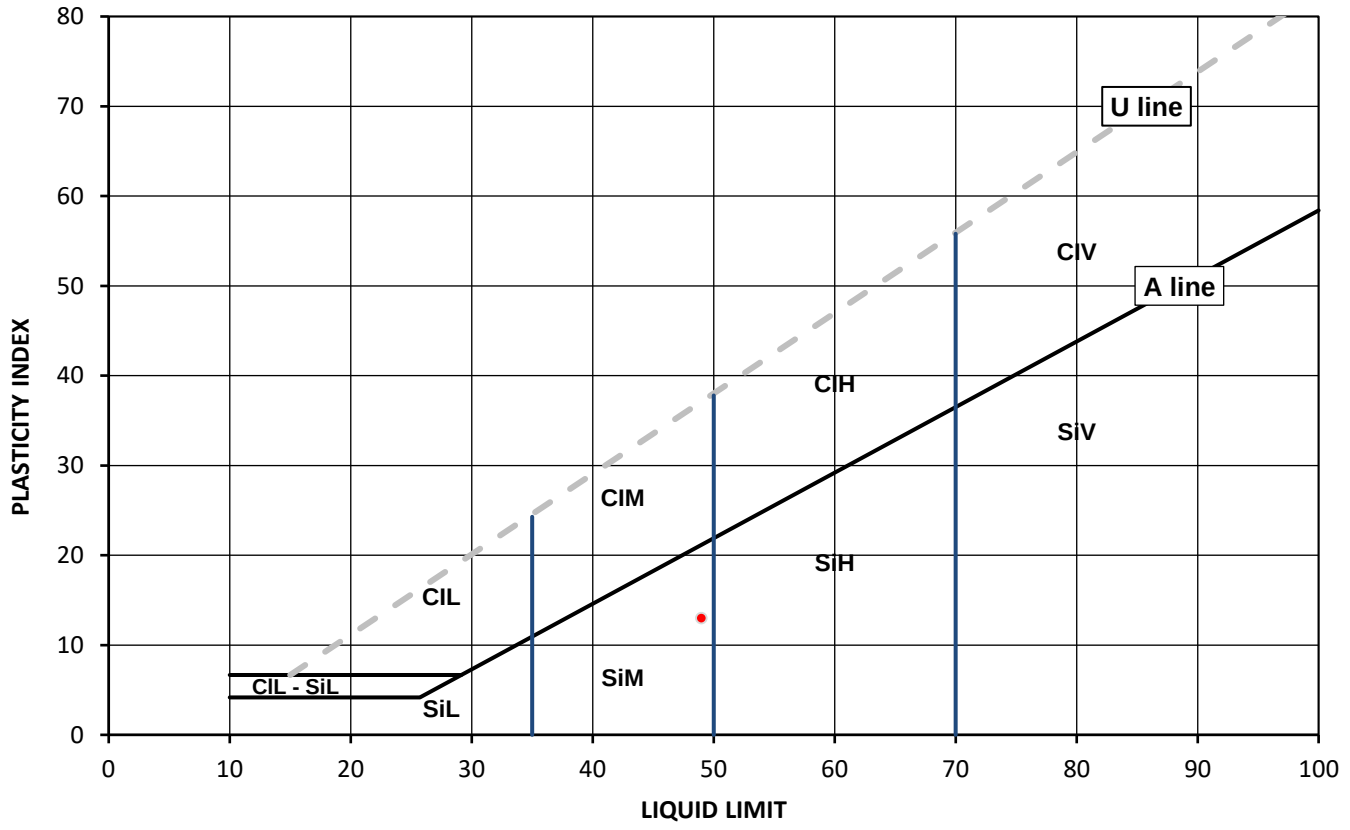
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	10/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	22/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594243	Depth Top [m]:	3.00
Hole No.:	CP05	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Dark grey gravelly very clayey SAND		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
34	49	36	13	67



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 236.10**

SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: C-15220-C
Job Number: 20-25053
Date Sampled: 03/08 - 11/08/2020
Date Received: 14/08/2020
Date Tested: 22/08/2020
Sampled By: Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [W]	Water Content [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top m	Depth Base m	Type			%	%	% Passing 425um %	WL %	Wp %	Ip %	bulk Mg/m3	dry Mg/m3	PD Mg/m3	%		
1594232	CP02	Not Given	5.00	5.45	U	Brown CLAY		23											
1594235	CP04	Not Given	5.00	5.45	U	Brown slightly gravelly CLAY		17											
1594243	CP05	Not Given	3.00	3.45	B	Dark grey gravelly very clayey SAND	Atterberg 4 Point	34		67	49	36	13						
1594236	CP05	Not Given	5.00	5.45	U	Brown slightly sandy slightly gravelly CLAY		30											
1594237	CP07	Not Given	3.00	3.45	U	Dark grey slightly gravelly sandy CLAY		25											
1594239	CP09	Not Given	3.00	3.45	U	Dark grey slightly gravelly CLAY		25											
1594241	CP11	Not Given	1.20	1.65	U	Brown to grey slightly gravelly CLAY		15											

Note: # Non accredited; NP - Non plastic

Comments: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 238.12

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

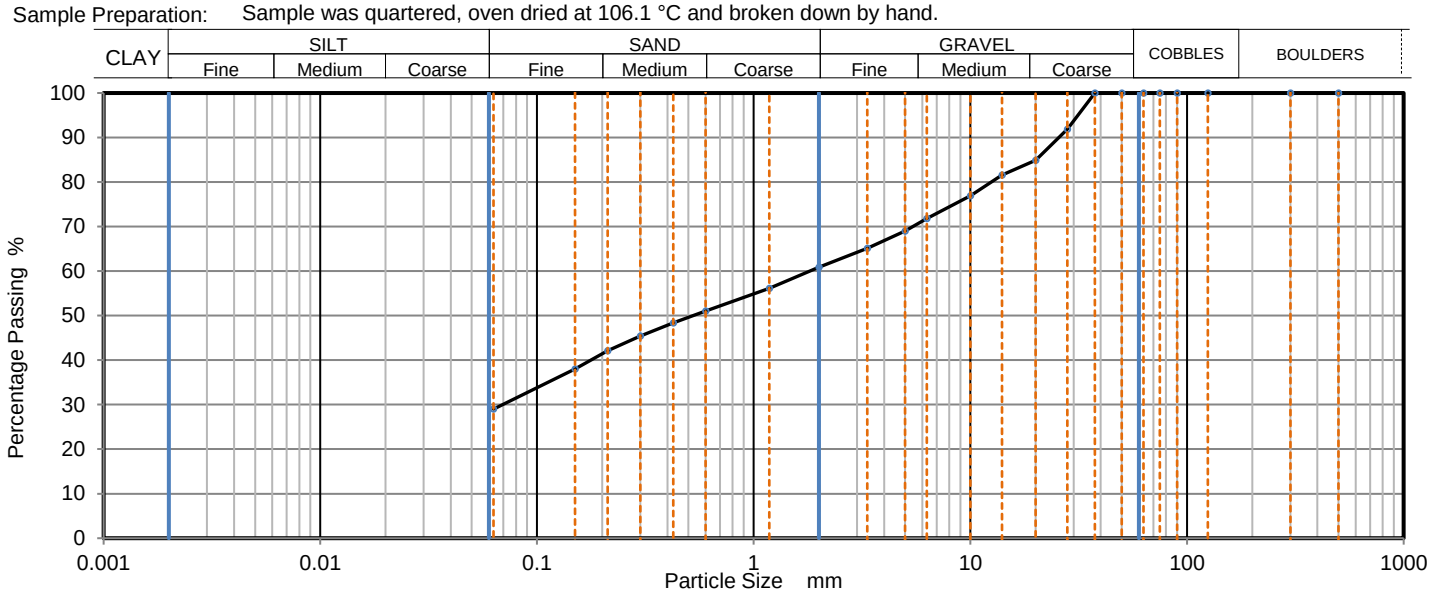
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	03/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	22/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594242	Depth Top [m]:	4.00
Hole No.:	CP07	Depth Base [m]:	4.45
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Dark grey very clayey very sandy GRAVEL		
Sample Preparation:	Sample was quartered, oven dried at 106.1 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	92		
20	85		
14	82		
10	77		
6.3	72		
5	69		
3.35	65		
2	61		
1.18	56		
0.6	51		
0.425	48		
0.3	45		
0.212	42		
0.15	38		
0.063	29		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	39.10
Sand	31.80
Fines <0.063mm	29.10

Grading Analysis		
D100	mm	37.5
D60	mm	1.8
D30	mm	0.0687
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 100.18**

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

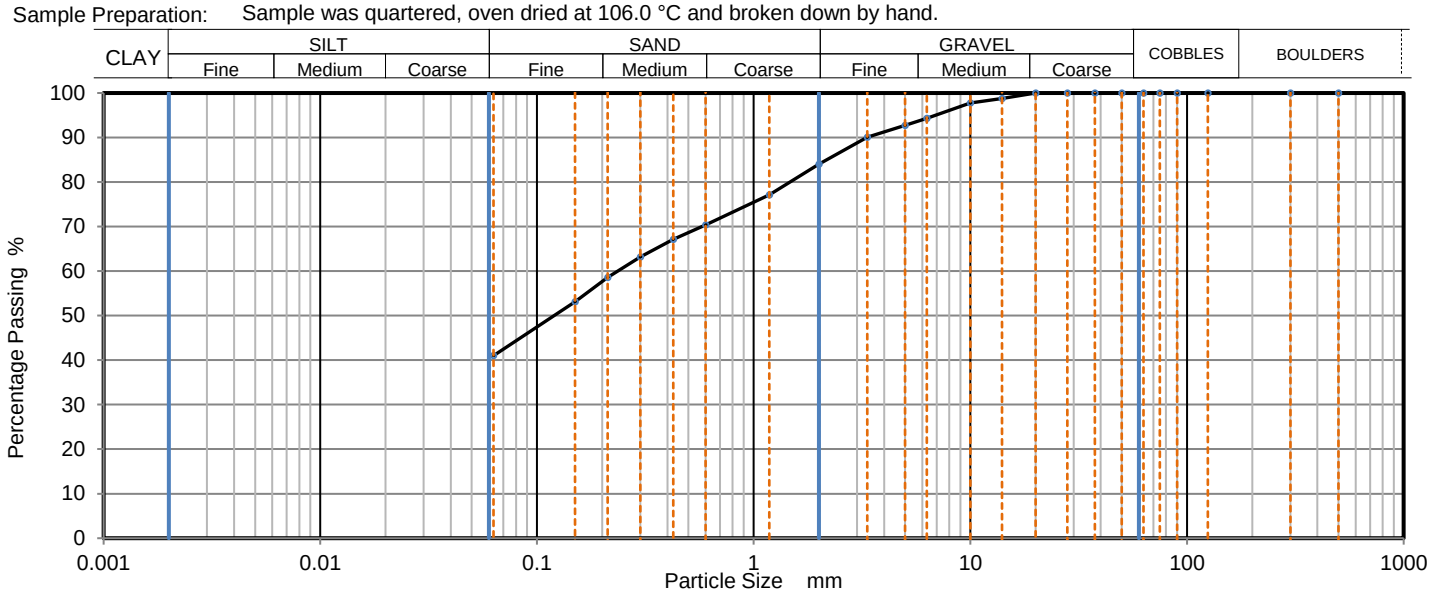
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	10/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	22/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594243	Depth Top [m]:	3.00
Hole No.:	CP05	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Dark grey gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 106.0 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	98		
6.3	94		
5	93		
3.35	90		
2	84		
1.18	77		
0.6	70		
0.425	67		
0.3	63		
0.212	59		
0.15	53		
0.063	42		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	16.00
Sand	42.20
Fines <0.063mm	41.70

Grading Analysis		
D100	mm	20
D60	mm	0.236
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 100.18**

TEST CERTIFICATE

One Dimensional Consolidation Test

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

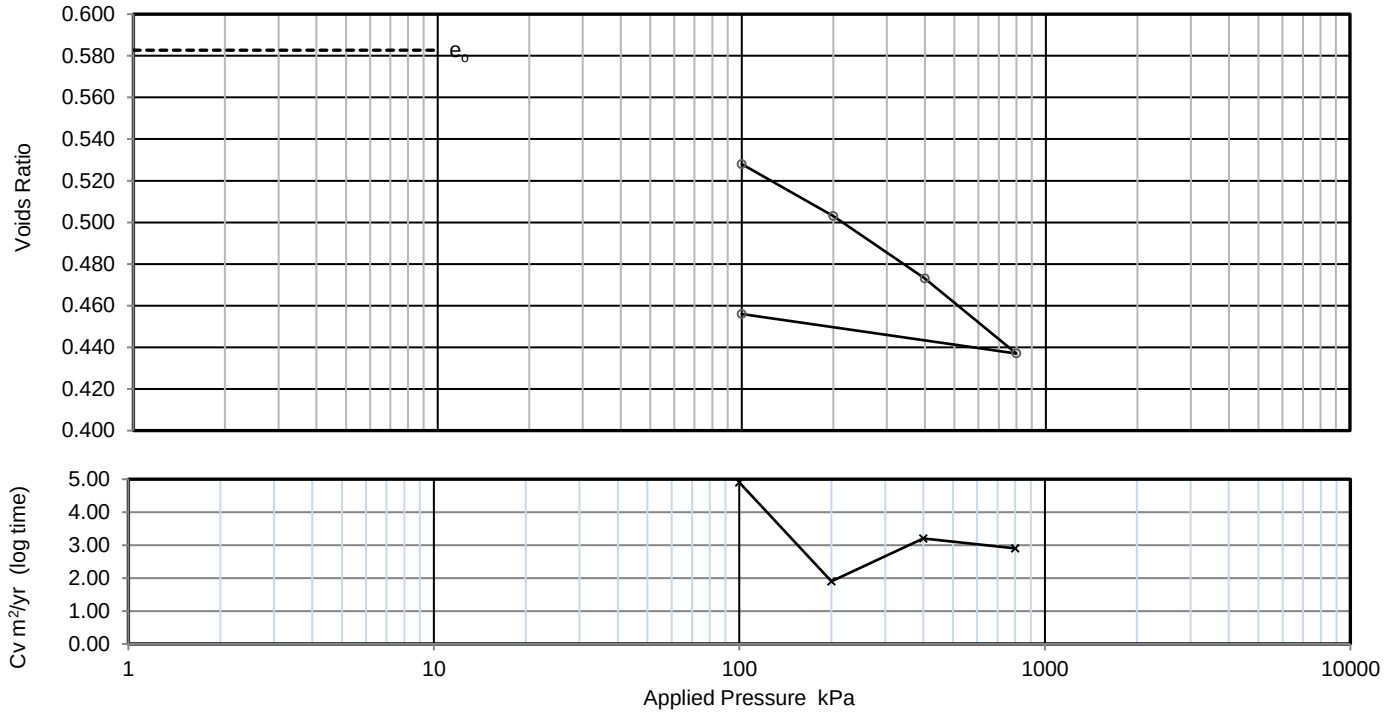
Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	06/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	21/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594232	Depth Top [m]:	5.00
Hole No.:	CP02	Depth Base [m]:	5.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.583	-	-	-	-
100	0.528	0.35	4.9	28	0.00062
200	0.503	0.16	1.9	6.7	0.00062
400	0.473	0.1	3.2	6.2	0.0019
800	0.437	0.06	2.9	5.1	0.0019
100	0.456	0.019			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.10	-	mm
Height	20.10	18.49	mm
Moisture Content	23	19	%
Bulk density	2.05	2.16	Mg/m3
Dry density	1.67	1.82	Mg/m3
Voids Ratio	0.583	0.456	
Saturation	103	109	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed: Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 172.15**

TEST CERTIFICATE

One Dimensional Consolidation Test

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

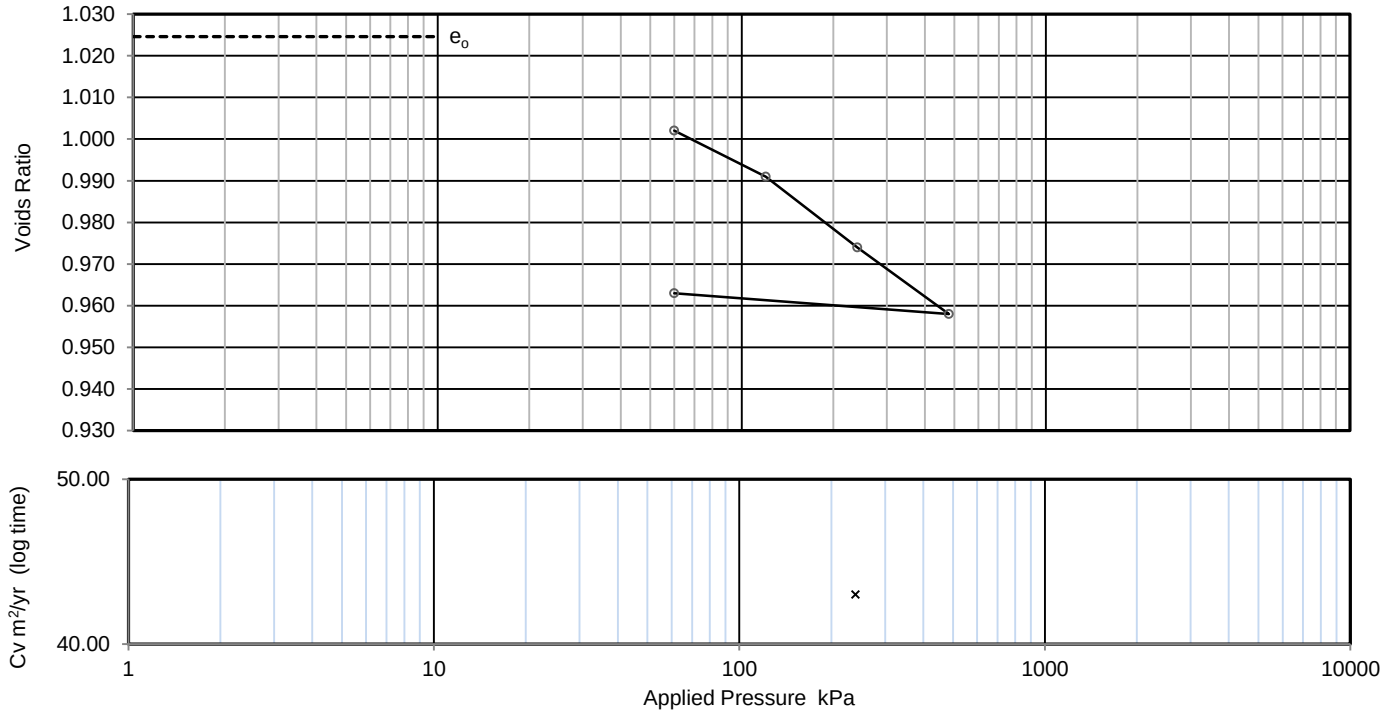
Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	03/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	21/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594237	Depth Top [m]:	3.00
Hole No.:	CP07	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Dark grey slightly gravelly sandy CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	1.025	-	-	-	-
60	1.002	0.18	N/A	53	0.00048
120	0.991	0.099	N/A	33	0.00062
240	0.974	0.068	43	56	0.00062
480	0.958	0.035	N/A	47	0.0013
60	0.963	0.0064			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.00	19.39	mm
Moisture Content	31	30	%
Bulk density	1.71	1.75	Mg/m3
Dry density	1.31	1.35	Mg/m3
Voids Ratio	1.025	0.963	
Saturation	79	81	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed: Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 172.15**

TEST CERTIFICATE

One Dimensional Consolidation Test

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

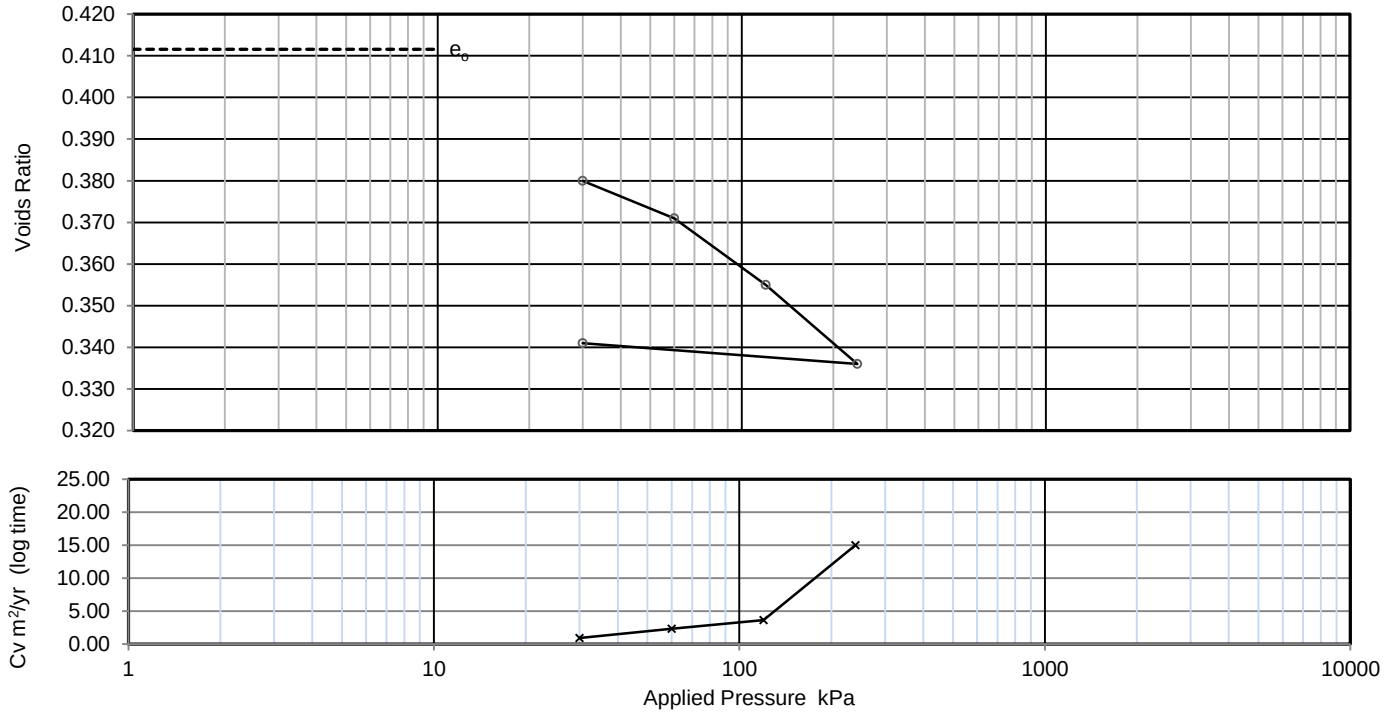
Client Reference: C-15220-C
Job Number: 20-25053
Date Sampled: 11/08/2020
Date Received: 14/08/2020
Date Tested: 21/08/2020
Sampled By: Client - SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1594241
Hole No.: CP11
Sample Reference: Not Given
Sample Description: Brown to grey slightly gravelly CLAY

Depth Top [m]: 1.20
Depth Base [m]: 1.65
Sample Type: U



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.412	-	-	-	-
30	0.380	0.73	0.92	2	0.00062
60	0.371	0.23	2.3	7.7	0.00063
120	0.355	0.19	3.6	9.7	0.00063
240	0.336	0.12	15	29	0.0019
30	0.341	0.021			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.30	19.29	mm
Moisture Content	15	15	%
Bulk density	2.16	2.27	Mg/m3
Dry density	1.88	1.98	Mg/m3
Voids Ratio	0.412	0.341	
Saturation	97	117	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed: Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 172.15**

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	06/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

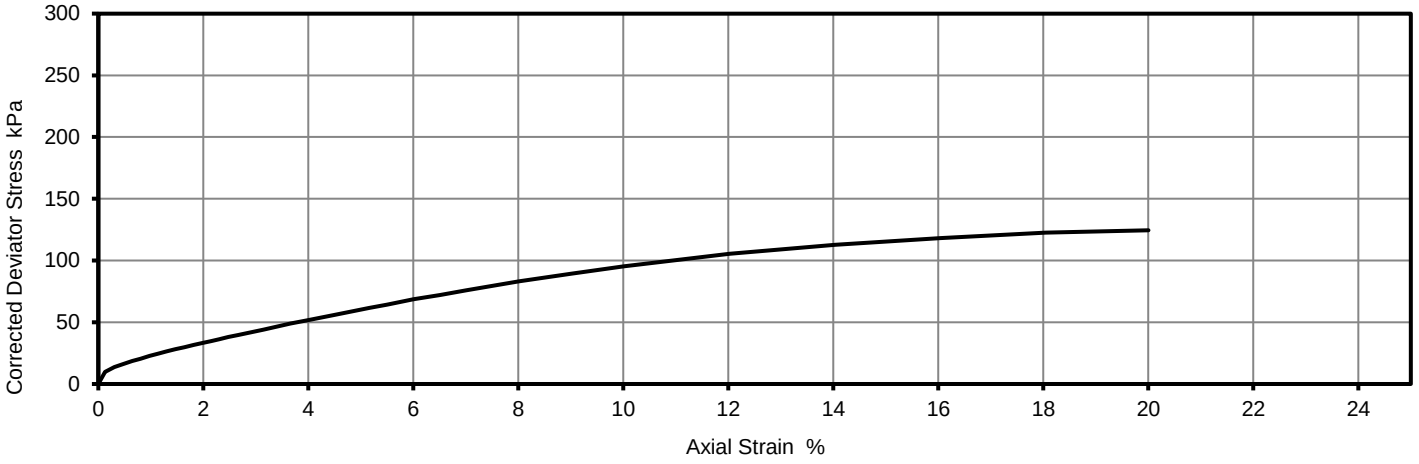
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

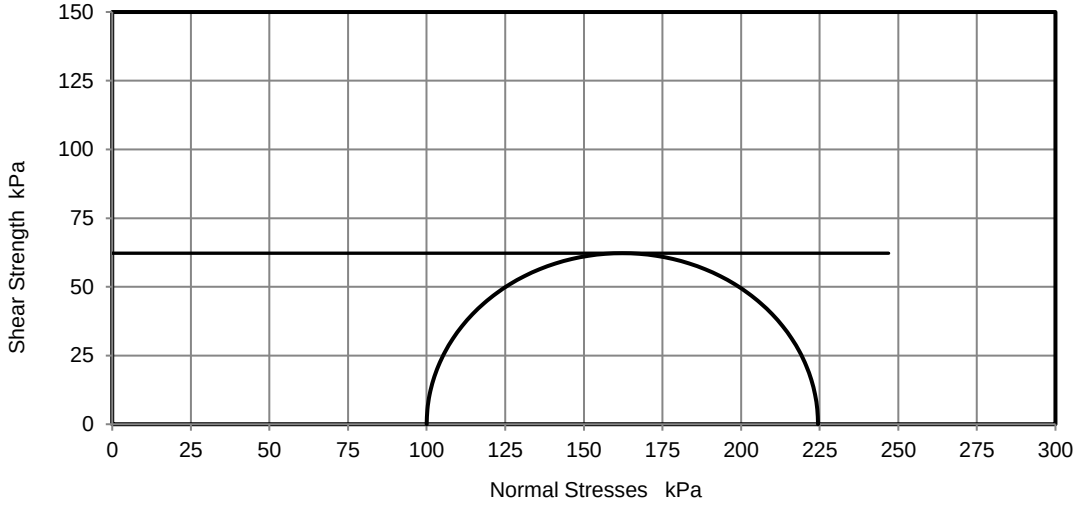
Laboratory Reference:	1594232	Depth Top [m]:	5.00
Hole No.:	CP02	Depth Base [m]:	5.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	1.98	%/min	
Length	201.88	mm	Cell Pressure	100	kPa	
Diameter	103.55	mm	Axial Strain at failure	20.0	%	
Bulk Density	2.01	Mg/m3	Deviator Stress, (σ1 - σ3)f	124	kPa	
Moisture Content	23	%	Undrained Shear Strength, cu	62	kPa	½(σ1 - σ3)f
Dry Density	1.64	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.82	kPa	Membrane thickness	0.22	mm	

Deviator Stress v Axial Strain



Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks:

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	07/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

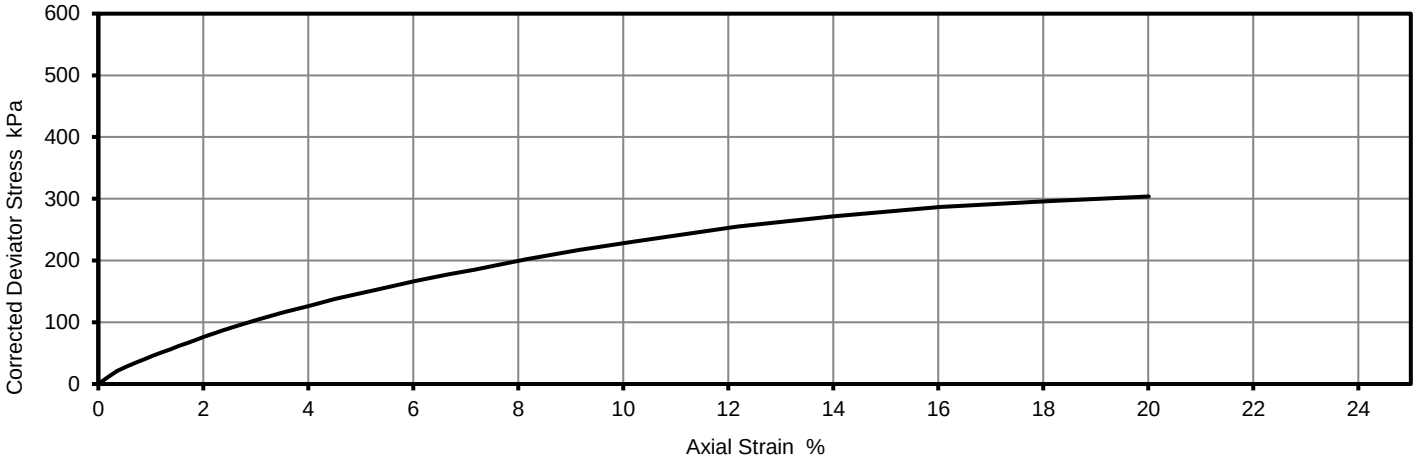
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

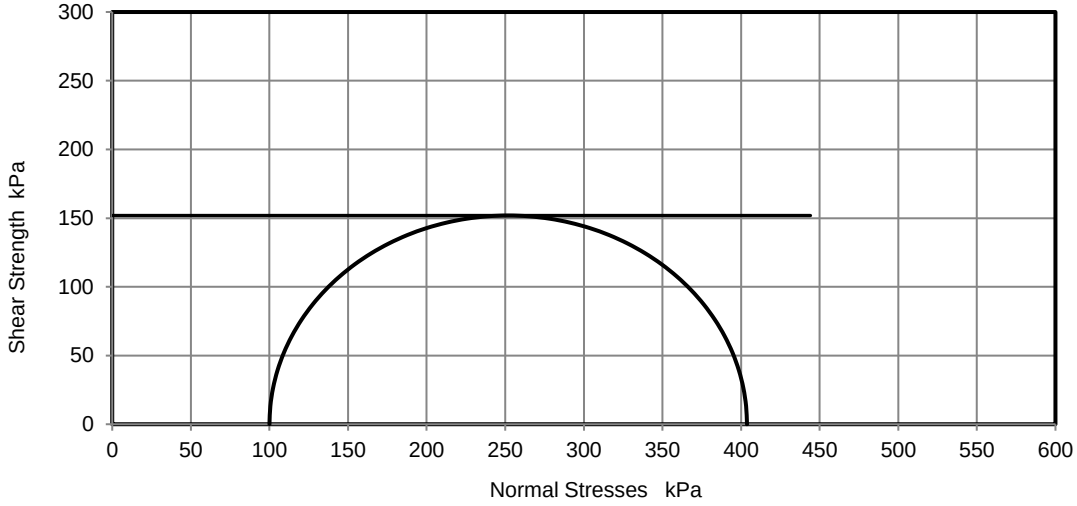
Laboratory Reference:	1594233	Depth Top [m]:	5.00
Hole No.:	CP03	Depth Base [m]:	5.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly sandy slightly gravelly CLAY		

Test Number	1		Rate of Strain	1.98	%/min
Length	202.51	mm	Cell Pressure	100	kPa
Diameter	102.20	mm	Axial Strain at failure	20.0	%
Bulk Density	2.19	Mg/m3	Deviator Stress, (σ1 - σ3)f	304	kPa
Moisture Content	17	%	Undrained Shear Strength, cu	152	kPa ½(σ1 - σ3)f
Dry Density	1.86	Mg/m3	Mode of Failure	Compound	
Membrane Correction	0.94	kPa	Membrane thickness	0.25	mm

Deviator Stress v Axial Strain

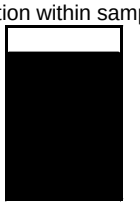


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks:

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	07/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

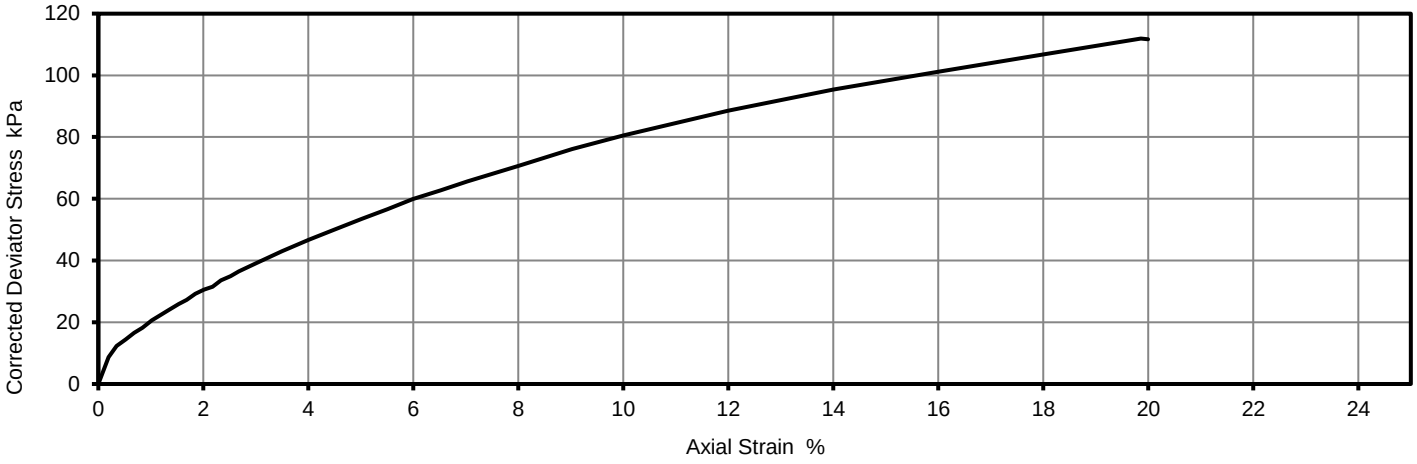
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594234	Depth Top [m]:	3.00
Hole No.:	CP04	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly sandy slightly gravelly CLAY with fragments of carbon		

Test Number	1		Rate of Strain	1.97	%/min
Length	203.20	mm	Cell Pressure	60	kPa
Diameter	102.09	mm	Axial Strain at failure	19.9	%
Bulk Density	2.14	Mg/m3	Deviator Stress, (σ1 - σ3)f	112	kPa
Moisture Content	20	%	Undrained Shear Strength, cu	56	kPa ½(σ1 - σ3)f
Dry Density	1.78	Mg/m3	Mode of Failure	Compound	
Membrane Correction	0.86	kPa	Membrane thickness	0.23	mm

Deviator Stress v Axial Strain

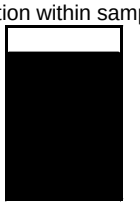


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	07/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

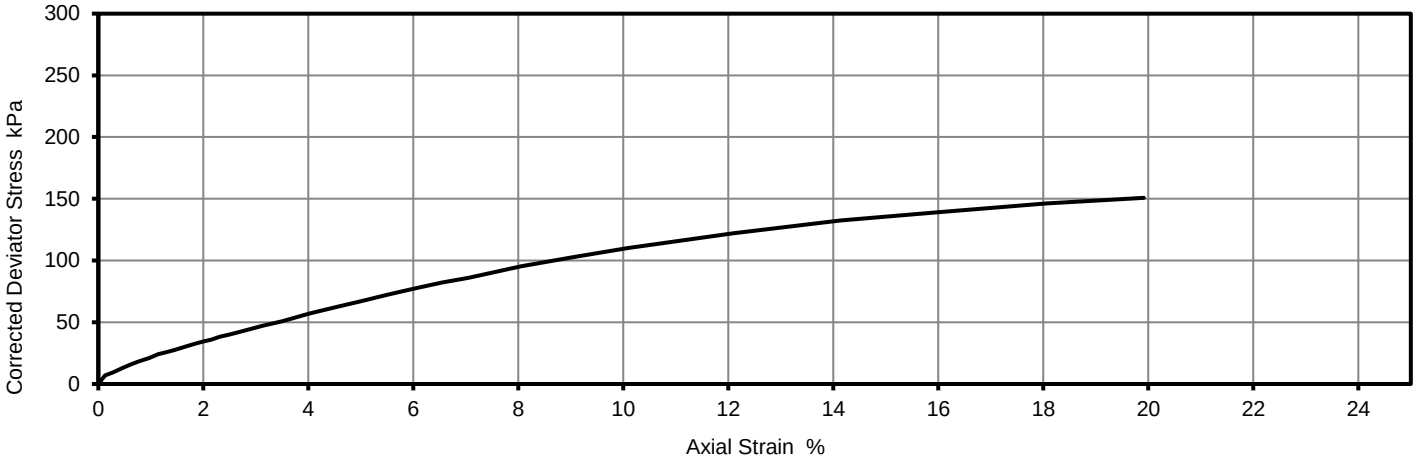
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

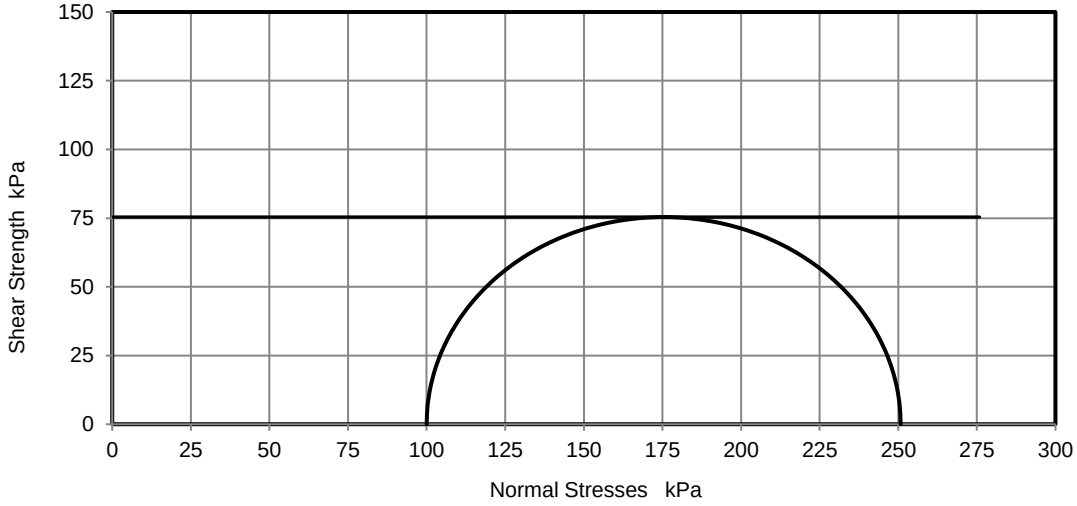
Laboratory Reference:	1594235	Depth Top [m]:	5.00
Hole No.:	CP04	Depth Base [m]:	5.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly gravelly CLAY		

Test Number	1		Rate of Strain	2.00	%/min
Length	200.46	mm	Cell Pressure	100	kPa
Diameter	101.63	mm	Axial Strain at failure	19.9	%
Bulk Density	2.18	Mg/m3	Deviator Stress, (σ1 - σ3)f	151	kPa
Moisture Content	17	%	Undrained Shear Strength, cu	75	kPa ½(σ1 - σ3)f
Dry Density	1.86	Mg/m3	Mode of Failure	Compound	
Membrane Correction	1.09	kPa	Membrane thickness	0.29	mm

Deviator Stress v Axial Strain

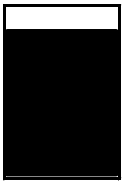


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	07/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

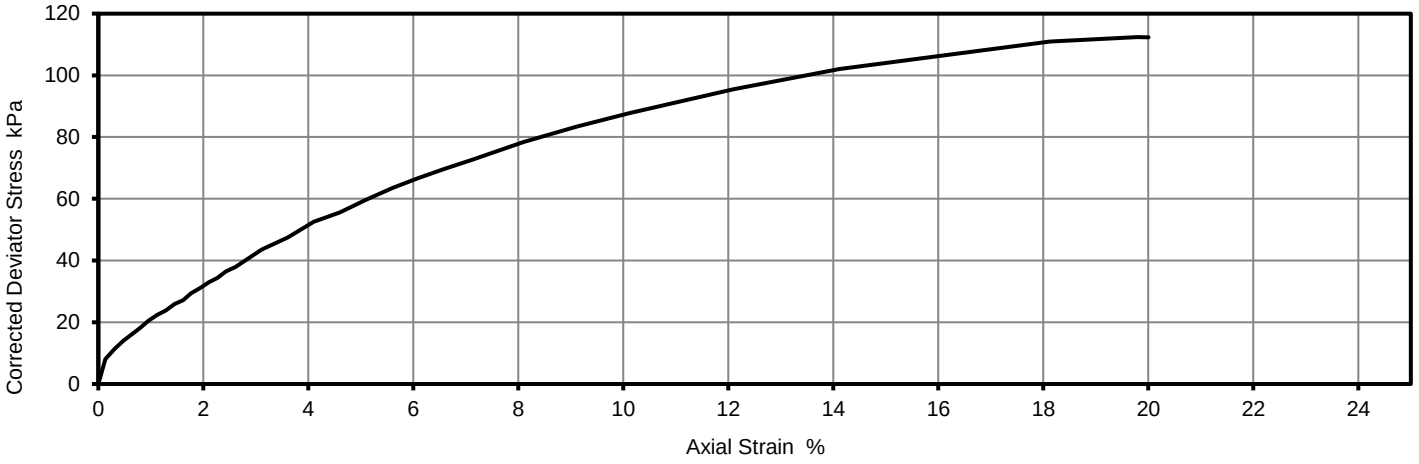
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

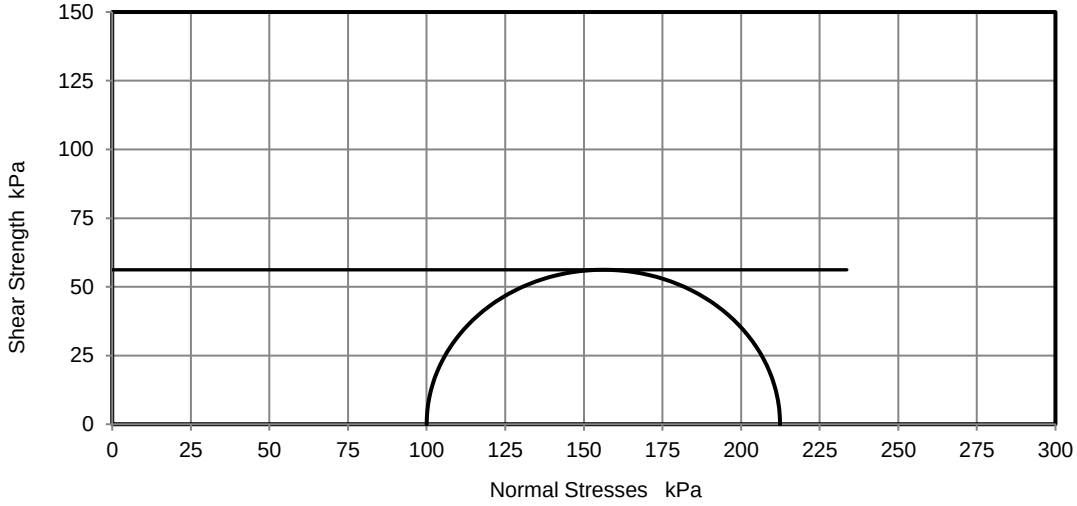
Laboratory Reference:	1594236	Depth Top [m]:	5.00
Hole No.:	CP05	Depth Base [m]:	5.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly sandy slightly gravelly CLAY		

Test Number	1		Rate of Strain	1.99	%/min
Length	200.96	mm	Cell Pressure	100	kPa
Diameter	102.17	mm	Axial Strain at failure	19.8	%
Bulk Density	2.19	Mg/m3	Deviator Stress, (σ1 - σ3)f	112	kPa
Moisture Content	30	%	Undrained Shear Strength, cu	56	kPa ½(σ1 - σ3)f
Dry Density	1.68	Mg/m3	Mode of Failure	Plastic	
Membrane Correction	1.08	kPa	Membrane thickness	0.29	mm

Deviator Stress v Axial Strain



Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	03/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

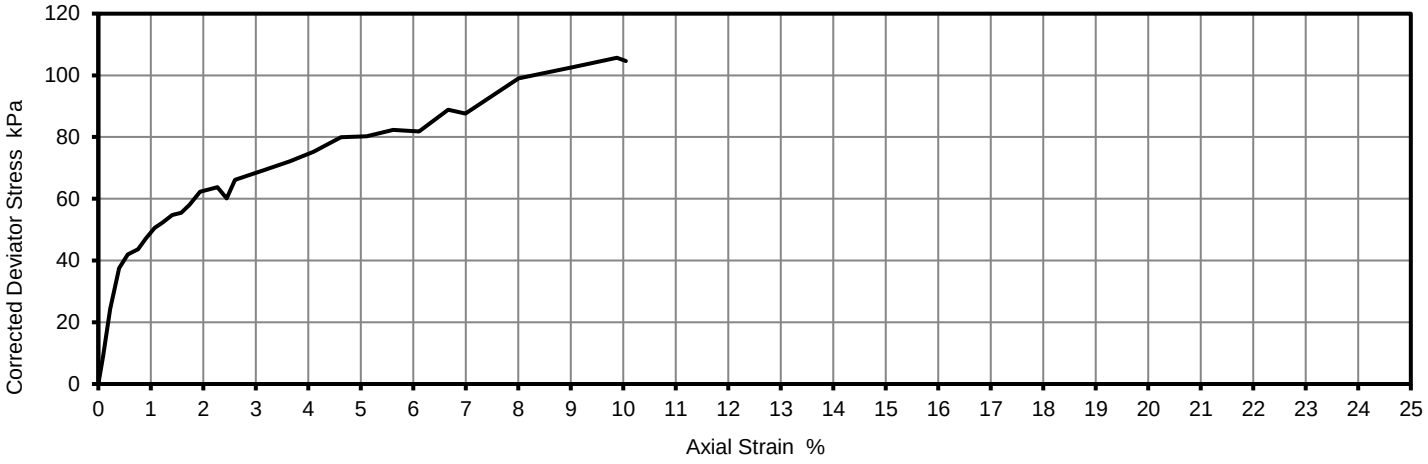
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

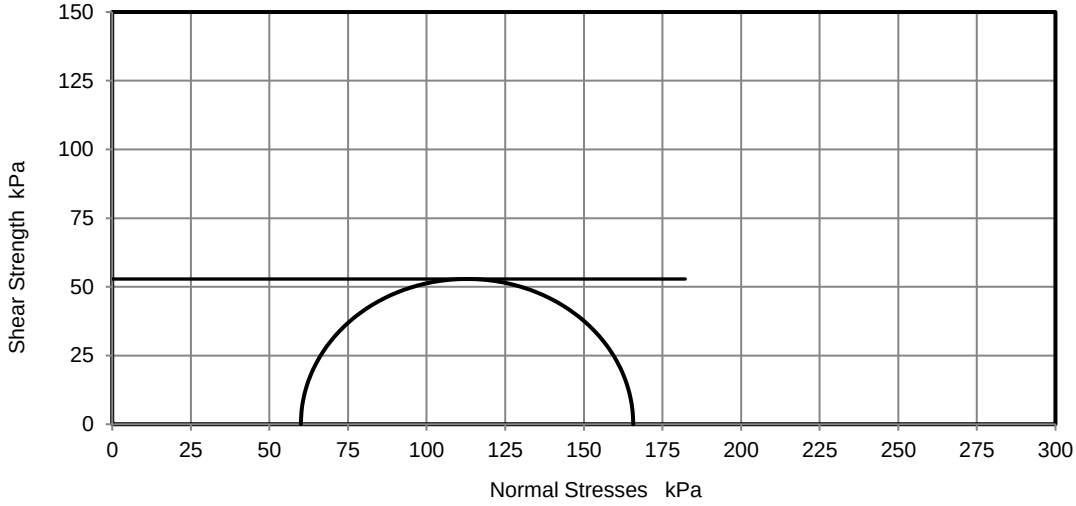
Laboratory Reference:	1594237	Depth Top [m]:	3.00
Hole No.:	CP07	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Dark grey slightly gravelly sandy CLAY		

Test Number	1		Rate of Strain	2.00	%/min
Length	75.33	mm	Cell Pressure	60	kPa
Diameter	37.63	mm	Axial Strain at failure	9.9	%
Bulk Density	1.70	Mg/m3	Deviator Stress, (σ1 - σ3)f	106	kPa
Moisture Content	25	%	Undrained Shear Strength, cu	53	kPa ½(σ1 - σ3)f
Dry Density	1.36	Mg/m3	Mode of Failure	Compound	
Membrane Correction	1.29	kPa	Membrane thickness	0.22	mm

Deviator Stress v Axial Strain

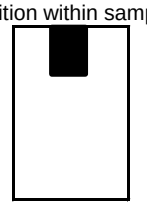


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING
4041

Environmental Science

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	04/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

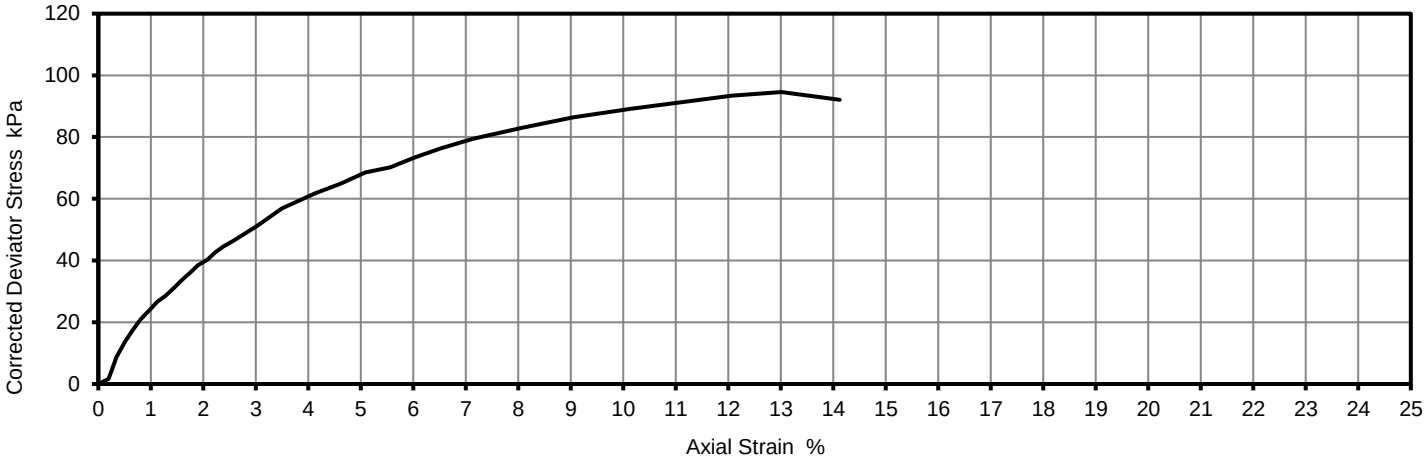
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

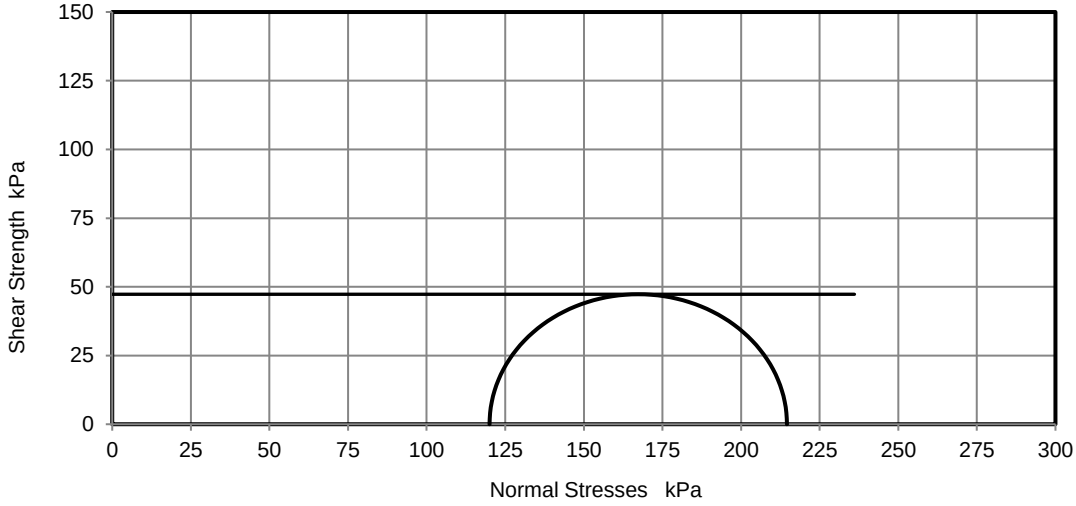
Laboratory Reference:	1594238	Depth Top [m]:	6.00
Hole No.:	CP08	Depth Base [m]:	6.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly gravelly slightly sandy CLAY		

Test Number	1		Rate of Strain	1.87	%/min
Length	213.71	mm	Cell Pressure	120	kPa
Diameter	101.71	mm	Axial Strain at failure	13.0	%
Bulk Density	2.16	Mg/m3	Deviator Stress, (σ1 - σ3)f	95	kPa
Moisture Content	17	%	Undrained Shear Strength, cu	47	kPa ½(σ1 - σ3)f
Dry Density	1.85	Mg/m3	Mode of Failure	Compound	
Membrane Correction	0.59	kPa	Membrane thickness	0.22	mm

Deviator Stress v Axial Strain

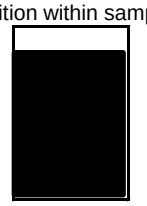


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	04/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

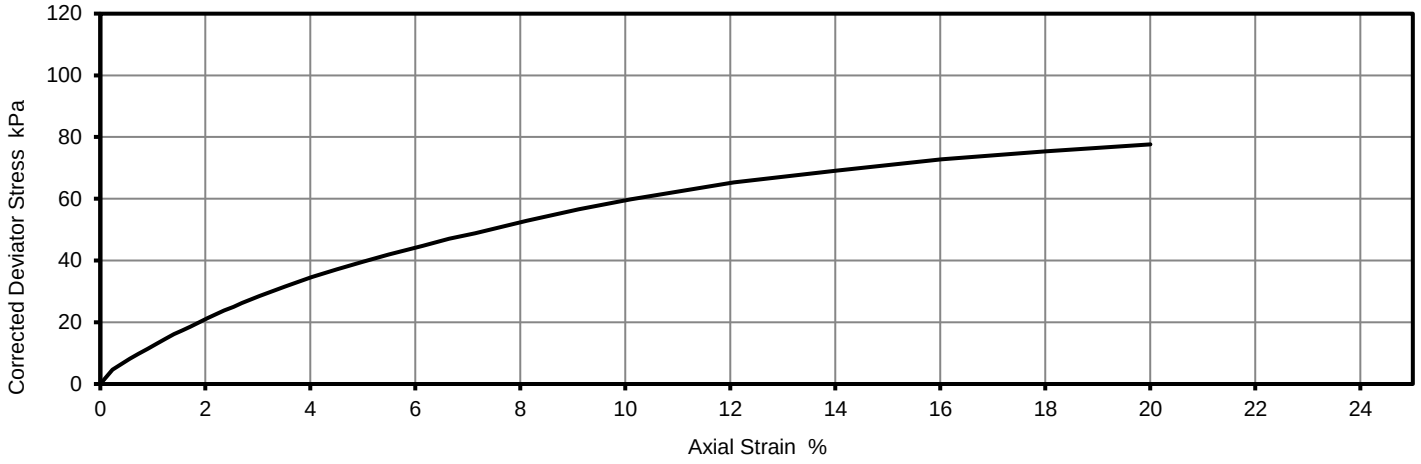
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

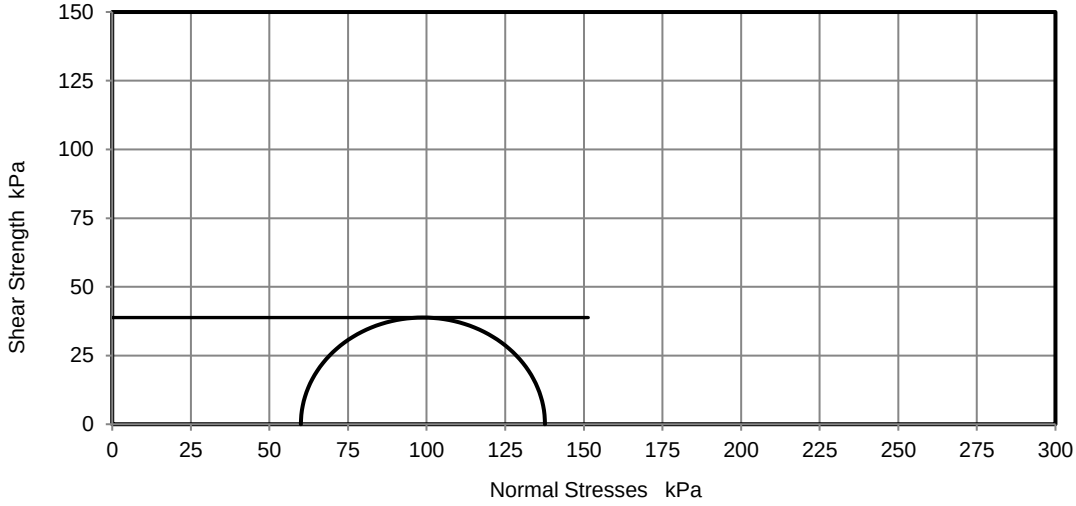
Laboratory Reference:	1594239	Depth Top [m]:	3.00
Hole No.:	CP09	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Dark grey slightly gravelly CLAY		

Test Number	1		Rate of Strain	1.94	%/min	
Length	205.74	mm	Cell Pressure	60	kPa	
Diameter	101.93	mm	Axial Strain at failure	20.0	%	
Bulk Density	2.03	Mg/m3	Deviator Stress, (σ1 - σ3)f	78	kPa	
Moisture Content	25	%	Undrained Shear Strength, cu	39	kPa	½(σ1 - σ3)f
Dry Density	1.63	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.79	kPa	Membrane thickness	0.21	mm	

Deviator Stress v Axial Strain



Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 05/10/2020

GF 184.11

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	11/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

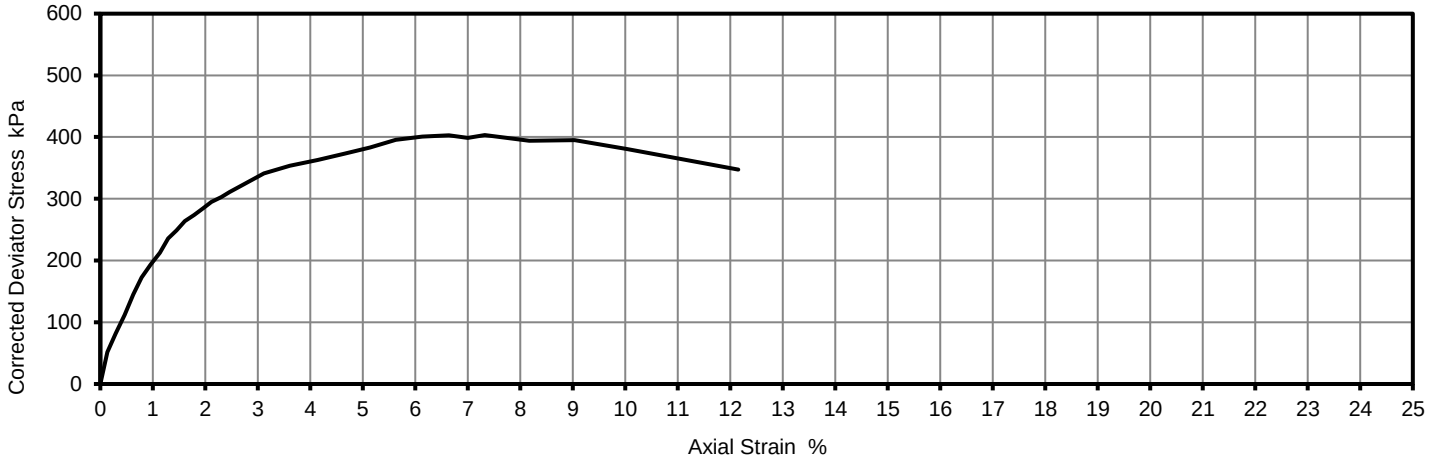
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

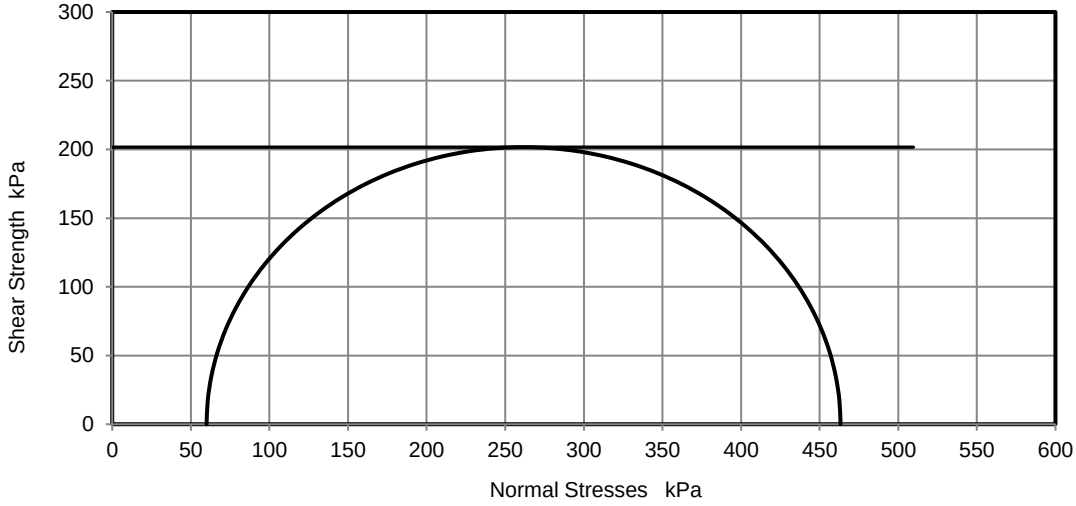
Laboratory Reference:	1594240	Depth Top [m]:	3.00
Hole No.:	CP10	Depth Base [m]:	3.45
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown slightly sandy slightly gravelly CLAY		

Test Number	1		Rate of Strain	2.00	%/min
Length	75.13	mm	Cell Pressure	60	kPa
Diameter	37.78	mm	Axial Strain at failure	7.3	%
Bulk Density	2.13	Mg/m3	Deviator Stress, (σ1 - σ3)f	403	kPa
Moisture Content	13	%	Undrained Shear Strength, cu	202	kPa ½(σ1 - σ3)f
Dry Density	1.88	Mg/m3	Mode of Failure	Compound	
Membrane Correction	0.95	kPa	Membrane thickness	0.20	mm

Deviator Stress v Axial Strain

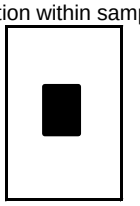


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 184.11**

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25053
		Date Sampled:	11/08/2020
		Date Received:	14/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	Client - SH

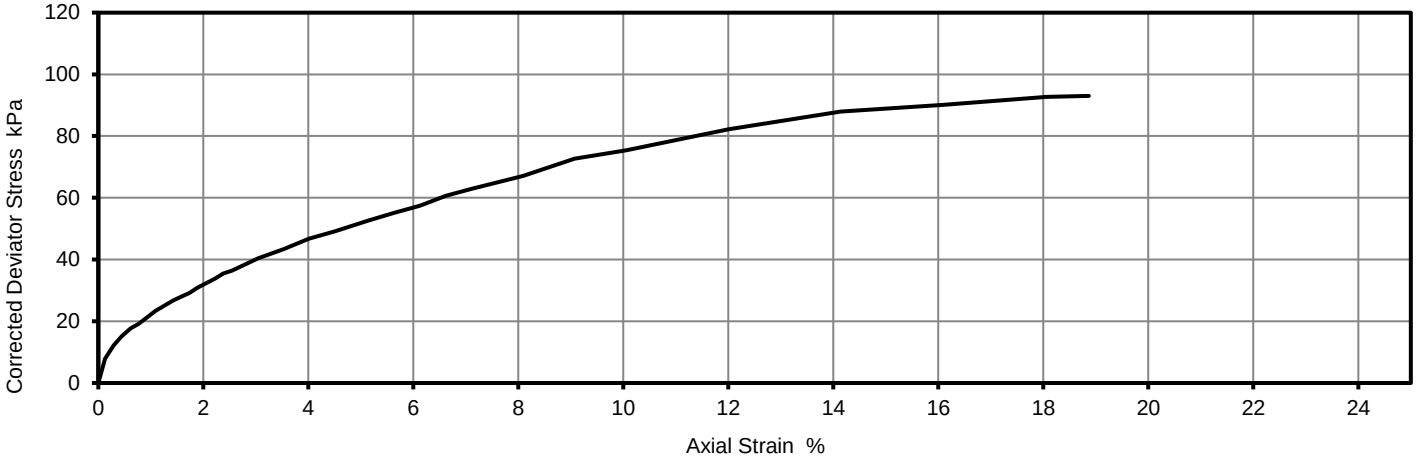
Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

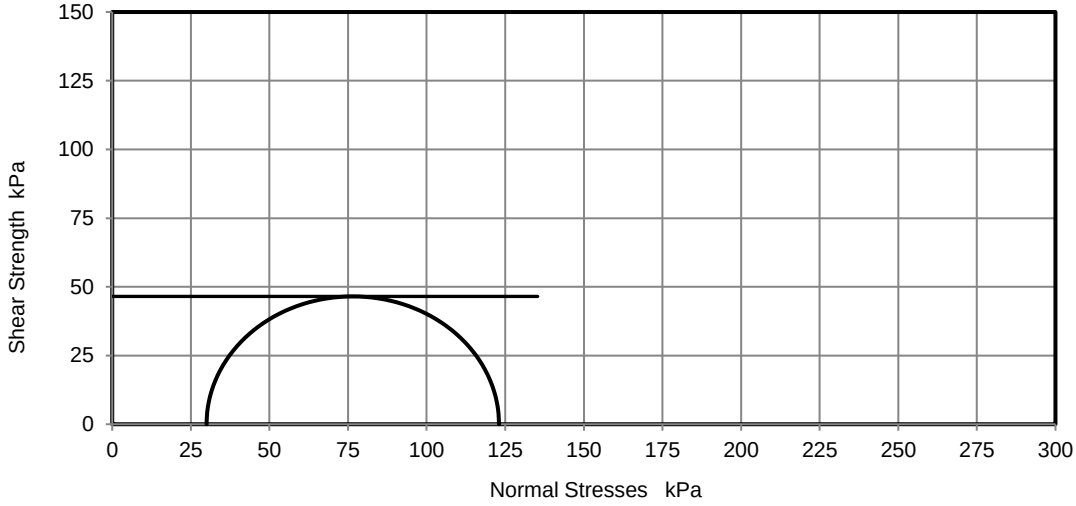
Laboratory Reference:	1594241	Depth Top [m]:	1.20
Hole No.:	CP11	Depth Base [m]:	1.65
Sample Reference:	Not Given	Sample Type:	U
Sample Description:	Brown to grey slightly gravelly CLAY		

Test Number	1		Rate of Strain	1.94	%/min
Length	206.55	mm	Cell Pressure	30	kPa
Diameter	102.27	mm	Axial Strain at failure	18.9	%
Bulk Density	2.14	Mg/m3	Deviator Stress, (σ1 - σ3)f	93	kPa
Moisture Content	15	%	Undrained Shear Strength, cu	47	kPa ½(σ1 - σ3)f
Dry Density	1.86	Mg/m3	Mode of Failure	Plastic	
Membrane Correction	1.11	kPa	Membrane thickness	0.31	mm

Deviator Stress v Axial Strain

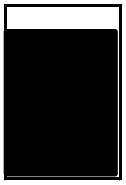


Mohr Circles





Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks: Re-issue 1: Hole No. amended for sample 1594232

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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 Date Reported: 05/10/2020 **GF 184.11**

SUMMARY REPORT

Summary of Point Load Strength Index Tests Results

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park,
Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Client Reference: C-15220-C
Job Number: 20-28885
Date Sampled: 28/08 - 03/09/2020
Date Received: 07/09/2020
Date Tested: 17/09/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P	Equivalent diameter, De	Point Load Strength Index	
		Reference	Depth Top	Depth Base	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne	W	Dps	Dps'			Is	Is(50)
			m	m								mm	mm	mm	mm	kN	mm	MPa	MPa
1614690	RC01	Not Given	7.00	7.20	C	Black to grey SILTSTONE	WC = 5.0%	1	A	P	YES	-	88.2	40.0	37.0	1.3	64.5	0.31	0.35
1614691	RC01	Not Given	7.25	7.38	C	Black to grey SILTSTONE	WC = 5.2%	1	A	P	YES	-	86.8	34.0	29.0	1.4	56.6	0.42	0.45
1614692	RC01	Not Given	8.34	8.50	C	Brown to grey SILTSTONE	WC = 5.3%	1	A	P	YES	-	86.1	55.0	41.0	4.8	67.0	1.08	1.23
1614693	RC01	Not Given	8.80	9.00	C	Light brown SANDSTONE	WC = 3.0%	1	A	U	YES	-	86.3	65.0	60.0	13.9	81.2	2.11	2.63
1614695	RC01	Not Given	9.90	10.02	C	Brown SANDSTONE	WC = 5.2%	1	A	U	YES	-	86.8	57.0	45.0	3.6	70.5	0.73	0.85
1614698	RC01	Not Given	12.45	12.58	C	Brown to grey SANDSTONE	WC = 5.5%	1	A	U	YES	-	85.2	45.0	36.0	10.0	62.5	2.57	2.84
1614699	RC02	Not Given	11.20	11.40	C	Grey MUDSTONE	WC = 5.6%	1	A	U	YES	-	101.4	45.0	40.0	1.8	71.9	0.34	0.40

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Comments:

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 21/09/2020

GF 134.12

SUMMARY REPORT

Summary of Uniaxial Compression Test on Rock Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

UKAS TESTING 4041

Environmental Science

Tested in Accordance with: ISRM, 2007, p153, part 1

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Client Reference: C-15220-C
Job Number: 20-28885
Date Sampled: 28/08/2020
Date Received: 07/09/2020
Date Tested: 17/09/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Specimen Dimensions (2)				Bulk density (2)	Water Content (1)	Uniaxial Compression (3)			
		Reference	Depth Top m	Depth Base m	Type			Diameter mm	Length mm	H/D	Orientation of sample	Mg/m3	%	Condition	Stress Rate Mpa/s	Mode of failure	UCS Mpa
1614694	RC01	Not Given	9.00	9.60	C	Light brown to grey SANDSTONE	Duration of test exceeded time specified in ISRM method, 2007, p153, part1.	86.2	219.2	2.5	Vertical	2.64	5.8	as received	0.0685	MS + AC	66.3
1614696	RC01	Not Given	10.15	10.50	C	Brown to grey SANDSTONE	Sample is below recommended length to diameter ratio.	86.4	95.2	1.1	Vertical	2.44	2.9	as received	0.0511	MS + AC	30.4
1614697	RC01	Not Given	11.80	12.33	C	Brown to grey SANDSTONE		86.4	221.4	2.6	Vertical	2.58	2.6	as received	0.1193	MS + AC	51.4

Note: 1 - ISRM p87 test 1, water content at 105 ± 3 oC, specimen as tested for UCS, 2 - ISRM p86 clause (vii), Caliper method used for determination of bulk volume and derivation of bulk density, 3 - ISRM p153 part 1, determination of Uniaxial Compressive Strength (UCS) of Rock Materials, above notes apply unless annotated otherwise in the remarks. Compaction machine: VJ Tech AUTOCON - VJT 51-3011; Mode of failure legend: S - Single shear, MS - multiple shear, AC - Axial cleavage, F - Fragmented

Comments:

Signed:

Monika Janoszek
PL Deputy Head of Geotechnical Section
for and on behalf of i2 Analytical Ltd

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Date Reported: 21/09/2020

GF 223.12

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

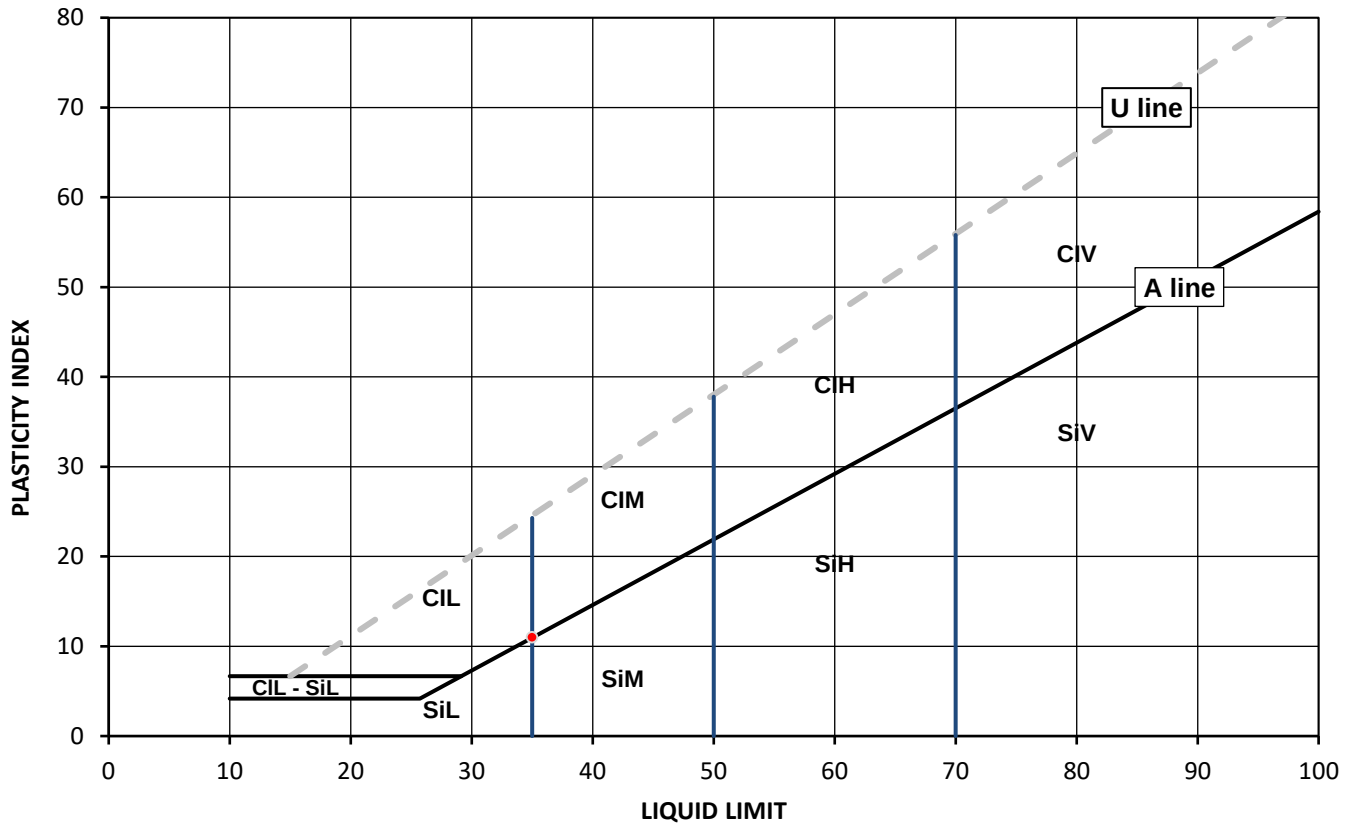
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	03/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593979	Depth Top [m]:	0.50
Hole No.:	TP10	Depth Base [m]:	1.00
Sample Reference:	Combined	Sample Type:	B
Soil Description:	Dark grey clayey very sandy GRAVEL		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
9.6	35	24	11	36



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 236.10

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

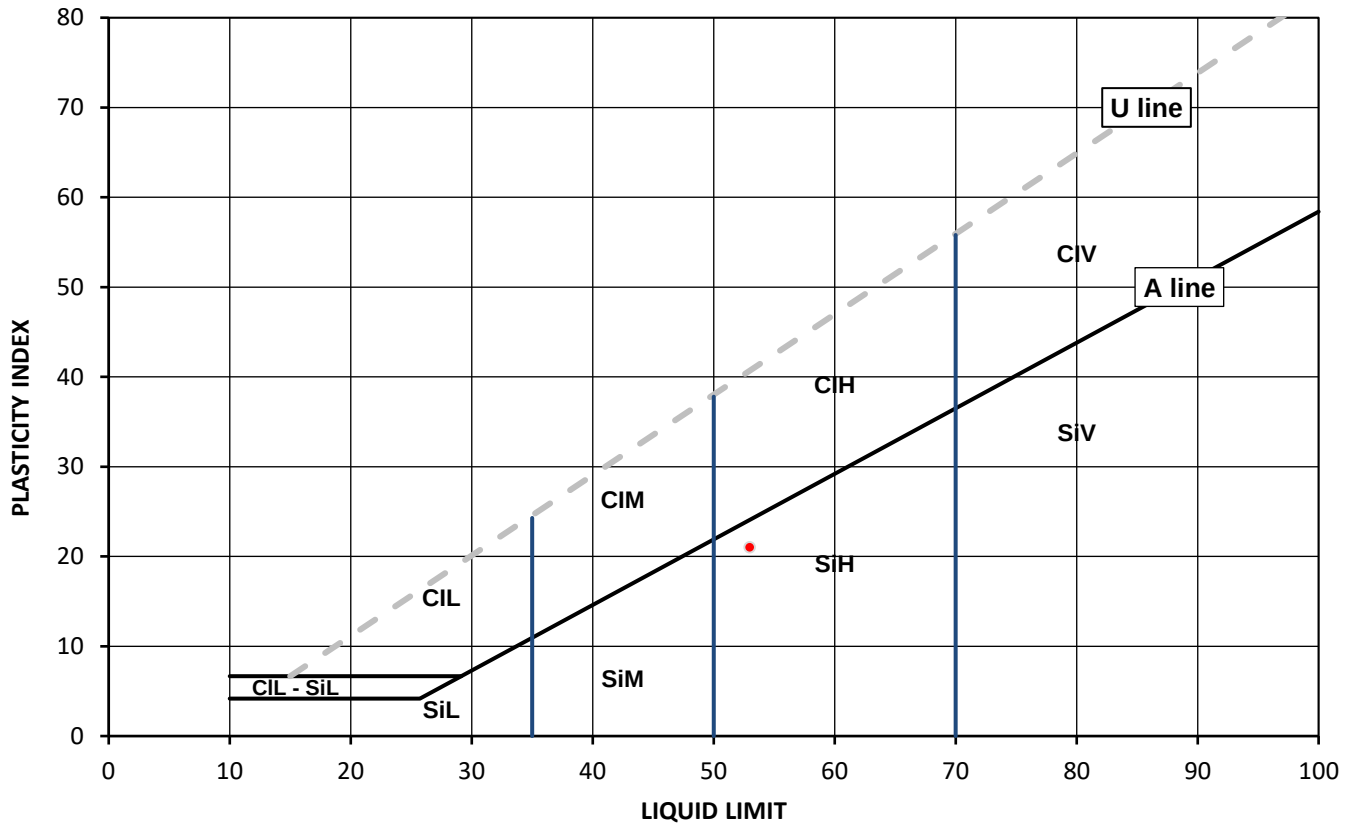
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	04/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593980	Depth Top [m]:	1.20
Hole No.:	TP07	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Dark grey slightly gravelly slightly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
27	53	32	21	82



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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 Date Reported: 27/08/2020 **GF 236.10**

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

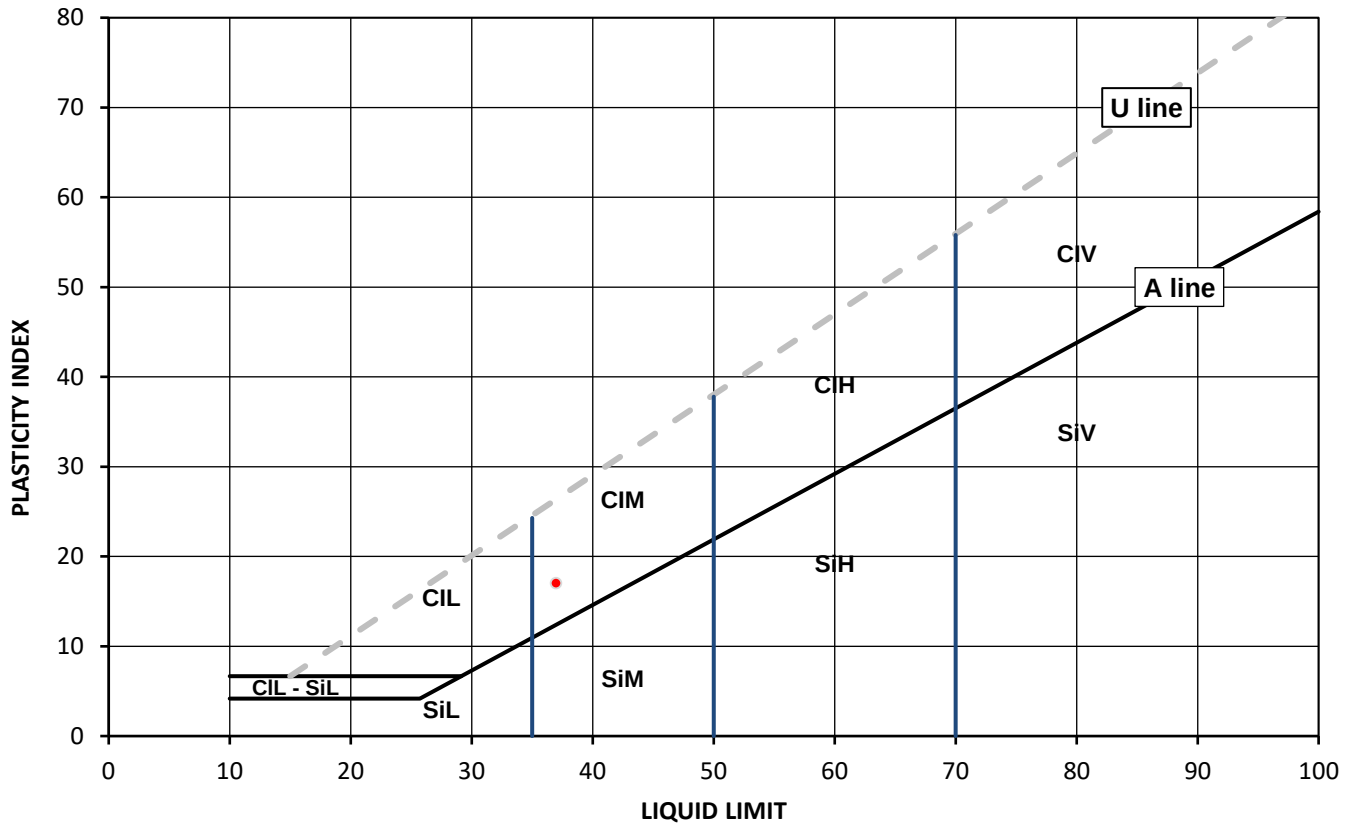
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593986	Depth Top [m]:	1.90
Hole No.:	TP20	Depth Base [m]:	2.00
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Grey mottled brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
25	37	20	17	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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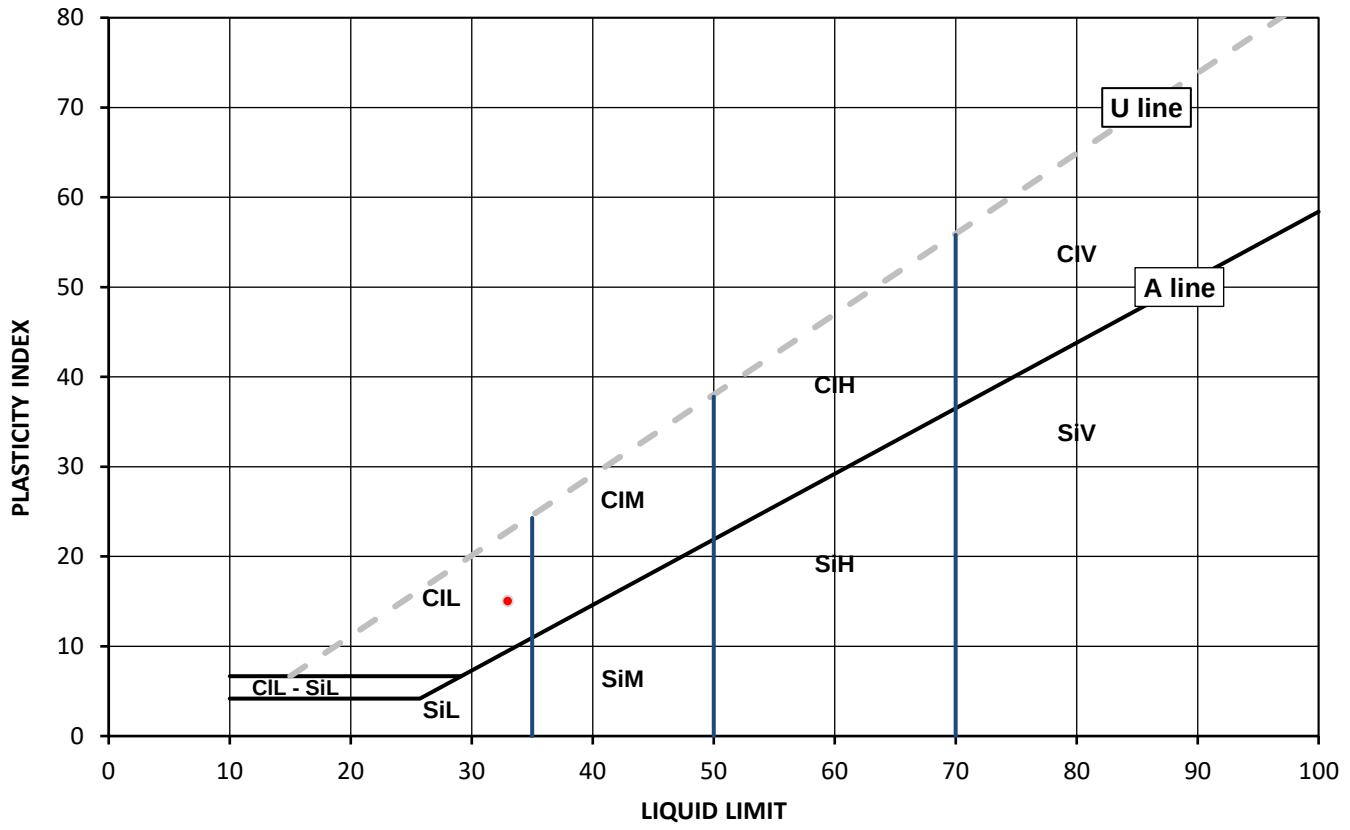
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593987	Depth Top [m]:	1.00
Hole No.:	TP03	Depth Base [m]:	1.10
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	33	18	15	93



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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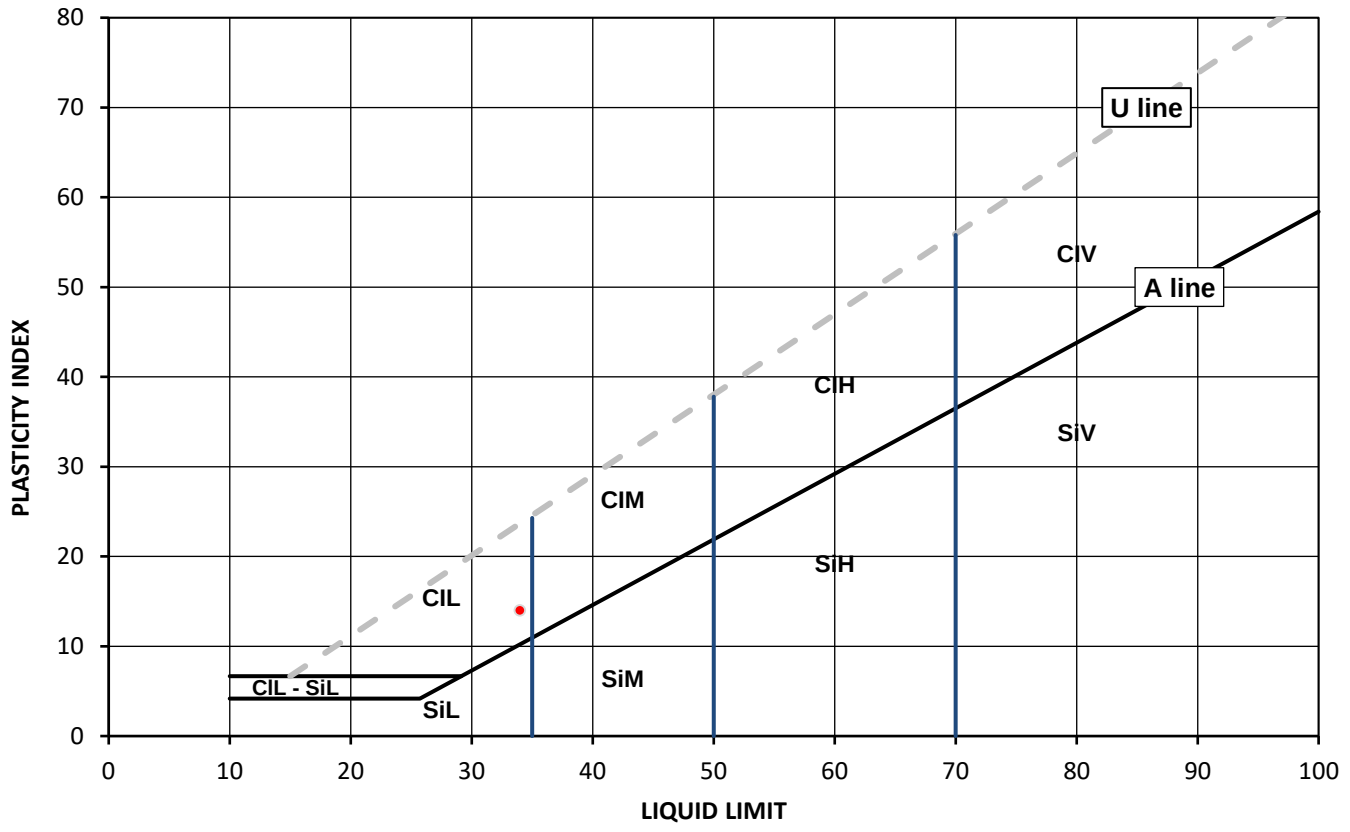
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593989	Depth Top [m]:	1.30
Hole No.:	TT02	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Multicolour slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
20	34	20	14	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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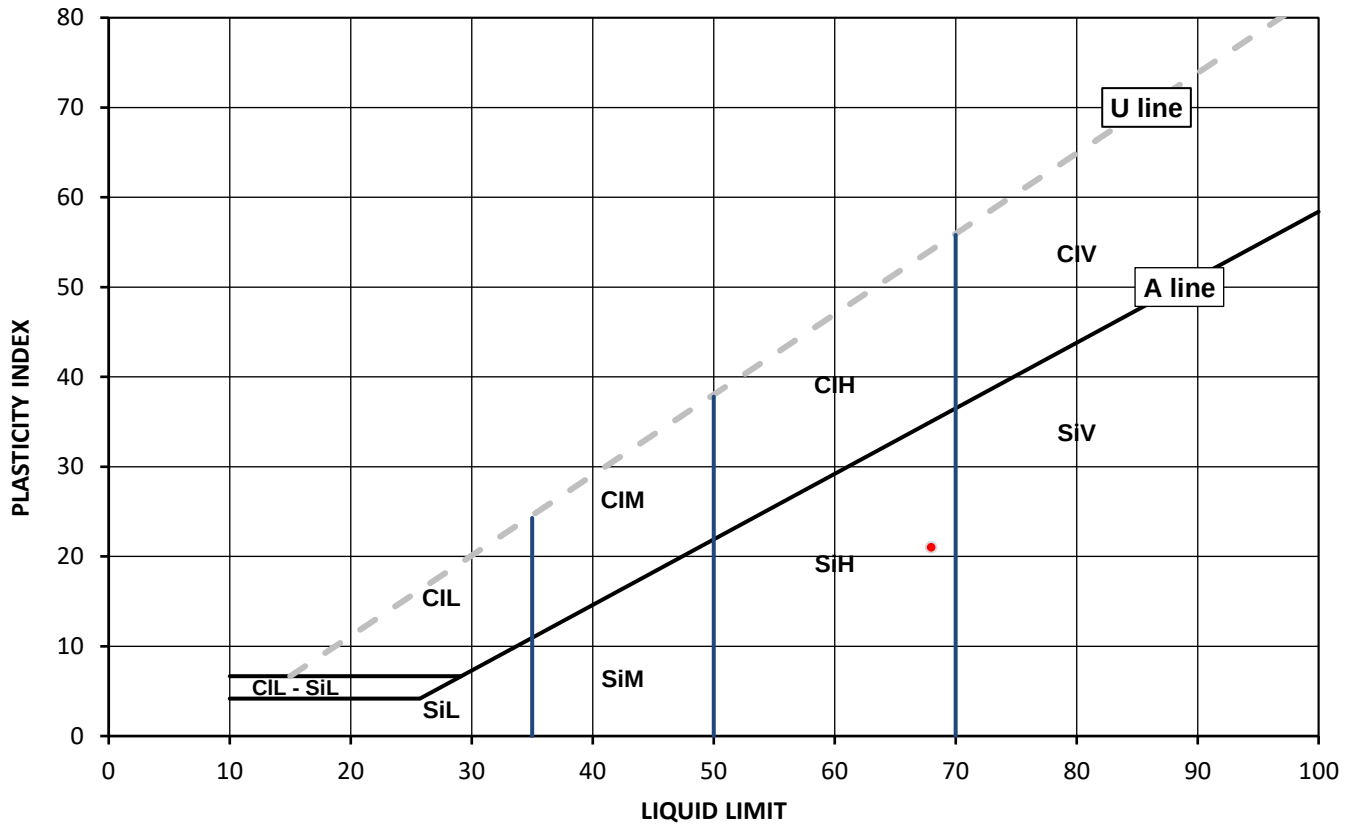
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593991	Depth Top [m]:	1.40
Hole No.:	TP15	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Black silty CLAY		
Sample Preparation:	Tested in natural condition		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
46	68	47	21	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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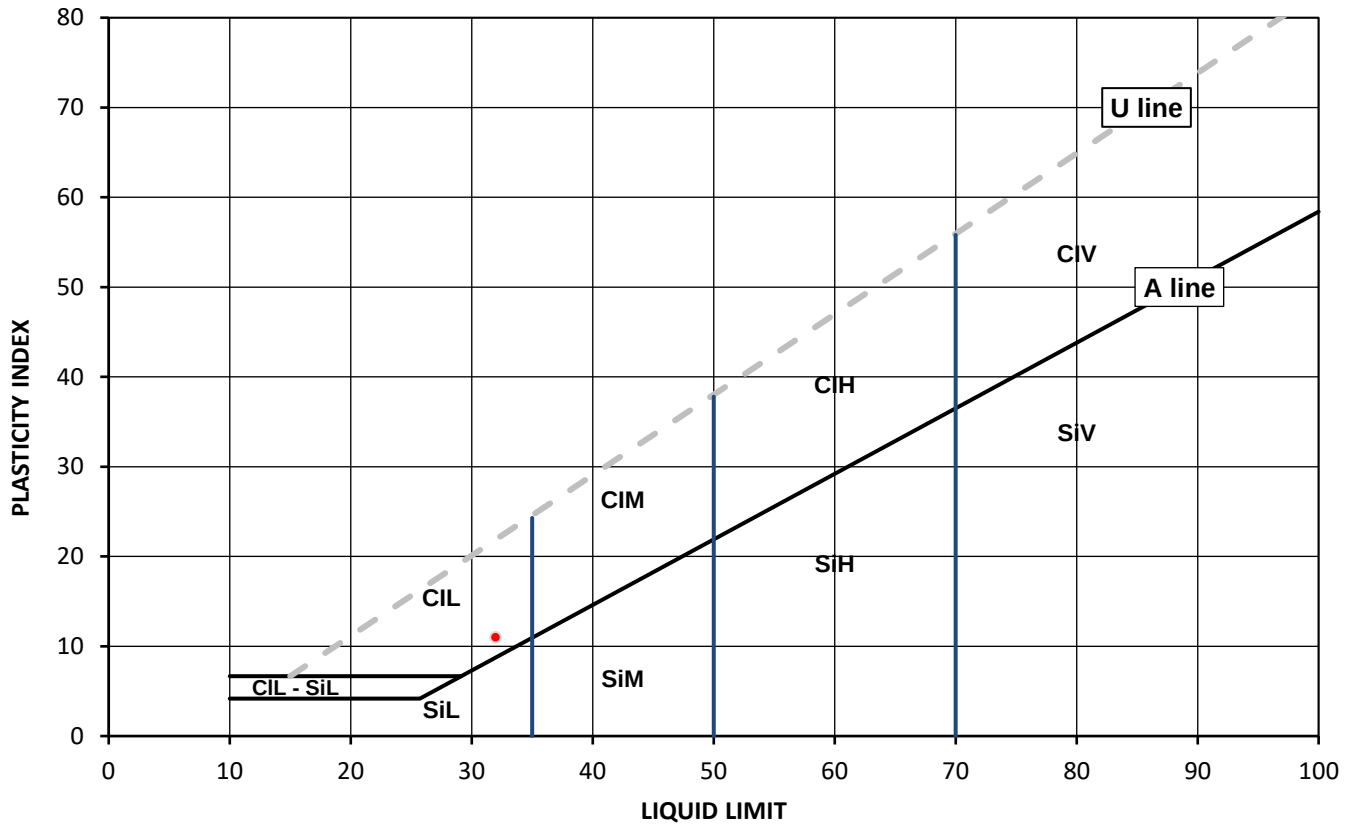
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593992	Depth Top [m]:	1.90
Hole No.:	TP15	Depth Base [m]:	2.00
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Brownish grey slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
30	32	21	11	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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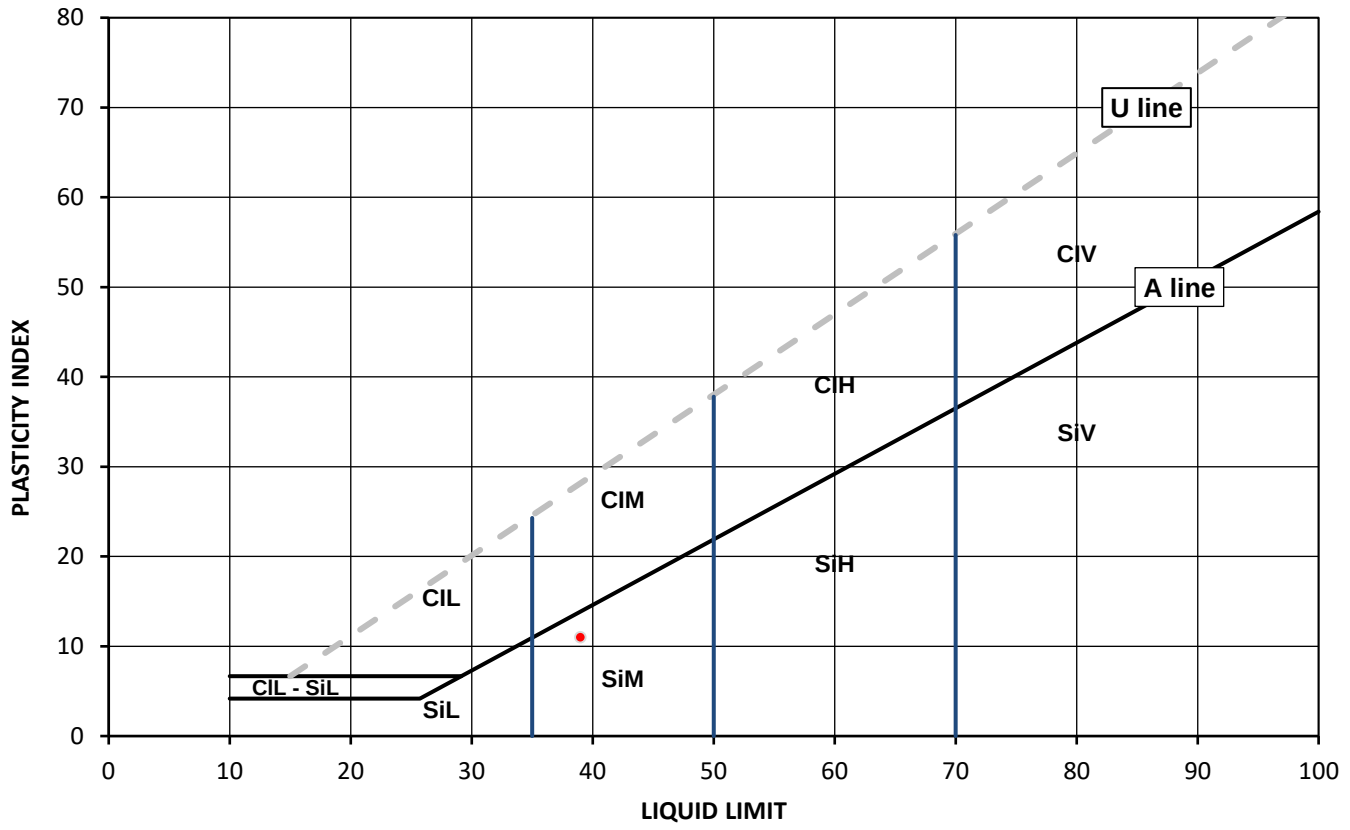
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593994	Depth Top [m]:	0.60
Hole No.:	TP18	Depth Base [m]:	0.70
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Dark grey clayey very sandy GRAVEL		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	39	28	11	36



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 06/08/2020
Date Received: 11/08/2020
Date Tested: 25/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

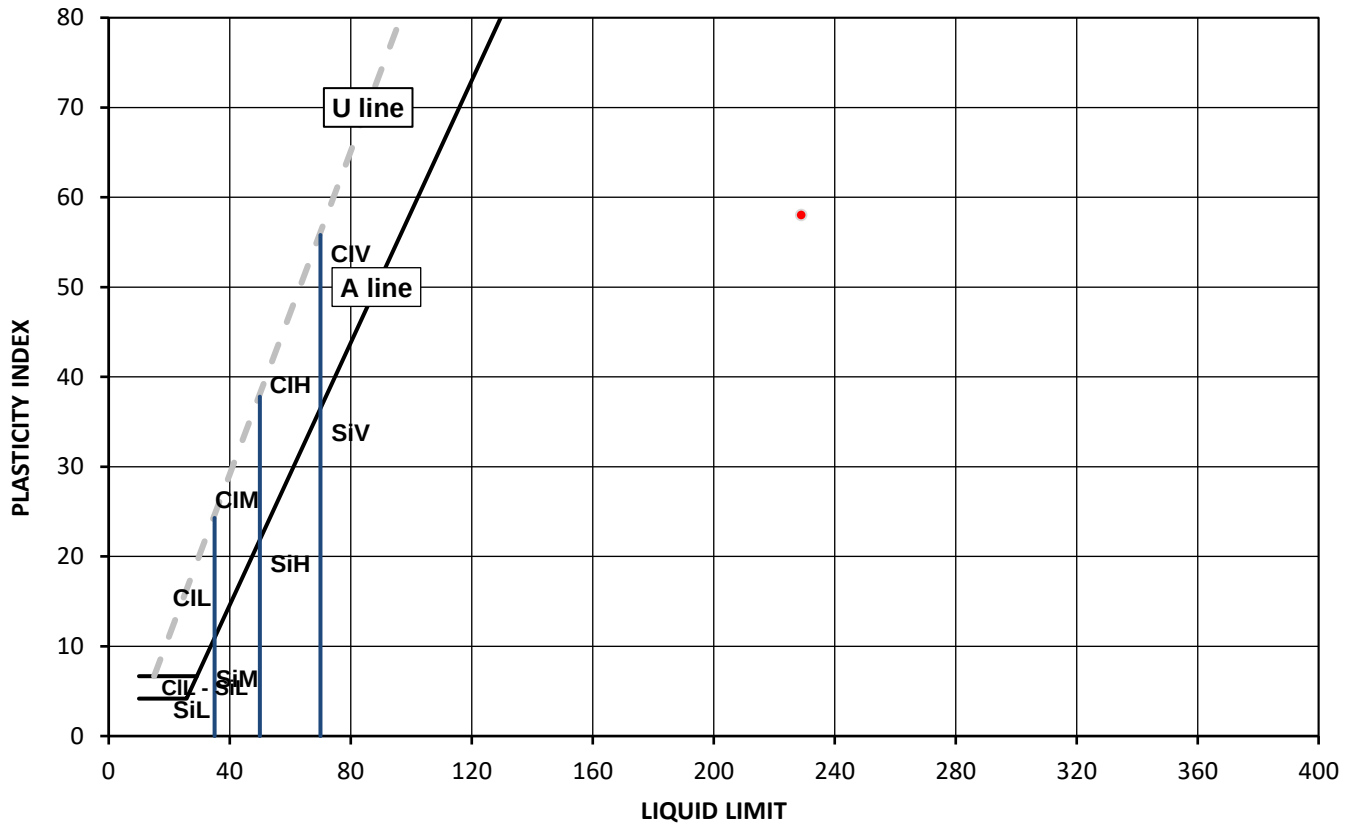
Test Results:

Laboratory Reference: 1593995
Hole No.: TP18
Sample Reference: Not Given
Soil Description: Dark brown organic CLAY

Depth Top [m]: 2.50
Depth Base [m]: 2.60
Sample Type: B

Sample Preparation: Tested in natural condition

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
72	229	171	58	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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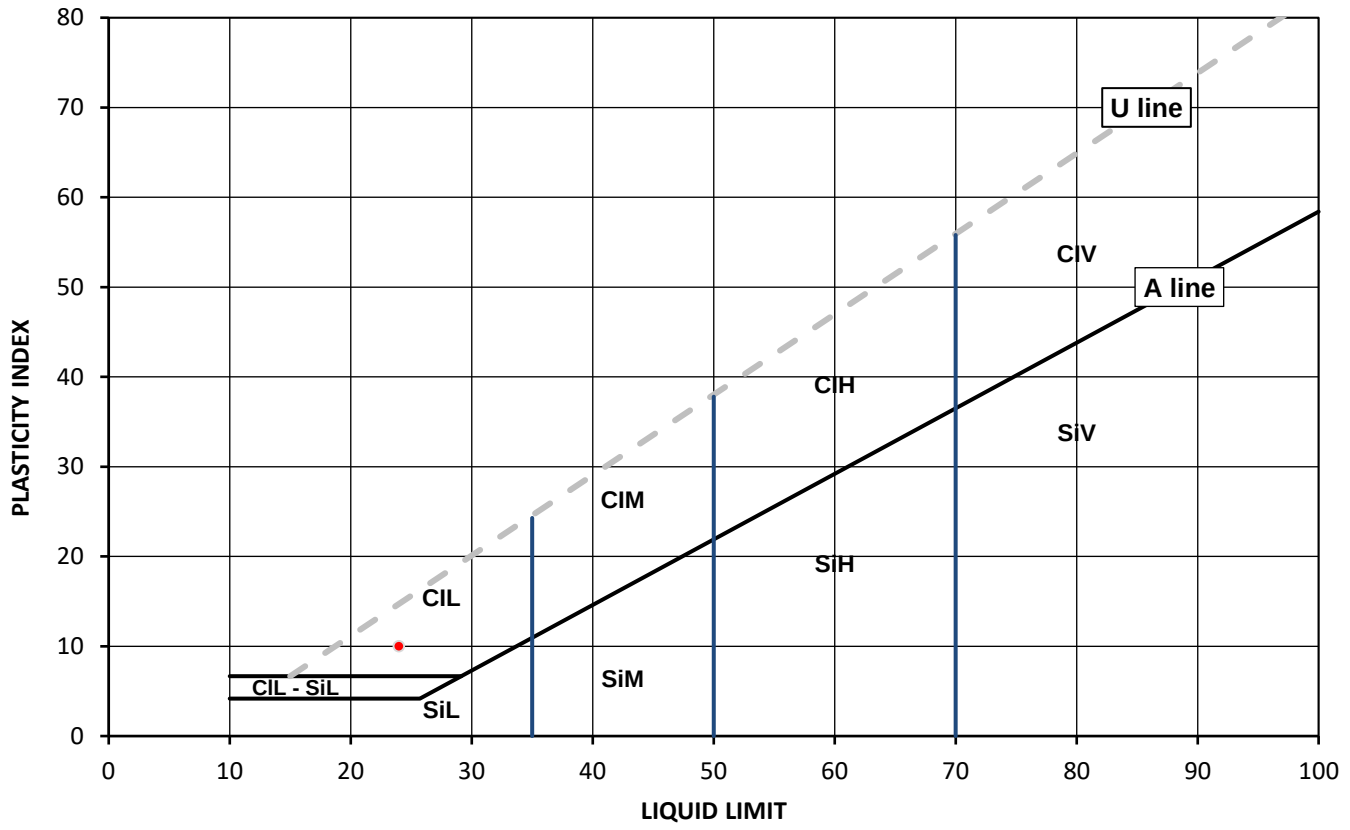
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Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593996	Depth Top [m]:	2.40
Hole No.:	TT02	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Brown slightly gravelly clayey SAND		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
16	24	14	10	95



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

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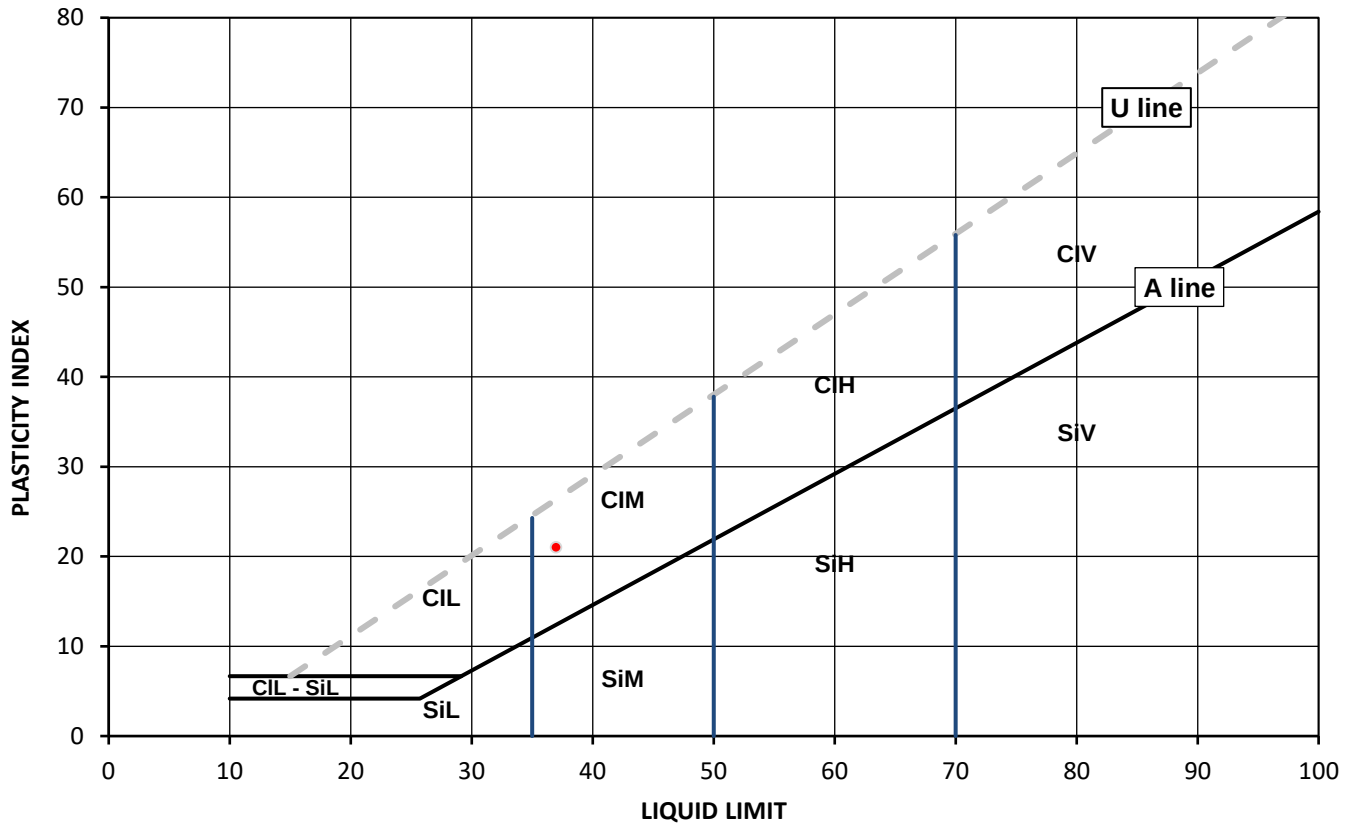
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	07/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593997	Depth Top [m]:	0.90
Hole No.:	TP14	Depth Base [m]:	1.00
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Dark grey clayey sandy GRAVEL		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
15	37	16	21	35



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

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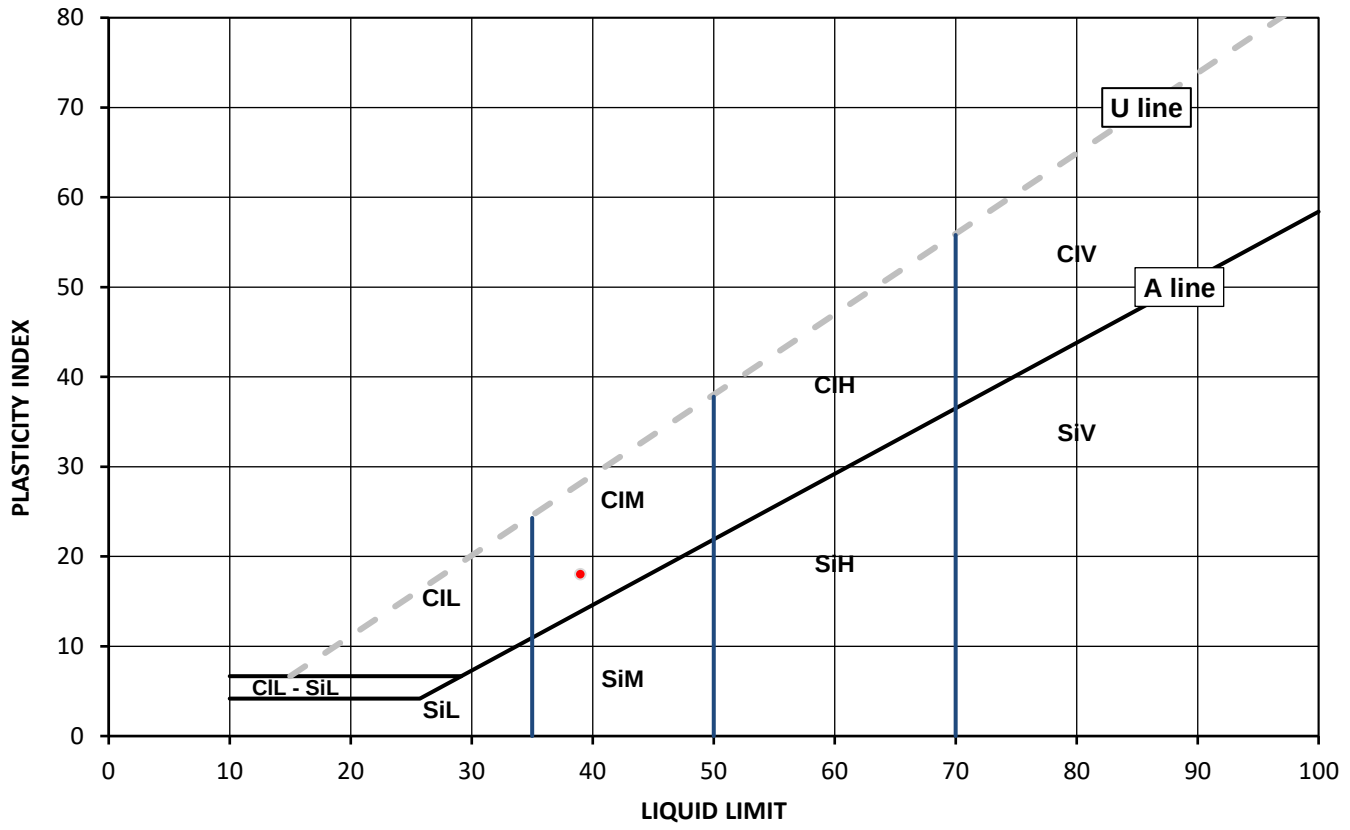
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	07/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593998	Depth Top [m]:	0.80
Hole No.:	WS02	Depth Base [m]:	0.90
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Brown mottled grey slightly gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
24	39	21	18	90



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

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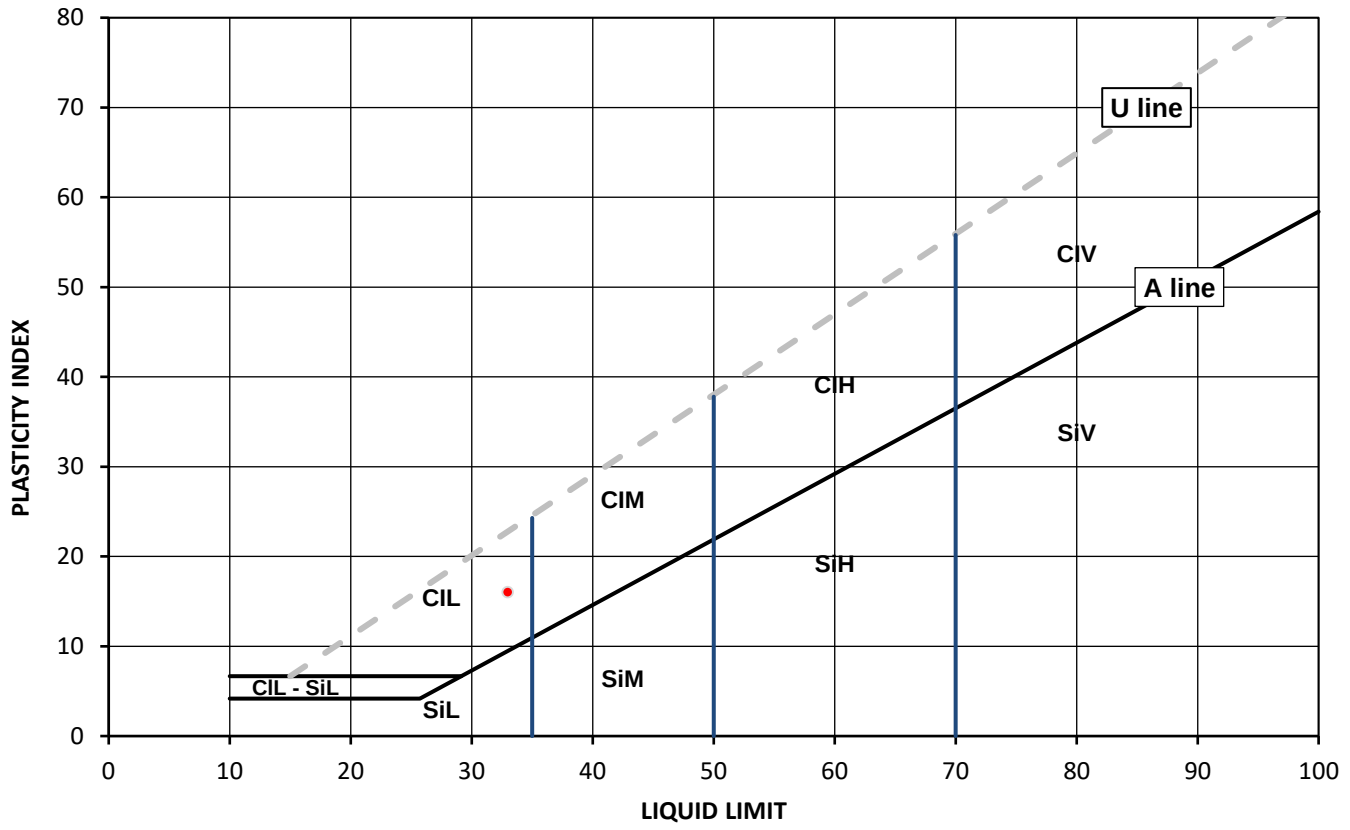
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	11/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594000	Depth Top [m]:	1.00
Hole No.:	TP23	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Greyish brown slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	33	17	16	92



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

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PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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 Date Reported: 27/08/2020 **GF 236.10**

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

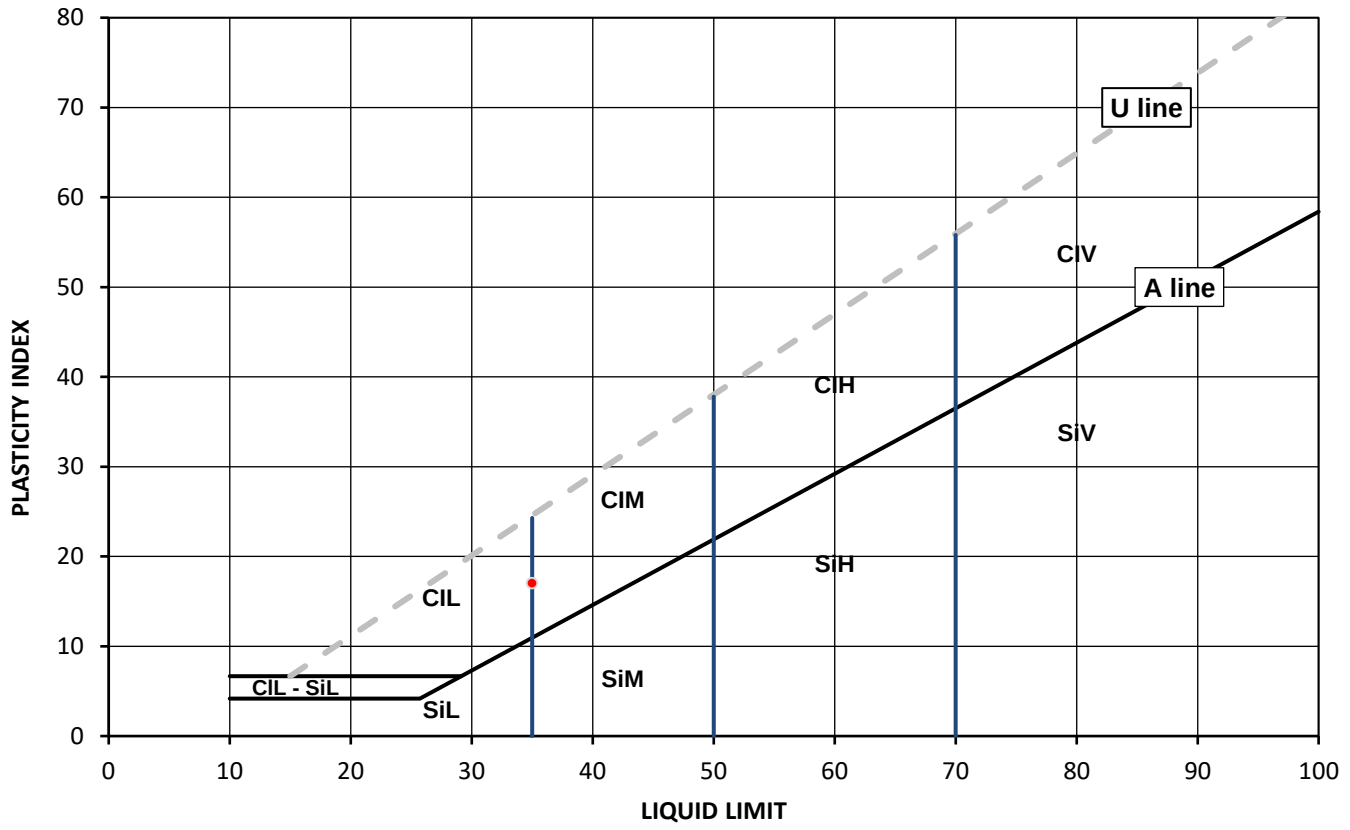
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	11/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	25/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1594001	Depth Top [m]:	0.90
Hole No.:	TP26	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Multicolour slightly gravelly sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
14	35	18	17	91



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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 Date Reported: 27/08/2020 **GF 236.10**

SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 03/08 - 07/08/2020
Date Received: 11/08/2020
Date Tested: 24/08 - 25/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [W]	Water Content [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
1593977	CP07	Not Given	1.20	1.65	B	Grey gravelly clayey SAND with fragments of flintstones and chalk		19											
1593978	CP08	Not Given	3.00	3.45	B	Dark brown GRAVEL		15											
1593981	TP01	Not Given	0.90	Not Given	B	Dark brown slightly gravelly very sandy CLAY		21											
1593987	TP03	Not Given	1.00	1.10	B	Brown slightly gravelly very sandy CLAY	Atterberg 4 Point	20		93	33	18	15			2.68			
1593988	TP03	Not Given	1.60	1.70	B	Brown slightly gravelly clayey SAND		17											
1593980	TP07	Not Given	1.20	Not Given	D	Dark grey slightly gravelly slightly sandy CLAY	Atterberg 4 Point	27		82	53	32	21						
1593979	TP10	Combined	0.50	1.00	B	Dark grey clayey very sandy GRAVEL	Atterberg 4 Point	9.6		36	35	24	11			2.39			
1593982	TP13	Not Given	0.50	0.60	D	Black slightly gravelly SAND		8.5											
1593997	TP14	Not Given	0.90	1.00	B	Dark grey clayey sandy GRAVEL	Atterberg 4 Point	15		35	37	16	21						
1593991	TP15	Not Given	1.40	Not Given	D	Black silty CLAY	Atterberg 4 Point	46		100	68	47	21						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 238.12

SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 05/08 - 11/08/2020
Date Received: 11/08/2020
Date Tested: 24/08 - 25/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [W]	Water Content [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
1593992	TP15	Not Given	1.90	2.00	B	Brownish grey slightly gravelly very sandy CLAY	Atterberg 4 Point	30		98	32	21	11						
1593993	TP16	Not Given	1.10	1.20	B	Dark grey clayey very sandy GRAVEL		7.4											
1593994	TP18	Not Given	0.60	0.70	B	Dark grey clayey very sandy GRAVEL	Atterberg 4 Point	16		36	39	28	11			2.24			
1593995	TP18	Not Given	2.50	2.60	B	Dark brown organic CLAY	Atterberg 4 Point	72		100	229	171	58						
1593984	TP20	Not Given	1.30	Not Given	B	Dark grey CLAY		39											
1593986	TP20	Not Given	1.90	2.00	B	Grey mottled brown slightly gravelly sandy CLAY	Atterberg 4 Point	25		99	37	20	17						
1594000	TP23	Not Given	1.00	Not Given	D	Greyish brown slightly gravelly very sandy CLAY	Atterberg 4 Point	17		92	33	17	16						
1594001	TP26	Not Given	0.90	Not Given	D	Multicolour slightly gravelly sandy CLAY	Atterberg 4 Point	14		91	35	18	17						
1593983	TT01	Not Given	2.10	2.20	B	Dark grey very gravelly very clayey SAND		31											
1593989	TT02	Not Given	1.30	Not Given	D	Multicolour slightly gravelly very sandy CLAY	Atterberg 4 Point	20		98	34	20	14						

Note: # Non accredited; NP - Non plastic

Comments:

Signed: Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 238.12

SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 06/08 - 07/08/2020
Date Received: 11/08/2020
Date Tested: 25/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [W]	Water Content [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top m	Depth Base m	Type			%	%	% Passing 425um %	WL %	Wp %	Ip %	bulk Mg/m3	dry Mg/m3	PD Mg/m3	%		
1593996	TT02	Not Given	2.40	Not Given	D	Brown slightly gravelly clayey SAND	Atterberg 4 Point	16		95	24	14	10						
1593999	TT03	Not Given	0.50	0.60	D	Black gravelly SAND		14											
1593998	WS02	Not Given	0.80	0.90	D	Brown mottled grey slightly gravelly sandy CLAY	Atterberg 4 Point	24		90	39	21	18						

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 238.12

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

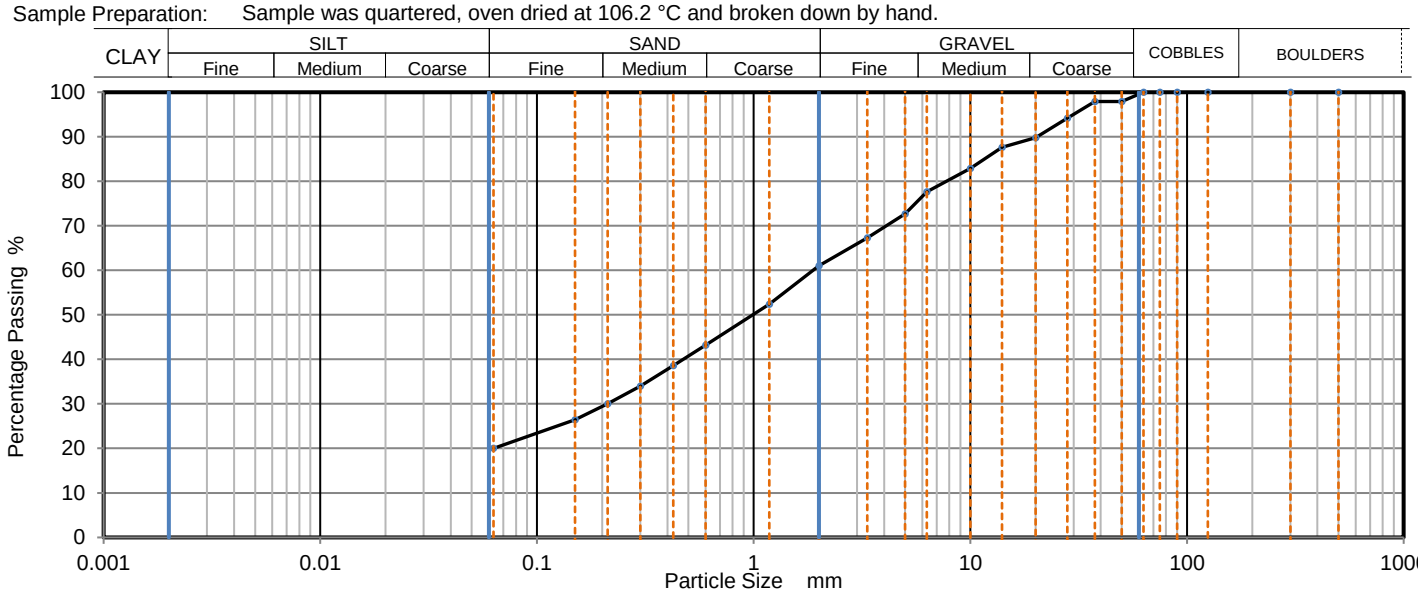
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 03/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593977
Hole No.: CP07
Sample Reference: Not Given
Sample Description: Grey gravelly clayey SAND with fragments of flintstone and chalk
Sample Preparation: Sample was quartered, oven dried at 106.2 °C and broken down by hand.

Depth Top [m]: 1.20
Depth Base [m]: 1.65
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	98		
37.5	98		
28	94		
20	90		
14	88		
10	83		
6.3	78		
5	73		
3.35	67		
2	61		
1.18	52		
0.6	43		
0.425	39		
0.3	34		
0.212	30		
0.15	26		
0.063	20		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	39.00
Sand	41.00
Fines <0.063mm	20.10

Grading Analysis		
D100	mm	63
D60	mm	1.88
D30	mm	0.212
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

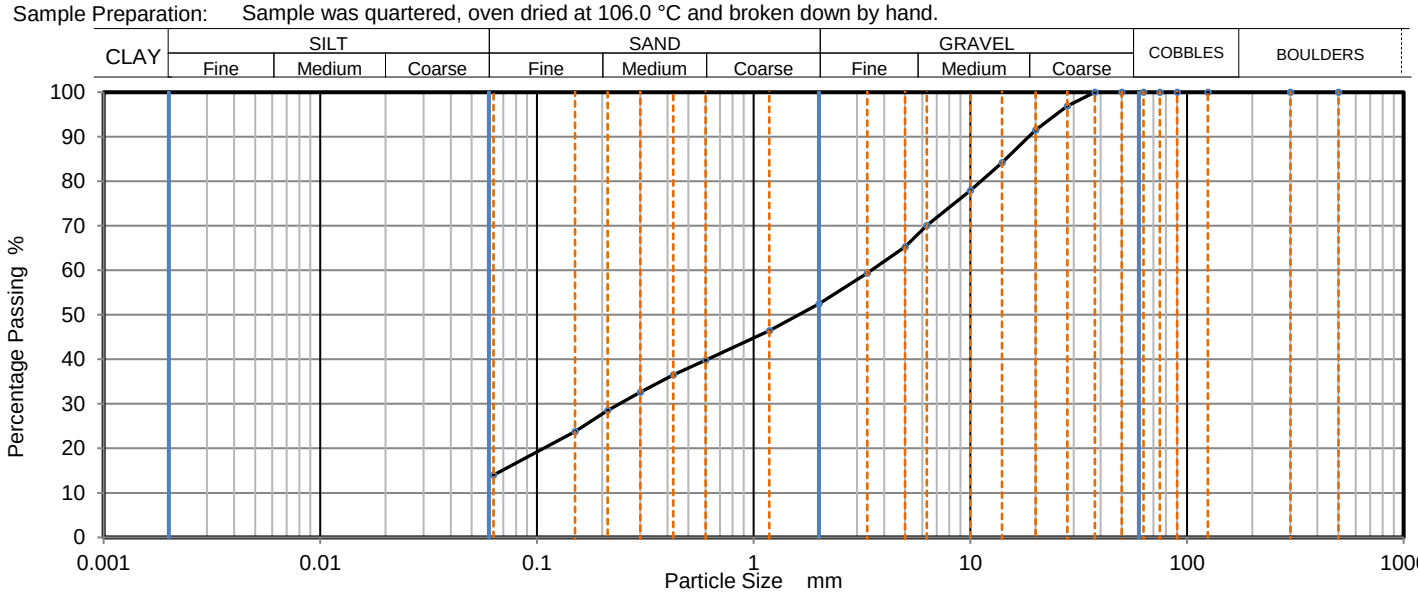
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 03/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593979
Hole No.: TP10
Sample Reference: Combined
Sample Description: Dark grey clayey very sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 0.50
Depth Base [m]: 1.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	92		
14	84		
10	78		
6.3	70		
5	65		
3.35	59		
2	53		
1.18	46		
0.6	40		
0.425	37		
0.3	33		
0.212	29		
0.15	24		
0.063	15		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	47.50
Sand	38.10
Fines <0.063mm	14.50

Grading Analysis		
D100	mm	37.5
D60	mm	3.5
D30	mm	0.241
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

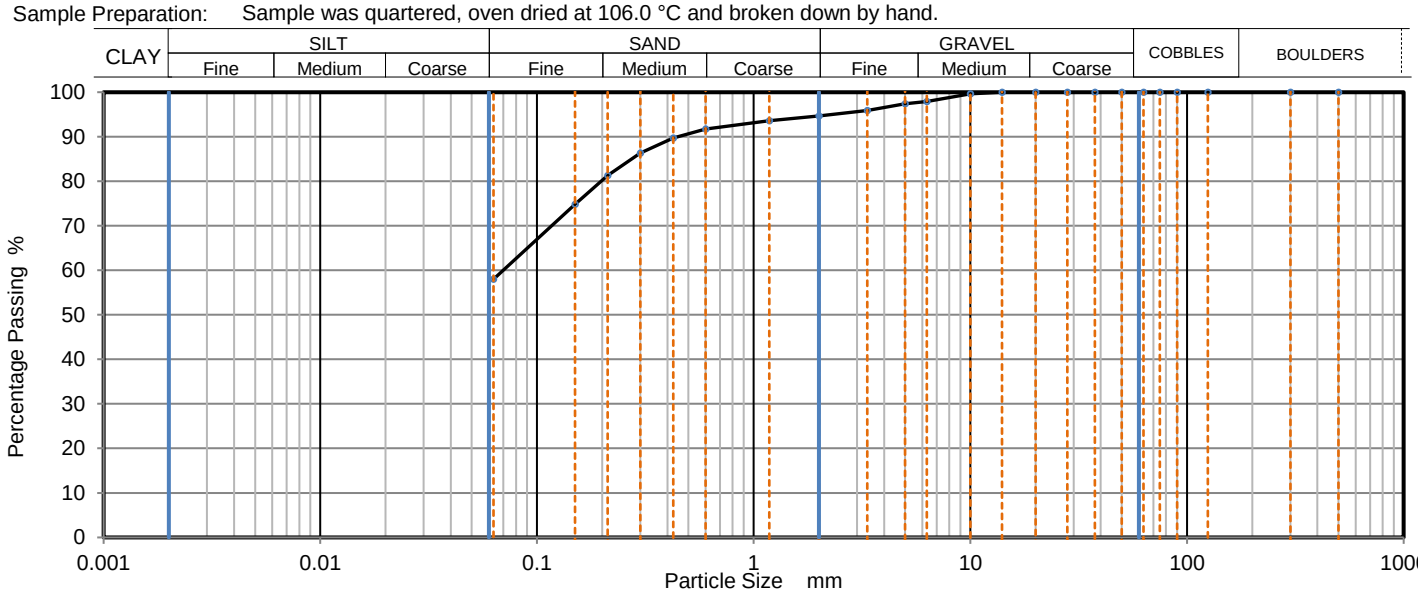
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 04/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593981
Hole No.: TP01
Sample Reference: Not Given
Sample Description: Dark brown slightly gravelly very sandy CLAY
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 0.90
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	98		
5	97		
3.35	96		
2	95		
1.18	94		
0.6	92		
0.425	90		
0.3	86		
0.212	81		
0.15	75		
0.063	59		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	5.30
Sand	36.00
Fines <0.063mm	58.70

Grading Analysis		
D100	mm	14
D60	mm	0.0676
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

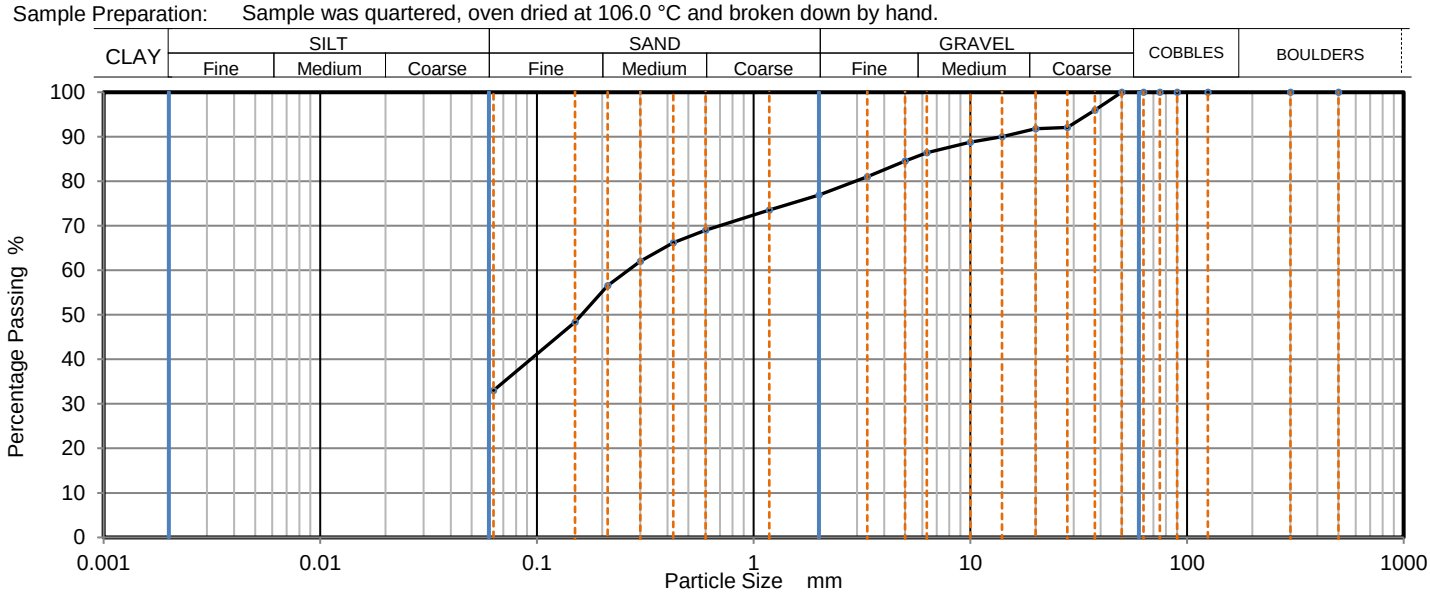
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	24/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593983	Depth Top [m]:	2.10
Hole No.:	TT01	Depth Base [m]:	2.20
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Dark grey very gravelly very clayey SAND		
Sample Preparation:	Sample was quartered, oven dried at 106.0 °C and broken down by hand.		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	92		
20	92		
14	90		
10	89		
6.3	86		
5	85		
3.35	81		
2	77		
1.18	74		
0.6	69		
0.425	66		
0.3	62		
0.212	57		
0.15	48		
0.063	34		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	23.10
Sand	43.30
Fines <0.063mm	33.50

Grading Analysis		
D100	mm	50
D60	mm	0.263
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

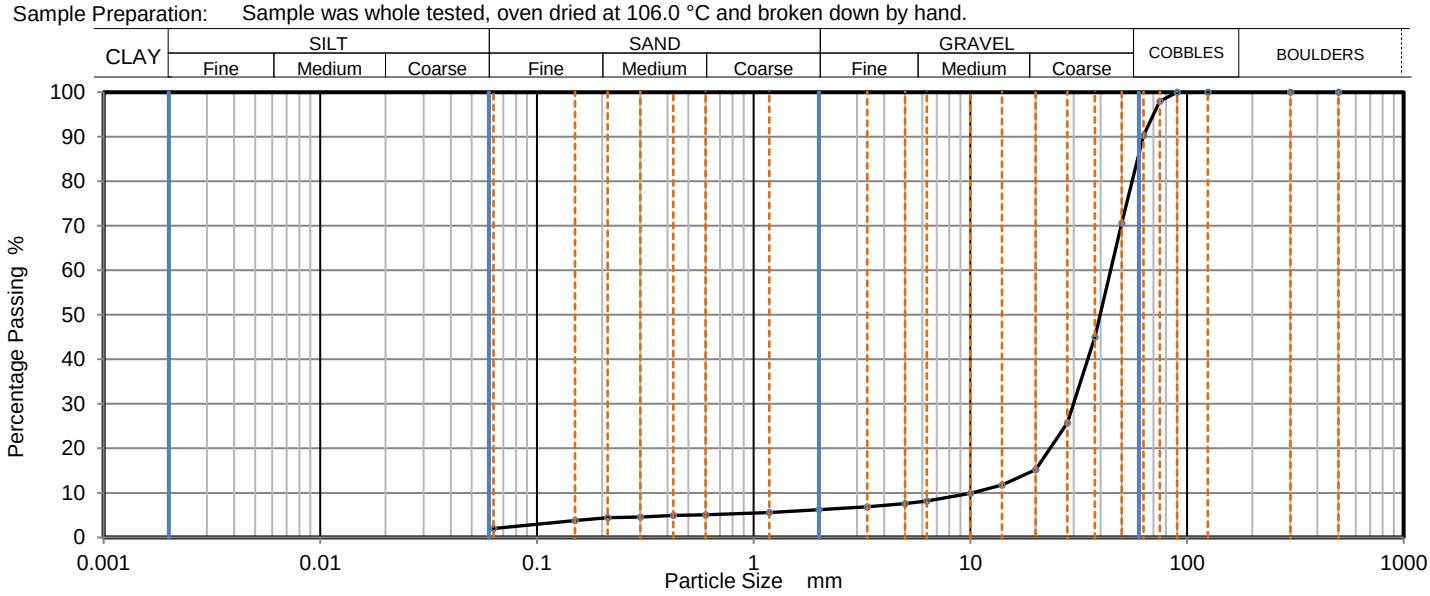
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 05/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593985
Hole No.: TP19
Sample Reference: Not Given
Sample Description: Brown slightly clayey slightly sandy GRAVEL with cobbles
Sample Preparation: Sample was whole tested, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 0.40
Depth Base [m]: 0.50
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	98		
63	90		
50	71		
37.5	45		
28	26		
20	15		
14	12		
10	10		
6.3	8		
5	8		
3.35	7		
2	6		
1.18	6		
0.6	5		
0.425	5		
0.3	5		
0.212	4		
0.15	4		
0.063	2		

Sample Proportions	% dry mass
Very coarse	9.70
Gravel	84.10
Sand	4.10
Fines <0.063mm	2.10

Grading Analysis		
D100	mm	90
D60	mm	44.4
D30	mm	29.9
D10	mm	10.1
Uniformity Coefficient		4.4
Curvature Coefficient		2

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

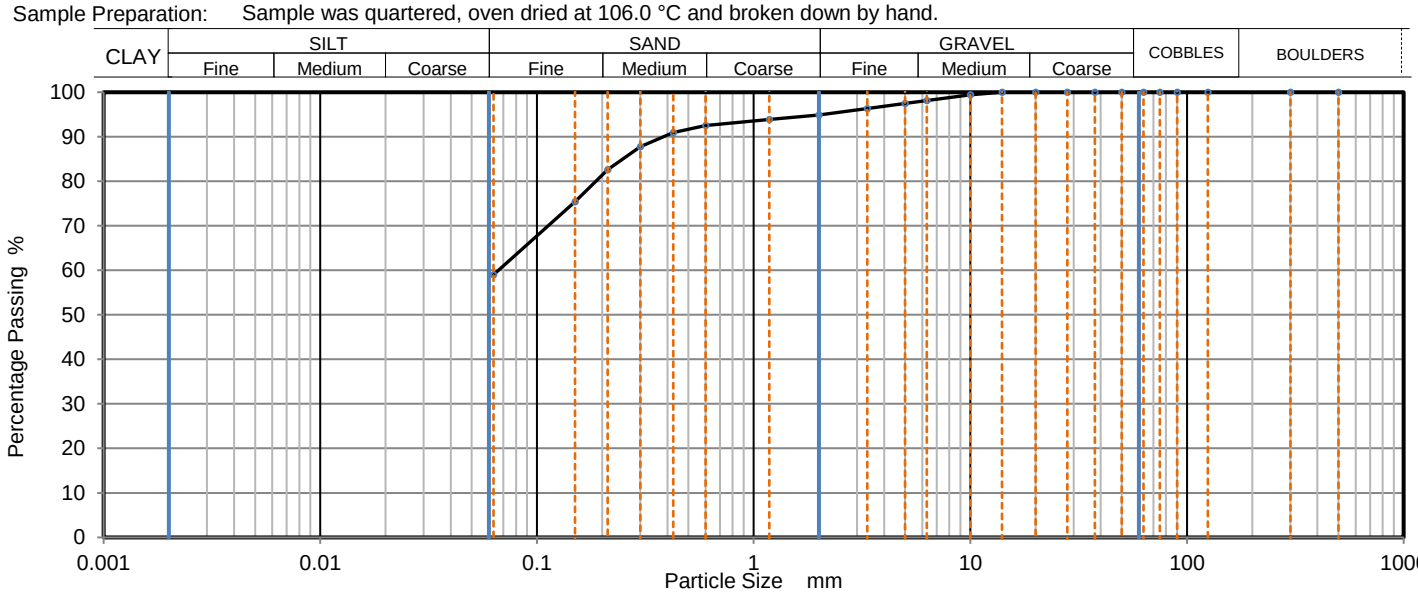
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 05/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593987
Hole No.: TP03
Sample Reference: Not Given
Sample Description: Brown slightly gravelly very sandy CLAY
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 1.00
Depth Base [m]: 1.10
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	98		
5	98		
3.35	96		
2	95		
1.18	94		
0.6	93		
0.425	91		
0.3	88		
0.212	83		
0.15	75		
0.063	59		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	5.10
Sand	35.60
Fines <0.063mm	59.40

Grading Analysis		
D100	mm	14
D60	mm	0.0652
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

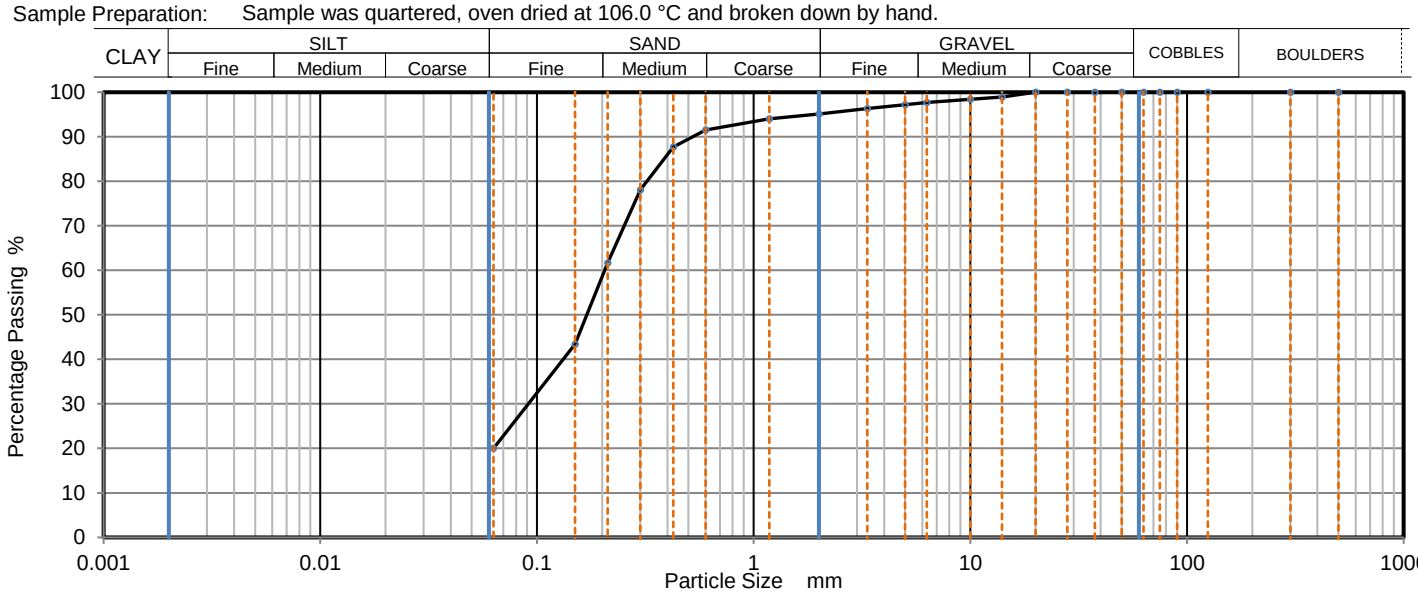
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 05/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593988
Hole No.: TP03
Sample Reference: Not Given
Sample Description: Brown slightly gravelly clayey SAND
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 1.60
Depth Base [m]: 1.70
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	98		
6.3	98		
5	97		
3.35	96		
2	95		
1.18	94		
0.6	92		
0.425	88		
0.3	78		
0.212	62		
0.15	43		
0.063	20		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	4.90
Sand	75.00
Fines <0.063mm	20.10

Grading Analysis		
D100	mm	20
D60	mm	0.205
D30	mm	0.0911
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

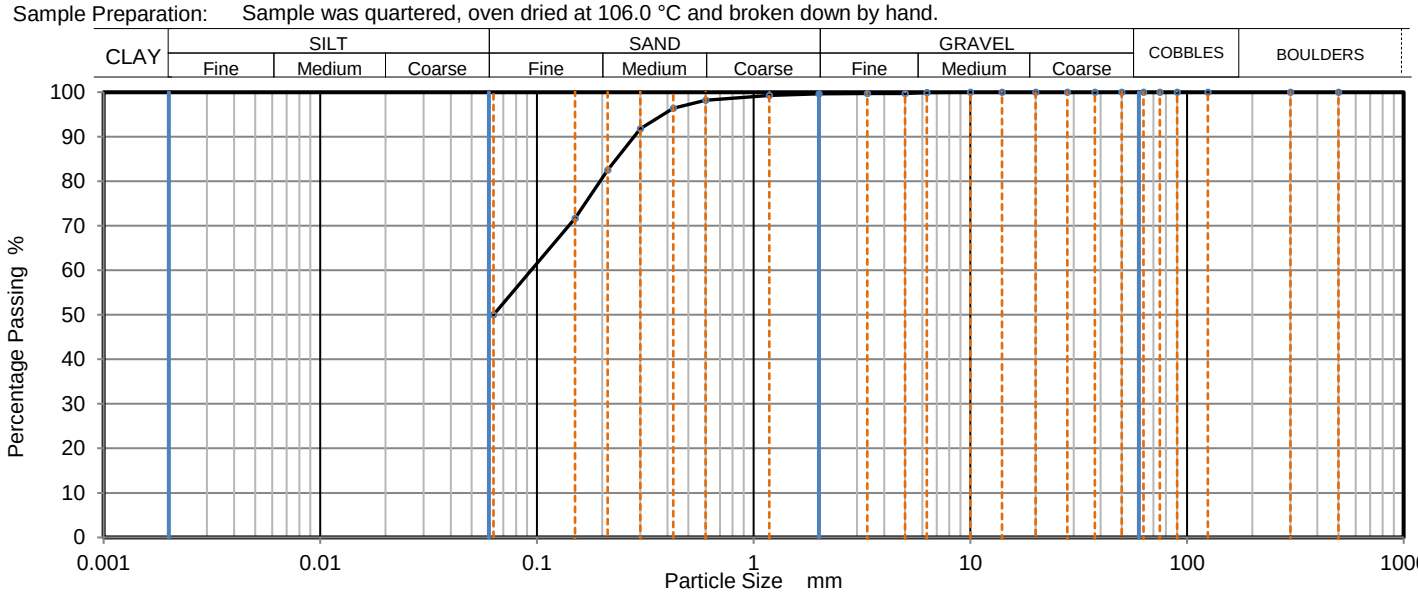
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 06/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593990
Hole No.: TP04
Sample Reference: Not Given
Sample Description: Brownish grey CLAY and SAND
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 1.80
Depth Base [m]: 1.90
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	98		
0.425	96		
0.3	92		
0.212	83		
0.15	72		
0.063	50		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	0.40
Sand	49.20
Fines <0.063mm	50.30

Grading Analysis		
D100	mm	10
D60	mm	0.0933
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

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PL Technical Reviewer
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Date Reported: 27/08/2020

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TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

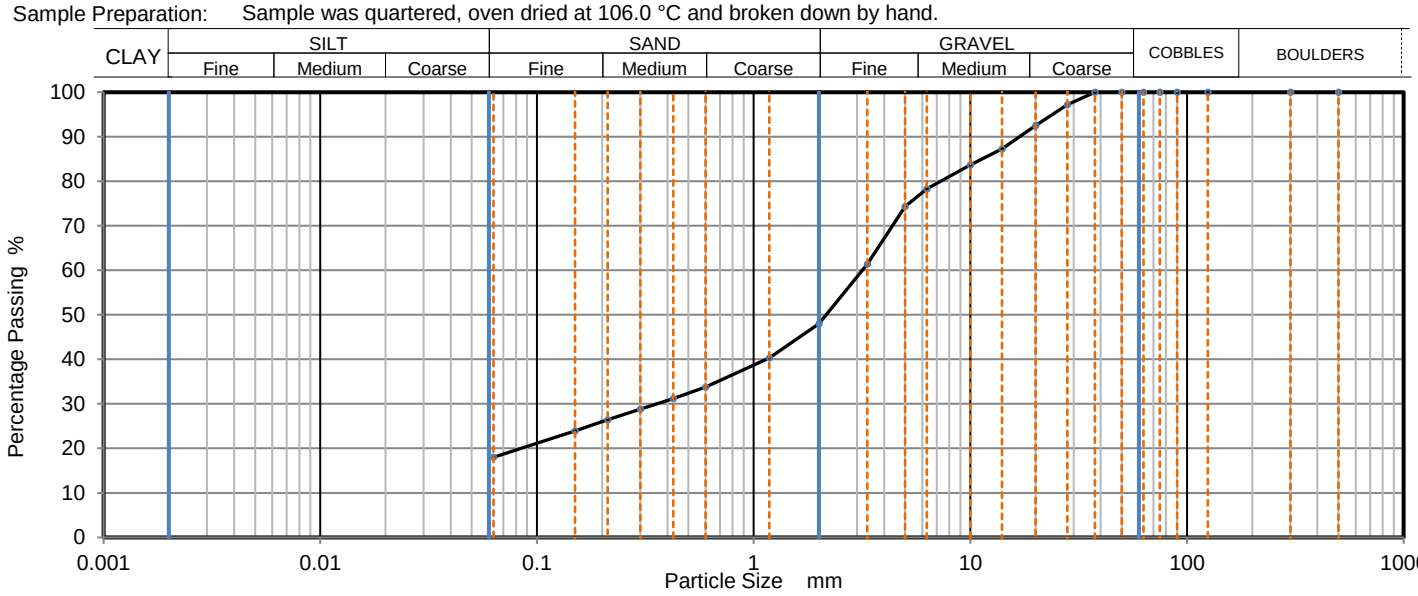
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 06/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593993
Hole No.: TP16
Sample Reference: Not Given
Sample Description: Dark grey clayey very sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 1.10
Depth Base [m]: 1.20
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	97		
20	93		
14	87		
10	84		
6.3	78		
5	74		
3.35	61		
2	48		
1.18	40		
0.6	34		
0.425	31		
0.3	29		
0.212	26		
0.15	24		
0.063	18		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	52.00
Sand	29.80
Fines <0.063mm	18.20

Grading Analysis		
D100	mm	37.5
D60	mm	3.17
D30	mm	0.357
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

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PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

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TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

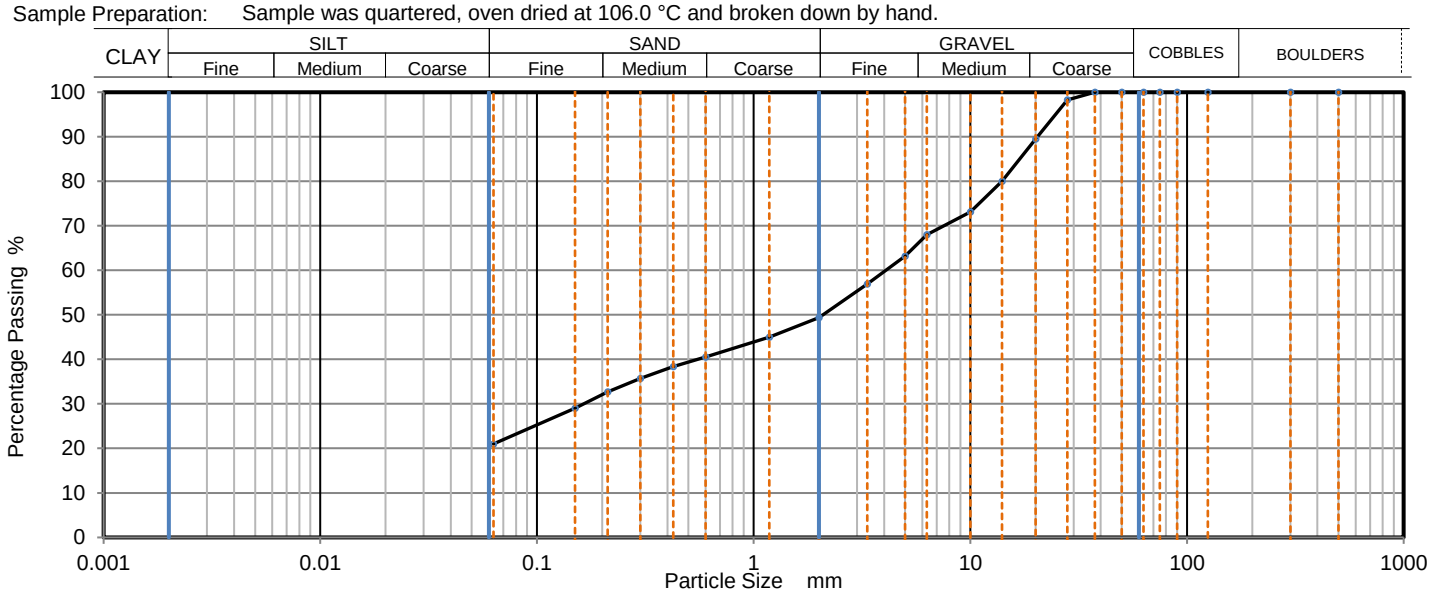
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 06/08/2020
Date Received: 11/08/2020
Date Tested: 24/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593994
Hole No.: TP18
Sample Reference: Not Given
Sample Description: Dark grey clayey very sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 0.60
Depth Base [m]: 0.70
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	98		
20	90		
14	80		
10	73		
6.3	68		
5	63		
3.35	57		
2	49		
1.18	45		
0.6	41		
0.425	38		
0.3	36		
0.212	33		
0.15	29		
0.063	21		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	50.60
Sand	28.40
Fines <0.063mm	21.00

Grading Analysis		
D100	mm	37.5
D60	mm	4.08
D30	mm	0.165
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

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PL Technical Reviewer
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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Particle Size Distribution

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd
Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY
Contact: Sarah Hey
Site Address: Stopes Road, Bolton

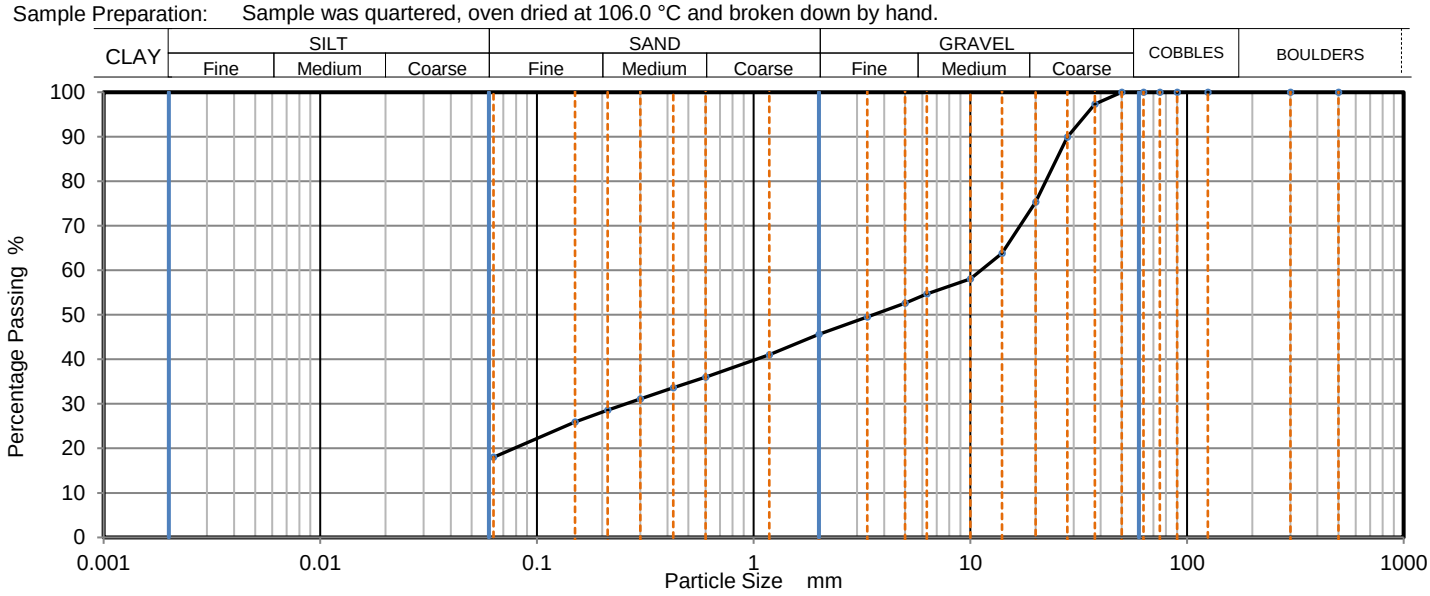
Client Reference: C-15220-C
Job Number: 20-24999
Date Sampled: 07/08/2020
Date Received: 11/08/2020
Date Tested: 25/08/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1593997
Hole No.: TP14
Sample Reference: Not Given
Sample Description: Dark grey clayey sandy GRAVEL
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 0.90
Depth Base [m]: 1.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	97		
28	90		
20	75		
14	64		
10	58		
6.3	55		
5	53		
3.35	50		
2	46		
1.18	41		
0.6	36		
0.425	34		
0.3	31		
0.212	29		
0.15	26		
0.063	19		

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	54.40
Sand	26.70
Fines <0.063mm	18.80

Grading Analysis		
D100	mm	50
D60	mm	11.2
D30	mm	0.259
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks:

Signed:

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PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 100.18

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	03/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	27/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

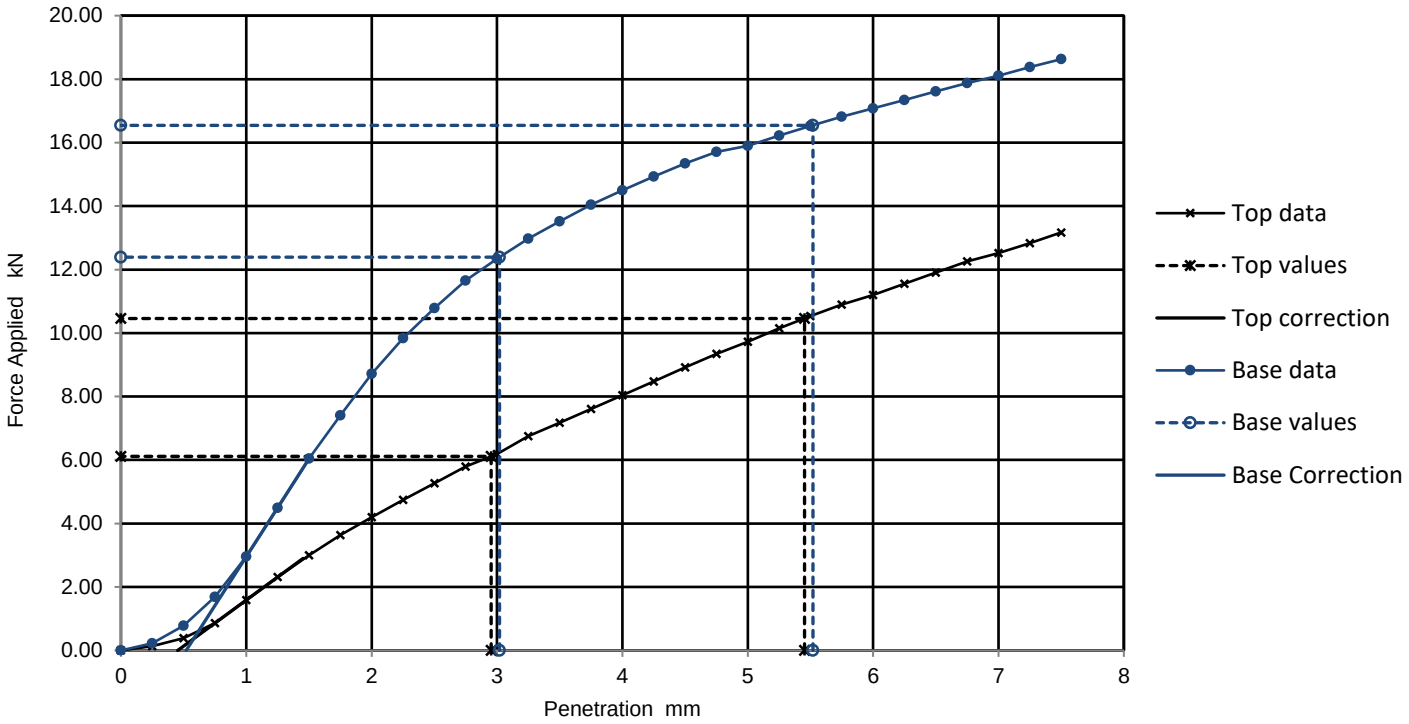
Laboratory Reference:	1593979	Depth Top [m]:	0.50
Hole No.:	TP10	Depth Base [m]:	1.00
Sample Reference:	Combined	Sample Type:	B
Sample Description:	Dark grey clayey very sandy GRAVEL		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	8 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	1.87	Mg/m3	Surcharge applied	8 kg
	Dry density	1.70	Mg/m3		4.9 kPa
	Moisture content	9.9	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	Yes	46.0	52.0	52.0		10
BASE	Yes	94.0	83.0	94.0		9.9

Remarks:

Test/ Specimen specific remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	04/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

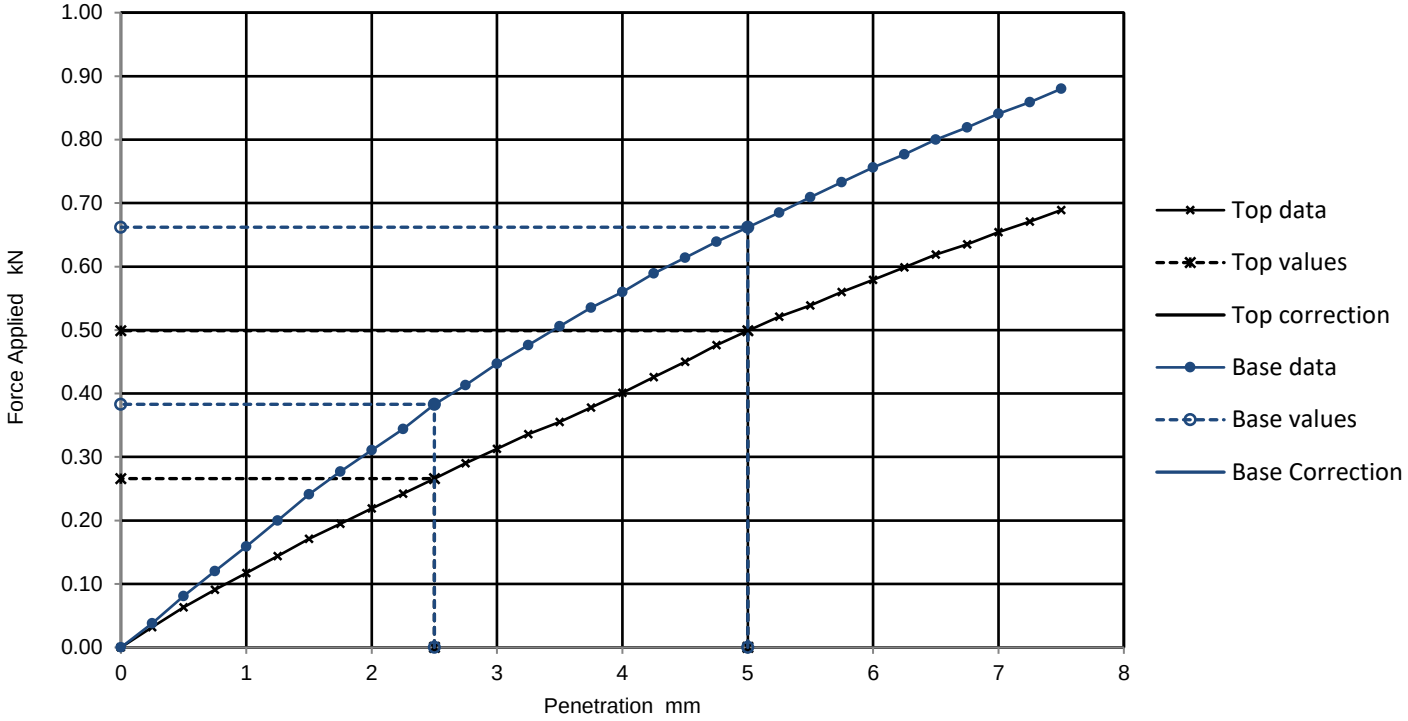
Laboratory Reference:	1593980	Depth Top [m]:	1.20
Hole No.:	TP07	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Dark grey slightly gravelly slightly sandy CLAY		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	2 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	1.65	Mg/m3	Surcharge applied	8 kg
	Dry density	1.31	Mg/m3		4.8 kPa
	Moisture content	26	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	Average	Moisture Content %
TOP	No	2.0	2.5	2.5		26
BASE	No	2.9	3.3	3.3		26

Remarks:

Test/ Specimen specific remarks:

Signed:

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PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

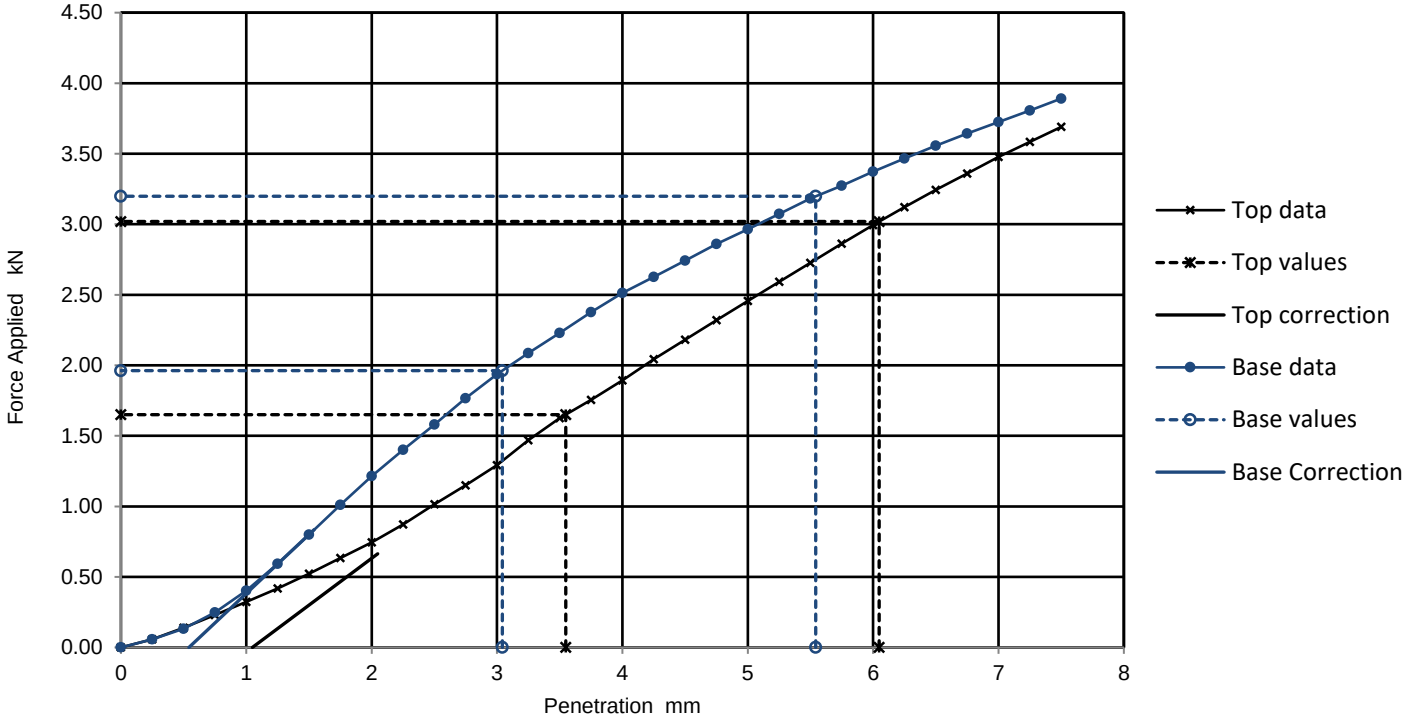
Laboratory Reference:	1593982	Depth Top [m]:	0.50
Hole No.:	TP13	Depth Base [m]:	0.60
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Black slightly gravelly SAND		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	7 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	1.16	Mg/m3	Surcharge applied	8 kg
	Dry density	1.07	Mg/m3		4.8 kPa
	Moisture content	8.5	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	Yes	12.0	15.0	15.0	16.0	8.8
BASE	Yes	15.0	16.0	16.0		8.6

Remarks:

Test/ Specimen specific remarks:

Signed:

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PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

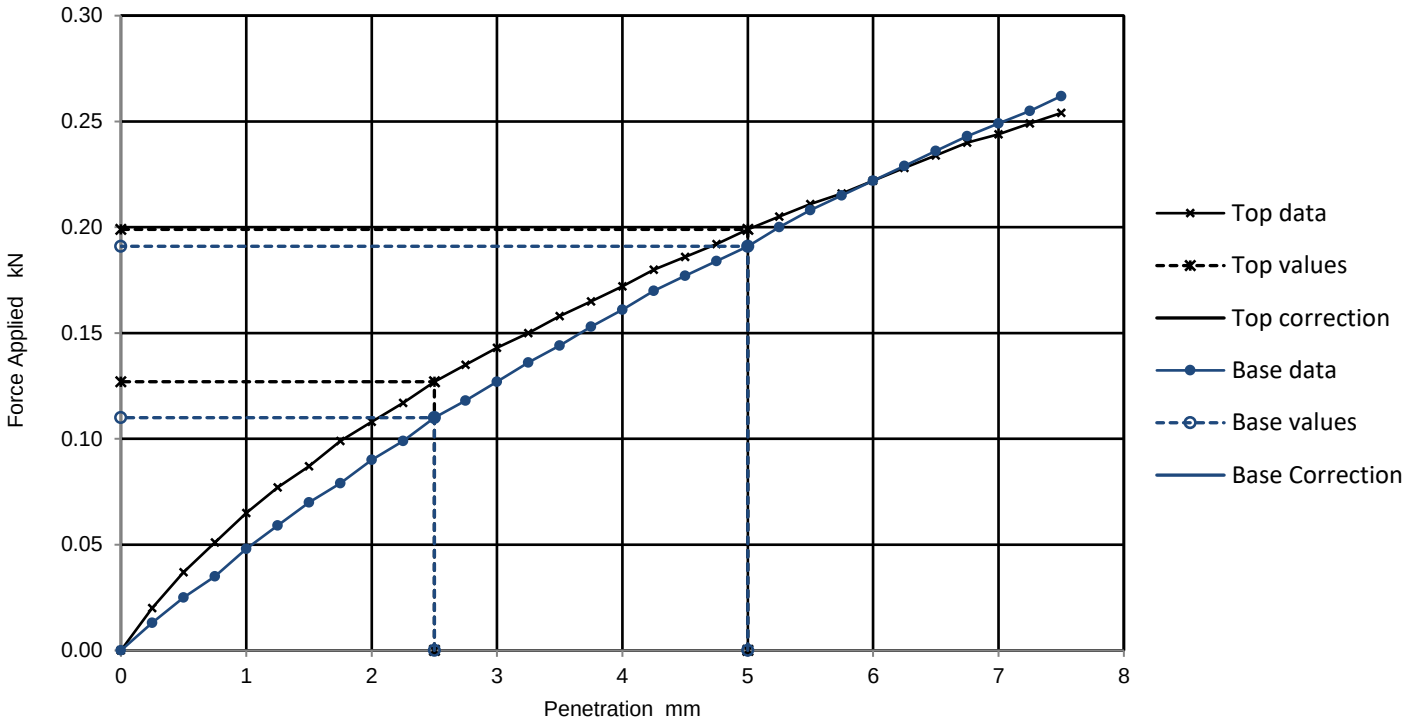
Laboratory Reference:	1593987	Depth Top [m]:	1.00
Hole No.:	TP03	Depth Base [m]:	1.10
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Brown slightly gravelly very sandy CLAY		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	0 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	2.03	Mg/m3	Surcharge applied	8 kg
	Dry density	1.80	Mg/m3		4.9 kPa
	Moisture content	13	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	No	1.0	1.0	1.0	1.0	12
BASE	No	0.8	1.0	1.0		13

Remarks:

Test/ Specimen specific remarks:

Signed:

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

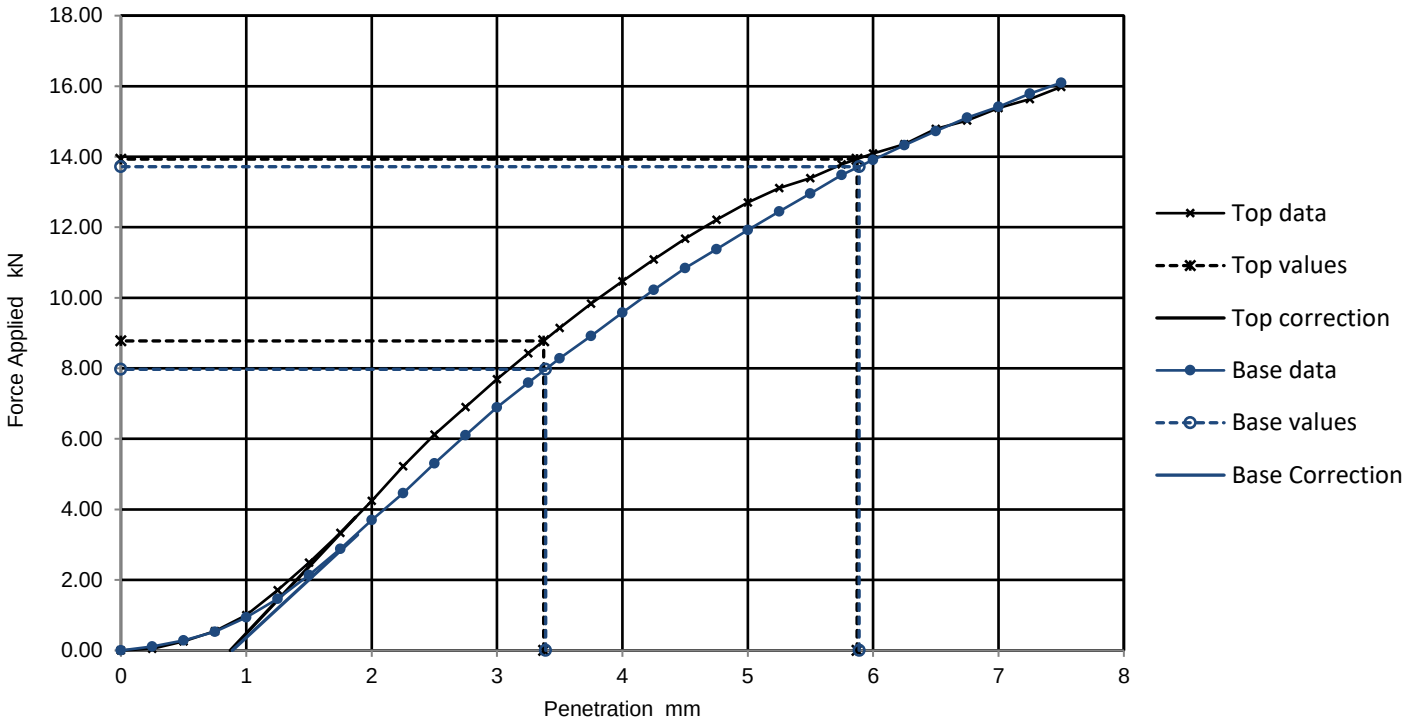
Laboratory Reference:	1593994	Depth Top [m]:	0.60
Hole No.:	TP18	Depth Base [m]:	0.70
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Dark grey clayey very sandy GRAVEL		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	10 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	1.71	Mg/m3	Surcharge applied	8 kg
	Dry density	1.46	Mg/m3		4.8 kPa
	Moisture content	17	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	Yes	66.0	70.0	70.0	69.0	17
BASE	Yes	60.0	69.0	69.0		17

Remarks:

Test/ Specimen specific remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	07/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

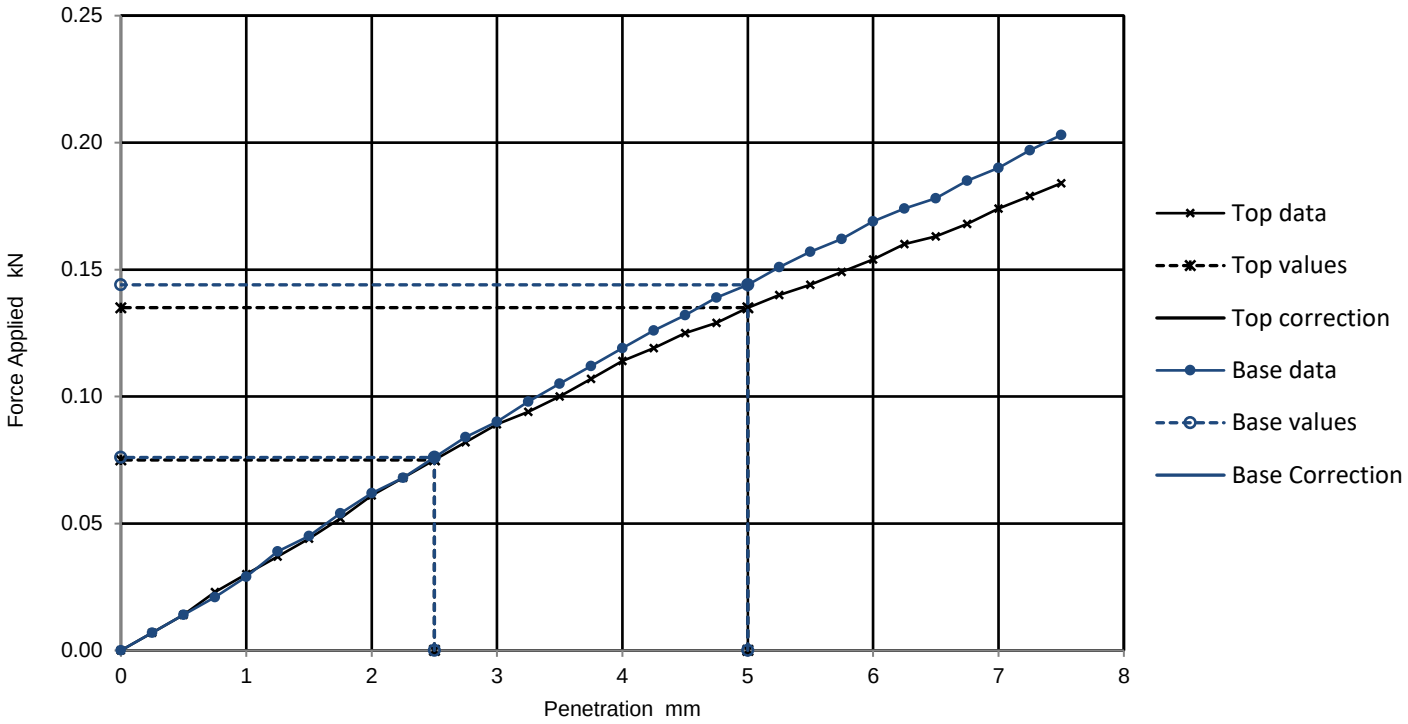
Laboratory Reference:	1593998	Depth Top [m]:	0.80
Hole No.:	WS02	Depth Base [m]:	0.90
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown mottled grey slightly gravelly sandy CLAY		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	1 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	2.24	Mg/m3	Surcharge applied	8 kg
	Dry density	1.82	Mg/m3		4.9 kPa
	Moisture content	23	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	No	0.6	0.7	0.7	0.7	23
BASE	No	0.6	0.7	0.7		24

Remarks:

Test/ Specimen specific remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Determination of California Bearing Ratio

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-4: 1990: Clause 7

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	07/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

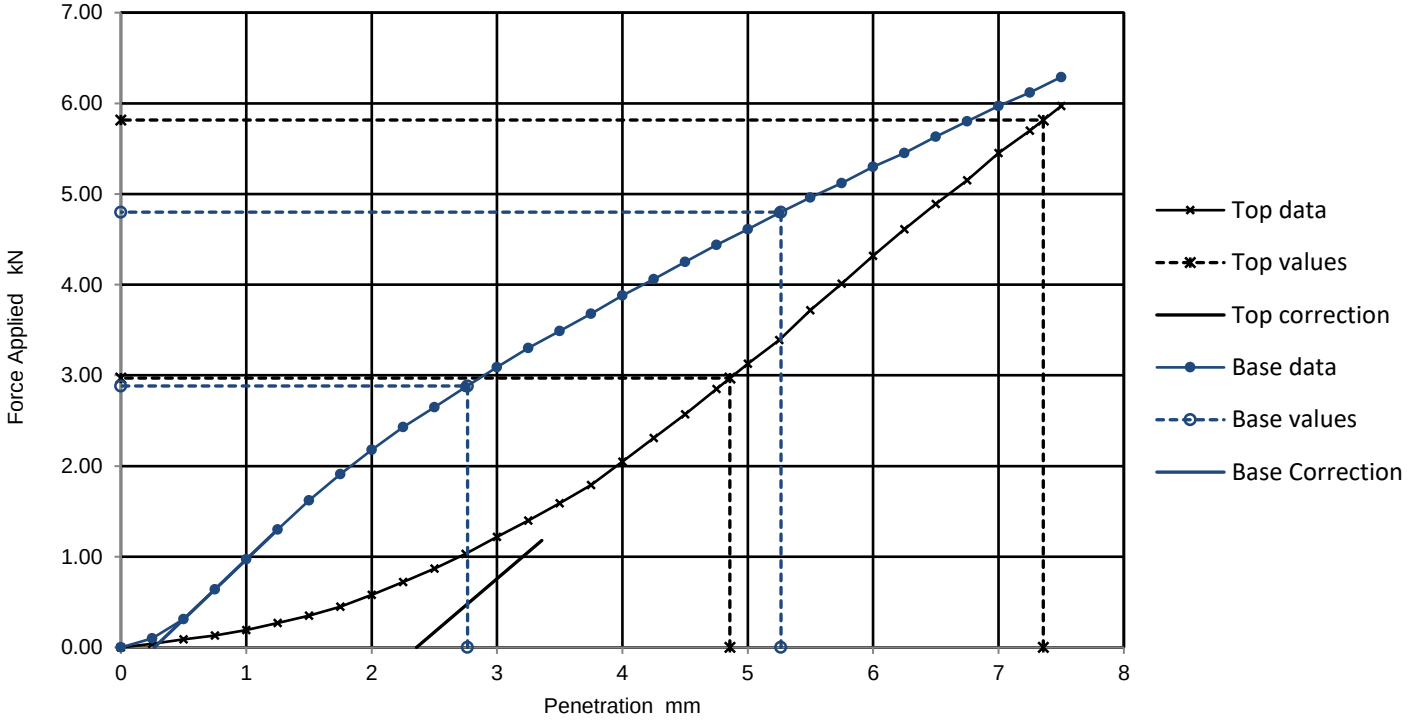
Laboratory Reference:	1593999	Depth Top [m]:	0.50
Hole No.:	TT03	Depth Base [m]:	0.60
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Black gravelly SAND		

Specimen Preparation:

Condition	Remoulded	Soaking details	Not soaked
Details	Recompacted with specified standard effort using 2.5kg rammer	Period of soaking	days
		Time to surface	days
		Amount of swell recorded	mm
Material retained on 20mm sieve removed	3 %	Dry density after soaking	Mg/m3

Initial Specimen details	Bulk density	1.61	Mg/m3	Surcharge applied	8 kg
	Dry density	1.41	Mg/m3		4.9 kPa
	Moisture content	14	%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP	Yes	23.0	29.0	29.0	27.0	13
BASE	Yes	22.0	24.0	24.0		14

Remarks:

Test/ Specimen specific remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 108.15

TEST CERTIFICATE

Dry Density / Moisture Content

Relationship Light Compaction

Tested in Accordance with:
BS 1377-4: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

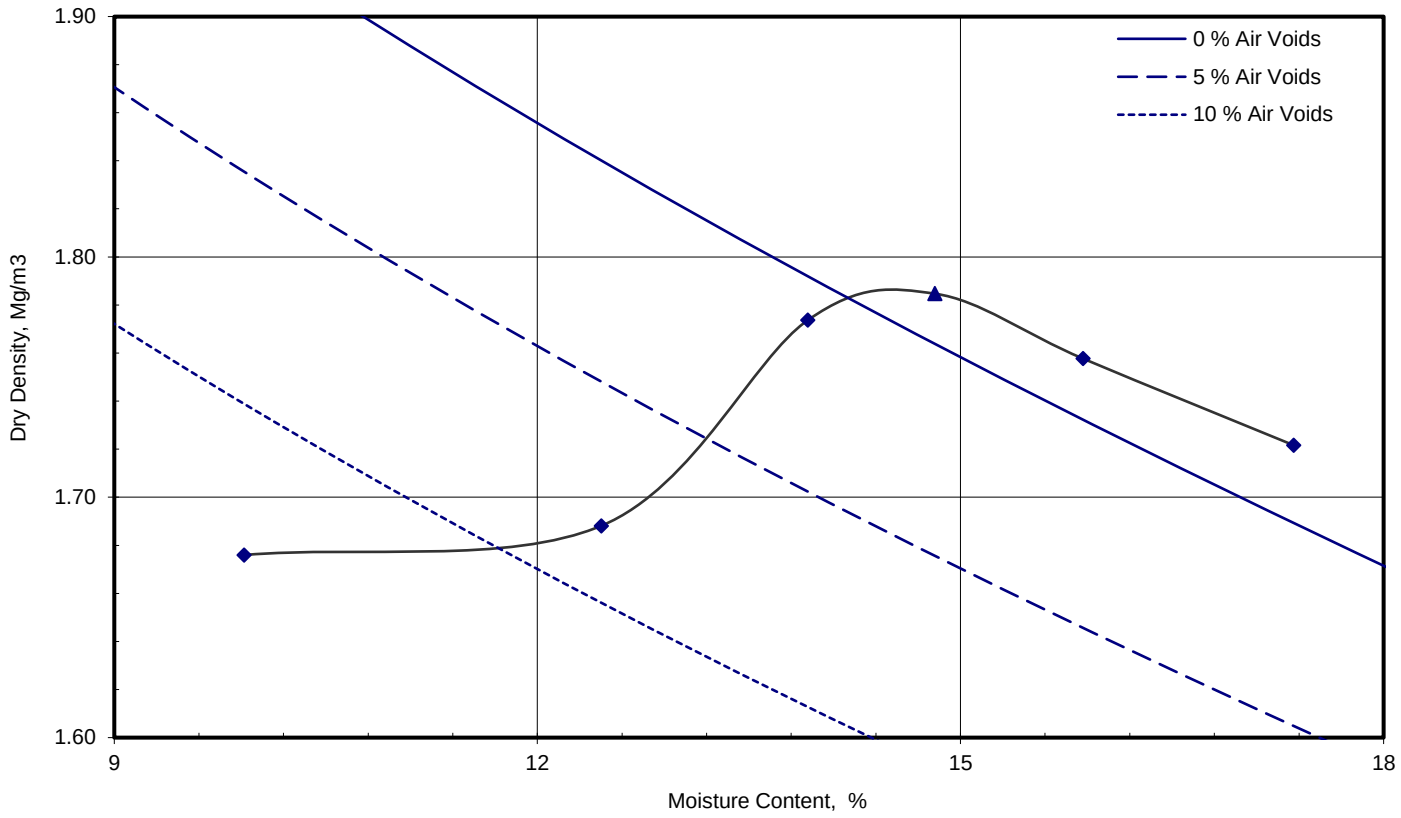
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	03/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593979	Depth Top [m]:	0.50
Hole No.:	TP10	Depth Base [m]:	1.00
Sample Reference:	Combined	Sample Type:	B
Sample Description:	Dark grey clayey very sandy GRAVEL		



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested
Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	8
Particle Density - Measured using gas jar	Mg/m³	2.39
As received Moisture Content	%	9.6
Maximum Dry Density	Mg/m³	**1.78**

Optimum Moisture Content	%	**15**

Note: Tested in Accordance with BS 1377-4: 1990: Clause 3.4 using 2.5kg [light] Rammer

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 109.19

TEST CERTIFICATE

Dry Density / Moisture Content

Relationship Light Compaction

Tested in Accordance with:
BS 1377-4: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

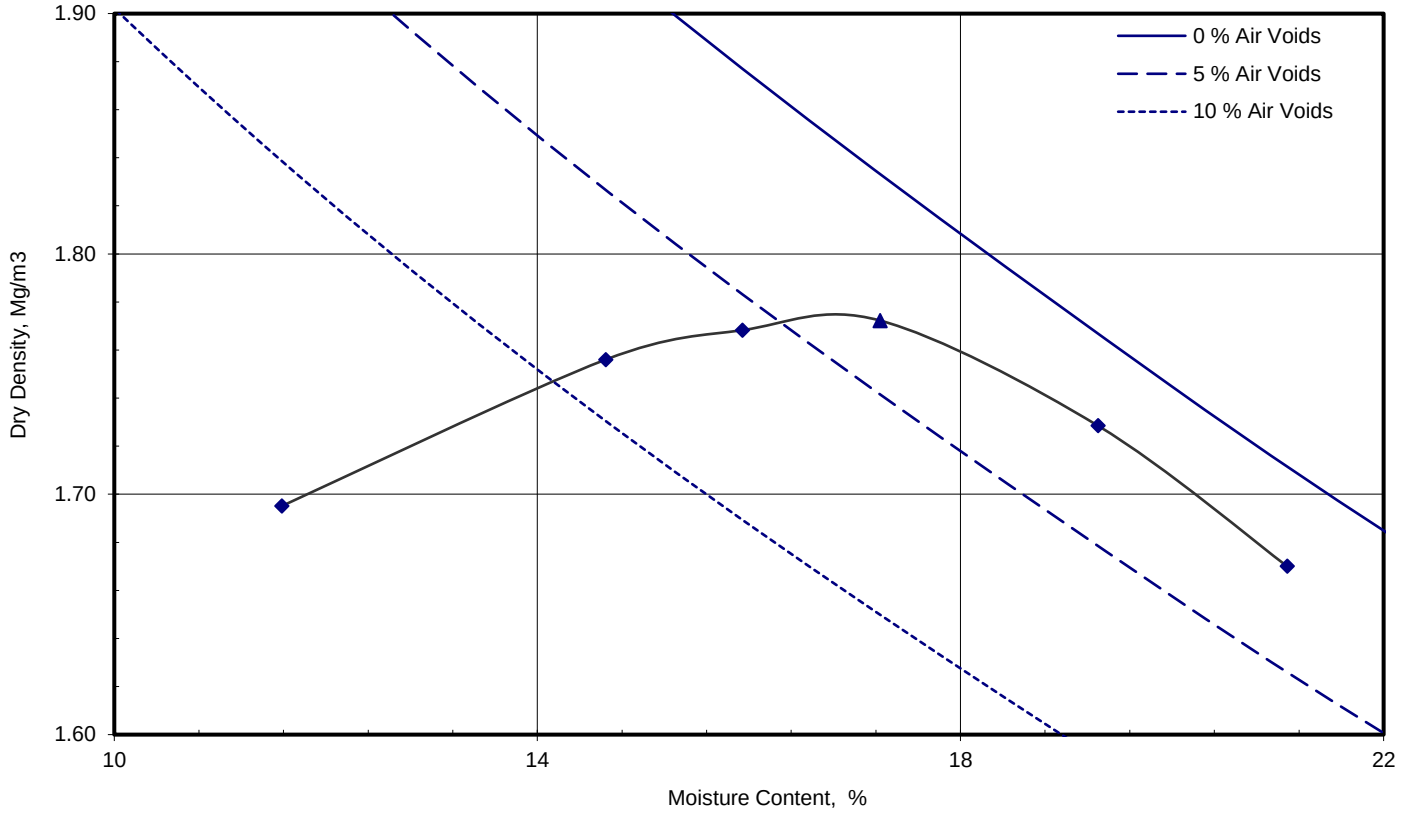
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593987	Depth Top [m]:	1.00
Hole No.:	TP03	Depth Base [m]:	1.10
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Brown slightly gravelly very sandy CLAY		



Preparation		Material used was natural
Mould Type		1 Litre
Samples Used		Single sample tested
Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	0
Particle Density - Measured using gas jar	Mg/m³	2.68
As received Moisture Content	%	20
Maximum Dry Density	Mg/m³	**1.77**

Optimum Moisture Content	%	**17**

Note: Tested in Accordance with BS 1377-4: 1990: Clause 3.3 using 2.5kg [light] Rammer

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 109.19

TEST CERTIFICATE

Dry Density / Moisture Content

Relationship Light Compaction

Tested in Accordance with:
BS 1377-4: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

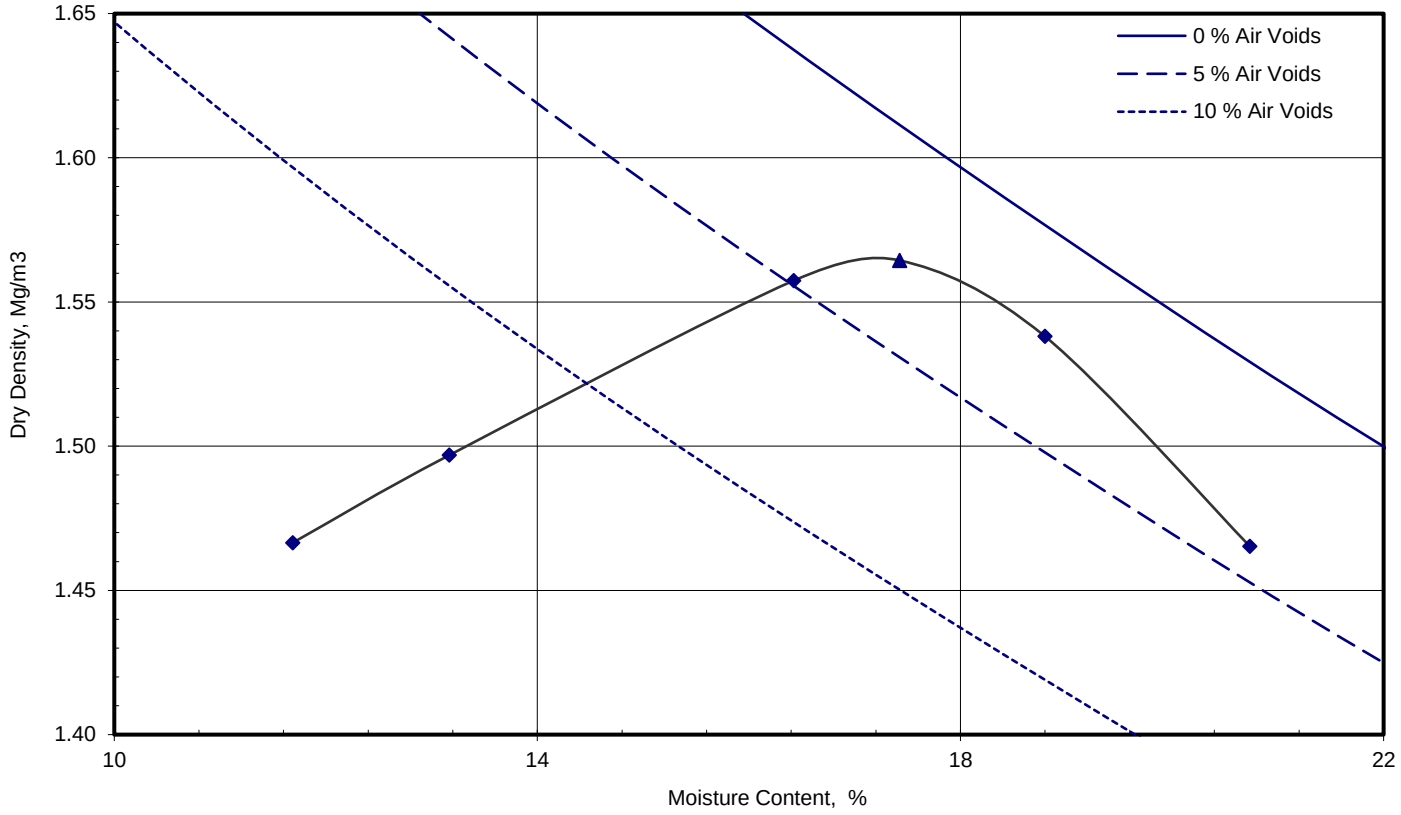
4041

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	06/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593994	Depth Top [m]:	0.60
Hole No.:	TP18	Depth Base [m]:	0.70
Sample Reference:	Not Given	Sample Type:	B
Sample Description:	Dark grey clayey very sandy GRAVEL		



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested
Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	10
Particle Density - Measured using gas jar	Mg/m³	2.24
As received Moisture Content	%	16
Maximum Dry Density	Mg/m³	**1.56**

Optimum Moisture Content	%	**17**

Note: Tested in Accordance with BS 1377-4: 1990: Clause 3.4 using 2.5kg [light] Rammer

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 27/08/2020

GF 109.19

TEST CERTIFICATE

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

Environmental Science

Hand Shear Vane at each compaction point

Tested in Accordance with: Guideline for Hand Shear Vane Test*

Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-24999
		Date Sampled:	05/08/2020
		Date Received:	11/08/2020
Contact:	Sarah Hey	Date Tested:	26/08/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1593987	Depth Top [m]:	1.00
Hole No.:	TP03	Depth Base [m]:	1.10
Sample Reference:	Not Given	Sample Type:	B
Soil Description:	Brown slightly gravelly very sandy CLAY		

Moisture Content	Shear Vane Reading					
	1	2	3	4	Average	Tv
%	kPa	kPa	kPa	kPa	kPa	kPa
12	UTP	UTP	UTP	UTP	UTP	
15	UTP	UTP	UTP	UTP	UTP	
16	UTP	UTP	UTP	UTP	UTP	
19	90	76	82	74	81	
21	50	62	66	58	59	

Note: UTP - Unable To Penetrate; * - Guideline for Hand Held Shear Vane Test, New Zealand Geotechnical Society INC, August 2001

Remarks: Compacted by: Light Compaction 2.5kg (BS1377:Part 4:1990).

Signed:

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PL Technical Reviewer
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Date Reported: 27/08/2020

GF 275.11

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

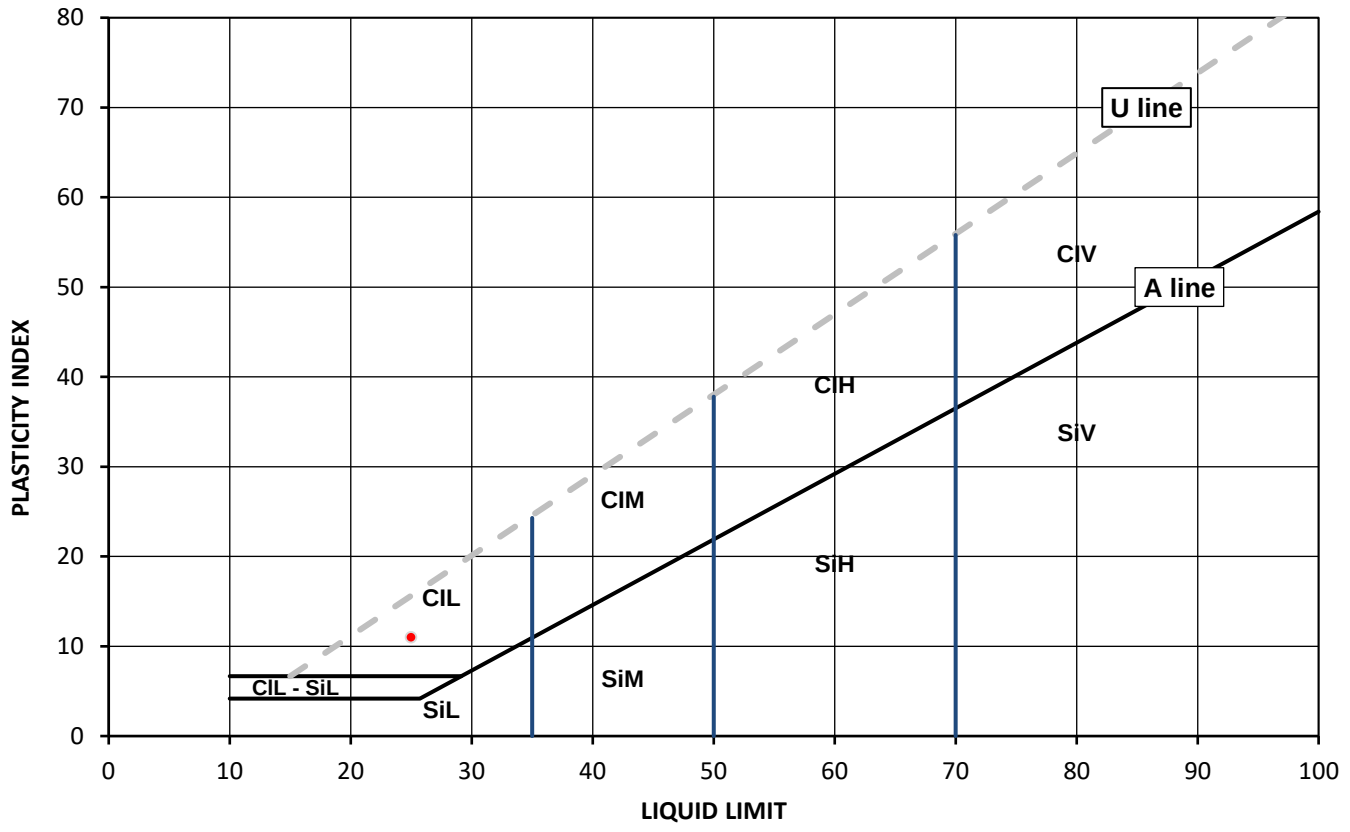
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25758
		Date Sampled:	19/08/2020
		Date Received:	20/08/2020
Contact:	Sarah Hey	Date Tested:	04/09/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1598451	Depth Top [m]:	1.80
Hole No.:	WS01	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Brown slightly gravelly clayey SAND		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
18	25	14	11	93



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 07/09/2020

GF 236.10

TEST CERTIFICATE

Liquid and Plastic Limits

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Tested in Accordance with: BS 1377-2: 1990: Clause 4.3 and 5

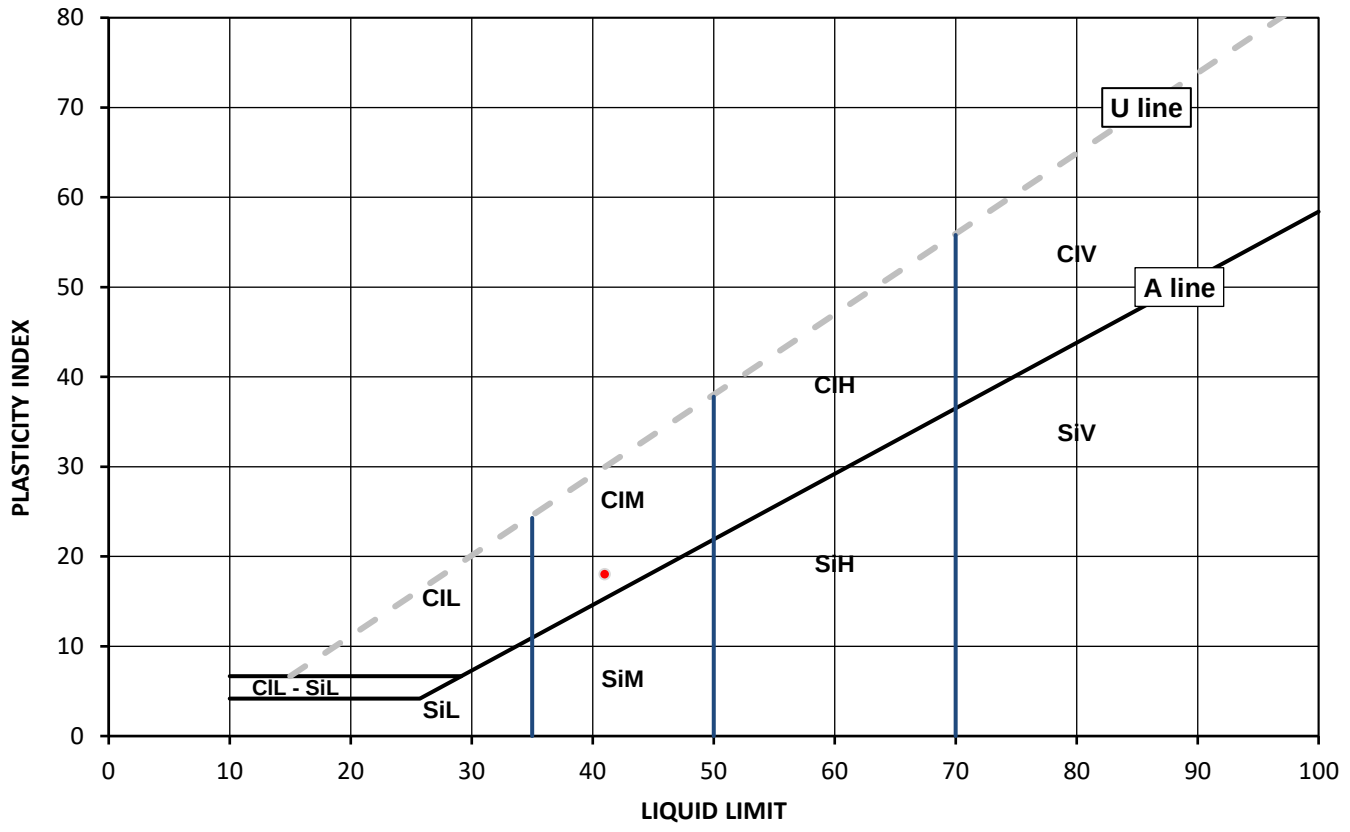
Client:	Hydrock Consultants Ltd	Client Reference:	C-15220-C
Client Address:	4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY	Job Number:	20-25758
		Date Sampled:	19/08/2020
		Date Received:	20/08/2020
Contact:	Sarah Hey	Date Tested:	04/09/2020
Site Address:	Stopes Road, Bolton	Sampled By:	SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	1598452	Depth Top [m]:	1.70
Hole No.:	WS14	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Soil Description:	Grey to brown slightly gravelly sandy CLAY		
Sample Preparation:	Tested after >425um removed by hand		

As Received Moisture Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
38	41	23	18	95



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Moisture Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed: Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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 Date Reported: 07/09/2020 **GF 236.10**

SUMMARY REPORT

Summary of Classification Test Results

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client: Hydrock Consultants Ltd

Client Address: 4 Lakeside, Festival Park, Stoke on Trent, ST1 5RY

Contact: Sarah Hey

Site Address: Stopes Road, Bolton

Tested in Accordance with:

Moisture Content by BS 1377-2: 1990: Clause 3.2; Water Content by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5; PD by BS 1377-2: 1990: Clause 8.2

Client Reference: C-15220-C
Job Number: 20-25758
Date Sampled: 19/08/2020
Date Received: 20/08/2020
Date Tested: 04/09/2020
Sampled By: SH

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Moisture Content [W]	Water Content [W]	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
1598451	WS01	Not Given	1.80	Not Given	D	Brown slightly gravelly clayey SAND	Atterberg 4 Point	18		93	25	14	11						
1598452	WS14	Not Given	1.70	Not Given	D	Grey to brown slightly gravelly sandy CLAY	Atterberg 4 Point	38		95	41	23	18						

Note: # Non accredited; NP - Non plastic

Comments:

Signed:

Aleksandra Jurochnik
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

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Date Reported: 07/09/2020

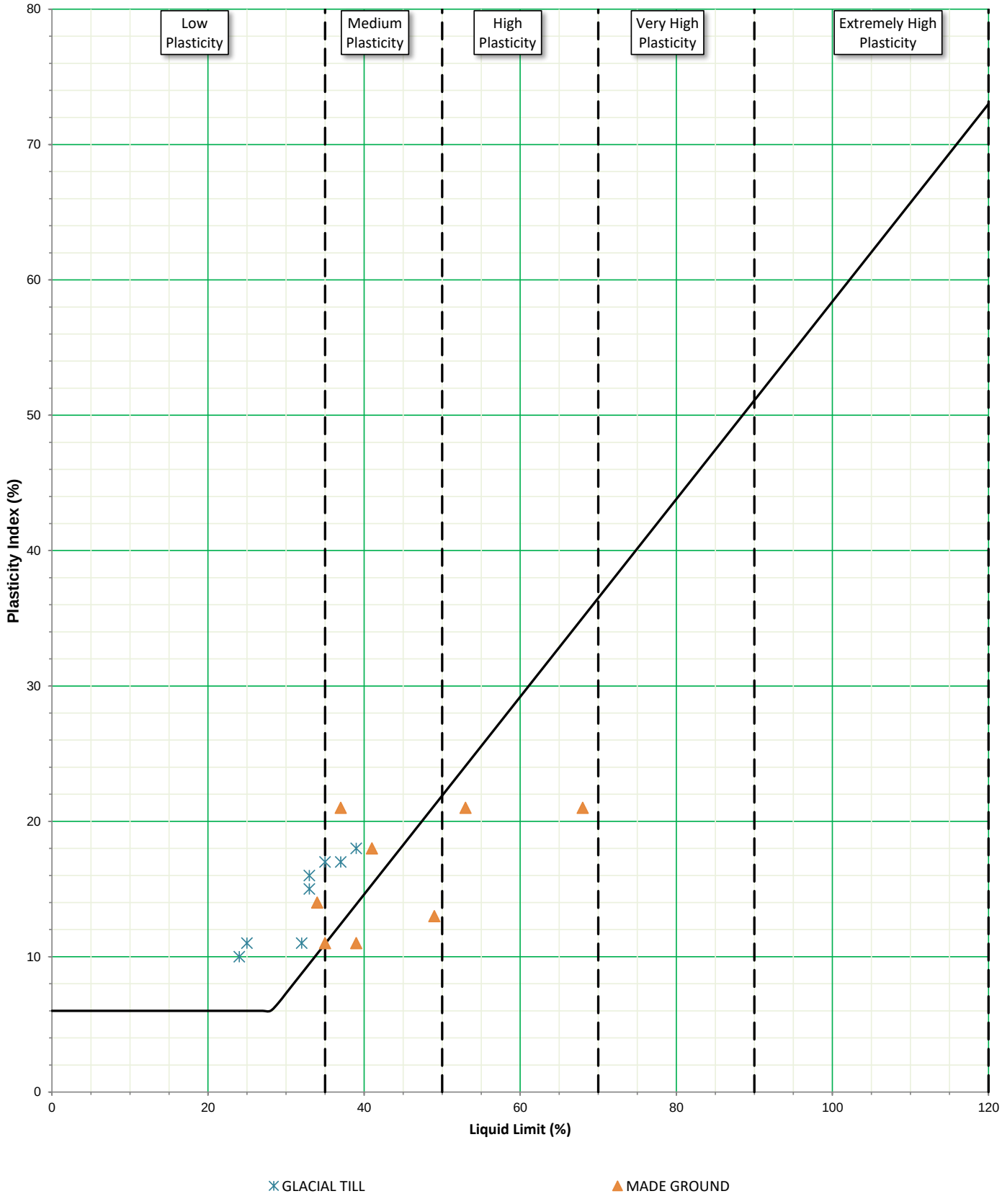
GF 238.12

Geotechnical Plots

Hydrock

PLASTICITY CLASSIFICATION CHART

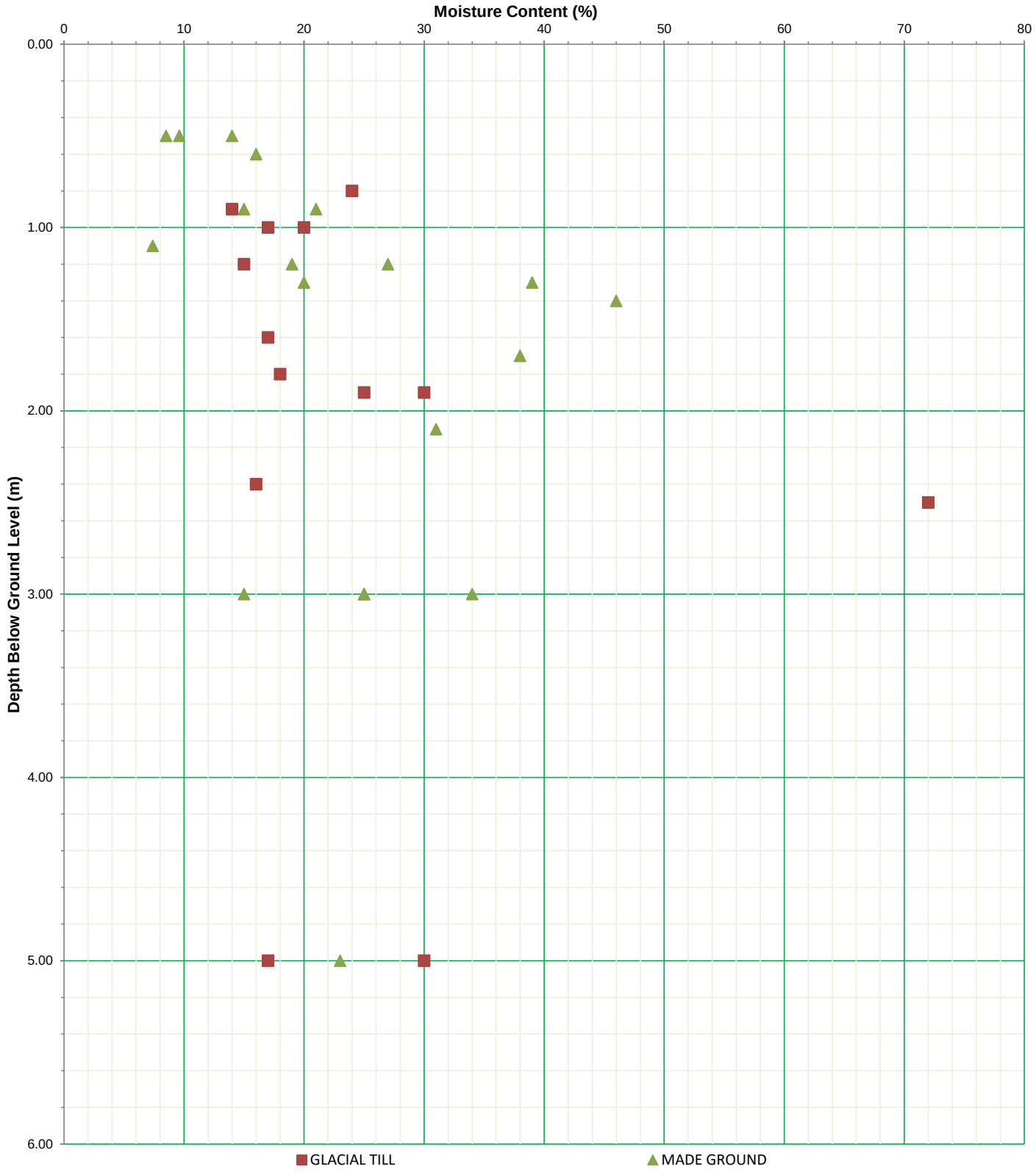
Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	



Template Version	1	Template Date	10/07/2019

MOISTURE CONTENT vs DEPTH

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

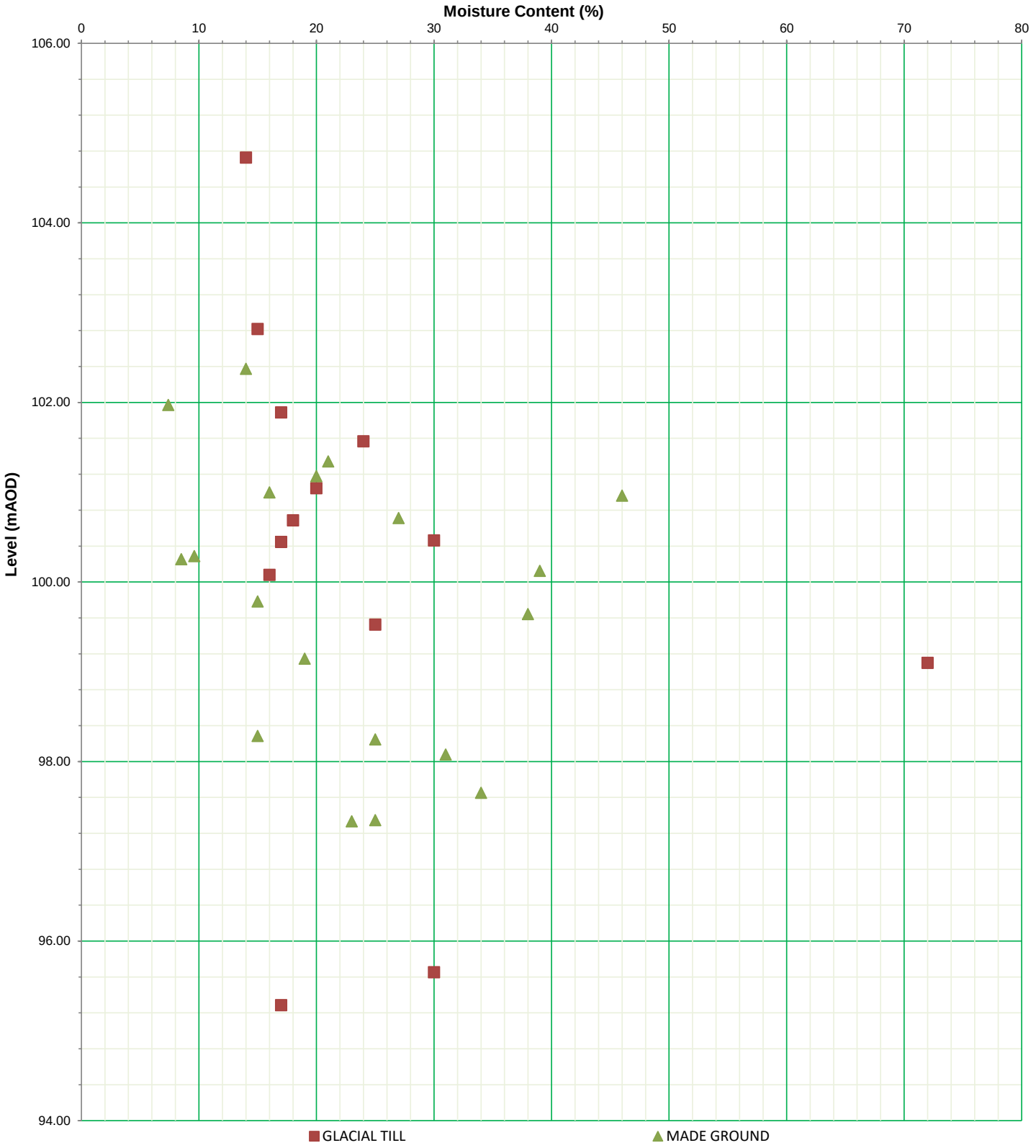


Template Version	1	Template Date	10/07/2019

Hydrock

MOISTURE CONTENT vs LEVEL

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

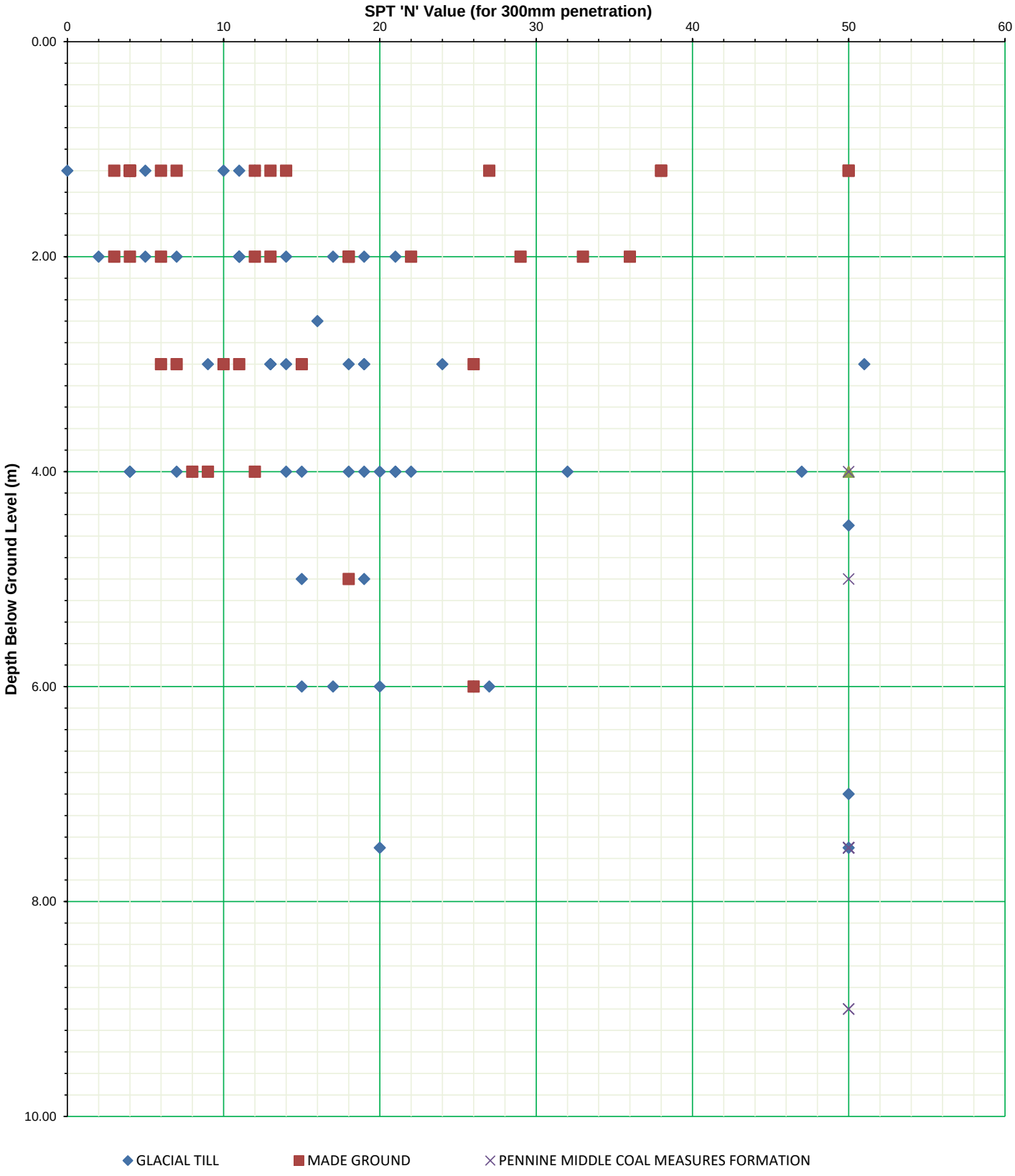


Template Version	1	Template Date	10/07/2019

Hydrock

SPT 'N' VALUES vs DEPTH

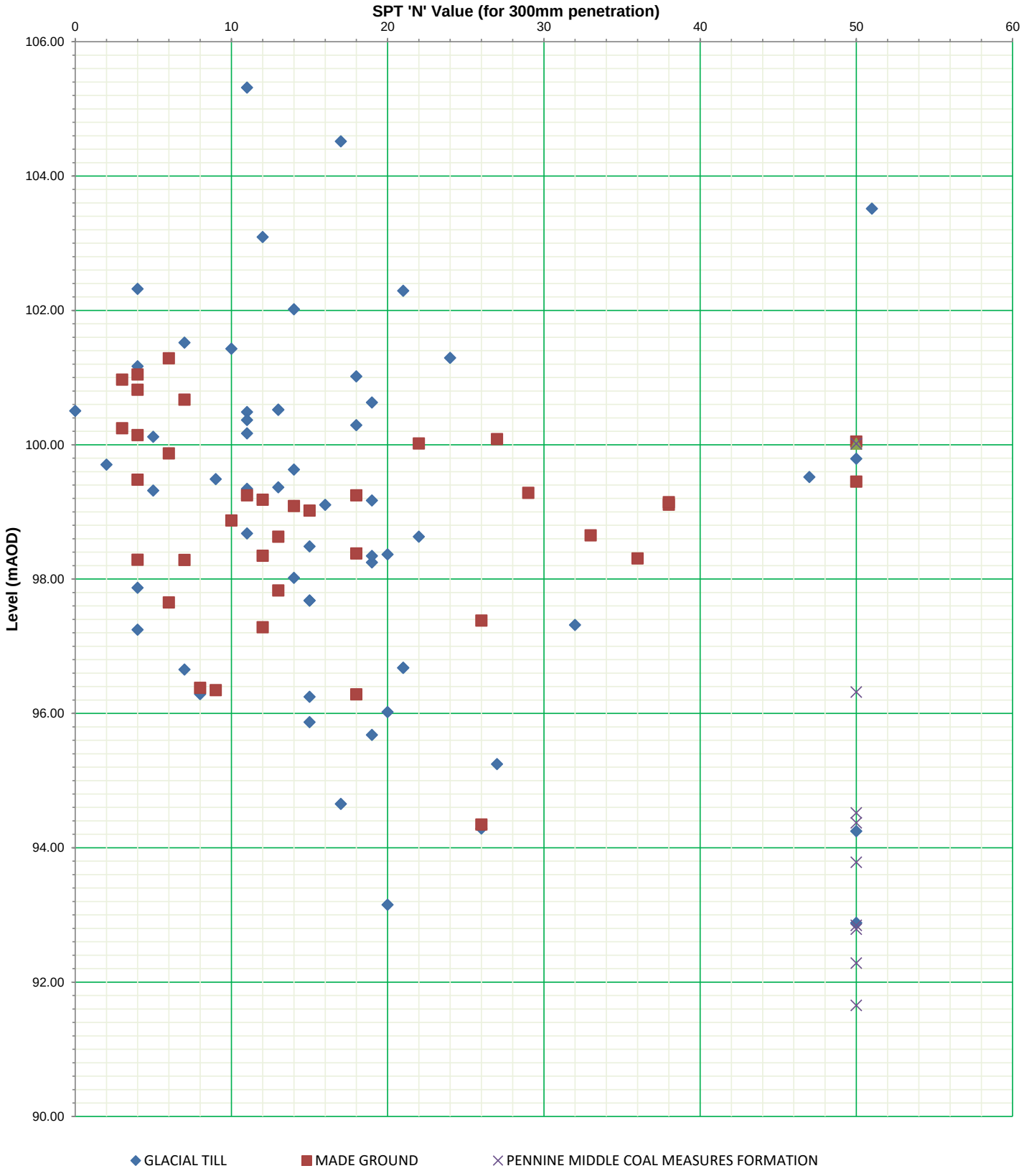
Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	



Hydrock

SPT 'N' VALUES vs LEVEL

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

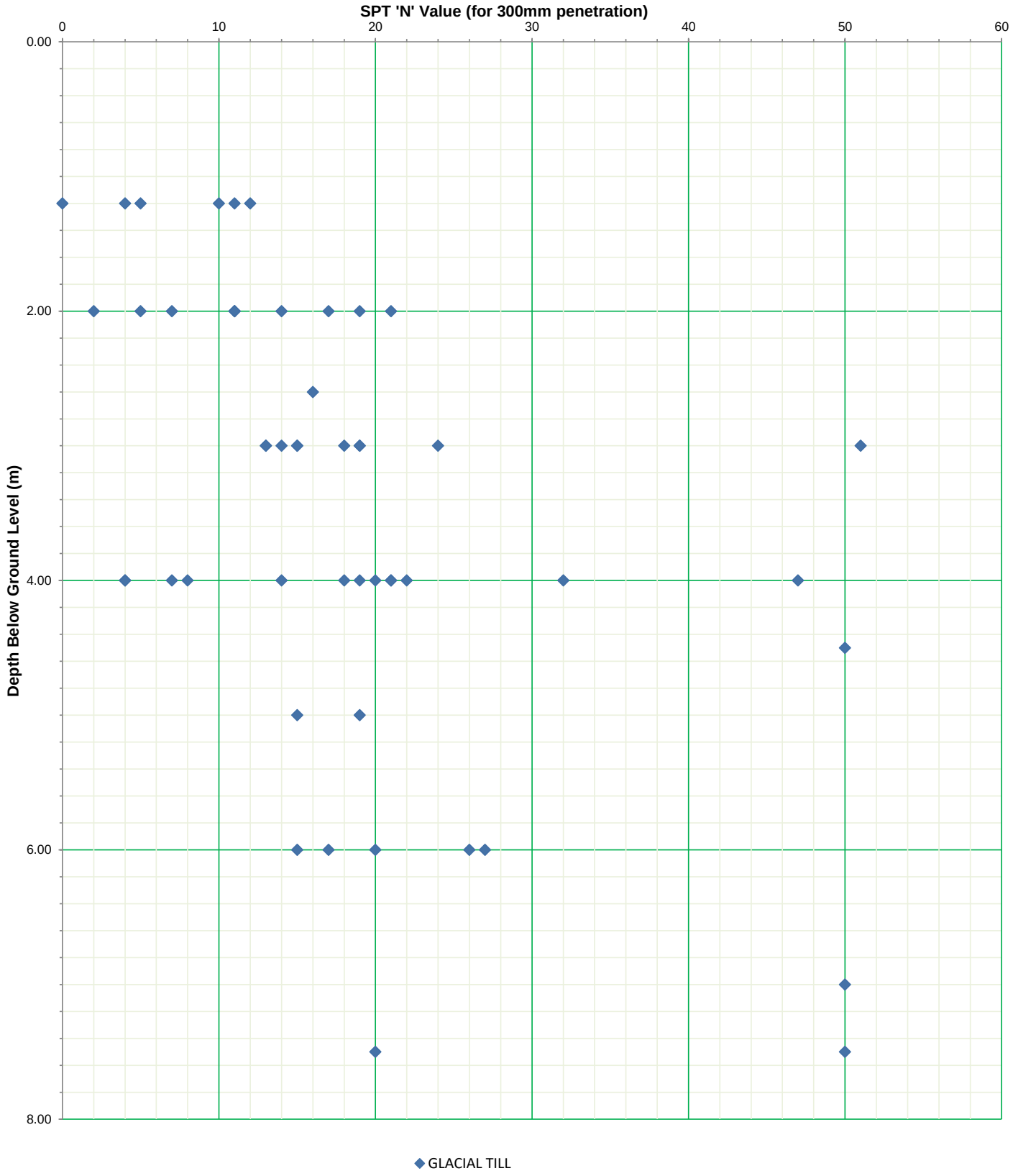


Template Version	1	Template Date	10/07/2019

Hydrock

SPT 'N' VALUES vs DEPTH COHESIVE NATURAL STRATA

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

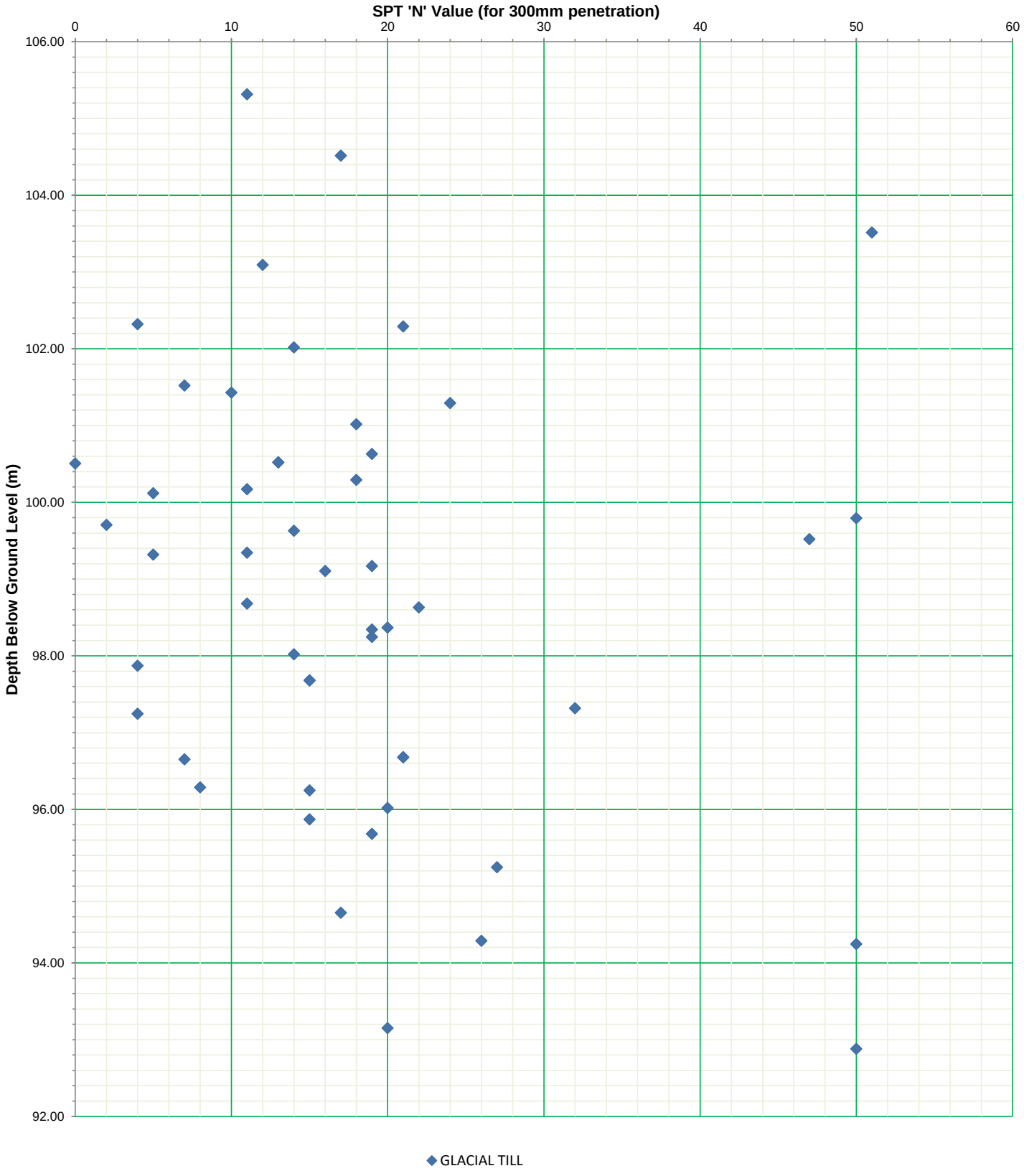


Template Version	1	Template Date	10/07/2019

Hydrock

SPT 'N' VALUES vs LEVEL COHESIVE STRATA

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

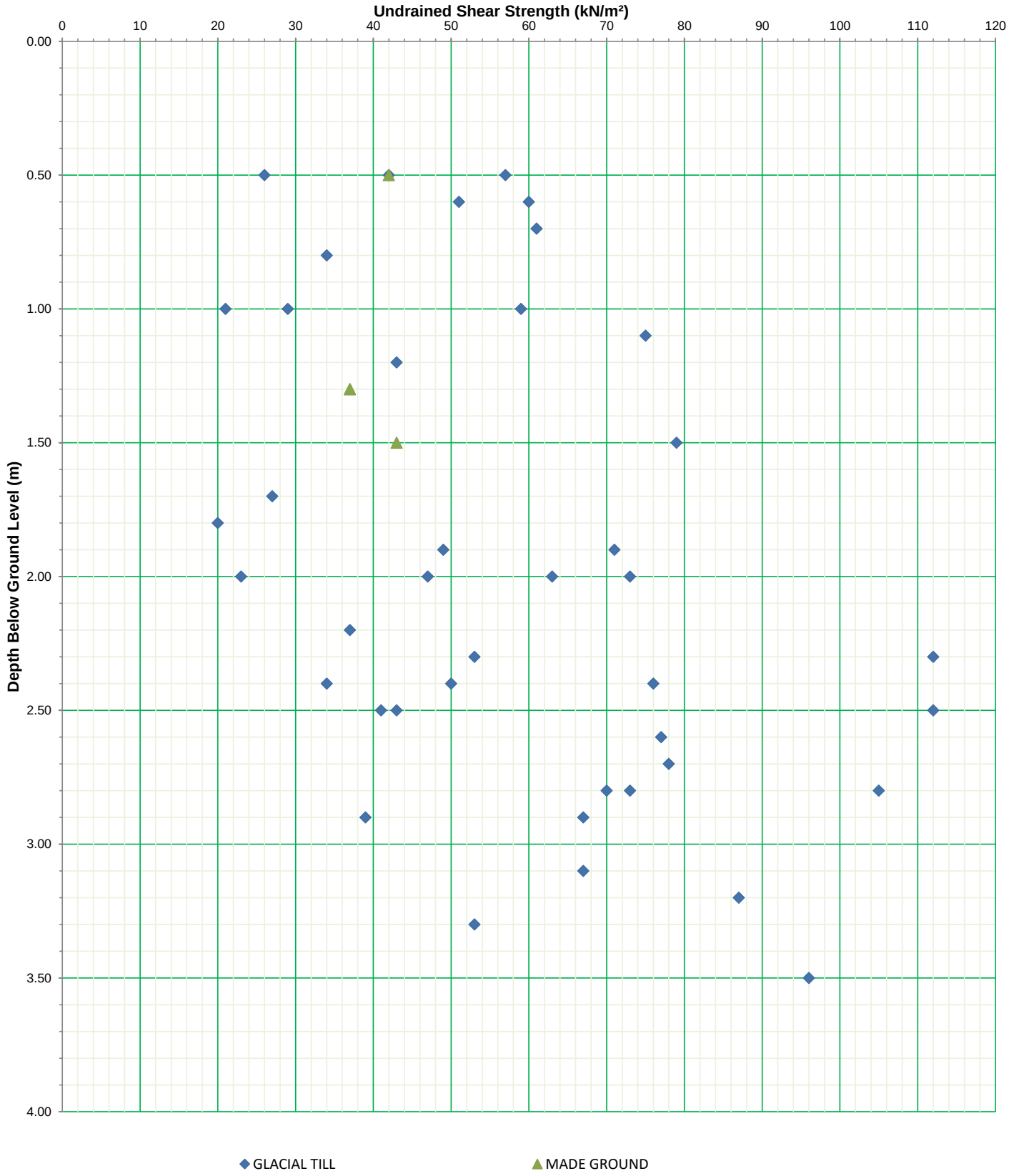


Template Version	1	Template Date	10/07/2019

Hydrock

UNDRAINED SHEAR STRENGTH vs DEPTH

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	Hand Shear Vane	

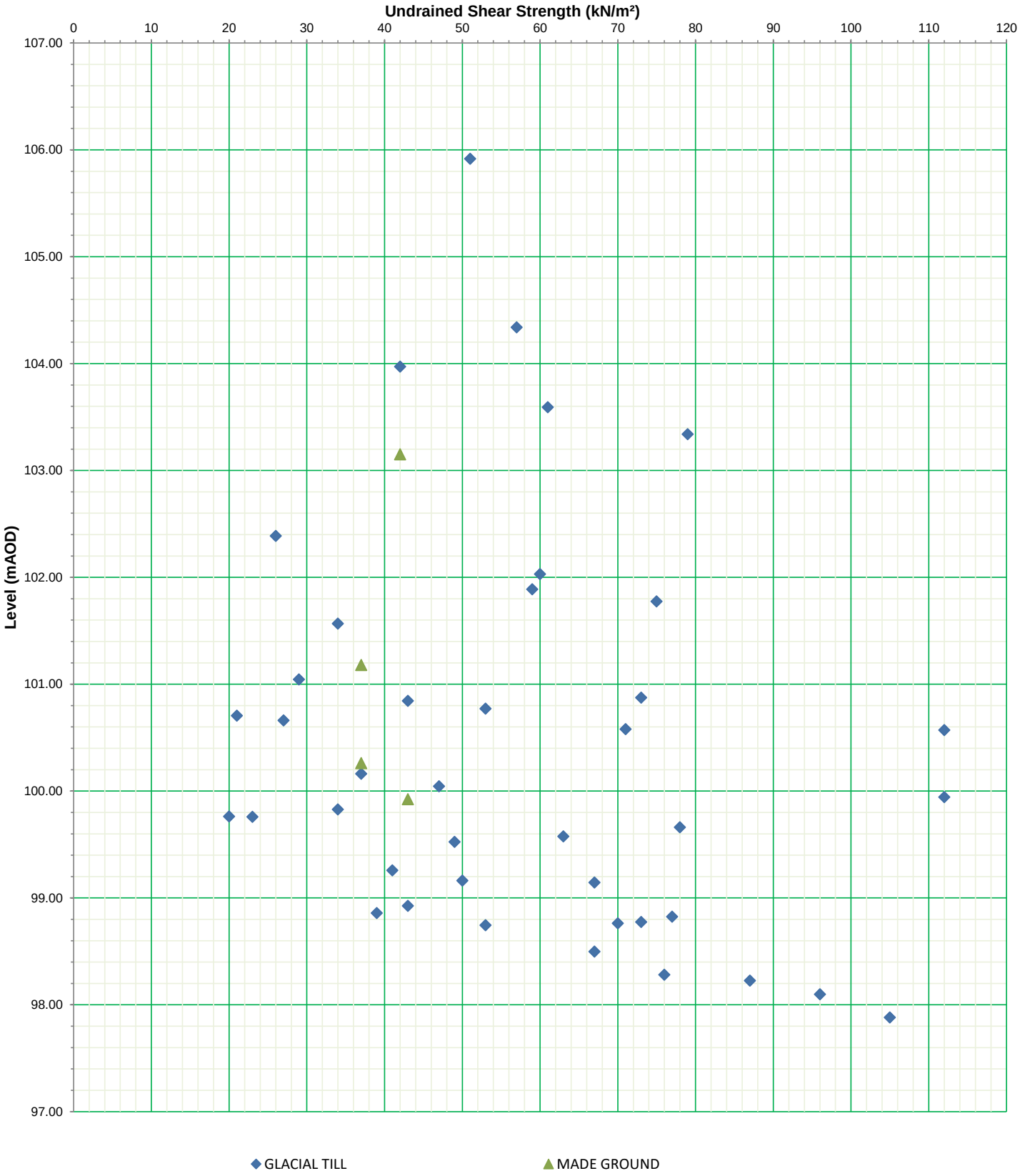


Template Version	1	Template Date	10/07/2019

Hydrock

UNDRAINED SHEAR STRENGTH vs LEVEL

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	Hand Shear Vane	

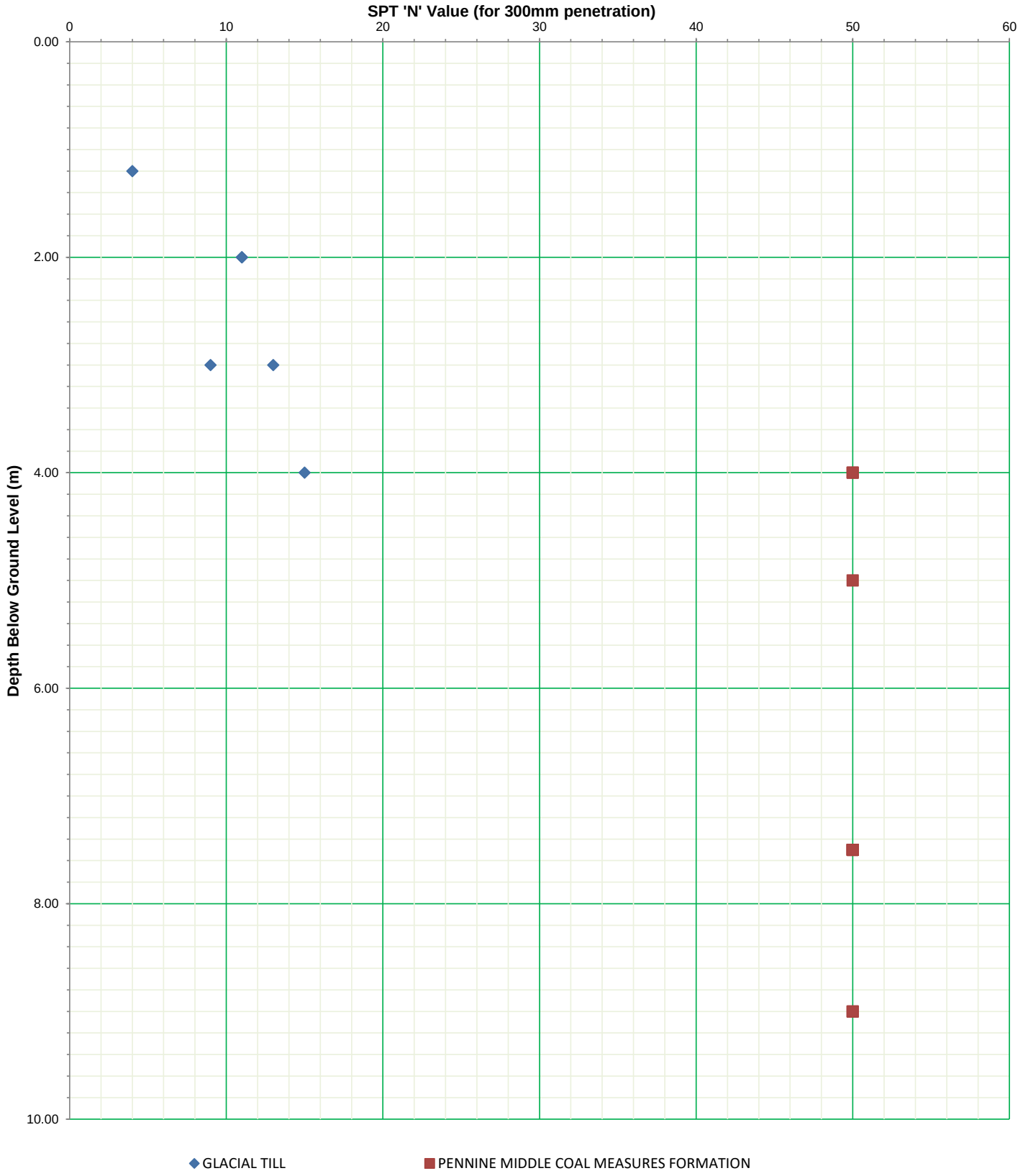


Template Version	1	Template Date	10/07/2019

Hydrock

SPT 'N' VALUES vs DEPTH GRANULAR NATURAL STRATA

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	

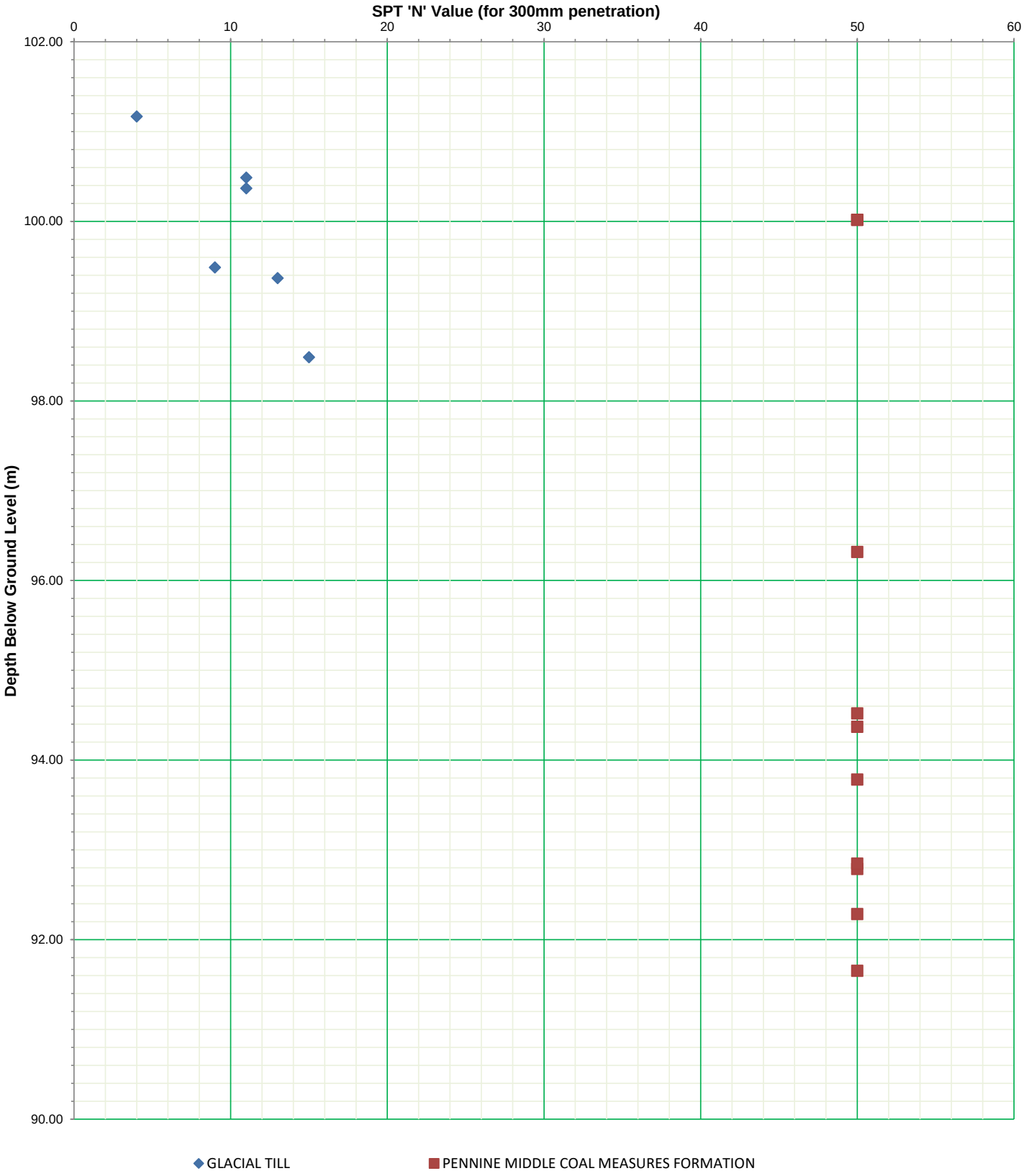


Template Version	1	Template Date	10/07/2019

Hydrock

SPT 'N' VALUES vs LEVEL GRANULAR STRATA

Site:	Client:	Contract No.	C-15220-C
Stopes Road, Bolton	Harworth Estates Property Group Ltd	All Data	



Template Version	1	Template Date	10/07/2019

Appendix D

Site Monitoring Data and Ground Gas Risk Assessment

Site Monitoring Data

Hydrock

Site: Stopes road, Bolton
Job number: C-15220-C
Client: Harworth Group

Gas analyser: GA5000
Equipment check OK: Y
Service in date: Y
Calibration check OK: Y
Name of person monitoring: See Notes.

Notes on site conditions:

Date	Operator	Weather Conditions
27/08/2020	DS	Sunny, breezy, dry ground
16/09/2020	Enitial	Sunny and breezy
01/10/2020	Enitial	Overcast
12/10/2020	Enitial	Overcast and wet
26/10/2020	Enitial	Showers and wet
09/11/2020	Enitial	Overcast

Notes: LEL = lower explosive limit = 5%v/v. * where the flow is less than the limit of detection of the instrument, the detection limit is reported (Highlighted in **blue**). GSVs are rounded to 3 places.

Monitoring round		Borehole details					Pressure and flow					Gas concentrations											GSV		Local conditions
													CH_4 (%v/v)		CH_4 (%LEL)		CO_2 (%v/v)		O_2 (%v/v)		Other Gases				
Date	Time	Borehole	Single or dual gas tap	Response zone depth (m)	Depth to water or depth of hole if dry (m)	D denotes dry hole	Atmospheric pressure (hPa)	Atm pressure falling / rising / steady	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	VOC (as ppm using PID)	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	CO (PPM)	H_2S (PPM)	Gas Screening Value (CH_4) (l/hr)	Gas Screening Value (CO_2) (l/hr)	Notes on condition of borehole and surrounding ground
							Max. individual values:				**13.3**		**13.00**		**3.00**		**10.80**		**115.40**				**0.039**	**0.242**	
							Min. individual values:				-1.3		0.10		0.10		0.00		0.10				0.000	0.000	**Summary statistics for this monitoring period.**
							Worst-case GSVs based on max. individual flow and max. individual conc. over the duration of this table:																**1.729**	**1.4364**	
28/08/20	AM	CP06	S	1.00 - 4.00	3.28		1000	S		0.0	0.0	NR	0.1	0.1	0.1	0.1	1.00	1.00	19.50	19.50	1.0	0.0	0.000	0.000	
28/08/20	AM	WS07	S	1.00 - 2.00	2.12		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	1.90	1.90	3.80	3.80	4.0	0.0	0.000	0.002	
28/08/20	AM	CP07	S	1.00 - 5.00	3.30		1000	S		0.1	0.1	NR	3.0	3.0	3.0	3.0	0.00	0.00	0.10	0.10	6.0	0.0	0.003	0.000	Flushed cover. Gas dour
28/08/20	AM	RO04	S	8.00 - 20.00	4.85		1000	S		0.1	0.1	NR	0.5	0.5	0.5	0.5	0.80	0.80	0.20	0.20	2.0	0.0	0.001	0.001	
28/08/20	AM	CP04	S	1.00 - 2.50	1.88		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	10.30	10.30	7.40	7.40	2.0	0.0	0.000	0.010	
28/08/20	PM	CP09	S	4.00 - 7.00	3.90		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	0.10	0.10	15.70	15.70	0.0	0.0	0.000	0.000	
28/08/20	PM	WS14	S	0.50 - 1.50	1.20		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	0.70	0.70	18.60	18.60	0.0	0.0	0.000	0.001	
28/08/20	PM	WS13	S	0.50 - 1.40	1.20		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	4.80	4.80	14.30	14.30	2.0	0.0	0.000	0.005	
28/08/20	PM	WS05	S	1.00 - 2.50	1.00		1000	S		0.0	0.0	NR	0.1	0.1	0.1	0.1	0.00	0.00	21.20	21.20	2.0	0.0	0.000	0.000	
28/08/20	PM	WS02	S	1.00 - 4.00	0.60		1000	S		-1.1	1.1	NR	0.1	0.1	0.1	0.1	0.90	0.90	19.10	19.10	4.0	0.0	0.001	0.010	
28/08/20	PM	CP03	S	4.00 - 7.50	2.35		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	1.30	1.30	17.80	17.80	6.0	0.0	0.000	0.001	
28/08/20	PM	RO10	S	8.50 - 15.00	5.50		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	0.20	0.20	16.10	16.10	68.0	0.0	0.000	0.000	
28/08/20	PM	WS11	S	1.00 - 3.00	1.22		1000	S		0.1	0.1	NR	0.1	0.1	0.1	0.1	5.20	5.20	15.00	15.00	1.0	0.0	0.000	0.005	
16/09/20	AM	CP03	S	4.00 - 7.50	2.83		1015	R	-0.2	0.0	0.0	NR	0.1	0.1	0.1	0.1	1.7	1.7	17.4	17.3	0.0	0.0	0.000	0.000	
16/09/20	PM	CP04	S	1.00 - 2.50	1.87		1018	R	-1.4	-0.1	-0.1	NR	0.1	0.1	0.1	0.1	0.1	9.5	20.3	8.8	0.0	1.0	0.000	0.010	
16/09/20	PM	CP06	S	1.00 - 4.00	3.67		1018	R	0.0	0.0	0.0	NR	0.1	0.1	0.1	0.1	0.1	0.1	20.4	20.5	0.0	0.0	0.000	0.000	
16/09/20	PM	CP07	S	1.00 - 5.00	3.58		1017	R	0.0	0.2	0.2	NR	0.1	10.6	0.1	0.1	0.5	0.5	0.5	0.5	0.0	0.0	0.021	0.001	
16/09/20	PM	CP09	S	4.00 - 7.00	3.89		1018	R	0.0	0.0	0.0	NR	0.1	0.1	0.1	0.1	0.1	0.1	19.7	19.8	0.0	0.0	0.000	0.000	
16/09/20	PM	RO04	S	8.00 - 20.00	14.93		1019	R	0.0	0.7	0.7	NR	0.1	0.1	0.1	2.0	0.7	0.7	20.0	0.3	0.0	0.0	0.001	0.005	
16/09/20	AM	RO10	S	8.50 - 15.00	5.43		1016	R	-0.2	-0.2	-0.2	NR	0.1	0.1	0.1	0.1	0.1	0.1	20.3	20.3	0.0	0.0	0.000	0.000	
16/09/20	AM	WS01	S	0.50 - 1.50	1.25		1017	R	0.0	-0.1	-0.1	NR	0.1	0.1	0.1	0.1	2.2	2.4	14.1	14.4	0.0	1.0	0.000	0.002	
16/09/20	AM	WS02	S	1.00 - 4.00	1.24		1017	R	-7.5	-1.3	-1.3	NR	0.1	0.1	0.1	0.1	2.5	2.5	18.1	17.8	4.0	1.0	0.001	0.033	
16/09/20	PM	WS05	S	1.00 - 2.50	2.40		1018	R	0.1	-0.1	-0.1	NR	0.1	0.1	0.1	0.1	0.1	0.1	20.0	19.9	0.0	1.0	0.000	0.000	
16/09/20	PM	WS07	S	1.00 - 2.00	1.95		1018	R	5.0	2.0	2.0	NR	0.6	0.1	12.0	2.0	2.9	3.2	18.6	10.5	1.0	0.0	0.002	0.064	
16/09/20	AM	WS11	S	1.00 - 3.00	1.90		1016	R	-0.2	0.2	0.2	NR	0.1	0.1	0.1	0.1	0.1	0.1	20.5	20.5	0.0	0.0	0.000	0.000	
16/09/20	PM	WS13	S	0.50 - 1.40	1.22		1019	R	0.0	-0.1	-0.1	NR	0.1	0.1	0.1	0.1	0.1	4.0	19.9	14.0	0.0	0.0	0.000	0.004	
01/10/20	AM	CP03	S	4.00 - 7.50	2.08		987	F	-0.3	0.4	0.4	NR	0.1	0.1	0.1	0.1	1.9	1.9	17.6	17.6	2.0	0	0.000	0.008	
01/10/20	AM	CP04	S	1.00 - 2.50	1.85		988	F	-1.1	0.1	0.1	NR	0.1	0.1	0.1	0.1	0.3	10.0	20.1	115.4	0.0	1	0.000	0.010	

Monitoring round		Borehole details					Pressure and flow					Gas concentrations											GSV		Local conditions
Date	Time	Borehole	Single or dual gas tap	Response zone depth (m)	Depth to water or depth of hole if dry (m)	D denotes dry hole	Atmospheric pressure (hPa)	Atm pressure falling / rising / steady	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	VOC (as ppm using PID)	CH_4 (%v/v)		CH_4 (%LEL)		CO_2 (%v/v)		O_2 (%v/v)		Other Gases		Gas Screening Value (CH_4) (l/hr)	Gas Screening Value (CO_2) (l/hr)	Notes on condition of borehole and surrounding ground
													Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	CO (PPM)	H_2S (PPM)			
01/10/20	AM	CP06	S	1.00 - 4.00	3.88		987	F	-0.2	0.2	0.2	NR	0.1	0.1	0.1	0.1	0.9	0.9	19.7	19.3	1.0	0	0.000	0.002	
01/10/20	AM	CP07	S	1.00 - 5.00	3.62		988	F	-0.3	0.2	0.2	NR	0.1	0.1	0.1	0.1	0.1	0.2	16.7	18.6	1.0	0	0.000	0.000	
01/10/20	AM	CP09	S	4.00 - 7.00	3.93		988	F	-0.1	0.3	0.3	NR	0.1	0.1	0.1	0.1	0.7	0.8	18.9	17.6	2.0	1	0.000	0.002	
01/10/20	AM	RO04	S	8.00 - 20.00	15.15		988	F	0.7	0.3	0.3	NR	0.1	0.1	0.1	0.1	1.7	1.7	16.6	10.2	2.0	0	0.000	0.005	
01/10/20	AM	RO10	S	8.50 - 15.00	5.58		988	F	-0.2	0.5	0.5	NR	0.1	0.1	0.1	0.1	0.3	0.3	20.1	20.2	2.0	0	0.001	0.002	
01/10/20	AM	WS01	S	0.50 - 1.50	0.68		988	F	-3.1	2.2	2.2	NR	0.1	0.1	0.1	0.1	2.8	2.8	16.9	16.0	1.0	0	0.002	0.062	
01/10/20	AM	WS02	S	1.00 - 4.00	1.27		988	F	-4.5	0.4	0.4	NR	0.1	0.1	0.1	0.1	4.0	4.0	19.1	18.7	2.0	0	0.000	0.016	
01/10/20	AM	WS05	S	1.00 - 2.50	2.31		988	F	1.3	0.4	0.4	NR	0.1	0.1	0.1	0.1	1.0	1.0	18.9	18.5	2.0	1	0.000	0.004	
01/10/20	AM	WS07	S	1.00 - 2.00	1.97		988	F	-0.7	0.2	0.2	NR	0.1	0.1	0.1	0.1	2.1	2.0	17.0	12.9	1.0	0	0.000	0.004	
01/10/20	AM	WS11	S	1.00 - 3.00	1.66		987	F	-0.3	0.5	0.5	NR	0.1	0.1	0.1	0.1	3.9	3.9	17.6	15.9	1.0	0	0.001	0.020	
01/10/20	AM	WS13	S	0.50 - 1.40	1.92		988	F	-2.0	0.3	0.3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Error with gas analyser.
01/10/20	AM	WS14	S	0.50 - 1.50	1.06		988	F	2.3	0.2	0.2	NR	0.1	0.1	0.1	0.1	1.2	1.2	19.1	17.1	1.0	1	0.000	0.002	

Ground Gas Risk Assessment

Ground Gas Risk Assessment

Hydrock

Job Number	C-15220
Job Name	Stopes Road, Bolton
Client	Harworth Group

Data: Hydrock Data

Max CH4	Max C02	Worst Case Flow	Worst Case GSV Methane	Worst Case GSV CO_2
13.0	11.1	11.0	1.4300	1.2210

Number of Readings	6
Number of Monitoring Rounds	6
Number of Readings with Flow Rate	60

NHBC Assessment

	Methane		Carbon Dioxide	
	Max Value	GSV	Max Value	GSV
Green	57	60	52	60
Amber 1	1	0	5	0
Amber 2	2	0	3	0
Red	0	0	0	0

CIRIA C665 Assessment

	Methane		Carbon Dioxide	
	Max Value	GSV	Max Value	GSV
CS1	57	60	52	59
CS2	3	0	8	1
CS3	N/A	0	N/A	0
CS4	N/A	0	N/A	0
CS5	N/A	0	N/A	0
CS6	N/A	0	N/A	0

Location	Pressure Trend	Date	Relative Pressure (mb)	Flow Rate (l/hr)	Stratum	Atmos. Pressure (m.bar)	CH_4 (% vol)		(%LEL)		CO_2 (% vol)		O_2 (% vol)		GSV – CH4	GSV – CO_2
					Stratum		Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady		
CP06	S	28/08/20		0.0	Opencast Made Ground	1000	0.10	0.10	0.10	0.10	1.00	1.00	19.50	19.50	0.0000	0.0000
WS07	S	28/08/20		0.1	Opencast Made Ground	1000	0.10	0.10	0.10	0.10	1.90	1.90	3.80	3.80	0.0001	0.0019
CP07	S	28/08/20		0.1	Opencast Made Ground	1000	3.00	3.00	3.00	3.00	0.00	0.00	0.10	0.10	0.0030	0.0000
RO04	S	28/08/20		0.1	PMCMF	1000	0.50	0.50	0.50	0.50	0.80	0.80	0.20	0.20	0.0005	0.0008
CP04	S	28/08/20		0.1	General Made Ground	1000	0.10	0.10	0.10	0.10	10.30	10.30	7.40	7.40	0.0001	0.0103
CP09	S	28/08/20		0.1	Glacial Till	1000	0.10	0.10	0.10	0.10	0.10	0.10	15.70	15.70	0.0001	0.0001
WS14	S	28/08/20		0.1	General / Organic Made Ground	1000	0.10	0.10	0.10	0.10	0.70	0.70	18.60	18.60	0.0001	0.0007
WS13	S	28/08/20		0.1	General / Organic Made Ground	1000	0.10	0.10	0.10	0.10	4.80	4.80	14.30	14.30	0.0001	0.0048
WS05	S	28/08/20		0.0	Glacial Till	1000	0.10	0.10	0.10	0.10	0.00	0.00	21.20	21.20	0.0000	0.0000
WS02	S	28/08/20		1.1	Glacial Till	1000	0.10	0.10	0.10	0.10	0.90	0.90	19.10	19.10	0.0011	0.0099
CP03	S	28/08/20		0.1	Glacial Till / PMCMF*	1000	0.10	0.10	0.10	0.10	1.30	1.30	17.80	17.80	0.0001	0.0013
RO10	S	28/08/20		0.1	PMCMF	1000	0.10	0.10	0.10	0.10	0.20	0.20	16.10	16.10	0.0001	0.0002
WS11	S	28/08/20		0.1	Furnace / General Made Ground	1000	0.10	0.10	0.10	0.10	5.20	5.20	15.00	15.00	0.0001	0.0052
CP03	R	16/09/20	-0.2	0.0	Glacial Till / PMCMF*	1015	0.10	0.10	0.10	0.10	1.7	1.7	17.4	17.3	0.0000	0.0000
CP04	R	16/09/20	-1.4	-0.1	General Made Ground	1018	0.10	0.10	0.10	0.10	0.1	9.5	20.3	8.8	-0.0001	-0.0095
CP06	R	16/09/20	0.0	0.0	Opencast Made Ground	1018	0.10	0.10	0.10	0.10	0.1	0.1	20.4	20.5	0.0000	0.0000
CP07	R	16/09/20	0.0	0.2	Opencast Made Ground	1017	0.10	10.60	0.10	0.10	0.5	0.5	0.5	0.5	0.0212	0.0010
CP09	R	16/09/20	0.0	0.0	Glacial Till	1018	0.10	0.10	0.10	0.10	0.1	0.1	19.7	19.8	0.0000	0.0000
RO04	R	16/09/20	0.0	0.7	PMCMF	1019	0.10	0.10	0.10	2.00	0.7	0.7	20.0	0.3	0.0007	0.0049
RO10	R	16/09/20	-0.2	-0.2	PMCMF	1016	0.10	0.10	0.10	0.10	0.1	0.1	20.3	20.3	-0.0002	-0.0002
WS01	R	16/09/20	0.0	-0.1	General Made Ground	1017	0.10	0.10	0.10	0.10	2.2	2.4	14.1	14.4	-0.0001	-0.0024
WS02	R	16/09/20	-7.5	-1.3	Glacial Till	1017	0.10	0.10	0.10	0.10	2.5	2.5	18.1	17.8	-0.0013	-0.0325
WS05	R	16/09/20	0.1	-0.1	Glacial Till	1018	0.10	0.10	0.10	0.10	0.1	0.1	20.0	19.9	-0.0001	-0.0001
WS07	R	16/09/20	5.0	2.0	Opencast Made Ground	1018	0.6	0.1	12	2	2.9	3.2	18.6	10.5	0.0020	0.0640
WS11	R	16/09/20	-0.2	0.2	Furnace / General Made Ground	1016	0.10	0.10	0.10	0.10	0.1	0.1	20.5	20.5	0.0002	0.0002

Ground Gas Risk Assessment

Hydrock

Location	Pressure Trend	Date	Relative Pressure (mb)	Flow Rate (l/hr)	Stratum	Atmos. Pressure (m.bar)	CH_4 (% vol)		(%LEL)		CO_2 (% vol)		O_2 (% vol)		GSV – CH4	GSV – CO_2
					Stratum		Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady		
WS13	R	16/09/20	0.0	-0.1	General / Organic Made Ground	1019	0.10	0.10	0.10	0.10	0.1	4.0	19.9	14.0	-0.0001	-0.0040
CP03	F	01/10/20	-0.3	0.4	Glacial Till / PMCMF*	987	0.10	0.10	0.10	0.10	1.9	1.9	17.6	17.6	0.0004	0.0076
CP04	F	01/10/20	-1.1	0.1	General Made Ground	988	0.10	0.10	0.10	0.10	0.3	10.0	20.1	15.4	0.0001	0.0100
CP06	F	01/10/20	-0.2	0.2	Opencast Made Ground	987	0.10	0.10	0.10	0.10	0.9	0.9	19.7	19.3	0.0002	0.0018
CP07	F	01/10/20	-0.3	0.2	Opencast Made Ground	988	0.10	0.10	0.10	0.10	0.1	0.2	16.7	18.6	0.0002	0.0004
CP09	F	01/10/20	-0.1	0.3	Glacial Till	988	0.10	0.10	0.10	0.10	0.7	0.8	18.9	17.6	0.0003	0.0024
RO04	F	01/10/20	0.7	0.3	PMCMF	988	0.10	0.10	0.10	0.10	1.7	1.7	16.6	10.2	0.0003	0.0051
RO10	F	01/10/20	-0.2	0.5	PMCMF	988	0.10	0.10	0.10	0.10	0.3	0.3	20.1	20.2	0.0005	0.0015
WS01	F	01/10/20	-3.1	2.2	General Made Ground	988	0.10	0.10	0.10	0.10	2.8	2.8	16.9	16.0	0.0022	0.0616
WS02	F	01/10/20	-4.5	0.4	Glacial Till	988	0.10	0.10	0.10	0.10	4.0	4.0	19.1	18.7	0.0004	0.0160
WS05	F	01/10/20	1.3	0.4	Glacial Till	988	0.10	0.10	0.10	0.10	1.0	1.0	18.9	18.5	0.0004	0.0040
WS07	F	01/10/20	-0.7	0.2	Opencast Made Ground	988	0.10	0.10	0.10	0.10	2.1	2.0	17.0	12.9	0.0002	0.0040
WS11	F	01/10/20	-0.3	0.5	Furnace / General Made Ground	987	0.10	0.10	0.10	0.10	3.9	3.9	17.6	15.9	0.0005	0.0195
WS13	F	01/10/20	-2.0	0.3	General / Organic Made Ground	988	0.10	0.10	0.10	0.10	11.0	11.1	15.7	5.3	0.0003	0.0333
WS14	F	01/10/20	.2.31	0.2	General / Organic Made Ground	988	0.10	0.10	0.10	0.10	1.2	1.2	19.1	17.1	0.0002	0.0024
CP03	F	12/10/20	-1.1	0.2	Glacial Till / PMCMF*	1008	0.1	0.1	0.1	0.1	1.8	1.9	18.2	18.2	0.0002	0.0038
CP04	F	12/10/20	-0.2	0.1	General Made Ground	1008	0.1	0.1	0.1	0.1	0.3	10.8	20.5	4.3	0.0001	0.0108
CP06	F	12/10/20	-0.2	0.4	Opencast Made Ground	1007	0.1	0.1	0.1	0.1	0.1	1.0	20.8	18.5	0.0004	0.0040
CP07	F	12/10/20	-0.3	0.3	Opencast Made Ground	1008	0.1	13.0	0.1	0.1	0.2	0.1	20.5	0.4	0.0390	0.0003
CP09	F	12/10/20	-0.2	0.3	Glacial Till	1008	0.1	0.1	0.1	0.1	0.3	0.3	20.6	18.2	0.0003	0.0009
RO04	F	12/10/20	-0.3	0.4	PMCMF	1008	0.1	0.1	0.1	0.1	0.3	0.2	20.5	16.8	0.0004	0.0008
RO10	F	12/10/20	0.2	0.4	PMCMF	1009	0.1	0.1	0.1	0.1	0.2	0.1	20.5	20.4	0.0004	0.0004
WS01	F	12/10/20	-14.5	-13.3	General Made Ground	1008	0.1	0.1	0.1	0.1	0.2	0.4	20.6	20.5	-0.0133	-0.0532
WS02	F	12/10/20	-0.5	-2.5	Glacial Till	1008	0.1	0.1	0.1	0.1	0.1	0.2	20.6	20.5	-0.0025	-0.0050
WS05	F	12/10/20	-0.1	0.3	Glacial Till	1008	0.1	0.1	0.1	0.1	0.1	0.1	20.9	20.9	0.0003	0.0003
WS07	F	12/10/20	-2.3	0.5	Opencast Made Ground	1008	0.7	0.1	14.0	0.1	0.1	4.7	20.0	10.4	0.0005	0.0235
WS11	F	12/10/20	-0.2	0.3	Furnace / General Made Ground	1009	0.1	0.1	0.1	0.1	5.8	5.8	12.4	12.4	0.0003	0.0174
WS13	F	12/10/20	-0.1	-0.4	General / Organic Made Ground	1008	0.1	0.1	0.1	0.1	0.1	4.5	20.9	12.2	-0.0004	-0.0180
WS14	F	12/10/20	0.6	0.3	General / Organic Made Ground	1007	0.1	0.1	0.1	0.1	0.1	0.6	20.9	17.0	0.0003	0.0018
CP03	R	26/10/20	-0.2	0.5	Glacial Till / PMCMF*	979	0.1	0.1	0.1	0.1	0.1	1.9	20.9	17.9	0.0005	0.0095
CP04	R	26/10/20	-0.3	0.4	General Made Ground	983	0.1	0.1	0.1	0.1	0.1	9.3	20.4	7.4	0.0004	0.0372
CP06	R	26/10/20	-0.1	0.3	Opencast Made Ground	983	0.1	0.1	0.1	0.1	0.1	1.1	20.5	18.3	0.0003	0.0033
CP09	R	26/10/20	-0.2	0.5	Glacial Till	985	0.1	0.1	0.1	0.1	0.1	0.2	20.6	20.2	0.0005	0.0010
RO10	R	26/10/20	-0.2	0.6	PMCMF	981	0.1	0.1	0.1	0.1	0.1	0.1	20.7	20.9	0.0006	0.0006
WS01	R	26/10/20	47.8	11.0	General Made Ground	980	0.1	0.1	0.1	0.1	0.1	2.2	20.7	14.4	0.0110	0.2420
WS02	R	26/10/20	36.9	3.9	Glacial Till	980	0.1	0.1	0.1	0.1	0.1	2.8	20.7	17.4	0.0039	0.1092
WS05	R	26/10/20	4.6	-0.5	Glacial Till	982	0.1	0.1	0.1	0.1	0.1	0.1	20.6	20.5	-0.0005	-0.0005
WS11	R	26/10/20	-0.3	0.4	Furnace / General Made Ground	981	0.1	0.1	0.1	0.1	0.1	8.3	20.7	12.3	0.0004	0.0332
WS13	R	26/10/20	-0.6	0.4	General / Organic Made Ground	981	0.1	0.1	0.1	0.1	0.1	5.0	20.4	11.8	0.0004	0.0200
CP03	R	09/11/20	-0.2	-0.3	Glacial Till / PMCMF*	1008	0.1	0.1	0.1	0.1	0.3	0.3	20.7	20.7	-0.0003	-0.0009
CP04	R	09/11/20	-0.4	-0.2	General Made Ground	1008	0.1	0.1	0.1	0.1	0.2	9.8	20.9	8.1	-0.0002	-0.0196
CP06	R	09/11/20	-0.4	-0.3	Opencast Made Ground	1009	0.1	0.1	0.1	0.1	0.1	1.0	20.7	18.9	-0.0003	-0.0030
CP09	R	09/11/20	-3.1	-0.4	Glacial Till	1008	0.1	0.1	0.1	0.1	0.1	2.0	20.9	19.9	-0.0004	-0.0080
RO10	R	09/11/20	-0.5	-3.9	PMCMF	1008	0.1	0.1	0.1	0.1	0.2	0.8	20.7	19.8	-0.0039	-0.0312
WS01	R	09/11/20	-0.6	-0.4	General Made Ground	1008	0.1	0.1	0.1	0.1	0.1	1.3	20.9	14.6	-0.0004	-0.0052
WS02	R	09/11/20	2.3	-0.3	Glacial Till	1008	0.1	0.1	0.1	0.1	0.1	1.9	20.7	19.6	-0.0003	-0.0057
WS05	R	09/11/20	-3.0	-0.7	Glacial Till	1008	0.1	0.1	0.1	0.1	0.1	0.5	20.9	19.9	-0.0007	-0.0035
WS11	R	09/11/20	-5.4	-0.4	Furnace / General Made Ground	1006	0.1	0.1	0.1	0.1	0.1	7.5	20.7	11.7	-0.0004	-0.0300
WS13	R	09/11/20	-2.0	-0.2	General / Organic Made Ground	1008	0.1	0.1	0.1	0.1	0.2	3.8	20.9	13.9	-0.0002	-0.0076

Ground Gas Risk Assessment

Hydrock

Location	Pressure Trend	Date	Relative Pressure (mb)	Flow Rate (l/hr)	Stratum	Atmos. Pressure (m.bar)	CH_4 (% vol)		(%LEL)		CO_2 (% vol)		O_2 (% vol)		GSV – CH4	GSV – CO_2
					Stratum		Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady		
WS14	R	09/11/20	0.1	-0.3	General / Organic Made Ground	1008	0.1	0.1	0.1	0.1	0.2	0.3	20.9	18.5	-0.0003	-0.0009

Appendix E

Contamination Test Results and Statistical Analysis

Contamination Test Results

Sarah Hey
Hydrock Consultants Ltd
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Stoke on Trent
ST1 5RY

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f: 01782 262020
e: stoke@hydrock.com

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Watford,
Herts,
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e: reception@i2analytical.com

Combined Report : Stopes Road, Bolton

Project / Site name:	Stopes Road, Bolton	**Samples received on:**	07/08/2020
Your job number:	C-15220-C	**Samples instructed on/ Analysis started on:**	07/08/2020
Your order number:	PO00984	**Analysis completed by:**	20/08/2020
Report Issue Number:	1	**Report issued on:**	11/09/2020
Samples Analysed:	2 bulk samples - 56 soil samples		

Signed: _____

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO000984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	8.1	17	15	16
Total mass of sample received	kg	0.001	NONE	0.3	0.4	0.3	0.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile & Amosite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	8.8	9.9	8.4	7.5
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	1300	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	0.125	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.26	0.37	1.4	1.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	257	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	72	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	36	-	-	-
Total Sulphur	mg/kg	50	MCERTS	950	-	-	-
Total Sulphur	%	0.005	MCERTS	0.095	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	5.6	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	0.56	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.017	0.023	0.018	0.034
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	< 2.0	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	< 5.0	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	1.1	0.4	< 0.05	0.44
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.28	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.41	0.66	< 0.05	0.44
Fluorene	mg/kg	0.05	MCERTS	0.34	0.44	< 0.05	0.42
Phenanthrene	mg/kg	0.05	MCERTS	1.5	6.2	1.3	6.8
Anthracene	mg/kg	0.05	MCERTS	0.28	1.1	0.28	1.5
Fluoranthene	mg/kg	0.05	MCERTS	1.4	8.7	2.4	15
Pyrene	mg/kg	0.05	MCERTS	1.3	8	2.2	14
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.63	4.1	1.2	6.8
Chrysene	mg/kg	0.05	MCERTS	0.66	2.8	0.9	6.1
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.58	3.6	0.86	6
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.37	1.9	0.7	4.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.48	3.2	0.8	5.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.25	1.6	0.45	2.6
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.46	< 0.05	0.59
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.29	1.8	0.47	2.7
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	9.53	45.2	11.6	73.8

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	27	49	50	85
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.5	2.1	2.4	2.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	1	6.5	3.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.4	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	25	28	32	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	29	33	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	69	110	150	110
Lead (aqua regia extractable)	mg/kg	1	MCERTS	42	88	61	210
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	0.5
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	36	63	46	44
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	3.4
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	47	120	71	60
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	81	120	85	99
Magnesium (water soluble)	mg/kg	5	NONE	13	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	6.6	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	8.2	6.6	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	53	22	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	450	75	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	75	20	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.9	7.6	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	26	32	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	160	120	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	36	43	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	ND	ND	-	-
VOC % Match	%	N/A	NONE	0.00000	0.00000	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	1.1	0.4	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	0.7	0.5	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.28	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.41	0.66	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	0.4	0.3	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	0.34	0.44	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	1.5	6.2	-	-
Anthracene	mg/kg	0.05	MCERTS	0.28	1.1	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	0.7	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	1.4	8.7	-	-
Pyrene	mg/kg	0.05	MCERTS	1.3	8	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.63	4.1	-	-
Chrysene	mg/kg	0.05	MCERTS	0.66	2.8	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.58	3.6	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.37	1.9	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.48	3.2	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.25	1.6	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.46	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.29	1.8	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	Naphthalene, 1,6-dimethyl-	11H-Benzo[b]fluorene	-	-
SVOC % Match	%	N/A	NONE	97	97	-	-
SVOCs TICs Compound Name		N/A	NONE	Heneicosane	Naphthalene, 1,3-dimethyl-	-	-
SVOC % Match	%	N/A	NONE	94	96	-	-
SVOCs TICs Compound Name		N/A	NONE	Octadecane, 4-methyl-	Naphthalene, 1,6,7-trimethyl-	-	-
SVOC % Match	%	N/A	NONE	93	96	-	-
SVOCs TICs Compound Name		N/A	NONE	4a,trans-8a-perhydro-trans-1-(2-methoxycarbonylethyl)-trans-2,trans-6,8a-trimethylnaphthalene-2-carboxylic acid	Phenanthrene, 2-methyl-	-	-
SVOC % Match	%	N/A	NONE	92	96	-	-
SVOCs TICs Compound Name		N/A	NONE	Anthra-9,10-quinone, 1-(3-hydrohy-3-phenyl-1-triazenyl)-	3-Chloro-N-hydroxy-N'-phenyl-benzamidine	-	-
SVOC % Match	%	N/A	NONE	92	96	-	-
SVOCs TICs Compound Name		N/A	NONE	0.00000	Chrysene, 6-methyl	-	-
SVOC % Match	%	N/A	NONE	0.00000	96	-	-
SVOCs TICs Compound Name		N/A	NONE	Tetradecane	Pyrene, 1-methyl-	-	-
SVOC % Match	%	N/A	NONE	91	95	-	-
SVOCs TICs Compound Name		N/A	NONE	1,2-Benzisothiazole, 3-(hexahydro-1H-azepin-1-yl)-, 1,1-dioxide	3-Bromo-5-ethoxy-4-hydroxybenzaldehyde	-	-
SVOC % Match	%	N/A	NONE	91	95	-	-
SVOCs TICs Compound Name		N/A	NONE	Naphthalenone, 4a,5,6,7,8,8a-hexahydro-6-[1-(hydroxymethyl)ethenyl]-4,8a-dimethyl-, [4ar-(4a.alpha.,6.alpha.,8a.beta.)]-	Antra-9,10-quinone, 1-(3-hydrohy-3-phenyl-1-triazenyl)-	-	-
SVOC % Match	%	N/A	NONE	91	95	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589039	1589040	1589041	1589043
Sample Reference				TP10	TP01	TP11	TP09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.20	1.60	2.10
Date Sampled				03/08/2020	04/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	Heptacosane	Benzonitrile, 2-(2-chlorobenzylidenamino)-	-	-
SVOC % Match	%	N/A	NONE	91	94	-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	12	13	15	14
Total mass of sample received	kg	0.001	NONE	0.7	0.3	0.3	0.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	10.5	8.8	8.7	9.3
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.5	0.29	0.34	0.41
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0078	0.018	0.023	0.018
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	2.3	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.71	0.29	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.49	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	1.6	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.54	15	0.51	1.8
Anthracene	mg/kg	0.05	MCERTS	0.13	3.5	0.11	0.46
Fluoranthene	mg/kg	0.05	MCERTS	0.82	25	0.71	3.6
Pyrene	mg/kg	0.05	MCERTS	0.74	23	0.67	3.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.47	13	0.37	1.8
Chrysene	mg/kg	0.05	MCERTS	0.34	10	0.37	1.6
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.33	10	0.28	1.4
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.24	7.7	0.24	1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.35	10	0.31	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	4.5	< 0.05	0.72
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	1.5	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	5	< 0.05	0.79
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3.96	133	3.86	18.1

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	33	47	55
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.51	1.4	1.7	1.9
Boron (water soluble)	mg/kg	0.2	MCERTS	5.5	1.1	1.8	2.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	1.4	0.4	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	47	21	23	29
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	47	21	24	29
Copper (aqua regia extractable)	mg/kg	1	MCERTS	260	49	89	67
Lead (aqua regia extractable)	mg/kg	1	MCERTS	580	53	45	42
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	33	36	46
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	2.6	< 1.0	3.4
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	18	43	48	63
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	610	89	74	75
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589044	1589045	1589046	1589047
Sample Reference				TP22	TP22	TP21	TP21
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	1.90	2.10	1.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	13	9.3	11	12
Total mass of sample received	kg	0.001	NONE	0.75	0.3	0.3	0.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	9.3	10.3	8.5	8.2
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.36	0.43	0.058	0.2
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.013	0.0075	0.011	0.014
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.5	0.27	< 0.05	0.99
Anthracene	mg/kg	0.05	MCERTS	0.14	< 0.05	< 0.05	0.21
Fluoranthene	mg/kg	0.05	MCERTS	1.1	0.73	< 0.05	2.1
Pyrene	mg/kg	0.05	MCERTS	0.96	0.77	< 0.05	2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.46	0.4	< 0.05	1.1
Chrysene	mg/kg	0.05	MCERTS	0.43	0.35	< 0.05	0.99
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.38	0.36	< 0.05	0.98
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.17	0.25	< 0.05	0.59
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.3	0.3	< 0.05	0.84
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.47
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.49
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	4.39	3.43	< 0.80	10.7

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	44	15	47	36
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.8	0.89	1.6	1.9
Boron (water soluble)	mg/kg	0.2	MCERTS	4	1.7	0.6	1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	0.5	< 0.2	0.5
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	34	28	34	47
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	28	35	47
Copper (aqua regia extractable)	mg/kg	1	MCERTS	79	39	60	93
Lead (aqua regia extractable)	mg/kg	1	MCERTS	63	26	26	89
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	43	27	41	44
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	61	34	52	54
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	92	66	140
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	18	-	-	25
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	200	-	-	250
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	21	-	-	59
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	-	16
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	36	-	-	58
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	30
VOCs							
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	< 1.0

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	ND	-	-	ND
VOC % Match	%	N/A	NONE	0.00000	-	-	0.00000
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	0.5	-	-	0.99
Anthracene	mg/kg	0.05	MCERTS	0.14	-	-	0.21
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	1.1	-	-	2.1
Pyrene	mg/kg	0.05	MCERTS	0.96	-	-	2
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.46	-	-	1.1
Chrysene	mg/kg	0.05	MCERTS	0.43	-	-	0.99
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	0.38	-	-	0.98

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	0.17	-	-	0.59
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.3	-	-	0.84
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.47
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.49

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	1-Bromo-11-iodoundecane	-	-	Benzo[e]pyrene
SVOC % Match	%	N/A	NONE	95	-	-	97
SVOCs TICs Compound Name		N/A	NONE	Cyclotriacontane	-	-	Pyrene, 1-methyl-
SVOC % Match	%	N/A	NONE	93.00000	-	-	96
SVOCs TICs Compound Name		N/A	NONE		-	-	Anthracene, 1-methyl-
SVOC % Match	%	N/A	NONE		-	-	95
SVOCs TICs Compound Name		N/A	NONE		-	-	1-Naphthalenecarboxylic acid, 2-benzoyl-
SVOC % Match	%	N/A	NONE		-	-	95
SVOCs TICs Compound Name		N/A	NONE		-	-	Hexadecane, 2,6,10,14-tetramethyl-
SVOC % Match	%	N/A	NONE		-	-	93
SVOCs TICs Compound Name		N/A	NONE		-	-	Anthra-9,10-quinone, 1-(3-hydrohy-3-phenyl-1-triazenyl)-
SVOC % Match	%	N/A	NONE		-	-	93
SVOCs TICs Compound Name		N/A	NONE		-	-	5H-Dibenzo[a,d]cycloheptene
SVOC % Match	%	N/A	NONE		-	-	92
SVOCs TICs Compound Name		N/A	NONE		-	-	0.00000
SVOC % Match	%	N/A	NONE		-	-	0.00000
SVOCs TICs Compound Name		N/A	NONE		-	-	Naphthalene, 2,3,6-trimethyl-
SVOC % Match	%	N/A	NONE		-	-	91

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589048	1589049	1589050	1589051
Sample Reference				TT01	TP20	TP19	TP03
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	0.10	0.60	0.40
Date Sampled				05/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE		-	-	1,10b(2H)-Dihydropyrano[3,4,5-jk]fluorene
SVOC % Match	%	N/A	NONE		-	-	91

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO000984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	20	15	11	18
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3	0.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	7.1	8.4	9	7.7
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	4700	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	0.471	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.14	0.081	0.11	0.24
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	109	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	15	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	7.5	-
Total Sulphur	mg/kg	50	MCERTS	-	-	2800	-
Total Sulphur	%	0.005	MCERTS	-	-	0.281	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	< 0.5	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	< 0.05	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0073	0.041	0.021	0.047
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	3.3	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	< 5.0	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	1.3	< 0.05	0.38
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1.2	1.3	1.3
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.13	0.31	0.25
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.49	6.4	1.9
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.63	6.5	1.7
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.43	2.7	1.1
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.29	2.8	0.86
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.3	2.5	0.73
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.16	1.5	0.57
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.8	0.68
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	0.36
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.31	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.1	0.39
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	4.95	28.2	10.2

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	5.8	10	36	27
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.74	1.8	2.9	0.52
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	1.8	2.3	0.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	27	34	30	9.9
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	35	31	10
Copper (aqua regia extractable)	mg/kg	1	MCERTS	26	48	100	56
Lead (aqua regia extractable)	mg/kg	1	MCERTS	14	26	76	44
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	15	45	41	13
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	2.7	< 1.0	2.1
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	27	20	42	22
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	31	130	110	31
Magnesium (water soluble)	mg/kg	5	NONE	-	-	12	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	6.2	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	< 0.1	-	< 0.1
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	< 1.0

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	< 1.0

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	ND	-	-	ND
VOC % Match	%	N/A	NONE	0.00000	-	-	0.00000
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.38
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	0.9
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	0.3
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	1.3
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.25
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	1.9
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	1.7
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	1.1
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.86
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.73

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.57
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.68
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.36
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	0.39

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	Naphthalene, 2,3,6-trimethyl-
SVOC % Match	%	N/A	NONE	0.00000	-	-	97
SVOCs TICs Compound Name		N/A	NONE		-	-	Naphthalene, 1,5-dimethyl-
SVOC % Match	%	N/A	NONE		-	-	96
SVOCs TICs Compound Name		N/A	NONE		-	-	Cyclohexane-1,3-dione, 2-allylaminomethylene-5,5-dimethyl-
SVOC % Match	%	N/A	NONE		-	-	95
SVOCs TICs Compound Name		N/A	NONE		-	-	Naphthalene, 1,4,5-trimethyl-
SVOC % Match	%	N/A	NONE		-	-	94
SVOCs TICs Compound Name		N/A	NONE		-	-	Hexadecane, 2,6,10,14-tetramethyl-
SVOC % Match	%	N/A	NONE		-	-	94
SVOCs TICs Compound Name		N/A	NONE		-	-	Anthracene, 2-methyl-
SVOC % Match	%	N/A	NONE		-	-	93
SVOCs TICs Compound Name		N/A	NONE		-	-	Bacchotricuneatin c
SVOC % Match	%	N/A	NONE		-	-	92
SVOCs TICs Compound Name		N/A	NONE		-	-	Anthracene, 9-methyl-
SVOC % Match	%	N/A	NONE		-	-	92
SVOCs TICs Compound Name		N/A	NONE		-	-	Naphthalene, 2,6-dimethyl-
SVOC % Match	%	N/A	NONE		-	-	91

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589052	1589053	1589054	1589055
Sample Reference				TP03	TT02	TP02	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	1.00	0.10	0.90
Date Sampled				05/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE		-	-	Naphthalene, 2-methyl-
SVOC % Match	%	N/A	NONE		-	-	90
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	< 0.001	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	< 0.001	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	< 0.007	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	16	4.3	12	20
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3	0.3
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	7.8	8.9	9	7.3
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.084	0.057	0.13	0.53
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.008	0.0037	0.0074	0.044
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.4
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.37
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.6
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	2.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.3
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.4
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.54
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.61
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.67
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	13.7

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	3	12	11	30
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.46	0.95	0.76	1.4
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	0.8	0.6	2.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.5
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	14	51	19	17
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	52	19	17
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	40	25	61
Lead (aqua regia extractable)	mg/kg	1	MCERTS	8.6	6.5	14	130
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	0.4
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.3	30	24	30
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	19	55	22	33
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	17	73	50	100
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	< 0.1	< 0.1	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Chloroethane	µg/kg	1	NONE	-	< 1.0	-	-
Bromomethane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	< 1.0	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-
Trichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	< 1.0	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	-	-
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	< 1.0	-	-
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	-	-
Dibromomethane	µg/kg	1	MCERTS	-	< 1.0	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	< 1.0	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	< 1.0	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-
Styrene	µg/kg	1	MCERTS	-	< 1.0	-	-
Tribromomethane	µg/kg	1	NONE	-	< 1.0	-	-
o-Xylene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
Bromobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	< 1.0	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
Butylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	< 1.0	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	< 1.0	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	< 1.0	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	ND	-	-
VOC % Match	%	N/A	NONE	-	0.00000	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	ND	-	-
SVOC % Match	%	N/A	NONE	-	0.00000	-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589056	1589057	1589058	1589059
Sample Reference				TP04	TP15	CP06	TP16
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.70	0.85	1.30	2.00
Date Sampled				06/08/2020	06/08/2020	06/08/2020	06/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO000984

Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	16	15	16	16
Total mass of sample received	kg	0.001	NONE	0.3	0.3	0.3	0.63
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	8.2	6	6.3	5.7
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	1300	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	0.13	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.16	1.4	0.085	0.021
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	156	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	0.011
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	3.9	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.9	-	-	-
Total Sulphur	mg/kg	50	MCERTS	690	-	-	-
Total Sulphur	%	0.005	MCERTS	0.069	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.018	< 0.0010	0.0094	0.051
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	3.6	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	< 5.0	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.56
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.95
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.98
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.47
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.6
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.5
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.42
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.26
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.32
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	5.36

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	47	6.4	3	35
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.7	0.63	0.39	1.1
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.3	0.5	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.6
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	23	15	5.6	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	16	6.1	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	64	18	10	60
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	9.3	6.8	140
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	0.8
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	35	37	16	19
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	52	180	14	32
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	50	36	26	120
Magnesium (water soluble)	mg/kg	5	NONE	18	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	9.1	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	< 0.1	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	0.56
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	0.95
Pyrene	mg/kg	0.05	MCERTS	-	-	-	0.98
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	0.47
Chrysene	mg/kg	0.05	MCERTS	-	-	-	0.6
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	0.5

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	0.3
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	0.42
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	0.26
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	0.32

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	-	0.00000
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
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Lab Sample Number				1589060	1589061	1589062	1593555
Sample Reference				TP18	WS03	WS03	TP23
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.60	1.40	2.20	0.20
Date Sampled				06/08/2020	07/08/2020	07/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	
SVOC % Match	%	N/A	NONE	-	-	-	
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	12	23	16	6.1
Total mass of sample received	kg	0.001	NONE	0.42	0.36	0.66	0.53
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	-	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	5.7	6.5	5.5	10.1
Free Cyanide	mg/kg	1	MCERTS	< 1	-	-	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	780	320	-
Total Sulphate as SO4	%	0.005	MCERTS	-	0.078	0.032	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.058	0.21	0.042	0.054
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	207	41.6	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.024	0.12	0.016	0.034
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	85	2.2	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	43	1.1	-
Total Sulphur	mg/kg	50	MCERTS	-	850	120	-
Total Sulphur	%	0.005	MCERTS	-	0.085	0.012	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	28	< 0.5	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	2.81	< 0.05	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.015	-	-	0.0041
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	5	4.2	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	< 5.0	< 5.0	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	-	-	< 0.80

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	76	-	-	3.2
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1	-	-	0.51
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-	-	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	-	-	< 1.2
Chromium (III)	mg/kg	1	NONE	18	-	-	16
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	18	-	-	16
Copper (aqua regia extractable)	mg/kg	1	MCERTS	22	-	-	11
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	-	-	9.2
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	30	-	-	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	-	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	25	-	-	15
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	63	-	-	41
Magnesium (water soluble)	mg/kg	5	NONE	-	11	< 5.0	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	5.3	< 2.5	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Chloroethane	µg/kg	1	NONE	< 1.0	-	-	-
Bromomethane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-
Trichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-	-
Dibromomethane	µg/kg	1	MCERTS	< 1.0	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
Styrene	µg/kg	1	MCERTS	< 1.0	-	-	-
Tribromomethane	µg/kg	1	NONE	< 1.0	-	-	-
o-Xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Bromobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Butylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	ND	-	-	-
VOC % Match	%	N/A	NONE	0.00000	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-
SVOC % Match	%	N/A	NONE	0.00000	-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593556	1593557	1593558	1593559
Sample Reference				TP28	TP20	TP25	CP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	1.30	0.50	0.10
Date Sampled				11/08/2020	05/08/2020	10/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE		-	-	-
SVOC % Match	%	N/A	NONE		-	-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	21	3.5	< 0.1
Moisture Content	%	N/A	NONE	5.6	6.4	21	14
Total mass of sample received	kg	0.001	NONE	0.8	0.8	0.5	0.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	-	-	-	-
Free Cyanide	mg/kg	1	MCERTS	-	-	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	2.6	-	7.1	2
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	-	-	-	-
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	0.928	2.56	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	-
Chromium (III)	mg/kg	1	NONE	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593925	1593926	1593927	1593928
Sample Reference				TP10	TP13	TP20	TP03
Sample Number				Combined	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-1.00	0.50-0.60	1.30	1.00-1.10
Date Sampled				03/08/2020	05/08/2020	05/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	5.4	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	24	12	34	12
Total mass of sample received	kg	0.001	NONE	0.6	0.6	0.6	1.2
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	-	-	-	7.4
Free Cyanide	mg/kg	1	MCERTS	-	-	-	-
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	440
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	0.044
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	0.11
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	113
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	64
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	32
Total Sulphur	mg/kg	50	MCERTS	-	-	-	280
Total Sulphur	%	0.005	MCERTS	-	-	-	0.028
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	15
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	1.47
Organic Matter	%	0.1	MCERTS	9.8	1.8	16	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	-	-	-	-
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	< 2.0
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	< 5.0
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	-
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	-
Chromium (III)	mg/kg	1	NONE	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	16
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	7.9
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1593929	1593930	1593931	1594298
Sample Reference				TP15	TP18	TP18	CP10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	0.60-0.70	2.50-2.60	1.20-1.65
Date Sampled				06/08/2020	06/08/2020	06/08/2020	10/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-

Total PCBs by GC-MS

Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-

Miscellaneous Organics

Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
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Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	5.5	15	6.8	15
Total mass of sample received	kg	0.001	NONE	0.8	0.42	1.4	0.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	8	8.3	6.5	7.6
Free Cyanide	mg/kg	1	MCERTS	-	-	-	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	970	620	200	-
Total Sulphate as SO4	%	0.005	MCERTS	0.097	0.062	0.02	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.33	0.4	0.025	0.3
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	329	397	24.8	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	16	12	5.2	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	7.8	6	2.6	-
Total Sulphur	mg/kg	50	MCERTS	1000	730	220	-
Total Sulphur	%	0.005	MCERTS	0.102	0.073	0.022	-
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.7	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05	< 0.05	0.07	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	-	-	-	0.032
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	32	< 2.0	< 2.0	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	16	< 5.0	< 5.0	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	-	-	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	-	-	< 0.80

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	6.9
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	1.8
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	0.3
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	< 1.2
Chromium (III)	mg/kg	1	NONE	-	-	-	18
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	100
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	7.6
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	22
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	130
Magnesium (water soluble)	mg/kg	5	NONE	71	32	17	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	35	16	8.5	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	< 1.0
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	2.7
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	190
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	450
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	410
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	4700
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	750
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	60
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	200
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	550
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	5900
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	680
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	ND
VOC % Match	%	N/A	NONE	-	-	-	0.00000
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	< 0.05

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	Cyclohexane, 2-butyl-1,1,3-trimethyl-
SVOC % Match	%	N/A	NONE	-	-	-	95
SVOCs TICs Compound Name		N/A	NONE	-	-	-	Z-14-Nonacosane
SVOC % Match	%	N/A	NONE	-	-	-	95
SVOCs TICs Compound Name		N/A	NONE	-	-	-	1,2 Benzisothiazole, 3-(hexahydro-1H-azepin-1-yl)-, 1,1-dioxide
SVOC % Match	%	N/A	NONE	-	-	-	94
SVOCs TICs Compound Name		N/A	NONE	-	-	-	1-Ethyl-2,2,6-trimethylcyclohexane
SVOC % Match	%	N/A	NONE	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	Cyclopentane, decyl-
SVOC % Match	%	N/A	NONE	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	Urs-20-en-16-ol, (16.beta.,18.alpha.,19.alpha.)-
SVOC % Match	%	N/A	NONE	-	-	-	93
SVOCs TICs Compound Name		N/A	NONE	-	-	-	Naphthalene, decahydro-
SVOC % Match	%	N/A	NONE	-	-	-	92
SVOCs TICs Compound Name		N/A	NONE	-	-	-	4-Pyrimidine-4,6-dione, hexahydro-3-ethyl-5-(5-nitrothiophen-2-ylmethylidene)-2-thioxo-
SVOC % Match	%	N/A	NONE	-	-	-	91
SVOCs TICs Compound Name		N/A	NONE	-	-	-	2-[3-(4-tert-Butyl-phenoxy)-2-hydroxy-propylsulfanyl]-4,6-dimethyl-nicotinonitrile
SVOC % Match	%	N/A	NONE	-	-	-	91

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1599324	1599325	1599330	1601136
Sample Reference				TP13	TP14	CP10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50-0.60	0.80	3.00-3.45	1.30
Date Sampled				05/08/2020	07/08/2020	11/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	Anthra-9,10-quinone, 1-(3-hydrohy-3-phenyl-1-triazenyl)-
SVOC % Match	%	N/A	NONE	-	-	-	91
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601137	1601138	1601139	1601140
Sample Reference				WS01	WS01	WS06	WS11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	1.70	0.20	0.30
Date Sampled				19/08/2020	19/08/2020	17/08/2020	17/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	10	13	5.4	8.5
Total mass of sample received	kg	0.001	NONE	0.6	0.6	0.6	0.6
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	-	8.1	8.7	8.6
Free Cyanide	mg/kg	1	MCERTS	-	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.066	0.017	0.021
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	-	0.0087	< 0.0010	0.022
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	1
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.24
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	2.3
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	2.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	1.4
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	1.3
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	1.6
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	1.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.75
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.86
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	-	< 0.80	< 0.80	13.9

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Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	5.8	3.7	24
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	0.87	0.7	3
Boron (water soluble)	mg/kg	0.2	MCERTS	-	0.4	< 0.2	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	-	18	24	31
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	19	25	31
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	22	16	75
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	12	11	35
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	32	29	52
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	20	20	62
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	58	65	65
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	6.3	< 0.001	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	62	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	170	< 2.0	-	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	690	< 8.0	-	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	3900	58	-	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	810	16	-	< 8.4
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	15	< 2.0	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	240	< 10	-	14
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	1600	57	-	27
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	82	13	-	< 8.4
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Sample Reference				WS01	WS01	WS06	WS11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	1.70	0.20	0.30
Date Sampled				19/08/2020	19/08/2020	17/08/2020	17/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Lab Sample Number				1601137	1601138	1601139	1601140
Sample Reference				WS01	WS01	WS06	WS11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.40	1.70	0.20	0.30
Date Sampled				19/08/2020	19/08/2020	17/08/2020	17/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	ND	-	-
VOC % Match	%	N/A	NONE	-	0.00000	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

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Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	Androstane	-	-
SVOC % Match	%	N/A	NONE	-	92	-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-

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Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-		-	-
SVOC % Match	%	N/A	NONE	-		-	-
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.45	1.30	0.40
Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	5.6	30	17	12
Total mass of sample received	kg	0.001	NONE	0.6	0.5	0.8	0.8
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite- Loose Fibres	Chrysotile- Loose Fibres
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	7	7.9	7.9
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.056	0.95	0.13	0.046
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.01	0.08	0.041	0.028
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.2
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.3
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.34	< 0.05	1.7
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.25	< 0.05	2.7
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	3.2	< 0.05	22
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.53	< 0.05	5.2
Fluoranthene	mg/kg	0.05	MCERTS	0.42	5.2	< 0.05	34
Pyrene	mg/kg	0.05	MCERTS	0.45	4.8	< 0.05	31
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	2.6	< 0.05	19
Chrysene	mg/kg	0.05	MCERTS	< 0.05	2.4	< 0.05	11
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	3.1	< 0.05	18
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.96	< 0.05	5.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	2.3	< 0.05	15
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.92	< 0.05	5.3
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	1.1	< 0.05	6.5

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	0.87	27.7	< 0.80	180

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Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.45	1.30	0.40
Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	58	34	38
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1	1.9	1.3	1.8
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	7.6	1.3	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.6	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	21	34	20	26
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	21	33	20	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	44	100	76	60
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	210	12	68
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	0.9	< 0.3	0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	30	34	37
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	3	< 1.0	3
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	32	49	36	52
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	60	140	39	79
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.8	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	20	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	280	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	51	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.9	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	13	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	110	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	41	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.45	1.30	0.40
Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.45	1.30	0.40
Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	1.45	1.30	0.40
Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601141	1601142	1601143	1601144
Sample Reference				WS12	WS14	WS10	WS09
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Date Sampled				18/08/2020	19/08/2020	19/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	8.6	9.5	9.5	0.24
Total mass of sample received	kg	0.001	NONE	0.6	0.5	0.5	2
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	-	Not-detected	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	7.7	8.5	7.7	-
Free Cyanide	mg/kg	1	MCERTS	< 1	-	< 1	-
Total Sulphate as SO4	mg/kg	50	MCERTS	-	1500	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	0.15	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.091	0.096	1.4	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	96.3	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	4.6	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	2.3	-	-
Total Sulphur	mg/kg	50	MCERTS	-	780	-	-
Total Sulphur	%	0.005	MCERTS	-	0.078	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	< 0.5	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	< 0.05	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.02	-	0.04	-
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	3.6	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	< 5.0	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	1.1	2.5
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.44	-	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.61	-	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	6.8	-	1.8	0.79
Anthracene	mg/kg	0.05	MCERTS	1.4	-	0.56	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	11	-	3	0.6
Pyrene	mg/kg	0.05	MCERTS	9.6	-	3	0.83
Benzo(a)anthracene	mg/kg	0.05	MCERTS	5.6	-	2.1	< 0.05
Chrysene	mg/kg	0.05	MCERTS	4	-	1.9	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	5.7	-	1.5	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	1.7	-	1.5	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.2	-	1.7	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.6	-	0.8	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.9	-	1	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	54.4	-	19.8	4.75

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	41	-	70	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.2	-	3.3	-
Boron (water soluble)	mg/kg	0.2	MCERTS	2	-	1.9	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-	0.9	-
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	-	< 1.2	-
Chromium (III)	mg/kg	1	NONE	34	-	35	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	-	36	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	67	-	280	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	45	-	210	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	-	0.6	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	43	-	62	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-
Titanium (aqua regia extractable)	mg/kg	15	NONE	-	-	-	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	61	-	66	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	68	-	380	-
Magnesium (water soluble)	mg/kg	5	NONE	-	< 5.0	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	< 2.5	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	13	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	62	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	120	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	19	-	-	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1601145	1602015	1602016	1602017
Sample Reference				RC02	CP07	WS01	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	0.10	0.10	0.05
Date Sampled				19/08/2020	03/08/2020	07/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	< 0.001	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	< 0.001	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	< 0.007	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	Not Identified
Total Residue	mg/kg	10	NONE	-	-	-	19000

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	5.1	7.7	20	5.9
Total mass of sample received	kg	0.001	NONE	0.5	0.5	0.5	0.65
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	9.5	11.2	8.4	8.9
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Total Sulphate as SO4	mg/kg	50	MCERTS	-	-	-	-
Total Sulphate as SO4	%	0.005	MCERTS	-	-	-	-
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.01	0.029	0.45	0.041
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	-
Water Soluble Chloride (2:1)	mg/kg	1	MCERTS	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	-	-	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	-
Ammonium as NH4 (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.0021	0.002	0.022	0.0026
Water Soluble Nitrate (2:1) as NO3	mg/kg	2	NONE	-	-	-	-
Water Soluble Nitrate (2:1) as NO3 (leachate equivalent)	mg/l	5	NONE	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-
Total Phenols							
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.44	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.3	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.58	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.56	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.26	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.3	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	2.44	< 0.80

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	3.3	9	41	8.1
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.58	0.49	2.2	3.3
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	1.5	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	22	30	32	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	22	30	32	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	20	19	73	73
Lead (aqua regia extractable)	mg/kg	1	MCERTS	8.3	12	60	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	28	27	47	40
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Titanium (aqua regia extractable)	mg/kg	15	NONE	31	100	-	700
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	18	18	47	88
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	57	57	81	24
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-
Monoaromatics & Oxygenates							
Benzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	< 1.0	-
Petroleum Hydrocarbons							
TPH2 (C6 - C10)	mg/kg	0.1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	< 8.0	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	< 8.4	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	< 10	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	17	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-	< 8.4	-
VOCs							
Chloromethane	µg/kg	1	ISO 17025	-	-	-	-
Chloroethane	µg/kg	1	NONE	-	-	-	-
Bromomethane	µg/kg	1	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	1	NONE	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Trichlorofluoromethane	µg/kg	1	NONE	-	-	-	-
1,1-Dichloroethene	µg/kg	1	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
2,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloromethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloropropene	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Benzene	µg/kg	1	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloropropane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
Dibromomethane	µg/kg	1	MCERTS	-	-	-	-
Bromodichloromethane	µg/kg	1	MCERTS	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichloropropane	µg/kg	1	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	1	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	1	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-Xylene	µg/kg	1	MCERTS	-	-	-	-
Styrene	µg/kg	1	MCERTS	-	-	-	-
Tribromomethane	µg/kg	1	NONE	-	-	-	-
o-Xylene	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
Isopropylbenzene	µg/kg	1	MCERTS	-	-	-	-
Bromobenzene	µg/kg	1	MCERTS	-	-	-	-
n-Propylbenzene	µg/kg	1	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
4-Chlorotoluene	µg/kg	1	MCERTS	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
tert-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	-	-	-	-
sec-Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-
p-Isopropyltoluene	µg/kg	1	ISO 17025	-	-	-	-
1,2-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Butylbenzene	µg/kg	1	MCERTS	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	-	-	-	-
Hexachlorobutadiene	µg/kg	1	MCERTS	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	-	-	-	-

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
VOCs TICs							
VOCs TICs Compound Name		N/A	NONE	-	-	-	-
VOC % Match	%	N/A	NONE	-	-	-	-
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

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Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton
Your Order No: PO00984

Lab Sample Number				1602018	1602019	1602020	1610034
Sample Reference				RO06	CP05	WS07	WS13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.15	1.70	0.70
Date Sampled				21/08/2020	10/08/2020	20/08/2020	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
PCBs by GC-MS							
PCB Congener 28	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 52	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 101	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 118	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 138	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 153	mg/kg	0.001	MCERTS	-	-	-	-
PCB Congener 180	mg/kg	0.001	MCERTS	-	-	-	-
Total PCBs by GC-MS							
Total PCBs	mg/kg	0.007	MCERTS	-	-	-	-
Miscellaneous Organics							
Coal Tar		N/A	NONE	-	-	-	-
Total Residue	mg/kg	10	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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The results included within the report relate only to the sample(s) submitted for testing.

Combined report	**Stopes Road, Bolton**
Project / Site name:	**Stopes Road, Bolton**
Your Order No:	**PO00984**

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1589040	TP01	0.20	134	Loose Fibres	**Chrysotile & Amosite**	< 0.001	**< 0.001**

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1589038	1589042
Sample Reference				RO12	TP11
Sample Number				None Supplied	None Supplied
Depth (m)				0.20	1.60
Date Sampled				03/08/2020	05/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Bulk Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Asbestos Identification	Type	N/A	ISO 17025	Amosite* Sheeting/Board Debris	No Asbestos Detected

U/S = Unsuitable Sample I/S = Insufficient Sample

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1589039	TP10	None Supplied	0.8	Brown loam and sand with gravel and vegetation.
1589040	TP01	None Supplied	0.2	Brown loam and sand with gravel and vegetation.
1589041	TP11	None Supplied	1.6	Brown loam and sand with gravel and vegetation.
1589043	TP09	None Supplied	2.1	Brown loam and sand with gravel and vegetation.
1589044	TP22	None Supplied	0.15	Brown loam and sand with gravel and vegetation.
1589045	TP22	None Supplied	1.9	Brown loam and clay with gravel and vegetation.
1589046	TP21	None Supplied	2.1	Brown loam and sand with gravel and vegetation.
1589047	TP21	None Supplied	1.4	Brown loam and clay with gravel and vegetation.
1589048	TT01	None Supplied	0.6	Brown loam and clay with gravel and vegetation.
1589049	TP20	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1589050	TP19	None Supplied	0.6	Brown loam and clay with gravel and vegetation.
1589051	TP03	None Supplied	0.4	Brown loam and clay with gravel and vegetation.
1589052	TP03	None Supplied	1	Brown clay and sand.
1589053	TT02	None Supplied	1	Brown clay and sand.
1589054	TP02	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1589055	TP04	None Supplied	0.9	Brown clay and sand with gravel.
1589056	TP04	None Supplied	1.7	Brown clay and sand.
1589057	TP15	None Supplied	0.85	Brown clay and sand.
1589058	CP06	None Supplied	1.3	Brown loam and clay with gravel and vegetation.
1589059	TP16	None Supplied	2	Brown loam and clay with gravel and vegetation.
1589060	TP18	None Supplied	0.6	Brown loam and sand with gravel and vegetation.
1589061	WS03	None Supplied	1.4	Brown clay and sand.
1589062	WS03	None Supplied	2.2	Brown clay and sand.
1593555	TP23	None Supplied	0.2	Brown loam and clay with vegetation and gravel
1593556	TP28	None Supplied	0.4	Brown clay and sand with vegetation and gravel
1593557	TP20	None Supplied	1.3	Grey clay and sand with vegetation and gravel.
1593558	TP25	None Supplied	0.5	Light brown clay and sand with vegetation.
1593559	CP04	None Supplied	0.1	Brown clay and sand with gravel.
1593925	TP10	Combined	0.50-1.00	Brown gravelly sand.
1593926	TP13	None Supplied	0.50-0.60	Brown gravelly sand with stones.
1593927	TP20	None Supplied	1.3	Brown clay and sand with stones.
1593928	TP03	None Supplied	1.00-1.10	Brown clay and sand.
1593929	TP15	None Supplied	1.4	Brown loam.
1593930	TP18	None Supplied	0.60-0.70	Grey gravelly sand with stones.
1593931	TP18	None Supplied	2.50-2.60	Brown loam.
1594298	CP10	None Supplied	1.20-1.65	Brown clay and sand.
1599324	TP13	None Supplied	0.50-0.60	Brown loam and sand with gravel.
1599325	TP14	None Supplied	0.8	Grey sandy clay with gravel.
1599330	CP10	None Supplied	3.00-3.45	Brown clay.
1601136	WS01	None Supplied	1.3	Brown clay and sand with gravel.
1601137	WS01	None Supplied	1.4	Brown sand.
1601138	WS01	None Supplied	1.7	Brown clay and sand.
1601139	WS06	None Supplied	0.2	Brown clay and sand with gravel.
1601140	WS11	None Supplied	0.3	Black clay and sand with gravel.
1601141	WS12	None Supplied	0.3	Black clay and sand with gravel.
1601142	WS14	None Supplied	1.45	Black clay and sand with gravel.
1601143	WS10	None Supplied	1.3	Black gravelly sand.
1601144	WS09	None Supplied	0.4	Brown clay and sand with gravel.
1601145	RC02	None Supplied	0.5	Brown clay and sand with gravel.
1602015	CP07	None Supplied	0.1	Brown loam and clay with vegetation and gravel
1602016	WS01	None Supplied	0.1	Brown loam and clay with vegetation and gravel
1602017	TP13	None Supplied	0.05	Non Soil**
1602018	RO06	None Supplied	0.3	Brown loam and clay with gravel.
1602019	CP05	None Supplied	0.15	Brown loam and clay with gravel.
1602020	WS07	None Supplied	1.7	Brown loam and clay with gravel and brick.
1610034	WS13	None Supplied	0.7	Black gravel.**

** Non MCERTS matrix

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in Bulks	Asbestos Identification in bulk material with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	W	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS

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Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
TPH2 (Soil)	Determination of hydrocarbons C6-C10 by headspace GC-MS.	In-house method based on USEPA8260	L088-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Tentatively identified compounds (VOC) in soil	Determination of volatile organic compounds total ion count in soil by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
Calorific Value of soil	Determination of the calorific value of soil by combustion in a controlled environment.	Calorific Value of Soil by Bomb Calorimeter	L013-PL	D	ISO 17025
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
Coal Tar in Soil	In-house method by GC-MS, by calculation of discrete polyaromatic content.	In-house method by calculation	L064-UK	D	NONE
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025

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Combined Report : Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

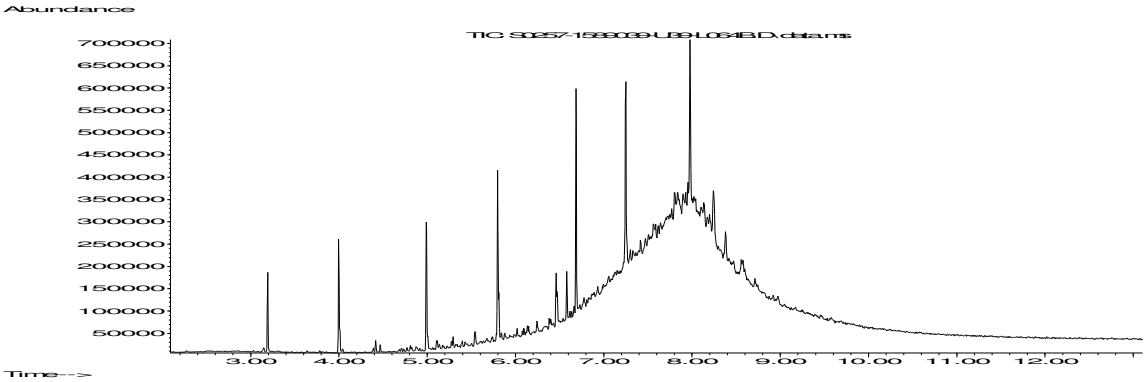
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
Water Soluble Nitrate (leachate equivalent)	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

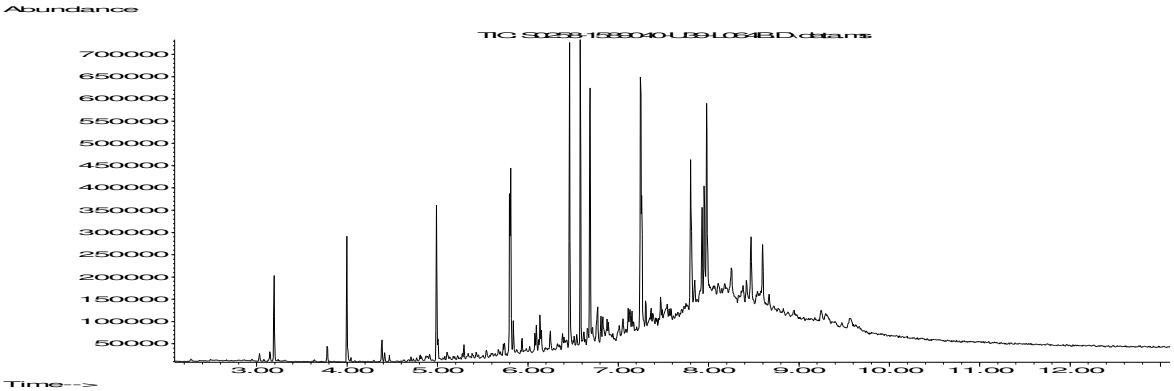
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

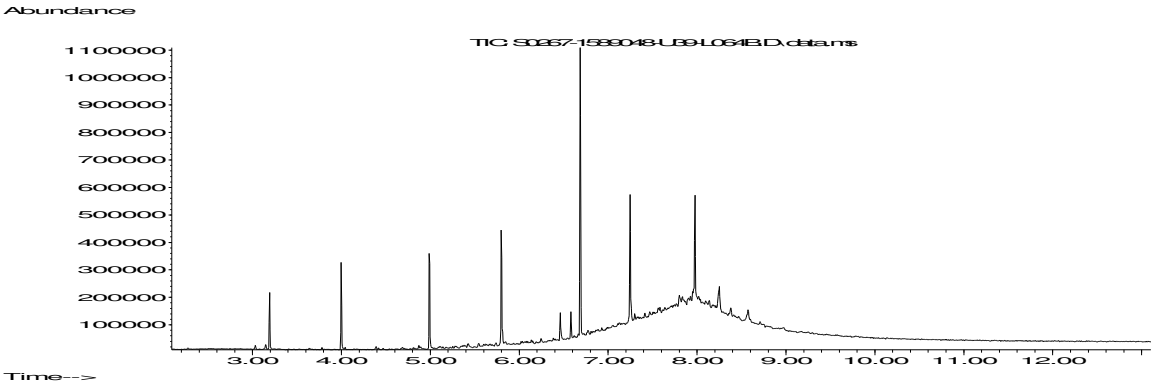
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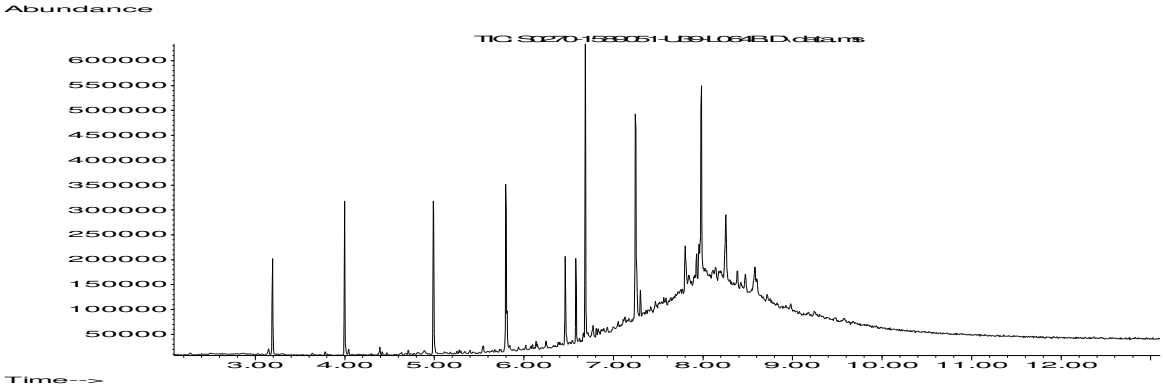
Combined Report Stopes Road, Bolton
Project / Site name: Stopes Road, Bolton

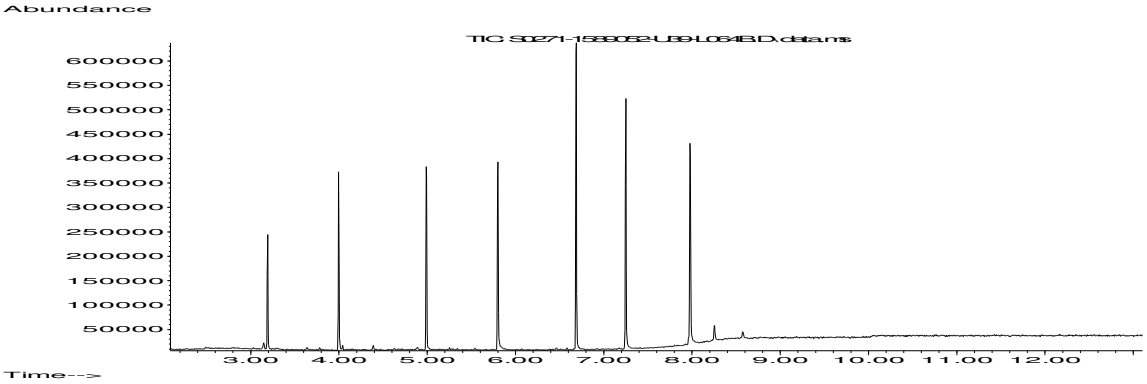
Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP01	None Supplied	S	1589040	c	Free cyanide in soil	L080-PL	c
TP10	None Supplied	S	1589039	c	Free cyanide in soil	L080-PL	c
TP23	None Supplied	S	1593555	b	Monohydric phenols i	L080-PL	b
TP23	None Supplied	S	1593555	b	Semi-volatile organic	L064-PL	b
TP23	None Supplied	S	1593555	b	Speciated EPA-16 PAI	L064-PL	b
TP23	None Supplied	S	1593555	b	Tentatively identified	L064-PL	b
CP05	None Supplied	S	1602019	c	Free cyanide in soil	L080-PL	c
TP13	None Supplied	S	1602017	b	Coal Tar in Soil	L064-UK	b
TP13	None Supplied	S	1602017	b	Speciated EPA-16 PAI	L064-PL	b
WS01	None Supplied	S	1602016	c	Free cyanide in soil	L080-PL	c
WS13	None Supplied	S	1610034	a	None Supplied	None Supplie	None Supplied

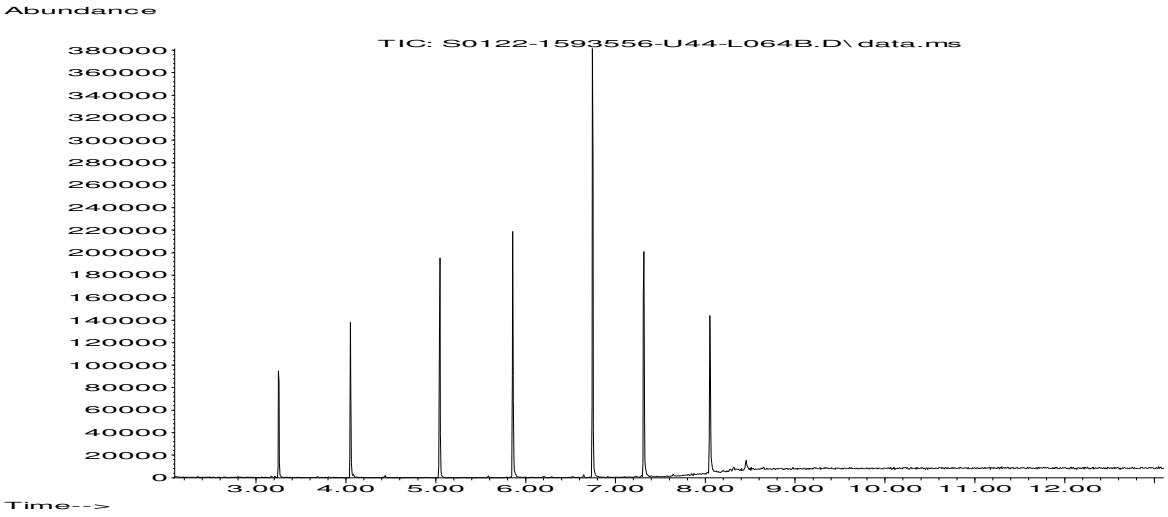

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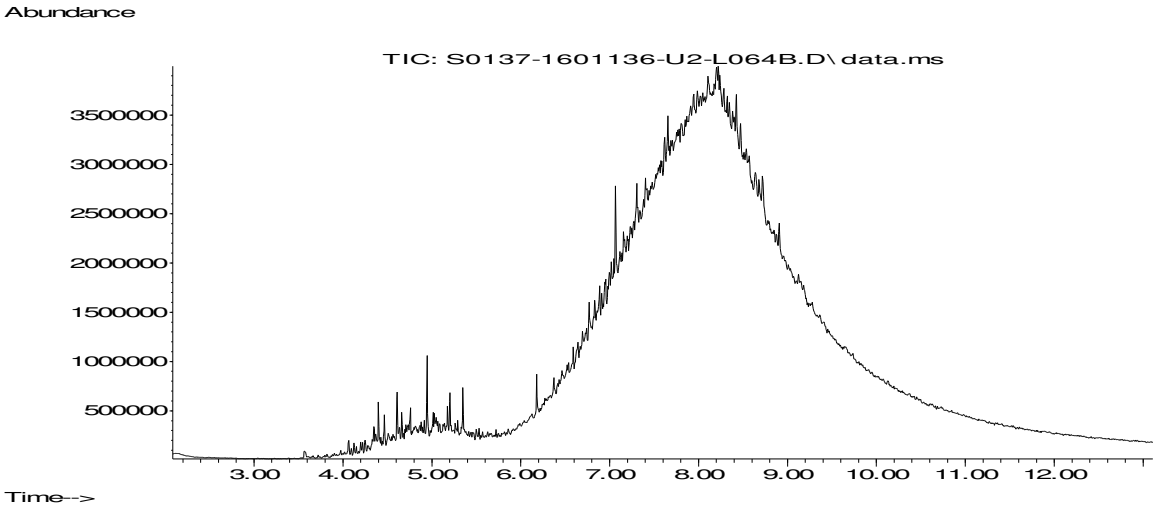

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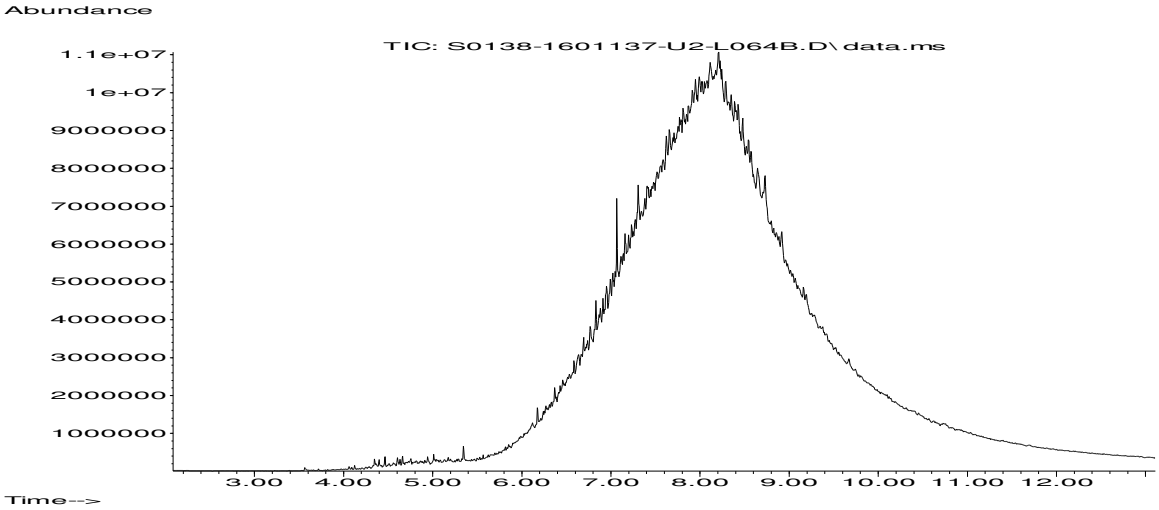

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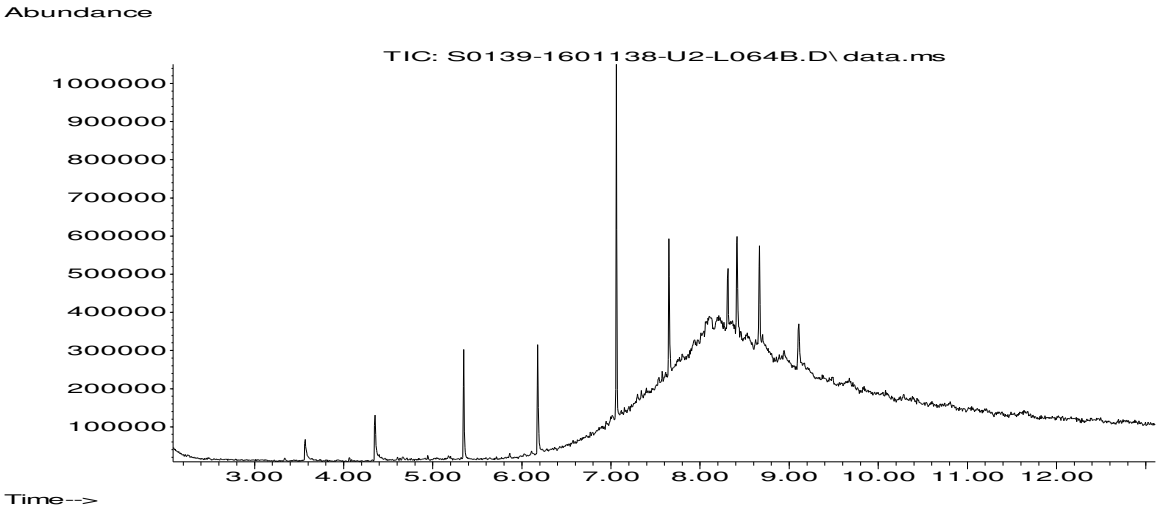

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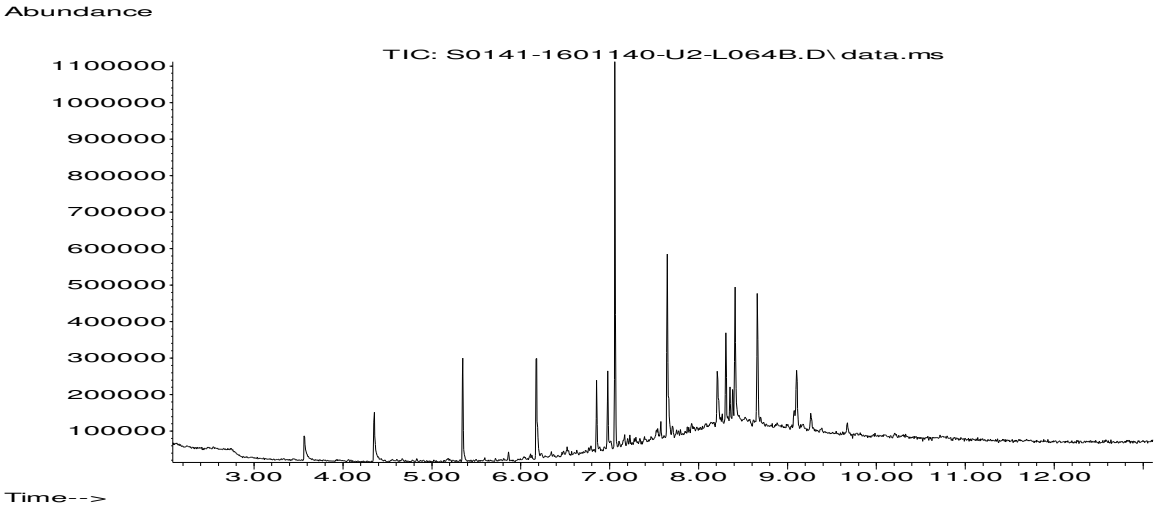

Abundance
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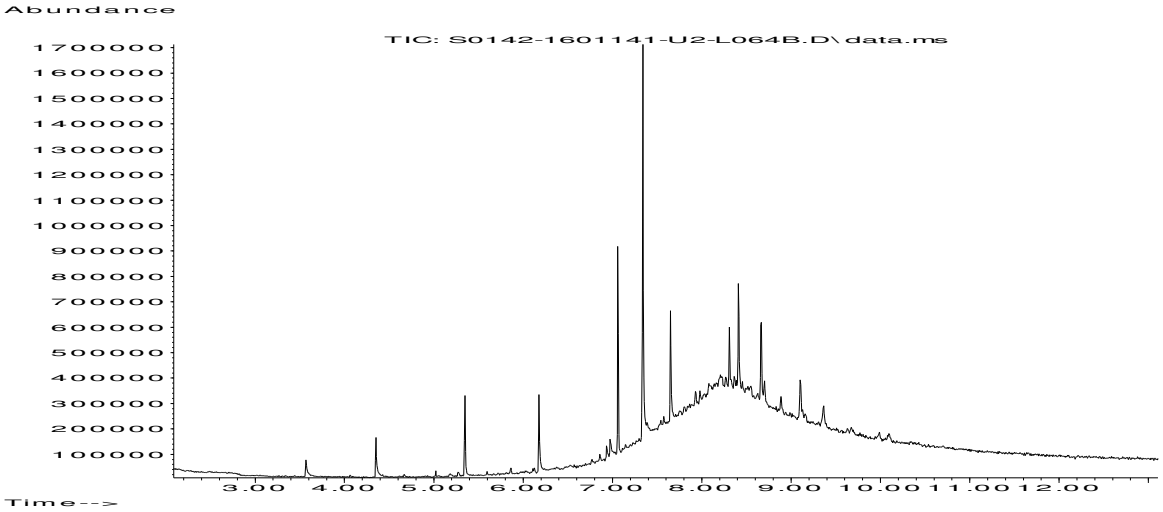

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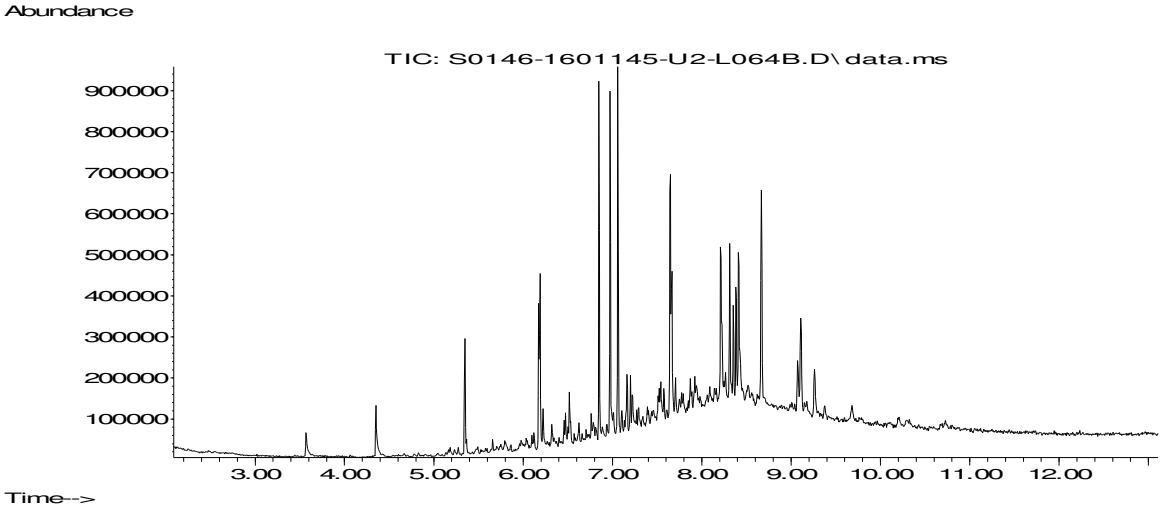

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Time-->

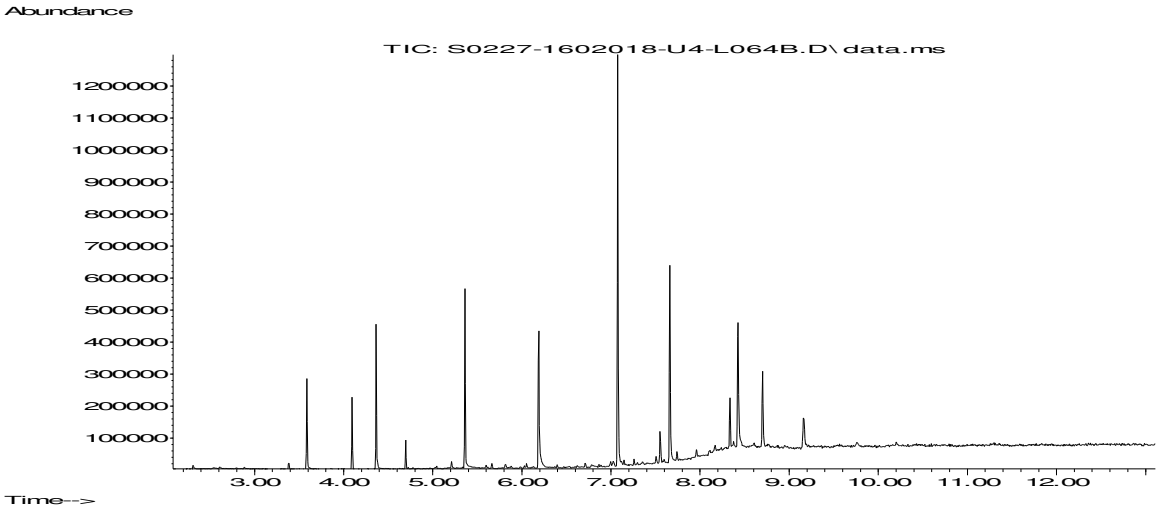

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Time-->

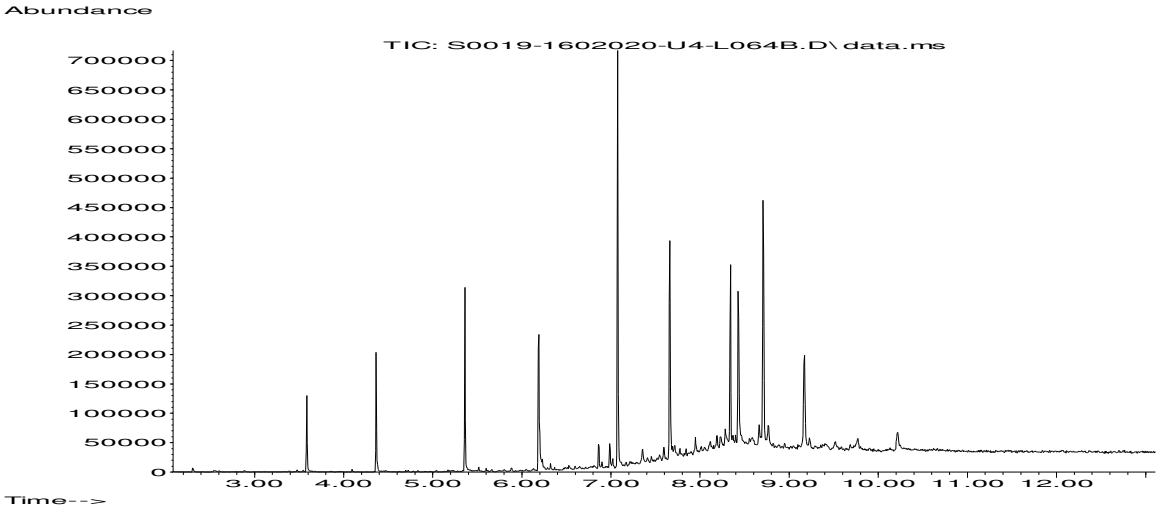

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Abundance
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11.00
12.00
Time-->


Abundance
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800000
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300000
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11.00
12.00
Time-->


Abundance
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11.00
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Time-->


Abundance
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7.00
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9.00
10.00
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12.00
Time-->


Abundance
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50000
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3.00
4.00
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Time-->

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Analytical Report Number : 20-30818

Project / Site name:	Stopes Road, Bolton	**Samples received on:**	17/09/2020
Your job number:	C-15220-C	**Samples instructed on/ Analysis started on:**	18/09/2020
Your order number:	PO00984	**Analysis completed by:**	25/09/2020
Report Issue Number:	1	**Report issued on:**	25/09/2020
Samples Analysed:	7 water samples		

Signed: _____

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

UKAS TESTING 4041

Analytical i2 Environmental Science

Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623889	1623890	1623891	1623892
Sample Reference				CP03	CP07	CP09	RO04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.2	8.1	6.5	7.2
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	780	1100	1000	1200
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	1.7	2	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	304000	285000	273000	408000
Chloride	mg/l	0.15	ISO 17025	9	63	80	56
Fluoride	µg/l	50	ISO 17025	280	1200	120	200
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	13000	1400	2400
Ammonia as NH3	µg/l	15	ISO 17025	< 15	16000	1700	2900
Ammonium as NH4	µg/l	15	ISO 17025	< 15	17000	1800	3100
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.15	20.4	11.6	11.1
Nitrate as N	mg/l	0.01	ISO 17025	0.93	0.07	0.24	0.14
Nitrate as NO3	mg/l	0.05	ISO 17025	4.13	0.3	1.08	0.64
Nitrite as N	µg/l	1	ISO 17025	27	28	31	56
Nitrite as NO2	µg/l	5	ISO 17025	89	92	100	180
Hardness - Total	mgCaCO3/l	1	ISO 17025	464	264	357	421
Bromate by IC	mg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002
Total Phenols							
Total Phenols (monohydric)	µg/l	1	ISO 17025	4.1	4.9	4	3.3
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
PAH Sums							
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.022	NONE	< 0.022	< 0.022	< 0.022	< 0.022
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	650	850	310	660

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623889	1623890	1623891	1623892
Sample Reference				CP03	CP07	CP09	RO04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Calcium (dissolved)	mg/l	0.012	ISO 17025	150	87	110	130
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	3.4	2.7	8.1	5.3
Iron (dissolved)	mg/l	0.004	ISO 17025	0.053	0.22	9.5	0.21
Magnesium (dissolved)	mg/l	0.005	ISO 17025	22	12	19	21
Sodium (dissolved)	mg/l	0.01	ISO 17025	35	130	180	170
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0051	0.402	0.534	0.673
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.2	2.8	< 0.4	1.1
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	18	4.28	2.07
Barium (dissolved)	µg/l	0.06	ISO 17025	35	110	180	200
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.1	0.06	0.17
Chromium (dissolved)	µg/l	0.2	ISO 17025	3.4	2.7	8.1	5.3
Cobalt (dissolved)	µg/l	0.2	ISO 17025	0.7	1.3	27	7.4
Copper (dissolved)	µg/l	0.5	ISO 17025	1.1	2.3	7.7	7.9
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	3.5	0.3	0.4
Manganese (dissolved)	µg/l	0.05	ISO 17025	3.2	60	9100	550
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	0.43	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	6.5	6.7	16	17
Selenium (dissolved)	µg/l	0.6	ISO 17025	4.3	3.1	5	3.5
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	< 0.20	1	3.5	1.7
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	14	0.5	0.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	1	6.4	12	4.3

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	< 2.0	< 2.0	< 2.0	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	-
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	-

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623889	1623890	1623891	1623892
Sample Reference				CP03	CP07	CP09	RO04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10	< 10	-
VOCs							
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	-
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	-
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623889	1623890	1623891	1623892
Sample Reference				CP03	CP07	CP09	RO04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	-
VOCs TICs							
VOCs TICs Compound Name		10	NONE	ND	ND	ND	-
VOC % Match	%	10	NONE	-	-	-	-
SVOCs							
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623889	1623890	1623891	1623892
Sample Reference				CP03	CP07	CP09	RO04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	-
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	ND	-
SVOC % Match	%	N/A	NONE	-	-	-	-

PCBs – WHO12

PCB Congener 77	µg/l	0.02	NONE	-	-	-	-
PCB Congener 81	µg/l	0.02	NONE	-	-	-	-
PCB Congener 105	µg/l	0.02	NONE	-	-	-	-
PCB Congener 114	µg/l	0.02	NONE	-	-	-	-
PCB Congener 118	µg/l	0.02	NONE	-	-	-	-
PCB Congener 123	µg/l	0.02	NONE	-	-	-	-
PCB Congener 126	µg/l	0.02	NONE	-	-	-	-
PCB Congener 156	µg/l	0.02	NONE	-	-	-	-
PCB Congener 157	µg/l	0.02	NONE	-	-	-	-
PCB Congener 167	µg/l	0.02	NONE	-	-	-	-
PCB Congener 169	µg/l	0.02	NONE	-	-	-	-
PCB Congener 189	µg/l	0.02	NONE	-	-	-	-

Total PCBs – WHO12

Total PCBs	µg/l	0.3	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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UKAS TESTING 4041

Analytical i2 Environmental Science

Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623893	1623894	1623895
Sample Reference				RO10	WS02	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH	pH Units	N/A	ISO 17025	7.3	7.2	6.9
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	1200	1000	570
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	456000	392000	77600
Chloride	mg/l	0.15	ISO 17025	55	21	33
Fluoride	µg/l	50	ISO 17025	250	250	310
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	230	38	490
Ammonia as NH3	µg/l	15	ISO 17025	280	47	600
Ammonium as NH4	µg/l	15	ISO 17025	300	49	630
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	6.09	8.86	6.04
Nitrate as N	mg/l	0.01	ISO 17025	0.07	0.3	0.04
Nitrate as NO3	mg/l	0.05	ISO 17025	0.3	1.33	0.2
Nitrite as N	µg/l	1	ISO 17025	40	30	16
Nitrite as NO2	µg/l	5	ISO 17025	130	98	52
Hardness - Total	mgCaCO3/l	1	ISO 17025	679	437	260
Bromate by IC	mg/l	0.002	NONE	< 0.002	< 0.002	< 0.002
Total Phenols						
Total Phenols (monohydric)	µg/l	1	ISO 17025	3.1	4.3	4.9
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.001	NONE	< 0.001	< 0.001	< 0.001
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.001	NONE	< 0.001	< 0.001	< 0.001
PAH Sums						
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.022	NONE	< 0.022	< 0.022	< 0.022
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	200	430	270

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UKAS TESTING
4041

Analytical i2 Environmental Science

Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623893	1623894	1623895
Sample Reference				RO10	WS02	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Calcium (dissolved)	mg/l	0.012	ISO 17025	200	140	86
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	4.2	4.6	4.2
Iron (dissolved)	mg/l	0.004	ISO 17025	0.024	0.084	0.067
Magnesium (dissolved)	mg/l	0.005	ISO 17025	44	24	11
Sodium (dissolved)	mg/l	0.01	ISO 17025	150	76	64
Aluminium (dissolved)	mg/l	0.001	ISO 17025	0.0044	0.917	0.218
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.1	0.9	0.9
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.09	0.77	0.98
Barium (dissolved)	µg/l	0.06	ISO 17025	43	60	85
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.09	0.07	0.03
Chromium (dissolved)	µg/l	0.2	ISO 17025	4.2	4.6	4.2
Cobalt (dissolved)	µg/l	0.2	ISO 17025	3	1.4	1.7
Copper (dissolved)	µg/l	0.5	ISO 17025	3.3	3.7	4.6
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	1.3	0.8
Manganese (dissolved)	µg/l	0.05	ISO 17025	1100	340	430
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	11	5.6	4.9
Selenium (dissolved)	µg/l	0.6	ISO 17025	4.7	1.5	0.6
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	89	2.2	0.92
Vanadium (dissolved)	µg/l	0.2	ISO 17025	0.8	1.5	0.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	28	3.1	6.9
Monoaromatics & Oxygenates						
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	-	-	< 1.0
o-xylene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	-	-	< 2.0
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	-	-	< 10

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623893	1623894	1623895
Sample Reference				RO10	WS02	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	-	-	< 10
VOCs						
Chloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Chloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Vinyl Chloride	µg/l	1	NONE	-	-	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	-	-	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Dibromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	-	-	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
Styrene	µg/l	1	ISO 17025	-	-	< 1.0
Tribromomethane	µg/l	1	ISO 17025	-	-	< 1.0
o-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
Bromobenzene	µg/l	1	ISO 17025	-	-	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	-	-	< 1.0

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623893	1623894	1623895
Sample Reference				RO10	WS02	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		10	NONE	-	-	ND
VOC % Match	%	10	NONE	-	-	-

SVOCs

Aniline	µg/l	0.05	NONE	-	-	< 0.05
Phenol	µg/l	0.05	NONE	-	-	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	-	-	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	-	-	< 0.05
2-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Hexachloroethane	µg/l	0.05	NONE	-	-	< 0.05
Nitrobenzene	µg/l	0.05	NONE	-	-	< 0.05
4-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Isophorone	µg/l	0.05	NONE	-	-	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	-	-	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	-	-	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	-	-	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	-	-	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	-	-	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	-	-	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Dibenzofuran	µg/l	0.05	NONE	-	-	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	-	-	< 0.05
Fluorene	µg/l	0.01	ISO 17025	-	-	< 0.01
Azobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	-	-	< 0.05

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Analytical Report Number: 20-30818
Project / Site name: Stopes Road, Bolton

Your Order No: PO00984

Lab Sample Number				1623893	1623894	1623895
Sample Reference				RO10	WS02	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Phenanthrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Carbazole	µg/l	0.05	NONE	-	-	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Anthraquinone	µg/l	0.05	NONE	-	-	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Chrysene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	< 0.01

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	-

PCBs – WHO12

PCB Congener 77	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 81	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 105	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 114	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 118	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 123	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 126	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 156	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 157	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 167	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 169	µg/l	0.02	NONE	-	< 0.020	-
PCB Congener 189	µg/l	0.02	NONE	-	< 0.020	-

Total PCBs – WHO12

Total PCBs	µg/l	0.3	NONE	-	< 0.300	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 20-30818
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Fluoride in water	Determination of fluoride in water by 1:1 ratio with a buffer solution followed by Ion Selective Electrode. Accredited matrices: SW, PW, GW.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry).Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE

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Analytical Report Number : 20-30818
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Speciated EPA-16 PAHs in water (LOW LEVEL Dets)	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270 (low level)	L102B-PL	W	NONE
TPH in (Water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L070-PL	W	NONE
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
TPH Chromatogram in Water	TPH Chromatogram in Water.	In-house method	L070-PL	W	NONE
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
PCBs WHO 12 in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-UK	W	NONE
Low level total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Free cyanide (low level) in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Bromate in Water	Determination of bromate in waters based on ion chromatography. Accredited matrices GW, PW, SW.	In house method based on Standard Methods for the Analysis of Water and Waste Water, method 4500	L008-PL	W	NONE
Specific PAH sums in water	Determination of PAH compounds in water by extraction in hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE

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Analytical Report Number : 20-30818
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Sample Deviation Report

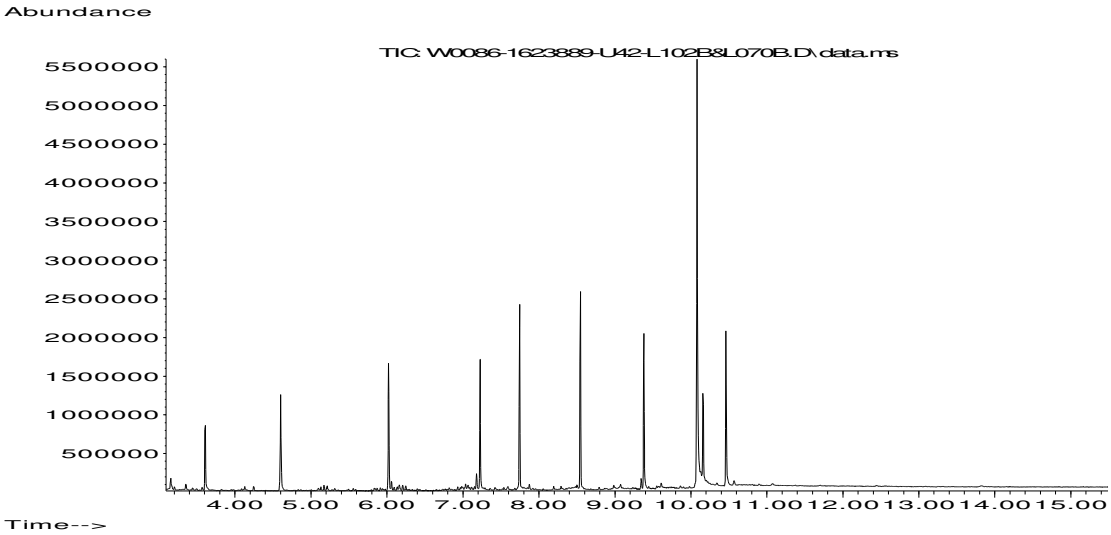
Analytical Report Number : 20-30818
Project / Site name: Stopes Road, Bolton

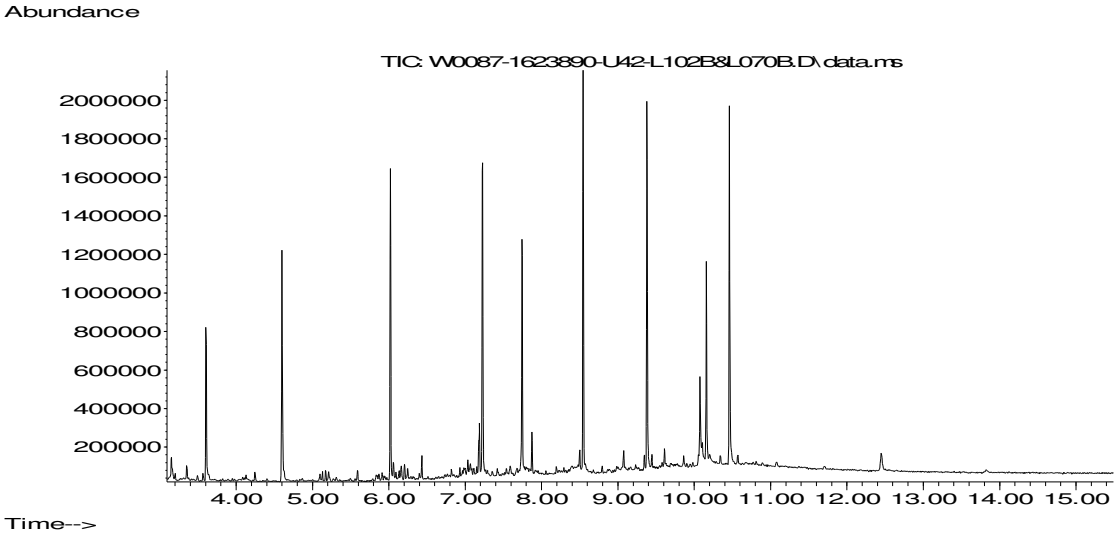
Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
CP03	None Supplied	W	1623889	c	Ammonia as NH3 in water	L082-PL	c
CP03	None Supplied	W	1623889	c	Ammoniacal Nitrogen as N in water	L082-PL	c
CP03	None Supplied	W	1623889	c	Ammonium as NH4 in water	L082-PL	c
CP03	None Supplied	W	1623889	c	Electrical conductivity at 20oC of water	L031-PL	c
CP03	None Supplied	W	1623889	c	Nitrate as N in water	L078-PL	c
CP03	None Supplied	W	1623889	c	Nitrate in water	L078-PL	c
CP03	None Supplied	W	1623889	c	Nitrite as N in water	L082-PL	c
CP03	None Supplied	W	1623889	c	Nitrite in water	L082-PL	c
CP03	None Supplied	W	1623889	c	pH at 20oC in water (automated)	L099-PL	c
CP07	None Supplied	W	1623890	c	Ammonia as NH3 in water	L082-PL	c
CP07	None Supplied	W	1623890	c	Ammoniacal Nitrogen as N in water	L082-PL	c
CP07	None Supplied	W	1623890	c	Ammonium as NH4 in water	L082-PL	c
CP07	None Supplied	W	1623890	c	Electrical conductivity at 20oC of water	L031-PL	c
CP07	None Supplied	W	1623890	c	Nitrate as N in water	L078-PL	c
CP07	None Supplied	W	1623890	c	Nitrate in water	L078-PL	c
CP07	None Supplied	W	1623890	c	Nitrite as N in water	L082-PL	c
CP07	None Supplied	W	1623890	c	Nitrite in water	L082-PL	c
CP07	None Supplied	W	1623890	c	pH at 20oC in water (automated)	L099-PL	c
CP09	None Supplied	W	1623891	c	Ammonia as NH3 in water	L082-PL	c
CP09	None Supplied	W	1623891	c	Ammoniacal Nitrogen as N in water	L082-PL	c
CP09	None Supplied	W	1623891	c	Ammonium as NH4 in water	L082-PL	c
CP09	None Supplied	W	1623891	c	Electrical conductivity at 20oC of water	L031-PL	c
CP09	None Supplied	W	1623891	c	Nitrate as N in water	L078-PL	c
CP09	None Supplied	W	1623891	c	Nitrate in water	L078-PL	c
CP09	None Supplied	W	1623891	c	Nitrite as N in water	L082-PL	c
CP09	None Supplied	W	1623891	c	Nitrite in water	L082-PL	c
CP09	None Supplied	W	1623891	c	pH at 20oC in water (automated)	L099-PL	c
RO04	None Supplied	W	1623892	c	Ammonia as NH3 in water	L082-PL	c
RO04	None Supplied	W	1623892	c	Ammoniacal Nitrogen as N in water	L082-PL	c
RO04	None Supplied	W	1623892	c	Ammonium as NH4 in water	L082-PL	c
RO04	None Supplied	W	1623892	c	Electrical conductivity at 20oC of water	L031-PL	c
RO04	None Supplied	W	1623892	c	Nitrate as N in water	L078-PL	c
RO04	None Supplied	W	1623892	c	Nitrate in water	L078-PL	c
RO04	None Supplied	W	1623892	c	Nitrite as N in water	L082-PL	c
RO04	None Supplied	W	1623892	c	Nitrite in water	L082-PL	c
RO04	None Supplied	W	1623892	c	pH at 20oC in water (automated)	L099-PL	c
RO10	None Supplied	W	1623893	c	Ammonia as NH3 in water	L082-PL	c
RO10	None Supplied	W	1623893	c	Ammoniacal Nitrogen as N in water	L082-PL	c
RO10	None Supplied	W	1623893	c	Ammonium as NH4 in water	L082-PL	c
RO10	None Supplied	W	1623893	c	Electrical conductivity at 20oC of water	L031-PL	c
RO10	None Supplied	W	1623893	c	Nitrate as N in water	L078-PL	c
RO10	None Supplied	W	1623893	c	Nitrate in water	L078-PL	c
RO10	None Supplied	W	1623893	c	Nitrite as N in water	L082-PL	c
RO10	None Supplied	W	1623893	c	Nitrite in water	L082-PL	c
RO10	None Supplied	W	1623893	c	pH at 20oC in water (automated)	L099-PL	c
WS02	None Supplied	W	1623894	c	Ammonia as NH3 in water	L082-PL	c
WS02	None Supplied	W	1623894	c	Ammoniacal Nitrogen as N in water	L082-PL	c
WS02	None Supplied	W	1623894	c	Ammonium as NH4 in water	L082-PL	c
WS02	None Supplied	W	1623894	c	Electrical conductivity at 20oC of water	L031-PL	c
WS02	None Supplied	W	1623894	c	Nitrate as N in water	L078-PL	c
WS02	None Supplied	W	1623894	c	Nitrate in water	L078-PL	c
WS02	None Supplied	W	1623894	c	Nitrite as N in water	L082-PL	c
WS02	None Supplied	W	1623894	c	Nitrite in water	L082-PL	c
WS02	None Supplied	W	1623894	c	pH at 20oC in water (automated)	L099-PL	c
WS11	None Supplied	W	1623895	c	Ammonia as NH3 in water	L082-PL	c
WS11	None Supplied	W	1623895	c	Ammoniacal Nitrogen as N in water	L082-PL	c
WS11	None Supplied	W	1623895	c	Ammonium as NH4 in water	L082-PL	c
WS11	None Supplied	W	1623895	c	Electrical conductivity at 20oC of water	L031-PL	c
WS11	None Supplied	W	1623895	c	Nitrate as N in water	L078-PL	c

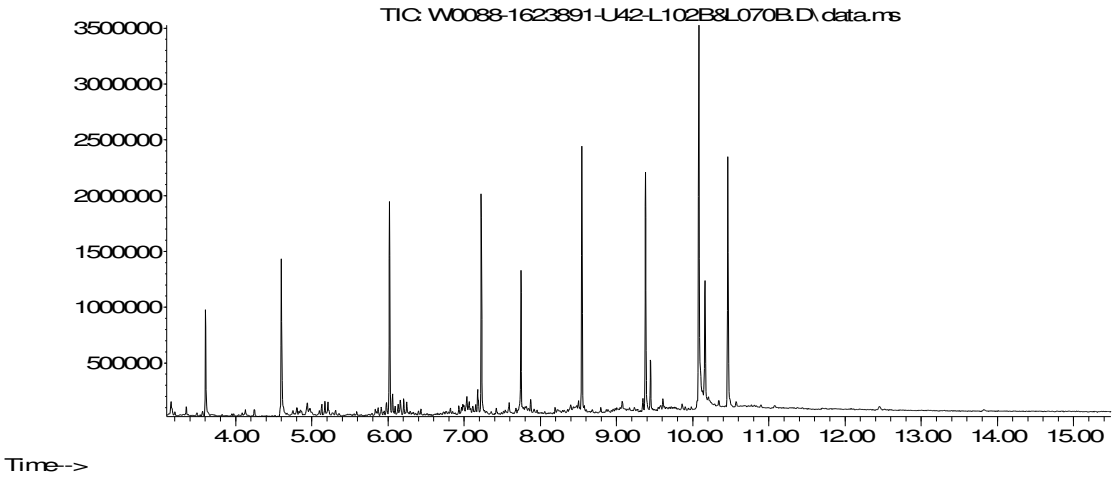
Sample Deviation Report

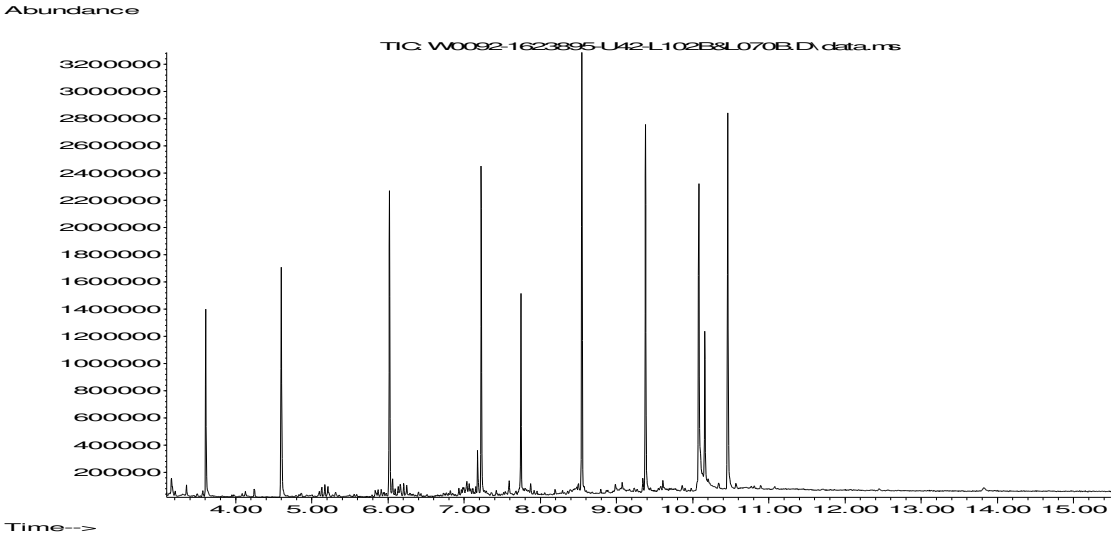
Analytical Report Number : 20-30818
Project / Site name: Stopes Road, Bolton

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
CP03	None Supplied	W	1623889	c	Ammonia as NH3 in water	L082-PL	c
WS11	None Supplied	W	1623895	c	Nitrate in water	L078-PL	c
WS11	None Supplied	W	1623895	c	Nitrite as N in water	L082-PL	c
WS11	None Supplied	W	1623895	c	Nitrite in water	L082-PL	c
WS11	None Supplied	W	1623895	c	pH at 20oC in water (automated)	L099-PL	c


Abundance
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Time-->


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Time-->


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Time-->


Abundance
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7.00
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9.00
10.00
11.00
12.00
13.00
14.00
15.00
Time-->

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WD18 8YS

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e: reception@i2analytical.com

Analytical Report Number : 20-38017

Project / Site name:	Stopes Road, Bolton	**Samples received on:**	27/10/2020
Your job number:	C-15220-C	**Samples instructed on/ Analysis started on:**	28/10/2020
Your order number:	PO 031941	**Analysis completed by:**	05/11/2020
Report Issue Number:	1	**Report issued on:**	05/11/2020
Samples Analysed:	7 water samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.1	6.4	6.8	7.5
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	730	970	2000	1000
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	250000	209000	1290000	626000
Chloride	mg/l	0.15	ISO 17025	10	85	130	9.9
Fluoride	µg/l	50	ISO 17025	280	120	190	230
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	1900	530	< 15
Ammonia as NH3	µg/l	15	ISO 17025	< 15	2200	640	< 15
Ammonium as NH4	µg/l	15	ISO 17025	< 15	2400	680	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.53	10.5	9.07	7.69
Nitrate as N	mg/l	0.01	ISO 17025	0.71	0.13	0.11	0.61
Nitrate as NO3	mg/l	0.05	ISO 17025	3.14	0.59	0.49	2.7
Nitrite as N	µg/l	1	ISO 17025	6.5	8.5	7.3	2.7
Nitrite as NO2	µg/l	5	ISO 17025	21	28	24	8.9
Hardness - Total	mgCaCO3/l	1	ISO 17025	387	329	1510	571
Bromate by IC	mg/l	0.002	NONE	< 0.002	U/S*	U/S*	< 0.002
Total Phenols							
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
PAH Sums							
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.04	NONE	< 0.040	< 0.040	< 0.040	< 0.040
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16

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Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	470	170	130	230
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	100	470	200
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	2	3.9	4.1	3.4
Iron (dissolved)	mg/l	0.004	ISO 17025	0.037	3.4	0.96	0.66
Iron (dissolved)	µg/l	4	ISO 17025	37	3400	960	660
Magnesium (dissolved)	mg/l	0.005	ISO 17025	17	18	85	18
Sodium (dissolved)	mg/l	0.01	ISO 17025	32	110	150	49
Aluminium (dissolved)	µg/l	1	ISO 17025	64	220	440	430
Antimony (dissolved)	µg/l	0.4	ISO 17025	1	0.8	0.8	2
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	0.82	5.72	2.67
Barium (dissolved)	µg/l	0.06	ISO 17025	34	150	27	49
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.07	0.04	0.19
Chromium (dissolved)	µg/l	0.2	ISO 17025	2	3.9	4.1	3.4
Cobalt (dissolved)	µg/l	0.2	ISO 17025	0.5	33	16	0.9
Copper (dissolved)	µg/l	0.5	ISO 17025	5.3	9.7	12	4.6
Lead (dissolved)	µg/l	0.2	ISO 17025	0.6	2.8	3.1	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	28	10000	4900	37
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.7	19	16	5.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	3.8	2.6	2.6	2.7
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	3	1	29	1.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.8	1.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.6	12	22	15
Monoaromatics & Oxygenates							
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	< 2.0	< 2.0	-	< 2.0

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Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10	-	< 10

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Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
VOCs							
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0

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Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		10	NONE	ND	ND	-	ND
VOC % Match	%	10	NONE	-	-	-	-

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Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs							
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND
SVOC % Match	%	N/A	NONE	-	-	-	-

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
PCBs – WHO12							
PCB Congener 77	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 81	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 105	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 114	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 118	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 123	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 126	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 156	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 157	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 167	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 169	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 189	µg/l	0.02	NONE	-	-	-	< 0.020
Total PCBs – WHO12							
Total PCBs	µg/l	0.3	NONE	-	-	-	< 0.300

U/S = Unsuitable Sample I/S = Insufficient Sample

*U/S - sample was oily.

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH	pH Units	N/A	ISO 17025	7.3	7.2	7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	780	460	540
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	185000	52300	63900
Chloride	mg/l	0.15	ISO 17025	11	22	32
Fluoride	µg/l	50	ISO 17025	440	200	300
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	130	590
Ammonia as NH3	µg/l	15	ISO 17025	< 15	160	720
Ammonium as NH4	µg/l	15	ISO 17025	< 15	170	760
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.05	7.33	3.67
Nitrate as N	mg/l	0.01	ISO 17025	1.28	0.46	0.08
Nitrate as NO3	mg/l	0.05	ISO 17025	5.69	2.06	0.34
Nitrite as N	µg/l	1	ISO 17025	6.6	440	7
Nitrite as NO2	µg/l	5	ISO 17025	22	1500	23
Hardness - Total	mgCaCO3/l	1	ISO 17025	403	183	210
Bromate by IC	mg/l	0.002	NONE	< 0.002	< 0.002	< 0.002
Total Phenols						
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
PAH Sums						
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.02	NONE	< 0.020	< 0.020	< 0.020
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.04	NONE	< 0.040	< 0.040	< 0.040
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	260	140	200
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	57	69
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	3.1	2.2	2.1
Iron (dissolved)	mg/l	0.004	ISO 17025	0.45	0.38	0.048
Iron (dissolved)	µg/l	4	ISO 17025	450	380	48
Magnesium (dissolved)	mg/l	0.005	ISO 17025	18	9.9	9
Sodium (dissolved)	mg/l	0.01	ISO 17025	40	35	51
Aluminium (dissolved)	µg/l	1	ISO 17025	120	640	580
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.8	1.7	0.9
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	1.27	1.41
Barium (dissolved)	µg/l	0.06	ISO 17025	51	140	110
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.08	0.11	0.1
Chromium (dissolved)	µg/l	0.2	ISO 17025	3.1	2.2	2.1
Cobalt (dissolved)	µg/l	0.2	ISO 17025	0.8	3.2	4.5
Copper (dissolved)	µg/l	0.5	ISO 17025	19	17	3.6
Lead (dissolved)	µg/l	0.2	ISO 17025	2.7	16	29
Manganese (dissolved)	µg/l	0.05	ISO 17025	150	330	520
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.4	6.1	8.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.9	0.7	< 0.6
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	3.2	2.1	0.39
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	2.6	1.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.1	8.2	42
Monoaromatics & Oxygenates						
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	-	-	< 1.0
o-xylene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	-	-	< 2.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	-	-	< 10

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
VOCs						
Chloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Chloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Vinyl Chloride	µg/l	1	NONE	-	-	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	-	-	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Dibromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	-	-	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
Styrene	µg/l	1	ISO 17025	-	-	< 1.0
Tribromomethane	µg/l	1	ISO 17025	-	-	< 1.0
o-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
Bromobenzene	µg/l	1	ISO 17025	-	-	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	-	-	< 1.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		10	NONE	-	-	ND
VOC % Match	%	10	NONE	-	-	-

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
SVOCs						
Aniline	µg/l	0.05	NONE	-	-	< 0.05
Phenol	µg/l	0.05	NONE	-	-	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	-	-	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	-	-	< 0.05
2-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Hexachloroethane	µg/l	0.05	NONE	-	-	< 0.05
Nitrobenzene	µg/l	0.05	NONE	-	-	< 0.05
4-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Isophorone	µg/l	0.05	NONE	-	-	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	-	-	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	-	-	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	-	-	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	-	-	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	-	-	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	-	-	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Dibenzofuran	µg/l	0.05	NONE	-	-	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	-	-	< 0.05
Fluorene	µg/l	0.01	ISO 17025	-	-	< 0.01
Azobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Carbazole	µg/l	0.05	NONE	-	-	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Anthraquinone	µg/l	0.05	NONE	-	-	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Chrysene	µg/l	0.01	ISO 17025	-	-	< 0.01

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	< 0.01

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	-

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
PCBs – WHO12						
PCB Congener 77	µg/l	0.02	NONE	-	-	-
PCB Congener 81	µg/l	0.02	NONE	-	-	-
PCB Congener 105	µg/l	0.02	NONE	-	-	-
PCB Congener 114	µg/l	0.02	NONE	-	-	-
PCB Congener 118	µg/l	0.02	NONE	-	-	-
PCB Congener 123	µg/l	0.02	NONE	-	-	-
PCB Congener 126	µg/l	0.02	NONE	-	-	-
PCB Congener 156	µg/l	0.02	NONE	-	-	-
PCB Congener 157	µg/l	0.02	NONE	-	-	-
PCB Congener 167	µg/l	0.02	NONE	-	-	-
PCB Congener 169	µg/l	0.02	NONE	-	-	-
PCB Congener 189	µg/l	0.02	NONE	-	-	-
Total PCBs – WHO12						
Total PCBs	µg/l	0.3	NONE	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

*U/S - sample was oily.

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Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Fluoride in water	Determination of fluoride in water by 1:1 ratio with a buffer solution followed by Ion Selective Electrode. Accredited matrices: SW, PW, GW.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry).Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Speciated EPA-16 PAHs in water (LOW LEVEL Dets)	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270 (low level)	L102B-PL	W	NONE
TPH in (Water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L070-PL	W	NONE
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
TPH Chromatogram in Water	TPH Chromatogram in Water.	In-house method	L070-PL	W	NONE
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
PCBs WHO 12 in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-UK	W	NONE
Low level total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Free cyanide (low level) in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025

Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Bromate in Water	Determination of bromate in waters based on ion chromatography. Accredited matrices GW, PW, SW.	In house method based on Standard Methods for the Analysis of Water and Waste Water, method 4500	L008-PL	W	NONE
Specific PAH sums in water	Determination of PAH compounds in water by extraction in hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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Analytical Report Number : 20-38017

Project / Site name:	Stopes Road, Bolton	**Samples received on:**	27/10/2020
Your job number:	C-15220-C	**Samples instructed on/ Analysis started on:**	28/10/2020
Your order number:	PO 031941	**Analysis completed by:**	05/11/2020
Report Issue Number:	1	**Report issued on:**	05/11/2020
Samples Analysed:	7 water samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
General Inorganics							
pH	pH Units	N/A	ISO 17025	7.1	6.4	6.8	7.5
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	730	970	2000	1000
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	250000	209000	1290000	626000
Chloride	mg/l	0.15	ISO 17025	10	85	130	9.9
Fluoride	µg/l	50	ISO 17025	280	120	190	230
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	1900	530	< 15
Ammonia as NH3	µg/l	15	ISO 17025	< 15	2200	640	< 15
Ammonium as NH4	µg/l	15	ISO 17025	< 15	2400	680	< 15
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.53	10.5	9.07	7.69
Nitrate as N	mg/l	0.01	ISO 17025	0.71	0.13	0.11	0.61
Nitrate as NO3	mg/l	0.05	ISO 17025	3.14	0.59	0.49	2.7
Nitrite as N	µg/l	1	ISO 17025	6.5	8.5	7.3	2.7
Nitrite as NO2	µg/l	5	ISO 17025	21	28	24	8.9
Hardness - Total	mgCaCO3/l	1	ISO 17025	387	329	1510	571
Bromate by IC	mg/l	0.002	NONE	< 0.002	U/S*	U/S*	< 0.002
Total Phenols							
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs							
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01
PAH Sums							
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.02	NONE	< 0.020	< 0.020	< 0.020	< 0.020
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.04	NONE	< 0.040	< 0.040	< 0.040	< 0.040
Total PAH							
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16	< 0.16

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Heavy Metals / Metalloids							
Boron (dissolved)	µg/l	10	ISO 17025	470	170	130	230
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	100	470	200
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	2	3.9	4.1	3.4
Iron (dissolved)	mg/l	0.004	ISO 17025	0.037	3.4	0.96	0.66
Iron (dissolved)	µg/l	4	ISO 17025	37	3400	960	660
Magnesium (dissolved)	mg/l	0.005	ISO 17025	17	18	85	18
Sodium (dissolved)	mg/l	0.01	ISO 17025	32	110	150	49
Aluminium (dissolved)	µg/l	1	ISO 17025	64	220	440	430
Antimony (dissolved)	µg/l	0.4	ISO 17025	1	0.8	0.8	2
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	0.82	5.72	2.67
Barium (dissolved)	µg/l	0.06	ISO 17025	34	150	27	49
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.03	0.07	0.04	0.19
Chromium (dissolved)	µg/l	0.2	ISO 17025	2	3.9	4.1	3.4
Cobalt (dissolved)	µg/l	0.2	ISO 17025	0.5	33	16	0.9
Copper (dissolved)	µg/l	0.5	ISO 17025	5.3	9.7	12	4.6
Lead (dissolved)	µg/l	0.2	ISO 17025	0.6	2.8	3.1	< 0.2
Manganese (dissolved)	µg/l	0.05	ISO 17025	28	10000	4900	37
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	5.7	19	16	5.8
Selenium (dissolved)	µg/l	0.6	ISO 17025	3.8	2.6	2.6	2.7
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	3	1	29	1.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.8	1.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.6	12	22	15
Monoaromatics & Oxygenates							
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	< 2.0	< 2.0	-	< 2.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	-	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	< 10	< 10	-	< 10

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
VOCs							
Chloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		10	NONE	ND	ND	-	ND
VOC % Match	%	10	NONE	-	-	-	-

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
SVOCs							
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	-	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	-	< 0.01

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	ND	-	ND
SVOC % Match	%	N/A	NONE	-	-	-	-

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665154	1665155	1665156	1665157
Sample Reference				CP03	CP09	RO10	WS01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status				
PCBs – WHO12							
PCB Congener 77	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 81	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 105	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 114	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 118	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 123	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 126	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 156	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 157	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 167	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 169	µg/l	0.02	NONE	-	-	-	< 0.020
PCB Congener 189	µg/l	0.02	NONE	-	-	-	< 0.020
Total PCBs – WHO12							
Total PCBs	µg/l	0.3	NONE	-	-	-	< 0.300

U/S = Unsuitable Sample I/S = Insufficient Sample

*U/S - sample was oily.

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
General Inorganics						
pH	pH Units	N/A	ISO 17025	7.3	7.2	7
Electrical Conductivity at 20 °C	µS/cm	10	ISO 17025	780	460	540
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	< 1	< 1	< 1
Sulphate as SO4	µg/l	45	ISO 17025	185000	52300	63900
Chloride	mg/l	0.15	ISO 17025	11	22	32
Fluoride	µg/l	50	ISO 17025	440	200	300
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	< 15	130	590
Ammonia as NH3	µg/l	15	ISO 17025	< 15	160	720
Ammonium as NH4	µg/l	15	ISO 17025	< 15	170	760
Dissolved Organic Carbon (DOC)	mg/l	0.1	NONE	4.05	7.33	3.67
Nitrate as N	mg/l	0.01	ISO 17025	1.28	0.46	0.08
Nitrate as NO3	mg/l	0.05	ISO 17025	5.69	2.06	0.34
Nitrite as N	µg/l	1	ISO 17025	6.6	440	7
Nitrite as NO2	µg/l	5	ISO 17025	22	1500	23
Hardness - Total	mgCaCO3/l	1	ISO 17025	403	183	210
Bromate by IC	mg/l	0.002	NONE	< 0.002	< 0.002	< 0.002
Total Phenols						
Total Phenols (monohydric)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0
Speciated PAHs						
Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01
PAH Sums						
Sum of Benzo(b)fluoranthene & Benzo(k)fluoranthene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02
Sum of Benzo(ghi)perylene & Indeno(1,2,3-cd)pyrene	µg/l	0.02	NONE	< 0.020	< 0.020	< 0.020
Sum of Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(ghi)pery	µg/l	0.04	NONE	< 0.040	< 0.040	< 0.040
Total PAH						
Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16	< 0.16

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Heavy Metals / Metalloids						
Boron (dissolved)	µg/l	10	ISO 17025	260	140	200
Calcium (dissolved)	mg/l	0.012	ISO 17025	130	57	69
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	3.1	2.2	2.1
Iron (dissolved)	mg/l	0.004	ISO 17025	0.45	0.38	0.048
Iron (dissolved)	µg/l	4	ISO 17025	450	380	48
Magnesium (dissolved)	mg/l	0.005	ISO 17025	18	9.9	9
Sodium (dissolved)	mg/l	0.01	ISO 17025	40	35	51
Aluminium (dissolved)	µg/l	1	ISO 17025	120	640	580
Antimony (dissolved)	µg/l	0.4	ISO 17025	1.8	1.7	0.9
Arsenic (dissolved)	µg/l	0.15	ISO 17025	< 0.15	1.27	1.41
Barium (dissolved)	µg/l	0.06	ISO 17025	51	140	110
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.08	0.11	0.1
Chromium (dissolved)	µg/l	0.2	ISO 17025	3.1	2.2	2.1
Cobalt (dissolved)	µg/l	0.2	ISO 17025	0.8	3.2	4.5
Copper (dissolved)	µg/l	0.5	ISO 17025	19	17	3.6
Lead (dissolved)	µg/l	0.2	ISO 17025	2.7	16	29
Manganese (dissolved)	µg/l	0.05	ISO 17025	150	330	520
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	4.4	6.1	8.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.9	0.7	< 0.6
Silver (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05
Tin (dissolved)	µg/l	0.2	ISO 17025	3.2	2.1	0.39
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	2.6	1.7
Zinc (dissolved)	µg/l	0.5	ISO 17025	3.1	8.2	42
Monoaromatics & Oxygenates						
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-xylene	µg/l	1	ISO 17025	-	-	< 1.0
o-xylene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
Sum of m, p & o-Xylene	µg/l	2	ISO 17025	-	-	< 2.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Petroleum Hydrocarbons						
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C16 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aliphatic >C35 - C44	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	-	-	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	-	-	< 10
TPH-CWG - Aromatic >C35 - C44	µg/l	10	NONE	-	-	< 10

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
VOCs						
Chloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Chloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Vinyl Chloride	µg/l	1	NONE	-	-	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	-	-	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Benzene	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Trichloroethene	µg/l	1	ISO 17025	-	-	< 1.0
Dibromomethane	µg/l	1	ISO 17025	-	-	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	-	-	< 1.0
Toluene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	-	-	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	-	-	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	-	-	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
Styrene	µg/l	1	ISO 17025	-	-	< 1.0
Tribromomethane	µg/l	1	ISO 17025	-	-	< 1.0
o-Xylene	µg/l	1	ISO 17025	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	-	-	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
Bromobenzene	µg/l	1	ISO 17025	-	-	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	-	-	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	-	-	< 1.0

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
1,2-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Butylbenzene	µg/l	1	ISO 17025	-	-	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	-	-	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	-	-	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	-	-	< 1.0

VOCs TICs

VOCs TICs Compound Name		10	NONE	-	-	ND
VOC % Match	%	10	NONE	-	-	-

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Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
SVOCs						
Aniline	µg/l	0.05	NONE	-	-	< 0.05
Phenol	µg/l	0.05	NONE	-	-	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	-	-	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	-	-	< 0.05
2-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Hexachloroethane	µg/l	0.05	NONE	-	-	< 0.05
Nitrobenzene	µg/l	0.05	NONE	-	-	< 0.05
4-Methylphenol	µg/l	0.05	NONE	-	-	< 0.05
Isophorone	µg/l	0.05	NONE	-	-	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	-	-	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	-	-	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	-	-	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	-	-	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	-	-	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	-	-	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	-	-	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	-	-	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	-	-	< 0.01
2,4-Dinitrotoluene	µg/l	0.05	NONE	-	-	< 0.05
Dibenzofuran	µg/l	0.05	NONE	-	-	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	-	-	< 0.05
Fluorene	µg/l	0.01	ISO 17025	-	-	< 0.01
Azobenzene	µg/l	0.05	NONE	-	-	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	-	-	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	-	-	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Carbazole	µg/l	0.05	NONE	-	-	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Anthraquinone	µg/l	0.05	NONE	-	-	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	-	-	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Chrysene	µg/l	0.01	ISO 17025	-	-	< 0.01

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Analytical Report Number: 20-38017
Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	< 0.01

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	-

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Project / Site name: Stopes Road, Bolton

Lab Sample Number				1665158	1665159	1665160
Sample Reference				WS02	WS05	WS11
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/10/2020	26/10/2020	26/10/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**			
PCBs – WHO12						
PCB Congener 77	µg/l	0.02	NONE	-	-	-
PCB Congener 81	µg/l	0.02	NONE	-	-	-
PCB Congener 105	µg/l	0.02	NONE	-	-	-
PCB Congener 114	µg/l	0.02	NONE	-	-	-
PCB Congener 118	µg/l	0.02	NONE	-	-	-
PCB Congener 123	µg/l	0.02	NONE	-	-	-
PCB Congener 126	µg/l	0.02	NONE	-	-	-
PCB Congener 156	µg/l	0.02	NONE	-	-	-
PCB Congener 157	µg/l	0.02	NONE	-	-	-
PCB Congener 167	µg/l	0.02	NONE	-	-	-
PCB Congener 169	µg/l	0.02	NONE	-	-	-
PCB Congener 189	µg/l	0.02	NONE	-	-	-
Total PCBs – WHO12						
Total PCBs	µg/l	0.3	NONE	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

*U/S - sample was oily.

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Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Electrical conductivity at 20oC of water	Determination of electrical conductivity in water by electrometric measurement. Accredited Matrices SW, GW, PW	In-house method	L031-PL	W	ISO 17025
Fluoride in water	Determination of fluoride in water by 1:1 ratio with a buffer solution followed by Ion Selective Electrode. Accredited matrices: SW, PW, GW.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Total Hardness of water	Determination of hardness in waters by calculation from calcium and magnesium. Accredited Matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045-PL	W	ISO 17025
Monohydric phenols in water - LOW LEVEL 1 ug/l	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Nitrite in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry).Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
Tentatively identified compounds (SVOC) in water	Determination of semi-volatile organic compounds total ion count in water by extraction with hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L070-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Tentatively identified compounds (VOC) in water	Determination of volatile organic compounds total ion count in water by headspace GC-MS followed by a full library scan.	In-house method based on USEPA8260	L073B-PL	W	NONE
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Speciated EPA-16 PAHs in water (LOW LEVEL Dets)	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270 (low level)	L102B-PL	W	NONE
TPH in (Water)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding.	L070-PL	W	NONE
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH4 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrite as N in water	Determination of nitrite in water by addition of sulphanilamide and NED followed by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Nitrate as N in water	Determination of nitrate by reaction with sodium salicylate and colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08,	L078-PL	W	ISO 17025
TPH Chromatogram in Water	TPH Chromatogram in Water.	In-house method	L070-PL	W	NONE
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
PCBs WHO 12 in water	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L028-UK	W	NONE
Low level total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Free cyanide (low level) in water	Determination of free cyanide by distillation followed by colorimetry.Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025

Analytical Report Number : 20-38017
Project / Site name: Stopes Road, Bolton

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Bromate in Water	Determination of bromate in waters based on ion chromatography. Accredited matrices GW, PW, SW.	In house method based on Standard Methods for the Analysis of Water and Waste Water, method 4500	L008-PL	W	NONE
Specific PAH sums in water	Determination of PAH compounds in water by extraction in hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L070-PL	W	NONE
Chloride in water	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Statistical Analysis

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	G	G	OP	G	G	G	F	G	G	F	F	OP	G	G	OM	F	G
								Location & Depth	CP01	CP04	CP05	CP06	RC02	RO06	TP01	TP02	TP03	TP04	TP09	TP10	TP11	TP14	TP15	TP16	TP18	TP19
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.15**	**0.10**	**0.15**	**1.30**	**0.50**	**0.30**	**0.20**	**0.10**	**0.40**	**0.90**	**2.10**	**0.80**	**1.60**	**0.80**	**0.85**	**2.00**	**0.60**	**0.60**
Arsenic	1	41	3.2	85	15	37	37.92492	FURTHER ASSESSMENT REQUIRED	32	3.2	9	11	41	3.3	49	36	36	27	85	27	50	70	12	30	47	47
Beryllium	0.06	41	0.49	3.3	0	73	2.184874	POTENTIALLY SUITABLE FOR USE	1.2	0.51	0.49	0.76	2.2	0.58	2.1	2.9	1.9	0.52	2.3	1.5	2.4	2.4	0.95	1.4	1.7	1.6
Boron	0.2	41	0.2	7.6	0	300	2.670996	POTENTIALLY SUITABLE FOR USE	0.4	0.2	0.2	0.6	2	0.2	1	2.3	1	0.9	3.8	1.4	6.5	0.4	0.8	2.4	0.4	0.6
Cadmium	0.2	41	0.2	1.4	0	14	0.479017	POTENTIALLY SUITABLE FOR USE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.4	0.2	0.2	0.2	0.5	0.2	0.2
Chromium (III)	1	41	9.9	51	0	890	33.9437	POTENTIALLY SUITABLE FOR USE	17	16	30	19	34	22	28	30	47	9.9	30	25	32	33	51	17	23	34
Chromium (VI)	1.2	41	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	0	2500	111.6175	POTENTIALLY SUITABLE FOR USE	140	11	19	25	67	20	110	100	93	56	110	69	150	79	40	61	64	60
Lead	2	41	6.5	580	4	200	134.4353	POTENTIALLY SUITABLE FOR USE	35	9.2	12	14	45	8.3	88	76	89	44	210	42	61	46	6.5	130	28	26
Mercury, inorganic	0.3	41	0.3	0.9	0	170	0.430212	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.3
Nickel	2	41	13	130	1	130	56.21472	POTENTIALLY SUITABLE FOR USE	61	21	27	24	43	28	63	41	44	13	44	36	46	57	30	30	35	41
Selenium	1	41	1	7.6	0	360	2.464602	POTENTIALLY SUITABLE FOR USE	3	1	1	1	1	1	1	1	1	2.1	3.4	1	1	3.5	1	1	1	1
Vanadium	1	41	15	780	1	410	149.0729	POTENTIALLY SUITABLE FOR USE	56	15	18	22	61	18	120	42	54	22	60	47	71	100	55	33	52	52
Zinc	2	41	24	610	0	3900	166.3808	POTENTIALLY SUITABLE FOR USE	25	41	57	50	68	57	120	110	140	31	99	81	85	75	73	100	50	66
Cyanide (free)	1	41	1	1	0	790	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	2	41	1	2.3	0	560	1.169951	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	41	0.05	1.9	0	520	0.500535	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.44	0.05	0.66	0.05	0.05	0.05	0.44	0.41	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	0.05	41	0.05	1.3	0	430	0.299227	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.28	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	41	0.05	20	0	5500	3.122636	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.4	0.05	1.1	0.31	0.21	0.25	1.5	0.28	0.28	0.05	0.05	0.37	0.05	0.05
Benz(a)anthracene	0.05	41	0.05	77	4	6.7	12.00601	FURTHER ASSESSMENT REQUIRED	0.35	0.05	0.05	0.05	5.6	0.05	4.1	2.7	1.1	1.1	6.8	0.63	1.2	0.58	0.05	1.3	0.05	0.05
Benzo(a)pyrene	0.05	41	0.05	62	10	1.5	9.610651	FURTHER ASSESSMENT REQUIRED	0.05	0.05	0.05	0.05	4.2	0.05	3.2	1.8	0.84	0.68	5.4	0.48	0.8	0.31	0.05	1.1	0.05	0.05
Benzo(b)fluoranthene	0.05	41	0.05	63	2	9.4	9.847137	FURTHER ASSESSMENT REQUIRED	0.22	0.05	0.05	0.05	5.7	0.05	1.9	2.5	0.59	0.73	4.9	0.37	0.7	0.48	0.05	1.4	0.05	0.05
Benzo(ghi)perylene	0.05	41	0.05	23	0	69	3.781746	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.9	0.05	1.8	1.1	0.49	0.39	2.7	0.29	0.47	0.32	0.05	0.67	0.05	0.05
Benzo(k)fluoranthene	0.05	41	0.05	35	1	14	5.478705	POTENTIALLY SUITABLE FOR USE	0.12	0.05	0.05	0.05	1.7	0.05	1.9	1.5	0.59	0.57	4.9	0.37	0.7	0.2	0.05	0.54	0.05	0.05
Chrysene	0.05	41	0.05	62	2	11	9.527882	POTENTIALLY SUITABLE FOR USE	0.34	0.05	0.05	0.05	4	0.05	2.8	2.8	0.99	0.86	6.1	0.66	0.9	0.48	0.05	1.2	0.05	0.05
Dibenz(a,h)anthracene	0.05	41	0.05	6.7	2	1.3	1.001653	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.46	0.31	0.05	0.05	0.59	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoranthene	0.05	41	0.05	150	0	560	23.3563	POTENTIALLY SUITABLE FOR USE	0.8	0.05	0.05	0.05	11	0.05	8.7	6.4	2.1	1.9	15	1.4	2.4	1.2	0.05	2.6	0.05	0.05
Fluorene	0.05	41	0.05	3.5	0	410	0.764203	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.61	0.05	0.44	0.05	0.05	0.05	0.42	0.34	0.05	0.05	0.05	0.05	0.05	0.05
Indeno(1,2,3,cd)pyrene	0.05	41	0.05	21	1	5.5	3.41574	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.6	0.05	1.6	1.1	0.47	0.36	2.6	0.25	0.45	0.26	0.05	0.61	0.05	0.05
Naphthalene	0.05	41	0.05	1.3	0	5.2	0.447235	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.4	0.05	0.05	0.38	0.44	1.1	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	41	0.05	80	0	220	12.72065	POTENTIALLY SUITABLE FOR USE	0.83	0.05	0.05	0.05	6.8	0.05	6.2	1.3	0.99	1.3	6.8	1.5	1.3	0.49	0.05	1.4	0.05	0.05
Pyrene	0.05	41	0.05	130	0	1200	20.48207	POTENTIALLY SUITABLE FOR USE	0.75	0.05	0.05	0.05	9.6	0.05	8	6.5	2	1.7	14	1.3	2.2	1.2	0.05	2.5	0.05	0.05
Asbestos identified	Y/N								N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N
FOC (dimensionless)	0.02198	**(mean)**							0.053	0.0041	0.002	0.0074	0.02	0.0021	0.023	0.021	0.014	0.047	0.034	0.017	0.018	0.022	0.0037	0.044	0.018	0.011
SOM (calculated)	3.79%	**(mean)**							9.14%	0.71%	0.34%	1.28%	3.45%	0.36%	3.97%	3.62%	2.41%	8.10%	5.86%	2.93%	3.10%	3.79%	0.64%	7.59%	3.10%	1.90%
pH (su)	8.5	**(mean)**							7.9	10.1	11.2	9	7.7	9.5	9.9	9	8.2	7.7	7.5	8.8	8.4	8	8.9	7.3	8.2	8.5

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Values in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	LF	LF	G	LF	TS	G	LF	RWN	G	G	G	RWN	BP	G	SB	OP	G
								Location & Depth	TP20	TP21	TP21	TP22	TP22	TP23	TP28	TT01	TT02	TT03	WS01	WS01	WS03	WS03	WS05	WS06	WS07	WS09
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.10**	**2.10**	**1.40**	**0.15**	**1.90**	**0.20**	**0.40**	**0.60**	**1.00**	**0.50**	**1.30**	**0.10**	**1.40**	**0.20**	**0.60**	**0.20**	**1.70**	**0.40**
Arsenic	1	41	3.2	85	15	37	37.92492	FURTHER ASSESSMENT REQUIRED	15	47	55	16	33	35	76	44	10	35	6.9	70	6.4	20	21	3.7	41	38
Beryllium	0.06	41	0.49	3.3	0	73	2.184874	POTENTIALLY SUITABLE FOR USE	0.89	1.7	1.9	0.51	1.4	1.1	1	1.8	1.8	2.9	1.8	3.3	0.63	1.6	2.4	0.7	2.2	1.8
Boron	0.2	41	0.2	7.6	0	300	2.670996	POTENTIALLY SUITABLE FOR USE	1.7	1.8	2.1	5.5	1.1	0.3	0.2	4	1.8	1	0.8	1.9	0.3	0.6	1.1	0.2	1.5	0.6
Cadmium	0.2	41	0.2	1.4	0	14	0.479017	POTENTIALLY SUITABLE FOR USE	0.5	0.2	0.2	1.4	0.4	0.6	0.2	0.7	0.2	0.2	0.3	0.9	0.2	0.2	0.3	0.2	0.2	0.2
Chromium (III)	1	41	9.9	51	0	890	33.9437	POTENTIALLY SUITABLE FOR USE	28	23	29	47	21	30	18	34	34	32	18	35	15	24	38	24	32	26
Chromium (VI)	1.2	41	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	0	2500	111.6175	POTENTIALLY SUITABLE FOR USE	39	89	67	260	49	60	22	79	48	82	19	280	18	49	77	16	73	60
Lead	2	41	6.5	580	4	200	134.4353	POTENTIALLY SUITABLE FOR USE	26	45	42	580	53	140	24	63	26	33	20	210	9.3	49	56	11	60	68
Mercury, inorganic	0.3	41	0.3	0.9	0	170	0.430212	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.3	0.8	0.3	0.3	0.3	0.3	0.3	0.6	0.3	0.3	0.3	0.3	0.3	0.3
Nickel	2	41	13	130	1	130	56.21472	POTENTIALLY SUITABLE FOR USE	27	36	46	24	33	19	30	43	45	59	100	62	37	130	50	29	47	37
Selenium	1	41	1	7.6	0	360	2.464602	POTENTIALLY SUITABLE FOR USE	1	1	3.4	1	2.6	1	1	1	2.7	1	7.6	1	1	1	1	1	1	3
Vanadium	1	41	15	780	1	410	149.0729	POTENTIALLY SUITABLE FOR USE	34	48	63	18	43	32	25	61	20	74	22	66	180	780	67	20	47	52
Zinc	2	41	24	610	0	3900	166.3808	POTENTIALLY SUITABLE FOR USE	92	74	75	610	89	120	63	110	130	45	130	380	36	120	89	65	81	79
Cyanide (free)	1	41	1	1	0	790	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	2	41	1	2.3	0	560	1.169951	POTENTIALLY SUITABLE FOR USE	1	1	1	1	2.3	1	1	1	1	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	41	0.05	1.9	0	520	0.500535	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.21	1.9	0.05	0.05	1.7
Acenaphthylene	0.05	41	0.05	1.3	0	430	0.299227	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.49	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1.1	0.05	0.05	1.3
Anthracene	0.05	41	0.05	20	0	5500	3.122636	POTENTIALLY SUITABLE FOR USE	0.05	0.11	0.46	0.13	3.5	0.05	0.05	0.14	0.13	0.05	0.05	0.56	0.05	0.66	20	0.05	0.3	5.2
Benz(a)anthracene	0.05	41	0.05	77	4	6.7	12.00601	FURTHER ASSESSMENT REQUIRED	0.4	0.37	1.8	0.47	13	0.47	0.05	0.46	0.43	0.24	0.05	2.1	0.05	2.7	77	0.05	0.26	19
Benzo(a)pyrene	0.05	41	0.05	62	10	1.5	9.610651	FURTHER ASSESSMENT REQUIRED	0.3	0.31	1.4	0.35	10	0.42	0.05	0.3	0.05	0.05	0.05	1.7	0.05	2.7	62	0.05	0.05	15
Benzo(b)fluoranthene	0.05	41	0.05	63	2	9.4	9.847137	FURTHER ASSESSMENT REQUIRED	0.25	0.24	1	0.24	7.7	0.5	0.05	0.17	0.3	0.05	0.05	1.5	0.05	3.5	63	0.05	0.05	18
Benzo(ghi)perylene	0.05	41	0.05	23	0	69	3.781746	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.79	0.05	5	0.32	0.05	0.05	0.05	0.05	0.05	1	0.05	1.3	23	0.05	0.05	6.5
Benzo(k)fluoranthene	0.05	41	0.05	35	1	14	5.478705	POTENTIALLY SUITABLE FOR USE	0.25	0.24	1	0.24	7.7	0.3	0.05	0.17	0.16	0.05	0.05	1.5	0.05	1.1	35	0.05	0.05	5.7
Chrysene	0.05	41	0.05	62	2	11	9.527882	POTENTIALLY SUITABLE FOR USE	0.35	0.37	1.6	0.34	10	0.6	0.05	0.43	0.29	0.19	0.05	1.9	0.05	2.8	62	0.05	0.3	11
Dibenz(a,h)anthracene	0.05	41	0.05	6.7	2	1.3	1.001653	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	6.7	0.05	0.05	0.05
Fluoranthene	0.05	41	0.05	150	0	560	23.3563	POTENTIALLY SUITABLE FOR USE	0.73	0.71	3.6	0.82	25	0.95	0.05	1.1	0.49	0.35	0.05	3	0.05	7.4	150	0.05	0.58	34
Fluorene	0.05	41	0.05	3.5	0	410	0.764203	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	1.6	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.22	3.5	0.05	0.05	2.7
Indeno(1,2,3,cd)pyrene	0.05	41	0.05	21	1	5.5	3.41574	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.72	0.05	4.5	0.26	0.05	0.05	0.05	0.05	0.05	0.8	0.05	1.1	21	0.05	0.05	5.3
Naphthalene	0.05	41	0.05	1.3	0	5.2	0.447235	POTENTIALLY SUITABLE FOR USE	0.05	0.29	0.05	0.05	0.71	0.05	0.05	0.05	1.3	0.05	0.05	1.1	0.05	0.05	0.05	0.05	0.05	1.2
Phenanthrene	0.05	41	0.05	80	0	220	12.72065	POTENTIALLY SUITABLE FOR USE	0.27	0.51	1.8	0.54	15	0.56	0.05	0.5	1.2	0.24	0.05	1.8	0.05	3.1	80	0.05	0.44	22
Pyrene	0.05	41	0.05	130	0	1200	20.48207	POTENTIALLY SUITABLE FOR USE	0.77	0.67	3.4	0.74	23	0.98	0.05	0.96	0.63	0.3	0.05	3	0.05	6.1	130	0.05	0.56	31
Asbestos identified	Y/N								N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
FOC (dimensionless)	0.02198	**(mean)**							0.0075	0.023	0.018	0.0078	0.018	0.051	0.015	0.013	0.041	0.022	0.032	0.04	0.001	0.014	0.03	0.001	0.022	0.028
SOM (calculated)	3.79%	**(mean)**							1.29%	3.97%	3.10%	1.34%	3.10%	8.79%	2.59%	2.24%	7.07%	3.79%	5.52%	6.90%	0.17%	2.41%	5.17%	0.17%	3.79%	4.83%
pH (su)	8.5	**(mean)**							10.3	8.7	9.3	10.5	8.8	5.7	5.7	9.3	8.4	8.6	7.6	7.7	6	9	11.9	8.7	8.4	7.9

Risk parameter: **Human health - residential with plant uptake (2.5%SOM)**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	F	F	SB	G	OM
								Location & Depth	WS10	WS11	WS12	WS13	WS14
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**1.30**	**0.30**	**0.30**	**0.70**	**1.45**
Arsenic	1	41	3.2	85	15	37	37.92492	FURTHER ASSESSMENT REQUIRED	34	24	14	8.1	58
Beryllium	0.06	41	0.49	3.3	0	73	2.184874	POTENTIALLY SUITABLE FOR USE	1.3	3	1	3.3	1.9
Boron	0.2	41	0.2	7.6	0	300	2.670996	POTENTIALLY SUITABLE FOR USE	1.3	0.3	0.9	0.2	7.6
Cadmium	0.2	41	0.2	1.4	0	14	0.479017	POTENTIALLY SUITABLE FOR USE	0.2	0.2	0.2	0.2	0.6
Chromium (III)	1	41	9.9	51	0	890	33.9437	POTENTIALLY SUITABLE FOR USE	20	31	21	32	34
Chromium (VI)	1.2	41	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	0	2500	111.6175	POTENTIALLY SUITABLE FOR USE	76	75	44	73	100
Lead	2	41	6.5	580	4	200	134.4353	POTENTIALLY SUITABLE FOR USE	12	35	20	18	210
Mercury, inorganic	0.3	41	0.3	0.9	0	170	0.430212	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.9
Nickel	2	41	13	130	1	130	56.21472	POTENTIALLY SUITABLE FOR USE	34	52	28	40	30
Selenium	1	41	1	7.6	0	360	2.464602	POTENTIALLY SUITABLE FOR USE	1	1	1	1	3
Vanadium	1	41	15	780	1	410	149.0729	POTENTIALLY SUITABLE FOR USE	36	62	32	88	49
Zinc	2	41	24	610	0	3900	166.3808	POTENTIALLY SUITABLE FOR USE	39	65	60	24	140
Cyanide (free)	1	41	1	1	0	790	1		1	1	1	1	1
Phenol (total)	2	41	1	2.3	0	560	1.169951	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1
Acenaphthene	0.05	41	0.05	1.9	0	520	0.500535	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.34
Acenaphthylene	0.05	41	0.05	1.3	0	430	0.299227	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	41	0.05	20	0	5500	3.122636	POTENTIALLY SUITABLE FOR USE	0.05	0.24	0.05	0.05	0.53
Benz(a)anthracene	0.05	41	0.05	77	4	6.7	12.00601	FURTHER ASSESSMENT REQUIRED	0.05	1.4	0.05	0.05	2.6
Benzo(a)pyrene	0.05	41	0.05	62	10	1.5	9.610651	FURTHER ASSESSMENT REQUIRED	0.05	1.4	0.05	0.05	2.3
Benzo(b)fluoranthene	0.05	41	0.05	63	2	9.4	9.847137	FURTHER ASSESSMENT REQUIRED	0.05	1.6	0.05	0.05	3.1
Benzo(ghi)perylene	0.05	41	0.05	23	0	69	3.781746	POTENTIALLY SUITABLE FOR USE	0.05	0.86	0.05	0.05	1.1
Benzo(k)fluoranthene	0.05	41	0.05	35	1	14	5.478705	POTENTIALLY SUITABLE FOR USE	0.05	0.9	0.05	0.05	0.96
Chrysene	0.05	41	0.05	62	2	11	9.527882	POTENTIALLY SUITABLE FOR USE	0.05	1.3	0.05	0.05	2.4
Dibenz(a,h)anthracene	0.05	41	0.05	6.7	2	1.3	1.001653	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05
Fluoranthene	0.05	41	0.05	150	0	560	23.3563	POTENTIALLY SUITABLE FOR USE	0.05	2.3	0.42	0.05	5.2
Fluorene	0.05	41	0.05	3.5	0	410	0.764203	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.25
Indeno(1,2,3,cd)pyrene	0.05	41	0.05	21	1	5.5	3.41574	POTENTIALLY SUITABLE FOR USE	0.05	0.75	0.05	0.05	0.92
Naphthalene	0.05	41	0.05	1.3	0	5.2	0.447235	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	41	0.05	80	0	220	12.72065	POTENTIALLY SUITABLE FOR USE	0.05	1	0.05	0.05	3.2
Pyrene	0.05	41	0.05	130	0	1200	20.48207	POTENTIALLY SUITABLE FOR USE	0.05	2.3	0.45	0.05	4.8
Asbestos identified	Y/N								Y	N	N	N	N
FOC (dimensionless)	0.02198	**(mean)**							0.041	0.022	0.01	0.0026	0.08
SOM (calculated)	3.79%	**(mean)**							7.07%	3.79%	1.72%	0.45%	13.79%
pH (su)	8.5	**(mean)**							7.9	8.6	8.4	8.9	7

Risk parameter: **Human health - residential with plant uptake (2.5%SOM)**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated

Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US_{95}	Result of Significance Test	Soil Type	F	G	LF	G	G	G	G	F	SB	G	G	OP	G
									Location & Depth	TP10	TP01	TT01	TP03	TP28	WS01	WS01	WS11	WS12	RC02	RO06	WS07	WS05
										0.80	0.20	0.60	0.40	0.40	1.30	1.40	0.30	0.30	0.50	0.30	1.70	0.60
Aliphatics EC5-EC6	0.01	13	0.001	0.001	0	78	0.001	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC6-EC8	0.01	13	0.001	0.001	0	230	0.001	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC8-EC10	0.01	13	0.001	6.3	0	65	2.92109	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	2.7	6.3	0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC10-EC12	0.01	13	1	190	1	120	85.68997	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	190	62	1	1	1	1	1	11
Aliphatics >EC12-EC16	0.1	13	2	450	2	59	207.4125	FURTHER ASSESSMENT REQUIRED		8.2	6.6	2	2	2	450	170	2	3.8	2	2	2	32
Aliphatics >EC16-EC35	0.1	13	8	5110	0	92000	3021.949	POTENTIALLY SUITABLE FOR USE		503	97	218	275	8	5110	4590	16	300	16	16	16	265
Aliphatics >EC35-EC44	0.1	13	8.4	810	0	92000	486.2796	POTENTIALLY SUITABLE FOR USE		75	20	21	59	8.4	750	810	8.4	51	8.4	8.4	8.4	33
Aromatics EC5-EC7	0.01	13	0.001	0.001	0	150	0.001	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC7-EC8	0.01	13	0.001	0.001	0	300	0.001	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC8-EC10	0.01	13	0.001	0.001	0	84	0.001	POTENTIALLY SUITABLE FOR USE		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC10-EC12	0.01	13	1	60	0	180	32.60117	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	60	1	1	1	1	1	1	45
Aromatics >EC12-EC16	0.1	13	2	200	0	330	91.13487	POTENTIALLY SUITABLE FOR USE		4.9	7.6	2	2	2	200	15	2	4.9	13	2	2	61
Aromatics >EC16-EC21	0.1	13	10	550	1	550	334.2449	POTENTIALLY SUITABLE FOR USE		26	32	10	16	10	550	240	14	13	62	10	10	450
Aromatics >EC21-EC35	0.1	13	10	5900	2	1500	2689.002	FURTHER ASSESSMENT REQUIRED		160	120	36	58	10	5900	1600	27	110	120	10	17	1100
Aromatics >EC35-EC44	0.1	13	8.4	680	0	1500	298.1549	POTENTIALLY SUITABLE FOR USE		36	43	8.4	30	8.4	680	82	8.4	41	19	8.4	8.4	39

ADDITIVITY CHECK		HAZARD QUOTIENTS FOR EACH FRACTION												
	Aliphatics EC5-EC6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Aliphatics >EC6-EC8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Aliphatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000	0.042	0.097	0.000	0.000	0.000	0.000	0.000	0.000
Considered additive	Aliphatics >EC10-EC12	0.008	0.008	0.008	0.008	0.008	1.583	0.517	0.008	0.008	0.008	0.008	0.008	0.092
	Aliphatics >EC12-EC16	0.139	0.112	0.034	0.034	0.034	7.627	2.881	0.034	0.064	0.034	0.034	0.034	0.542
	Aliphatics >EC16-EC35	0.005	0.001	0.002	0.003	0.000	0.056	0.050	0.000	0.003	0.000	0.000	0.000	0.003
	Aliphatics >EC35-EC44	0.001	0.000	0.000	0.001	0.000	0.008	0.009	0.000	0.001	0.000	0.000	0.000	0.000
	Aromatics EC5-EC7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Aromatics >EC7-EC8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Aromatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Considered additive	Aromatics >EC10-EC12	0.006	0.006	0.006	0.006	0.006	0.333	0.006	0.006	0.006	0.006	0.006	0.006	0.250
	Aromatics >EC12-EC16	0.015	0.023	0.006	0.006	0.006	0.606	0.045	0.006	0.015	0.039	0.006	0.006	0.185
	Aromatics >EC16-EC21	0.047	0.058	0.018	0.029	0.018	1.000	0.436	0.025	0.024	0.113	0.018	0.018	0.818
Considered additive	Aromatics >EC21-EC35	0.107	0.080	0.024	0.039	0.007	3.933	1.067	0.018	0.073	0.080	0.007	0.011	0.733
	Aromatics >EC35-EC44	0.024	0.029	0.006	0.020	0.006	0.453	0.055	0.006	0.027	0.013	0.006	0.006	0.026
	Hazard Index for ali>C8-C16	**0.147**	**0.120**	**0.042**	**0.042**	**0.042**	**9.252**	**3.495**	**0.042**	**0.073**	**0.042**	**0.042**	**0.042**	**0.634**
	Hazard Index for aro>C8-C16	**0.020**	**0.029**	**0.012**	**0.012**	**0.012**	**0.939**	**0.051**	**0.012**	**0.020**	**0.045**	**0.012**	**0.012**	**0.435**
	Hazard Index for aro>C16-C35	**0.154**	**0.138**	**0.042**	**0.068**	**0.025**	**4.933**	**1.503**	**0.043**	**0.097**	**0.193**	**0.025**	**0.030**	**1.552**

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-152220
Lab. report no(s).: Multiple

Hazard Index table - HI or HQ greater than 1 highlighted with yellow shading.

Legend: Main table values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Main table alues in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Plant Life

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	G	G	OP	G	G	G	F	G	G	F	F	OP	G	G	OM	F	G
								Location & Depth	CP01	CP04	CP05	CP06	RC02	RO06	TP01	TP02	TP03	TP04	TP09	TP10	TP11	TP14	TP15	TP16	TP18	TP19
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.15**	**0.10**	**0.15**	**1.30**	**0.50**	**0.30**	**0.20**	**0.10**	**0.40**	**0.90**	**2.10**	**0.80**	**1.60**	**0.80**	**0.85**	**2.00**	**0.60**	**0.60**
Arsenic	1	41	3.2	85	0	250	46.7742	POTENTIALLY SUITABLE FOR USE	32	3.2	9	11	41	3.3	49	36	36	27	85	27	50	70	12	30	47	47
Boron	0.2	41	0.2	7.6	5	3	2.670996	POTENTIALLY SUITABLE FOR USE	0.4	0.2	0.2	0.6	2	0.2	1	2.3	1	0.9	3.8	1.4	6.5	0.4	0.8	2.4	0.4	0.6
Chromium (III)	1	41	9.9	51	0	400	33.9437	POTENTIALLY SUITABLE FOR USE	17	16	30	19	34	22	28	30	47	9.9	30	25	32	33	51	17	23	34
Chromium (VI)	1.2	41	1.2	1.2	0	25	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	2	200	111.6175	POTENTIALLY SUITABLE FOR USE	140	11	19	25	67	20	110	100	93	56	110	69	150	79	40	61	64	60
Nickel	2	41	13	130	1	110	56.21472	POTENTIALLY SUITABLE FOR USE	61	21	27	24	43	28	63	41	44	13	44	36	46	57	30	30	35	41
Zinc	2	41	24	610	2	300	166.3808	POTENTIALLY SUITABLE FOR USE	25	41	57	50	68	57	120	110	140	31	99	81	85	75	73	100	50	66
	Mean																									
pH (su)	8.5								7.9	10.1	11.2	9	7.7	9.5	9.9	9	8.2	7.7	7.5	8.8	8.4	8	8.9	7.3	8.2	8.5

Risk parameter: **Plant life pH >7**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Values in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Plant Life

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	LF	LF	G	LF	TS	G	LF	RWN	G	G	G	RWN
								Location & Depth	TP20	TP21	TP21	TP22	TP22	TP23	TP28	TT01	TT02	TT03	WS01	WS01	WS03
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.10**	**2.10**	**1.40**	**0.15**	**1.90**	**0.20**	**0.40**	**0.60**	**1.00**	**0.50**	**1.30**	**0.10**	**1.40**
Arsenic	1	41	3.2	85	0	250	46.7742	POTENTIALLY SUITABLE FOR USE	15	47	55	16	33	35	76	44	10	35	6.9	70	6.4
Boron	0.2	41	0.2	7.6	5	3	2.670996	POTENTIALLY SUITABLE FOR USE	1.7	1.8	2.1	5.5	1.1	0.3	0.2	4	1.8	1	0.8	1.9	0.3
Chromium (III)	1	41	9.9	51	0	400	33.9437	POTENTIALLY SUITABLE FOR USE	28	23	29	47	21	30	18	34	34	32	18	35	15
Chromium (VI)	1.2	41	1.2	1.2	0	25	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	2	200	111.6175	POTENTIALLY SUITABLE FOR USE	39	89	67	260	49	60	22	79	48	82	19	280	18
Nickel	2	41	13	130	1	110	56.21472	POTENTIALLY SUITABLE FOR USE	27	36	46	24	33	19	30	43	45	59	100	62	37
Zinc	2	41	24	610	2	300	166.3808	POTENTIALLY SUITABLE FOR USE	92	74	75	610	89	120	63	110	130	45	130	380	36
	Mean																				
pH (su)	8.5								10.3	8.7	9.3	10.5	8.8	5.7	5.7	9.3	8.4	8.6	7.6	7.7	6

Risk parameter: **Plant life pH >7**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Assessment of Chemicals of Potential Concern to Plant Life

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	BP	G	SB	OP	G	F	F	SB	G	OM
								Location & Depth	WS03	WS05	WS06	WS07	WS09	WS10	WS11	WS12	WS13	WS14
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.20**	**0.60**	**0.20**	**1.70**	**0.40**	**1.30**	**0.30**	**0.30**	**0.70**	**1.45**
Arsenic	1	41	3.2	85	0	250	46.7742	POTENTIALLY SUITABLE FOR USE	20	21	3.7	41	38	34	24	14	8.1	58
Boron	0.2	41	0.2	7.6	5	3	2.670996	POTENTIALLY SUITABLE FOR USE	0.6	1.1	0.2	1.5	0.6	1.3	0.3	0.9	0.2	7.6
Chromium (III)	1	41	9.9	51	0	400	33.9437	POTENTIALLY SUITABLE FOR USE	24	38	24	32	26	20	31	21	32	34
Chromium (VI)	1.2	41	1.2	1.2	0	25	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	41	11	280	2	200	111.6175	POTENTIALLY SUITABLE FOR USE	49	77	16	73	60	76	75	44	73	100
Nickel	2	41	13	130	1	110	56.21472	POTENTIALLY SUITABLE FOR USE	130	50	29	47	37	34	52	28	40	30
Zinc	2	41	24	610	2	300	166.3808	POTENTIALLY SUITABLE FOR USE	120	89	65	81	79	39	65	60	24	140
	Mean																	
pH (su)	8.5								9	11.9	8.7	8.4	7.9	7.9	8.6	8.4	8.9	7

Risk parameter: **Plant life pH >7**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
								Location & Depth	CP01	CP04	CP05	RC02	RO06	TP01	TP03	TP04	TP14	TP15	TP19	TP20	TP22	TP28	TT03
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.15**	**0.10**	**0.15**	**0.50**	**0.30**	**0.20**	**0.40**	**0.90**	**0.80**	**0.85**	**0.60**	**0.10**	**0.15**	**0.40**	**0.50**
Arsenic	1	20	3.2	76	7	37	39.61096	FURTHER ASSESSMENT REQUIRED	32	3.2	9	41	3.3	49	36	27	70	12	47	15	16	76	35
Beryllium	0.06	20	0.49	3.3	0	73	2.533853	POTENTIALLY SUITABLE FOR USE	1.2	0.51	0.49	2.2	0.58	2.1	1.9	0.52	2.4	0.95	1.6	0.89	0.51	1	2.9
Boron	0.2	20	0.2	5.5	0	300	2.19429	POTENTIALLY SUITABLE FOR USE	0.4	0.2	0.2	2	0.2	1	1	0.9	0.4	0.8	0.6	1.7	5.5	0.2	1
Cadmium	0.2	20	0.2	1.4	0	14	0.632186	POTENTIALLY SUITABLE FOR USE	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.5	1.4	0.2	0.2
Chromium (III)	1	20	9.9	51	0	890	40.52424	POTENTIALLY SUITABLE FOR USE	17	16	30	34	22	28	47	9.9	33	51	34	28	47	18	32
Chromium (VI)	1.2	20	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	20	11	280	0	2500	151.4744	POTENTIALLY SUITABLE FOR USE	140	11	19	67	20	110	93	56	79	40	60	39	260	22	82
Lead	2	20	6.5	580	2	200	196.9414	POTENTIALLY SUITABLE FOR USE	35	9.2	12	45	8.3	88	89	44	46	6.5	26	26	580	24	33
Mercury, inorganic	0.3	20	0.3	0.6	0	170	0.3804	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nickel	2	20	13	100	0	130	62.48217	POTENTIALLY SUITABLE FOR USE	61	21	27	43	28	63	44	13	57	30	41	27	24	30	59
Selenium	1	20	1	7.6	0	360	3.274652	POTENTIALLY SUITABLE FOR USE	3	1	1	1	1	1	1	2.1	3.5	1	1	1	1	1	1
Vanadium	1	20	15	120	0	410	79.92842	POTENTIALLY SUITABLE FOR USE	56	15	18	61	18	120	54	22	100	55	52	34	18	25	74
Zinc	2	20	24	610	0	3900	249.2593	POTENTIALLY SUITABLE FOR USE	25	41	57	68	57	120	140	31	75	73	66	92	610	63	45
Cyanide (free)	1	20	1	1	0	790	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	2	20	1	1	0	560	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	20	0.05	1.9	0	520	0.806957	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.44	0.05	0.66	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	0.05	20	0.05	1.3	0	430	0.522843	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.28	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	20	0.05	20	0	5500	5.874248	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	1.4	0.05	1.1	0.21	0.25	0.05	0.05	0.05	0.05	0.13	0.05	0.05
Benz(a)anthracene	0.05	20	0.05	77	2	6.7	22.52861	FURTHER ASSESSMENT REQUIRED	0.35	0.05	0.05	5.6	0.05	4.1	1.1	1.1	0.58	0.05	0.05	0.4	0.47	0.05	0.24
Benzo(a)pyrene	0.05	20	0.05	62	5	1.5	18.06719	FURTHER ASSESSMENT REQUIRED	0.05	0.05	0.05	4.2	0.05	3.2	0.84	0.68	0.31	0.05	0.05	0.3	0.35	0.05	0.05
Benzo(b)fluoranthene	0.05	20	0.05	63	2	9.4	18.62013	FURTHER ASSESSMENT REQUIRED	0.22	0.05	0.05	5.7	0.05	1.9	0.59	0.73	0.48	0.05	0.05	0.25	0.24	0.05	0.05
Benzo(ghi)perylene	0.05	20	0.05	23	0	69	6.874863	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	1.9	0.05	1.8	0.49	0.39	0.32	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(k)fluoranthene	0.05	20	0.05	35	1	14	9.998599	POTENTIALLY SUITABLE FOR USE	0.12	0.05	0.05	1.7	0.05	1.9	0.59	0.57	0.2	0.05	0.05	0.25	0.24	0.05	0.05
Chrysene	0.05	20	0.05	62	2	11	17.75441	FURTHER ASSESSMENT REQUIRED	0.34	0.05	0.05	4	0.05	2.8	0.99	0.86	0.48	0.05	0.05	0.35	0.34	0.05	0.19
Dibenz(a,h)anthracene	0.05	20	0.05	6.7	1	1.3	1.85075	FURTHER ASSESSMENT REQUIRED	0.05	0.05	0.05	0.05	0.05	0.46	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoranthene	0.05	20	0.05	150	0	560	43.59264	POTENTIALLY SUITABLE FOR USE	0.8	0.05	0.05	11	0.05	8.7	2.1	1.9	1.2	0.05	0.05	0.73	0.82	0.05	0.35
Fluorene	0.05	20	0.05	3.5	0	410	1.322123	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.61	0.05	0.44	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Indeno(1,2,3,cd)pyrene	0.05	20	0.05	21	1	5.5	6.205715	FURTHER ASSESSMENT REQUIRED	0.05	0.05	0.05	1.6	0.05	1.6	0.47	0.36	0.26	0.05	0.05	0.05	0.05	0.05	0.05
Naphthalene	0.05	20	0.05	1.2	0	5.2	0.528874	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.4	0.05	0.38	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	20	0.05	80	0	220	23.75173	POTENTIALLY SUITABLE FOR USE	0.83	0.05	0.05	6.8	0.05	6.2	0.99	1.3	0.49	0.05	0.05	0.27	0.54	0.05	0.24
Pyrene	0.05	20	0.05	130	0	1200	37.97717	POTENTIALLY SUITABLE FOR USE	0.75	0.05	0.05	9.6	0.05	8	2	1.7	1.2	0.05	0.05	0.77	0.74	0.05	0.3
Asbestos identified	Y/N								N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N
FOC (dimensionless)	0.01934	**(mean)**							0.053	0.0041	0.002	0.02	0.0021	0.023	0.014	0.047	0.022	0.0037	0.011	0.0075	0.0078	0.015	0.022
SOM (calculated)	3.33%	**(mean)**							9.14%	0.71%	0.34%	3.45%	0.36%	3.97%	2.41%	8.10%	3.79%	0.64%	1.90%	1.29%	1.34%	2.59%	3.79%
pH (su)	8.8	**(mean)**							7.9	10.1	11.2	7.7	9.5	9.9	8.2	7.7	8	8.9	8.5	10.3	10.5	5.7	8.6

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Values in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	G	G	G	G	G	
								Location & Depth	WS01	WS01	WS05	WS09	WS13	
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**1.30**	**0.10**	**0.60**	**0.40**	**0.70**	
Arsenic	1	20	3.2	76	7	37	39.61096	FURTHER ASSESSMENT REQUIRED	6.9	70	21	38	8.1	
Beryllium	0.06	20	0.49	3.3	0	73	2.533853	POTENTIALLY SUITABLE FOR USE	1.8	3.3	2.4	1.8	3.3	
Boron	0.2	20	0.2	5.5	0	300	2.19429	POTENTIALLY SUITABLE FOR USE	0.8	1.9	1.1	0.6	0.2	
Cadmium	0.2	20	0.2	1.4	0	14	0.632186	POTENTIALLY SUITABLE FOR USE	0.3	0.9	0.3	0.2	0.2	
Chromium (III)	1	20	9.9	51	0	890	40.52424	POTENTIALLY SUITABLE FOR USE	18	35	38	26	32	
Chromium (VI)	1.2	20	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	
Copper	1	20	11	280	0	2500	151.4744	POTENTIALLY SUITABLE FOR USE	19	280	77	60	73	
Lead	2	20	6.5	580	2	200	196.9414	POTENTIALLY SUITABLE FOR USE	20	210	56	68	18	
Mercury, inorganic	0.3	20	0.3	0.6	0	170	0.3804	POTENTIALLY SUITABLE FOR USE	0.3	0.6	0.3	0.3	0.3	
Nickel	2	20	13	100	0	130	62.48217	POTENTIALLY SUITABLE FOR USE	100	62	50	37	40	
Selenium	1	20	1	7.6	0	360	3.274652	POTENTIALLY SUITABLE FOR USE	7.6	1	1	3	1	
Vanadium	1	20	15	120	0	410	79.92842	POTENTIALLY SUITABLE FOR USE	22	66	67	52	88	
Zinc	2	20	24	610	0	3900	249.2593	POTENTIALLY SUITABLE FOR USE	130	380	89	79	24	
Cyanide (free)	1	20	1	1	0	790	1		1	1	1	1	1	
Phenol (total)	2	20	1	1	0	560	1		1	1	1	1	1	
Acenaphthene	0.05	20	0.05	1.9	0	520	0.806957	POTENTIALLY SUITABLE FOR USE	0.05	0.05	1.9	1.7	0.05	
Acenaphthylene	0.05	20	0.05	1.3	0	430	0.522843	POTENTIALLY SUITABLE FOR USE	0.05	0.05	1.1	1.3	0.05	
Anthracene	0.05	20	0.05	20	0	5500	5.874248	POTENTIALLY SUITABLE FOR USE	0.05	0.56	20	5.2	0.05	
Benz(a)anthracene	0.05	20	0.05	77	2	6.7	22.52861	FURTHER ASSESSMENT REQUIRED	0.05	2.1	77	19	0.05	
Benzo(a)pyrene	0.05	20	0.05	62	5	1.5	18.06719	FURTHER ASSESSMENT REQUIRED	0.05	1.7	62	15	0.05	
Benzo(b)fluoranthene	0.05	20	0.05	63	2	9.4	18.62013	FURTHER ASSESSMENT REQUIRED	0.05	1.5	63	18	0.05	
Benzo(ghi)perylene	0.05	20	0.05	23	0	69	6.874863	POTENTIALLY SUITABLE FOR USE	0.05	1	23	6.5	0.05	
Benzo(k)fluoranthene	0.05	20	0.05	35	1	14	9.998599	POTENTIALLY SUITABLE FOR USE	0.05	1.5	35	5.7	0.05	
Chrysene	0.05	20	0.05	62	2	11	17.75441	FURTHER ASSESSMENT REQUIRED	0.05	1.9	62	11	0.05	
Dibenz(a,h)anthracene	0.05	20	0.05	6.7	1	1.3	1.85075	FURTHER ASSESSMENT REQUIRED	0.05	0.05	6.7	0.05	0.05	
Fluoranthene	0.05	20	0.05	150	0	560	43.59264	POTENTIALLY SUITABLE FOR USE	0.05	3	150	34	0.05	
Fluorene	0.05	20	0.05	3.5	0	410	1.322123	POTENTIALLY SUITABLE FOR USE	0.05	0.05	3.5	2.7	0.05	
Indeno(1,2,3,cd)pyrene	0.05	20	0.05	21	1	5.5	6.205715	FURTHER ASSESSMENT REQUIRED	0.05	0.8	21	5.3	0.05	
Naphthalene	0.05	20	0.05	1.2	0	5.2	0.528874	POTENTIALLY SUITABLE FOR USE	0.05	1.1	0.05	1.2	0.05	
Phenanthrene	0.05	20	0.05	80	0	220	23.75173	POTENTIALLY SUITABLE FOR USE	0.05	1.8	80	22	0.05	
Pyrene	0.05	20	0.05	130	0	1200	37.97717	POTENTIALLY SUITABLE FOR USE	0.05	3	130	31	0.05	
Asbestos identified	Y/N								N	N	N	Y	N	
FOC (dimensionless)	0.01934	**(mean)**							0.032	0.04	0.03	0.028	0.0026	
SOM (calculated)	3.33%	**(mean)**							5.52%	6.90%	5.17%	4.83%	0.45%	
pH (su)	8.8	**(mean)**							7.6	7.7	11.9	7.9	8.9	

Risk parameter: **Human health - residential with plant uptake (2.5%SOM)**
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated

Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US_{95}	Result of Significance Test	Soil Type	G	G	G	G	G	G
									Location & Depth	TP01	TP03	TP28	RC02	RO06	WS05
										0.20	0.40	0.40	0.50	0.30	0.60
Aliphatics EC5-EC6	0.01	6	0.001	0.001	0	78	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC6-EC8	0.01	6	0.001	0.001	0	230	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC8-EC10	0.01	6	0.001	0.001	0	65	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aliphatics >EC10-EC12	0.01	6	1	11	0	120	9.933333	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	11
Aliphatics >EC12-EC16	0.1	6	2	32	0	59	29.15043	POTENTIALLY SUITABLE FOR USE		6.6	2	2	2	2	32
Aliphatics >EC16-EC35	0.1	6	8	275	0	92000	337.203	POTENTIALLY SUITABLE FOR USE		97	275	8	16	16	265
Aliphatics >EC35-EC44	0.1	6	8.4	59	0	92000	58.85867	POTENTIALLY SUITABLE FOR USE		20	59	8.4	8.4	8.4	33
Aromatics EC5-EC7	0.01	6	0.001	0.001	0	150	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC7-EC8	0.01	6	0.001	0.001	0	300	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC8-EC10	0.01	6	0.001	0.001	0	84	0.001			0.001	0.001	0.001	0.001	0.001	0.001
Aromatics >EC10-EC12	0.01	6	1	45	0	180	40.30667	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	45
Aromatics >EC12-EC16	0.1	6	2	61	0	330	55.81526	POTENTIALLY SUITABLE FOR USE		7.6	2	2	13	2	61
Aromatics >EC16-EC21	0.1	6	10	450	0	550	406.7659	POTENTIALLY SUITABLE FOR USE		32	16	10	62	10	450
Aromatics >EC21-EC35	0.1	6	10	1100	0	1500	994.5403	POTENTIALLY SUITABLE FOR USE		120	58	10	120	10	1100
Aromatics >EC35-EC44	0.1	6	8.4	43	0	1500	51.40758	POTENTIALLY SUITABLE FOR USE		43	30	8.4	19	8.4	39

ADDITIVITY CHECK		HAZARD QUOTIENTS FOR EACH FRACTION					
	Aliphatics EC5-EC6	0.000	0.000	0.000	0.000	0.000	0.000
	Aliphatics >EC6-EC8	0.000	0.000	0.000	0.000	0.000	0.000
	Aliphatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000	0.000
Considered additive	Aliphatics >EC10-EC12	0.008	0.008	0.008	0.008	0.008	0.092
	Aliphatics >EC12-EC16	0.112	0.034	0.034	0.034	0.034	0.542
	Aliphatics >EC16-EC35	0.001	0.003	0.000	0.000	0.000	0.003
	Aliphatics >EC35-EC44	0.000	0.001	0.000	0.000	0.000	0.000
	Aromatics EC5-EC7	0.000	0.000	0.000	0.000	0.000	0.000
	Aromatics >EC7-EC8	0.000	0.000	0.000	0.000	0.000	0.000
	Aromatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000	0.000
Considered additive	Aromatics >EC10-EC12	0.006	0.006	0.006	0.006	0.006	0.250
	Aromatics >EC12-EC16	0.023	0.006	0.006	0.039	0.006	0.185
	Aromatics >EC16-EC21	0.058	0.029	0.018	0.113	0.018	0.818
Considered additive	Aromatics >EC21-EC35	0.080	0.039	0.007	0.080	0.007	0.733
	Aromatics >EC35-EC44	0.029	0.020	0.006	0.013	0.006	0.026
	Hazard Index for ali>C8-C16	**0.120**	**0.042**	**0.042**	**0.042**	**0.042**	**0.634**
	Hazard Index for aro>C8-C16	**0.029**	**0.012**	**0.012**	**0.045**	**0.012**	**0.435**
	Hazard Index for aro>C16-C35	**0.138**	**0.068**	**0.025**	**0.193**	**0.025**	**1.552**

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-152220
Lab. report no(s).: Multiple

Legend: Hazard Index table - HI or HQ greater than 1 highlighted with yellow shading.
Main table values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Main table alues in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	F	F	F	F	F	F								
								Location & Depth	TP02	TP09	TP10	TP18	WS10	WS11								
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**US_{95}**	**Result of Significance Test**	**0.10**	**2.10**	**0.80**	**0.60**	**1.30**	**0.30**								
Arsenic	1	6	24	85	2	37	82.14918	FURTHER ASSESSMENT REQUIRED	36	85	27	47	34	24								
Beryllium	0.06	6	1.3	3	0	73	3.412091	POTENTIALLY SUITABLE FOR USE	2.9	2.3	1.5	1.7	1.3	3								
Boron	0.2	6	0.3	3.8	0	300	3.916148	POTENTIALLY SUITABLE FOR USE	2.3	3.8	1.4	0.4	1.3	0.3								
Cadmium	0.2	6	0.2	0.4	0	14	0.378667	POTENTIALLY SUITABLE FOR USE	0.2	0.2	0.4	0.2	0.2	0.2								
Chromium (III)	1	6	20	31	0	890	34.51971	POTENTIALLY SUITABLE FOR USE	30	30	25	23	20	31								
Chromium (VI)	1.2	6	1.2	1.2	0	6.1	1.2		1.2	1.2	1.2	1.2	1.2	1.2								
Copper	1	6	64	110	0	2500	115.0123	POTENTIALLY SUITABLE FOR USE	100	110	69	64	76	75								
Lead	2	6	12	210	1	200	197.2984	POTENTIALLY SUITABLE FOR USE	76	210	42	28	12	35								
Mercury, inorganic	0.3	6	0.3	0.5	0	170	0.478667	POTENTIALLY SUITABLE FOR USE	0.3	0.5	0.3	0.3	0.3	0.3								
Nickel	2	6	34	52	0	130	52.59657	POTENTIALLY SUITABLE FOR USE	41	44	36	35	34	52								
Selenium	1	6	1	3.4	0	360	3.144	POTENTIALLY SUITABLE FOR USE	1	3.4	1	1	1	1								
Vanadium	1	6	36	62	0	410	67.93011	POTENTIALLY SUITABLE FOR USE	42	60	47	52	36	62								
Zinc	2	6	39	110	0	3900	123.4048	POTENTIALLY SUITABLE FOR USE	110	99	81	50	39	65								
Cyanide (free)	1	6	1	1	0	790	1		1	1	1	1	1	1								
Phenol (total)	2	6	1	1	0	560	1		1	1	1	1	1	1								
Acenaphthene	0.05	6	0.05	0.44	0	520	0.520102	POTENTIALLY SUITABLE FOR USE	0.05	0.44	0.41	0.05	0.05	0.05								
Acenaphthylene	0.05	6	0.05	0.05	0	430	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05								
Anthracene	0.05	6	0.05	1.5	0	5500	1.380884	POTENTIALLY SUITABLE FOR USE	0.31	1.5	0.28	0.05	0.05	0.24								
Benz(a)anthracene	0.05	6	0.05	6.8	1	6.7	6.535263	POTENTIALLY SUITABLE FOR USE	2.7	6.8	0.63	0.05	0.05	1.4								
Benzo(a)pyrene	0.05	6	0.05	5.4	2	1.5	5.138542	FURTHER ASSESSMENT REQUIRED	1.8	5.4	0.48	0.05	0.05	1.4								
Benzo(b)fluoranthene	0.05	6	0.05	4.9	0	9.4	4.95699	POTENTIALLY SUITABLE FOR USE	2.5	4.9	0.37	0.05	0.05	1.6								
Benzo(ghi)perylene	0.05	6	0.05	2.7	0	69	2.635509	POTENTIALLY SUITABLE FOR USE	1.1	2.7	0.29	0.05	0.05	0.86								
Benzo(k)fluoranthene	0.05	6	0.05	4.9	0	14	4.591513	POTENTIALLY SUITABLE FOR USE	1.5	4.9	0.37	0.05	0.05	0.9								
Chrysene	0.05	6	0.05	6.1	0	11	5.975189	POTENTIALLY SUITABLE FOR USE	2.8	6.1	0.66	0.05	0.05	1.3								
Dibenz(a,h)anthracene	0.05	6	0.05	0.59	0	1.3	0.583357	POTENTIALLY SUITABLE FOR USE	0.31	0.59	0.05	0.05	0.05	0.05								
Fluoranthene	0.05	6	0.05	15	0	560	14.49843	POTENTIALLY SUITABLE FOR USE	6.4	15	1.4	0.05	0.05	2.3								
Fluorene	0.05	6	0.05	0.42	0	410	0.46665	POTENTIALLY SUITABLE FOR USE	0.05	0.42	0.34	0.05	0.05	0.05								
Indeno(1,2,3,cd)pyrene	0.05	6	0.05	2.6	0	5.5	2.536718	POTENTIALLY SUITABLE FOR USE	1.1	2.6	0.25	0.05	0.05	0.75								
Naphthalene	0.05	6	0.05	1.1	0	5.2	1.048941	POTENTIALLY SUITABLE FOR USE	0.05	0.44	1.1	0.05	0.05	0.05								
Phenanthrene	0.05	6	0.05	6.8	0	220	6.293587	POTENTIALLY SUITABLE FOR USE	1.3	6.8	1.5	0.05	0.05	1								
Pyrene	0.05	6	0.05	14	0	1200	13.70521	POTENTIALLY SUITABLE FOR USE	6.5	14	1.3	0.05	0.05	2.3								
Asbestos identified	Y/N								N	N	N	N	Y	N								
FOC (dimensionless)	0.0255	**(mean)**							0.021	0.034	0.017	0.018	0.041	0.022								
SOM (calculated)	4.40%	**(mean)**							3.62%	5.86%	2.93%	3.10%	7.07%	3.79%								
pH (su)	8.3	**(mean)**							9	7.5	8.8	8.2	7.9	8.6								

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Values in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

All values in mg/kg unless otherwise stated								Soil Type	OP	OP	OM	LF	LF	LF	TS	LF	RWN	RWN	BP	SB	OP	SB	OM
								Location & Depth	CP06	TP11	TP16	TP21	TP21	TP22	TP23	TT01	TT02	WS03	WS03	WS06	WS07	WS12	WS14
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**			**1.30**	**1.60**	**2.00**	**2.10**	**1.40**	**1.90**	**0.20**	**0.60**	**1.00**	**1.40**	**0.20**	**0.20**	**1.70**	**0.30**	**1.45**
Arsenic	1	15	3.7	58	6	37			11	50	30	47	55	33	35	44	10	6.4	20	3.7	41	14	58
Beryllium	0.06	15	0.63	2.4	0	73			0.76	2.4	1.4	1.7	1.9	1.4	1.1	1.8	1.8	0.63	1.6	0.7	2.2	1	1.9
Boron	0.2	15	0.2	7.6	0	300			0.6	6.5	2.4	1.8	2.1	1.1	0.3	4	1.8	0.3	0.6	0.2	1.5	0.9	7.6
Cadmium	0.2	15	0.2	0.7	0	14			0.2	0.2	0.5	0.2	0.2	0.4	0.6	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.6
Chromium (III)	1	15	15	34	0	890			19	32	17	23	29	21	30	34	34	15	24	24	32	21	34
Chromium (VI)	1.2	15	1.2	1.2	0	6.1			1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	15	16	150	0	2500			25	150	61	89	67	49	60	79	48	18	49	16	73	44	100
Lead	2	15	9.3	210	1	200			14	61	130	45	42	53	140	63	26	9.3	49	11	60	20	210
Mercury, inorganic	0.3	15	0.3	0.9	0	170			0.3	0.3	0.4	0.3	0.3	0.3	0.8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.9
Nickel	2	15	19	130	1	130			24	46	30	36	46	33	19	43	45	37	130	29	47	28	30
Selenium	1	15	1	3.4	0	360			1	1	1	1	3.4	2.6	1	1	2.7	1	1	1	1	1	3
Vanadium	1	15	20	780	1	410			22	71	33	48	63	43	32	61	20	180	780	20	47	32	49
Zinc	2	15	36	140	0	3900			50	85	100	74	75	89	120	110	130	36	120	65	81	60	140
Cyanide (free)	1	15	1	1	0	790			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	2	15	1	2.3	0	560			1	1	1	1	1	2.3	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	15	0.05	1.1	0	520			0.05	0.05	0.05	0.05	0.05	1.1	0.05	0.05	0.05	0.05	0.21	0.05	0.05	0.05	0.34
Acenaphthylene	0.05	15	0.05	0.49	0	430			0.05	0.05	0.05	0.05	0.05	0.49	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	15	0.05	3.5	0	5500			0.05	0.28	0.37	0.11	0.46	3.5	0.05	0.14	0.13	0.05	0.66	0.05	0.3	0.05	0.53
Benz(a)anthracene	0.05	15	0.05	13	1	6.7			0.05	1.2	1.3	0.37	1.8	13	0.47	0.46	0.43	0.05	2.7	0.05	0.26	0.05	2.6
Benzo(a)pyrene	0.05	15	0.05	10	3	1.5			0.05	0.8	1.1	0.31	1.4	10	0.42	0.3	0.05	0.05	2.7	0.05	0.05	0.05	2.3
Benzo(b)fluoranthene	0.05	15	0.05	7.7	0	9.4			0.05	0.7	1.4	0.24	1	7.7	0.5	0.17	0.3	0.05	3.5	0.05	0.05	0.05	3.1
Benzo(ghi)perylene	0.05	15	0.05	5	0	69			0.05	0.47	0.67	0.05	0.79	5	0.32	0.05	0.05	0.05	1.3	0.05	0.05	0.05	1.1
Benzo(k)fluoranthene	0.05	15	0.05	7.7	0	14			0.05	0.7	0.54	0.24	1	7.7	0.3	0.17	0.16	0.05	1.1	0.05	0.05	0.05	0.96
Chrysene	0.05	15	0.05	10	0	11			0.05	0.9	1.2	0.37	1.6	10	0.6	0.43	0.29	0.05	2.8	0.05	0.3	0.05	2.4
Dibenz(a,h)anthracene	0.05	15	0.05	1.5	1	1.3			0.05	0.05	0.05	0.05	0.05	1.5	0.05	0.05	0.05	0.05	0.25	0.05	0.05	0.05	0.05
Fluoranthene	0.05	15	0.05	25	0	560			0.05	2.4	2.6	0.71	3.6	25	0.95	1.1	0.49	0.05	7.4	0.05	0.58	0.42	5.2
Fluorene	0.05	15	0.05	1.6	0	410			0.05	0.05	0.05	0.05	0.05	1.6	0.05	0.05	0.05	0.05	0.22	0.05	0.05	0.05	0.25
Indeno(1,2,3,cd)pyrene	0.05	15	0.05	4.5	0	5.5			0.05	0.45	0.61	0.05	0.72	4.5	0.26	0.05	0.05	0.05	1.1	0.05	0.05	0.05	0.92
Naphthalene	0.05	15	0.05	1.3	0	5.2			0.05	0.05	0.05	0.29	0.05	0.71	0.05	0.05	1.3	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	15	0.05	15	0	220			0.05	1.3	1.4	0.51	1.8	15	0.56	0.5	1.2	0.05	3.1	0.05	0.44	0.05	3.2
Pyrene	0.05	15	0.05	23	0	1200			0.05	2.2	2.5	0.67	3.4	23	0.98	0.96	0.63	0.05	6.1	0.05	0.56	0.45	4.8
Asbestos identified	Y/N								N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
FOC (dimensionless)	0.024093	**(mean)**							0.0074	0.018	0.044	0.023	0.018	0.018	0.051	0.013	0.041	0.001	0.014	0.001	0.022	0.01	0.08
SOM (calculated)	4.15%	**(mean)**							1.28%	3.10%	7.59%	3.97%	3.10%	3.10%	8.79%	2.24%	7.07%	0.17%	2.41%	0.17%	3.79%	1.72%	13.79%
pH (su)	8.2	**(mean)**							9	8.4	7.3	8.7	9.3	8.8	5.7	9.3	8.4	6	9	8.7	8.4	8.4	7

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-15220
Lab. report no(s).: Multiple

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Values in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

						Soil Type	F	LF	F	SB	OP							
						All values in mg/kg unless otherwise stated Location & Depth	TP10	TT01	WS11	WS12	WS07							
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**0.80**	**0.60**	**0.30**	**0.30**	**1.70**							
Aliphatics EC5-EC6	0.01	5	0.001	0.001	0	78	0.001	0.001	0.001	0.001	0.001							
Aliphatics >EC6-EC8	0.01	5	0.001	0.001	0	230	0.001	0.001	0.001	0.001	0.001							
Aliphatics >EC8-EC10	0.01	5	0.001	0.001	0	65	0.001	0.001	0.001	0.001	0.001							
Aliphatics >EC10-EC12	0.01	5	1	1	0	120	1	1	1	1	1							
Aliphatics >EC12-EC16	0.1	5	2	8.2	0	59	8.2	2	2	3.8	2							
Aliphatics >EC16-EC35	0.1	5	16	503	0	92000	503	218	16	300	16							
Aliphatics >EC35-EC44	0.1	5	8.4	75	0	92000	75	21	8.4	51	8.4							
Aromatics EC5-EC7	0.01	5	0.001	0.001	0	150	0.001	0.001	0.001	0.001	0.001							
Aromatics >EC7-EC8	0.01	5	0.001	0.001	0	300	0.001	0.001	0.001	0.001	0.001							
Aromatics >EC8-EC10	0.01	5	0.001	0.001	0	84	0.001	0.001	0.001	0.001	0.001							
Aromatics >EC10-EC12	0.01	5	1	1	0	180	1	1	1	1	1							
Aromatics >EC12-EC16	0.1	5	2	4.9	0	330	4.9	2	2	4.9	2							
Aromatics >EC16-EC21	0.1	5	10	26	0	550	26	10	14	13	10							
Aromatics >EC21-EC35	0.1	5	17	160	0	1500	160	36	27	110	17							
Aromatics >EC35-EC44	0.1	5	8.4	41	0	1500	36	8.4	8.4	41	8.4							
						ADDITIVITY CHECK	**HAZARD QUOTIENTS FOR EACH FRACTION**											
						Aliphatics EC5-EC6	0.000	0.000	0.000	0.000	0.000							
						Aliphatics >EC6-EC8	0.000	0.000	0.000	0.000	0.000							
					Considered additive	Aliphatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000							
					Considered additive	Aliphatics >EC10-EC12	0.008	0.008	0.008	0.008	0.008							
					Considered additive	Aliphatics >EC12-EC16	0.139	0.034	0.034	0.064	0.034							
						Aliphatics >EC16-EC35	0.005	0.002	0.000	0.003	0.000							
						Aliphatics >EC35-EC44	0.001	0.000	0.000	0.001	0.000							
						Aromatics EC5-EC7	0.000	0.000	0.000	0.000	0.000							
						Aromatics >EC7-EC8	0.000	0.000	0.000	0.000	0.000							
					Considered additive	Aromatics >EC8-EC10	0.000	0.000	0.000	0.000	0.000							
					Considered additive	Aromatics >EC10-EC12	0.006	0.006	0.006	0.006	0.006							
					Considered additive	Aromatics >EC12-EC16	0.015	0.006	0.006	0.015	0.006							
						Aromatics >EC16-EC21	0.047	0.018	0.025	0.024	0.018							
					Considered additive	Aromatics >EC21-EC35	0.107	0.024	0.018	0.073	0.011							
						Aromatics >EC35-EC44	0.024	0.006	0.006	0.027	0.006							
						Hazard Index for ali>C8-C16	**0.147**	**0.042**	**0.042**	**0.073**	**0.042**							
						Hazard Index for aro>C8-C16	**0.020**	**0.012**	**0.012**	**0.020**	**0.012**							
						Hazard Index for aro>C16-C35	**0.154**	**0.042**	**0.043**	**0.097**	**0.030**							

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-152220
Lab. report no(s).: Multiple

Legend:
Hazard Index table - HI or HQ greater than 1 highlighted with yellow shading.
Main table values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Main table alues in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health

Hydrock

						Soil Type	G	G											
						All values in mg/kg unless otherwise stated Location & Depth	WS01	WS01											
Chemical of Potential Concern	**Lab. RL**	**No. Samples**	**Min. Value**	**Max. Value**	**No. Samples > or = GAC**	**GAC**	**1.30**	**1.40**											
Aliphatics EC5-EC6	0.01	2	0.001	0.001	0	78	0.001	0.001											
Aliphatics >EC6-EC8	0.01	2	0.001	0.001	0	230	0.001	0.001											
Aliphatics >EC8-EC10	0.01	2	2.7	6.3	0	65	2.7	6.3											
Aliphatics >EC10-EC12	0.01	2	62	190	1	120	190	62											
Aliphatics >EC12-EC16	0.1	2	170	450	2	59	450	170											
Aliphatics >EC16-EC35	0.1	2	4590	5110	0	92000	5110	4590											
Aliphatics >EC35-EC44	0.1	2	750	810	0	92000	750	810											
Aromatics EC5-EC7	0.01	2	0.001	0.001	0	150	0.001	0.001											
Aromatics >EC7-EC8	0.01	2	0.001	0.001	0	300	0.001	0.001											
Aromatics >EC8-EC10	0.01	2	0.001	0.001	0	84	0.001	0.001											
Aromatics >EC10-EC12	0.01	2	1	60	0	180	60	1											
Aromatics >EC12-EC16	0.1	2	15	200	0	330	200	15											
Aromatics >EC16-EC21	0.1	2	240	550	1	550	550	240											
Aromatics >EC21-EC35	0.1	2	1600	5900	2	1500	5900	1600											
Aromatics >EC35-EC44	0.1	2	82	680	0	1500	680	82											
						ADDITIVITY CHECK	**HAZARD QUOTIENTS FOR EACH FRACTION**												
						Aliphatics EC5-EC6	0.000	0.000											
						Aliphatics >EC6-EC8	0.000	0.000											
						Aliphatics >EC8-EC10	0.042	0.097											
					Considered additive	Aliphatics >EC10-EC12	1.583	0.517											
						Aliphatics >EC12-EC16	7.627	2.881											
						Aliphatics >EC16-EC35	0.056	0.050											
						Aliphatics >EC35-EC44	0.008	0.009											
						Aromatics EC5-EC7	0.000	0.000											
						Aromatics >EC7-EC8	0.000	0.000											
						Aromatics >EC8-EC10	0.000	0.000											
					Considered additive	Aromatics >EC10-EC12	0.333	0.006											
						Aromatics >EC12-EC16	0.606	0.045											
						Aromatics >EC16-EC21	1.000	0.436											
					Considered additive	Aromatics >EC21-EC35	3.933	1.067											
						Aromatics >EC35-EC44	0.453	0.055											
						Hazard Index for ali>C8-C16	**9.252**	**3.495**											
						Hazard Index for aro>C8-C16	**0.939**	**0.051**											
						Hazard Index for aro>C16-C35	**4.933**	**1.503**											

Risk parameter: Human health - residential with plant uptake (2.5%SOM)
Data set: Made Ground
Client: Harworth Group
Site: Stopes Road
Job no.: C-152220
Lab. report no(s).: Multiple

Hazard Index table - HI or HQ greater than 1 highlighted with yellow shading.

Legend: Main table values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.
Main table alues in red are equal to, or greater than, the generic assessment criterion (GAC).
MG denotes Made Ground
NAT denotes natural ground

Remedial Targets Methodology Data Table

Hydrock

Hydrock Scenario: Scenario D - DWS & EQS (inland)
RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater and surface water
Secondary receptor(s): Human health (abstraction)
Data set: Groundwater
Client: Harworth Estates Property Group Ltd
Site: Stopes Road, Bolton
Job no: C-15220
Test Certificates(s): 20-30818
Dataset ALL ZONES

PNEC calculated (inland EQS)

2013/39/EU Annex I
P = priority substance
PH = priority hazardous substances.
WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)
H Hazardous substance
NP Non-hazardous pollutant
(blank) Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value		DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1133	Hardness as mg/l $CaCO_3$			-	-	-	10	-	-	-	-	-					Representative hardness of receiving surface water environment used in some inland EQS
7440-22-4	Silver (Ag) (dissolved)			14	0	0.05	<0.05	<0.05	<0.05	<0.05	n/a	0.05		0		0	
7429-90-5	Aluminium (Al) (dissolved)			14	14	1	4.4	917	758.4	917	200	n/a	10		10		
7440-38-2	Arsenic (As) (dissolved)	SP	**H**	14	11	0.15	<0.15	18	10.018	18	10	50	1	0	1	0	
7440-42-8	Boron (B) (dissolved)		NP	14	14	10	130	850	726.5	850	1000	2000	0	0	0	0	
7440-39-3	Barium (Ba) (dissolved)			14	14	0.06	27	200	187	200	1300	n/a	0		0		
7440-43-9	Cadmium (Cd) (dissolved)	**PH**	NP	14	14	0.02	0.03	0.19	0.177	0.19	5	0.08	0	6	0	6	EQS (inland) dependent on hardness of receiving surface water environment
7440-48-4	Cobalt (Co) (dissolved)		NP	14	14	0.2	0.5	33	29.1	33	n/a	3		6		6	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	**H**	14	0	5	<5	<5	<5	<5	n/a	3.4		14		0	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP		14	14	1	2	8.1	6.28	8.1	n/a	4.7		2		2	
7440-47-3	Chromium (Cr) (total) (dissolved)			14	14	0.2	2	8.1	6.28	8.1	50	n/a	0		0		
7440-50-8	Copper (Cu) (dissolved)	SP	NP	14	14	0.5	1.1	19	17.7	19	2000	1	0	14	0	14	Bioavailable EQS (inland)
7439-89-6	Iron (Fe) (dissolved)	SP		14	14	4	24	9500	5535	9500	200	1000	8	2	8	2	
7439-97-6	Mercury (Hg) (dissolved)	**PH**	**H**	14	1	0.05	<0.05	0.43	0.183	0.43	1	0.07	0	1	0	1	
P1286	Manganese (Mn) (dissolved)	SP		14	14	0.05	3.2	10000	9415	10000	50	123	11	10	11	10	Bioavailable EQS (inland)
7440-23-5	Sodium (Na) (dissolved)			14	14	10	32000	180000	173500	180000	200000	n/a	0		0		
7440-02-0	Nickel (Ni) (dissolved)	***P***	NP	14	14	0.5	4.4	19	17.7	19	20	4	0	14	0	14	Bioavailable EQS (inland)
7439-92-1	Lead (Pb) (dissolved)	***P***	**H**	14	11	0.2	<0.2	29	20.55	29	10	1.2	2	7	2	7	Bioavailable EQS (inland)
7440-36-0	Antimony (Sb) (dissolved)		NP	14	13	0.4	<0.4	2.8	2.28	2.8	5	n/a	0		0		
7782-49-2	Selenium (Se) (dissolved)		NP	14	12	0.6	<0.6	5	4.805	5	10	n/a	0		0		
7440-31-5	Tin (Sn) (dissolved)			14	13	0.2	<0.2	89	50	89	n/a	25		2		2	
7440-62-2	Vanadium (V) (dissolved)			14	10	0.2	<0.2	14	6.59	14	n/a	20		0		0	EQS (inland) dependent on hardness of receiving surface water environment
7440-66-6	Zinc (Zn) (dissolved)	SP	NP	14	14	0.5	1	42	32.9	42	n/a	12.3		4		4	Bioavailable EQS (inland) + ambient background concentration (ABC)
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP	14	0	1	<1	<1	<1	<1	n/a	1		0		0	
57-12-5	Cyanide (total)			14	2	1	<1	2	1.805	2	50	n/a	0		0		
P1140	Ammonium (NH_4^+)		NP	14	10	15	<15	17000	7965	17000	500	n/a	7		7		
P1238	Ammnoniacal Nitrogen (as N)		NP	14	10	15	<15	13000	6110	13000	n/a	300		7		7	
P1720	Ammonia (unionised) (NH_3 as N) {free ammonia}	SP	NP	14	10	15	<15	16000	7485	16000	n/a	n/a					
15541-45-4	Bromate (BrO_3)			12	0	2	0.002	<2	<2	<2	10	n/a	0		0		
16887-00-6	Chloride (Cl^-)			14	7	150	9.9	80000	68950	80000	250000	250000	0	0	0	0	
16984-48-8	Fluoride (F^-)			14	14	50	120	1200	706	1200	1500	1000	0	1	0	1	EQS (inland) dependent on hardness of receiving surface water environment
P1348	Nitrate (NO_3^-)			14	14	50	200	5690	4676	5690	50000	n/a	0		0		
P1349	Nitrite (NO_2^-)			14	14	5	8.9	1500	642	1500	500	n/a	1		1		
14808-79-8	Sulfate (SO_4^{2-})			14	14	45	52300	1290000	858400	1290000	250000	400000	8	4	8	4	
P1134	pH (min.) (su)			14	14	0	6.4	8.1	7.71	8.1	6.5	6	1	0	1	0	
P1134	pH (max.) (su)			14	14	0	6.4	8.1	7.71	8.1	9.5	9	0	0	0	0	
P1287	Electrical conductivity (µS/cm)			14	14	10	460	2000	1480	2000	2500	n/a	0		0		
120-12-7	Anthracene	***PH***	**H**	14	0	0.01	<0.01	<0.01	<0.01	<0.01	n/a	0.1		0		0	
50-32-8	Benzo(a)pyrene	***PH***	**H**	14	0	0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.00017	0	14	0	0	Benzo(a)pyrene EQS used as marker substance for the group of benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene & indeno (1,2,3-cd)pyrene
206-44-0	Fluoranthene	***P***	**H**	14	0	0.01	<0.01	<0.01	<0.01	<0.01	n/a	0.0063		14		0	
91-20-3	Naphthalene	***P***	NP	14	0	0.01	<0.01	<0.01	<0.01	<0.01	n/a	2		0		0	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	***P***	**H**	14	7	0.022	<0.022	0.04	0.04	0.04	0.1	n/a	0		0		
P1877	Phenol	SP	NP	14	7	1	<1	4.9	4.9	4.9	n/a	7.7		0		0	
P1407	Ali EC5-EC6			8	0	1	<1	<1	<1	<1	15000	10	0	0	0	0	n-hexane fall within this fraction

Remedial Targets Methodology Data Table

Hydrock

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples
Water body receptor(s): Groundwater and surface water
Secondary receptor(s): Human health (abstraction)
Data set: Groundwater
Client: Harworth Estates Property Group Ltd
Site: Stopes Road, Bolton
Job no: C-15220
Test Certificates(s): 20-30818
Dataset ALL ZONES

	PNEC calculated (inland EQS)

P = priority substance
PH = priority hazardous substances.
WFD Designation (2015 Directions)
OP = Other substance identical to previous legislation
SP = Specific Pollutant

JAGDAG Hazardous Substances Determination (UK)

H	Hazardous substance
NP	Non-hazardous pollutant
(blank)	Not included in assessment

CAS / AGS Number	Chemicals of Potential Concern (concentrations in µg/l)	WFD Designation	Hazardous Substance Status	Summary of Sample Data						Value Being Compared to Target = Maximum Value	Water Quality Target (Exceeded if Red		No. Samples Exceeding Water Quality Target		No. Samples above LoD Exceeding Water		Notes
				No. of Samples	No. of Samples > LoD	Limit of Detection	Minimum Value	Maximum Value	95-%ile Value		DWS	Inland Waters EQS	DWS	Inland Waters EQS	DWS	Inland Waters EQS	EQS compared to dissolved metals as an initial screen, with no adjustment for bioavailability or ABC.
P1408	Ali >EC6-EC8			8	0	1	<1	<1	<1	<1	15000	10	0	0	0	0	n-heptane falls within this fraction
P1409	Ali >EC8-EC10			8	0	1	<1	<1	<1	<1	300	10	0	0	0	0	n-octane and n-nonane fall within this fraction
P1410	Ali >EC10-EC12			8	0	10	<10	<10	<10	<10	300	10	0	0	0	0	
P1411	Ali >EC12-EC16			8	0	10	<10	<10	<10	<10	300	10	0	0	0	0	
P1938	Ali >EC16-EC35			8	0	10	<10	<10	<10	<10	n/a	10		0		0	
P1415	Ali >EC35-EC44			8	0	10	<10	<10	<10	<10	n/a	10		0		0	
P1441	Aro EC5-EC7			8	0	1	<1	<1	<1	<1	1	10	0	0	0	0	Benzene wholly representative of this fraction
P1355	Aro >EC7-EC8			8	0	1	<1	<1	<1	<1	700	10	0	0	0	0	Toluene wholly representative of this fraction
P1356	Aro >EC8-EC10			8	0	1	<1	<1	<1	<1	300	10	0	0	0	0	Ethylbenzene / xylene / trimethylbenzene representative of this range
P1357	Aro >EC10-EC12			8	0	10	<10	<10	<10	<10	90	10	0	0	0	0	Naphthalene often forms a reasonable percentage of this fraction
P1358	Aro > EC12-EC16			8	0	10	<10	<10	<10	<10	90	10	0	0	0	0	2-methylnaphthalene, acenpthylene, acenapthene falls within this fraction
P1359	Aro >EC16-EC21			8	0	10	<10	<10	<10	<10	90	10	0	0	0	0	fluorene, anthracene, phenanthrene, pyrene falls within this range
P1360	Aro >EC21-EC35			8	0	10	<10	<10	<10	<10	90	10	0	0	0	0	Benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(cd)pyrene fall within this fraction
P1362	Aro >EC35-EC44			8	0	10	<10	<10	<10	<10	n/a	10		0		0	
71-43-2	Benzene	***P***	**H**	8	0	1	<1	<1	<1	<1	1	10	0	0	0	0	
108-88-3	Toluene	SP	**H**	8	0	1	<1	<1	<1	<1	700	74	0	0	0	0	
100-41-4	Ethylbenzene		**H**	8	0	1	<1	<1	<1	<1	300	20	0	0	0	0	Proposed EQS for Ethylbenzene in Water, R&D Technical Report P2-115/TR4. EA 2001
1330-20-7	Xylene		**H**	8	0	1	<1	<1	<1	<1	500	30	0	0	0	0	
1634-04-04	Methyl tertiary butyl ether (MTBE)		NP	8	0	1	<1	<1	<1	<1	15	n/a	0		0		Non health based value - WHO odour threshold

Remedial Targets Methodology Data Table

Hydrock

Hydrock Scenario: Scenario D - DWS & EQS (inland)

RTM Level: RTM Level 2 - Groundwater Beneath Source Assessment - groundwater samples

Water body receptor(s): Groundwater and surface water
Secondary receptor(s): Human health (abstraction)
Data set: Groundwater
Client: Harworth Estates Property Group Ltd
Site: Stopes Road, Bolton
Job no: C-15220
Test Certificates(s): 20-30818
Dataset ALL ZONES

PNEC calculated (inland EQS)

123* Exceeds solubility value
<1 Grey text and "<" sign if value <= LoD
999 Red text if value > DWS
Red fill if value > Inland Waters EQS

Surface Water Representative Hardness as mg/l $CaCO_3$ 10

CAS / AGS Number	Chemical of Potential Concern (µg/l)	WFD Designation	Hazardous Substance Status	Solubility Limit	No. of samples	Limit of Detection	DWS	Inland Waters EQS	CP03	CP09	WS02	CP07	WS11	RO04	RO10	CP03	CP09	RO10	WS01	WS02	WS05	WS11
Strata / Zone									GT	GT	GT	MG	MG	PCM	PCM	GT	GT	PCM	MG	GT	GT	MG
Date sampled:									14/09/2020	14/09/2020	14/09/2020	14/09/2020	14/09/2020	14/09/2020	14/09/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020
7440-22-4	Silver (Ag) (dissolved)				14	0.05	n/a	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
7429-90-5	Aluminium (Al) (dissolved)				14	1	200	n/a	5.1	534	917	402	218	673	4.4	64	220	440	430	120	640	580	
7440-38-2	Arsenic (As) (dissolved)	SP	H		14	0.15	10	50	<0.15	4.28	0.77	18	0.98	2.07	2.09	<0.15	0.82	5.72	2.67	<0.15	1.27	1.41	
7440-42-8	Boron (B) (dissolved)		NP		14	10	1000	2000	650	310	430	850	270	660	200	470	170	130	230	260	140	200	
7440-39-3	Barium (Ba) (dissolved)				14	0.06	1300	n/a	35	180	60	110	85	200	43	34	150	27	49	51	140	110	
7440-43-9	Cadmium (Cd) (dissolved)	PH	NP		14	0.02	5	0.08	0.03	0.06	0.07	0.1	0.03	0.17	0.09	0.03	0.07	0.04	0.19	0.08	0.11	0.1	
7440-48-4	Cobalt (Co) (dissolved)		NP		14	0.2	n/a	3	0.7	27	1.4	1.3	1.7	7.4	3	0.5	33	16	0.9	0.8	3.2	4.5	
18540-29-9	Chromium (VI) (Cr) (dissolved)	SP	H		14	5	n/a	3.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
16065-83-1	Chromium (III) (Cr) (dissolved)	SP			14	1	n/a	4.7	3.4	8.1	4.6	2.7	4.2	5.3	4.2	2	3.9	4.1	3.4	3.1	2.2	2.1	
7440-47-3	Chromium (Cr) (total) (dissolved)				14	0.2	50	n/a	3.4	8.1	4.6	2.7	4.2	5.3	4.2	2	3.9	4.1	3.4	3.1	2.2	2.1	
7440-50-8	Copper (Cu) (dissolved)	SP	NP		14	0.5	2000	1	1.1	7.7	3.7	2.3	4.6	7.9	3.3	5.3	9.7	12	4.6	19	17	3.6	
7439-89-6	Iron (Fe) (dissolved)	SP			14	4	200	1000	53	9500	84	220	67	210	24	37	3400	960	660	450	380	48	
7439-97-6	Mercury (Hg) (dissolved)	PH	H		14	0.05	1	0.07	<0.05	<0.05	<0.05	0.43	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
P1286	Manganese (Mn) (dissolved)	SP			14	0.05	50	123	3.2	9100	340	60	430	550	1100	28	10000	4900	37	150	330	520	
7440-23-5	Sodium (Na) (dissolved)				14	10	200000	n/a	35000	180000	76000	130000	64000	170000	150000	32000	110000	150000	49000	40000	35000	51000	
7440-02-0	Nickel (Ni) (dissolved)	P	NP		14	0.5	20	4	6.5	16	5.6	6.7	4.9	17	11	5.7	19	16	5.8	4.4	6.1	8.5	
7439-92-1	Lead (Pb) (dissolved)	P	H		14	0.2	10	1.2	<0.2	0.3	1.3	3.5	0.8	0.4	<0.2	0.6	2.8	3.1	<0.2	2.7	16	29	
7440-36-0	Antimony (Sb) (dissolved)		NP		14	0.4	5	n/a	1.2	<0.4	0.9	2.8	0.9	1.1	1.1	1	0.8	0.8	2	1.8	1.7	0.9	
7782-49-2	Selenium (Se) (dissolved)		NP		14	0.6	10	n/a	4.3	5	1.5	3.1	<0.6	3.5	4.7	3.8	2.6	2.6	2.7	2.9	0.7	<0.6	
7440-31-5	Tin (Sn) (dissolved)				14	0.2	n/a	25	<0.2	3.5	2.2	1	0.92	1.7	89	3	1	29	1.6	3.2	2.1	0.39	
7440-62-2	Vanadium (V) (dissolved)				14	0.2	n/a	20	<0.2	0.5	1.5	14	0.6	0.9	0.8	<0.2	<0.2	0.8	1.6	<0.2	2.6	1.7	
7440-66-6	Zinc (Zn) (dissolved)	SP	NP		14	0.5	n/a	12.3	1	12	3.1	6.4	6.9	4.3	28	3.6	12	22	15	3.1	8.2	42	
P1095	Cyanide (free) (hydrogen cyanide)	SP	NP		14	1	n/a	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
57-12-5	Cyanide (total)				14	1	50	n/a	1.7	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
P1140	Ammonium (NH_4^+)		NP		14	15	500	n/a	<15	1800	49	17000	630	3100	300	<15	2400	680	<15	<15	170	760	
P1238	Ammnoniacal Nitrogen (as N)		NP		14	15	n/a	300	<15	1400	38	13000	490	2400	230	<15	1900	530	<15	<15	130	590	
P1720	Ammonia (unionised) (NH_3 as N) (free ammonia)	SP	NP		14	15	n/a	n/a	<15	1700	47	16000	600	2900	280	<15	2200	640	<15	<15	160	720	
15541-45-4	Bromate (BrO_3)				12	2	10	n/a	<2	<2	<2	<2	<2	<2	<2	<0.002			<0.002	<0.002	<0.002	<0.002	
16887-00-6	Chloride (Cl^-)				14	150	250000	250000	9000	80000	21000	63000	33000	56000	55000	<10	<85	<130	<9.9	<11	<22	<32	
16984-48-8	Fluoride (F^-)				14	50	1500	1000	280	120	250	1200	310	200	250	280	120	190	230	440	200	300	
P1348	Nitrate (NO_3^-)				14	50	50000	n/a	4130	1080	1330	300	200	640	300	3140	590	490	2700	5690	2060	340	
P1349	Nitrite (NO_2^-)				14	5	500	n/a	89	100	98	92	52	180	130	21	28	24	8.9	22	1500	23	
14808-79-8	Sulfate (SO_4^{2-})				14	45	250000	400000	304000	273000	392000	285000	77600	408000	456000	250000	209000	1290000	626000	185000	52300	63900	
P1134	pH (min.) (su)				14	0	6.5	6	7.2	6.5	7.2	8.1	6.9	7.2	7.3	7.1	6.4	6.8	7.5	7.3	7.2	7	
P1134	pH (max.) (su)				14	0	9.5	9	7.2	6.5	7.2	8.1	6.9	7.2	7.3	7.1	6.4	6.8	7.5	7.3	7.2	7	
P1287	Electrical conductivity (µS/cm)				14	10	2500	n/a	780	1000	1000	1100	570	1200	1200	730	970	2000	1000	780	460	540	
120-12-7	Anthracene	PH	H	56	14	0.01	n/a	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
50-32-8	Benzo(a)pyrene	PH	H	3.8	14	0.01	0.01	0.00017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
206-44-0	Fluoranthene	P	H	230	14	0.01	n/a	0.0063	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
91-20-3	Naphthalene	P	NP	19000	14	0.01	n/a	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
GRP01	PAHs = sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene	P	H		14	0.022	0.1	n/a	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	0.04	0.04	0.04	0.04	0.04	0.04	0.04	
P1877	Phenol	SP	NP	84100000	14	1	n/a	7.7	4.1	4	4.3	4.9	4.9	3.3	3.1	<1	<1	<1	<1	<1	<1	<1	
P1407	Ali EC5-EC6			35900	8	1	15000	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1408	Ali >EC6-EC8			5370	8	1	15000	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1409	Ali >EC8-EC10			427	8	1	300	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1410	Ali >EC10-EC12			33.9	8	10	300	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1411	Ali >EC12-EC16			0.759	8	10	300	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1938	Ali >EC16-EC35			0.00254	8	10	n/a	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1415	Ali >EC35-EC44			0.00254	8	10	n/a	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1441	Aro EC5-EC7			1780000	8	1	1	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1355	Aro >EC7-EC8			590000	8	1	700	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1356	Aro >EC8-EC10			64600	8	1	300	10	<1	<1		<1	<1			<1	<1		<1			<1	
P1357	Aro >EC10-EC12			24500	8	10	90	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1358	Aro > EC12-EC16			5750	8	10	90	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1359	Aro >EC16-EC21			653	8	10	90	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1360	Aro >EC21-EC35			6.61	8	10	90	10	<10	<10		<10	<10			<10	<10		<10			<10	
P1362	Aro >EC35-EC44			6.61	8	10	n/a	10	<10	<10		<10	<10			<10	<10		<10			<10	
71-43-2	Benzene	P	H	1780000	8	1	1	10	<1	<1		<1	<1			<1	<1		<1			<1	
108-88-3	Toluene	SP	H	590000	8	1	700	74	<1	<1		<1	<1			<1	<1		<1			<1	
100-41-4	Ethylbenzene		H	180000	8	1	300	20	<1	<1		<1	<1			<1	<1		<1			<1	
1330-20-7	Xylene		H	173000	8	1	500	30	<1	<1		<1	<1			<1	<1		<1			<1	
1634-04-04	Methyl tertiary butyl ether (MTBE)		NP	48000000	8	1	15	n/a	<1	<1		<1	<1			<1	<1		<1			<1	

Appendix F

Waste Assessment

HazWasteOnline™ Assessment

Waste Classification Report

9X5WQ-BN584-H275Y

Job name

C-15220

Description/Comments

Made Ground Soils

Project

Stopes Road

Site

Bolton

Related Documents

#	Name	Description
None		

Waste Stream Template

Hydrock Standard plus Cresol (ammended Lead)

Classified by

Name:
Sarah Hey
Date:
09 Oct 2020 12:46 GMT
Telephone:
01454 619533

Company:
Hydrock Consultants Ltd

HazWasteOnline™ Training Record:

Course	Date
Hazardous Waste Classification	07 Feb 2018
Advanced Hazardous Waste Classification	08 Feb 2018

Report

Created by: Sarah Hey
Created date: 09 Oct 2020 12:46 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	CP01	0.15	Non Hazardous		3
2	CP04	0.10	Non Hazardous		5
3	CP05	0.15	Non Hazardous		7
4	CP06	1.30	Non Hazardous		9
5	RC02	0.50	Non Hazardous		11
6	RO06	0.30	Non Hazardous		14
7	TP01	0.20	Non Hazardous		17
8	TP02	0.10	Non Hazardous		20
9	TP03	0.40	Non Hazardous		22
10	TP04	0.90	Non Hazardous		25
11	TP09	2.10	Non Hazardous		27
12	TP10	0.80	Non Hazardous		29

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
13	TP11	1.60	Non Hazardous		32
14	TP14	0.80	Non Hazardous		34
15	TP15	0.85	Non Hazardous		36
16	TP16	2.00	Non Hazardous		38
17	TP18	0.60	Non Hazardous		40
18	TP19	0.60	Non Hazardous		42
19	TP20	0.10	Non Hazardous		44
20	TP21	2.10	Non Hazardous		46
21	TP21[2]	1.40	Non Hazardous		48
22	TP22	0.15	Non Hazardous		50
23	TP22[2]	1.90	Non Hazardous		52
24	TP23	0.20	Non Hazardous		54
25	TP28	0.40	Non Hazardous		56
26	TT01	0.60	Non Hazardous		58
27	TT02	1.00	Non Hazardous		61
28	TT03	0.50	Non Hazardous		63
29	WS01	1.30	Hazardous	HP 3(i), HP 7, HP 11	65
30	WS01[2]	0.10	Non Hazardous		68
31	WS03	1.40	Non Hazardous		70
32	WS03[2]	0.20	Non Hazardous		72
33	WS05	0.60	Hazardous	HP 3(i), HP 7, HP 8, HP 11	74
34	WS06	0.20	Non Hazardous		77
35	WS07	1.70	Non Hazardous		79
36	WS09	0.40	Non Hazardous		82
37	WS10	1.30	Non Hazardous		84
38	WS11	0.30	Non Hazardous		86
39	WS12	0.30	Non Hazardous		89
40	WS13	0.70	Non Hazardous		92
41	WS14	1.45	Non Hazardous		94
42	WS01[3]	1.4	Hazardous	HP 3(i), HP 7, HP 11	96

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	98
Appendix B: Rationale for selection of metal species	99
Appendix C: Version	100

Classification of sample: CP01

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

Sample details

Sample Name:	LoW Code:
CP01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
0.15 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		32 mg/kg	1.32	42.25 mg/kg	0.00423 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.35 mg/kg		0.35 mg/kg	0.000035 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.22 mg/kg		0.22 mg/kg	0.000022 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.12 mg/kg		0.12 mg/kg	0.000012 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.2 mg/kg	2.775	3.33 mg/kg	0.000333 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.4 mg/kg	13.43	5.372 mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17 mg/kg	1.462	24.846 mg/kg	0.00248 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.34	mg/kg		0.34	mg/kg	0.000034 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		140	mg/kg	1.126	157.624	mg/kg	0.0158 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
19		fluoranthene		205-912-4	206-44-0		0.8	mg/kg		0.8	mg/kg	0.00008 %		
20		fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	35	mg/kg		35	mg/kg	0.0035 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		61	mg/kg	1.579	96.349	mg/kg	0.00963 %		
26		pH			PH		7.9	pH		7.9	pH	7.9 pH		
27		phenanthrene		201-581-5	85-01-8		0.83	mg/kg		0.83	mg/kg	0.000083 %		
28		phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
29		pyrene		204-927-3	129-00-0		0.75	mg/kg		0.75	mg/kg	0.000075 %		
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		25	mg/kg	1.245	31.118	mg/kg	0.00311 %		
											Total:	0.0406 %		

Key

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

Classification of sample: CP04

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

Sample details

Sample Name:	LoW Code:
CP04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
0.10 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.2 mg/kg	1.32	4.225 mg/kg	0.000423 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.51 mg/kg	2.775	1.415 mg/kg	0.000142 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		16 mg/kg	1.462	23.385 mg/kg	0.00234 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11	mg/kg	1.126	12.385	mg/kg	0.00124 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
19		fluoranthene		205-912-4	206-44-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
20		fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	9.2	mg/kg		9.2	mg/kg	0.00092 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		21	mg/kg	1.579	33.169	mg/kg	0.00332 %		
26		pH			PH		10.1	pH		10.1	pH	10.1 pH		
27		phenanthrene		201-581-5	85-01-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
28		phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
29		pyrene		204-927-3	129-00-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		41	mg/kg	1.245	51.033	mg/kg	0.0051 %		
											Total:	0.0144 %		

Key

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

Classification of sample: CP05

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

Sample details

Sample Name:		LoW Code:	
CP05		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
0.15 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 index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
3		anthracene		204-371-1	120-12-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9	mg/kg	1.32	11.883	mg/kg	0.00119 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.49	mg/kg	2.775	1.36	mg/kg	0.000136 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2	mg/kg	13.43	2.686	mg/kg	0.000269 %		
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<**LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30	mg/kg	1.462	43.847	mg/kg	0.00438 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				19	mg/kg	1.126	21.392	mg/kg	0.00214 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	12	mg/kg		12	mg/kg	0.0012 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				27	mg/kg	1.579	42.646	mg/kg	0.00426 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				11.2	pH		11.2	pH	11.2 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				57	mg/kg	1.245	70.949	mg/kg	0.00709 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0213 %		

Key

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

Classification of sample: CP06

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

Sample details

Sample Name:	LoW Code:
CP06	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	14.524 mg/kg	0.00145 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.76 mg/kg	2.775	2.109 mg/kg	0.000211 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.6 mg/kg	13.43	8.058 mg/kg	0.000806 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		19 mg/kg	1.462	27.77 mg/kg	0.00278 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		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									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	14	mg/kg		14	mg/kg	0.0014 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				24	mg/kg	1.579	37.908	mg/kg	0.00379 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				9	pH		9	pH	9pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				50	mg/kg	1.245	62.236	mg/kg	0.00622 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0201 %		

Key

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

Classification of sample: RC02

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

Sample details

Sample Name:	LoW Code:
RC02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.44 mg/kg		0.44 mg/kg	0.000044 %		
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		1.4 mg/kg		1.4 mg/kg	0.00014 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		41 mg/kg	1.32	54.133 mg/kg	0.00541 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		5.6 mg/kg		5.6 mg/kg	0.00056 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		4.2 mg/kg		4.2 mg/kg	0.00042 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		5.7 mg/kg		5.7 mg/kg	0.00057 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1.9 mg/kg		1.9 mg/kg	0.00019 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.7 mg/kg		1.7 mg/kg	0.00017 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.2 mg/kg	2.775	6.106 mg/kg	0.000611 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		2 mg/kg	13.43	26.86 mg/kg	0.00269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				4	mg/kg		4	mg/kg	0.0004 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				67	mg/kg	1.126	75.435	mg/kg	0.00754 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				11	mg/kg		11	mg/kg	0.0011 %		
			205-912-4	206-44-0									
21		fluorene				0.61	mg/kg		0.61	mg/kg	0.000061 %		
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	45	mg/kg		45	mg/kg	0.0045 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				43	mg/kg	1.579	67.918	mg/kg	0.00679 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				7.7	pH		7.7	pH	7.7 pH		
				PH									
28		phenanthrene				6.8	mg/kg		6.8	mg/kg	0.00068 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				9.6	mg/kg		9.6	mg/kg	0.00096 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				242.406	mg/kg		242.406	mg/kg	0.0242 %		
				TPH									
32		zinc { zinc oxide }				68	mg/kg	1.245	84.641	mg/kg	0.00846 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0714 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0242%)

Classification of sample: RO06

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

Sample details

Sample Name:
RO06
Sample Depth:
0.30 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.3 mg/kg	1.32	4.357 mg/kg	0.000436 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.58 mg/kg	2.775	1.61 mg/kg	0.000161 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		22 mg/kg	1.462	32.154 mg/kg	0.00322 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		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									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	8.3	mg/kg		8.3	mg/kg	0.00083 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				28	mg/kg	1.579	44.226	mg/kg	0.00442 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				9.5	pH		9.5	pH	9.5 pH		
				PH									
28		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				58.806	mg/kg		58.806	mg/kg	0.00588 %		
				TPH									
32		zinc { zinc oxide }				57	mg/kg	1.245	70.949	mg/kg	0.00709 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0253 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00588%)

Classification of sample: TP01

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

Sample details

Sample Name:	LoW Code:
TP01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
0.20 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.66 mg/kg		0.66 mg/kg	0.000066 %		
2	acenaphthylene		205-917-1	208-96-8		0.28 mg/kg		0.28 mg/kg	0.000028 %		
3	anthracene		204-371-1	120-12-7		1.1 mg/kg		1.1 mg/kg	0.00011 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		49 mg/kg	1.32	64.696 mg/kg	0.00647 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.1 mg/kg		4.1 mg/kg	0.00041 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		3.2 mg/kg		3.2 mg/kg	0.00032 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.9 mg/kg		1.9 mg/kg	0.00019 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1.8 mg/kg		1.8 mg/kg	0.00018 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.9 mg/kg		1.9 mg/kg	0.00019 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.1 mg/kg	2.775	5.828 mg/kg	0.000583 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1 mg/kg	13.43	13.43 mg/kg	0.00134 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		28 mg/kg	1.462	40.924 mg/kg	0.00409 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				2.8	mg/kg		2.8	mg/kg	0.00028 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				110	mg/kg	1.126	123.848	mg/kg	0.0124 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				0.46	mg/kg		0.46	mg/kg	0.000046 %		
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				8.7	mg/kg		8.7	mg/kg	0.00087 %		
			205-912-4	206-44-0									
21		fluorene				0.44	mg/kg		0.44	mg/kg	0.000044 %		
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	88	mg/kg		88	mg/kg	0.0088 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				0.4	mg/kg		0.4	mg/kg	0.00004 %		
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				63	mg/kg	1.579	99.508	mg/kg	0.00995 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				9.9	pH		9.9	pH	9.9 pH		
				PH									
28		phenanthrene				6.2	mg/kg		6.2	mg/kg	0.00062 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				8	mg/kg		8	mg/kg	0.0008 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				328.206	mg/kg		328.206	mg/kg	0.0328 %		
				TPH									
32		zinc { zinc oxide }				120	mg/kg	1.245	149.366	mg/kg	0.0149 %		
		030-013-00-7	215-222-5	1314-13-2									
33		asbestos				10	mg/kg		10	mg/kg	0.001 %		
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0974 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0328%)

Classification of sample: TP02

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

Sample details

Sample Name:
TP02
Sample Depth:
0.10 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.31 mg/kg		0.31 mg/kg	0.000031 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		36 mg/kg	1.32	47.532 mg/kg	0.00475 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.7 mg/kg		2.7 mg/kg	0.00027 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.8 mg/kg		1.8 mg/kg	0.00018 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		2.5 mg/kg		2.5 mg/kg	0.00025 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1.1 mg/kg		1.1 mg/kg	0.00011 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.5 mg/kg		1.5 mg/kg	0.00015 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.9 mg/kg	2.775	8.048 mg/kg	0.000805 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		2.3 mg/kg	13.43	30.889 mg/kg	0.00309 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30 mg/kg	1.462	43.847 mg/kg	0.00438 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				2.8	mg/kg		2.8	mg/kg	0.00028 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				100	mg/kg	1.126	112.589	mg/kg	0.0113 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				0.31	mg/kg		0.31	mg/kg	0.000031 %		
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				6.4	mg/kg		6.4	mg/kg	0.00064 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	76	mg/kg		76	mg/kg	0.0076 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				41	mg/kg	1.579	64.759	mg/kg	0.00648 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				9	pH		9	pH	9pH		
				PH									
27		phenanthrene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				6.5	mg/kg		6.5	mg/kg	0.00065 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				110	mg/kg	1.245	136.919	mg/kg	0.0137 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0555 %		

Key

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

Classification of sample: TP03

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

Sample details

Sample Name:
TP03
Sample Depth:
0.40 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.21 mg/kg		0.21 mg/kg	0.000021 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		36 mg/kg	1.32	47.532 mg/kg	0.00475 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.1 mg/kg		1.1 mg/kg	0.00011 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.84 mg/kg		0.84 mg/kg	0.000084 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.59 mg/kg		0.59 mg/kg	0.000059 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.49 mg/kg		0.49 mg/kg	0.000049 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.59 mg/kg		0.59 mg/kg	0.000059 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.9 mg/kg	2.775	5.273 mg/kg	0.000527 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1 mg/kg	13.43	13.43 mg/kg	0.00134 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.5 mg/kg	1.285	0.643 mg/kg	0.00005 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		47 mg/kg	1.462	68.693 mg/kg	0.00687 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				93	mg/kg	1.126	104.708	mg/kg	0.0105 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				2.1	mg/kg		2.1	mg/kg	0.00021 %		
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				0.47	mg/kg		0.47	mg/kg	0.000047 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	89	mg/kg		89	mg/kg	0.0089 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				44	mg/kg	1.579	69.498	mg/kg	0.00695 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				8.2	pH		8.2	pH	8.2 pH		
				PH									
28		phenanthrene				0.99	mg/kg		0.99	mg/kg	0.000099 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				2	mg/kg		2	mg/kg	0.0002 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				444.006	mg/kg		444.006	mg/kg	0.0444 %		
				TPH									
32		zinc { zinc oxide }				140	mg/kg	1.245	174.26	mg/kg	0.0174 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.103 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0444%)

Classification of sample: TP04

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

Sample details

Sample Name:	LoW Code:
TP04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		0.25 mg/kg		0.25 mg/kg	0.000025 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27 mg/kg	1.32	35.649 mg/kg	0.00356 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.1 mg/kg		1.1 mg/kg	0.00011 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.68 mg/kg		0.68 mg/kg	0.000068 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.73 mg/kg		0.73 mg/kg	0.000073 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.39 mg/kg		0.39 mg/kg	0.000039 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.57 mg/kg		0.57 mg/kg	0.000057 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.52 mg/kg	2.775	1.443 mg/kg	0.000144 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.9 mg/kg	13.43	12.087 mg/kg	0.00121 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		9.9 mg/kg	1.462	14.469 mg/kg	0.00145 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.86	mg/kg		0.86	mg/kg	0.000086 %		
		601-048-00-0	205-923-4	218-01-9									
16		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									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.36	mg/kg		0.36	mg/kg	0.000036 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	44	mg/kg		44	mg/kg	0.0044 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				0.38	mg/kg		0.38	mg/kg	0.000038 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				13	mg/kg	1.579	20.533	mg/kg	0.00205 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.7	pH		7.7	pH	7.7 pH		
				PH									
27		phenanthrene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				1.7	mg/kg		1.7	mg/kg	0.00017 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				31	mg/kg	1.245	38.586	mg/kg	0.00386 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0246 %		

Key

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

Classification of sample: TP09

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

Sample details

Sample Name:	LoW Code:
TP09	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
2.10 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 index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		0.44	mg/kg		0.44	mg/kg	0.000044 %		
2		acenaphthylene		205-917-1	208-96-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
3		anthracene		204-371-1	120-12-7		1.5	mg/kg		1.5	mg/kg	0.00015 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		85	mg/kg	1.32	112.228	mg/kg	0.0112 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		6.8	mg/kg		6.8	mg/kg	0.00068 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		5.4	mg/kg		5.4	mg/kg	0.00054 %		
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		4.9	mg/kg		4.9	mg/kg	0.00049 %		
8		benzo[ghi]perylene		205-883-8	191-24-2		2.7	mg/kg		2.7	mg/kg	0.00027 %		
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		4.9	mg/kg		4.9	mg/kg	0.00049 %		
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.3	mg/kg	2.775	6.383	mg/kg	0.000638 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		3.8	mg/kg	13.43	51.034	mg/kg	0.0051 %		
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<**LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30	mg/kg	1.462	43.847	mg/kg	0.00438 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				6.1	mg/kg		6.1	mg/kg	0.00061 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				110	mg/kg	1.126	123.848	mg/kg	0.0124 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				0.59	mg/kg		0.59	mg/kg	0.000059 %		
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				15	mg/kg		15	mg/kg	0.0015 %		
			205-912-4	206-44-0									
20		fluorene				0.42	mg/kg		0.42	mg/kg	0.000042 %		
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				2.6	mg/kg		2.6	mg/kg	0.00026 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	210	mg/kg		210	mg/kg	0.021 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				0.44	mg/kg		0.44	mg/kg	0.000044 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				44	mg/kg	1.579	69.498	mg/kg	0.00695 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.5	pH		7.5	pH	7.5 pH		
				PH									
27		phenanthrene				6.8	mg/kg		6.8	mg/kg	0.00068 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				14	mg/kg		14	mg/kg	0.0014 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				99	mg/kg	1.245	123.227	mg/kg	0.0123 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0819 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.41 mg/kg		0.41 mg/kg	0.000041 %		
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		0.28 mg/kg		0.28 mg/kg	0.000028 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27 mg/kg	1.32	35.649 mg/kg	0.00356 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.63 mg/kg		0.63 mg/kg	0.000063 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.48 mg/kg		0.48 mg/kg	0.000048 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.37 mg/kg		0.37 mg/kg	0.000037 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.29 mg/kg		0.29 mg/kg	0.000029 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.37 mg/kg		0.37 mg/kg	0.000037 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.5 mg/kg	2.775	4.163 mg/kg	0.000416 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.4 mg/kg	13.43	18.802 mg/kg	0.00188 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.4 mg/kg	1.285	0.514 mg/kg	0.00004 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		25 mg/kg	1.462	36.539 mg/kg	0.00365 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		chrysene	601-048-00-0	205-923-4	218-01-9		0.66	mg/kg		0.66	mg/kg	0.000066 %		
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		69	mg/kg	1.126	77.686	mg/kg	0.00777 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
19		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
20		fluoranthene		205-912-4	206-44-0		1.4	mg/kg		1.4	mg/kg	0.00014 %		
21		fluorene		201-695-5	86-73-7		0.34	mg/kg		0.34	mg/kg	0.000034 %		
22		indeno[123-cd]pyrene		205-893-2	193-39-5		0.25	mg/kg		0.25	mg/kg	0.000025 %		
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	42	mg/kg		42	mg/kg	0.0042 %		
24		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
25		naphthalene	601-052-00-2	202-049-5	91-20-3		1.1	mg/kg		1.1	mg/kg	0.00011 %		
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		36	mg/kg	1.579	56.862	mg/kg	0.00569 %		
27		pH			PH		8.8	pH		8.8	pH	8.8 pH		
28		phenanthrene		201-581-5	85-01-8		1.5	mg/kg		1.5	mg/kg	0.00015 %		
29		phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
30		pyrene		204-927-3	129-00-0		1.3	mg/kg		1.3	mg/kg	0.00013 %		
31		TPH (C6 to C40) petroleum group			TPH		815.106	mg/kg		815.106	mg/kg	0.0815 %		
32		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		81	mg/kg	1.245	100.822	mg/kg	0.0101 %		
											Total:	0.12 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0815%)

Classification of sample: TP11

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

Sample details

Sample Name:
TP11
Sample Depth:
1.60 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.28 mg/kg		0.28 mg/kg	0.000028 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		50 mg/kg	1.32	66.016 mg/kg	0.0066 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.2 mg/kg		1.2 mg/kg	0.00012 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.8 mg/kg		0.8 mg/kg	0.00008 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.7 mg/kg		0.7 mg/kg	0.00007 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.47 mg/kg		0.47 mg/kg	0.000047 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.7 mg/kg		0.7 mg/kg	0.00007 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.4 mg/kg	2.775	6.661 mg/kg	0.000666 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		6.5 mg/kg	13.43	87.295 mg/kg	0.00873 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.9	mg/kg		0.9	mg/kg	0.00009 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				150	mg/kg	1.126	168.883	mg/kg	0.0169 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				2.4	mg/kg		2.4	mg/kg	0.00024 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.45	mg/kg		0.45	mg/kg	0.000045 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	61	mg/kg		61	mg/kg	0.0061 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				46	mg/kg	1.579	72.657	mg/kg	0.00727 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.4	pH		8.4	pH	8.4 pH		
				PH									
27		phenanthrene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				2.2	mg/kg		2.2	mg/kg	0.00022 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				85	mg/kg	1.245	105.801	mg/kg	0.0106 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0633 %		

Key

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

Classification of sample: TP14

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

Sample details

Sample Name:
TP14
Sample Depth:
0.80 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		70 mg/kg	1.32	92.423 mg/kg	0.00924 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.58 mg/kg		0.58 mg/kg	0.000058 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.31 mg/kg		0.31 mg/kg	0.000031 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.48 mg/kg		0.48 mg/kg	0.000048 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.32 mg/kg		0.32 mg/kg	0.000032 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.2 mg/kg		0.2 mg/kg	0.00002 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.4 mg/kg	2.775	6.661 mg/kg	0.000666 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.4 mg/kg	13.43	5.372 mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		33 mg/kg	1.462	48.231 mg/kg	0.00482 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.48	mg/kg		0.48	mg/kg	0.000048 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				79	mg/kg	1.126	88.945	mg/kg	0.00889 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.26	mg/kg		0.26	mg/kg	0.000026 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	46	mg/kg		46	mg/kg	0.0046 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				57	mg/kg	1.579	90.031	mg/kg	0.009 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8	pH		8	pH	8pH		
				PH									
27		phenanthrene				0.49	mg/kg		0.49	mg/kg	0.000049 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				75	mg/kg	1.245	93.354	mg/kg	0.00934 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0483 %		

Key

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

Classification of sample: TP15

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

Sample details

Sample Name:
TP15
Sample Depth:
0.85 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	15.844 mg/kg	0.00158 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.95 mg/kg	2.775	2.637 mg/kg	0.000264 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.8 mg/kg	13.43	10.744 mg/kg	0.00107 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		51 mg/kg	1.462	74.539 mg/kg	0.00745 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		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									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	6.5	mg/kg		6.5	mg/kg	0.00065 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				30	mg/kg	1.579	47.385	mg/kg	0.00474 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.9	pH		8.9	pH	8.9 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				73	mg/kg	1.245	90.864	mg/kg	0.00909 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.03 %		

Key

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

Classification of sample: TP16

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

Sample details

Sample Name:
TP16
Sample Depth:
2.00 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.37 mg/kg		0.37 mg/kg	0.000037 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		30 mg/kg	1.32	39.61 mg/kg	0.00396 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.3 mg/kg		1.3 mg/kg	0.00013 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.1 mg/kg		1.1 mg/kg	0.00011 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.4 mg/kg		1.4 mg/kg	0.00014 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.67 mg/kg		0.67 mg/kg	0.000067 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.54 mg/kg		0.54 mg/kg	0.000054 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.4 mg/kg	2.775	3.885 mg/kg	0.000389 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		2.4 mg/kg	13.43	32.232 mg/kg	0.00322 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.5 mg/kg	1.285	0.643 mg/kg	0.00005 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17 mg/kg	1.462	24.846 mg/kg	0.00248 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				61	mg/kg	1.126	68.679	mg/kg	0.00687 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				2.6	mg/kg		2.6	mg/kg	0.00026 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.61	mg/kg		0.61	mg/kg	0.000061 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	130	mg/kg		130	mg/kg	0.013 %		
		082-001-00-6											
23		mercury { mercury dichloride }				0.4	mg/kg	1.353	0.541	mg/kg	0.0000541 %		
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				30	mg/kg	1.579	47.385	mg/kg	0.00474 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.3	pH		7.3	pH	7.3 pH		
				PH									
27		phenanthrene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				2.5	mg/kg		2.5	mg/kg	0.00025 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				100	mg/kg	1.245	124.471	mg/kg	0.0124 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0491 %		

Key

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

Classification of sample: TP18

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

Sample details

Sample Name:
TP18
Sample Depth:
0.60 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		47 mg/kg	1.32	62.055 mg/kg	0.00621 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.7 mg/kg	2.775	4.718 mg/kg	0.000472 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.4 mg/kg	13.43	5.372 mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		23 mg/kg	1.462	33.616 mg/kg	0.00336 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				64	mg/kg	1.126	72.057	mg/kg	0.00721 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	28	mg/kg		28	mg/kg	0.0028 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				35	mg/kg	1.579	55.282	mg/kg	0.00553 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.2	pH		8.2	pH	8.2 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				50	mg/kg	1.245	62.236	mg/kg	0.00622 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.033 %		

Key

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

Classification of sample: TP19

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

Sample details

Sample Name:
TP19
Sample Depth:
0.60 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		47 mg/kg	1.32	62.055 mg/kg	0.00621 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.6 mg/kg	2.775	4.441 mg/kg	0.000444 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.6 mg/kg	13.43	8.058 mg/kg	0.000806 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				60	mg/kg	1.126	67.553	mg/kg	0.00676 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	26	mg/kg		26	mg/kg	0.0026 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				41	mg/kg	1.579	64.759	mg/kg	0.00648 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.5	pH		8.5	pH	8.5 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				66	mg/kg	1.245	82.151	mg/kg	0.00822 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0371 %		

Key

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

Classification of sample: TP20

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

Sample details

Sample Name:
TP20
Sample Depth:
0.10 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15 mg/kg	1.32	19.805 mg/kg	0.00198 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.4 mg/kg		0.4 mg/kg	0.00004 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.3 mg/kg		0.3 mg/kg	0.00003 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.25 mg/kg		0.25 mg/kg	0.000025 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.25 mg/kg		0.25 mg/kg	0.000025 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.89 mg/kg	2.775	2.47 mg/kg	0.000247 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.7 mg/kg	13.43	22.831 mg/kg	0.00228 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.5 mg/kg	1.285	0.643 mg/kg	0.00005 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		28 mg/kg	1.462	40.924 mg/kg	0.00409 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.35	mg/kg		0.35	mg/kg	0.000035 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				39	mg/kg	1.126	43.91	mg/kg	0.00439 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				0.73	mg/kg		0.73	mg/kg	0.000073 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	26	mg/kg		26	mg/kg	0.0026 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				27	mg/kg	1.579	42.646	mg/kg	0.00426 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				10.3	pH		10.3	pH	10.3 pH		
				PH									
27		phenanthrene				0.27	mg/kg		0.27	mg/kg	0.000027 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				0.77	mg/kg		0.77	mg/kg	0.000077 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				92	mg/kg	1.245	114.514	mg/kg	0.0115 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0323 %		

Key

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

Classification of sample: TP21

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

Sample details

Sample Name:
TP21
Sample Depth:
2.10 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.11 mg/kg		0.11 mg/kg	0.000011 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		47 mg/kg	1.32	62.055 mg/kg	0.00621 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.37 mg/kg		0.37 mg/kg	0.000037 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.31 mg/kg		0.31 mg/kg	0.000031 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.24 mg/kg		0.24 mg/kg	0.000024 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.24 mg/kg		0.24 mg/kg	0.000024 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.7 mg/kg	2.775	4.718 mg/kg	0.000472 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.8 mg/kg	13.43	24.174 mg/kg	0.00242 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		23 mg/kg	1.462	33.616 mg/kg	0.00336 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.37	mg/kg		0.37	mg/kg	0.000037 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				89	mg/kg	1.126	100.204	mg/kg	0.01 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				0.71	mg/kg		0.71	mg/kg	0.000071 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	45	mg/kg		45	mg/kg	0.0045 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				0.29	mg/kg		0.29	mg/kg	0.000029 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				36	mg/kg	1.579	56.862	mg/kg	0.00569 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.7	pH		8.7	pH	8.7 pH		
				PH									
27		phenanthrene				0.51	mg/kg		0.51	mg/kg	0.000051 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				0.67	mg/kg		0.67	mg/kg	0.000067 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				74	mg/kg	1.245	92.109	mg/kg	0.00921 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0429 %		

Key

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

Classification of sample: TP21[2]

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

Sample details

Sample Name:
TP21[2]
Sample Depth:
1.40 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.46 mg/kg		0.46 mg/kg	0.000046 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		55 mg/kg	1.32	72.618 mg/kg	0.00726 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.8 mg/kg		1.8 mg/kg	0.00018 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.4 mg/kg		1.4 mg/kg	0.00014 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1 mg/kg		1 mg/kg	0.0001 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.79 mg/kg		0.79 mg/kg	0.000079 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1 mg/kg		1 mg/kg	0.0001 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.9 mg/kg	2.775	5.273 mg/kg	0.000527 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		2.1 mg/kg	13.43	28.203 mg/kg	0.00282 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		29 mg/kg	1.462	42.385 mg/kg	0.00424 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				67	mg/kg	1.126	75.435	mg/kg	0.00754 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				3.6	mg/kg		3.6	mg/kg	0.00036 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.72	mg/kg		0.72	mg/kg	0.000072 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	42	mg/kg		42	mg/kg	0.0042 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				46	mg/kg	1.579	72.657	mg/kg	0.00727 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				9.3	pH		9.3	pH	9.3 pH		
				PH									
27		phenanthrene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				3.4	mg/kg		3.4	mg/kg	0.00034 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				75	mg/kg	1.245	93.354	mg/kg	0.00934 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0456 %		

Key

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

Classification of sample: TP22

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

Sample details

Sample Name:
TP22
Sample Depth:
0.15 m

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

Hazard properties

None identified

Determinands

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

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
1		acenaphthene 201-469-6 / 83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2		acenaphthylene 205-917-1 / 208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3		anthracene 204-371-1 / 120-12-7		0.13 mg/kg		0.13 mg/kg	0.000013 %		
4		arsenic { arsenic trioxide } 033-003-00-0 / 215-481-4 / 1327-53-3		16 mg/kg	1.32	21.125 mg/kg	0.00211 %		
5		benzo[a]anthracene 601-033-00-9 / 200-280-6 / 56-55-3		0.47 mg/kg		0.47 mg/kg	0.000047 %		
6		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 / 200-028-5 / 50-32-8		0.35 mg/kg		0.35 mg/kg	0.000035 %		
7		benzo[b]fluoranthene 601-034-00-4 / 205-911-9 / 205-99-2		0.24 mg/kg		0.24 mg/kg	0.000024 %		
8		benzo[ghi]perylene 205-883-8 / 191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9		benzo[k]fluoranthene 601-036-00-5 / 205-916-6 / 207-08-9		0.24 mg/kg		0.24 mg/kg	0.000024 %		
10		beryllium { beryllium oxide } 004-003-00-8 / 215-133-1 / 1304-56-9		0.51 mg/kg	2.775	1.415 mg/kg	0.000142 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) } 10294-33-4, 10294-34-5, 7637-07-2		5.5 mg/kg	13.43	73.865 mg/kg	0.00739 %		
12		cadmium { cadmium sulfide } 048-010-00-4 / 215-147-8 / 1306-23-6	1	1.4 mg/kg	1.285	1.799 mg/kg	0.00014 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		47 mg/kg	1.462	68.693 mg/kg	0.00687 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide } 024-001-00-0 / 215-607-8 / 1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.34	mg/kg		0.34	mg/kg	0.000034 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				260	mg/kg	1.126	292.731	mg/kg	0.0293 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				0.82	mg/kg		0.82	mg/kg	0.000082 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	580	mg/kg		580	mg/kg	0.058 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				24	mg/kg	1.579	37.908	mg/kg	0.00379 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				10.5	pH		10.5	pH	10.5 pH		
				PH									
27		phenanthrene				0.54	mg/kg		0.54	mg/kg	0.000054 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				0.74	mg/kg		0.74	mg/kg	0.000074 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				610	mg/kg	1.245	759.276	mg/kg	0.0759 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.185 %		

Key

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

Classification of sample: TP22[2]

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

Sample details

Sample Name:
TP22[2]
Sample Depth:
1.90 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		1.1	mg/kg		1.1	mg/kg	0.00011 %		
2	acenaphthylene		205-917-1	208-96-8		0.49	mg/kg		0.49	mg/kg	0.000049 %		
3	anthracene		204-371-1	120-12-7		3.5	mg/kg		3.5	mg/kg	0.00035 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		33	mg/kg	1.32	43.571	mg/kg	0.00436 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		13	mg/kg		13	mg/kg	0.0013 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		10	mg/kg		10	mg/kg	0.001 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		7.7	mg/kg		7.7	mg/kg	0.00077 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		5	mg/kg		5	mg/kg	0.0005 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		7.7	mg/kg		7.7	mg/kg	0.00077 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.4	mg/kg	2.775	3.885	mg/kg	0.000389 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.1	mg/kg	13.43	14.773	mg/kg	0.00148 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.4	mg/kg	1.285	0.514	mg/kg	0.00004 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21	mg/kg	1.462	30.693	mg/kg	0.00307 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				10	mg/kg		10	mg/kg	0.001 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				49	mg/kg	1.126	55.169	mg/kg	0.00552 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				1.5	mg/kg		1.5	mg/kg	0.00015 %		
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				25	mg/kg		25	mg/kg	0.0025 %		
			205-912-4	206-44-0									
20		fluorene				1.6	mg/kg		1.6	mg/kg	0.00016 %		
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				4.5	mg/kg		4.5	mg/kg	0.00045 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	53	mg/kg		53	mg/kg	0.0053 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				0.71	mg/kg		0.71	mg/kg	0.000071 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				33	mg/kg	1.579	52.123	mg/kg	0.00521 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.8	pH		8.8	pH	8.8 pH		
				PH									
27		phenanthrene				15	mg/kg		15	mg/kg	0.0015 %		
			201-581-5	85-01-8									
28		phenol				2.3	mg/kg		2.3	mg/kg	0.00023 %		
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				23	mg/kg		23	mg/kg	0.0023 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				89	mg/kg	1.245	110.78	mg/kg	0.0111 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0501 %		

Key

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

Classification of sample: TP23

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

Sample details

Sample Name:
TP23
Sample Depth:
0.20 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		35 mg/kg	1.32	46.211 mg/kg	0.00462 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.47 mg/kg		0.47 mg/kg	0.000047 %		
6	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 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.5 mg/kg		0.5 mg/kg	0.00005 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.32 mg/kg		0.32 mg/kg	0.000032 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.3 mg/kg		0.3 mg/kg	0.00003 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	3.053 mg/kg	0.000305 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.3 mg/kg	13.43	4.029 mg/kg	0.000403 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.6 mg/kg	1.285	0.771 mg/kg	0.00006 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		30 mg/kg	1.462	43.847 mg/kg	0.00438 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				60	mg/kg	1.126	67.553	mg/kg	0.00676 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				0.95	mg/kg		0.95	mg/kg	0.000095 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.26	mg/kg		0.26	mg/kg	0.000026 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	140	mg/kg		140	mg/kg	0.014 %		
		082-001-00-6											
23		mercury { mercury dichloride }				0.8	mg/kg	1.353	1.083	mg/kg	0.000108 %		
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				19	mg/kg	1.579	30.01	mg/kg	0.003 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				5.7	pH		5.7	pH	5.7 pH		
				PH									
27		phenanthrene				0.56	mg/kg		0.56	mg/kg	0.000056 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				0.98	mg/kg		0.98	mg/kg	0.000098 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				120	mg/kg	1.245	149.366	mg/kg	0.0149 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0497 %		

Key

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

Classification of sample: TP28

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

Sample details

Sample Name:
TP28
Sample Depth:
0.40 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		76 mg/kg	1.32	100.345 mg/kg	0.01 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1 mg/kg	2.775	2.775 mg/kg	0.000278 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				22	mg/kg	1.126	24.77	mg/kg	0.00248 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	24	mg/kg		24	mg/kg	0.0024 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				30	mg/kg	1.579	47.385	mg/kg	0.00474 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				5.7	pH		5.7	pH	5.7 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				63	mg/kg	1.245	78.417	mg/kg	0.00784 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0313 %		

Key

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

Classification of sample: TT01

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

Sample details

Sample Name:
TT01
Sample Depth:
0.60 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.05 mg/kg		0.05 mg/kg	0.000005 %		
2	acenaphthylene		205-917-1	208-96-8		0.05 mg/kg		0.05 mg/kg	0.000005 %		
3	anthracene		204-371-1	120-12-7		0.14 mg/kg		0.14 mg/kg	0.000014 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		44 mg/kg	1.32	58.094 mg/kg	0.00581 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.46 mg/kg		0.46 mg/kg	0.000046 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.3 mg/kg		0.3 mg/kg	0.00003 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.17 mg/kg		0.17 mg/kg	0.000017 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.05 mg/kg		0.05 mg/kg	0.000005 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.17 mg/kg		0.17 mg/kg	0.000017 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.8 mg/kg	2.775	4.996 mg/kg	0.0005 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		4 mg/kg	13.43	53.72 mg/kg	0.00537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.7 mg/kg	1.285	0.9 mg/kg	0.00007 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.43	mg/kg		0.43	mg/kg	0.000043 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				79	mg/kg	1.126	88.945	mg/kg	0.00889 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			205-912-4	206-44-0									
21		fluorene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	63	mg/kg		63	mg/kg	0.0063 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		**<LOD**
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				0.05	mg/kg		0.05	mg/kg	0.000005 %		
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				43	mg/kg	1.579	67.918	mg/kg	0.00679 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				9.3	pH		9.3	pH	9.3 pH		
				PH									
28		phenanthrene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				0.96	mg/kg		0.96	mg/kg	0.000096 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				299.406	mg/kg		299.406	mg/kg	0.0299 %		
				TPH									
32		zinc { zinc oxide }				110	mg/kg	1.245	136.919	mg/kg	0.0137 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0835 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0299%)

Classification of sample: TT02

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

Sample details

Sample Name:	LoW Code:
TT02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
1.00 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		0.13 mg/kg		0.13 mg/kg	0.000013 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10 mg/kg	1.32	13.203 mg/kg	0.00132 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.43 mg/kg		0.43 mg/kg	0.000043 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.3 mg/kg		0.3 mg/kg	0.00003 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.16 mg/kg		0.16 mg/kg	0.000016 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.8 mg/kg	2.775	4.996 mg/kg	0.0005 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.8 mg/kg	13.43	24.174 mg/kg	0.00242 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.29	mg/kg		0.29	mg/kg	0.000029 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				48	mg/kg	1.126	54.043	mg/kg	0.0054 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
19		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
20		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	26	mg/kg		26	mg/kg	0.0026 %		
		082-001-00-6											
21		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
22		naphthalene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
		601-052-00-2	202-049-5	91-20-3									
23		nickel { nickel dihydroxide }				45	mg/kg	1.579	71.077	mg/kg	0.00711 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
24		pH				8.4	pH		8.4	pH	8.4 pH		
				PH									
25		phenanthrene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
			201-581-5	85-01-8									
26		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
27		pyrene				0.63	mg/kg		0.63	mg/kg	0.000063 %		
			204-927-3	129-00-0									
28		zinc { zinc oxide }				130	mg/kg	1.245	161.813	mg/kg	0.0162 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0416 %		

Key

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

Classification of sample: TT03

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

Sample details

Sample Name:	LoW Code:
TT03	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		35 mg/kg	1.32	46.211 mg/kg	0.00462 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.24 mg/kg		0.24 mg/kg	0.000024 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.9 mg/kg	2.775	8.048 mg/kg	0.000805 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1 mg/kg	13.43	13.43 mg/kg	0.00134 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.19	mg/kg		0.19	mg/kg	0.000019 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				82	mg/kg	1.126	92.323	mg/kg	0.00923 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
19		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-893-2	193-39-5									
20		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	33	mg/kg		33	mg/kg	0.0033 %		
		082-001-00-6											
21		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
22		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
23		nickel { nickel dihydroxide }				59	mg/kg	1.579	93.19	mg/kg	0.00932 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
24		pH				8.6	pH		8.6	pH	8.6 pH		
				PH									
25		phenanthrene				0.24	mg/kg		0.24	mg/kg	0.000024 %		
			201-581-5	85-01-8									
26		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
27		pyrene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
			204-927-3	129-00-0									
28		zinc { zinc oxide }				45	mg/kg	1.245	56.012	mg/kg	0.0056 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0396 %		

Key

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

Classification of sample: WS01

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

Sample details

Sample Name:	LoW Code:	
WS01	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
1.30 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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 hazardous because Samples are not wet and unlikely to be hazardous.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.389%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.389%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.389%)

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
		CLP index number	EC Number	CAS Number									
1		acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-469-6	83-32-9									
2		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			205-917-1	208-96-8									
3		anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				6.9	mg/kg	1.32	9.11	mg/kg	0.000911 %		
		033-003-00-0	215-481-4	1327-53-3									

#		Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number / EC Number / CAS Number							
5		benzo[a]anthracene 601-033-00-9 / 200-280-6 / 56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6		benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 / 200-028-5 / 50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7		benzo[b]fluoranthene 601-034-00-4 / 205-911-9 / 205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8		benzo[ghi]perylene 205-883-8 / 191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9		benzo[k]fluoranthene 601-036-00-5 / 205-916-6 / 207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10		beryllium { beryllium oxide } 004-003-00-8 / 215-133-1 / 1304-56-9		1.8 mg/kg	2.775	4.996 mg/kg	0.0005 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) } 10294-33-4, 10294-34-5, 7637-07-2		0.8 mg/kg	13.43	10.744 mg/kg	0.00107 %		
12		cadmium { cadmium sulfide } 048-010-00-4 / 215-147-8 / 1306-23-6	1	0.3 mg/kg	1.285	0.386 mg/kg	0.00003 %		
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) } 215-160-9 / 1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide } 024-001-00-0 / 215-607-8 / 1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
15		chrysene 601-048-00-0 / 205-923-4 / 218-01-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16		copper { dicopper oxide; copper (I) oxide } 029-002-00-X / 215-270-7 / 1317-39-1		19 mg/kg	1.126	21.392 mg/kg	0.00214 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5		<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene 601-041-00-2 / 200-181-8 / 53-70-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
19		ethylbenzene 601-023-00-4 / 202-849-4 / 100-41-4		<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
20		fluoranthene 205-912-4 / 206-44-0		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
21		fluorene 201-695-5 / 86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
22		indeno[123-cd]pyrene 205-893-2 / 193-39-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
23		lead { lead compounds with the exception of those specified elsewhere in this Annex } 082-001-00-6	1	20 mg/kg		20 mg/kg	0.002 %		
24		mercury { mercury dichloride } 080-010-00-X / 231-299-8 / 7487-94-7		<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
25		naphthalene 601-052-00-2 / 202-049-5 / 91-20-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
26		nickel { nickel dihydroxide } 028-008-00-X / 235-008-5 [1] 234-348-1 [2] / 12054-48-7 [1] 11113-74-9 [2]		100 mg/kg	1.579	157.95 mg/kg	0.0158 %		
27		pH PH		7.6 pH		7.6 pH	7.6 pH		
28		phenanthrene 201-581-5 / 85-01-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
29		phenol 604-001-00-2 / 203-632-7 / 108-95-2		<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
30		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				13892.705	mg/kg		13892.705	mg/kg	1.389 %		
				TPH									
32		zinc { zinc oxide }				130	mg/kg	1.245	161.813	mg/kg	0.0162 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	1.431 %		

Key

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

Classification of sample: WS01[2]

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

Sample details

Sample Name:
WS01[2]
Sample Depth:
0.10 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.56 mg/kg		0.56 mg/kg	0.000056 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		70 mg/kg	1.32	92.423 mg/kg	0.00924 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.1 mg/kg		2.1 mg/kg	0.00021 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.7 mg/kg		1.7 mg/kg	0.00017 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.5 mg/kg		1.5 mg/kg	0.00015 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1 mg/kg		1 mg/kg	0.0001 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.5 mg/kg		1.5 mg/kg	0.00015 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		3.3 mg/kg	2.775	9.159 mg/kg	0.000916 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.9 mg/kg	13.43	25.517 mg/kg	0.00255 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.9 mg/kg	1.285	1.157 mg/kg	0.00009 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		35 mg/kg	1.462	51.154 mg/kg	0.00512 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				280	mg/kg	1.126	315.249	mg/kg	0.0315 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				3	mg/kg		3	mg/kg	0.0003 %		
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.8	mg/kg		0.8	mg/kg	0.00008 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	210	mg/kg		210	mg/kg	0.021 %		
		082-001-00-6											
23		mercury { mercury dichloride }				0.6	mg/kg	1.353	0.812	mg/kg	0.0000812 %		
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				62	mg/kg	1.579	97.929	mg/kg	0.00979 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.7	pH		7.7	pH	7.7 pH		
				PH									
27		phenanthrene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				3	mg/kg		3	mg/kg	0.0003 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				380	mg/kg	1.245	472.991	mg/kg	0.0473 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.13 %		

Key

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

Classification of sample: WS03

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

Sample details

Sample Name:
WS03
Sample Depth:
1.40 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.4 mg/kg	1.32	8.45 mg/kg	0.000845 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.63 mg/kg	2.775	1.748 mg/kg	0.000175 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.3 mg/kg	13.43	4.029 mg/kg	0.000403 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		15 mg/kg	1.462	21.923 mg/kg	0.00219 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				18	mg/kg	1.126	20.266	mg/kg	0.00203 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	9.3	mg/kg		9.3	mg/kg	0.00093 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				37	mg/kg	1.579	58.441	mg/kg	0.00584 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				6	pH		6	pH	6pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				36	mg/kg	1.245	44.81	mg/kg	0.00448 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0176 %		

Key

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

Classification of sample: WS03[2]

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

Sample details

Sample Name:
WS03[2]
Sample Depth:
0.20 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.21 mg/kg		0.21 mg/kg	0.000021 %		
2	acenaphthylene		205-917-1	208-96-8		0.05 mg/kg		0.05 mg/kg	0.000005 %		
3	anthracene		204-371-1	120-12-7		0.66 mg/kg		0.66 mg/kg	0.000066 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		20 mg/kg	1.32	26.407 mg/kg	0.00264 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.7 mg/kg		2.7 mg/kg	0.00027 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		2.7 mg/kg		2.7 mg/kg	0.00027 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		3.5 mg/kg		3.5 mg/kg	0.00035 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1.3 mg/kg		1.3 mg/kg	0.00013 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.1 mg/kg		1.1 mg/kg	0.00011 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.6 mg/kg	2.775	4.441 mg/kg	0.000444 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.6 mg/kg	13.43	8.058 mg/kg	0.000806 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24 mg/kg	1.462	35.077 mg/kg	0.00351 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				2.8	mg/kg		2.8	mg/kg	0.00028 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				49	mg/kg	1.126	55.169	mg/kg	0.00552 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				0.25	mg/kg		0.25	mg/kg	0.000025 %		
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				7.4	mg/kg		7.4	mg/kg	0.00074 %		
			205-912-4	206-44-0									
20		fluorene				0.22	mg/kg		0.22	mg/kg	0.000022 %		
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	49	mg/kg		49	mg/kg	0.0049 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				130	mg/kg	1.579	205.335	mg/kg	0.0205 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				9	pH		9	pH	9pH		
				PH									
27		phenanthrene				3.1	mg/kg		3.1	mg/kg	0.00031 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				6.1	mg/kg		6.1	mg/kg	0.00061 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				120	mg/kg	1.245	149.366	mg/kg	0.0149 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0572 %		

Key

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

Classification of sample: WS05

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

Sample details

Sample Name:	LoW Code:	
WS05	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
0.60 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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 hazardous because Samples are not wet and unlikely to be hazardous.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.204%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.204%)

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.9 pH)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.204%)

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
		CLP index number	EC Number	CAS Number							
1		acenaphthene				1.9 mg/kg		1.9 mg/kg	0.00019 %		
			201-469-6	83-32-9							

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
2		acenaphthylene				1.1	mg/kg		1.1	mg/kg	0.00011 %		
			205-917-1	208-96-8									
3		anthracene				20	mg/kg		20	mg/kg	0.002 %		
			204-371-1	120-12-7									
4		arsenic { arsenic trioxide }				21	mg/kg	1.32	27.727	mg/kg	0.00277 %		
		033-003-00-0	215-481-4	1327-53-3									
5		benzo[a]anthracene				77	mg/kg		77	mg/kg	0.0077 %		
		601-033-00-9	200-280-6	56-55-3									
6		benzo[a]pyrene; benzo[def]chrysene				62	mg/kg		62	mg/kg	0.0062 %		
		601-032-00-3	200-028-5	50-32-8									
7		benzo[b]fluoranthene				63	mg/kg		63	mg/kg	0.0063 %		
		601-034-00-4	205-911-9	205-99-2									
8		benzo[ghi]perylene				23	mg/kg		23	mg/kg	0.0023 %		
			205-883-8	191-24-2									
9		benzo[k]fluoranthene				35	mg/kg		35	mg/kg	0.0035 %		
		601-036-00-5	205-916-6	207-08-9									
10		beryllium { beryllium oxide }				2.4	mg/kg	2.775	6.661	mg/kg	0.000666 %		
		004-003-00-8	215-133-1	1304-56-9									
11		boron { boron tribromide/trichloride/trifluoride (combined) }				1.1	mg/kg	13.43	14.773	mg/kg	0.00148 %		
				10294-33-4, 10294-34-5, 7637-07-2									
12		cadmium { cadmium sulfide }			1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %		
		048-010-00-4	215-147-8	1306-23-6									
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				38	mg/kg	1.462	55.539	mg/kg	0.00555 %		
			215-160-9	1308-38-9									
14		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		**<LOD**
		024-001-00-0	215-607-8	1333-82-0									
15		chrysene				62	mg/kg		62	mg/kg	0.0062 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				77	mg/kg	1.126	86.693	mg/kg	0.00867 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				6.7	mg/kg		6.7	mg/kg	0.00067 %		
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				150	mg/kg		150	mg/kg	0.015 %		
			205-912-4	206-44-0									
21		fluorene				3.5	mg/kg		3.5	mg/kg	0.00035 %		
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				21	mg/kg		21	mg/kg	0.0021 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	56	mg/kg		56	mg/kg	0.0056 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		**<LOD**
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		**<LOD**
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				50	mg/kg	1.579	78.975	mg/kg	0.0079 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
27		pH				11.9	pH		11.9	pH	11.9 pH		
				PH									
28		phenanthrene				80	mg/kg		80	mg/kg	0.008 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				130	mg/kg		130	mg/kg	0.013 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				2036.006	mg/kg		2036.006	mg/kg	0.204 %		
				TPH									
32		zinc { zinc oxide }				89	mg/kg	1.245	110.78	mg/kg	0.0111 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.322 %		

Key

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

Classification of sample: WS06

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

Sample details

Sample Name:	LoW Code:
WS06	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
0.20 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.7 mg/kg	1.32	4.885 mg/kg	0.000489 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.943 mg/kg	0.000194 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		24 mg/kg	1.462	35.077 mg/kg	0.00351 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		16	mg/kg	1.126	18.014	mg/kg	0.0018 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
19		fluoranthene		205-912-4	206-44-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
20		fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	11	mg/kg		11	mg/kg	0.0011 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		29	mg/kg	1.579	45.805	mg/kg	0.00458 %		
26		pH			PH		8.7	pH		8.7	pH	8.7 pH		
27		phenanthrene		201-581-5	85-01-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
28		phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
29		pyrene		204-927-3	129-00-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		65	mg/kg	1.245	80.906	mg/kg	0.00809 %		
											Total:	0.0207 %		

Key

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

Classification of sample: WS07

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

Sample details

Sample Name:		LoW Code:	
WS07		Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:			
1.70 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 index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
3		anthracene		204-371-1	120-12-7		0.3	mg/kg		0.3	mg/kg	0.00003 %		
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		41	mg/kg	1.32	54.133	mg/kg	0.00541 %		
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.26	mg/kg		0.26	mg/kg	0.000026 %		
6		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
7		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8		benzo[ghi]perylene		205-883-8	191-24-2		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
9		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
10		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.2	mg/kg	2.775	6.106	mg/kg	0.000611 %		
11		boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.5	mg/kg	13.43	20.145	mg/kg	0.00201 %		
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<**LOD**
13		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32	mg/kg	1.462	46.77	mg/kg	0.00468 %		
14		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				73	mg/kg	1.126	82.19	mg/kg	0.00822 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				0.58	mg/kg		0.58	mg/kg	0.000058 %		
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	60	mg/kg		60	mg/kg	0.006 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				47	mg/kg	1.579	74.236	mg/kg	0.00742 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				8.4	pH		8.4	pH	8.4 pH		
				PH									
28		phenanthrene				0.44	mg/kg		0.44	mg/kg	0.000044 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				0.56	mg/kg		0.56	mg/kg	0.000056 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				65.806	mg/kg		65.806	mg/kg	0.00658 %		
				TPH									
32		zinc { zinc oxide }				81	mg/kg	1.245	100.822	mg/kg	0.0101 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.052 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00658%)

Classification of sample: WS09

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

Sample details

Sample Name:
WS09
Sample Depth:
0.40 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		1.7	mg/kg		1.7	mg/kg	0.00017 %		
2	acenaphthylene		205-917-1	208-96-8		1.3	mg/kg		1.3	mg/kg	0.00013 %		
3	anthracene		204-371-1	120-12-7		5.2	mg/kg		5.2	mg/kg	0.00052 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		38	mg/kg	1.32	50.172	mg/kg	0.00502 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		19	mg/kg		19	mg/kg	0.0019 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		15	mg/kg		15	mg/kg	0.0015 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		18	mg/kg		18	mg/kg	0.0018 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		6.5	mg/kg		6.5	mg/kg	0.00065 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		5.7	mg/kg		5.7	mg/kg	0.00057 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.8	mg/kg	2.775	4.996	mg/kg	0.0005 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.6	mg/kg	13.43	8.058	mg/kg	0.000806 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		26	mg/kg	1.462	38	mg/kg	0.0038 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				11	mg/kg		11	mg/kg	0.0011 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				60	mg/kg	1.126	67.553	mg/kg	0.00676 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				34	mg/kg		34	mg/kg	0.0034 %		
			205-912-4	206-44-0									
20		fluorene				2.7	mg/kg		2.7	mg/kg	0.00027 %		
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				5.3	mg/kg		5.3	mg/kg	0.00053 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	68	mg/kg		68	mg/kg	0.0068 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<**LOD**
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				37	mg/kg	1.579	58.441	mg/kg	0.00584 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.9	pH		7.9	pH	7.9 pH		
				PH									
27		phenanthrene				22	mg/kg		22	mg/kg	0.0022 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				31	mg/kg		31	mg/kg	0.0031 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				79	mg/kg	1.245	98.332	mg/kg	0.00983 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0579 %		

Key

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

Classification of sample: WS10

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

Sample details

Sample Name:
WS10
Sample Depth:
1.30 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		34 mg/kg	1.32	44.891 mg/kg	0.00449 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3 mg/kg	2.775	3.608 mg/kg	0.000361 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		1.3 mg/kg	13.43	17.459 mg/kg	0.00175 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		20 mg/kg	1.462	29.231 mg/kg	0.00292 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				76	mg/kg	1.126	85.568	mg/kg	0.00856 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	12	mg/kg		12	mg/kg	0.0012 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				34	mg/kg	1.579	53.703	mg/kg	0.00537 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.9	pH		7.9	pH	7.9 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				39	mg/kg	1.245	48.544	mg/kg	0.00485 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0302 %		

Key

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

Classification of sample: WS11

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

Sample details

Sample Name:
WS11
Sample Depth:
0.30 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.24 mg/kg		0.24 mg/kg	0.000024 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		24 mg/kg	1.32	31.688 mg/kg	0.00317 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		1.4 mg/kg		1.4 mg/kg	0.00014 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		1.4 mg/kg		1.4 mg/kg	0.00014 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		1.6 mg/kg		1.6 mg/kg	0.00016 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		0.86 mg/kg		0.86 mg/kg	0.000086 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.9 mg/kg		0.9 mg/kg	0.00009 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		3 mg/kg	2.775	8.326 mg/kg	0.000833 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.3 mg/kg	13.43	4.029 mg/kg	0.000403 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		31 mg/kg	1.462	45.308 mg/kg	0.00453 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				75	mg/kg	1.126	84.442	mg/kg	0.00844 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		**<LOD**
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				2.3	mg/kg		2.3	mg/kg	0.00023 %		
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		**<LOD**
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				0.75	mg/kg		0.75	mg/kg	0.000075 %		
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	35	mg/kg		35	mg/kg	0.0035 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		**<LOD**
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		**<LOD**
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				52	mg/kg	1.579	82.134	mg/kg	0.00821 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				8.6	pH		8.6	pH	8.6 pH		
				PH									
28		phenanthrene				1	mg/kg		1	mg/kg	0.0001 %		
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		**<LOD**
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				2.3	mg/kg		2.3	mg/kg	0.00023 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				79.806	mg/kg		79.806	mg/kg	0.00798 %		
				TPH									
32		zinc { zinc oxide }				65	mg/kg	1.245	80.906	mg/kg	0.00809 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0473 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00798%)

Classification of sample: WS12

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

Sample details

Sample Name:	LoW Code:
WS12	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
0.30 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14 mg/kg	1.32	18.485 mg/kg	0.00185 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1 mg/kg	2.775	2.775 mg/kg	0.000278 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.9 mg/kg	13.43	12.087 mg/kg	0.00121 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		21 mg/kg	1.462	30.693 mg/kg	0.00307 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				44	mg/kg	1.126	49.539	mg/kg	0.00495 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	20	mg/kg		20	mg/kg	0.002 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				28	mg/kg	1.579	44.226	mg/kg	0.00442 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				8.4	pH		8.4	pH	8.4 pH		
				PH									
28		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				0.45	mg/kg		0.45	mg/kg	0.000045 %		
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				525.706	mg/kg		525.706	mg/kg	0.0526 %		
				TPH									
32		zinc { zinc oxide }				60	mg/kg	1.245	74.683	mg/kg	0.00747 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0786 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0526%)

Classification of sample: WS13

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

Sample details

Sample Name:
WS13
Sample Depth:
0.70 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.1 mg/kg	1.32	10.695 mg/kg	0.00107 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		3.3 mg/kg	2.775	9.159 mg/kg	0.000916 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		32 mg/kg	1.462	46.77 mg/kg	0.00468 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				73	mg/kg	1.126	82.19	mg/kg	0.00822 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	18	mg/kg		18	mg/kg	0.0018 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				40	mg/kg	1.579	63.18	mg/kg	0.00632 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				8.9	pH		8.9	pH	8.9 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				24	mg/kg	1.245	29.873	mg/kg	0.00299 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0269 %		

Key

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

Classification of sample: WS14

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

Sample details

Sample Name:
WS14
Sample Depth:
1.45 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		0.34 mg/kg		0.34 mg/kg	0.000034 %		
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		0.53 mg/kg		0.53 mg/kg	0.000053 %		
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		58 mg/kg	1.32	76.579 mg/kg	0.00766 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		2.6 mg/kg		2.6 mg/kg	0.00026 %		
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		2.3 mg/kg		2.3 mg/kg	0.00023 %		
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		3.1 mg/kg		3.1 mg/kg	0.00031 %		
8	benzo[ghi]perylene		205-883-8	191-24-2		1.1 mg/kg		1.1 mg/kg	0.00011 %		
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.96 mg/kg		0.96 mg/kg	0.000096 %		
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.9 mg/kg	2.775	5.273 mg/kg	0.000527 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		7.6 mg/kg	13.43	102.068 mg/kg	0.0102 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.6 mg/kg	1.285	0.771 mg/kg	0.00006 %		
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	49.693 mg/kg	0.00497 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				2.4	mg/kg		2.4	mg/kg	0.00024 %		
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				100	mg/kg	1.126	112.589	mg/kg	0.0113 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<**LOD**
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				5.2	mg/kg		5.2	mg/kg	0.00052 %		
			205-912-4	206-44-0									
20		fluorene				0.25	mg/kg		0.25	mg/kg	0.000025 %		
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				0.92	mg/kg		0.92	mg/kg	0.000092 %		
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	210	mg/kg		210	mg/kg	0.021 %		
		082-001-00-6											
23		mercury { mercury dichloride }				0.9	mg/kg	1.353	1.218	mg/kg	0.000122 %		
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				30	mg/kg	1.579	47.385	mg/kg	0.00474 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7	pH		7	pH	7pH		
				PH									
27		phenanthrene				3.2	mg/kg		3.2	mg/kg	0.00032 %		
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				4.8	mg/kg		4.8	mg/kg	0.00048 %		
			204-927-3	129-00-0									
30		zinc { zinc oxide }				140	mg/kg	1.245	174.26	mg/kg	0.0174 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0813 %		

Key

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

Classification of sample: WS01[3]

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

Sample details

Sample Name:	LoW Code:	
WS01[3]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:		
1.4 m	Entry:	17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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 hazardous because Samples are not wet and unlikely to be hazardous.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.758%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.758%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.758%)

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
		CLP index number	EC Number	CAS Number							
1		ethylbenzene				<1 mg/kg		<1 mg/kg	<0.0001 %		<**LOD**
		601-023-00-4	202-849-4	100-41-4							
2		TPH (C6 to C40) petroleum group				7576.305 mg/kg		7576.305 mg/kg	0.758 %		
				TPH							
								Total:	0.758 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection
ND	Not detected

Appendix A: Classifier defined and non CLP determinands

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

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

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

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

boron tribromide/trichloride/trifluoride (combined) (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Conversion factor: 13.43
Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride
Data source: N/A
Data source date: 06 Aug 2015
Hazard Statements: EUH014 , Acute Tox. 2 H330 , Acute Tox. 2 H300 , Skin Corr. 1A H314 , Skin Corr. 1B H314

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

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

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

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

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

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

lead compounds with the exception of those specified elsewhere in this Annex

CLP index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following CLP protocols, considers many simple lead compounds to be Carcinogenic category 2
Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

pH (CAS Number: PH)

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

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

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

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

CLP index number: 601-023-00-4
Description/Comments:
Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

beryllium {beryllium oxide}

Worst case species based on hazard statements

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

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

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Most likely common species

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

Worst case species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

zinc {zinc oxide}

Worst case species based on hazard statements

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2020.281.4492.8754 (08 Oct 2020)
HazWasteOnline Database: 2020.281.4492.8754 (08 Oct 2020)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
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 Wastes 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
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Waste Classification Report

RK2Z3-54AAU-MJYAK

Job name

C-15220

Description/Comments

Glacial Till Soils

Project

Stopes Road

Site

Bolton

Related Documents

#	Name	Description
None		

Waste Stream Template

Hydrock Standard plus Cresol (ammended Lead)

Classified by

Name:
Sarah Hey
Date:
09 Oct 2020 10:55 GMT
Telephone:
01454 619533

Company:
Hydrock Consultants Ltd

HazWasteOnline™ Training Record:

Course	Date
Hazardous Waste Classification	07 Feb 2018
Advanced Hazardous Waste Classification	08 Feb 2018

Report

Created by: Sarah Hey
Created date: 09 Oct 2020 10:55 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP03	1.00	Non Hazardous		2
2	TP04	1.70	Non Hazardous		5
3	WS03	2.20	Non Hazardous		7
4	WS01	1.70	Non Hazardous		9

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	12
Appendix B: Rationale for selection of metal species	13
Appendix C: Version	14

Classification of sample: TP03

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

Sample details

Sample Name:
TP03
Sample Depth:
1.00 m

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

Hazard properties

None identified

Determinands

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

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.8 mg/kg	1.32	7.658 mg/kg	0.000766 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.74 mg/kg	2.775	2.054 mg/kg	0.000205 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.5 mg/kg	13.43	6.715 mg/kg	0.000672 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		27 mg/kg	1.462	39.462 mg/kg	0.00395 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		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									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	14	mg/kg		14	mg/kg	0.0014 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				15	mg/kg	1.579	23.692	mg/kg	0.00237 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				7.1	pH		7.1	pH	7.1 pH		
				PH									
28		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				50.806	mg/kg		50.806	mg/kg	0.00508 %		
				TPH									
32		zinc { zinc oxide }				31	mg/kg	1.245	38.586	mg/kg	0.00386 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.022 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00508%)

Classification of sample: TP04

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

Sample details

Sample Name:	LoW Code:
TP04	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
1.70 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.961 mg/kg	0.000396 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.46 mg/kg	2.775	1.277 mg/kg	0.000128 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.8 mg/kg	13.43	10.744 mg/kg	0.00107 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		14 mg/kg	1.462	20.462 mg/kg	0.00205 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				17	mg/kg	1.126	19.14	mg/kg	0.00191 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
20		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
21		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	8.6	mg/kg		8.6	mg/kg	0.00086 %		
		082-001-00-6											
23		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
24		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
25		nickel { nickel dihydroxide }				9.3	mg/kg	1.579	14.689	mg/kg	0.00147 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
26		pH				7.8	pH		7.8	pH	7.8 pH		
				PH									
27		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
28		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
29		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
30		zinc { zinc oxide }				17	mg/kg	1.245	21.16	mg/kg	0.00212 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0107 %		

Key

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

Classification of sample: WS03

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

Sample details

Sample Name:	LoW Code:
WS03	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
2.20 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.961 mg/kg	0.000396 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.39 mg/kg	2.775	1.082 mg/kg	0.000108 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.5 mg/kg	13.43	6.715 mg/kg	0.000672 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<**LOD**
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		5.6 mg/kg	1.462	8.185 mg/kg	0.000818 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<**LOD**

#		Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
15		chrysene	601-048-00-0	205-923-4	218-01-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
16		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10	mg/kg	1.126	11.259	mg/kg	0.00113 %		
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
18		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
19		fluoranthene		205-912-4	206-44-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
20		fluorene		201-695-5	86-73-7		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
22		lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	6.8	mg/kg		6.8	mg/kg	0.00068 %		
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
24		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
25		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		16	mg/kg	1.579	25.272	mg/kg	0.00253 %		
26		pH			PH		6.3	pH		6.3	pH	6.3 pH		
27		phenanthrene		201-581-5	85-01-8		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
28		phenol	604-001-00-2	203-632-7	108-95-2		<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
29		pyrene		204-927-3	129-00-0		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
30		zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		26	mg/kg	1.245	32.363	mg/kg	0.00324 %		
											Total:	0.0102 %		

Key

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

Classification of sample: WS01

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

Sample details

Sample Name:	LoW Code:
WS01	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	
1.70 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 index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.8 mg/kg	1.32	7.658 mg/kg	0.000766 %		
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
8	benzo[ghi]perylene		205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
10	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.87 mg/kg	2.775	2.415 mg/kg	0.000241 %		
11	boron { boron tribromide/trichloride/trifluoride (combined) }			10294-33-4, 10294-34-5, 7637-07-2		0.4 mg/kg	13.43	5.372 mg/kg	0.000537 %		
12	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
13	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		18 mg/kg	1.462	26.308 mg/kg	0.00263 %		
14	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15		chrysene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
16		copper { dicopper oxide; copper (I) oxide }				22	mg/kg	1.126	24.77	mg/kg	0.00248 %		
		029-002-00-X	215-270-7	1317-39-1									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
18		dibenz[a,h]anthracene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
19		ethylbenzene				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		fluoranthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-912-4	206-44-0									
21		fluorene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-695-5	86-73-7									
22		indeno[123-cd]pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-893-2	193-39-5									
23		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	12	mg/kg		12	mg/kg	0.0012 %		
		082-001-00-6											
24		mercury { mercury dichloride }				<0.3	mg/kg	1.353	<0.406	mg/kg	<0.0000406 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
25		naphthalene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
26		nickel { nickel dihydroxide }				32	mg/kg	1.579	50.544	mg/kg	0.00505 %		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
27		pH				8.1	pH		8.1	pH	8.1 pH		
				PH									
28		phenanthrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			201-581-5	85-01-8									
29		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
30		pyrene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			204-927-3	129-00-0									
31		TPH (C6 to C40) petroleum group				160.006	mg/kg		160.006	mg/kg	0.016 %		
				TPH									
32		zinc { zinc oxide }				58	mg/kg	1.245	72.193	mg/kg	0.00722 %		
		030-013-00-7	215-222-5	1314-13-2									
										Total:	0.0369 %		

Key

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.016%)

Appendix A: Classifier defined and non CLP determinands

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

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

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

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

boron tribromide/trichloride/trifluoride (combined) (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

Conversion factor: 13.43
Description/Comments: Combines the hazard statements and the average of the conversion factors for boron tribromide, boron trichloride and boron trifluoride
Data source: N/A
Data source date: 06 Aug 2015
Hazard Statements: EUH014 , Acute Tox. 2 H330 , Acute Tox. 2 H300 , Skin Corr. 1A H314 , Skin Corr. 1B H314

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

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

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

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

CLP index number: 601-023-00-4
Description/Comments:
Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

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

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

lead compounds with the exception of those specified elsewhere in this Annex

CLP index number: 082-001-00-6
Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following CLP protocols, considers many simple lead compounds to be Carcinogenic category 2
Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

pH (CAS Number: PH)

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

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

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

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

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

beryllium {beryllium oxide}

Worst case species based on hazard statements

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

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

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Most likely common species

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

Worst case species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

zinc {zinc oxide}

Worst case species based on hazard statements

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.1, May 2018
HazWasteOnline Classification Engine Version: 2020.281.4492.8754 (08 Oct 2020)
HazWasteOnline Database: 2020.281.4492.8754 (08 Oct 2020)

This classification utilises the following guidance and legislation:
WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018
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 Wastes 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
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Appendix G

Preliminary Geotechnical Risk Register

Geotechnical Hazard Identification – Following Ground Investigation

The preliminary Geotechnical Risk Register following Ground Investigation is set out in Table G.2.

The probability and impact of a hazard have been judged on a qualitative scale as set out in Table G.1. The degree of risk (R) is determined by combining tan assessment of the probability (P) of the hazard occurring with an assessment of the impact (I) of the hazard and associated mitigation it will require if it occurs (R = P x I).

Table G.1: Qualitative assessment of hazards and risks

P = Probability			I = Impact			R = Risk Rating (P x I)	
1	Very unlikely (VU)		1	Very Low		1 – 4	None / negligible
2	Unlikely (U)		2	Low		5 – 9	Minor
3	Plausible(P)		3	Medium		10 – 14	Moderate
4	Likely (Lk)		4	High		15 – 19	Substantial
5	Very Likely (VLk)		5	Very High		20 - 25	Severe

Table G.2: Preliminary geotechnical risk register

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Uncontrolled Made Ground (variable strength and compressibility).	There is Made Ground due to historical construction activity at the site as well as the backfilled quarry in the west of the site and historic landfilling. Made Ground recorded to 7.5m	Structures	Bearing capacity failure, settlement (total and differential).	4	4	16	Design foundations to found below Made Ground or on Made Ground which has been improved.
			Floor slab failure.	3	4	12	Design appropriate ground improvement, which will likely include over-excavation and replacement for the majority of the site. Suspended floor slabs in areas of deeper Made Ground
		Roads and Pavements.	Settlement (total and differential) of roads and pavements.	4	3	12	Design roads and pavements using suitable geotechnical parameters and increase the sub-base. Ground improvement using dynamic surface compaction, or basal reinforcement in area of backfilled quarry.
		Services.	Settlement (differential), causing damage to services.	3	2	6	Anticipated settlements are significant with regard to services, especially at the connection with piled structures. There is a requirement to improve the Made Ground prior to installation of services. It is also advisable to steepen falls in drainage to prevent back fall and use rocker boxes and flexible couplings.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	3	5	15	Where soft spots encountered, over-excavation and replacement with suitable fill. Working platform and haul roads required for specific plant Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Cont…							

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Low strength and high compressibility of natural soils (Glacial Till)	The ground investigation identified low strength particularly within the upper 3.0m	Structures	Bearing capacity failure, settlement (total and differential).	4	4	16	Design foundations to found below low strength zone. Design foundations based on low foundation pressures and confirm with settlement analysis
		Roads and Pavements.	Settlement (total and differential) of roads and pavements.	4	3	12	Design roads and pavements using suitable geotechnical parameters and increase the sub-base. Consider geogrid at the base of capping to reduce thickness of granular material
		Services.	Settlement (differential), causing damage to services.	2	2	4	Settlement of services unlikely to be significant in natural soils. Further consideration may be required where services are required in the vicinity of the pong on the eastern boundary
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	3	5	15	Where soft spots encountered, over-excavation and replacement with suitable fill. Working platform and haul roads required for specific plant Site inspection and watching brief by Contractor to review working platform frequently and regularly.
Shrinkage / swelling of the clay fraction of soils under the influence of vegetation.	The clays of the Glacial Till are Low volume change potential. Mature trees are located on site and on the site boundary	Foundations.	Shrinkage or heave of soils and associated damage to foundations.	3	4	12	Deepen foundations due to trees in accordance with NHBC Standards
		Floor slabs.	Floor slab failure.	3	4	12	Over-excavate and replace desiccated or potentially desiccated soils where required
Cont…							

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Variable lateral and vertical changes in ground conditions.	The Made Ground soils vary laterally and vertically, both in composition and strength. The depth of rockhead is also variable.	Structures	Excessive total and differential settlement	3	4	12	Design foundations to found below Made Ground or on Made Ground which has been improved to mitigate differential settlement. Design foundations to found below any loose relative density sand and gravel or soft clay. Incorporate mesh reinforcement into foundations.
			Floor slab failure.	3	4	12	Suspended floor slabs in the vicinity of the backfilled quarry
		Roads and Pavements.	Excessive total and differential settlement	3	3	9	Use geogrids to span areas of high differential.
		Services.	Settlement (differential), causing damage to services.	3	3	9	Detailed assessment required where settlement sensitive infrastructure passes into areas of deeper untreated Made Ground
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction.	2	3	6	Where soft spots encountered, over-excavate and replace with suitable fill. Design working platforms and haul roads appropriately
Sulfates present in the soils.	The ground investigation has proven that there is the potential for expansive sulfate bearing soils to be present. This appears to be particularly related to the Made Ground	Attack of buried concrete.	Damage to concrete and reduction in strength.	3	4	12	Classify concrete in accordance with BRE SD1 and design concrete accordingly.
		Earthworks/ pavements.	Sulfate heave following the use of hydraulic binders.	3	4	12	Supplementary sulfate testing in accordance with BRE guidelines to be undertaken during earthworks where binders are proposed. The use of modification / stabilisation to be restricted to suitable materials following laboratory trials. In all instances where improvement by the inclusion of binders is considered, a mix design is required and as part of this design, samples should be checked for swelling, even where very low sulfate values are recorded.

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Obstructions.	Obstructions have been proven by the investigation and there is a potential for additional obstructions to be present due to historical construction activity, or unknown fill in Made Ground.	Construction staff, vehicles and plant operators.	Risk of collapse of excavation as obstructions are pulled out.	4	3	12	Consider likelihood of excavation collapse in temporary works risk assessment.
		Roads and Pavements	Hard spots in externals and roads / pavements.	3	2	6	Removal of obstructions during the enabling works.
		Programme	Delays at construction stage during foundation construction, drainage and ground improvement (VSC)	3	3	6	
Shallow groundwater and changing groundwater	Monitoring during the ground investigations has proven perched groundwater within the Made Ground and superficial soils	Permanent subgrade	Low strength subgrade in areas of cut due to shallow groundwater	3	2	6	Temporary drainage and dewatering during construction. Permanent drainage to account for localised groundwater.
		Pavements and external areas	Inundation settlement in areas of deep Made Ground	2	4	8	The shallow groundwater is to be taken into account during geotechnical design of the permanent works including worst case groundwater levels.
		Temporary Works	Excavation collapse	3	4	12	Temporary works design required. Allowance for sump pumping and control of groundwater.
Earthworks – poor bearing capacity and / or settlement of new fill.	There is likely to be minor earthworks associated with achieving the required site levels	Roads and Pavements.	Settlement (total and differential).	4	3	12	Minimum engineering performance to be defined in an Earthworks Specification.
		Services.	Settlement (differential), causing damage to services.	4	3	12	Site testing to be undertaken to confirm the works are in accordance with the design. A suitable watching brief and independent verification.
Cont….							

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required	
				P	I	R		
Historic Mining.	The site has been proven to be within the zone of influence of underground coal mining. Surface mining also impacts the western side of the site	Structures	Reduction of lateral support potentially affecting stability of the structure. Excessive settlement	4	5	20	Additional works required to locate mine entries and quarry highwalls. Possibly to consider geophysics. Further review of underground workings to be undertaken in conjunction with an appropriate treatment strategy.	Piled foundations in areas of opencast workings. Notwithstanding stabilisation works, foundations to be designed in accordance with CIRIA publication C758D, 'Abandoned Mine Workings Manual' and 'Structural Foundations Manual for Low Rise Buildings' (Atkinson) or the NCB publication, 'Subsidence Engineers Handbook'.
		Roads and Pavements and external areas	Serviceability affected. Voids opening at surface	4	4	16		Underground workings to be treated. Mine entries and shafts to be treated to prevent localised collapse
		Services.	Damage to services. Leaking drainage causing inundation and further collapse.	4	3	12		No soakaway drainage within influencing distance of structures and roads. Infiltration if used is to be installed in POS. Use rocker boxes and flexible couplings.
		Construction staff, vehicles and plant operators.	Trafficking of the site in temporary conditions. Overturning of plant during construction/treatment.	4	4	16		Working platform design and treatment methodology to consider collapse during enabling works. Particularly during excavation and vibratory works.

Hazard	Comments	Who is at Risk	Consequence	Risk Before Mitigation			Actions Required
				P	I	R	
Unforeseen ground conditions - risk associated with limited data.	Ground investigation has been undertaken. However, additional information will be obtained during construction. Ground conditions are only defined at exploratory hole locations.	All aspects of the development		3	4	12	Additional sources of information relating to the location of the shallow mine workings and potential highwalls required. Designers to be contacted if conditions encountered are different to those identified during investigation. Regular inspections of excavations and earthworks for evidence of stability.
Adverse chemical ground conditions, (e.g. expansive slag).	The site history and the conditions proven during the ground investigation indicate there is the potential for red shale and expansive	Foundations and ground bearing floor slabs		3	4	12	Suspended floor slabs in areas of Made Ground in accordance with NHBC Standards. Concrete structures to be designed with appropriate concrete class. Removal of adverse and deleterious materials as part of the enabling works.

Whilst the probability and impact of the hazard occurring can be reduced to a minimum by geotechnical design, the impact cannot be reduced below very low. The risk register will need to be up-dated, as necessary, to reflect design, additional information, data and experience as it is gained through the construction process.

Impacts of the design with regard to health and Safety considerations will need to be included by the designer at design stage.

Appendix H

Plausible Source-Pathway-Receptor Contaminant Linkages

Summary of Potential Contaminant Linkages

Table H.2 lists the plausible contaminant linkages which have been identified. These are considered as potentially unacceptable risks in line with guidelines published in LCRM (2019) and additional risk assessment is required.

Source – Pathway – Receptor Linkages have been assessed in general accordance with guidance in CIRIA Report C552 (Rudland et al 2001) but modified to add a 'no linkage' category and to remove low/moderate risk (See Table H.1). Further information is given in the relevant Hydrock methodology, referenced in Appendix I, including descriptions of typical examples of probability and consequences.

It should be noted that whilst the risk assessment process undertaken in this report may identify potential risks to site demolition and redevelopment workers, consideration of occupational health and safety issues is beyond the scope of this report and need to be considered separately in the Construction Phase Health and Safety Plan.

Table H.1: Consequence versus probability assessment.

		Consequence			
Probability		Severe	Medium	Mild	Minor
	High Likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Low risk	Very low risk
	Low Likelihood	Moderate risk	Low risk	Low risk	Very low risk
	Unlikely	Low risk	Very low risk	Very low risk	Very low risk
	No Linkage	No risk			

Table H.2: Exposure model – final source-pathway-receptor contaminant linkages

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments	
Made Ground associated with historic development (arsenic and PAH, hotspot of vanadium)	Ingestion, inhalation or direct contact.	Site users.	Likely	Medium	Moderate	There is Made Ground below the entire site, and there is pervasive arsenic and PAH at levels in excess of the GAC.	Mitigation in the form of an engineered cover system.
	Inhalation of fugitive dust.	Neighbours.	Low likelihood	Medium	Low		
	Leaching through unsaturated zone.	Groundwater and possible abstractors.	Low likelihood	Medium	Low		There is considered to be a low risk to controlled waters due to underlying cohesive Glacial Till deposits inhibiting the vertical pathway. Furthermore, groundwater testing has confirmed there are no significant exceedances of the GAC and mitigation is not required. In addition, due to the general topography of the site sloping down towards the southwest, it is unlikely contaminants will migrate towards the surface water receptors (drainage ditch and ponds).
	Surface run-off.	Aquatic ecosystems. Surface water and possible abstractors.	Low likelihood	Medium	Low		
Made Ground below the site from historic development (metals).	Root uptake.	Landscape planting	Likely	Minor	Very Low	There is Made Ground below the entire site, and concentrations of boron, copper and nickel exceed the GAC for plant life. Furthermore, as there is no subsoil or topsoil on site, this will need to be imported, which will form part of the cover system.	

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments	
Made Ground below the site from historic development (asbestos).	Inhalation of fugitive dust.	Site users.	Likely	Severe	Very High	There is Made Ground below the entire site, and ACM and asbestos fibres have been proven to be present in the soil.	Contact with these materials is likely in gardens and areas of Public Open Space. Mitigation measures will be required to break the SPR linkage.
		Neighbours.	Low likelihood	Severe	Moderate		The risk of significant generation of dust is likely only during site development process and can therefore be controlled. Suppression should be included in control measures. There is ACM present on site, so works to be undertaken in accordance with CAR 2012.
Made Ground below the site from historic development (PAH and petroleum hydrocarbons).	Direct contact	Water supply pipes.	Likely	Medium	Moderate	There is Made Ground below the entire site, and there are PAH and petroleum hydrocarbons at levels in excess of the GAC. Direct contact with buried water supply pipes is therefore likely. Mitigation measures will be required to break the SPR linkage.	
Hotspot of petroleum hydrocarbons in the vicinity of WS01	Ingestion, inhalation or direct contact.	Site users.	Likely	Medium	Moderate	Hydrocarbons in excess of the GAC have been encountered in WS01, associated with historical tanks in the area.	Contact with these materials is possible. Mitigation will be required.
	Vapours.	Neighbours.		Low likelihood	Low		Site impact is very localised and no impact on neighbours is anticipated.
	Inhalation of fugitive dust.	Neighbours.	Low	Medium	Low		The risk of significant generation of dust is likely only during site

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments	
							development and can therefore be controlled. Suppression should be included in control measures.
	Leaching through unsaturated zone.	Groundwater and possible abstractors.	Likely	Medium	Moderate		Petroleum hydrocarbons have not been detected in the groundwater and as such there is considered to be no risk to identified receptors.
	Direct contact	Water supply pipes.		Medium	Moderate		Direct contact with buried water supply pipes is likely and mitigation will be required.
Ground gases (carbon dioxide and methane) from organic materials in the Made Ground below the site and associated with historic mining issues such as the opencast Made Ground.	Migration, build up and asphyxiation.	Site users.	Likely	Medium to Severe	Moderate to High	Ground gas monitoring has indicated elevated levels of carbon dioxide and methane. Therefore, mitigation measures to Characteristic Situation 2 conditions are required for carbon dioxide and possibly for methane where plots are located within the Opencast Made Ground. However, further monitoring of the Landfill Made Ground and peat deposits are required to fully characterise the site.	
		Neighbours.		Medium	Moderate		
Ground gases (methane) from organic materials in the Made Ground and from the opencast Made Ground.	Migration, build up and explosion.	Site users.	Unlikely	Medium to Severe	Very low to Low	Elevated concentrations of methane have been recorded in the opencast Made Ground. Therefore, mitigation measures to CS2 conditions should be allowed for, until further monitoring has been undertaken.	
		Neighbours.					
		Buildings on site.					
		Buildings on adjacent sites.					

Sources	Possible Pathways	Receptors	Probability	Consequence	Risk Level	Comments
Asbestos fibres from insulation or asbestos-containing materials in the buildings.	Fugitive dust.	On Site	Likely	Severe	High	Asbestos may be present in existing buildings and in Made Ground. Careful removal will be required from buildings during demolition. However, removal under controlled conditions should limit release of fibres to the air and the ground.
		Neighbours.	Unlikely	Severe	Low	

Appendix I

Hydrock Methodologies

This report uses Hydrock Desk Study and Ground Investigation template V47.1.

This appendix provides additional background information on certain approaches and methods used by Hydrock Consultants Limited in the preparation of this report.

The following Hydrock Methodologies apply to this report. These are not included, but are available on request by quoting the methodology reference, revision and date.

Reference	Name	Revision	Date
001	Desk Study	001	30/07/2018
002	Ground Investigation	001	30/07/2018
003	Preliminary Geo-environmental Risk Assessment Rationale	001	30/07/2018
004	Preliminary geotechnical Risk Register	001	30/07/2018
005	Generic Risk Assessment for Human Health (Soils)	001	30/07/2018
006	Generic Risk Assessment for Pollution of Controlled Waters	001	30/07/2018
007	Detailed Quantitative Risk Assessment for Risk to Controlled Waters	001	30/07/2018
008	Generic Risk Assessment for Risk to Plants	001	30/07/2018
009	Generic Risk Assessment for Water Supply Pipes	001	30/07/2018
010	Generic Ground Gas Risk Assessment	001	30/07/2018
011	Determination of Contaminated Land Under Part 2A of the Environmental Protection Act 1990	001	30/07/2018
012	Waste Management	001	30/07/2018
013	Materials Management	001	30/07/2018
014	Asbestos in Soils	001	30/07/2018
015	Remediation and Mitigation (New Methodology)	001	30/07/2018
016	Geotechnical Categorization and Characteristic Design Values	001	30/07/2018
017	Foundation and Floor Slab Recommendations - Residential	001	30/07/2018
019	Earthworks Suitability Recommendations	001	30/07/2018
020	Pavements and Pavement Foundations	001	30/07/2018
023	Sulphate Recommendations	001	30/07/2018