

Wilson Bowden Developments Ltd
Plot Q, Kingsway Business Park
Rochdale

Phase 2 Geo-Environmental Assessment

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Rochdale
Phase 2 Geo-Environmental Assessment

Birmingham
Livery Place, 35 Livery Street, Colmore Business District, Birmingham, B3 2PB
T: 0121 233 3322

Leeds
Whitehall Waterfront, 2 Riverside Way, Leeds
LS1 4EH
T: 0113 233 8000

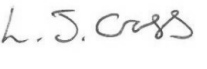
London
11 Borough High Street
London, SE1 9SE
T: 0207 407 3879

Manchester
11, Portland Street, Manchester M1 3HU
T: 0161 233 4260

Nottingham
Waterfront House, Station Street, Nottingham NG2 3DQ
T: 0115 924 1100

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Author:	Catherine Riley CEng, CEnv, MCIWEM	Principal Geo- Environmental Consultant	
Reviewer:	Tim Hull BSc MSc CGeol FGS SiLC SQP	(Associate Director) Technical Manager	
Approver:	Luke Cross BSc (Hons)	Principal Geo- Environmental Consultant	

REVISION CONTROL

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Notice

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This report details the findings of work carried out between the date of our appointment and the date of this report. The report has been prepared by BWB 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. BWB has used reasonable skill, care and diligence in the design of the investigation of the site. The inherent variation of ground conditions allows only definition of the actual conditions at the locations and depths of the exploratory holes formed and at the time of the investigation. At intermediate locations, conditions can only be inferred.

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

Should additional information or records be provided following the issue of this report, or are not identified in the References section of this report, which are considered to be relevant to the study area and for which reliance can be provided, BWB should be informed in order that the content of the document can be reviewed and revised accordingly.

The work has been carried out in general accordance with recognised good practices.

Unless otherwise stated, no assessment has been made concerning soil or groundwater known or suspected to be contaminated or impacted with radioactive substances or unexploded ordnance.

Geotechnical designs should be carried out in parallel with the geo-environmental recommendations including requirements for remediation to minimise contamination risks and to undertake all earthworks in accordance with a Declared Material Management Plan.

Geotechnical recommendations provided in this report are preliminary and may be subject to further investigation, assessment and geotechnical design.

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

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY	
Site Address	Plot Q, Michael Faraday Avenue, Kingsway Business Park, OL16 4JN.
Site Setting	At the time of the ground investigation, the site was disused and comprised of overgrown grassland with an old stone wall running centrally through the site. The proposed development comprises a warehouse distribution/production unit with first floor office and core facilities.
Published Ground Conditions	Information published by the BGS indicates that the site is underlain by Glaciofluvial Sheet Deposits beneath the west and Glacial Till beneath the east, overlying bedrock of the Pennine Lower Coal Measures Formation. Hummocky Glacial Deposits and Alluvium linked to Stanney Brook are also shown to be in the vicinity. The Groundsure report indicates two localised areas of worked ground near the eastern boundary and south east perimeter of the site.
Site Investigation	Investigation undertaken between 18–21 November 2025 comprising: three cable percussive boreholes (BH01–BH03) to a maximum depth of 15.45 m bgl including SPTs and gas/groundwater installations, and fifteen machine-excavated trial pits (TP01–TP15) to a maximum depth of 3.50 m bgl.
Ground Conditions Encountered	The ground conditions encountered generally confirmed the published geology discussed in the Phase 1 Desk Study report (244498-BWB-ZZ-XX-T-G-0001_Phase 1 Geo-Environmental Assessment). Ground conditions comprised Topsoil (from 0.2m to 0.45m thickness), locally underlain by Made Ground (0.20m to 2.30m thick) underlain by Glaciofluvial Sheet Deposits to the west and Till to the east. The Glaciofluvial deposits comprise interbedded medium-dense sands and firm to stiff clays, whereas the Till comprises firm to stiff slightly sandy and slightly gravelly clays. Bedrock was not encountered in any investigation location.
Geotechnical Appraisal	The Made Ground, present locally to depths of up to 2.30m, is unsuitable for supporting shallow foundations due to its heterogeneity and poor competence. Shallow foundations may be feasible where founded on competent natural soils, subject to structural loading and final platform levels. Ground improvement, such as vibro stone columns or rigid inclusions, may allow the use of shallow pad foundations and a ground-bearing slab. Piled foundations also remain a feasible option depending on load requirements. The design sulphate and ASEC class for below ground concrete at the site is DS-1 and AC-2z. Localised Made Ground is DS-4, AC-4. Soakaway drainage is not considered viable due to variable and shallow groundwater. Groundwater is likely to vary seasonally at the site. The ground investigation will have likely captured the low range of groundwater conditions, with some areas of the site displaying evidence of historical waterlogging at the surface (reeds, organic topsoil build up). If groundwater levels rise following extended periods of wet weather, groundwater control may be required during construction ground works.
Environmental Appraisal	No exceedances of human-health screening criteria for a commercial end use were identified in the soil samples. Minor exceedances of leachable copper, nickel and zinc were recorded; however, given that the proposed development incorporates extensive hardstanding, the risk to controlled waters is not considered significant. Ground gas monitoring recorded slightly elevated concentrations of carbon dioxide, negligible flows, and no detectable methane. On this basis, the site is classified as Characteristic Situation 1 (CS1), and no ground gas protection measures are required.

EXECUTIVE SUMMARY	
Waste Assessment	The results of the waste classification indicates that soils are non-hazardous.
Recommendations	Ground improvement is likely to be required to support the proposed development and should need to be undertaken in accordance with a suitable specification. Earthworks will need to be undertaken in accordance with a suitable specification document, which will need to be prepared to describe the materials and their requirements including placement and acceptability limits. . Contingency for groundwater control should be considered especially if development is undertaken during winter months.
This summary should be read in conjunction with BWB's full report (ref. 244498-BWB-ZZ-XX-T-G-0002_Phase 2 Geo-Environmental Assessment) and reflects an assessment of the Site based on information received by BWB at the time of production.	

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1. INTRODUCTION

Instruction

- 1.1 BWB Consulting (BWB) was instructed by Wilson Bowden Developments Ltd (the Client) to carry out a Phase 2 Geo-Environmental Assessment for the site at Plot Q, Kingsway Business Park, Rochdale. Details of the project brief are included in BWB proposal reference 250707/01/03/2444 98/CRI/RTR, dated 07/07/25.
- 1.2 The subject site is being considered for development, to comprise a warehouse distribution/production unit with first floor office and core facilities.

Previous Reports

- 1.3 The following geo-environmental reports have previously been completed for the site by BWB:
- 'Phase 1 Geo-Environmental Assessment', reference 244498-BWB-ZZ-XX-T-G-0001_Phase 1 Geo-Environmental Assessment, Rev P2 dated May 2026; and
 - 'Technical Note – Verification Report' Loop Road Storage Area – Kingsway, Rochdale, reference KLR-BWB-ZZ-XX-RP-YE-0001_TN, dated 10th August 2022.
- 1.4 In addition, BWB have also completed the following relevant reports for the adjacent site (Plot R):
- 'Phase 1 Geo-Environmental Assessment', reference 'KYP-BWB-ZZ-XX-RP-YE-0001_Ph1', dated July 2022; and
 - 'Phase 2 Geo-Environmental Assessment', reference KYR-BWB-ZZ-XX-RP-YE-0002_Ph2, dated August 2025.

Objectives

- 1.5 The objectives of the report are to assess:
- The prevailing ground and groundwater conditions across the site;
 - The potential presence and extent of contamination in shallow soil and groundwater beneath the site;
 - The significance and magnitude of the observed contamination through comparison of analytical data to appropriate published environmental screening criteria;
 - The geotechnical properties of the ground beneath the site to enable geotechnical assessment and foundation selection; and
 - The ground gas regime beneath the site.
- 1.6 The above objectives will allow the preliminary Conceptual Site Model presented in the Phase 1 report to be verified and updated.

- 1.7 The report has been completed in accordance with BS10175:2011+A2:2017 'Investigation of Potentially Contaminated Sites, Code of Practice' and EA Guidance on Risk Management of Land Contamination¹.
- 1.8 This report presents the information obtained from a desk study and the ground investigations and contains relevant factual information from the previous investigations. The report, together with the associated Figures and Appendices, provides a Ground Investigation Report (GIR), as defined in BS EN 1997-1:2024 and BS EN 1997-2:2007

Scope of Works

- 1.9 The ground investigation scope of works was completed between the 18th and 21st November 2025 and comprised the following.
- Non-intrusive survey of excavation locations for underground utilities;
 - Fifteen machine excavated trial pits;
 - Three cable percussive boreholes;
 - Four gas and groundwater monitoring visits;
 - Chemical laboratory analysis of soils and groundwater; and
 - Geotechnical laboratory testing of soil.

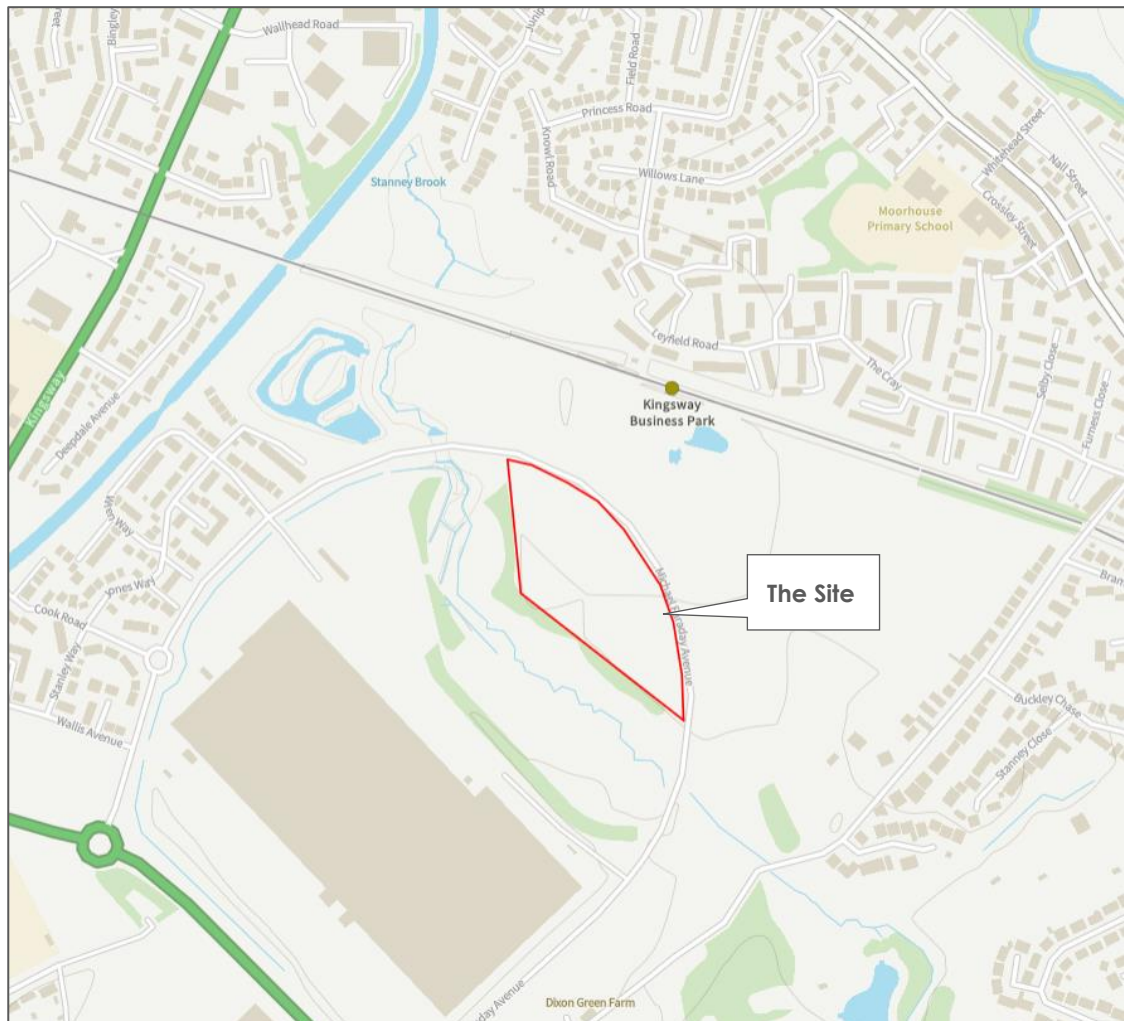
¹ <https://www.gov.uk/government/publications/land-contamination-risk-management-lcrm>

2. THE SITE

Site Location

- 2.1 The site is located at Plot Q, Kingsway Business Park, in Rochdale located at National Grid Reference 391861, 412506. The location of the site is shown in **Figure 2.1**.

Figure 2.1 : Site Location Plan



Site Description

- 2.2 The site comprises an irregularly shaped parcel of land, featuring severe local undulations and an area of low topography in the northeast corner. Photographs from the site inspection are presented in **Appendix 1**.
- 2.3 At the time of the walkover (11/11/25), the site comprised of a single open grass-covered field with no permanent structures present (Photo 9), perhaps used for agricultural purposes historically.

- 2.4 However, it appeared to have been left vacant and unused for a significant length of time when the inspection was conducted.
- 2.5 Access to the site was limited by a bund along the northern perimeter adjacent to Michael Faraday Avenue. In front of the bund, a ditch was present (Photo 2), restricting vehicular entry. A tarmac pathway with a combined pedestrian and cycle route ran parallel to the site boundary alongside Michael Faraday Avenue (Photo 5). A similar bund was observed along the opposite perimeter, featuring a steep slope that extended down to the edge of the plot and tree line.
- 2.6 The site was covered by grassland and there was no hardstanding present. It was bisected by a dry-stone wall (Photo 3) that transitioned into a barbed wire fence (which spanned across the site from northwest to southeast) (Photo 4). Several gaps were noted in both the wall and fencing. Ground conditions were waterlogged, particularly in low-lying areas.
- 2.7 The site exhibited severe local undulation, with uneven ground and occasional depressions concealed by long grass, making traversal difficult, with an area of low topography on the northwest corner of the site (Photo 1). Vegetation was developed in certain areas, restricting access, while other sections were more open.
- 2.8 No surface water or perched water was observed during the walkover. However, dense vegetation in some areas limited the visibility of potential wet spots. A ditch running downslope, parallel to Michael Faraday Avenue suggested potential water flow, with drainage pipes identified in this location (Photo 7). However, this was not marked as a watercourse on the OS Maps.
- 2.9 Drainage appeared to be via natural infiltration. No drainage infrastructure was confirmed, apart from gullies present in Michael Faraday Avenue and pipes noted near the ditch. Service markers were noted during the site walkover, labelled 'Foul' and 'GW'. The service plans from United Utilities indicate manholes and services spurs for foul and surface water drainage are located on the edge of the site in two locations: in the north close to the footpath running to the east of Plot R and on the east of the site. No manholes were observed on site however a mound was present along the boundary of the site, and the manholes may therefore lie beneath this.

Previous Report Summary (Technical Note – Verification Report)

- 2.10 BWB produced a Validation Report for a small area in the south area of the Plot Q site with respect to its former use as a storage area for soil materials excavated during Kingsway Loop Road construction works.
- 2.11 To ascertain if any substantial volume of material has been left on site following the site's use as an excavated soil storage compound, spot levels for the area were surveyed. Site levels were generally flat, 150.45m AOD in the north and 150.34m AOD in the south. Materials were placed on site without prior surveying of the site; however, levels appeared to be consistent with the undeveloped land adjacent to the north.
- 2.12 Soil sampling comprised the excavation of six shallow hand pits within the former soil storage area and subsequent chemical analysis of soils.

- 2.13 Topsoil was encountered across the site in all six shallow hand pits and comprised a brown sandy clay with rootlets. Soil testing of six shallow topsoil samples included standard metals/metalloids Free, Total and Complex cyanide, PAH (16 USEPA speciation), TPH CWG (two selected samples), asbestos, pH and fraction of organic carbon (FOC).
- 2.14 Contamination data was compared to the LQM/CIEH Suitable 4 Use Levels criteria (S4ULs), Category 4 Screening Levels (C4SLs) and BWB derived Generic Screening Criteria (GACs) for a Public Open Space (Park) end use.
- 2.15 No exceedances for guideline concentrations for the protection of human health were recorded when compared to Public Open Space (Park) screening criteria. Asbestos was not encountered in any of the soils analysed.
- 2.16 It was therefore concluded that the shallow soils were not indicated to represent a risk to human health receptors in the context of the sites current use, and the use for stockpiling had not caused any detriment to the site.

3. ANTICIPATED GROUND CONDITIONS

Published Geology

- 3.1 British Geological Survey (BGS) mapping for the site indicates that the site is underlain by Glaciofluvial Sheet Deposits beneath the west and Till beneath the east, overlying bedrock of the Pennine Lower Coal Measures Formation. Alluvium is also present around 50m west and 40m south of the site associated with Stanney Brook. Hummocky Glacial Deposits are also shown 100m southwest; these deposits were recorded during the site investigation for Plot R to the north.
- 3.2 Made Ground is indicated by the Groundsure report to be present on site in two areas. One location is marked near the eastern boundary, adjacent to Michael Faraday Avenue, in the location of a historic pond. Another is shown on the southwest perimeter of the site, close to where the tree line begins. Made Ground is defined as 'Worked Ground' in the Groundsure report.
- 3.3 No local borehole data on the BGS borehole logs. However, BWB undertook a ground investigation on Plot R which lies to the north. The investigation found that the ground conditions comprised Topsoil and Made Ground (from 0.2m to 2.3m thickness) directly underlain by Hummocky Glacial Deposits which typically comprised a layer of soft to firm clay (base depths of 0.8m to 3.0m) over medium dense to dense sands and sandy clays to a maximum proven depth of 15.45m. Bedrock was not encountered during investigation.

Hydrogeology

- 3.4 The underlying ground conditions have been classified by the Environment Agency (EA) as follows:
- Glaciofluvial Sheet - Secondary A Aquifer;
 - Glacial Till - Secondary Undifferentiated Aquifer; and
 - Pennine Lower Coal Measures - Secondary A Aquifer.

Hydrology

- 3.5 The following bodies of water are present within 400m of the site:
- Stanney Brook is present around 50m to the south west of the site boundary.
- 3.6 The north west of the site is indicated to be within an EA Groundwater Source Protection Zone 3 Outer Catchment.
- 3.7 The site itself is not within a designated flood risk zone; however, Flood Zones 1 and 2 are present around 50m north west of the site, associated with Stanney Brook.

4. PRELIMINARY ENVIRONMENTAL RISK ASSESSMENT

Introduction

- 4.1 The risk posed by any contaminants in soil or groundwater will depend on the nature of the hazard, the probability of exposure, the pathway by which exposure occurs, and the likely effects on the receptors. A contaminant is defined as a substance that has the potential to cause harm, while a risk is considered to exist if such a substance is present in sufficient concentration to cause harm and a pathway exists for a receptor to be exposed to the substance.
- 4.2 The following sections discuss all the identified potential on and off-site sources, pathways and receptors in the context of the proposed development and plausible pollutant linkages which may represent a risk to identified receptors such as human health and/or controlled waters from the data gained from the desk study. At this stage the assessment is qualitative and aimed to determine all pollutant linkages, irrespective of significance or allowing for uncertainty.
- 4.3 Three impact potentials exist for any given site; these are:
- The site impacting upon itself;
 - The site impacting on its surroundings; and
 - The surroundings impacting on the site.
- 4.4 All three impacts need to be considered in a risk assessment.
- 4.5 A Source, Pathway, Receptor analysis has been undertaken for the site based on the information provided in the preceding sections. This is presented as **Table 4:1** and further information about the risk classification scheme is included within **Appendix 2**.
- 4.6 Sources (S); These are potential or known sources of contamination that may relate to a former land use or present site feature or process (e.g. fuel storage tanks).
- 4.7 Pathways (P); A pathway is defined as a mechanism or route by which a contaminant comes into contact with, or otherwise affects a receptor. Pathways by which the identified receptors may be impacted upon in the context of the proposed development.
- 4.8 Receptors (R); Receptors are defined as people, living organisms, ecological systems, controlled waters, atmosphere, structures and utilities that could be adversely affected by contaminant(s).
- 4.9 Under the Construction Design Management (CDM) Regulations 2015, construction and maintenance contractors must undertake their own risk assessments and mitigation to protect their staff, other human receptors and the environment from potential contamination. By law potential risks to human health and the environment from construction activities must appropriately identified and all necessary steps taken to eliminate/manage that risk. Therefore, construction / maintenance workers are excluded as a receptor in the CSM.

Table 4:1 : Preliminary Conceptual Site Model

Source	Pathway	Receptor	Con	Prob	Risk	Mitigation/Investigation
S1: On site: Made Ground – Potential contaminants may include metals, benzo(a)pyrene and other PAH compounds, asbestos and hazardous ground gases (carbon dioxide/methane).	P1: Direct contact, incidental ingestion and inhalation of particulates.	R1: Construction / services personnel	Md	Lw	M/L	The exposure of intrusive maintenance workers can be mitigated by the adoption of suitable working methods, utilising appropriate personal protective equipment (PPE) and maintaining good hygiene. If significant asbestos is recorded, the requirements of the Control of Asbestos Regulations (CAR) 2012 should be complied with.
		R2: Future site users (commercial)	Md	UI	L	Limited potential sources of contamination have been identified through the Phase 1 assessment. As part of the proposed development, it is anticipated that hardstanding will be present across the majority of the site. This will limit the potential for direct contact with and minimise dust generation from potentially contaminated soils at the site post construction. In landscaped areas the provision of a clean capping layer would restrict direct access to potentially contaminated soils. <i>This ground investigation assessed the extent of potential contamination.</i>
	P2: Migration and accumulation of ground gasses in enclosed spaces leading to asphyxiation (carbon dioxide) or explosion (methane).	R1: Construction/ services personnel	Md	Lw	M/L	Gas assessment should be consistent with British Standard and CIRIA guidance. BGS mapping identifies Alluvium superficial soils, adjacent to the site, which may contain organic material. Limited Made Ground is expected across the site, but two areas identified as 'Worked Ground' could potential be sources. Made Ground was also present across the majority of Plot R, so may also be present on Plot Q. <i>This ground investigation assessed the extent of potential risk from ground gas.</i>
		R2: Future site users				
	P2: Leaching and permeation through soil profile.	R3: Groundwater	Md	UI	L	Limited potential sources of contamination have been identified through the Phase 1 assessment.

Source	Pathway	Receptor	Con	Prob	Risk	Mitigation/Investigation
	P3: Vertical and lateral migration of contaminants in the soil leachate.	(Secondary A aquifer)	Md	UI	L	No groundwater or surface water data is currently available for the site. <i>This ground investigation included the installation of groundwater monitoring wells to assess whether potentially unacceptable levels of contaminants of potential concern were present.</i>
	P4: Surface runoff	R5: Surface Water (Stanney Brook)	Md	UI	L	The recommendations of DEFRA and EA guidance document 'Pollution prevention for businesses' should be considered during construction.
	P5: Direct contact.	R6: Water utility pipes	Md	Lw	M/L	Organic compounds in the shallow soils could taint the water supply. <i>This ground investigation and laboratory analysis was undertaken to inform the design of new services.</i>
		R7: Buried structures/ foundations.	Md	Lw	M/L	Sulphates and low pH in the ground could accelerate the degradation of buried concrete structures (e.g. foundations). <i>This ground investigation includes an assessment of the concrete design class.</i>
S2: Off-site - Made Ground associated with ongoing development of Kingsway Business Park	P2: Leaching and permeation through soil profile	R3: Groundwater (Secondary A aquifer)	Md	UI	L	It is expected that the cohesive ground conditions will minimise groundwater migration from off-site.
	P3: Migration of contaminated groundwater	R5: Surface Water (Stanney Brook)	Md	UI	L	
VH = Very High, H = High, M = Moderate, M/L = Moderate/Low, L = Low, VL = Very Low						
KEY: Sv = Severe, Md = Medium, Mi = Mild, Mr = Minor Hi = High, Li = Likely, Lw = Low Likelihood, UI = Unlikely						

5. PHASE II ENVIRONMENTAL AND GEOTECHNICAL GROUND INVESTIGATION

Fieldworks

5.1 Intrusive ground investigation works were undertaken between 18th and 21st November. The works comprised the following works:

- Clearance of investigation locations by a specialist buried utilities' tracing company;
- Collection of coordinates and elevations of exploratory hole locations;
- The formation of three cable percussive boreholes (BH01 to BH03 inclusive) to depths of up to 15.45m bgl with in situ Standard Penetration Testing (SPTs) undertaken at regular depth intervals and installation of gas and groundwater monitoring wells on completion;
- The formation of fifteen machine-excavated trial pits (TP01 to TP15 inclusive) to depths of up to 3.50m bgl;
- Collection of environmental soil and groundwater samples for chemical analyses at a UKAS and MCERTS accredited laboratory;
- Collection of Class 3 large and small disturbed samples for geotechnical testing at a UKAS accredited laboratory; and
- Four post investigation ground gas and groundwater level monitoring visits.

5.2 An exploratory hole location plan is presented as **Drawing 1**. BWB exploratory hole records are presented as **Appendix 3**, the SPT calibration certificate is presented in **Appendix 4**, and the post investigation gas and groundwater monitoring data is presented as **Appendix 5**.

5.3 The site investigation works were carried out in general accordance with BS5930:2015+A1:2020 'Code of Practice for Site Investigations' and BS10175:2011+A2:2017 'Investigation of Potentially Contaminated Sites'.

Chemical Sampling Strategy

5.4 There was a non-targeted sampling strategy, considering the anticipated limited Made Ground and the natural shallow soils including areas of natural organic material.

5.5 Samples of Made Ground and natural soils were taken and subjected to testing to inform preliminary assessments of the potential for re-use of soils for fill and/or landscaping.

5.6 Cable percussive boreholes included single groundwater and gas installations to monitor and characterise the underlying groundwater regime within the Superficial Deposits and are summarised **Table 5:1**.

Table 5:1 : Response Zones

Location	Response Zone	Stratum
BH01	Between 3.0m and 15.0m	Glaciofluvial Sheet

Location	Response Zone	Stratum
BH02	Between 3.0m and 15.0m	Glacial Till
BH03	Between 10.0m and 15.0m	Glaciofluvial Sheet

Chemical Analytical Strategy

Soil Strategy

5.7 Selected soil samples collected from exploratory hole locations were sent to i2 Analytical Ltd (UKAS and MCERTS accredited) for chemical analysis. The following chemical analytical testing was undertaken:

- Twelve soil samples tested for a soil suite (BWB Standard Suite) comprising arsenic, barium, beryllium, water soluble boron, cadmium, chromium, hexavalent chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc, water soluble sulphate (2:1 extract), total phenols, total cyanide, free cyanide, complex cyanide, fraction of organic carbon, pH, Polycyclic Aromatic Hydrocarbons (PAHs) (United States Environment Protection Agency priority 16 compounds) and Total Petroleum Hydrocarbons (TPH) C6-C40;
- Three soil samples tested for TPH speciated to the UK Criteria Working Group (TPHCWG) aliphatic and aromatic compounds;
- Five soil samples for asbestos screening;
- Five soil samples tested for a suite of common leachable contaminants, namely arsenic, barium, beryllium, water soluble boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc, water soluble sulphate (2:1 extract), sulphate, total cyanide and pH;
- Three soil samples tested for a pesticide and herbicide suite; and
- Five soil samples tested for a Waste Acceptance Criteria (WAC) suite.

5.8 The results of the soil chemical testing are presented as **Appendix 6**.

Groundwater Strategy

5.9 Groundwater samples obtained using a bailer following the removal of 3 times the well volume of water or the well bailed dry and was allowed to recharge. The groundwater samples were sent to i2 Analytical Ltd (UKAS and MCERTS accredited) for the following suite of groundwater chemical testing:

- Two water samples tested for arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, vanadium, zinc, conductivity, soluble sulphate, ammoniacal nitrogen, total phenols, total cyanide, pH, total organic carbon, PAHs (US EPA priority 16 compounds).

5.10 The results of the water chemical testing are presented as **Appendix 7**.

Geotechnical Investigation Strategy

- 5.11 The cable percussive borehole locations were positioned relative to the proposed building footprint to determine underlying ground conditions and parameters for geotechnical assessment purposes. The trial pits were positioned to determine ground conditions, near-surface geotechnical properties and characteristics across the wider site, with the CBR tests undertaken within the proposed service yards and car parking areas to assist with for pavement design.
- 5.12 In-situ soil strength testing comprising SPTs were undertaken with the cable percussive boreholes. SPT 'N' values are included on the exploratory hole records presented as **Appendix 3**.
- 5.13 Selected Class 3 large and small disturbed samples were collected from the investigation locations and sent to the geotechnical testing laboratory (Normec I2 Analytical Ltd), which is UKAS accredited. The following geotechnical testing was undertaken;
- Eleven samples tested for moisture contents;
 - Eight samples tested for Atterberg (liquid and plastic) limits;
 - Three samples tested for particle size distribution (PSD) by sieve and pipette;
 - Eight samples tested for BRE suites comprising total and soluble sulphates, water soluble chloride, total sulphur, water soluble nitrate and pH;
 - Three samples tested for particle density values;
 - Five samples tested for 'compaction' properties (2.5kg); and
 - Three samples tested for recompacted CBR values.
- 5.14 The results of the geotechnical testing are included as **Appendix 8**. In addition, the results of two of the BRE samples tested is included on the Chemical Test certificate in **Appendix 6**.

6. GROUND CONDITIONS ENCOUNTERED

Stratigraphy and Ground Model

- 6.1 The ground conditions encountered during ground investigations confirmed the published geology discussed in the Phase 1 report comprising Glaciofluvial Sheet Deposits to the west and Till to the east. Centrally within the site the Till was recorded underlying the Glaciofluvial Sheet Deposits.
- 6.2 The recorded ground conditions are summarised in **Table 6:1**. Uncorrected SPT results collected from the borehole locations are presented on the exploratory hole records presented in **Appendix 3**.

Table 6:1 : Summary of Ground Conditions

Stratum	Top Depth (m)		Base Depth (m)		Thickness (m)		SPT N Value	
	Min	Max	Min	Max	Min	Max	Min	Max
Topsoil	0.00	0.00	0.10	0.45	0.10	0.45	-	-
Made Ground	0.10	0.25	0.85	1.8	0.65	1.55	-	-
Glaciofluvial Sheet Deposits	0.30	1.80	1.20	>15.45	1.20	>15.15	6	23
Till	0.25	2.50	>2.6	>15.45	>2.4	>15.15	10	25

Geological Descriptions

Topsoil

- 6.3 Topsoil was encountered across the site at thicknesses of between 0.10m and 0.45m. The composition also displayed consistency, typically comprising dark brown sandy, locally slightly gravelly clay with rootlets. The gravel was fine to coarse subrounded sandstone.
- 6.4 The depth of topsoil over the site may vary from that encountered at the locations investigated within the scope of this investigation which may result in inaccurate estimations of topsoil quantities on the site.

Made Ground

- 6.5 Made Ground was encountered within four trial pits located (TP08, TP13 to TP15) beneath the Topsoil at the site with thicknesses ranging between 0.65m and 1.80m.
- 6.6 Trial pit TP08 was located in the yard to the west of the site. Trial pits TP13 and TP15 were located within the proposed yard area to the east of the site and TP14 was located beneath the south eastern corner of the proposed building.
- 6.7 The Made Ground typically comprised soft to firm dark brown gravelly clay.

- 6.8 The gravel consisted of fine to coarse subangular to subrounded brick, ceramic, concrete, sandstone, coal and metal with many cobbles of brick, some cobbles of sandstone and occasional floor tiles. In TP13 a Heras fence foot was recorded.
- 6.9 In TP14 the cohesive Made Ground was underlain at 0.70m by granular Made Ground. The granular Made Ground comprised black sand and gravel. The gravel comprised fine to coarse subangular to subrounded brick, ceramic, sandstone, mudstone, wire, plastic, slate, wood and glass, with occasional timber pieces and many cobbles of brick. A strong organic odour was noted in this stratum.
- 6.10 Made Ground was encountered within one trial pit (TP08) beneath the Topsoil with thicknesses of 1.80m. It is noted that this trial pit was excavated on a bund area which runs along the western site boundary. Here the Made Ground comprised soft to firm dark brown gravelly clay. The gravel consisted of fine to coarse subangular to subrounded brick, sandstone, coal and clinker.

Glaciofluvial Sheet Deposits

- 6.11 Soils inferred as the Glaciofluvial Sheet Deposits were encountered in exploratory holes BH01, BH03, TP01 to TP03, TP05, TP06, TP08, TP09 and TP12 beneath the topsoil at depths of between 0.30m and 1.80m. These deposits were recorded to the west and centrally within the site.
- 6.12 The Glaciofluvial Sheet Deposits typically comprised interbedded medium dense yellowish brown locally clayey locally slightly gravelly to gravelly fine and medium sand and soft to firm, locally firm to stiff orangish brown and light grey slightly sandy slightly gravelly clay. Locally in BH01 a thin layer of medium dense sand and gravel was recorded from 3.20m to 3.60m bgl and from 14.20m to the base of the hole at 15.45m.

Till

- 6.13 Soils inferred as Till were encountered in exploratory holes BH02, TP03, TP04, TP06, TP07, TP09-11 and TP13-15 beneath the site at depths of between 0.20m and 2.50m. These deposits were recorded centrally and to the east of the site. Centrally these deposits were recorded beneath the Glaciofluvial Sheet Deposits (TP03, TP06, TP09).
- 6.14 The Till typically comprises firm becoming firm to stiff or stiff dark brown mottled grey slightly sandy slightly gravelly Clay. Gravel consisted of fine and medium subangular to subrounded sandstone, mudstone and coal. The stratum becomes firm to stiff or stiff with depths from 2.70m to 3.10m bgl. Locally the upper layer of this stratum as recorded as soft to firm.

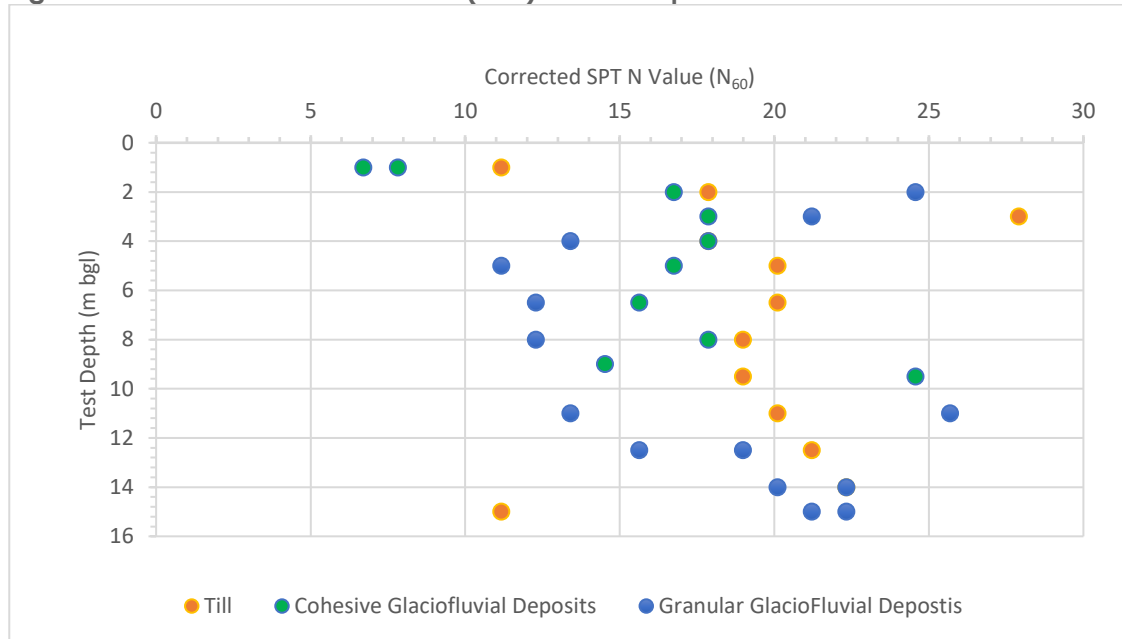
In Situ and Laboratory Geotechnical Test Results

In Situ Testing

- 6.15 From in situ SPTs, corrected 'N₆₀' values have been derived, and a plot of N₆₀ value vs. depth (in m bgl) is presented as **Figure 6:1**.

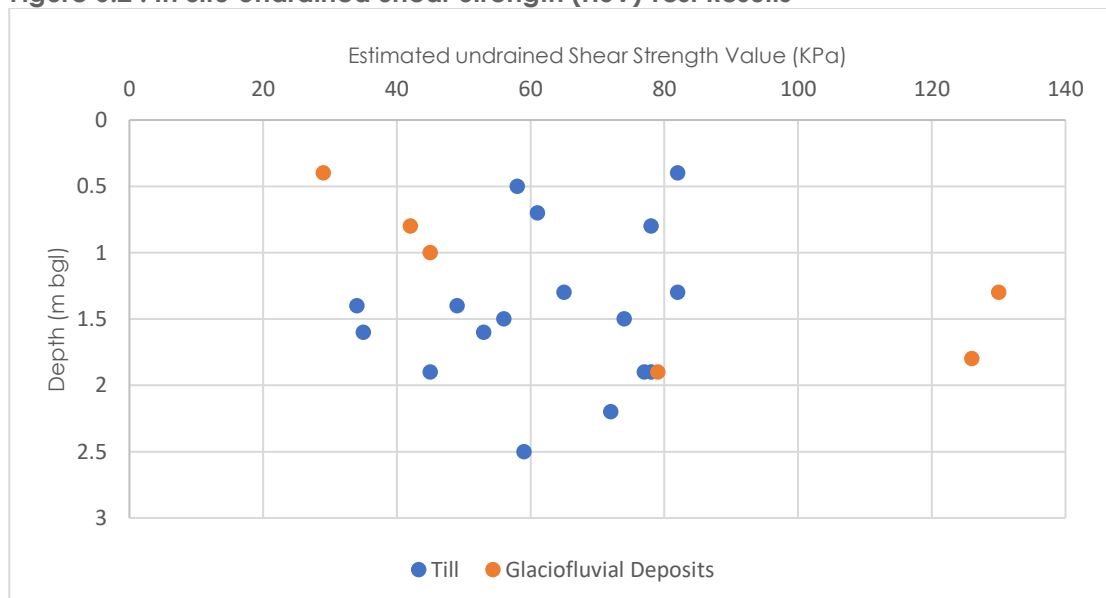
- 6.16 N_{60} Values within the Glaciofluvial Sheet Deposits were recorded ranging from 6 and 24 in the cohesive soils and from 11 to 25 in the granular soils. N_{60} values with the Till were found to be between 11 and 28.

Figure 6:1 : Corrected SPT 'N' Value (N_{60}) Versus Depth



- 6.17 Where cohesive soils were encountered, undrained shear strength values were determined during hole formation using a hand shear vane (HSV). The tests comprised three tests with the average taken as the peak result and plotted graphically against depth (m bgl), as **Figure 6:2**. The detailed HSV results are also included on the exploratory hole records presented in **Appendix 3**.

Figure 6:2 : In Situ Undrained Shear Strength (HSV) Test Results



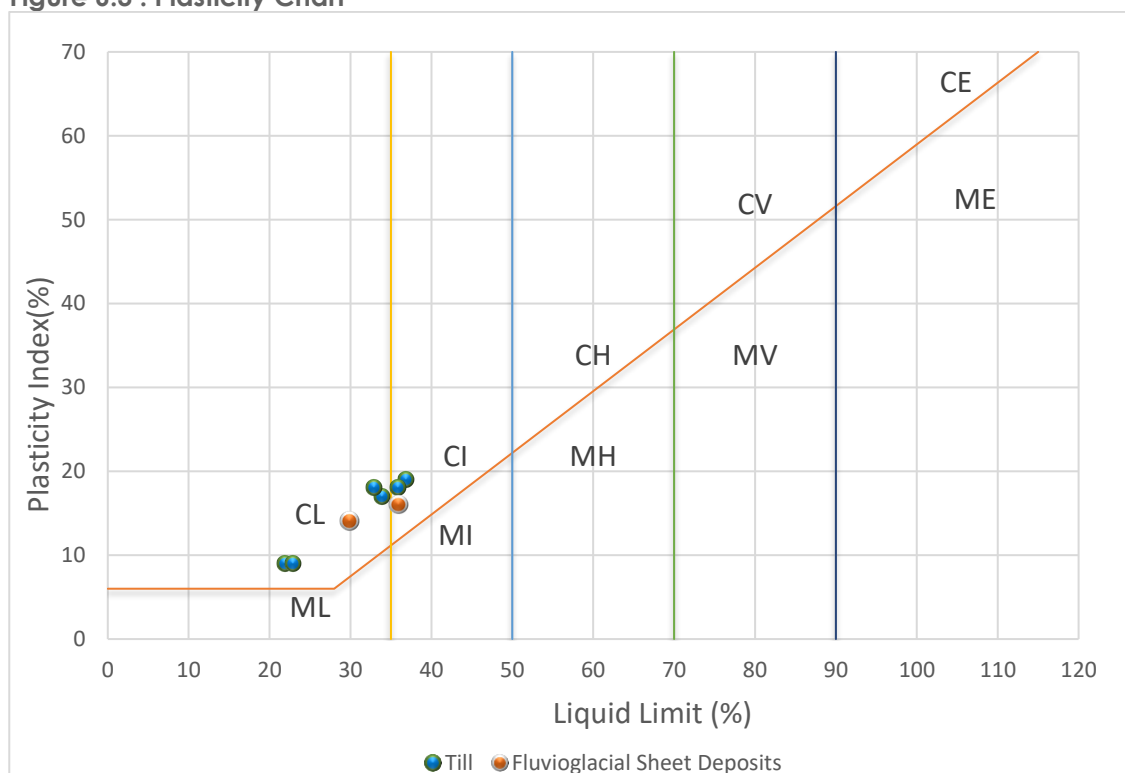
Geotechnical Laboratory Test Results

6.18 Where cohesive soils were encountered and sampled, geotechnical laboratory testing included the determination of Atterberg Limits and Plasticity Index (PI) values. A Plasticity Chart is presented as **Figure 6:3**.

6.19 This indicates the following PI values:

- Cohesive Glaciofluvial Sheet Deposits - Pls in the range 14% to 20% (low / intermediate plasticity).
- Till to be in the range 9% to 18% (non-plastic to low plasticity).

Figure 6:3 : Plasticity Chart



6.20 The results of the insitu and geotechnical laboratory testing undertaken are summarised in **Table 6:2**.

Table 6:2 : Summary of Laboratory and In Situ Geotechnical Test Results

Lithology / Parameter (Units)	Made Ground	Glaciofluvial Sheet Deposits	Till
Moisture Content (%)	-	15.5 to 25.8	11.4 to 24.7
Plasticity Index (%)	-	14 to 16	9 to 19
Atterberg Classification	-	Low to Intermediate	Non-plastic to Low
PSD:			
Cobbles (%)		0	0
Gravel (%)		0	1 to 8
Sand (%)		97	32 to 47
Silt/Clay (%)		3	52 to 59

Lithology / Parameter (Units)	Made Ground	Glaciofluvial Sheet Deposits	Till
Particle Density (Mg/m ³)	-	2.66	2.69
Reworked CBR (%)	-	<1	<1
2.5kg Compaction: OMC (%) MDD (Mg/m ³)	-	13 to 19 1.71 to 1.78	14 to 17 1.73 to 1.88
SPN N ₆₀ Values	-	6 and 24 (cohesive) 11 to 25 (granular)	11 to 28
Undrained HSV Shear Strength (kPa)	42 to 93	29 to 130	34 to 82

- 6.21 One PSD test was undertaken on a sample from the Glaciofluvial Sheet Deposits and two from the Till, a summary of the results is provided in **Table 6:3** below.

Table 6:3 : Summary of Particle Size Distribution Results

Location	Depth (m)	Cobble Content (%)	Gravel Content (%)	Sand Content (%)	Silt / Clay Content (%)	Earthworks Classification
Glaciofluvial Sheet Deposits						
TP02	2.0	0	0	97	3	1A
Till						
TP09	2.3	0	8	32	60	2A/B
TP15	1.9	0	1	47	52	2A/B

Hydrogeology

- 6.22 Groundwater entries were recorded during hole formation as summarised in **Table 4:1** below.

Table 6:4 : Groundwater Entries During Hole Formation

Hole	Strike Depth (m)	Stratum	Notes
BH01	11.7	Glaciofluvial Sheet	Soils damp but no groundwater rise.
BH03	12.7	Glaciofluvial Sheet	Soils damp but no groundwater rise.
TP01	0.15	Topsoil	Slight seepage.
TP02	1.5	Glaciofluvial Sheet	Slight seepage.
TP05	0.7	Glaciofluvial Sheet	Numerous seepages.
TP09	2.5	Till	Slight seepage.
TP10	2.0	Till	Fast seepage.

- 6.23 During subsequent monitoring, groundwater levels were recorded in the monitoring wells. Resting levels were recorded at depths of between 1.81m (BH02 on 19/12/25) and 12.63m (BH03 on 02/12/25) bgl during the monitoring visits. The results are presented within **Appendix 6**. Groundwater levels in all wells rose continuously throughout the monitoring period between 1.10m in BH01 and by over 4.00m in BH02 and BH03.

Hydrology

- 6.24 Stanney Brook is present around 50m to the south west of the site boundary.

Contamination Observations

- 6.25 A summary of the contamination observations and volatile vapour concentrations recorded using a photo ionisation detector (PID) (calibrated against isobutylene) noted during the intrusive investigation works are summarised in **Table 6:5** below.

Table 6:5 : Summary of Contamination Observations

Location	Depth (m bgl)	Observations	PID Concentration (ppm)
TP14	0.70 – 1.05	Strong organic odour	0.4

- 6.26 No contamination observations were noted during the groundwater sampling visit or subsequent gas and groundwater monitoring period.

7. GEOTECHNICAL APPRAISAL

Introduction

- 7.1 This section of the report provides a summary geotechnical appraisal of the site relative to the proposed development, based on the ground and groundwater conditions encountered (and summarised in previous report sections).
- 7.2 It should be noted, the following comments are provided for guidance only and in relation to the purpose of this document, which is a Phase 2 report, with the key focus on the geo-environmental conditions of the site and associated risk assessment, but taking due account of geotechnical requirements and impact of the proposed development.
- 7.3 At a later stage in the development design process, more rigorous geotechnical assessment and design needs to be undertaken, culminating in a Geotechnical Design Report, as required under Eurocode 7.

Earthworks/Enabling Works

- 7.4 In order to accommodate the proposed development, there will be a need for the following site preparation activities.
- 7.5 Following de-vegetation, all Topsoil and near surface organic soils will need to be stripped from the site; from the available data the thickness of these varies between 0.10m and 0.50m, with an average of 0.29m.
- 7.6 Thereafter, and with reference to the current site topography, there will be a need for "earthworks" (cut and fill) to be undertaken to create suitable platforms for construction of the development. The earthworks will involve cut to depths of up to 1.4m (volume of approximately 8703m³) and up to 3.4m of fill (volume of approximately 7662m³) with any shortfall imported to site or excess removed from site. The proposed cut / fill earthworks is presented in BWB's drawing 244498-BWB-EXT-XX-D-C-0102.
- 7.7 The earthworks will need to be undertaken to a suitable specification.
- 7.8 All Engineered Fill materials are to be classified according to Table 3.4 and 3.10a of the Specification for Highway Works (CC601 Version E/1.0.0 dated September 2025).
- 7.9 Based on the results obtained, near-surface granular soil materials are likely to conform to Highway Works Class 1A. Where cohesive deposits are present, they are likely to conform to Highway Works Class 2A/B.
- 7.10 The suitability of earthworks materials has been assessed on the basis of the testing carried out as part of this investigation. The materials encountered on site may vary from those analysed; furthermore, inclement weather, winter working or seasonal variations in groundwater may result in materials being unsuitable for incorporation within the works without modification by lime, cement or other methods.

- 7.11 In particular, cohesive soils are very susceptible to 'wet weather working' and BWB strongly recommends that consideration should be given to lime and/or cement stabilisation of these materials if the earthworks are undertaken during inclement weather or the winter period.
- 7.12 Stockpiled materials often deteriorate due to water infiltration, and they may become unsuitable for incorporation in the works; further testing and re-assessment should be made prior to the finalisation and implementation of the earthworks design.

Foundations

- 7.13 The foundation solution adopted will be dependent upon the loads that need to be supported from the superstructure. At this stage no preliminary loadings have been provided.
- 7.14 The ground investigation (GI) has identified variable soil deposits across the proposed site comprising cohesive fine-grained soils (low to intermediate plasticity clays and gravelly clays) along with granular sands and gravels. Estimates of shear strength of fine grains soils is given in **Figure 7:1** below based on in-situ testing carried out during the GI. The upper 2.0m shows wide variation in soil strengths ranging from low to high strength. Below 2.0m the soils strength mostly greater than 70kPa (medium to high strength) and shows a general increase with depth below 8.0m.

Figure 7:1 : Estimated Shear Strength of Fine-Grained Soils

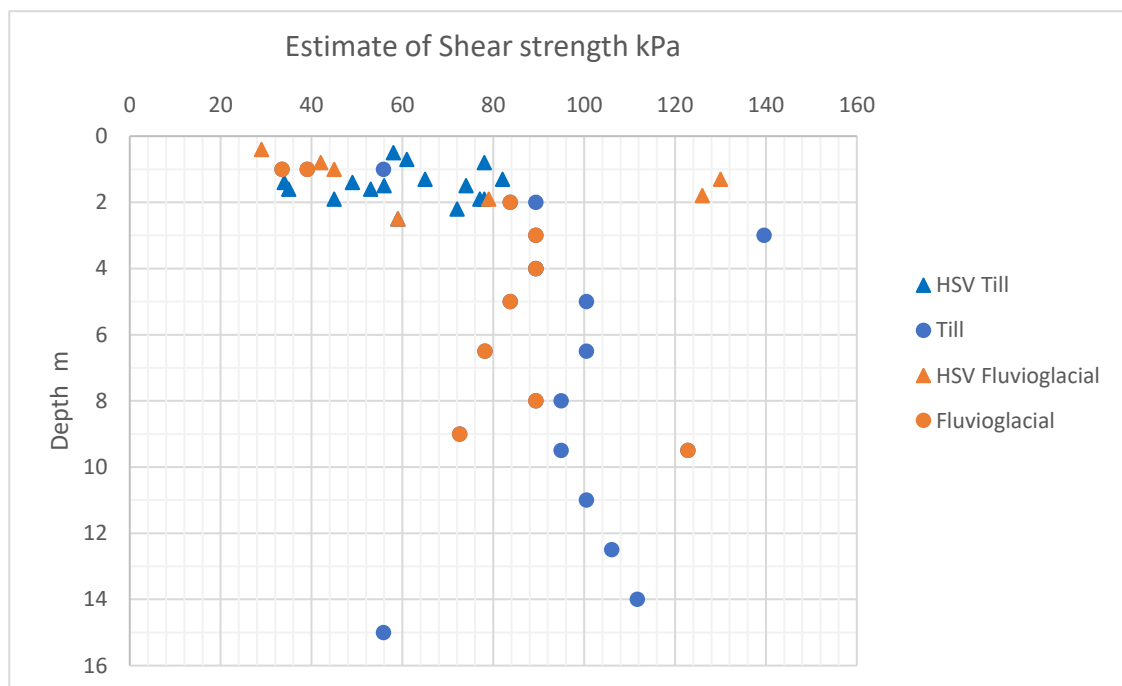
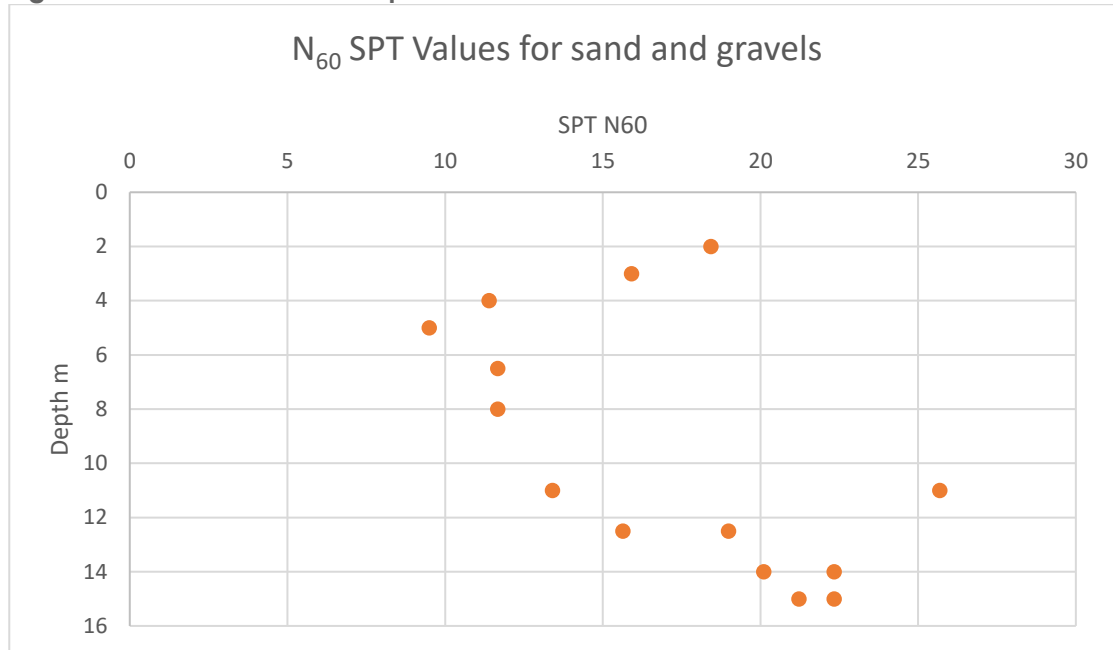


Figure 7:2 : SPT in Granular Deposits



- 7.15 Corrected SPT's in granular deposits beneath the site are shown in **Figure 7:2**. Values drop from 2.0m to 5.0m in BH01. The boreholes were recorded as damp from 11.7m with subsequent monitoring recording groundwater at 11.66m depth. SPT's show a general increase from 4m or 5.0m to 15m depth.
- 7.16 A minimum SPT value of 9 was recorded at 5.0m; the remaining values are all >10. These sands and gravels are medium dense. From results above a minimum angle of shearing resistance of 30° can be adopted for preliminary design.

Spread Foundations (Pads/Strips)

- 7.17 The localised Made Ground up to 1.8m thickness is unsuitable for the support of shallow spread foundations owing to its variability/poor competence and the potential risk of excessive total and/or differential settlements.
- 7.18 Shallow foundations bearing upon natural cohesive or granular soils may be feasible dependent upon structural loads and final levels. Given variable strength and compressibility of the upper 2.0m along with localised Made Ground, mechanical strengthening of the top 2.0m by compaction may improve the ground enough such that shallow footings could be used.
- 7.19 Initial estimates indicate that foundations supported on low plastic cohesive deposits at 2.0m depths could be designed on the basis of a presumed net bearing pressure in the order of 250 kPa, with foundation widths limited by maximum allowable settlement tolerances. Therefore, further detailed assessment and design will need to be undertaken, once loading details are available, to determine if this is suitable for the support of the proposed structures, or if alternative foundation solutions are required.

7.20 Alternative to shallow foundations include:

- Ground improvement, to provide strengthened elements within the soil to the depths of stiffer natural ground. At this site, options could include vibro stone columns and rigid inclusions.
- Deep foundations, comprising piles to stiffer higher strength or denser underlying soils

Ground Improvement Techniques

7.21 Ground improvement techniques such as vibro stone columns or rigid inclusions would improve the performance of the ground such that shallow foundations could then be adopted.

7.22 The design of ground improvement would need to be undertaken by a specialist designer, and the proposals reviewed by BWB prior to commencement.

Piled Foundations

7.23 Should high loads or tight settlement tolerances be required from the structures then piled foundations should be considered.

7.24 The design of piled foundations would need to be undertaken by a specialist designer, and the proposals reviewed by BWB prior to commencement.

Ground Floor Slabs

7.25 From initial considerations, it is anticipated that ground floor slabs could be constructed but will require ground improvement of the upper 2.0m of ground where currently up to 1.8m of Made Ground and soft spots are present in the underlying strata.

7.26 However, the risk of excessive settlements will need to be checked at the detailed design stage as the structure spans both clay soils and granular deposits which will have different settlement characteristics.

Roads and External Hardstanding - Pavements

7.27 The design of the proposed roads and hardstanding area pavements will need to be based on appropriate design CBR values.

7.28 Long term CBR values in cohesive soils are typically based on correlations from Table C1 of TRRL 1132 (Structural Design of Bituminous Roads) according to guidance in National Highways document CD225, Design for New Pavement Foundations. Based on the Plasticity Index values, determined in the recent ground investigation, the correlated long term CBR values would indicate between 1.5% and 4% can be achieved at the site within the cohesive deposits.

Groundwater

- 7.29 Groundwater is likely to vary greatly seasonally at the site. The ground investigation, undertaken in November (after a particularly dry late spring/summer) will have likely captured a lowered groundwater situation at the site, with various areas of the site displaying evidence of current surface waterlogging.
- 7.30 If, as anticipated, groundwater levels rise following extended periods of wet weather, groundwater control may be required during construction ground works, and standard pumping equipment is likely to be suitable. The local water authority should be consulted to assess whether a temporary drainage consent is required, for discharging to the local drainage network.
- 7.31 The Contractor and temporary works designer should undertake a review in advance of works to assess whether forming the base of excavations to a fall and pumping from sumps is likely to be sufficient to control perched water.
- 7.32 If temporary dewatering is required via well points, a suitably qualified dewatering specialist should be consulted by the Contractor.

Excavations

Ease of Excavation

- 7.33 Excavations into the underlying natural soils should be readily achievable using standard plant, noting that the potential for soft ground should be considered by the Contractor in selection of plant for tracking purposes. Depending on weather conditions and timing of works, tracked plant and other access interventions may be necessary.

Stability of Excavation

- 7.34 Excavations may encounter 'running' sands within the Fluvioglacial Deposits, which in ground investigations resulted in collapsing trial pits.
- 7.35 The risks associated with water bearing sands and excavation instability needs to be considered by the temporary works' designers and the Contractor with regard to sequencing, trench support proposals and construction methodology.
- 7.36 Excavations may become unstable if left open for any significant periods.

Legislation on Personnel Entry to Excavations

- 7.37 It is recommended that no excavations should be entered without appropriate support and a full risk assessment should be completed prior to entry. Mitigation measures to protect from accumulating ground gases should be implemented.
- 7.38 Where personnel entry is required for inspection, excavations should be sufficiently enlarged and an assessment of safe temporary angles should be made by the Contractor/temporary works designer.

Chemical Attack on Buried Concrete

- 7.39 The classification of concrete in aggressive ground has been undertaken in accordance with BRE Special Digest 1: Concrete in Aggressive Ground (2005). The ranges for each stratum are shown in **Table 7:1**, with the full results available in **Appendix 6** and **Appendix 8**.
- 7.40 Based upon the available data, the following Design Sulphate Classes (DS) and Aggressive Chemical Environment for Concrete Class (ACEC) have been calculated for the various strata recorded on site.

Table 7:1 : Concrete Classification by Geology

Geology	Design Sulphate Class	Aggressive Chemical Environment for Concrete Class
Made Ground	DS-4	AC-4
Glaciofluvial Sheet Deposits (Clay)	DS-1	AC-2z
Glaciofluvial Sheet Deposits (Sand)	DS-1	AC-1
Till	DS-1	AC-1

8. GROUND GAS ASSESSMENT

Introduction

- 8.1 Ground gas assessment has been undertaken to assess the risks associated with ground gases and volatile vapours to new buildings and their occupants. The results obtained have been assessed in line with relevant guidance (notably CIRIA C665).
- 8.2 Based on the desk study and the ground investigation undertaken, the following potential sources of hazardous ground gas have been identified:
- Localised Made Ground on the site.
- 8.3 Based on the potential sources identified, CIRIA C665 guidance indicates that for a site with very low gas generation potential and a low sensitivity development (the proposed commercial land use), a typical monitoring programme may comprise four visits over a period of one month.
- 8.4 BWB have completed the prescribed monitoring programme as set out in CIRIA C665.

Methodology

- 8.5 All boreholes were installed with ground gas monitoring wells with response zones set within the Glaciofluvial Sheet Deposits in BH01 and BH3 and in the Till in BH02. Exploratory hole records showing monitoring well constructions are presented in **Appendix 3**.
- 8.6 The assessment of potential ground gas generation is based on the observation of trends and changes in gas evolution by the direct measurement of ground gases from gas wells. The works included measurement of methane, carbon dioxide, oxygen, hydrogen sulphide, carbon monoxide, gas flows and barometric pressure.

Results

- 8.7 The minimum and maximum steady state concentrations recorded for borehole flow, oxygen, carbon dioxide and methane are summarised below in **Table 8:1**. The full ground gas monitoring results are presented in **Appendix 5**.

Table 8:1 : Summary of Recorded Ground Gas Results

Borehole ID	Targeted Geology	Steady Flow (l/hr)		Carbon Dioxide (%v/v)		Methane (%v/v)	
		min.	max.	min.	max.	min.	max.
BH01	Till	<0.1	-4.2	<0.1	2.8	<0.1	<0.1
BH02	GF	<0.1	<0.1	0.3	4.8	<0.1	<0.1
BH03	GF	<0.1	<0.1	<0.1	5.6	<0.1	<0.1

Atmospheric Pressure and Flow

- 8.8 During the monitoring programme completed at the site the atmospheric pressures were recorded as follows:
- Round 1 – 973mB during the site visit, with regional pressures rising from 964mB to 974mB over the preceding 12 hours;
 - Round 2 – 986mB during the site visit, with regional pressures rising from 988mB to 1004mB over the preceding 12 hours;
 - Round 3 – 988mB during the site visit, with regional pressures steady at 988mB over the preceding 12 hours; and
 - Round 4 – 987mB during the site visit, with regional pressures falling from 1010mB to 1003mB over the preceding 12 hours.
- 8.9 Three monitoring visits were undertaken when atmospheric pressure was recorded below 1000mB, representing a low pressure event.
- 8.10 The pressure was recorded as rising during two monitoring visits, as static during one monitoring visits and falling during one monitoring visits.
- 8.11 On this basis, the monitoring is considered likely to have captured the worst-case gassing scenario at the site as generally, ground gas emissions tend to increase when the pressure drops below 1000mB and particularly when atmospheric pressure falls rapidly.
- 8.12 During the monitoring period, no positive flow rates were recorded with all readings <0.1l/hr (recorded in the majority of boreholes / visits). A negative flow rate of -4.2l/hr was recorded during the first monitoring event on 2nd December 2025 in BH01. All subsequent events recorded flows <0.1l/hr. This negative reading is likely to be an artifact from the drilling and installation and not representative of a true gas flow.

Hazardous Ground Gas and Volatile Vapours

- 8.13 Steady carbon dioxide concentrations recorded ranged between <0.1% v/v (recorded in several boreholes on several occasions) and 5.6% v/v (recorded on 19/12/25 in BH03).
- 8.14 Steady methane concentrations were all <0.1%v/v.
- 8.15 Hydrogen sulphide concentrations were not recorded above the limit of detection of the equipment during the monitoring visits.
- 8.16 Carbon monoxide concentrations were not recorded above the limit of detection of the equipment during the monitoring visits.
- 8.17 Ground gas monitoring results are presented in **Appendix 5**.

Risk Assessment

- 8.18 CIRIA Report 665 "Assessing Risks Posed by Hazardous Ground Gases to Buildings" presents current best practice on the assessment of ground gases for commercial and residential buildings (with the exception of low rise traditional housing). The report presents a risk based approach based on gas screening values which depend on both the concentration and emission rate of gas from the ground. Gas screening values are calculated as follows:

$$\text{Gas screening value (l/hr)} = \frac{\text{gas concentration (\%)} \times \text{measured borehole flow rate (l/h)}}{100}$$

- 8.19 Maximum gas screening values of 0.0056 l/hr of carbon dioxide were recorded giving a classification of CS1. Carbon dioxide concentrations above 5% were recorded on two occasions in BH03 but based on the observed ground conditions, the elevated carbon dioxide is considered to be representative of natural respiration of organic matter.
- 8.20 Gas protection measures are unlikely to be required for any development on the site.

9. CONTAMINANT DISTRIBUTION

Soils

9.1 Contamination data have been compared to generic site assessment criteria (GSAC) for a commercial end use presented in LQM/CIEH S4ULs for Human Health Risk Assessment Copyright Land Quality Management Limited reproduced with permission; publication number S4UL3271. The soil chemical laboratory results are presented as **Appendix 6** and screened against GSACs are presented in **Appendix 9**.

9.2 A summary of the soil chemical laboratory results is presented in **Table 9:1**.

Table 9:1 : Summary of Soil Chemical Testing Results

Contaminant	No of Samples	Range of Concentrations	Generic Screening Level (mg/kg)	No of Exceedances
Heavy Metals				
Arsenic	12	2.8 to 19	640	0
Barium	12	47 to 460	2,210	0
Beryllium	12	0.39 to 1.5	12	0
Boron	12	0.2 to 2.3	240,000	0
Cadmium	12	< 0.1 to 0.8	190	0
Chromium VI	6	< 0.5 to 1.8	33	0
Chromium III	12	9.6 to 23	8,600	0
Copper	12	12 to 170	68,000	0
Lead	12	13 to 170	2,330	0
Inorganic Mercury	12	< 0.05 to 0.4	1,100	0
Nickel	12	7.8 to 27	980	0
Selenium	12	< 0.25 to 1.2	12,00	0
Vanadium	12	15 to 40	9,000	0
Zinc	12	23 to 390	730,000	0
Inorganics				
Cyanide (free)	12	< 0.5 to 1	43	0
Cyanide (Complex)	12	< 0.5 to 1	213	0
Phenol	12	< 0.1 to 1.6	690	0
Petroleum Hydrocarbons				
TPH (EC5-6) aliphatic	3	< 1 to 0.01	5,900	0
TPH (>EC6-8) aliphatic	3	< 1 to 0.01	17,000	0
TPH (>EC8-10) aliphatic	3	< 1 to 0.01	4,800	0
TPH (>EC10-12) aliphatic	3	< 1 to 1	23,000	0
TPH (>EC12-16) aliphatic	3	< 1 to 2	82,000	0

Contaminant	No of Samples	Range of Concentrations	Generic Screening Level (mg/kg)	No of Exceedances
TPH (>EC16-21) aliphatic	3	< 1 to 8	170,000	0
TPH (>EC21-35) aliphatic	3	< 1 to 82	170,000	0
TPH (>EC6-7) aromatic	3	< 1 to 0.01	4,600	0
TPH (>EC7-8) aromatic	3	< 1 to 0.01	110,000	0
TPH (>EC8-10) aromatic	3	< 1 to 0.02	8,100	0
TPH (>EC10-12) aromatic	3	1.2 to 31	28,000	0
TPH (>EC12-16) aromatic	3	< 1 to 2.9	37,000	0
TPH (>EC16-21) aromatic	3	< 1 to 13	28,000	0
TPH (>EC21-35) aromatic	3	< 1 to 59	28,000	0
Total TPH	15	<10 to 210	500	0
Polycyclic Aromatic Hydrocarbons				
Naphthalene	14	< 0.1 to 6.4	460	0
Acenaphthylene	14	< 0.1 to 0.09	97,000	0
Acenaphthene	14	< 0.1 to 4.2	97,000	0
Fluorene	14	< 0.1 to 2.7	68,000	0
Phenanthrene	14	0.07 to 17	22,000	0
Anthracene	14	< 0.1 to 2.9	540,000	0
Fluoranthene	14	0.06 to 16	23,000	0
Pyrene	14	0.06 to 14	54,000	0
Benzo(a)anthracene	14	0.06 to 7.3	170	0
Chrysene	14	0.06 to 7.4	350	0
Benzo(b)fluoranthene	14	< 0.1 to 7.6	44	0
Benzo(k)fluoranthene	14	< 0.1 to 2.3	1,200	0
Benzo(a)pyrene	14	< 0.1 to 5.8	365	0
Indeno(123-cd)pyrene	14	< 0.1 to 2.4	510	0
Dibenzo(ah)anthracene	14	< 0.1 to 0.64	3.6	0
Benzo(g,h,i)perylene	14	< 0.1 to 2.6	4,000	0

- 9.3 No contaminants within the Made Ground or near surface natural soils have been found to exceed the GSACs for a "Commercial" end use.
- 9.4 Five samples were submitted for asbestos screening; asbestos was not identified.
- 9.5 Samples submitted for pesticide and PCB analysis did not detect any pesticides or PCBs.

Soil Leachate

- 9.6 Five soils samples were selected and analysed for a variety of leachable contaminants. Screening sheets of the concentrations and adopted guideline concentrations are presented within **Appendix 10**.
- 9.7 Leachate values have been compared to the both the UK Drinking Water Standard (UKDWS) and the EQS, as both the underlying Secondary A Aquifer and Stanney Brook represent controlled water receptors. A summary of the leachate exceedances is presented in **Table 9:2**.

Table 9:2 : Summary of Soil Leachate Exceedances

Contaminant	Exceedance Concentration Range (µg/l)	Location (m bgl)	EQS Generic Screening Level (µg/l)	UK DWS Generic Screening Level (µg/l)
EQS				
Copper	4.5 – 15	TP05 at 0.15m, TP08 at 0.75m, TP11 at 0.2m, TP14 at 1.0m and TP15 at 0.4m	1.0	2,000
Nickel	7.6 – 13.0	TP05 at 0.15m and TP14 at 1.0m	4.0	20
Zinc	12 – 36	TP05 at 0.15m, TP11 at 0.2m and TP14 at 1.0m	10.9	5000
DWS/EQS				
Sulphate as SO ₄ (mg/l)	1300 - 1330	TP05 at 0.15m and TP14 at 1.0m	400mg/l	250mg/l

Surface Water

- 9.8 No surface water samples were recovered or tested as part of the investigation.

Groundwater

- 9.9 Two groundwater samples (BH01 and BH03) were retrieved on 18th December 2025. groundwater test data has been compared to both the UK DWS and the EQS.
- 9.10 The site lies at a higher elevation than the adjacent Stanney Brook. Whilst the ground investigation has indicated that groundwater beneath the site is likely to be perched, there is a possibility that groundwater beneath the site could be a source for recharge of the Brook, if there is the potential for movement between the groundwater beneath the site and the adjacent Beck. The EQS are therefore also considered to see if the groundwater beneath the site could be a potential risk to the Brook.
- 9.11 A summary of the groundwater exceedances is presented in **Table 9:3** and the screening in **Appendix 11**.

Table 9:3 : Summary of Groundwater Chemical Testing Results

Contaminant	No of Samples	Range of Concentrations	Generic Screening Level (mg/l)	No of Exceedances
EQS				
Chromium	2	8.7 – 10	4.7	2
Copper	2	1.8 – 2.4	1.0	2
Nickel	2	5.5 – 7.8	4.0	2
Zinc	2	3.2 – 11	10.9	1
Ammoniacal Nitrogen	2	170 – 200	15	2

10. HUMAN HEALTH RISK ASSESSMENT

10.1 Soil contaminant data have been compared against Generic Site Assessment Criteria (GSAC) presented in LQM/CIEH S4ULs for Human Health Risk Assessment Copyright Land Quality Management Limited reproduced with permission; publication number S4UL3271. The results of the soil chemical laboratory results are provided within **Appendix 7** with a table summarising the results presented as **Appendix 9**.

10.2 The GSACs have been developed with the following assumptions which have been changed from the CLEA default parameter set. Soil type is a sandy loam with an organic matter content of 2.5%. This is considered to be more representative of shallow Made Ground found on most Brownfield sites than the CLEA default of 6% organic matter. The building type for a commercial development is assumed to be a post 1970s office which is representative of new commercial buildings.

Pathways

10.3 Contamination data have been compared to generic site assessment criteria (GSAC) for a commercial end use (i.e. using all pathways for that end use) based on a site specific organic matter content of 2.5%. Details of the derivation of the GSACs are presented in **Appendix 9**.

10.4 The site is to be developed for commercial end use and therefore the key receptor is considered to be an adult female worker and GSACs for a commercial industrial end use have been adopted.

10.5 Exposure pathways considered in this assessment are presented in **Table 10:1**.

Table 10:1 : Commercial Exposure Pathways

Source	Shallow Soils		Deep Soils
Pathway	Commercial / Industrial with Managed Landscaped Areas	Commercial / Industrial with Hardstanding Areas	Commercial / Industrial
Ingestion of Soil	✓	✗	✗
Ingestion of site derived household dust	✓	✗	✗
Ingestion of contaminated vegetables	✗	✗	✗
Ingestion of soil attached to vegetables	✗	✗	✗
Dermal contact with Soil	✓	✗	✗
Dermal contact with site derived household dust	✓	✗	✗
Inhalation of fugitive soil dust	✓	✗	✗
Inhalation of fugitive site derived household dust	✓	✗	✗
Inhalation of vapours outside	✓	✓	✓
Inhalation of vapours inside	✓	✓	✓

Sources

- 10.6 Localised Made Ground was recorded within Plot Q within four trial pits located (TP08, TP13 to TP15). Trial pit TP08 was located in the yard to the west of the site; it is noted that this trial pit was excavated on a bund area which runs along the western site boundary. Trial pits TP13 and TP15 were located within the proposed yard area to the east of the site and TP14 was located beneath the south eastern corner of the proposed building.
- 10.7 No significant sources of soil contamination have been identified on site, and therefore there is no plausible contaminant linkage between soil contamination and human health.

11. CONTROLLED WATERS RISK ASSESSMENT

- 11.1 The results of soil leachate and groundwater analysis are presented as **Appendix 6** and **Appendix 7** respectively.
- 11.2 No surface water testing has been undertaken as part of this assessment.
- 11.3 The controlled waters assessment considers the potential impact of on-site contamination to pertinent controlled waters receptors identified at the site including:
- Principal/Secondary A Aquifer beneath the site within Glaciofluvial Sheet Deposits.
 - Source Protection Zone 2 located beneath the western edge of the site.
 - Stanney Brook.
- 11.4 No licensed abstractions are located within 500m of the site.

Pathways

- 11.5 Controlled water risk assessment has been undertaken through assessment of leachable concentrations of contaminants in soil referring to exposure pathways considered and referencing **Table 11:1**.

Table 11:1 : Controlled Water Exposure Pathways

Controlled Waters Exposure Pathway	Receptor
Leaching of soil contamination into recharge infiltration	✓
Vertical migration of impacted pore water through unsaturated zone into underlying aquifer	✓
Horizontal migration of groundwater through aquifer to off site receptors	✓

Soil Leachability

- 11.6 A summary of the soil leachate concentrations and adopted guideline concentrations are presented within **Appendix 10**.
- 11.7 The soil leachate concentrations have been compared to the UK Drinking Water Standards (UK DWS) to assess the risk to the underlying aquifer.
- Two exceedances of the sulphate DWS standard (250mg/l) were noted in TP05 at 0.15m and TP14 at 1.0m.
- 11.8 When screened against the EQS elevated concentrations of sulphate, copper, nickel and zinc were recorded. Following a direct comparison of leachate laboratory results to water quality standards, the following was noted.
- Two exceedances of the sulphate EQS standard (400mg/l) were noted in TP05 at 0.15m and TP14 at 1.0m.
 - All five samples reported exceedance of the copper freshwater EQS standard (1.0µg/l).

- Two exceedances of the nickel freshwater EQS standard (4.0µg/l) were noted in TP05 at 0.15m and TP14 at 1.0m.
 - Three exceedances of the zinc freshwater EQS standard (10.9µg/l) were noted in TP05 at 0.15m, TP11 at 0.2m and TP14 at 1.0m.
- 11.9 No potentially significant sources of copper, nickel or zinc have been identified on site. BWB consider the EQS exceedances to not be significant given they are within an order of magnitude of the screening criteria. It is unusual for copper to meet the EQS standard requirements based on natural ground concentrations and the findings are not considered to present a significant risk.
- 11.10 In addition, the proposed development will also typically be comprised of hardstanding over the majority of the site. Therefore, it is not considered that the leachable heavy metals represent a risk to the underlying aquifer in the context of the proposed development, as the potential for soil leaching is reduced due to the reduced infiltration.

Groundwater

- 11.11 A groundwater concentration screening sheet is presented as **Appendix 11**.
- 11.12 The groundwater concentrations have been compared to the UK Drinking Water Standards (UK DWS) to assess the risk to the underlying aquifer. Neither of the two results were above the generic screening levels.
- 11.13 When screened against the EQS elevated concentrations of sulphate, copper, nickel and zinc were recorded. Following a direct comparison of leachate laboratory results to water quality standards, the following was noted.
- Both samples exceeded the EQS standard for chromium, copper and nickel.
 - One of the samples (BH01) exceeded the EQS standard for zinc.

Summary

- 11.14 Elevated sulphate was recorded in the leachate from two of the sample. However, no elevated sulphates were recorded within the groundwater, BWB therefore consider the DWS exceedance to not be significant.
- 11.15 No potential sources of copper, nickel or zinc have been identified on site. BWB consider the EQS exceedances to not be significant given they are within an order of magnitude of the screening criteria. It is unusual for copper to meet the EQS standard requirements based on natural ground concentrations and the findings are not considered to present a significant risk.
- 11.16 In addition, the proposed development will also typically be comprised of hardstanding over the majority of the site. Therefore, BWB does not consider the leachable heavy metals to represent a risk to the underlying aquifer in the context of the proposed development, as the potential for soil leaching is reduced due to the reduced infiltration.

12. ENVIRONMENTAL RISK ASSESSMENT

12.1 The ground gas, human health and controlled water risk as has confirmed the following;

- Gas protection measures are unlikely to be required for any development on the site.
- Localised Made Ground was recorded within the site.
- No significant sources of soil contamination have been identified on site.
- Low concentrations of metals and inorganics have been recorded in leachate and samples of the groundwater above UK DWS and EQS screening criteria. BWB consider it unlikely that the shallow soils on site could be impacting upon the groundwater quality. The levels of exceedances are not considered significant to the recorded levels of contaminants in samples.

12.2 When considered in the context of the conceptual site model and the historical activities that have taken place (i.e. former agricultural use, deep mining and nearby industrial activity), the proposed development is considered to pose a LOW risk to human health and controlled waters, due to the lack of significant contamination sources on site.

13. WASTE MANAGEMENT

Waste Classification

- 13.1 Soil samples have been characterised against hazardous waste criteria using Hazwasteonline. The results of the waste classification are presented in **Appendix 12**. The assessment indicates that the soils analysed are likely to be classified as non-hazardous. The waste classification assessment only applies to those soils that have been tested. If other soils are to be disposed of off-site then further analysis may be required.
- 13.2 Asbestos has not been found at the site. The presence of visible asbestos containing materials in waste or at concentrations exceeding 0.1% by weight will classify the waste as mixed and require disposal as hazardous waste irrespective of the chemical properties of the waste.
- 13.3 Should any soils require disposal off site an assessment of waste classification of the soils for disposal should be made by a competent person. Further chemical analysis may be required to fully characterise waste soils for disposal to landfill or re-use off site. WAC analysis may be required for disposal of soils as inert or hazardous.

Waste Acceptance Criteria

- 13.4 WAC testing was completed on two samples; the results indicated the wastes would be suitable for disposal in either an inert or stable non-reactive (SNRHW) landfill.

14. CONCLUSION AND RECOMMENDATIONS

Conclusions

- 14.1 The proposed development for Plot Q comprises a warehouse distribution/production unit with first floor office and core facilities.
- 14.2 The generalised ground conditions across the development plot consist of Topsoil with localised Made Ground present on the south west edge of the site where a bund is present, beneath the south eastern corner of the proposed building and on the eastern portion in the proposed yard area.
- 14.3 The topsoil, and localised Made Ground, is underlain by Glaciofluvial Sheet Deposits to the west and Till to the east.

Environmental

- 14.4 No exceedances were recorded when screened against the respective LQM/CIEH S4UL, for a commercial end use, screening criteria for risks to human health.
- 14.5 Low concentrations of metals and inorganics have been recorded in leachate and samples of the groundwater above UK DWS and EQS screening criteria. BWB consider it unlikely that the shallow soils on site could be impacting upon the groundwater quality. The levels of exceedances are not considered significant to the recorded levels of contaminants in samples.
- 14.6 As the proposed development on the site will comprise large areas with hardstanding and buildings which will limit further infiltration and leaching, BWB does not consider that controlled waters will be exposed to an unacceptable risk as a result of the proposed development.
- 14.7 Ground gas monitoring recorded slightly elevated concentrations of carbon dioxide, no detectable methane and negligible to low gas flows. The site has been classified as Characteristic Situation 1 (CS1). Therefore, no ground gas protection measures will be required for new buildings.

Geotechnical

- 14.8 The investigation has identified variable soil deposits across the proposed site comprising cohesive fine-grained soils (low to intermediate plasticity clays and gravelly clays) along with granular sands and gravels.
- 14.9 The localised Made Ground up to 1.8m thickness is unsuitable for the support of shallow spread foundations owing to its variability/poor competence and the potential risk of excessive total and/or differential settlements.
- 14.10 Shallow foundations bearing upon natural cohesive or granular soils may be feasible dependent upon structural loads and final levels.

- 14.11 Given variable strength and compressibility of the upper 2.0m along with localised Made Ground, mechanical strengthening of the top 2.0m by compaction may improve the ground enough such that shallow footings could be used.
- 14.12 Ground improvement techniques would improve the performance of the ground such that shallow foundations could then be adopted.
- 14.13 Vibro-stone columns (VSC) to support shallow (pad) spread foundations and a ground bearing floor slab would be feasible. Alternatively, ground improvement comprising installation of rigid inclusions (RIs), with a load transfer platform is considered feasible, as are piled foundations.
- 14.14 The design sulphate and ACEC class for below ground concrete at the site is DS1 and AC-1 for natural soils. Where concrete is in contact / near Made Ground a class of DS4 AC-4 is required.
- 14.15 Grading and Atterberg Limit tests for the near-surface Glaciofluvial Sheet Deposits indicated that excavated site-won materials would generally classify as either Class 1A (granular) and Till as Class 2A/2B (cohesive) in accordance with 'Table 6/2 of the SHW, Series 600'.
- 14.16 Based on the ground conditions encountered together with the variable and shallow groundwater issues in the area, soakaway drainage is unlikely to be a viable solution.
- 14.17 Groundwater is likely to vary greatly seasonally at the site. The ground investigation, undertaken in November (after a particularly dry spring/summer), will have likely captured a lowered groundwater situation at the site, with some areas of the site displaying evidence of waterlogging.
- 14.18 If groundwater levels rise following extended periods of wet weather, groundwater pumping may be required during construction ground works.

Recommendations

- 14.19 Ground improvement is likely to be required and will need to be undertaken in accordance with a suitable specification.
- 14.20 Earthworks will need to be undertaken in accordance with a suitable specification document.
- 14.21 Allowance should be made for temporary shoring of excavations due to likely stability issues associated with running sands.
- 14.22 Contingency for groundwater control should be considered especially if development is undertaken during the winter months.

The design sulphate and ACEC class for below ground concrete at the site is generally DS-1 and AC-2z. However, where concrete is in contact with the localised Made Ground a concrete class of DS-4, AC-4 will be required.

15. REFERENCES

1. British Standards Institution, (BSI), BS 8485:2015+A1:2019, Code of Practice for the characterization and remediation from ground gas in affected developments
2. British Standards Institution, (BSI), BS 8576:2013, Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs)
3. British Standards Institution, (BSI), BS 10175:2011+A2:2017, Investigation of Contaminated Sites – Code of Practice
4. British Standards Institution, (BSI), BS5930:2015+A1:2020 Code of practice for ground investigations
5. British Standards Institution, (BSI), BS EN 1997-1:2004+A1:2013, Incorporating corrigendum February 2009, Eurocode 7 – Geotechnical Design – Part 1: General rules.
6. British Standards Institution, (BSI), BS EN 1997-2:2007 Incorporating corrigendum June 2010, Eurocode 7 – Geotechnical Design – Part 2: Ground Investigation and testing.
7. Building Research Establishment Special Digest 1 *Third Edition*. Concrete in Aggressive Ground (2005)
8. Building Research Establishment (BRE) BR211, Radon; Guidance on Protective Measures for New Buildings (2015)
9. Construction Industry Research and Information Association (CIRIA), Report 132, A Guide to Safe working on Contaminated Sites (1996).
10. Construction Industry Research and Information Association (CIRIA). 2001, C522 Contaminated land risk assessment, A guide to good practice.
11. Construction Industry Research and Information Association (CIRIA). 2007, Report C665, Assessing Risk Posed by on Hazardous Ground Gases to Buildings
12. Department for Communities and Local Government (DCLG), 2012, National Planning Policy Framework.
13. Department for Environment Food and Rural Affairs (DEFRA), 2012, Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance.
14. Environment Agency report Land Contamination Risk Management, 2020.
15. Environment Agency 2008, Updated technical background to the CLEA model Science Report – SC050021/SR3
16. Environment Agency 2008, Human health toxicological assessment of contaminants in soil Science Report – SC050021/SR2
17. Environment Agency 2009, CLEA Software (Version 1.05) Handbook Better Regulation Science Programme Science report: SC050021/SR4
18. Environment Agency 2008, A review of body weight and height data used within the Contaminated Land Exposure Assessment model (CLEA) Project SC050021/ Technical Review 1

19. Environment Agency, 2006, Remedial Targets Methodology, Hydrogeological Risk Assessment for Land Contamination
20. Health and Safety Executive (HSE) 'Protection of workers and the general public during the Development of Contaminated Land (1991).
21. NHBC Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D Publication 66: 2008.

DRAWINGS

Drawing 1: Exploratory Hole Location Plan



- Notes**
1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
 2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
 4. Any discrepancies noted on site are to be reported to the engineer immediately.

Key Plan

Legend

- TPXX - Denotes the location of Trial Pit
- BHXX - Denotes the location of Borehole
- Approximate Site Boundary

P2	22.05.26	FINAL ISSUE	JH	CR
Rev	Date	Details of issue / revision	Dwn	Rev

Issues & Revisions

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Client
**WILSON BOWDEN
DEVELOPMENTS LTD**

Project Title
**PLOT Q, KINGSWAY
BUSINESS PARK**

Drawing Title
**EXPLORATORY HOLE
LOCATION PLAN**

Drawn:	J. HARLAND	Reviewed:	C. RILEY
BWB Ref:	244 498	Date:	22.05.26
Scale:	A3	NTS	

Drawing Status
FINAL

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
244498-BWB-ZZ-XX-G-01_EHLP	S2	P2



APPENDICES

Appendix 1 : Site Photographs



Photo 1 — Area of Low Topography.



Photo 2 — Bund and ditch adjacent to Michael Faraday Avenue.



Photo 3 — Dry Stone Wall.



Photo 4 — Barbed Wire Fencing.



Photo 5— Pedestrian Path and Bicycle Lane.



Photo 6 — Vegetated Areas.



Photo 7 — Drainage running through the ditch.



Photo 8 — Gap in the barbed wire fencing.



Photo 9 — Overview of the field.

Appendix 2 : Classification of Risk

BWB RISK ASSESSMENT CLASSIFICATION (REFERENCE CIRIA C552, CONTAMINATED LAND RISK ASSESSMENT: A GUIDE TO GOOD PRACTICE, 2001)

CIRIA C552, *Contaminated Land Risk Assessment A Guide to Good Practice*, 2001 sets out a methodology for estimating risk. The methodology for risk evaluation is a qualitative method for interpreting the output for the risk estimation stage of the assessment. It involves the classification of the:

- Magnitude of the potential consequence (severity) of risk occurring; and
- Magnitude of the probability (likelihood) of the risk occurring.

The classification of consequence and probability are replicated in **Table 1** and **Table 2**, respectively.

Table 1: Classification of Consequence

Classification	Definition	Examples
Severe (Sv)	Short term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to a particular ecosystem, or organism forming part of such ecosystem.	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium (Md)	Chronic damage to Human Health ("significant harm"). Pollution of sensitive water resources. A significant change in a particular ecosystem, or organism forming part of such ecosystem.	Concentrations of a contaminant from site exceeding the generic or site-specific assessment criteria. Leaching of contaminants from a site to a major or minor aquifer. Death of species within a designated nature reserve.
Mild (Mi)	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater. Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor (Mr)	Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. Non-permanent health effects to human health (easily prevented by measures such as protective clothing etc.). Easily repairable effects of damage to buildings, structures and services.	The presence of contaminants at such concentration that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discolouration of concrete.

The classification of consequence does not take into account the probability of the consequence being realised. Therefore, there may be more than one consequence for a particular pollutant linkage. Both a severe and medium classification can result in death.

Severe relates to short term (acute) risk while medium relates to long term (chronic) risk. Mild relates to significant harm but to less sensitive receptors. Minor classification relates to harm which is not significant but could have a financial cost.

Table 2: Classification of Probability

Classification	Definition
High likelihood (Hi)	There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable in the long term, or there is evidence at the receptor of harm or pollution.
Likely (Li)	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood (Lw)	There is a pollutant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term.
Unlikely (Ui)	There is a pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

The classification gives a guide as to the severity and consequence of identified risk when compared with other risk presented on the site. It should be noted that if a risk is identified it cannot be classified as “no risk” but as “very low risk”. Differing stakeholders may have a different view on the acceptability of a risk.

Once the consequence and probability have been classified these can be compared using a matrix to identify an overall risk category, as shown in **Table 3**. These categories and the actions required are categorised in **Table 4**.

Table 3: Risk Evaluation Matrix

Consequence		Severe (Sv)	Medium (Md)	Mild (Mi)	Minor (Mr)
Probability	High likelihood (Hi)	Very High Risk (VH)	High Risk (H)	Moderate Risk (M)	Mod/Low Risk (M/L)
	Likely (Li)	High Risk (H)	Moderate Risk (M)	Mod/Low Risk (M/L)	Low Risk (L)
	Low likelihood (Lw)	Moderate Risk (M)	Mod/Low Risk (M/L)	Low Risk (L)	Very Low Risk (VL)
	Unlikely (Ui)	Mod/Low Risk (M/L)	Low Risk (L)	Very Low Risk (VL)	Very Low Risk (VL)

Table 4: Risk Categorisations

Very High Risk (VH)	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation are likely to be required.
High Risk (H)	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate Risk (M)	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low Risk (L)	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very Low Risk (VL)	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

Reference:

CIRIA C552 *Contaminated land risk assessment. A guide to good practice*. Rudland, D J, Lancefield, R M, Mayell, P N, 2001.

Appendix 3 : Exploratory Hole Logs

BOREHOLE LOG

Scale 1:50

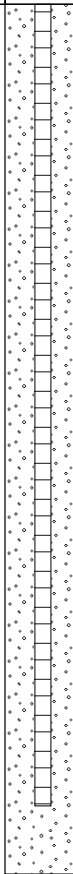
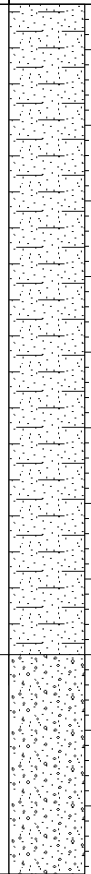
Sheet 1 of 2

[illegible]

BOREHOLE LOG

Scale 1:50

Sheet 2 of 2

LOCATION ID		Project Name: Plot Q					Ground Level (m AOD): 148.40							
BH01		Project Number: 244498					Eastings: 391828.69							
		Client: Wilson Bowden Developments Ltd					Northings: 412549.23							
Hole Type: CP		Rig: Dando			Start & End Date: 18/11/2025 - 19/11/2025			Engineer: CRI		Checker:				
Boring		Strata					Samples			In-Situ Tests				
Strike	Well	Level (m AOD) & [Thickness (m)]	Description	Legend	Depth (m bgl)	Type (blows)	From (m)	To (m)	Type	Depth (m)	Result	Casing Depth & (Water Level)		
		[4.75]	Medium dense orangish brown fine to medium slightly clayey SAND. (Glaciofluvial Deposits)						SPT	11.00	N=12 (1,2/3,3,3,3)			
									SPT	12.50	N=14 (2,2/3,3,4,4)			
									SPT	14.00	N=18 (2,3/4,4,5,5)			
									SPT	15.00	N=19 (2,3/4,4,5,6)			
		134.20	Medium dense dark brown coarse to fine SAND and GRAVEL. Gravel is fine to coarse subrounded to subangular sandstone. (Glaciofluvial Deposits)		14.20									
		[1.45]												
		132.95	Hole Terminated at 15.45m bgl.		15.45									
Remarks														
Chiseling														
From (m bgl)	To (m bgl)	Time (hh:mm)												
Reason for Termination:														
Terminated at depth														
Groundwater Remarks:														
Borehole became damp at 11.7m but no groundwater rise.														
Other Remarks:														
Location cleared of buried services. No olfactory or visual evidence of contamination noted.														
Water Added														
From (m bgl)	To (m bgl)	Volume (l)												


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BOREHOLE LOG

Scale 1:50

Sheet 1 of 2

LOCATION ID		Project Name: Plot Q						Ground Level (m AOD): 150.36						
BH02		Project Number: 244498						Eastings: 391937.85						
		Client: Wilson Bowden Developments Ltd						Northings: 412458.14						
Hole Type: CP		Rig: Dando			Start & End Date: 19/11/2025 - 20/11/2025			Engineer: CRi		Checker:				
Boring		Strata						Samples			In-Situ Tests			
Strike	Well	Level (m AOD) & [Thickness (m)]	Description			Legend	Depth (m bgl)	Type (blows)	From (m)	To (m)	Type	Depth (m)	Result	Casing Depth & (Water Level)
		[0.30]	Dark brown sandy CLAY. Some rootlets. (Topsoil)				0.30							
		150.06	Firm grey mottled orangish brown and brown sandy CLAY. Occasional fossilised roots and weathered sandstone gravel. (Till)								SPT	1.00	N=10 (1,1/2,2,3,3)	
		[1.15]												
		148.91	Firm dark brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded sandstone and mudstone. (Till)				1.45				SPT	2.00	N=16 (2,2/3,4,4,5)	
											SPT	3.00	N=25 (2,4/6,6,6,7)	
											SPT	4.00	N=16 (2,3/3,4,4,5)	
		[5.05]									SPT	5.00	N=18 (2,3/4,4,5,5)	
		143.86	Firm brown CLAY. (Till)				6.50				SPT	6.50	N=18 (3,3/4,4,5,5)	
											SPT	8.00	N=17 (3,3/4,4,4,5)	
											SPT	9.50	N=17 (2,3/4,4,4,5)	
Chiseling			Remarks											
From (m bgl)	To (m bgl)	Time (hh:mm)												
			Reason for Termination:											
			Terminated at depth											
			Groundwater Remarks:											
			No groundwater encountered.											
Water Added			Other Remarks:											
From (m bgl)	To (m bgl)	Volume (l)												
			Location cleared of buried services. No olfactory or visual evidence of contamination noted.											
BWB A CAP GROUP COMPANY AGS REGISTERED 1984 2023														

BOREHOLE LOG

LOCATION ID		Project Name: Plot Q					Ground Level (m AOD): 150.36						
BH02		Project Number: 244498					Eastings: 391937.85						
		Client: Wilson Bowden Developments Ltd					Northings: 412458.14						
Hole Type: CP		Rig: Dando			Start & End Date: 19/11/2025 - 20/11/2025			Engineer: CRi		Checker:			
Boring		Strata					Samples			In-Situ Tests			
Strike	Well	Level (m AOD) & [Thickness (m)]	Description	Legend	Depth (m bgl)	Type (blows)	From (m)	To (m)	Type	Depth (m)	Result	Casing Depth & (Water Level)	
			Firm brown CLAY. (Till)										
									SPT	11.00	N=18 (3,3/4,4,5,5)		
			12 - 12.95m: Clay becoming slightly gravelly. Gravel is medium subrounded quartz and fine subangular to subrounded mudstone?						SPT	12.50	N=19 (3,3/4,4,5,6)		
									SPT	14.00	N=20 (2,3/4,5,5,6)		
			Stiff brown sandy slightly gravelly CLAY. Gravel is fine to medium subangular to rounded sandstone and fine subangular coal. (Till)						SPT	15.00	N=21 (3,4/4,5,6,6)		
			Hole Terminated at 15.45m bgl.										
Chiselling		Remarks											
From (m bgl)	To (m bgl)	Time (hh:mm)	Reason for Termination:										
			Terminated at depth										
Groundwater Remarks:			No groundwater encountered.										
Water Added			Other Remarks:										
From (m bgl)	To (m bgl)	Volume (l)	Location cleared of buried services. No olfactory or visual evidence of contamination noted.										

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REGISTERED DES 202

BOREHOLE LOG

LOCATION ID BH03		Project Name: Plot Q						Ground Level (m AOD): 150.15						
		Project Number: 244498						Eastings: 391845.00						
		Client: Wilson Bowden Developments Ltd						Northings: 412467.23						
Hole Type: CP		Rig: Dando			Start & End Date: 20/11/2025 - 21/11/2025			Engineer: CRi		Checker:				
Boring		Strata					Samples			In-Situ Tests				
Strike	Well	Level (m AOD) & [Thickness (m)]	Description		Legend	Depth (m bgl)	Type (U/blows)	From (m)	To (m)	Type	Depth (m)	Result	Casing Depth & (Water Level)	
		(0.30) 149.85	Dark brown sandy CLAY. Some rootlets. (Topsoil)			0.30								
			Soft brown mottled orangish brown and grey slightly sandy CLAY. (Glaciofluvial Deposits)							SPT	1.00	N=7 (1,1/1,2,2,2)		
		(1.70)												
		148.15	Stiff dark brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is fine to medium subangular sandstone and mudstone. (Glaciofluvial Deposits)			2.00				SPT	2.00	N=15 (2,2/3,3,4,5)		
		(1.00)												
		147.15	Soft to firm dark brown slightly gravelly CLAY. Gravel is fine to medium subangular sandstone. (Glaciofluvial Deposits)			3.00				SPT	3.00	N=16 (2,3/3,4,4,5)		
										SPT	4.00	N=16 (2,2/3,4,4,5)		
										SPT	5.00	N=15 (2,3/3,3,4,5)		
										SPT	6.50	N=14 (2,2/3,3,4,4)		
		(7.00)												
										SPT	8.00	N=16 (2,3/3,4,4,5)		
										SPT	9.50	N=22 (3,3/4,5,6,7)		
Chiselling			Remarks											
From (m bgl)	To (m bgl)	Time (hh:mm)												
			Reason for Termination: Terminated at depth											
			Groundwater Remarks: Borehole became damp at 12.7m but no groundwater rise.											
Water Added			Other Remarks:											
From (m bgl)	To (m bgl)	Volume (l)	Location cleared of buried services. No olfactory or visual evidence of contamination noted.											



BOREHOLE LOG

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Sheet 2 of 2

LOCATION ID BH03		Project Name: Plot Q					Ground Level (m AOD): 150.15							
		Project Number: 244498					Eastings: 391845.00							
		Client: Wilson Bowden Developments Ltd					Northings: 412467.23							
Hole Type: CP		Rig: Dando			Start & End Date: 20/11/2025 - 21/11/2025			Engineer: CRI		Checker:				
Boring		Strata					Samples			In-Situ Tests				
Strike	Well	Level (m AOD) & [Thickness (m)]	Description		Legend	Depth (m bgl)	Type (blows)	From (m)	To (m)	Type	Depth (m)	Result	Casing Depth & (Water Level)	
		140.15	Soft to firm dark brown slightly gravelly CLAY. Gravel is fine to medium subangular sandstone. (Glaciofluvial Deposits)			10.00								
			Medium dense orangish brown medium to coarse slightly gravelly SAND. Gravel is medium subrounded quartz and fine subangular sandstone. (Glaciofluvial Deposits)								SPT	11.00	N=23 (3,3/4,5,7,7)	
			12 - 12.45m: No longer gravelly.								SPT	12.50	N=17 (2,3/3,4,4,6)	
		[5.45]									SPT	14.00	N=20 (3,4/4,5,5,6)	
											SPT	15.00	N=20 (2,4/4,5,6,5)	
		134.70	Hole Terminated at 15.45m bgl.			15.45								
Chiseling		Remarks												
From (m bgl)	To (m bgl)	Time (hh:mm)	Reason for Termination: Terminated at depth											
Groundwater Remarks:			Borehole became damp at 12.7m but no groundwater rise.											
Water Added			Other Remarks:											
From (m bgl)	To (m bgl)	Volume (l)	Location cleared of buried services. No olfactory or visual evidence of contamination noted.											
			 											

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.00 0.65 Pit Dimensions (m) Orientation: 135°							
TP01	Project Number: 244498										
	Client: Wilson Bowden Developments Ltd										
	Plant: JCB	Start & End Date: 19/11/2025									
Ground Level (m AOD): 145.39		Eastings & Northings: 391782E 412606N		Engineer: CRi	Checker:						
Strata Samples In-Situ Tests											
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.30m	Dark brown sandy CLAY. Occasional coarse subrounded cobbles of sandstone. Some rootlets. (Topsoil)		0.30						
		145.09	Firm to stiff brownish grey mottled orangish brown sandy gravelly CLAY. Gravel is fine to medium subangular to subrounded coal and mudstone. (Glaciofluvial Deposits)								
		0.80m									
		144.29	Yellowish brown fine to medium SAND. (Glaciofluvial Deposits)								
		0.20m									
144.09	Firm orangish brown and light grey mottled slightly sandy slightly gravelly CLAY. Gravel is fine angular coal and fine to medium sandstone. (Glaciofluvial Deposits)	1.30	D1	1.10							
0.45m			D2	1.50							
143.64	Yellowish brown fine to medium SAND. (Glaciofluvial Deposits)	1.75									
0.45m	1.80 - 2.00m: Some sandstone cobbles.										
143.19	Hole Terminated at 2.20m bgl.			2.20							
Remarks											
Reason for Termination: Terminated due to slope Groundwater Notes: Slight seepage at 0.15m. Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
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TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q			3.10 0.70 Pit Dimensions (m) Orientation: 90° Stability: Unstable.						
TP02		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 19/11/2025								
Ground Level (m AOD): 148.80		Eastings & Northings: 391839E 412584N			Engineer: CRi		Checker:				
Strata						Samples			In-Situ Tests		
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
▼		0.30m	Dark brown sandy slightly gravelly CLAY. Gravel is fine to coarse subrounded sandstone. (Topsoil)		0.30	ES1	0.15				
		148.50	Grey and orangish brown mottled slightly gravelly fine to medium SAND. Gravel is fine to coarse subangular to subrounded sandstone. Some sandstone cobbles. (Glaciofluvial Deposits)		0.30	B1	1.00				
		0.90m									
		147.60	Stiff to very stiff brown slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded coal and sandstone. (Glaciofluvial Deposits)		1.20	D1	1.30		HSV	1.30	(130)kPa
	0.70m										
		146.90	Yellowish brown fine to medium SAND. (Glaciofluvial Deposits)		1.90	B2	2.00				
		1.35m									
		145.55	Hole Terminated at 3.25m bgl.		3.25						
Remarks											
Reason for Termination: Terminated at depth Groundwater Notes: Slight seepage at 1.5m. Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
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TRIAL PIT LOG

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LOCATION ID:		Project Name: Plot Q		3.80 0.70 Pit Dimensions (m) Orientation: 0° Stability: Unstable, collapsed at 3m bgl.							
TP03		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 21/11/2025								
Ground Level (m AOD): 149.53		Eastings & Northings: 391881E 412545N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.50m	Dark brown sandy CLAY. Some rootlets. (Topsoil)			ES1	0.25				
		149.03	Greyish brown slightly clayey fine to medium SAND. Occasional sandstone cobbles. (Glaciofluvial Deposits)		0.50	B1	0.60		PID	0.60	0.2ppm
			0.7 - 1.1m: Pockets of soft brown light grey and orangish brown mottled sandy CLAY.								
		1.60m	1.1 - 2.1m: Becoming brown, light grey and orangish brown mottled.			B2	1.70		PID	1.70	0.1ppm
		147.43	Soft dark grey sandy CLAY. Many cobbles and boulders of sandstone. (Glaciofluvial Deposits)		2.10						
		0.40m									
		147.03	Firm dark grey slightly gravelly CLAY. Gravel is fine and medium angular to subrounded sandstone. (Till)		2.50				HSV	2.50	(59)kPa
		0.50m									
		146.53	Hole Terminated at 3.00m bgl.		3.00						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
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TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:	Project Name: Plot Q		3.70 0.70 Pit Dimensions (m) Orientation: 0°								
TP04	Project Number: 244498										
	Client: Wilson Bowden Developments Ltd										
	Plant: JCB	Start & End Date: 20/11/2025									
Ground Level (m AOD): 149.67		Eastings & Northings: 391910E 412524N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.45m	Dark brown sandy CLAY. Some rootlets. (Topsoil)								
		149.22	Firm light grey mottled orangish brown sandy slightly gravelly CLAY. Gravel is fine and medium coal and fine to coarse subrounded to rounded sandstone. (Till)		0.45	D1 ES1	0.50 0.50				
		0.30m									
		148.92	Firm to stiff brown slightly gravelly CLAY. Gravel is fine to coarse subangular sandstone. (Till)		0.75						
		1.35m									
		147.57	Stiff brown, orangish brown and light grey mottled CLAY. Occasional sandstone cobbles. (Till)		2.10	D2	2.20				
		0.60m									
		146.97	Hole Terminated at 2.70m bgl.		2.70						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
										BWB CAP GROUP COMPANY AGS REGISTERED USER 2023	

TRIAL PIT LOG

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LOCATION ID:		Project Name: Plot Q		2.80 0.60 Pit Dimensions (m) Orientation: 90°							
TP05		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 19/11/2025								
Ground Level (m AOD): 147.96		Eastings & Northings: 391797E 412586N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
▼		0.30m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.30	ES1	0.15				
		147.66	Soft to firm greyish brown mottled orangish brown very sandy slightly gravelly CLAY. Gravel is fine to medium subangular to subrounded sandstone. Some cobbles of sandstone. (Glaciofluvial Deposits)		0.30						
		0.45m									
		147.21	Brown gravelly SAND. Gravel is fine to coarse subangular to subrounded sandstone and coal. (Glaciofluvial Deposits)		0.75						
		0.45m									
		146.76	Soft light grey mottled orangish brown sandy slightly gravelly CLAY. Gravel is fine to medium subangular coal and subrounded sandstone. (Glaciofluvial Deposits)		1.20	B1	1.30	PID	1.30	0.1ppm	
0.50m											
146.26	Stiff to very stiff brownish grey slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and coal. (Glaciofluvial Deposits)		1.70			HSV	1.80	(126)kPa			
0.65m											
145.61	Yellowish brown fine to medium SAND. (Glaciofluvial Deposits)		2.35								
0.35m											
145.26	Hole Terminated at 2.70m bgl.				2.70						
Remarks											
Reason for Termination: Terminated due to instability											
Groundwater Notes: Numerous seepages at 0.7m.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
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TRIAL PIT LOG

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LOCATION ID:	Project Name: Plot Q		3.60 0.70 Pit Dimensions (m) Orientation: 135°		
TP06	Project Number: 244498				
	Client: Wilson Bowden Developments Ltd				
	Plant: JCB	Start & End Date: 21/11/2025			
Ground Level (m AOD): 149.71		Eastings & Northings: 391885E 412511N		Engineer: CRi	Checker:

Strata					Samples			In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.40m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.40	ES1	0.20				
		149.31	Soft to firm light grey mottled orangish brown slightly gravelly sandy CLAY. Gravel is fine to medium, subangular to subrounded coal and sandstone. (Till)		0.40	D1	0.70				
		1.00m									
		148.31	Firm dark grey slightly gravelly CLAY. Gravel is occasional fine to coarse, angular to subrounded sandstone. (Till)		1.40	D2	1.50		HSV	1.60	(53)kPa
		0.70m									
		147.61	Stiff to very stiff greyish brown and light grey mottled slightly gravelly CLAY. Gravel is fine and medium subangular to subrounded sandstone. (Till)		2.10						
		0.80m									
		146.81	Hole Terminated at 2.90m bgl.		2.90	D3	2.80				

Remarks

Reason for Termination:

Terminated at depth

Groundwater Notes:

No groundwater encountered.

Other Remarks:

Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.

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TRIAL PIT LOG

Scale: 1:20

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LOCATION ID:		Project Name: Plot Q		4.30 0.70 Pit Dimensions (m) Orientation: 90° Stability: Dry and stable.								
TP07		Project Number: 244498										
		Client: Wilson Bowden Developments Ltd										
		Plant: JCB	Start & End Date: 20/11/2025									
Ground Level (m AOD): 150.04		Eastings & Northings: 391916E 412488N		Engineer: CRi		Checker:						
Strata						Samples		In-Situ Tests				
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result	
		0.20m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.20	ES1	0.10					
		149.84	Firm brown mottled orangish brown sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. (Till)									
		1.50m					B1	0.80		HSV	0.80	(78)kPa
		148.34	Stiff dark brown slightly gravelly CLAY. Gravel is fine rounded to subrounded sandstone. Occasional light grey mottling (Till)				B2	2.00		HSV	1.30	(65)kPa
		0.90m										
		147.44	Hole Terminated at 2.60m bgl.		2.60							
Remarks												
Reason for Termination: Terminated due to refusal												
Groundwater Notes: No groundwater encountered.												
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.												
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TRIAL PIT LOG

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LOCATION ID:		Project Name: Plot Q			3.10 0.70 Pit Dimensions (m) Orientation: 0° Stability: Dry and stable.						
TP08		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 19/11/2025								
Ground Level (m AOD): 149.99		Eastings & Northings: 391782E 412543N			Engineer: CRi		Checker:				
Strata						Samples			In-Situ Tests		
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.25m	Dark brown sandy CLAY. Some rootlets. (Topsoil)								
		149.74	Soft to firm dark brown gravelly CLAY. Gravel is fine to coarse angular to subrounded brick, sandstone, coal and clinker. (Made Ground)		0.25						
		1.55m				ES1	0.75		HSV	0.75	(42)kPa
		148.19	Stiff orangish brown, brown and light grey mottled sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone and coal. Occasional black mottling. (Glaciofluvial Deposits)		1.80						
		0.30m				D1	1.90		HSV	1.90	(79)kPa
		147.89	Brown fine to coarse slightly gravelly SAND. Gravel is fine and medium subangular coal. (Glaciofluvial Deposits)		2.10						
		1.40m									
		146.49	Hole Terminated at 3.50m bgl.		3.50						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. Backfilled with arisings.											
BWB CAF GROUP COMPANY AGS REGISTERED USER 2023											

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.60 0.70 Pit Dimensions (m) Orientation: 135°							
TP09		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 19/11/2025								
Ground Level (m AOD): 149.59		Eastings & Northings: 391843E 412505N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.30m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.30	ES1	0.20				
		149.28	Soft to firm light grey sandy slightly gravelly CLAY. Gravel is coarse subrounded siltstone. Occasional orangish brown and black mottling. (Glaciofluvial Deposits)								
		0.45m				B1	0.70		PID	0.70	0.5ppm
		148.84	Orangish brown sandy CLAY. (Glaciofluvial Deposits)								
		0.45m						HSV	1.50	(56)kPa	
148.38	Firm dark grey gravelly CLAY. Gravel is coarse subangular sandstone and fine to medium mudstone and coal. (Till)										
0.80m											
147.58	Stiff to very stiff dark grey gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone and angular to subangular coal. (Fill)										
1.30m						B2	2.30				
146.28	Hole Terminated at 3.30m bgl.										
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: Slight seepage at 2.5m.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
										BWB AGS	

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LOCATION ID:		Project Name: Plot Q		4.00 0.70 Pit Dimensions (m) Orientation: 135°										
TP10		Project Number: 244498												
		Client: Wilson Bowden Developments Ltd												
		Plant: JCB	Start & End Date: 20/11/2025					Stability: Dry and stable.						
Ground Level (m AOD): 149.88		Eastings & Northings: 391886E 412471N		Engineer: CRi		Checker:								
Strata						Samples		In-Situ Tests						
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result			
▼		0.25m	Dark brown sandy CLAY. Some rootlets. (Topsoil) 0.00 - 0.25: Topsoil wet.		0.25	ES1	0.15							
		149.63	Firm greyish brown sandy CLAY. Occasional orangish brown mottling. (Till)									HSV	0.50	(58)kPa
		1.65m												
		147.98	Stiff brown slightly gravelly CLAY. Gravel is fine to medium subrounded sandstone and mudstone. Occasional grey mottling. (Till)									HSV	1.30	(82)kPa
0.90m														
147.08	Hole Terminated at 2.80m bgl.			HSV	2.80	(105)kPa								
Remarks														
Reason for Termination: Terminated at depth														
Groundwater Notes: Fast seepage at 2.0m.														
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.														
BWB CAF GROUP COMPANY AGS REGISTERED USER 2023														

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.50 0.70 Pit Dimensions (m) Orientation: 0°							
TP11		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 20/11/2025								
Ground Level (m AOD): 150.23		Eastings & Northings: 391921E 412448N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.30m	Dark brown sandy CLAY. Some rootlets. (Topsoil)			ES1	0.20				
		149.93	Firm brown mottled grey sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone. Occasional sandstone cobble. (Till)		0.30	D1	0.70		HSV	0.70	(61)kPa
		1.40m									
		148.52	Firm to stiff brown mottled grey slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded sandstone, mudstone and coal. Occasional sandstone cobbles. (Till)		1.70	D2	1.70				
		1.10m									
		147.43	Hole Terminated at 2.80m bgl.		2.80						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
										BWB CAF GROUP COMPANY AGS REGISTERED USER 2023	

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.70 0.70 Pit Dimensions (m) Orientation: 0° Stability: Dry and stable.							
TP12		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 19/11/2025								
Ground Level (m AOD): 149.66		Eastings & Northings: 391803E 412512N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.30m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.30						
		149.36	Soft brown occasional mottled orangish brown sandy CLAY. Occasional medium and coarse subrounded sandstone gravel. (Glaciofluvial Deposits)			ES1	0.40		HSV	0.40	(29)kPa
		1.10m									
			1.00 - 1.40: Becoming soft to firm						HSV	1.00	(45)kPa
		148.26	Brown fine to medium SAND. Occasional fine subangular coal gravel. Occasional clay pockets noted with depth. (Glaciofluvial Deposits)		1.40						
		1.80m									
		146.46	Hole Terminated at 3.20m bgl.		3.20						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
BWB CAF GROUP COMPANY AGS REGISTERED USER 2023											

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		6.65 0.70 Pit Dimensions (m) Orientation: 135° Stability: Dry and stable.							
TP13		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 20/11/2025								
Ground Level (m AOD): 150.41		Eastings & Northings: 391942E 412435N		Engineer: CRi		Checker:					
Strata					Samples			In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.20m	Dark brown sandy CLAY. Some rootlets. (Topsoil)								
		150.21	Soft to firm dark brown gravelly clay. Gravel is fine to coarse subangular to subrounded brick, concrete, sandstone and metal. Many cobbles of brick. Some cobbles of sandstone. One foot for Heras fencing. (Made Ground)		0.20	ES1	0.60		HSV	0.60	(93)kPa
		0.65m			0.85						
		149.56	Firm to stiff brown CLAY. Occasional orangish brown mottling. (Till)			D1	1.90		HSV	1.90	(78)kPa
		0.95m		1.80							
		148.60	Firm to stiff dark grey mottled orangish brown slightly gravelly CLAY. Gravel is fine to coarse subangular to rounded sandstone. (Till)								
		1.10m									
		147.50	Hole Terminated at 2.90m bgl.		2.90						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. Backfilled with arisings.											
BWB CAF GROUP COMPANY AGS REGISTERED USER 2023											

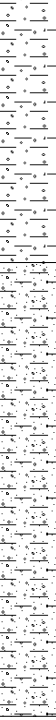
TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.80 0.70 Pit Dimensions (m) Orientation: 0°							
TP14		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 20/11/2025					Stability: Dry and stable.			
Ground Level (m AOD): 150.39		Eastings & Northings: 391873E 412443N		Engineer: CRi		Checker:					
Strata						Samples		In-Situ Tests			
Groundwa ter Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.25m	Dark brown sandy CLAY. Some rootlets. (Topsoil)								
		150.14	Firm brown gravelly clay. Gravel is fine to coarse subangular to subrounded sandstone and mudstone. Some cobbles of sandstone. (Made Ground)		0.25	ES1	0.35		HSV	0.40	(70)kPa
		0.45m									
		149.69	Black fine to coarse sand and gravel. Gravel is fine to coarse subangular brick, ceramic, sandstone, mudstone, wire, plastic, metal, slate, wood and glass. One piece of timber. Many cobbles of brick. Strong organic odour. (Made Ground)		0.70	ES2	1.00		PID	1.00	0.4ppm
		0.35m									
		149.34	Firm brown CLAY. Occasional light grey mottling. (Till)		1.05	B1	1.50		HSV	1.40	(49)kPa
		1.35m									
		147.99	Stiff brown and grey mottled slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded coal and sandstone. (Till)		2.40	B2	2.50			1.90	(77)kPa
		0.20m									
		147.79	Hole Terminated at 2.60m bgl.		2.60						
Remarks											
Reason for Termination: Terminated due to refusal											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. Backfilled with arisings.											
BWB CAF GROUP COMPANY AGS REGISTERED USER 2023											

TRIAL PIT LOG

Scale: 1:20Sheet 1 of 1

LOCATION ID:		Project Name: Plot Q		3.70 0.70 Pit Dimensions (m) Orientation: 90° Stability: Dry and stable.							
TP15		Project Number: 244498									
		Client: Wilson Bowden Developments Ltd									
		Plant: JCB	Start & End Date: 20/11/2025								
Ground Level (m AOD): 150.96		Eastings & Northings: 391916E 412400N		Engineer: CRi		Checker:					
Strata					Samples			In-Situ Tests			
Groundwater Strike	Backfill	Level (m AOD)	Description	Legend	Depth (m bgl)	Type	From (m)	To (m)	Type	Depth (m)	Result
		0.10m	Dark brown sandy CLAY. Some rootlets. (Topsoil)		0.10	ES1	0.40		HSV	0.40	(82)kPa
		150.86	Firm to stiff dark brown slightly gravelly clay. Gravel is fine to coarse angular to rounded brick, ceramic, sandstone and coal. Some cobbles of brick and sandstone with occasional floor tile. (Made Ground)								
		1.10m									
		149.76	Soft becoming soft to firm greyish brown mottled light grey gravelly CLAY. Gravel is fine to coarse angular to subrounded sandstone. (Till)								
		0.70m									
		149.06	Firm becoming firm to stiff orangish brown and grey mottled sandy gravelly CLAY. Gravel is fine to coarse subangular to rounded sandstone. (Till)		1.20	B1	1.90		HSV	1.90	(45)kPa
		1.20m									
		147.86	Hole Terminated at 3.10m bgl.								
					3.10						
Remarks											
Reason for Termination: Terminated at depth											
Groundwater Notes: No groundwater encountered.											
Other Remarks: Location cleared of buried services. No olfactory or visual evidence of contamination noted. Backfilled with arisings.											
										 	

Appendix 4 : SPT Calibration Certification

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING UK LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR1979
Test Date: 15/04/2024
Report Date: 15/04/2024
File Name: AR1979 (2).spt
Test Operator: CM

Instrumented Rod Data

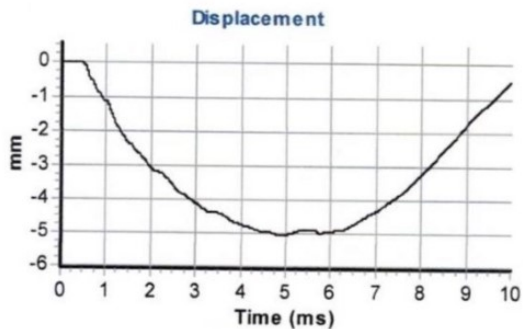
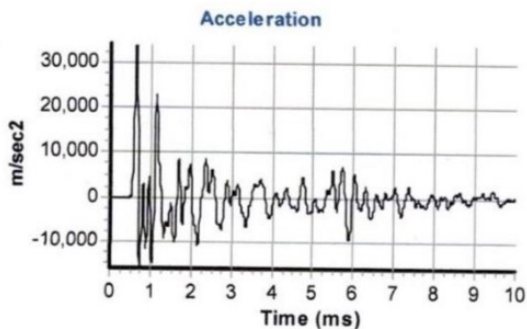
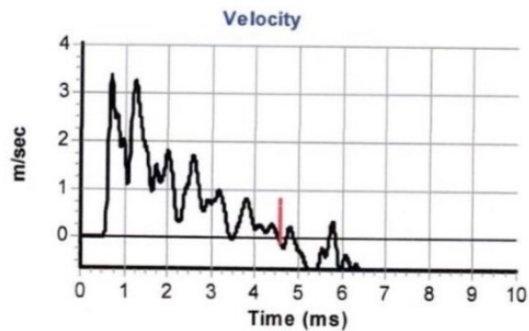
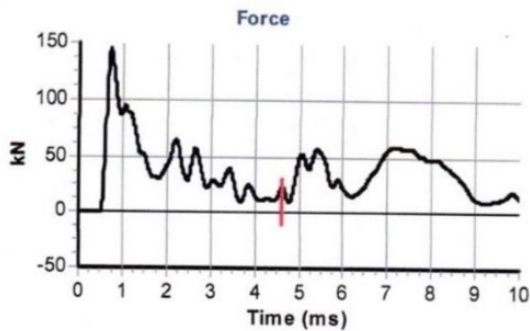
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location

DP DRILLING - 83550



Calculations

Area of Rod A (mm^2): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 317

Energy Ratio E_r (%): **67**

Signed: C. McCLUSKEY

Title: FITTER

Appendix 5 : Gas and Groundwater Monitoring Data

BWB
CONSULTANCY | ENVIRONMENT
INFRASTRUCTURE | BUILDINGS

Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Wind Strength (m/s)	4.9	3.7
Wind Direction (from)	SW-NE	W-E
Temperature (°C)	5.3	8.7
Barometric Pressure (h Pa / mB)	972.7	973.9
App 12 Hour Pressure (h Pa / mB)	964 to 973	
12 Hour Pressure Trend	Rising	
PID - Air		
PID - Calibration Gas		

Site:		Plot Q, Rochdale
Client:		Wilson Bowden Developments Ltd
Job No.:		244498
Date:		02 December 2025
Start / End Time:		09:00 / 11:00
Engineer:		James Harland
Monitoring Equipment:	Gas Meter ID	AA-GFM436
	PID ID	
	Dip Tape	SN:635085 PN:0082760
	Other	N/A

[illegible]

Site:		Plot Q, Rochdale
Client:		Wilson Bowden Developments Ltd
Job No.:		244498
Date:		08/12/2025
Start / End Time:		14:00 - 16:00
Engineer:		James Harland
Monitoring Equipment:	Gas Meter ID	AA-GFM436
	PID ID	
	Dip Tape	SN:635085 PN:0082760
	Other	N/A

BWB
CONSULTANCY | ENVIRONMENT
INFRASTRUCTURE | BUILDINGS

Weather Conditions	Start	End
(Dry / Raining)	Dry	Light Rain
Wind Strength (m/s)		
Wind Direction (from)		
Temperature (°C)		
Barometric Pressure (h Pa / mB)	987.0	986.0
App 12 Hour Pressure (h Pa / mB)	898 to 1004	
12 Hour Pressure Trend	Rising	
PID - Air		
PID - Calibration Gas		

[illegible]

BWb GAS AND GROUNDWATER MONITORING																	
Site:				Plot Q, Rochdale													
Client:				Wilson Bowden Developments Ltd													
Job No.:				244498													
Date:				12/12/2025													
Start / End Time:				09:00 / 11:00													
Engineer:				James Harland													
Monitoring Equipment:				Gas Meter ID		AA-GFM436											
				PID ID													
				Dip Tape		SN:635085 PN:0082760											
				Other		N/A											
</																	

BWB

Dry = No Groundwater

CONSULTANCY | ENVIRONMENT
INFRASTRUCTURE | BUILDINGS

Weather Conditions	Start	End
(Dry / Raining)	Dry	Dry
Wind Strength (m/s)		
Wind Direction (from)		
Temperature (°C)		
Barometric Pressure (h Pa / mB)	987.0	984.0
App 12 Hour Pressure (h Pa / mB)	1010 to 1003	
12 Hour Pressure Trend	falling	
PID - Air		
PID - Calibration Gas		

[illegible]

Appendix 6 : Soil Chemical Analysis Results

BWB Consulting Limited
Whitehall Waterfront
2 Riverside Way
Leeds
LS1 4EH

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t:

e: catherine.riley@bwbconsulting.com
james.harland@bwbconsulting.com

t: 01923 225404

f: 01923 237404

e: info-i2analytical@normecgroup.com

Analytical Report Number : 25-064504

Project / Site name:	Kingsway Plot Q	Samples received on:	25/11/2025
Your job number:	244498	Samples instructed on/ Analysis started on:	29/11/2025
Your order number:		Analysis completed by:	11/12/2025
Report Issue Number:	1	Report issued on:	11/12/2025
Samples Analysed:	16 soil samples - 7 leachate samples		



Signed:

Rafał Szczepańczyk
Technical Reviewer
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
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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.

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765286	765287	765288	765289	765290
Sample Reference	TP02	TP03	TP04	TP05	TP07
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.15	0.25	0.50	0.15	0.10
Date Sampled	19/11/2025	21/11/2025	20/11/2025	19/11/2025	20/11/2025
Time Taken	0855	1050	1500	1047	1427
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	10.6	83.7	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	28	20	17	31	23
Total mass of sample received	kg	0.1	NONE	1.5	1	1.5	1.9	1.6

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	-	-	-	-	-
Analysis completed	N/A	N/A	N/A	-	-	-	-	-

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	-	-	-	-	-
pH (L099)	pH Units	N/A	MCERTS	-	6.3	6.7	6.3	-
Total Cyanide	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	-
Complex Cyanide	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	-
Free Cyanide	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	520	140	670	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	-	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	16	62	39	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.00784	0.0308	0.0197	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	7.84	30.8	19.7	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	-	250	120	390	-
Total Sulphur	%	0.005	MCERTS	-	-	-	-	-
Ammoniacal Nitrogen as NH ₄ ⁺	mg/kg	0.5	MCERTS	-	-	-	-	-
Ammonium as NH ₄ ⁺ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	-	6.4	2.2	6.1	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-	-	-
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	2	NONE	-	-	-	-	-
Water Soluble Nitrate (2:1) as NO ₃ (leachate equivalent)	mg/l	5	NONE	-	-	-	-	-
Acid Neutralisation Capacity	mmol/kg	-9999	NONE	-	-	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	-
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Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765286	765287	765288	765289	765290
Sample Reference	TP02	TP03	TP04	TP05	TP07
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.15	0.25	0.50	0.15	0.10
Date Sampled	19/11/2025	21/11/2025	20/11/2025	19/11/2025	20/11/2025
Time Taken	0855	1050	1500	1047	1427
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	6.4	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.06	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	4.2	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	2.7	-
Phenanthrene	mg/kg	0.05	MCERTS	-	0.24	< 0.05	17	-
Anthracene	mg/kg	0.05	MCERTS	-	0.05	< 0.05	2.9	-
Fluoranthene	mg/kg	0.05	MCERTS	-	0.45	0.06	16	-
Pyrene	mg/kg	0.05	MCERTS	-	0.43	0.06	14	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	0.26	< 0.05	7.3	-
Chrysene	mg/kg	0.05	MCERTS	-	0.27	< 0.05	7.4	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	0.38	< 0.05	7.6	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	0.16	< 0.05	2.3	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	0.25	< 0.05	5.8	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	0.14	< 0.05	2.4	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	< 0.05	0.64	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	0.09	< 0.05	2.6	-
Coronene	mg/kg	0.05	NONE	-	-	-	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-	2.72	< 0.80	99.6	-
Total WAC-17 PAHs	mg/kg	0.85	NONE	-	-	-	-	-

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	12	2.8	14	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	47	74	88	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	0.49	0.4	0.72	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	< 0.2	0.2	0.6	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	< 0.2	< 0.2	0.3	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	-	U/S ^{*U/S g}	< 1.8	U/S ^{*U/S g}	-
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	< 1.80	-	< 1.80	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	9.6	13	16	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	35	16	67	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	45	14	57	-
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	< 0.3	< 0.3	< 0.3	-
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	7.8	12	14	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	15	17	27	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	37	23	88	-

Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765286	765287	765288	765289	765290
Sample Reference	TP02	TP03	TP04	TP05	TP07
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.15	0.25	0.50	0.15	0.10
Date Sampled	19/11/2025	21/11/2025	20/11/2025	19/11/2025	20/11/2025
Time Taken	0855	1050	1500	1047	1427
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	-	-	< 1.0	-	-
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	-	-	< 2.0	-	-
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-	-	< 8.0	-	-
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-	-	< 8.0	-	-
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	-	-	< 10	-	-

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	-	-	< 0.020	-	-
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	-	-	< 1.0	-	-
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	-	-	< 2.0	-	-
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-	-	< 10	-	-
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-	-	< 10	-	-
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	-	-	< 10	-	-

Petroleum Range Organics (EC6 - EC10) _{HS_1D_TOTAL}	mg/kg	1	ISO 17025	-	< 1.0	< 1.0	< 1.0	-
TPH (EC10 - EC40) _{EH_CU_1D_TOTAL}	mg/kg	10	MCERTS	-	13	< 10	96	-

Mineral Oil (EC10 - EC40) _{EH_CU_1D_AL}	mg/kg	10	NONE	-	-	-	-	-
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Toluene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
p & m-Xylene	µg/kg	8	MCERTS	-	-	< 8.0	-	-
o-Xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	-

Total BTEX	µg/kg	10	MCERTS	-	-	-	-	-
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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	mg/kg	0.007	MCERTS	-	-	-	-	-
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Pesticides (GC-MS)

Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	< 10	-	-	-	< 10
Alachlor	µg/kg	10	NONE	< 10	-	-	-	< 10

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765286	765287	765288	765289	765290
Sample Reference				TP02	TP03	TP04	TP05	TP07
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.15	0.25	0.50	0.15	0.10
Date Sampled				19/11/2025	21/11/2025	20/11/2025	19/11/2025	20/11/2025
Time Taken				0855	1050	1500	1047	1427
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Bifenthrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Cyhalothrin (Lambda)	µg/kg	10	NONE	< 10	-	-	-	< 10
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	< 10	-	-	-	< 10
Omethoate	µg/kg	10	NONE	< 10	-	-	-	< 10
1,2,3-Trichlorobenzene	µg/kg	10	NONE	< 10	-	-	-	< 10
1,3,5-Trichlorobenzene	µg/kg	10	NONE	< 10	-	-	-	< 10
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	< 10	-	-	-	< 10
Dimethylvinphos	µg/kg	10	NONE	< 10	-	-	-	< 10
Demeton-O	µg/kg	10	NONE	< 10	-	-	-	< 10
Demeton-S	µg/kg	10	NONE	< 10	-	-	-	< 10
Endrin Aldehyde	µg/kg	10	NONE	< 10	-	-	-	< 10
Endrin Ketone	µg/kg	10	NONE	< 10	-	-	-	< 10
Hexachlorobutadiene	µg/kg	10	NONE	< 10	-	-	-	< 10
Phosphamidon (Sum)	µg/kg	10	NONE	< 10	-	-	-	< 10
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	< 10	-	-	-	< 10
Cis-Permethrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Endosulfan sulfate	µg/kg	10	NONE	< 10	-	-	-	< 10
Etrinfos	µg/kg	10	NONE	< 10	-	-	-	< 10
Fenvalerate (Sum)	µg/kg	10	NONE	< 10	-	-	-	< 10
Hexachlorobenzene	µg/kg	10	NONE	< 10	-	-	-	< 10
Mevinphos, E+Z	µg/kg	10	NONE	< 10	-	-	-	< 10
Pentachlorobenzene	µg/kg	10	NONE	< 10	-	-	-	< 10
Pirimiphos-ethyl	µg/kg	10	NONE	< 10	-	-	-	< 10
Propetamphos	µg/kg	10	NONE	< 10	-	-	-	< 10
Tecnazene	µg/kg	10	NONE	< 10	-	-	-	< 10
Triadimefon	µg/kg	10	NONE	< 10	-	-	-	< 10
Trans-Permethrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Aldrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Azinphos-methyl	µg/kg	10	NONE	< 10	-	-	-	< 10
Beta-BHC	µg/kg	10	NONE	< 10	-	-	-	< 10
Cis-Chlordane	µg/kg	10	NONE	< 10	-	-	-	< 10
Chlorfenvinphos	µg/kg	10	NONE	< 10	-	-	-	< 10
Chlorpyrifos	µg/kg	10	NONE	< 10	-	-	-	< 10
Chlorothalonil	µg/kg	10	NONE	< 10	-	-	-	< 10
Carbophenothion	µg/kg	10	NONE	< 10	-	-	-	< 10
Cyfluthrin (Sum)	µg/kg	10	NONE	< 10	-	-	-	< 10
Delta-BHC	µg/kg	10	NONE	< 10	-	-	-	< 10
Dieldrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Deltamethrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Heptachlor Exo-epoxide	µg/kg	10	NONE	< 10	-	-	-	< 10
Endrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Endosulfan I (alpha isomer)	µg/kg	10	NONE	< 10	-	-	-	< 10
Endosulfan II (beta isomer)	µg/kg	10	NONE	< 10	-	-	-	< 10
Fenthion	µg/kg	10	NONE	< 10	-	-	-	< 10
Isodrin	µg/kg	10	NONE	< 10	-	-	-	< 10
Methacrifos	µg/kg	10	NONE	< 10	-	-	-	< 10
O,p'-DDD	µg/kg	10	NONE	< 10	-	-	-	< 10
O,p'-DDE	µg/kg	10	NONE	< 10	-	-	-	< 10
O,p'-DDT	µg/kg	10	NONE	< 10	-	-	-	< 10

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765286	765287	765288	765289	765290
Sample Reference				TP02	TP03	TP04	TP05	TP07
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.15	0.25	0.50	0.15	0.10
Date Sampled				19/11/2025	21/11/2025	20/11/2025	19/11/2025	20/11/2025
Time Taken				0855	1050	1500	1047	1427
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Parathion	µg/kg	10	NONE	< 10	-	-	-	< 10
Parathion-methyl	µg/kg	10	NONE	< 10	-	-	-	< 10
Pendimethalin	µg/kg	10	NONE	< 10	-	-	-	< 10
Phorate	µg/kg	10	NONE	< 10	-	-	-	< 10
Phosalone	µg/kg	10	NONE	< 10	-	-	-	< 10
P,p'-DDD	µg/kg	10	NONE	< 10	-	-	-	< 10
P,p'-DDE	µg/kg	10	NONE	< 10	-	-	-	< 10
P,p'-DDT	µg/kg	10	NONE	< 10	-	-	-	< 10
P,p'-Methoxychlor	µg/kg	10	NONE	< 10	-	-	-	< 10
Propyzamide	µg/kg	10	NONE	< 10	-	-	-	< 10
Triazophos	µg/kg	10	NONE	< 10	-	-	-	< 10
Trans-Chlordane	µg/kg	10	NONE	< 10	-	-	-	< 10
Cypermethrin (Sum)	µg/kg	10	NONE	< 10	-	-	-	< 10
Dichlorvos	µg/kg	10	NONE	< 10	-	-	-	< 10
Dimethoate	µg/kg	10	NONE	< 10	-	-	-	< 10
Diazinon	µg/kg	10	NONE	< 10	-	-	-	< 10
Ethion	µg/kg	10	NONE	< 10	-	-	-	< 10
Fenitrothion	µg/kg	10	NONE	< 10	-	-	-	< 10
Malathion	µg/kg	10	NONE	< 10	-	-	-	< 10
Pirimiphos-methyl	µg/kg	10	NONE	< 10	-	-	-	< 10
Trifluralin	µg/kg	10	NONE	< 10	-	-	-	< 10
Azinphos-ethyl	µg/kg	10	NONE	< 10	-	-	-	< 10

Pesticides (LC-MS)

Terbutryn	µg/kg	10	NONE	< 10	-	-	-	< 10
Prometryn	µg/kg	10	NONE	< 10	-	-	-	< 10
Propazine	µg/kg	10	NONE	< 10	-	-	-	< 10
Trietazine	µg/kg	10	NONE	< 10	-	-	-	< 10
Atrazine	µg/kg	10	NONE	< 10	-	-	-	< 10
Cyanazine	µg/kg	10	NONE	< 10	-	-	-	< 10
Simazine	µg/kg	10	NONE	< 10	-	-	-	< 10
Terbutylazine	µg/kg	10	NONE	< 10	-	-	-	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765291	765292	765293	765294	765295
Sample Reference	TP08	TP09	TP10	TP11	TP12
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.75	0.20	0.15	0.20	0.40
Date Sampled	19/11/2025	19/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1256	1519	0845	1055	1448
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	19.6	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	28	44	29	22
Total mass of sample received	kg	0.1	NONE	2	0.9	1.1	1.1	1.3

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	MJN	-	-	-	-
Analysis completed	N/A	N/A	N/A	08/12/2025	-	-	-	-

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	-	-	-	-	-
pH (L099)	pH Units	N/A	MCERTS	7.3	5.5	6.6	6.2	7.3
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	290	790	1600	490	210
Total Sulphate as SO ₄	%	0.005	MCERTS	0.029	-	-	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	100	36	500	30	19
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0513	0.0178	0.251	0.0151	0.00969
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	51.3	17.8	251	15.1	9.69
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.1	-	-	-	-
Total Sulphur	mg/kg	50	MCERTS	210	480	1100	390	170
Total Sulphur	%	0.005	MCERTS	0.021	-	-	-	-
Ammoniacal Nitrogen as NH ₄ ⁺	mg/kg	0.5	MCERTS	< 0.5	-	-	-	-
Ammonium as NH ₄ ⁺ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	< 0.05	-	-	-	-
Organic Matter	%	0.1	MCERTS	-	-	13	-	-
Organic Matter (automated)	%	0.1	MCERTS	2.1	8.8	-	7.9	3.4
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	-
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-	-	-
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	2	NONE	< 2.0	-	-	-	-
Water Soluble Nitrate (2:1) as NO ₃ (leachate equivalent)	mg/l	5	NONE	< 5.0	-	-	-	-
Acid Neutralisation Capacity	mmol/kg	-9999	NONE	-	-	-	-	-

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	1.6	< 1.0	< 1.0
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Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765291	765292	765293	765294	765295
Sample Reference	TP08	TP09	TP10	TP11	TP12
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.75	0.20	0.15	0.20	0.40
Date Sampled	19/11/2025	19/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1256	1519	0845	1055	1448
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.07	0.25	0.28	0.21	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	0.08	0.75	0.42	0.39	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.06	0.47	0.25	0.25	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.27	3.4	2.2	2.2	0.07
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.69	0.44	0.38	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.39	5	2.6	2.7	0.1
Pyrene	mg/kg	0.05	MCERTS	0.35	4.3	2.3	2.3	0.09
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.19	2.5	1.2	1.3	0.06
Chrysene	mg/kg	0.05	MCERTS	0.21	2.4	1.5	1.3	0.06
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.21	2.5	1.5	1.5	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.13	1.2	0.57	0.52	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.18	2.1	1.1	1.1	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.11	0.96	0.45	0.54	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.24	0.11	0.12	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.12	0.92	0.49	0.51	< 0.05
Coronene	mg/kg	0.05	NONE	-	-	-	-	-

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.38	27.6	15.3	15.2	< 0.80
Total WAC-17 PAHs	mg/kg	0.85	NONE	-	-	-	-	-

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.5	14	19	11	3.9
Barium (aqua regia extractable)	mg/kg	1	MCERTS	120	220	240	130	53
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.89	0.58	1.5	0.66	0.39
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	0.7	1.9	0.4	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.3	0.7	0.3	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	U/S ^{*U/S g}	U/S ^{*U/S g}	U/S ^{*U/S g}	U/S ^{*U/S g}
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	< 1.80	< 1.80	< 1.80	< 1.80
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	17	23	16	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	25	37	160	46	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	25	67	170	55	13
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	0.4	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	12	27	12	12
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	26	23	40	21	27
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	59	76	390	91	23

Magnesium (leachate equivalent)	mg/l	2.5	NONE	10	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	20	-	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765291	765292	765293	765294	765295
Sample Reference	TP08	TP09	TP10	TP11	TP12
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.75	0.20	0.15	0.20	0.40
Date Sampled	19/11/2025	19/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1256	1519	0845	1055	1448
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	-	-	-	-
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	-	-	-	-
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	< 0.010	-	-	-	-
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0	-	-	-	-
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0	-	-	-	-
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	-	-	-	-
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	-	-	-	-

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	-	-	-	-
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	< 0.010	-	-	-	-
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	< 0.020	-	-	-	-
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	31	-	-	-	-
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	< 2.0	-	-	-	-
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	-	-	-	-
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	-	-	-	-
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	31	-	-	-	-

Petroleum Range Organics (EC6 - EC10) _{HS_1D_TOTAL}	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (EC10 - EC40) _{EH_CU_1D_TOTAL}	mg/kg	10	MCERTS	31	27	34	20	< 10

Mineral Oil (EC10 - EC40) _{EH_CU_1D_AL}	mg/kg	10	NONE	-	-	-	-	-
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	< 5.0	-	-	-	-
Benzene	µg/kg	5	MCERTS	< 5.0	-	-	-	-
Toluene	µg/kg	5	MCERTS	< 5.0	-	-	-	-
Ethylbenzene	µg/kg	5	MCERTS	< 5.0	-	-	-	-
p & m-Xylene	µg/kg	8	MCERTS	< 8.0	-	-	-	-
o-Xylene	µg/kg	5	MCERTS	< 5.0	-	-	-	-

Total BTEX	µg/kg	10	MCERTS	-	-	-	-	-
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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	mg/kg	0.007	MCERTS	-	-	-	-	-
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Pesticides (GC-MS)

Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-	< 10	-	-	-
Alachlor	µg/kg	10	NONE	-	< 10	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765291	765292	765293	765294	765295
Sample Reference				TP08	TP09	TP10	TP11	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.75	0.20	0.15	0.20	0.40
Date Sampled				19/11/2025	19/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken				1256	1519	0845	1055	1448
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Bifenthrin	µg/kg	10	NONE	-	< 10	-	-	-
Cyhalothrin (Lambda)	µg/kg	10	NONE	-	< 10	-	-	-
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-	< 10	-	-	-
Omethoate	µg/kg	10	NONE	-	< 10	-	-	-
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-	< 10	-	-	-
Dimethylvinphos	µg/kg	10	NONE	-	< 10	-	-	-
Demeton-O	µg/kg	10	NONE	-	< 10	-	-	-
Demeton-S	µg/kg	10	NONE	-	< 10	-	-	-
Endrin Aldehyde	µg/kg	10	NONE	-	< 10	-	-	-
Endrin Ketone	µg/kg	10	NONE	-	< 10	-	-	-
Hexachlorobutadiene	µg/kg	10	NONE	-	< 10	-	-	-
Phosphamidon (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
Cis-Permethrin	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan sulfate	µg/kg	10	NONE	-	< 10	-	-	-
Etrinfos	µg/kg	10	NONE	-	< 10	-	-	-
Fenvalerate (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Hexachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
Mevinphos, E+Z	µg/kg	10	NONE	-	< 10	-	-	-
Pentachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
Pirimiphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	-
Propetamphos	µg/kg	10	NONE	-	< 10	-	-	-
Tecnazene	µg/kg	10	NONE	-	< 10	-	-	-
Triadimefon	µg/kg	10	NONE	-	< 10	-	-	-
Trans-Permethrin	µg/kg	10	NONE	-	< 10	-	-	-
Aldrin	µg/kg	10	NONE	-	< 10	-	-	-
Azinphos-methyl	µg/kg	10	NONE	-	< 10	-	-	-
Beta-BHC	µg/kg	10	NONE	-	< 10	-	-	-
Cis-Chlordane	µg/kg	10	NONE	-	< 10	-	-	-
Chlorfenvinphos	µg/kg	10	NONE	-	< 10	-	-	-
Chlorpyrifos	µg/kg	10	NONE	-	< 10	-	-	-
Chlorothalonil	µg/kg	10	NONE	-	< 10	-	-	-
Carbophenothion	µg/kg	10	NONE	-	< 10	-	-	-
Cyfluthrin (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Delta-BHC	µg/kg	10	NONE	-	< 10	-	-	-
Dieldrin	µg/kg	10	NONE	-	< 10	-	-	-
Deltamethrin	µg/kg	10	NONE	-	< 10	-	-	-
Heptachlor Exo-epoxide	µg/kg	10	NONE	-	< 10	-	-	-
Endrin	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	< 10	-	-	-
Fenthion	µg/kg	10	NONE	-	< 10	-	-	-
Isodrin	µg/kg	10	NONE	-	< 10	-	-	-
Methacrifos	µg/kg	10	NONE	-	< 10	-	-	-
O,p'-DDD	µg/kg	10	NONE	-	< 10	-	-	-
O,p'-DDE	µg/kg	10	NONE	-	< 10	-	-	-
O,p'-DDT	µg/kg	10	NONE	-	< 10	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765291	765292	765293	765294	765295
Sample Reference				TP08	TP09	TP10	TP11	TP12
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.75	0.20	0.15	0.20	0.40
Date Sampled				19/11/2025	19/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken				1256	1519	0845	1055	1448
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Parathion	µg/kg	10	NONE	-	< 10	-	-	-
Parathion-methyl	µg/kg	10	NONE	-	< 10	-	-	-
Pendimethalin	µg/kg	10	NONE	-	< 10	-	-	-
Phorate	µg/kg	10	NONE	-	< 10	-	-	-
Phosalone	µg/kg	10	NONE	-	< 10	-	-	-
P,p'-DDD	µg/kg	10	NONE	-	< 10	-	-	-
P,p'-DDE	µg/kg	10	NONE	-	< 10	-	-	-
P,p'-DDT	µg/kg	10	NONE	-	< 10	-	-	-
P,p'-Methoxychlor	µg/kg	10	NONE	-	< 10	-	-	-
Propyzamide	µg/kg	10	NONE	-	< 10	-	-	-
Triazophos	µg/kg	10	NONE	-	< 10	-	-	-
Trans-Chlordane	µg/kg	10	NONE	-	< 10	-	-	-
Cypermethrin (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Dichlorvos	µg/kg	10	NONE	-	< 10	-	-	-
Dimethoate	µg/kg	10	NONE	-	< 10	-	-	-
Diazinon	µg/kg	10	NONE	-	< 10	-	-	-
Ethion	µg/kg	10	NONE	-	< 10	-	-	-
Fenitrothion	µg/kg	10	NONE	-	< 10	-	-	-
Malathion	µg/kg	10	NONE	-	< 10	-	-	-
Pirimiphos-methyl	µg/kg	10	NONE	-	< 10	-	-	-
Trifluralin	µg/kg	10	NONE	-	< 10	-	-	-
Azinphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	-

Pesticides (LC-MS)

Terbutryn	µg/kg	10	NONE	-	< 10	-	-	-
Prometryn	µg/kg	10	NONE	-	< 10	-	-	-
Propazine	µg/kg	10	NONE	-	< 10	-	-	-
Trietazine	µg/kg	10	NONE	-	< 10	-	-	-
Atrazine	µg/kg	10	NONE	-	< 10	-	-	-
Cyanazine	µg/kg	10	NONE	-	< 10	-	-	-
Simazine	µg/kg	10	NONE	-	< 10	-	-	-
Terbutylazine	µg/kg	10	NONE	-	< 10	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765296	765297	765298	765299	766263
Sample Reference	TP13	TP14 ES1	TP14 ES2	TP15	TP08
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.60	0.35	1.00	0.40	0.75
Date Sampled	20/11/2025	20/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1214	0933	0950	1138	1256
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	1.3
Moisture Content	%	0.01	NONE	16	15	19	14	15
Total mass of sample received	kg	0.1	NONE	0.9	1.1	2	1	2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	-
Asbestos Analyst ID	N/A	N/A	N/A	MJN	MJN	MJN	MJN	-
Analysis completed	N/A	N/A	N/A	08/12/2025	08/12/2025	08/12/2025	08/12/2025	-

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	-	-	-	-	7.5
pH (L099)	pH Units	N/A	MCERTS	7.5	8	8	8	-
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Complex Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Free Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	22000	350	7900	280	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-	-	0.788	-	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3800	140	4100	130	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.88	0.0724	2.07	0.0655	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1880	72.4	2070	65.5	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	6.6	-	-
Total Sulphur	mg/kg	50	MCERTS	7200	230	4400	180	-
Total Sulphur	%	0.005	MCERTS	-	-	0.442	-	-
Ammoniacal Nitrogen as NH ₄ ⁺	mg/kg	0.5	MCERTS	-	-	5	-	-
Ammonium as NH ₄ ⁺ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-	-	0.32	-	-
Organic Matter	%	0.1	MCERTS	-	-	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	2.1	2	4	1.3	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	-	-	-	-	1.2
Loss on Ignition @ 450°C	%	0.2	MCERTS	-	-	-	-	2.8
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	2	NONE	-	-	< 2.0	-	-
Water Soluble Nitrate (2:1) as NO ₃ (leachate equivalent)	mg/l	5	NONE	-	-	< 5.0	-	-
Acid Neutralisation Capacity	mmol/kg	-9999	NONE	-	-	-	-	3.8

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	-
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Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765296	765297	765298	765299	766263
Sample Reference	TP13	TP14 ES1	TP14 ES2	TP15	TP08
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.60	0.35	1.00	0.40	0.75
Date Sampled	20/11/2025	20/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1214	0933	0950	1138	1256
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.09	0.15	0.87	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.06	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.05	0.57	< 0.05	0.06
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.53	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.29	0.32	4.6	0.2	0.28
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.06	0.89	< 0.05	0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.41	0.49	6.6	0.27	0.36
Pyrene	mg/kg	0.05	MCERTS	0.41	0.48	5.9	0.26	0.34
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.19	0.23	2.8	0.13	0.16
Chrysene	mg/kg	0.05	MCERTS	0.25	0.29	2.9	0.16	0.22
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.25	0.27	3	0.16	0.22
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.1	0.13	1.6	0.07	0.08
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.2	0.22	2.6	0.12	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.12	0.12	1.4	0.08	0.11
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	0.42	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.17	0.15	1.7	0.09	0.12
Coronene	mg/kg	0.05	NONE	-	-	-	-	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	2.54	2.97	36.4	1.55	-
Total WAC-17 PAHs	mg/kg	0.85	NONE	-	-	-	-	2.03

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.8	7.5	8.5	6.3	-
Barium (aqua regia extractable)	mg/kg	1	MCERTS	350	140	460	130	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.73	0.87	1.1	0.8	-
Boron (water soluble)	mg/kg	0.2	MCERTS	0.7	0.3	2.3	0.4	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.2	< 0.2	0.8	< 0.2	-
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	-
Chromium (hexavalent) by IC	mg/kg	1.8	NONE	-	-	-	-	-
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	19	22	19	21	-
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	22	170	39	-
Lead (aqua regia extractable)	mg/kg	1	MCERTS	90	23	170	17	-
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	14	25	19	23	-
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.2	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	28	24	30	24	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	160	57	340	52	-

Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	61	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	120	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765296	765297	765298	765299	766263
Sample Reference	TP13	TP14 ES1	TP14 ES2	TP15	TP08
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.60	0.35	1.00	0.40	0.75
Date Sampled	20/11/2025	20/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken	1214	0933	0950	1138	1256
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	-	-	< 1.0	-	-
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	-	-	< 2.0	-	-
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-	-	< 8.0	-	-
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-	-	82	-	-
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	-	-	82	-	-

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-	-	< 0.010	-	-
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	-	-	< 0.020	-	-
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	-	-	1.2	-	-
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	-	-	2.9	-	-
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-	-	13	-	-
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-	-	59	-	-
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	-	-	76	-	-

Petroleum Range Organics (EC6 - EC10) _{HS_1D_TOTAL}	mg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	-
TPH (EC10 - EC40) _{EH_CU_1D_TOTAL}	mg/kg	10	MCERTS	50	< 10	210	< 10	-

Mineral Oil (EC10 - EC40) _{EH_CU_1D_AL}	mg/kg	10	NONE	-	-	-	-	< 10
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
Toluene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	-	-	< 8.0	-	< 8.0
o-Xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	< 5.0

Total BTEX	µg/kg	10	MCERTS	-	-	-	-	< 10
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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	mg/kg	0.007	MCERTS	-	-	-	-	< 0.007
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Pesticides (GC-MS)

Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-	-	-	-	-
Alachlor	µg/kg	10	NONE	-	-	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765296	765297	765298	765299	766263
Sample Reference				TP13	TP14 ES1	TP14 ES2	TP15	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.60	0.35	1.00	0.40	0.75
Date Sampled				20/11/2025	20/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken				1214	0933	0950	1138	1256
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Bifenthrin	µg/kg	10	NONE	-	-	-	-	-
Cyhalothrin (Lambda)	µg/kg	10	NONE	-	-	-	-	-
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-	-	-	-	-
Omethoate	µg/kg	10	NONE	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-	-	-	-	-
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-	-	-	-	-
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-	-	-	-	-
Dimethylvinphos	µg/kg	10	NONE	-	-	-	-	-
Demeton-O	µg/kg	10	NONE	-	-	-	-	-
Demeton-S	µg/kg	10	NONE	-	-	-	-	-
Endrin Aldehyde	µg/kg	10	NONE	-	-	-	-	-
Endrin Ketone	µg/kg	10	NONE	-	-	-	-	-
Hexachlorobutadiene	µg/kg	10	NONE	-	-	-	-	-
Phosphamidon (Sum)	µg/kg	10	NONE	-	-	-	-	-
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-	-	-	-	-
Cis-Permethrin	µg/kg	10	NONE	-	-	-	-	-
Endosulfan sulfate	µg/kg	10	NONE	-	-	-	-	-
Etrinfos	µg/kg	10	NONE	-	-	-	-	-
Fenvalerate (Sum)	µg/kg	10	NONE	-	-	-	-	-
Hexachlorobenzene	µg/kg	10	NONE	-	-	-	-	-
Mevinphos, E+Z	µg/kg	10	NONE	-	-	-	-	-
Pentachlorobenzene	µg/kg	10	NONE	-	-	-	-	-
Pirimiphos-ethyl	µg/kg	10	NONE	-	-	-	-	-
Propetamphos	µg/kg	10	NONE	-	-	-	-	-
Tecnazene	µg/kg	10	NONE	-	-	-	-	-
Triadimefon	µg/kg	10	NONE	-	-	-	-	-
Trans-Permethrin	µg/kg	10	NONE	-	-	-	-	-
Aldrin	µg/kg	10	NONE	-	-	-	-	-
Azinphos-methyl	µg/kg	10	NONE	-	-	-	-	-
Beta-BHC	µg/kg	10	NONE	-	-	-	-	-
Cis-Chlordane	µg/kg	10	NONE	-	-	-	-	-
Chlorfenvinphos	µg/kg	10	NONE	-	-	-	-	-
Chlorpyrifos	µg/kg	10	NONE	-	-	-	-	-
Chlorothalonil	µg/kg	10	NONE	-	-	-	-	-
Carbophenothion	µg/kg	10	NONE	-	-	-	-	-
Cyfluthrin (Sum)	µg/kg	10	NONE	-	-	-	-	-
Delta-BHC	µg/kg	10	NONE	-	-	-	-	-
Dieldrin	µg/kg	10	NONE	-	-	-	-	-
Deltamethrin	µg/kg	10	NONE	-	-	-	-	-
Heptachlor Exo-epoxide	µg/kg	10	NONE	-	-	-	-	-
Endrin	µg/kg	10	NONE	-	-	-	-	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	-	-	-	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	-	-	-	-
Fenthion	µg/kg	10	NONE	-	-	-	-	-
Isodrin	µg/kg	10	NONE	-	-	-	-	-
Methacrifos	µg/kg	10	NONE	-	-	-	-	-
O,p'-DDD	µg/kg	10	NONE	-	-	-	-	-
O,p'-DDE	µg/kg	10	NONE	-	-	-	-	-
O,p'-DDT	µg/kg	10	NONE	-	-	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				765296	765297	765298	765299	766263
Sample Reference				TP13	TP14 ES1	TP14 ES2	TP15	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.60	0.35	1.00	0.40	0.75
Date Sampled				20/11/2025	20/11/2025	20/11/2025	20/11/2025	19/11/2025
Time Taken				1214	0933	0950	1138	1256
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					
Parathion	µg/kg	10	NONE	-	-	-	-	-
Parathion-methyl	µg/kg	10	NONE	-	-	-	-	-
Pendimethalin	µg/kg	10	NONE	-	-	-	-	-
Phorate	µg/kg	10	NONE	-	-	-	-	-
Phosalone	µg/kg	10	NONE	-	-	-	-	-
P,p'-DDD	µg/kg	10	NONE	-	-	-	-	-
P,p'-DDE	µg/kg	10	NONE	-	-	-	-	-
P,p'-DDT	µg/kg	10	NONE	-	-	-	-	-
P,p'-Methoxychlor	µg/kg	10	NONE	-	-	-	-	-
Propyzamide	µg/kg	10	NONE	-	-	-	-	-
Triazophos	µg/kg	10	NONE	-	-	-	-	-
Trans-Chlordane	µg/kg	10	NONE	-	-	-	-	-
Cypermethrin (Sum)	µg/kg	10	NONE	-	-	-	-	-
Dichlorvos	µg/kg	10	NONE	-	-	-	-	-
Dimethoate	µg/kg	10	NONE	-	-	-	-	-
Diazinon	µg/kg	10	NONE	-	-	-	-	-
Ethion	µg/kg	10	NONE	-	-	-	-	-
Fenitrothion	µg/kg	10	NONE	-	-	-	-	-
Malathion	µg/kg	10	NONE	-	-	-	-	-
Pirimiphos-methyl	µg/kg	10	NONE	-	-	-	-	-
Trifluralin	µg/kg	10	NONE	-	-	-	-	-
Azinphos-ethyl	µg/kg	10	NONE	-	-	-	-	-

Pesticides (LC-MS)

Terbutryn	µg/kg	10	NONE	-	-	-	-	-
Prometryn	µg/kg	10	NONE	-	-	-	-	-
Propazine	µg/kg	10	NONE	-	-	-	-	-
Trietazine	µg/kg	10	NONE	-	-	-	-	-
Atrazine	µg/kg	10	NONE	-	-	-	-	-
Cyanazine	µg/kg	10	NONE	-	-	-	-	-
Simazine	µg/kg	10	NONE	-	-	-	-	-
Terbuthylazine	µg/kg	10	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064504

Project / Site name: Kingsway Plot Q

Lab Sample Number	766264			
Sample Reference	TP14 ES2			
Sample Number	None Supplied			
Water Matrix	N/A			
Depth (m)	1.00			
Date Sampled	19/11/2025			
Time Taken	0950			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	36.8
Moisture Content	%	0.01	NONE	18
Total mass of sample received	kg	0.1	NONE	2

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	-
Asbestos Analyst ID	N/A	N/A	N/A	-
Analysis completed	N/A	N/A	N/A	-

General Inorganics

pH (L005B)	pH Units	N/A	MCERTS	7.3
pH (L099)	pH Units	N/A	MCERTS	-
Total Cyanide	mg/kg	1	MCERTS	-
Complex Cyanide	mg/kg	1	MCERTS	-
Free Cyanide	mg/kg	1	MCERTS	-
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-
Total Sulphate as SO ₄	%	0.005	MCERTS	-
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-
Total Sulphur	mg/kg	50	MCERTS	-
Total Sulphur	%	0.005	MCERTS	-
Ammoniacal Nitrogen as NH ₄ ⁺	mg/kg	0.5	MCERTS	-
Ammonium as NH ₄ ⁺ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	-
Organic Matter	%	0.1	MCERTS	-
Organic Matter (automated)	%	0.1	MCERTS	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.2
Loss on Ignition @ 450°C	%	0.2	MCERTS	5.8
Water Soluble Nitrate (2:1) as NO ₃	mg/kg	2	NONE	-
Water Soluble Nitrate (2:1) as NO ₃ (leachate equivalent)	mg/l	5	NONE	-
Acid Neutralisation Capacity	mmol/kg	-9999	NONE	3.4

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-
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Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	766264			
Sample Reference	TP14 ES2			
Sample Number	None Supplied			
Water Matrix	N/A			
Depth (m)	1.00			
Date Sampled	19/11/2025			
Time Taken	0950			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	2
Acenaphthylene	mg/kg	0.05	MCERTS	0.09
Acenaphthene	mg/kg	0.05	MCERTS	0.87
Fluorene	mg/kg	0.05	MCERTS	0.82
Phenanthrene	mg/kg	0.05	MCERTS	5.5
Anthracene	mg/kg	0.05	MCERTS	0.95
Fluoranthene	mg/kg	0.05	MCERTS	7.3
Pyrene	mg/kg	0.05	MCERTS	6.4
Benzo(a)anthracene	mg/kg	0.05	MCERTS	2.7
Chrysene	mg/kg	0.05	MCERTS	2.9
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	3.2
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	1.4
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	1.4
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	0.34
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	1.6
Coronene	mg/kg	0.05	NONE	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	-
Total WAC-17 PAHs	mg/kg	0.85	NONE	39.8

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-
Barium (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	1.8	MCERTS	-
Chromium (hexavalent) by IC	mg/kg	1.8	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	-
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-

Magnesium (leachate equivalent)	mg/l	2.5	NONE	-
Magnesium (water soluble)	mg/kg	5	NONE	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number					766264
Sample Reference					TP14 ES2
Sample Number					None Supplied
Water Matrix					N/A
Depth (m)					1.00
Date Sampled					19/11/2025
Time Taken					0950
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-
TPHCWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-
TPHCWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.01	MCERTS	-
TPHCWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	-
TPHCWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	-
TPHCWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-
TPHCWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	-
TPHCWG - Aliphatic >EC5 - EC35 _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	-

TPHCWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-
TPHCWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.01	MCERTS	-
TPHCWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.02	MCERTS	-
TPHCWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	-
TPHCWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	-
TPHCWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-
TPHCWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	-
TPHCWG - Aromatic >EC5 - EC35 _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	-

Petroleum Range Organics (EC6 - EC10) _{HS_1D_TOTAL}	mg/kg	1	ISO 17025	-
TPH (EC10 - EC40) _{EH_CU_1D_TOTAL}	mg/kg	10	MCERTS	-

Mineral Oil (EC10 - EC40) _{EH_CU_1D_AL}	mg/kg	10	NONE	200
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VOCs

MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	MCERTS	-
Benzene	µg/kg	5	MCERTS	< 5.0
Toluene	µg/kg	5	MCERTS	< 5.0
Ethylbenzene	µg/kg	5	MCERTS	< 5.0
p & m-Xylene	µg/kg	8	MCERTS	< 8.0
o-Xylene	µg/kg	5	MCERTS	< 5.0

Total BTEX	µg/kg	10	MCERTS	< 10
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PCBs by GC-MS

PCB Congener 28	mg/kg	0.001	MCERTS	0.007
PCB Congener 52	mg/kg	0.001	MCERTS	0.002
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	mg/kg	0.007	MCERTS	0.009
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Pesticides (GC-MS)

Alpha-BHC (Benzene Hexachloride)	µg/kg	10	NONE	-
Alachlor	µg/kg	10	NONE	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				766264
Sample Reference				TP14 ES2
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.00
Date Sampled				19/11/2025
Time Taken				0950
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	
Bifenthrin	µg/kg	10	NONE	-
Cyhalothrin (Lambda)	µg/kg	10	NONE	-
Gamma-BHC (Lindane, gamma HCH)	µg/kg	10	NONE	-
Omethoate	µg/kg	10	NONE	-
1,2,3-Trichlorobenzene	µg/kg	10	NONE	-
1,3,5-Trichlorobenzene	µg/kg	10	NONE	-
2,6-Dichlorobenzonitrile	µg/kg	10	NONE	-
Dimethylvinphos	µg/kg	10	NONE	-
Demeton-O	µg/kg	10	NONE	-
Demeton-S	µg/kg	10	NONE	-
Endrin Aldehyde	µg/kg	10	NONE	-
Endrin Ketone	µg/kg	10	NONE	-
Hexachlorobutadiene	µg/kg	10	NONE	-
Phosphamidon (Sum)	µg/kg	10	NONE	-
1,2,4,5-Tetrachlorobenzene	µg/kg	10	NONE	-
Cis-Permethrin	µg/kg	10	NONE	-
Endosulfan sulfate	µg/kg	10	NONE	-
Etrinfos	µg/kg	10	NONE	-
Fenvalerate (Sum)	µg/kg	10	NONE	-
Hexachlorobenzene	µg/kg	10	NONE	-
Mevinphos, E+Z	µg/kg	10	NONE	-
Pentachlorobenzene	µg/kg	10	NONE	-
Pirimiphos-ethyl	µg/kg	10	NONE	-
Propetamphos	µg/kg	10	NONE	-
Tecnazene	µg/kg	10	NONE	-
Triadimefon	µg/kg	10	NONE	-
Trans-Permethrin	µg/kg	10	NONE	-
Aldrin	µg/kg	10	NONE	-
Azinphos-methyl	µg/kg	10	NONE	-
Beta-BHC	µg/kg	10	NONE	-
Cis-Chlordane	µg/kg	10	NONE	-
Chlorfenvinphos	µg/kg	10	NONE	-
Chlorpyrifos	µg/kg	10	NONE	-
Chlorothalonil	µg/kg	10	NONE	-
Carbophenothion	µg/kg	10	NONE	-
Cyfluthrin (Sum)	µg/kg	10	NONE	-
Delta-BHC	µg/kg	10	NONE	-
Dieldrin	µg/kg	10	NONE	-
Deltamethrin	µg/kg	10	NONE	-
Heptachlor Exo-epoxide	µg/kg	10	NONE	-
Endrin	µg/kg	10	NONE	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-
Fenthion	µg/kg	10	NONE	-
Isodrin	µg/kg	10	NONE	-
Methacrifos	µg/kg	10	NONE	-
O,p'-DDD	µg/kg	10	NONE	-
O,p'-DDE	µg/kg	10	NONE	-
O,p'-DDT	µg/kg	10	NONE	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				766264
Sample Reference				TP14 ES2
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				1.00
Date Sampled				19/11/2025
Time Taken				0950
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	
Parathion	µg/kg	10	NONE	-
Parathion-methyl	µg/kg	10	NONE	-
Pendimethalin	µg/kg	10	NONE	-
Phorate	µg/kg	10	NONE	-
Phosalone	µg/kg	10	NONE	-
P,p'-DDD	µg/kg	10	NONE	-
P,p'-DDE	µg/kg	10	NONE	-
P,p'-DDT	µg/kg	10	NONE	-
P,p'-Methoxychlor	µg/kg	10	NONE	-
Propyzamide	µg/kg	10	NONE	-
Triazophos	µg/kg	10	NONE	-
Trans-Chlordane	µg/kg	10	NONE	-
Cypermethrin (Sum)	µg/kg	10	NONE	-
Dichlorvos	µg/kg	10	NONE	-
Dimethoate	µg/kg	10	NONE	-
Diazinon	µg/kg	10	NONE	-
Ethion	µg/kg	10	NONE	-
Fenitrothion	µg/kg	10	NONE	-
Malathion	µg/kg	10	NONE	-
Pirimiphos-methyl	µg/kg	10	NONE	-
Trifluralin	µg/kg	10	NONE	-
Azinphos-ethyl	µg/kg	10	NONE	-

Pesticides (LC-MS)

Terbutryn	µg/kg	10	NONE	-
Prometryn	µg/kg	10	NONE	-
Propazine	µg/kg	10	NONE	-
Trietazine	µg/kg	10	NONE	-
Atrazine	µg/kg	10	NONE	-
Cyanazine	µg/kg	10	NONE	-
Simazine	µg/kg	10	NONE	-
Terbutylazine	µg/kg	10	NONE	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765289	765291	765294	765298	765299
Sample Reference	TP05	TP08	TP11	TP14 ES2	TP15
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.15	0.75	0.20	1.00	0.40
Date Sampled	19/11/2025	19/11/2025	20/11/2025	20/11/2025	20/11/2025
Time Taken	1047	1256	1055	0950	1138
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Moisture of sample	%	N/A	NONE	48	17	42	31	18
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General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	7.3	8	7.1	8.2	8.2
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Sulphate as SO ₄	mg/l	0.045	ISO 17025	1330	18.2	5.13	1300	34.5

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	1.5	< 1.0	< 1.0	4.1	1.2
Barium (dissolved)	µg/l	0.05	ISO 17025	63	56	11	62	63
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	710	51	38	700	60
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (dissolved)	µg/l	0.4	ISO 17025	< 0.4	1.1	< 0.4	< 0.4	< 0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	6.1	7.2	15	4.5	6.7
Lead (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	13	1	2.7	7.6	0.9
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	2.2	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	36	6.8	12	34	4.5

10:1 WAC Leachate

Arsenic	mg/l	0.001	ISO 17025	-	-	-	-	-
Barium	mg/l	0.00005	ISO 17025	-	-	-	-	-
Cadmium	mg/l	0.0001	ISO 17025	-	-	-	-	-
Chromium	mg/l	0.0004	ISO 17025	-	-	-	-	-
Copper	mg/l	0.0007	ISO 17025	-	-	-	-	-
Mercury	mg/l	0.0005	ISO 17025	-	-	-	-	-
Molybdenum	mg/l	0.0004	ISO 17025	-	-	-	-	-
Nickel	mg/l	0.0003	ISO 17025	-	-	-	-	-
Lead	mg/l	0.001	ISO 17025	-	-	-	-	-
Antimony	mg/l	0.0017	ISO 17025	-	-	-	-	-
Selenium	mg/l	0.004	ISO 17025	-	-	-	-	-
Zinc	mg/l	0.0004	ISO 17025	-	-	-	-	-
Chloride	mg/l	0.15	ISO 17025	-	-	-	-	-
Fluoride	mg/l	0.05	ISO 17025	-	-	-	-	-
Sulphate	mg/l	0.045	ISO 17025	-	-	-	-	-
Total dissolved solids	mg/l	6	ISO 17025	-	-	-	-	-
Total monohydric phenols	mg/l	0.01	ISO 17025	-	-	-	-	-
Dissolved organic carbon	mg/l	0.1	NONE	-	-	-	-	-

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number	765289	765291	765294	765298	765299
Sample Reference	TP05	TP08	TP11	TP14 ES2	TP15
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	0.15	0.75	0.20	1.00	0.40
Date Sampled	19/11/2025	19/11/2025	20/11/2025	20/11/2025	20/11/2025
Time Taken	1047	1256	1055	0950	1138
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status		

10:1 WAC Leachate

Arsenic	mg/kg	0.01	NONE	-	-	-	-	-
Barium	mg/kg	0.0005	NONE	-	-	-	-	-
Cadmium	mg/kg	0.001	NONE	-	-	-	-	-
Chromium	mg/kg	0.004	NONE	-	-	-	-	-
Copper	mg/kg	0.007	NONE	-	-	-	-	-
Mercury	mg/kg	0.005	NONE	-	-	-	-	-
Molybdenum	mg/kg	0.004	NONE	-	-	-	-	-
Nickel	mg/kg	0.003	NONE	-	-	-	-	-
Lead	mg/kg	0.01	NONE	-	-	-	-	-
Antimony	mg/kg	0.017	NONE	-	-	-	-	-
Selenium	mg/kg	0.04	NONE	-	-	-	-	-
Zinc	mg/kg	0.004	NONE	-	-	-	-	-
Chloride	mg/kg	1.5	NONE	-	-	-	-	-
Fluoride	mg/kg	0.5	NONE	-	-	-	-	-
Sulphate	mg/kg	0.45	NONE	-	-	-	-	-
Total dissolved solids	mg/kg	60	NONE	-	-	-	-	-
Total monohydric phenols	mg/kg	0.1	NONE	-	-	-	-	-
Dissolved organic carbon	mg/kg	1	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064504
Project / Site name: Kingsway Plot Q

Lab Sample Number				766263	766264			
Sample Reference				TP08	TP14 ES2			
Sample Number				None Supplied	None Supplied			
Water Matrix				N/A	N/A			
Depth (m)				0.75	1.00			
Date Sampled				19/11/2025	19/11/2025			
Time Taken				1256	0950			
Analytical Parameter (Leachate Analysis)				Units	Test Limit of detection	Test Accreditation Status		

Moisture of sample	%	N/A	NONE	-	-
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General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	-	-
Total Cyanide	µg/l	10	ISO 17025	-	-
Sulphate as SO ₄	mg/l	0.045	ISO 17025	-	-

Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	-	-
Barium (dissolved)	µg/l	0.05	ISO 17025	-	-
Beryllium (dissolved)	µg/l	0.2	ISO 17025	-	-
Boron (dissolved)	µg/l	10	ISO 17025	-	-
Cadmium (dissolved)	µg/l	0.08	ISO 17025	-	-
Chromium (dissolved)	µg/l	0.4	ISO 17025	-	-
Copper (dissolved)	µg/l	0.7	ISO 17025	-	-
Lead (dissolved)	µg/l	1	ISO 17025	-	-
Mercury (dissolved)	µg/l	0.5	ISO 17025	-	-
Nickel (dissolved)	µg/l	0.3	ISO 17025	-	-
Selenium (dissolved)	µg/l	4	ISO 17025	-	-
Vanadium (dissolved)	µg/l	1.7	ISO 17025	-	-
Zinc (dissolved)	µg/l	0.4	ISO 17025	-	-

10:1 WAC Leachate

Arsenic	mg/l	0.001	ISO 17025	0.00167	< 0.00100
Barium	mg/l	0.00005	ISO 17025	0.0275	0.0753
Cadmium	mg/l	0.0001	ISO 17025	< 0.000100	< 0.000100
Chromium	mg/l	0.0004	ISO 17025	0.0057	0.063
Copper	mg/l	0.0007	ISO 17025	0.0024	0.00097
Mercury	mg/l	0.0005	ISO 17025	< 0.000500	0.00209
Molybdenum	mg/l	0.0004	ISO 17025	0.000678	0.00611
Nickel	mg/l	0.0003	ISO 17025	0.0035	0.033
Lead	mg/l	0.001	ISO 17025	< 0.0010	< 0.0010
Antimony	mg/l	0.0017	ISO 17025	< 0.0017	< 0.0017
Selenium	mg/l	0.004	ISO 17025	< 0.0040	< 0.0040
Zinc	mg/l	0.0004	ISO 17025	0.011	0.0047
Chloride	mg/l	0.15	ISO 17025	0.5	16
Fluoride	mg/l	0.05	ISO 17025	0.5	0.46
Sulphate	mg/l	0.045	ISO 17025	6.9	360
Total dissolved solids	mg/l	6	ISO 17025	58	490
Total monohydric phenols	mg/l	0.01	ISO 17025	< 0.010	< 0.010
Dissolved organic carbon	mg/l	0.1	NONE	7.55	5.27

Analytical Report Number: 25-064504

Project / Site name: Kingsway Plot Q

Lab Sample Number				766263	766264
Sample Reference				TP08	TP14 ES2
Sample Number				None Supplied	None Supplied
Water Matrix				N/A	N/A
Depth (m)				0.75	1.00
Date Sampled				19/11/2025	19/11/2025
Time Taken				1256	0950
Analytical Parameter (Leachate Analysis)	Units	Test Limit of detection	Test Accreditation Status		

10:1 WAC Leachate

Arsenic	mg/kg	0.01	NONE	0.0167	< 0.0100
Barium	mg/kg	0.0005	NONE	0.275	0.753
Cadmium	mg/kg	0.001	NONE	< 0.00100	< 0.00100
Chromium	mg/kg	0.004	NONE	0.057	0.63
Copper	mg/kg	0.007	NONE	0.024	0.0097
Mercury	mg/kg	0.005	NONE	< 0.00500	0.0209
Molybdenum	mg/kg	0.004	NONE	0.00678	0.0611
Nickel	mg/kg	0.003	NONE	0.035	0.33
Lead	mg/kg	0.01	NONE	< 0.010	< 0.010
Antimony	mg/kg	0.017	NONE	< 0.017	< 0.017
Selenium	mg/kg	0.04	NONE	< 0.040	< 0.040
Zinc	mg/kg	0.004	NONE	0.11	0.047
Chloride	mg/kg	1.5	NONE	5	160
Fluoride	mg/kg	0.5	NONE	5	4.6
Sulphate	mg/kg	0.45	NONE	69	3600
Total dissolved solids	mg/kg	60	NONE	580	4900
Total monohydric phenols	mg/kg	0.1	NONE	< 0.10	< 0.10
Dissolved organic carbon	mg/kg	1	NONE	75.5	52.7

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

i2 Analytical

7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

Telephone: 01923 225404
Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results

Report No:	25-064504					
				Client: BWB Consulting Limited		
Location	Kingsway Plot Q					
Lab Reference (Sample Number)	766263			Landfill Waste Acceptance Criteria		
				Limits		
Sampling Date	19.11.2025			Inert Waste Landfill	Stable Non- reactive HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfill
Sample ID	TP08					
Depth (m)	0.75					
Solid Waste Analysis						
TOC (%)**	1.2			3%	5%	6%
Loss on Ignition (%) **	2.8			--	--	10%
BTEX (µg/kg) **	< 10			6000	--	--
Sum of PCBs (mg/kg) **	< 0.007			1	--	--
Mineral Oil (mg/kg) EH, 10, CU, AL	< 10			500	--	--
Total PAH (WAC-17) (mg/kg)	2.03			100	--	--
pH (units)**	7.5			--	>6	--
Acid Neutralisation Capacity (mmol / kg)	3.8			--	To be evaluated	To be evaluated
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test	
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)	
Arsenic *	0.00167			0.0167	0.5	2
Barium *	0.0275			0.275	20	100
Cadmium *	< 0.000100			< 0.00100	0.04	1
Chromium *	0.0057			0.057	0.5	10
Copper *	0.0024			0.024	2	50
Mercury *	< 0.000500			< 0.00500	0.01	0.2
Molybdenum *	0.000678			0.00678	0.5	10
Nickel *	0.0035			0.035	0.4	10
Lead *	< 0.0010			< 0.010	0.5	10
Antimony *	< 0.0017			< 0.017	0.06	0.7
Selenium *	< 0.0040			< 0.040	0.1	0.5
Zinc *	0.011			0.11	4	50
Chloride *	0.5			5	800	15000
Fluoride*	0.5			5	10	150
Sulphate *	6.9			69	1000	20000
TDS*	58			580	4000	60000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-
DOC	7.55			75.5	500	800
Leach Test Information						
Stone Content (%)	1.3					
Sample Mass (kg)	2					
Dry Matter (%)	85					
Moisture (%)	15					
Results are expressed on a dry weight basis, after correction for moisture content where applicable.						
				* = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation				** = MCERTS accredited		
Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3. This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.						

i2 Analytical

7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

Telephone: 01923 225404
Fax: 01923 237404
email:reception@i2analytical.com

Waste Acceptance Criteria Analytical Results

Report No:		25-064504						
					Client: BWB Consulting Limited			
Location		Kingsway Plot Q						
Lab Reference (Sample Number)		766264			Landfill Waste Acceptance Criteria			
					Limits			
Sampling Date		19.11.2025			Inert Waste Landfill	Stable Non- reactive HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfill	
Sample ID		TP14 ES2						
Depth (m)		1.00						
Solid Waste Analysis								
TOC (%)**		2.2			3%	5%	6%	
Loss on Ignition (%) **		5.8			--	--	10%	
BTEX (µg/kg) **		< 10			6000	--	--	
Sum of PCBs (mg/kg) **		0.009			1	--	--	
Mineral Oil (mg/kg) EH, 1D, CU, AL		200			500	--	--	
Total PAH (WAC-17) (mg/kg)		39.8			100	--	--	
pH (units)**		7.3			--	>6	--	
Acid Neutralisation Capacity (mmol / kg)		3.4			--	To be evaluated	To be evaluated	
Eluate Analysis		10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)		mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *		< 0.00100			< 0.0100	0.5	2	25
Barium *		0.0753			0.753	20	100	300
Cadmium *		< 0.000100			< 0.00100	0.04	1	5
Chromium *		0.063			0.63	0.5	10	70
Copper *		0.00097			0.0097	2	50	100
Mercury *		0.00209			0.0209	0.01	0.2	2
Molybdenum *		0.00611			0.0611	0.5	10	30
Nickel *		0.033			0.33	0.4	10	40
Lead *		< 0.0010			< 0.010	0.5	10	50
Antimony *		< 0.0017			< 0.017	0.06	0.7	5
Selenium *		< 0.0040			< 0.040	0.1	0.5	7
Zinc *		0.0047			0.047	4	50	200
Chloride *		16			160	800	15000	25000
Fluoride*		0.46			4.6	10	150	500
Sulphate *		360			3600	1000	20000	50000
TDS*		490			4900	4000	60000	100000
Phenol Index (Monohydric Phenols) *		< 0.010			< 0.10	1	-	-
DOC		5.27			52.7	500	800	1000
Leach Test Information								
Stone Content (%)		36.8						
Sample Mass (kg)		2						
Dry Matter (%)		82						
Moisture (%)		18						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)								
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited								
Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3. This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.								

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

* 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 *
765286	TP02	None Supplied	0.15	Brown loam and sand with vegetation
765287	TP03	None Supplied	0.25	Brown loam and sand with stones and vegetation
765288	TP04	None Supplied	0.5	Brown clay and sand
765289	TP05	None Supplied	0.15	Brown loam and clay with vegetation
765290	TP07	None Supplied	0.1	Brown clay and sand with vegetation and gravel
765291	TP08	None Supplied	0.75	Brown clay and sand with vegetation and stones
765292	TP09	None Supplied	0.2	Brown loam and sand with vegetation
765293	TP10	None Supplied	0.15	Brown loam and clay with gravel and vegetation
765294	TP11	None Supplied	0.2	Brown loam and clay with gravel and vegetation
765295	TP12	None Supplied	0.4	Brown clay and loam with gravel and vegetation
765296	TP13	None Supplied	0.6	Brown clay and sand with gravel and brick
765297	TP14 ES1	None Supplied	0.35	Brown clay and sand
765298	TP14 ES2	None Supplied	1	Brown clay and sand with gravel and brick
765299	TP15	None Supplied	0.4	Brown clay and sand with vegetation
766263	TP08	None Supplied	0.75	Brown clay and sand with vegetation and stones
766264	TP14 ES2	None Supplied	1	Brown clay and sand with gravel and brick

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
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.	L019B	D	NONE
Pesticides by GC-MS/MS	Determination of Pesticides in soil by GC MS/MS	In-house method	L055B	W	NONE
Pesticides by LC-MS	Determination of Pesticides in soil by LC-MS	In-house method	L056B	W	NONE
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
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	L038B	D	MCERTS
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	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
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	L038B	D	MCERTS
Hexavalent chromium in soil by Ion Chromatography	Determination of hexavalent chromium in alkaline soil extract by use of ion chromatography with spectrophotometric detection	In-house method	L130B	W	NONE
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Total petroleum hydrocarbons by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID	In-house method	L076B	D	MCERTS
Complex Cyanide in soil	Determination of complex cyanide by calculation	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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	L080-PL	W	MCERTS
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	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total petroleum hydrocarbons by HS-GC-MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC-MS	In-house method	L129-PL	W	ISO 17025
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
BTEX and/or Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS	In-house method based on USEPA 8260	L073B	W	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID in soil	Determination of total petroleum hydrocarbons in soil by GC-FID with carbon banding aliphatic and aromatic	In-house method	L076B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil (Summed Bands)	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic (Summed Bands).	Calculation	L076B/L088-PL	D/W	NONE
Total petroleum hydrocarbons with carbon banding by HS-GC/MS in soil	Determination of total petroleum hydrocarbons in soil by HS-GC/MS with carbon banding aliphatic and aromatic	In-house method	L088-PL	W	MCERTS
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Total cyanide in leachate	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
pH at 20°C in leachate (automated)	Determination of pH in leachate by electrometric measurement	In-house method	L099-PL	W	ISO 17025
One stage WAC 2:1 leachate preparation	One stage batch test at a liquid to solid ratio of 2 L/kg	BS EN 12457-1-2002	L043B	W	NONE
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
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	L038B	D	NONE
Water Soluble Nitrate (leachate equivalent)	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Nitrate, water soluble, in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
Ammonium as NH ₄ 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	L082B	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L023B	D	MCERTS
pH at 20°C in soil	Determination of pH in soil by addition of water followed by electrometric measurement	In-house method	L005B	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with hexane followed by GC-MS	In-house method based on USEPA 8082	L027B	D	MCERTS
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031B	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination	L033B	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved organic carbon in leachate by TOC/DOC NDIR Analyser	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
One stage WAC 10:1 leachate preparation	One stage batch test at a liquid to solid ratio of 10 L/kg	BS EN 12457-2-2002	L043B	W	ISO 17025
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046B	W	NONE
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser	In-house based on MEWAM Method ISBN 0117516260	L082B	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

*U/S g- Unsuitable for analysis due to high colour intensity.

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP04	N/A	S	765288	c	BTEX and/or Volatile organic compounds in soil	L073B	c
TP04	N/A	S	765288	c	Complex Cyanide in soil	L080-PL	c
TP04	N/A	S	765288	c	Free cyanide in soil	L080-PL	c
TP04	N/A	S	765288	c	Monohydric phenols in soil	L080-PL	c
TP04	N/A	S	765288	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP04	N/A	S	765288	c	Total cyanide in soil	L080-PL	c
TP04	N/A	S	765288	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP04	N/A	S	765288	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP04	N/A	S	765288	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
TP05	N/A	L	765289	bc	One stage WAC 2:1 leachate preparation	L043B	b
TP05	N/A	S	765289	bc	Complex Cyanide in soil	L080-PL	c
TP05	N/A	S	765289	bc	Free cyanide in soil	L080-PL	c
TP05	N/A	S	765289	bc	Monohydric phenols in soil	L080-PL	c
TP05	N/A	S	765289	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP05	N/A	S	765289	bc	Total cyanide in soil	L080-PL	c
TP05	N/A	S	765289	bc	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP05	N/A	S	765289	bc	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP08	N/A	S	765291	c	BTEX and/or Volatile organic compounds in soil	L073B	c
TP08	N/A	S	765291	c	Complex Cyanide in soil	L080-PL	c
TP08	N/A	S	765291	c	Free cyanide in soil	L080-PL	c
TP08	N/A	S	765291	c	Monohydric phenols in soil	L080-PL	c
TP08	N/A	S	765291	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP08	N/A	S	765291	c	Total cyanide in soil	L080-PL	c
TP08	N/A	S	765291	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP08	N/A	S	765291	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP08	N/A	S	765291	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
TP08	N/A	S	766263	c	BTEX and/or Volatile organic compounds in soil	L073B	c
TP08	N/A	S	766263	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP08	N/A	S	766263	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP09	N/A	S	765292	c	Complex Cyanide in soil	L080-PL	c
TP09	N/A	S	765292	c	Free cyanide in soil	L080-PL	c
TP09	N/A	S	765292	c	Monohydric phenols in soil	L080-PL	c
TP09	N/A	S	765292	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP09	N/A	S	765292	c	Total cyanide in soil	L080-PL	c
TP09	N/A	S	765292	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP09	N/A	S	765292	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP10	N/A	S	765293	c	Complex Cyanide in soil	L080-PL	c
TP10	N/A	S	765293	c	Free cyanide in soil	L080-PL	c
TP10	N/A	S	765293	c	Monohydric phenols in soil	L080-PL	c
TP10	N/A	S	765293	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP10	N/A	S	765293	c	Total cyanide in soil	L080-PL	c
TP10	N/A	S	765293	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP10	N/A	S	765293	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP11	N/A	L	765294	bc	One stage WAC 2:1 leachate preparation	L043B	b
TP11	N/A	S	765294	bc	Complex Cyanide in soil	L080-PL	c
TP11	N/A	S	765294	bc	Free cyanide in soil	L080-PL	c
TP11	N/A	S	765294	bc	Monohydric phenols in soil	L080-PL	c
TP11	N/A	S	765294	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP11	N/A	S	765294	bc	Total cyanide in soil	L080-PL	c
TP11	N/A	S	765294	bc	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP11	N/A	S	765294	bc	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP12	N/A	S	765295	c	Complex Cyanide in soil	L080-PL	c
TP12	N/A	S	765295	c	Free cyanide in soil	L080-PL	c
TP12	N/A	S	765295	c	Monohydric phenols in soil	L080-PL	c
TP12	N/A	S	765295	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP12	N/A	S	765295	c	Total cyanide in soil	L080-PL	c

Analytical Report Number : 25-064504

Project / Site name: Kingsway Plot Q

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP12	N/A	S	765295	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP12	N/A	S	765295	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP13	N/A	S	765296	c	Complex Cyanide in soil	L080-PL	c
TP13	N/A	S	765296	c	Free cyanide in soil	L080-PL	c
TP13	N/A	S	765296	c	Monohydric phenols in soil	L080-PL	c
TP13	N/A	S	765296	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP13	N/A	S	765296	c	Total cyanide in soil	L080-PL	c
TP13	N/A	S	765296	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP13	N/A	S	765296	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP14 ES1	N/A	S	765297	c	Complex Cyanide in soil	L080-PL	c
TP14 ES1	N/A	S	765297	c	Free cyanide in soil	L080-PL	c
TP14 ES1	N/A	S	765297	c	Monohydric phenols in soil	L080-PL	c
TP14 ES1	N/A	S	765297	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP14 ES1	N/A	S	765297	c	Total cyanide in soil	L080-PL	c
TP14 ES1	N/A	S	765297	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP14 ES1	N/A	S	765297	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP14 ES2	N/A	S	765298	c	BTEX and/or Volatile organic compounds in soil	L073B	c
TP14 ES2	N/A	S	765298	c	Complex Cyanide in soil	L080-PL	c
TP14 ES2	N/A	S	765298	c	Free cyanide in soil	L080-PL	c
TP14 ES2	N/A	S	765298	c	Monohydric phenols in soil	L080-PL	c
TP14 ES2	N/A	S	765298	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP14 ES2	N/A	S	765298	c	Total cyanide in soil	L080-PL	c
TP14 ES2	N/A	S	765298	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP14 ES2	N/A	S	765298	c	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c
TP14 ES2	N/A	S	765298	c	Total petroleum hydrocarbons with carbon banding by GC-FID in soil	L076B	c
TP14 ES2	N/A	S	766264	c	BTEX and/or Volatile organic compounds in soil	L073B	c
TP14 ES2	N/A	S	766264	c	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP14 ES2	N/A	S	766264	c	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP15	N/A	L	765299	bc	One stage WAC 2:1 leachate preparation	L043B	b
TP15	N/A	S	765299	bc	Complex Cyanide in soil	L080-PL	c
TP15	N/A	S	765299	bc	Free cyanide in soil	L080-PL	c
TP15	N/A	S	765299	bc	Monohydric phenols in soil	L080-PL	c
TP15	N/A	S	765299	bc	Speciated PAHs and/or Semi-volatile organic compounds in soil	L064B	c
TP15	N/A	S	765299	bc	Total cyanide in soil	L080-PL	c
TP15	N/A	S	765299	bc	Total petroleum hydrocarbons by GC-FID in soil	L076B	c
TP15	N/A	S	765299	bc	Total petroleum hydrocarbons by HS-GC-MS in soil	L129-PL	c

Appendix 7 : Groundwater Chemical Analysis Results



4041

BWB Consulting Limited
Whitehall Waterfront
2 Riverside Way
Leeds
LS1 4EH

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t:

e: james.harland@bwbconsulting.com

t: 01923 225404

f: 01923 237404

e: info-i2analytical@normecgroup.com

Analytical Report Number : 26-001149

Project / Site name:	Plot Q	Samples received on:	23/12/2025
Your job number:	244498	Samples instructed on/ Analysis started on:	13/01/2026
Your order number:		Analysis completed by:	19/01/2026
Report Issue Number:	1	Report issued on:	19/01/2026
Samples Analysed:	2 water samples		



Signed:

Anna Goc
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
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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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Analytical Report Number: 26-001149

Project / Site name: Plot Q

Lab Sample Number				798446	798447
Sample Reference				BH01	BH03
Sample Number				None Supplied	None Supplied
Water Matrix				Ground water	Ground water
Depth (m)				None Supplied	None Supplied
Date Sampled				18/12/2025	18/12/2025
Time Taken				1330	1300
Analytical Parameter (Water Analysis)	Units	Test Limit of detection	Test Accreditation Status		

General Inorganics

pH (L099)	pH Units	N/A	ISO 17025	6.9	7.4
Electrical Conductivity at 20°C	µS/cm	10	ISO 17025	440	730
Total Cyanide	µg/l	10	ISO 17025	< 10	< 10
Sulphate as SO ₄	mg/l	0.045	ISO 17025	33.7	51.2
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	200	170
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	16.2	19
Hardness - Total	mgCaCO ₃ /l	1	ISO 17025	251	408

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	0.04	0.03
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	0.05	0.02
Pyrene	µg/l	0.01	ISO 17025	0.06	0.02
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	< 0.16
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.42	0.43
Barium (dissolved)	µg/l	0.06	ISO 17025	91	170
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.07	0.03
Chromium (dissolved)	µg/l	0.2	ISO 17025	10	8.7
Copper (dissolved)	µg/l	0.5	ISO 17025	2.4	1.8
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Mercury (dissolved)	µg/l	0.05	NONE	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	7.8	5.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6	5
Vanadium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.4
Zinc (dissolved)	µg/l	0.5	ISO 17025	11	3.2



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Analytical Report Number: 26-001149

Project / Site name: Plot Q

Lab Sample Number				798446	798447
Sample Reference				BH01	BH03
Sample Number				None Supplied	None Supplied
Water Matrix				Ground water	Ground water
Depth (m)				None Supplied	None Supplied
Date Sampled				18/12/2025	18/12/2025
Time Taken				1330	1300
Analytical Parameter (Water Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Boron (dissolved)	µg/l	10	ISO 17025	24	80
Calcium (dissolved)	mg/l	0.012	ISO 17025	61	100
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0

Petroleum Hydrocarbons

Petroleum Range Organics (EC6 - EC10) HS_ID_TOTAL	µg/l	10	ISO 17025	< 10	< 10
TPH (EC10 - EC40) EH_ID_TOTAL_MS	µg/l	10	NONE	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



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Analytical Report Number : 26-001149

Project / Site name: Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

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, PW, GW, 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	L012B	W	ISO 17025
Electrical Conductivity at 20°C in water	Determination of electrical conductivity in water by electrochemical measurement. Accredited matrices: SW, PW, GW, FSE	In-house method	L031B	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved organic carbon in water by TOC/DOC NDIR Analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037B	W	ISO 17025
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited matrices: SW, PW, GW, FSE, LL; PrW, DI PrW (Al, Cu, Fe, Zn)	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025
Total Hardness of water	Determination of total hardness of water by calculation from calcium and magnesium. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L045B	W	ISO 17025
Total Petroleum Hydrocarbons in water by GC-MS	Determination of total petroleum hydrocarbons in water by GC-MS. Accredited matrices (TPH C12-C35): SW, PW, GW	In-house method	L070B	W	NONE
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5-diphenylcarbazide, followed by colorimetry. Accredited matrices: SW, PW, GW, FSE, LL	In-house method by continuous flow analyser	L080-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Total cyanide in water	Determination of total cyanide in water by distillation followed by colorimetry. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Total Petroleum Hydrocarbons in water by HS-GC/MS	Determination of total petroleum hydrocarbons in water by GC-MS HS	In-house method	L129-PL	W	ISO 17025
pH of water at 20°C (automated)	Determination of pH of water by electrochemical measurement. Accredited matrices: SW, PW, GW, FSE, LL	In-house method	L099-PL	W	ISO 17025
Speciated PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAHs) in water by extraction in dichloromethane followed by GC-MS. Accredited matrices (PAHs): SW, PW, GW	In-house method based on USEPA 8270	L102B	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of ammonium/ammonia/ammoniacal nitrogen by the colorimetric salicylate/nitroprusside method using discrete analyser. Accredited matrices: SW, PW, GW, FSE, LL	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082B	W	ISO 17025



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Analytical Report Number : 26-001149

Project / Site name: Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited matrices: SW, PW, GW, PrW, DI PrW, FSE, LL	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution



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Sample Deviation Report



Analytical Report Number : 26-001149

Project / Site name: Plot Q

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container/Insufficient material provided c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH01	N/A	W	798446	c	Ammoniacal Nitrogen as N in water	L082B	c
BH01	N/A	W	798446	c	Dissolved Organic Carbon in water	L037B	c
BH01	N/A	W	798446	c	Electrical Conductivity at 20°C in water	L031B	c
BH01	N/A	W	798446	c	Hexavalent chromium in water	L080-PL	c
BH01	N/A	W	798446	c	Metals in water by ICP-MS (dissolved)	L012B	c
BH01	N/A	W	798446	c	Metals in water by ICP-OES (dissolved)	L039B	c
BH01	N/A	W	798446	c	Monohydric phenols in water	L080-PL	c
BH01	N/A	W	798446	c	Speciated PAHs and/or Semi-volatile organic compounds in water	L102B	c
BH01	N/A	W	798446	c	Sulphate in water	L039B	c
BH01	N/A	W	798446	c	Total Hardness of water	L045B	c
BH01	N/A	W	798446	c	Total Petroleum Hydrocarbons in water by GC-MS	L070B	c
BH01	N/A	W	798446	c	Total Petroleum Hydrocarbons in water by HS-GC/MS	L129-PL	c
BH01	N/A	W	798446	c	Total cyanide in water	L080-PL	c
BH01	N/A	W	798446	c	pH of water at 20°C (automated)	L099-PL	c
BH03	N/A	W	798447	c	Ammoniacal Nitrogen as N in water	L082B	c
BH03	N/A	W	798447	c	Dissolved Organic Carbon in water	L037B	c
BH03	N/A	W	798447	c	Electrical Conductivity at 20°C in water	L031B	c
BH03	N/A	W	798447	c	Hexavalent chromium in water	L080-PL	c
BH03	N/A	W	798447	c	Metals in water by ICP-MS (dissolved)	L012B	c
BH03	N/A	W	798447	c	Metals in water by ICP-OES (dissolved)	L039B	c
BH03	N/A	W	798447	c	Monohydric phenols in water	L080-PL	c
BH03	N/A	W	798447	c	Speciated PAHs and/or Semi-volatile organic compounds in water	L102B	c
BH03	N/A	W	798447	c	Sulphate in water	L039B	c
BH03	N/A	W	798447	c	Total Hardness of water	L045B	c
BH03	N/A	W	798447	c	Total Petroleum Hydrocarbons in water by GC-MS	L070B	c
BH03	N/A	W	798447	c	Total Petroleum Hydrocarbons in water by HS-GC/MS	L129-PL	c
BH03	N/A	W	798447	c	Total cyanide in water	L080-PL	c
BH03	N/A	W	798447	c	pH of water at 20°C (automated)	L099-PL	c

Appendix 8 : Geotechnical Laboratory Testing Results

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
 Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

4041

Client: BWB Consulting Limited
 Client Address: Whitehall Waterfront, 2 Riverside Way,
 Leeds, LS1 4EH

Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 19/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

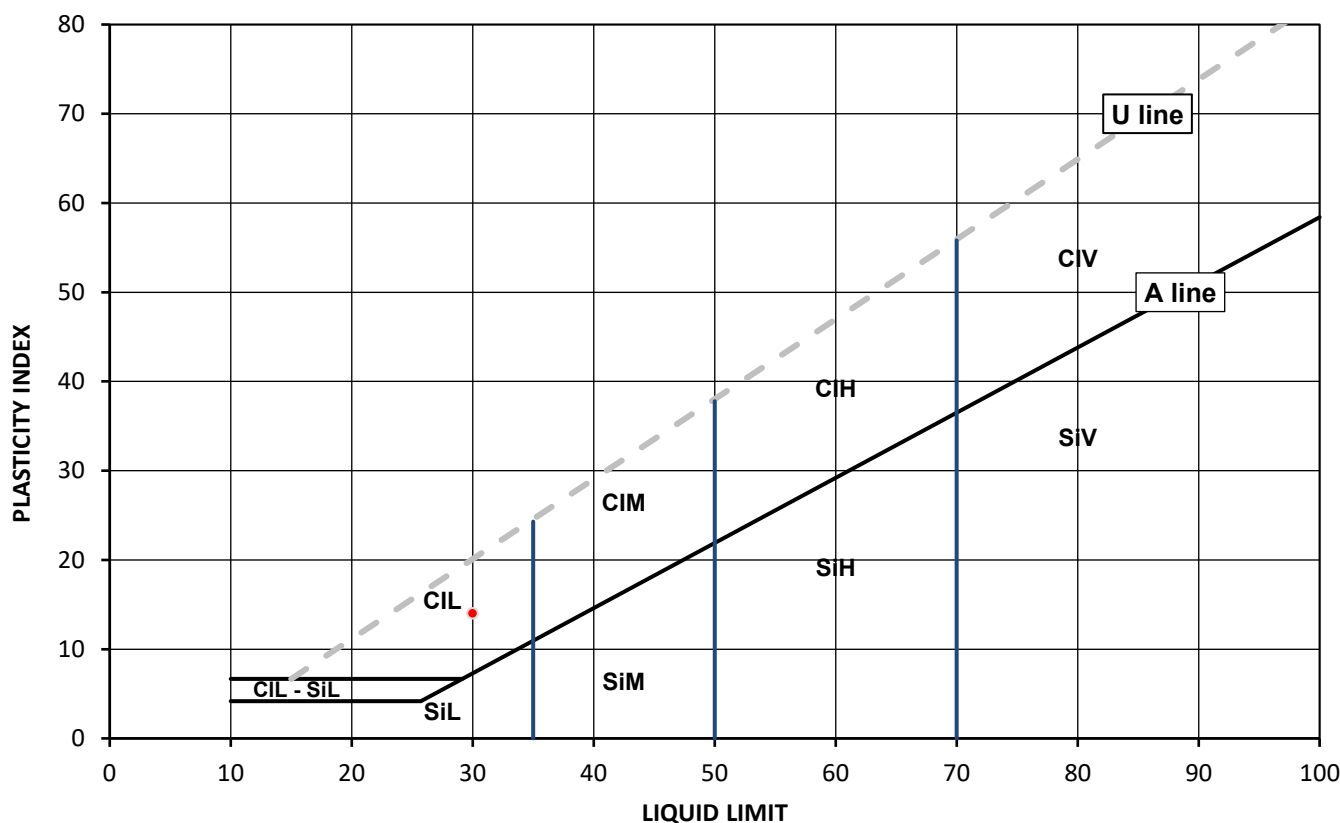
Test Results:

Laboratory Reference: 764389
 Hole No.: TP01
 Sample Reference: 2
 Sample Description: Brown slightly gravelly very sandy CLAY

Depth Top [m]: 1.50
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
15.5	30	16	14	0.00	1.00	99



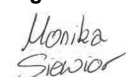
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	append to classification for organic material (eg ClHO)
	V Very high	
	O Organic	

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed:



Monika Siewior
 Senior Reporting Specialist
 for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022,cl 5.2 and 6



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 04/12/2025
Sampled By: Not Given

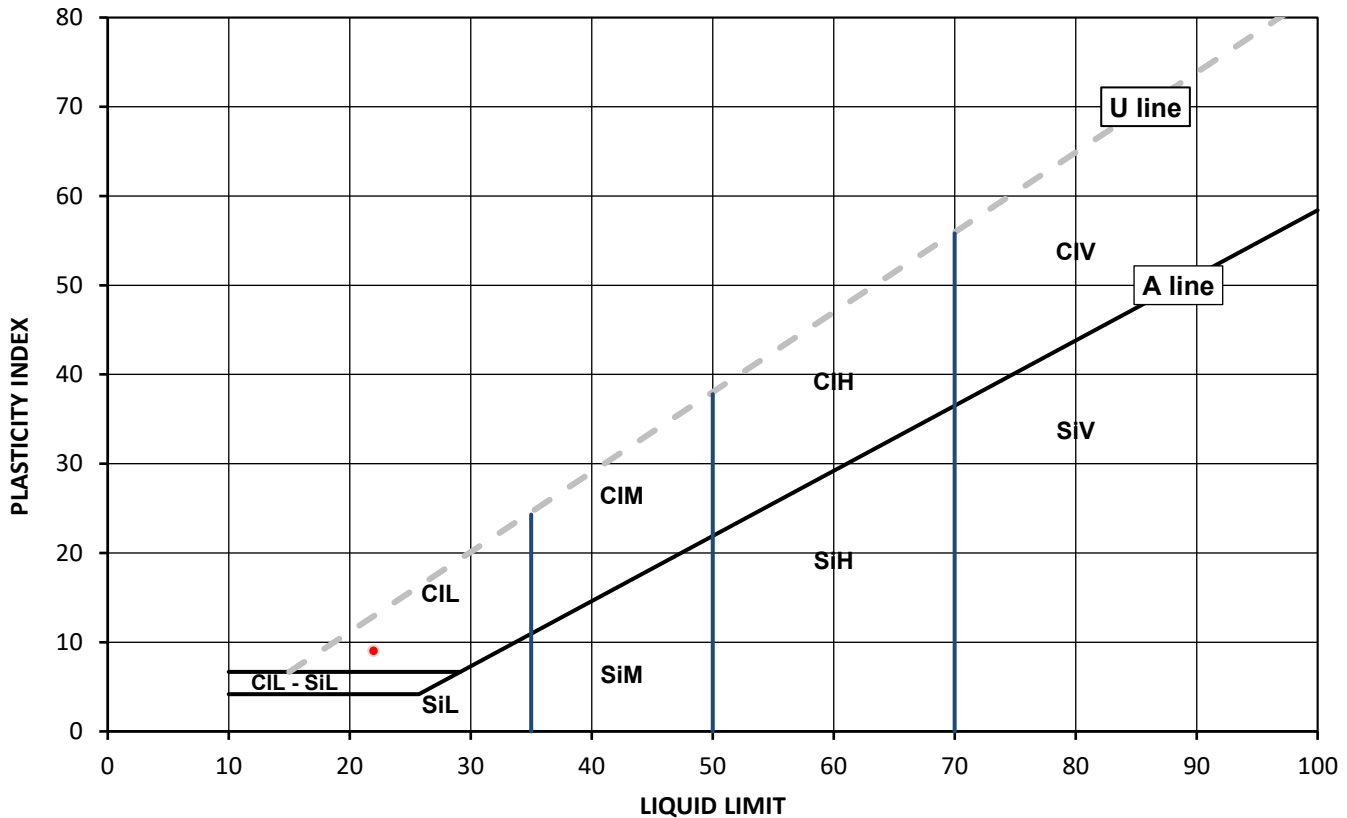
Test Results:

Laboratory Reference: 764394
Hole No.: TP04
Sample Reference: 1
Sample Description: Brownish grey slightly gravelly clayey SAND

Depth Top [m]: 0.50
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
13.5	22	13	9	0.11	0.89	98



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	append to classification for organic material (eg ClHO)
	V Very high	
	O Organic	

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

Signed:

Monika Siewior

Monika Siewior
Senior Reporting Specialist
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Page 1 of 1

Date Reported: 12/12/2025

GF 337.16

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS
 Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022,
 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

4041

Client: BWB Consulting Limited
 Client Address: Whitehall Waterfront, 2 Riverside Way,
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Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 20/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

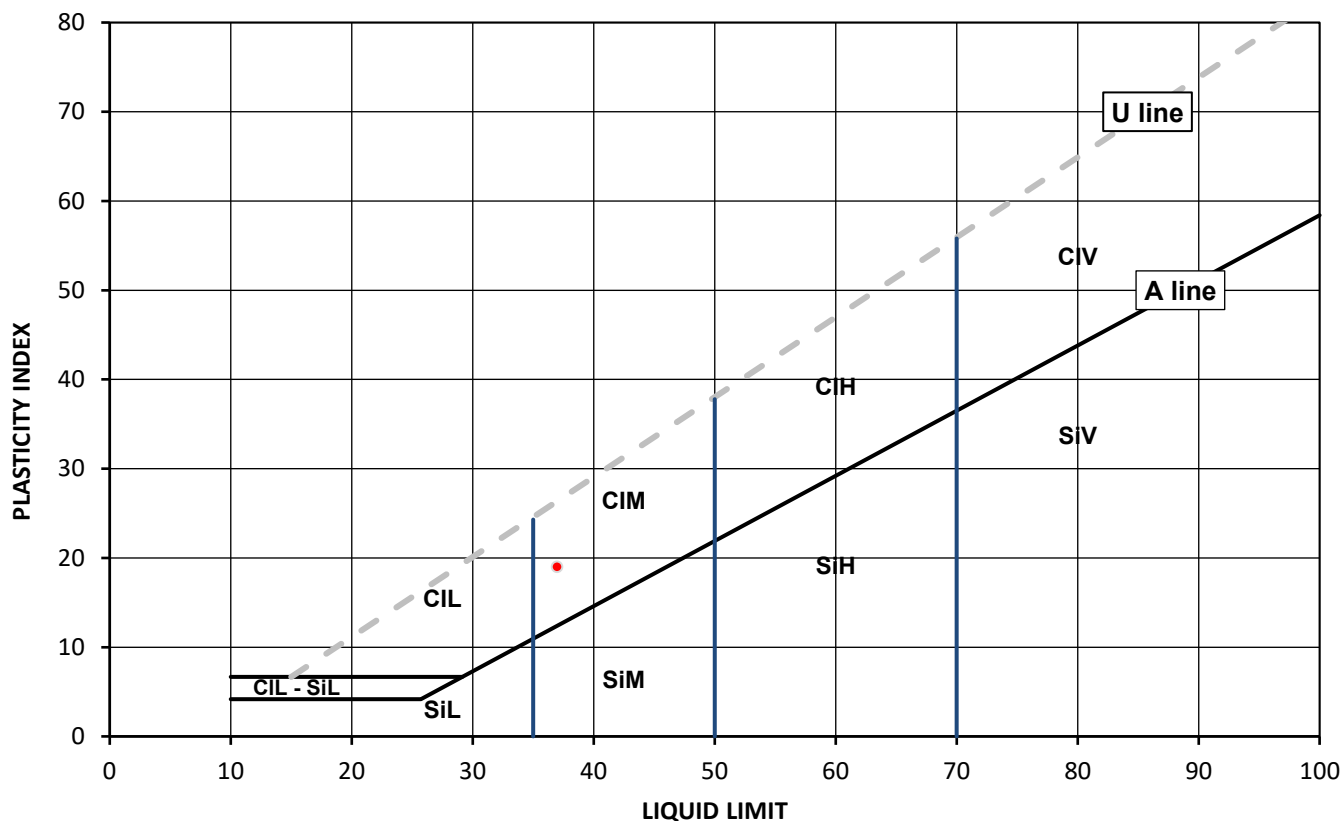
Test Results:

Laboratory Reference: 764395
 Hole No.: TP04
 Sample Reference: 2
 Sample Description: Brown slightly gravelly sandy CLAY

Depth Top [m]: 2.20
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
24.7	37	18	19	0.37	0.63	99



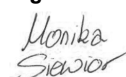
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg ClHO)

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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TEST CERTIFICATE

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 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

4041

Client: BWB Consulting Limited
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 Leeds, LS1 4EH

Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 21/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

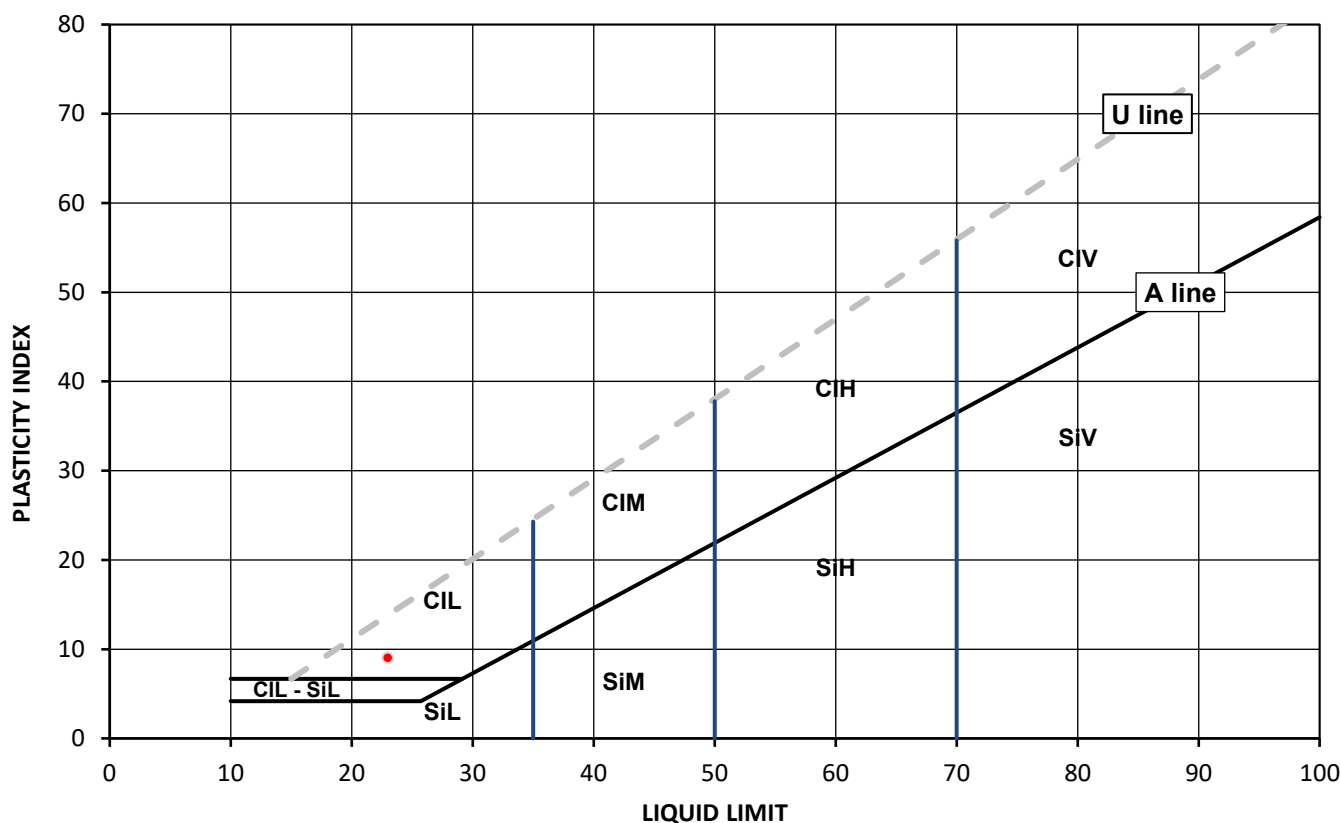
Test Results:

Laboratory Reference: 764397
 Hole No.: TP06
 Sample Reference: 1
 Sample Description: Brownish grey clayey SAND

Depth Top [m]: 0.50
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested in natural condition; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
16.4	23	14	9	0.22	0.78	100



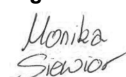
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	
	V Very high	
	O Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

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TEST CERTIFICATE

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 Client Address: Whitehall Waterfront, 2 Riverside Way,
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Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 19/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

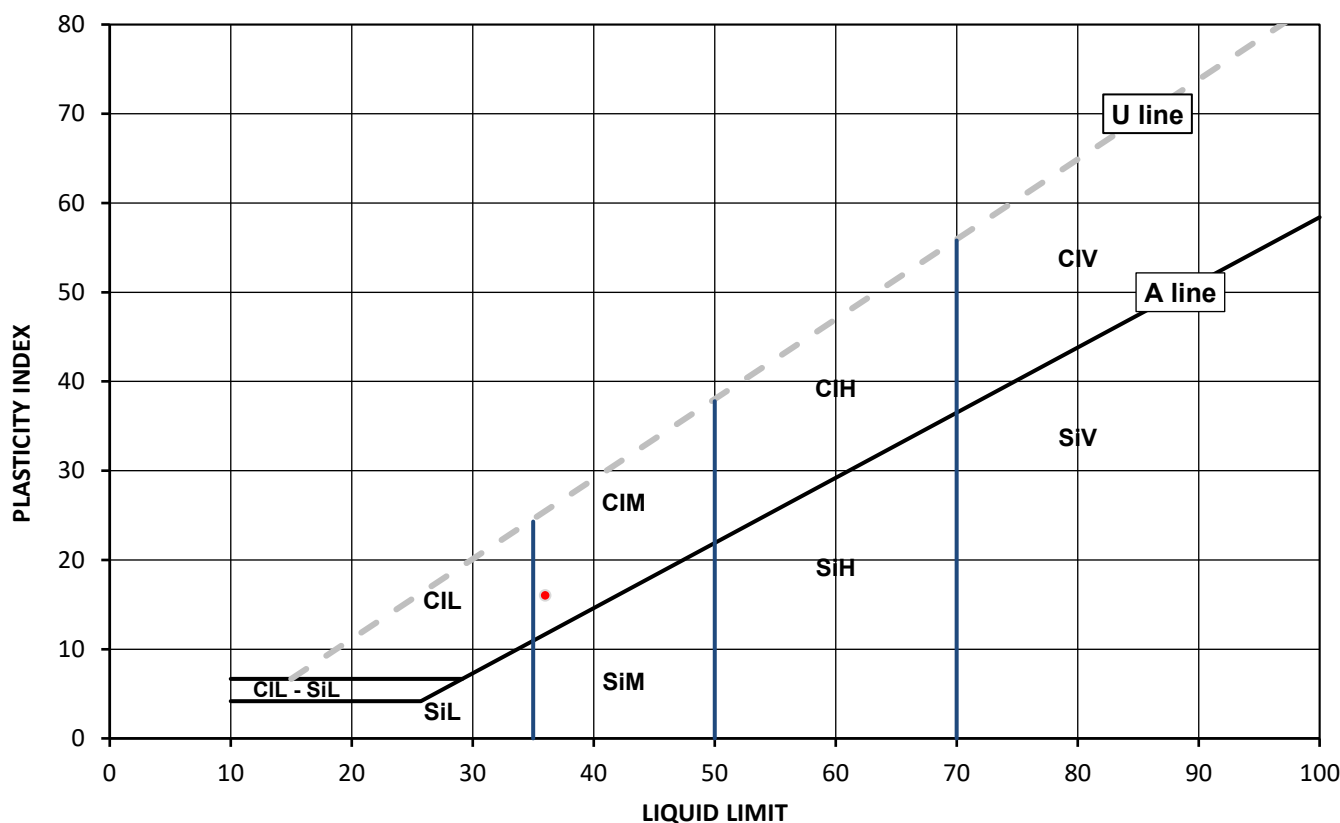
Test Results:

Laboratory Reference: 764400
 Hole No.: TP08
 Sample Reference: 1
 Sample Description: Brown slightly gravelly sandy CLAY

Depth Top [m]: 1.90
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
25.8	36	20	16	N/A	N/A	97



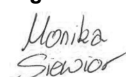
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	
	V Very high	
	O Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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TEST CERTIFICATE

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 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

4041

Client: BWB Consulting Limited
 Client Address: Whitehall Waterfront, 2 Riverside Way,
 Leeds, LS1 4EH

Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 20/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

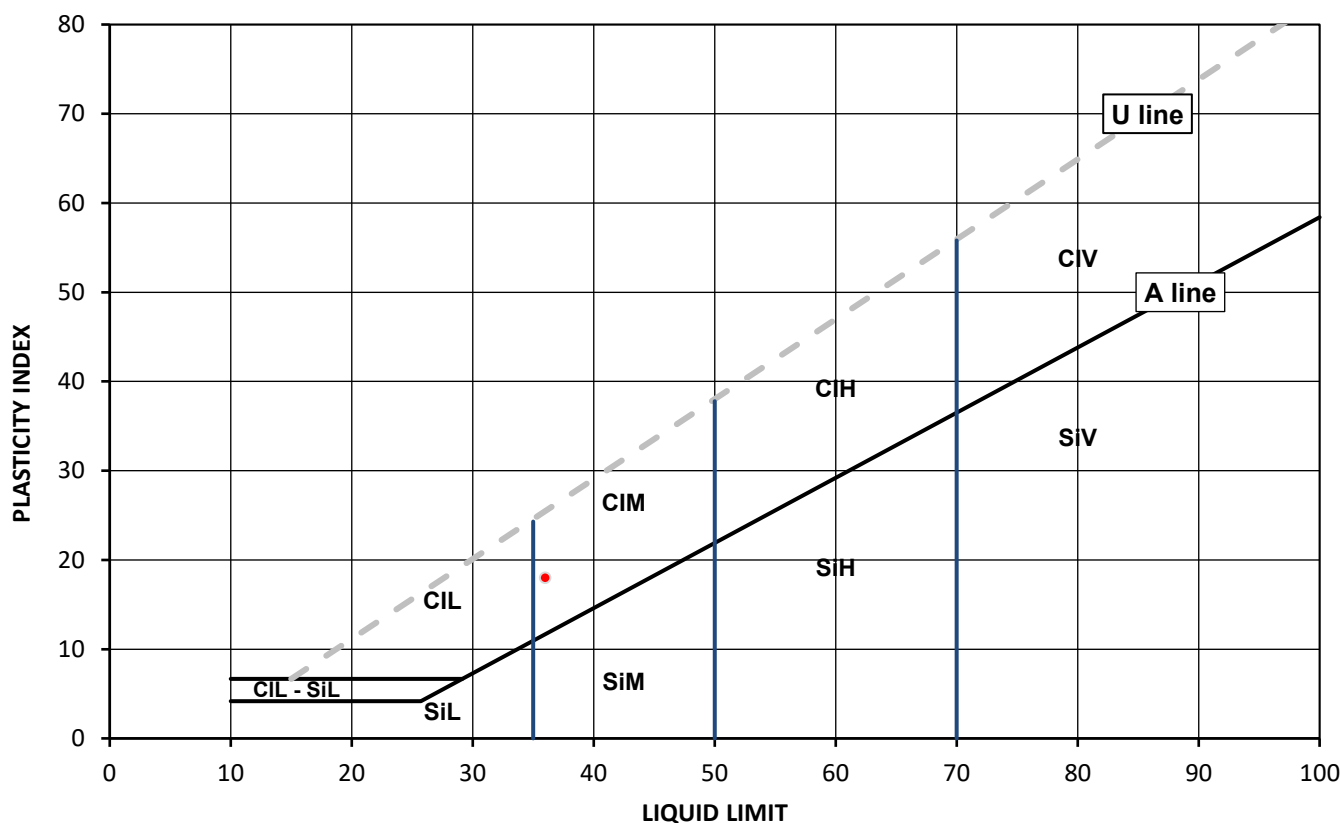
Test Results:

Laboratory Reference: 764401
 Hole No.: TP10
 Sample Reference: 1
 Sample Description: Brown slightly gravelly sandy CLAY

Depth Top [m]: 1.30
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
21.4	36	18	18	0.17	0.83	99



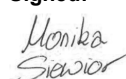
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg ClHO)

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

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 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

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 Leeds, LS1 4EH

Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 20/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

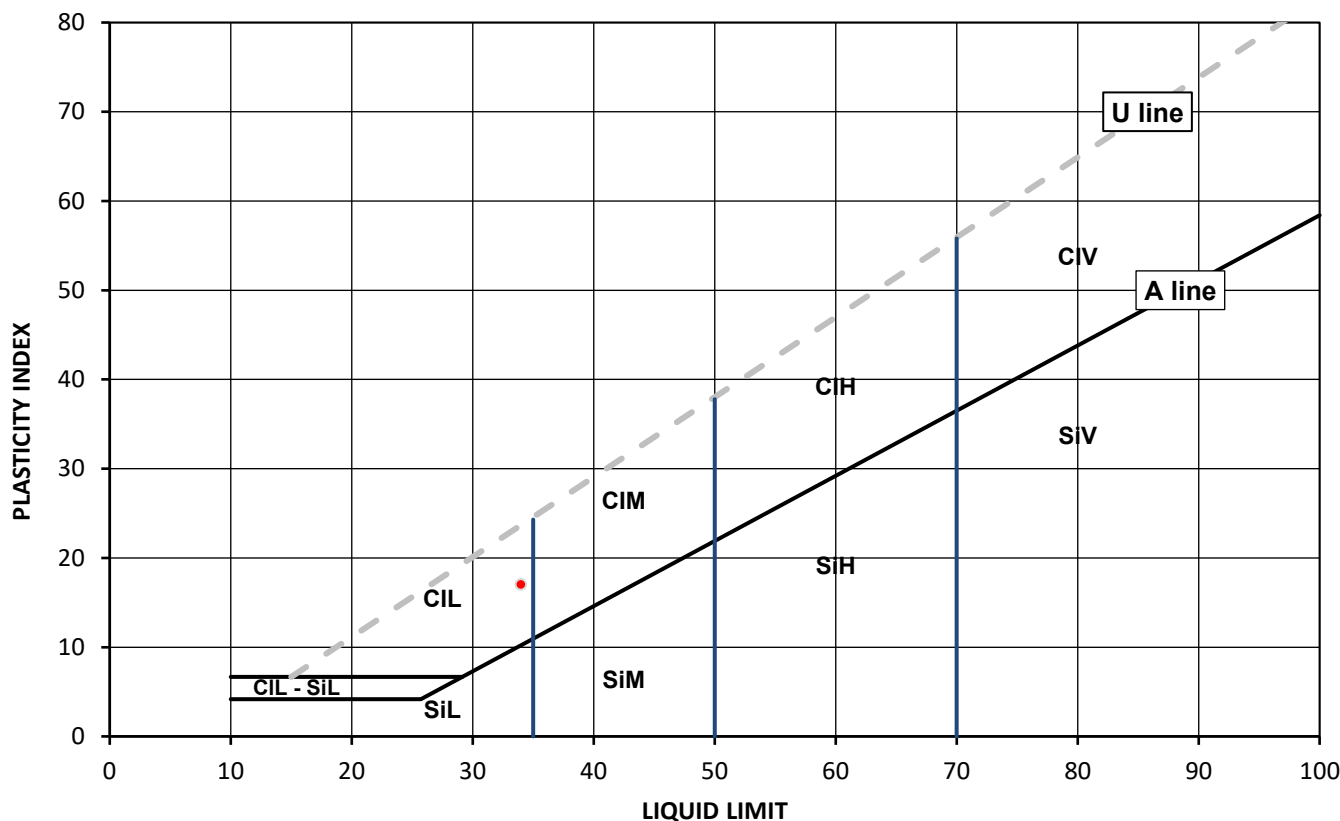
Test Results:

Laboratory Reference: 764402
 Hole No.: TP11
 Sample Reference: 1
 Sample Description: Brown slightly gravelly very sandy CLAY

Depth Top [m]: 0.70
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
20.4	34	17	17	0.18	0.82	99



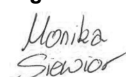
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	
	V Very high	
	O Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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TEST CERTIFICATE

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 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

4041

Client: BWB Consulting Limited
 Client Address: Whitehall Waterfront, 2 Riverside Way,
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Contact: Catherine Riley
 Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
 Job Number: 25-064345-1
 Date Sampled: 20/11/2025
 Date Received: 25/11/2025
 Date Tested: 04/12/2025
 Sampled By: Not Given

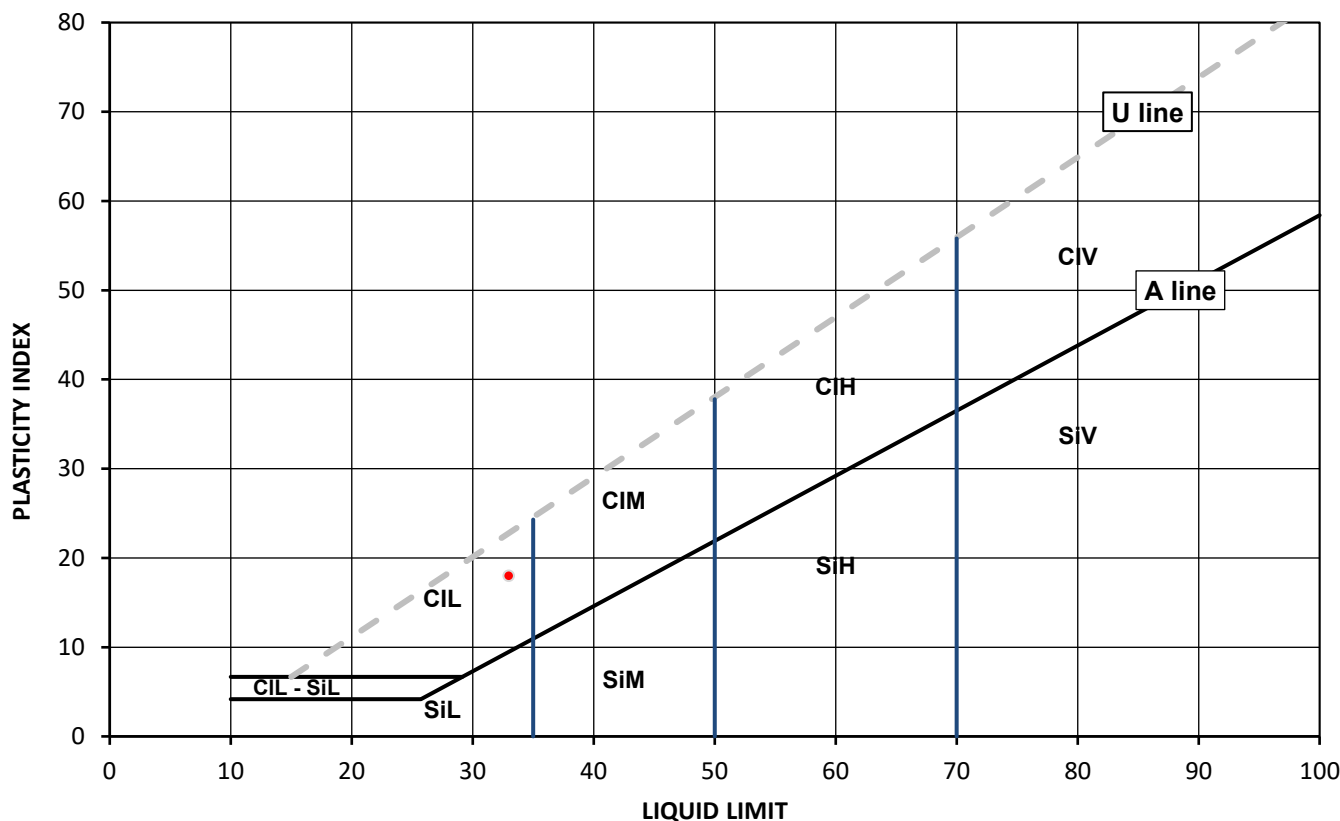
Test Results:

Laboratory Reference: 764403
 Hole No.: TP13
 Sample Reference: 1
 Sample Description: Brownish grey slightly gravelly very sandy CLAY

Depth Top [m]: 1.90
 Depth Base [m]: Not Given
 Sample Type: D

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
 Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
18.1	33	15	18	0.17	0.83	87



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L Low	50 to 70
	M Medium	exceeding 70
	H High	append to classification for organic material (eg ClHO)
	V Very high	
	O Organic	

Note: Water Content by BS EN ISO 17892-1:2014+A1:2022, BS 1377-2:2022; # Non accredited

Remarks:

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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:



4041

Client: BWB Consulting Limited

Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley

Site Address: Kingsway Plot Q

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt
Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN ISO 17892-1:2014+A1:2022.
Particle Density by gas jar BS 1377-2:2022.

Client Reference: 244498

Job Number: 25-064345-1

Date Sampled: 19/11 - 21/11/2025

Date Received: 25/11/2025

Date Tested: 04/12 - 05/12/2025

Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit							Density		
		Reference	Depth Top	Depth Base	Type				% Passing 425um	WL*	Correlation Factor	Wp	Ip	Cone type	Sample Preparation	bulk	dry	PD
			m	m														
764389	TP01	2	1.50	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 4 Point	15.5	99	30	-	16	14	80g/30 deg	R / I			
764390	TP02	1	1.00	Not Given	B	Brown SAND		17.4										2.66
764394	TP04	1	0.50	Not Given	D	Brownish grey slightly gravelly clayey SAND	Atterberg 4 Point	13.5	98	22	-	13	9	80g/30 deg	R / I			
764395	TP04	2	2.20	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 4 Point	24.7	99	37	-	18	19	80g/30 deg	R / I			
764397	TP06	1	0.50	Not Given	D	Brownish grey clayey SAND	Atterberg 4 Point	16.4	100	23	-	14	9	80g/30 deg	N / I			
764400	TP08	1	1.90	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 4 Point	25.8	97	36	-	20	16	80g/30 deg	R / I			
764401	TP10	1	1.30	Not Given	D	Brown slightly gravelly sandy CLAY	Atterberg 4 Point	21.4	99	36	-	18	18	80g/30 deg	R / I			
764402	TP11	1	0.70	Not Given	D	Brown slightly gravelly very sandy CLAY	Atterberg 4 Point	20.4	99	34	-	17	17	80g/30 deg	R / I			
764403	TP13	1	1.90	Not Given	D	Brownish grey slightly gravelly very sandy CLAY	Atterberg 4 Point	18.1	87	33	-	15	18	80g/30 deg	R / I			
764404	TP14	1	1.50	Not Given	B	Greyish brown CLAY		22.8										2.69

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, WR - Tested after washing to remove >425mm; I - The water content in the sample was increased, D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed:

Monika Siewior

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for and on behalf of i2 Analytical Ltd

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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:



4041

Client: BWB Consulting Limited

W by BS EN ISO 17892-1:2014+A1:2022. Particle Density by gas jar BS 1377-2:2022.

Client Reference: 244498

Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Job Number: 25-064345-1

Contact: Catherine Riley

Date Sampled: 20/11/2025

Site Address: Kingsway Plot Q

Date Received: 25/11/2025

Date Tested: 04/12/2025

Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit								Density		
		Reference	Depth Top	Depth Base	Type				% Passing 425um	WL*	Correlation Factor	Wp	Ip	Cone type	Sample Preparation	bulk	dry	PD	
			m	m												Mg/m3	Mg/m3	Mg/m3	
764699	TP09	2	2.30	Not Given	B	Brown slightly gravelly slightly sandy silty CLAY		11.4										2.69	

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, WR - Tested after washing to remove >425mm; I - The water content in the sample was increased , D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

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Signed:

Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1



4041
Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 19/11 - 21/11/2025
Date Received: 25/11/2025
Date Tested: 04/12 - 05/12/2025
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC											
		Reference	Depth Top m	Depth Base m	Type														
764389	TP01	2	1.50	Not Given	D	Brown slightly gravelly very sandy CLAY		15.5											
764390	TP02	1	1.00	Not Given	B	Brown SAND		17.4											
764394	TP04	1	0.50	Not Given	D	Brownish grey slightly gravelly clayey SAND		13.5											
764395	TP04	2	2.20	Not Given	D	Brown slightly gravelly sandy CLAY		24.7											
764397	TP06	1	0.50	Not Given	D	Brownish grey clayey SAND		16.4											
764400	TP08	1	1.90	Not Given	D	Brown slightly gravelly sandy CLAY		25.8											
764401	TP10	1	1.30	Not Given	D	Brown slightly gravelly sandy CLAY		21.4											
764402	TP11	1	0.70	Not Given	D	Brown slightly gravelly very sandy CLAY		20.4											
764403	TP13	1	1.90	Not Given	D	Brownish grey slightly gravelly very sandy CLAY		18.1											
764404	TP14	1	1.50	Not Given	B	Greyish brown CLAY		22.8											

Comments:

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Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS EN ISO 17892-1:2014+A1:2022, BS 1377-2: 2022, clause 4.1



Client: 4041
Client Address: BWB Consulting Limited
Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 04/12/2025
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC											
		Reference	Depth Top m	Depth Base m	Type														
764699	TP09	2	2.30	Not Given	B	Brown slightly gravelly slightly sandy silty CLAY		11.4											

Comments:

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Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF PARTICLE DENSITY - GAS JAR METHOD

Tested in Accordance with: BS 1377-2:2022, clause 9.2



4041

Client: BWB Consulting Limited

Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley

Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498

Job Number: 25-064345-1

Date Sampled: 19/11 - 20/11/2025

Date Received: 25/11/2025

Date Tested: 04/12 - 05/12/2025

Sampled By: Not Given

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	PD Mg/m3	Preparation				
		Reference	Depth Top m	Depth Base m	Type								
764390	TP02	1	1.00	Not Given	B	Brown SAND		2.66	Quartered, natural condition				
764404	TP14	1	1.50	Not Given	B	Greyish brown CLAY		2.69	Quartered, natural condition				
764699	TP09	2	2.30	Not Given	B	Brown slightly gravelly slightly sandy silty CLAY		2.69	Quartered, natural condition				

Note: PD - Particle Density

Comments:

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Signed:

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Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd



TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016,
BS 1377-2:2022 cl. 10



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

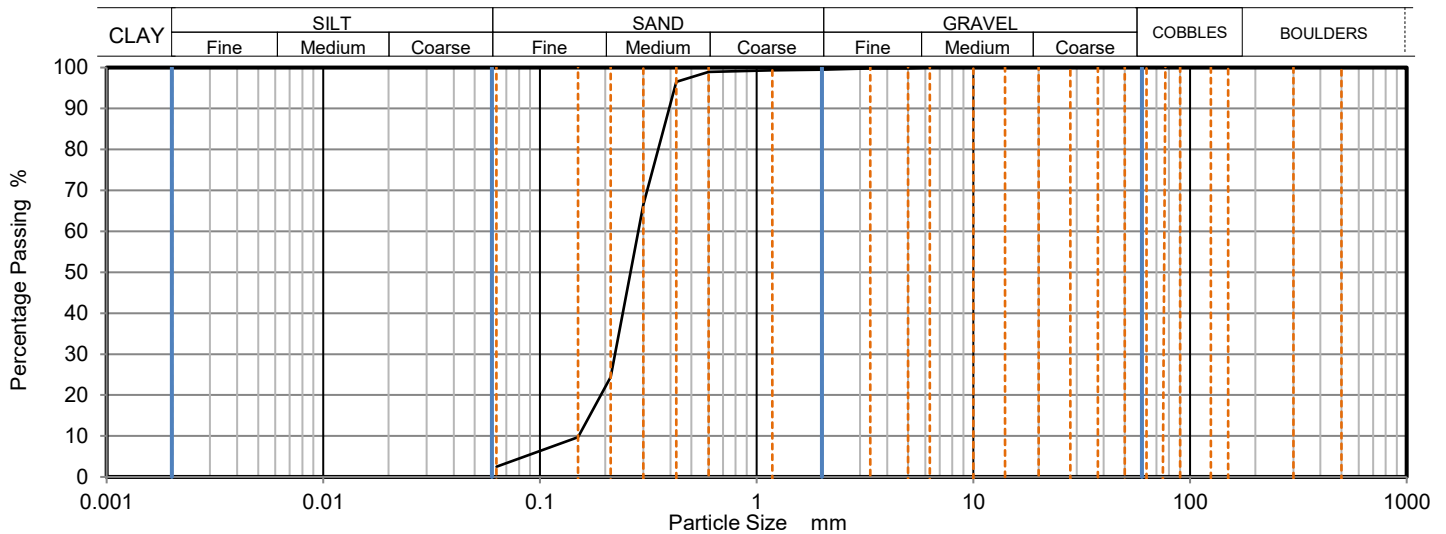
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 19/11/2025
Date Received: 25/11/2025
Date Tested: 04/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764391
Hole No.: TP02
Sample Reference: 2
Sample Description: Yellowish brown slightly clayey SAND
Sample Preparation: Sample was quartered, oven dried at 106.4 °C and broken down by hand.

Depth Top [m]: 2.00
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	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	99		
0.425	97		
0.3	67		
0.212	24		
0.15	10		
0.063	3		

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	97
Fines <0.063 mm	3

Grading Analysis		
D100	mm	6.3
D60	mm	0.284
D30	mm	0.222
D10	mm	0.151
Uniformity Coefficient		1.9
Curvature Coefficient		1.1

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving on as received or wet sample

Remarks:

Signed:

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Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016,
BS 1377-2:2022 cl. 10



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

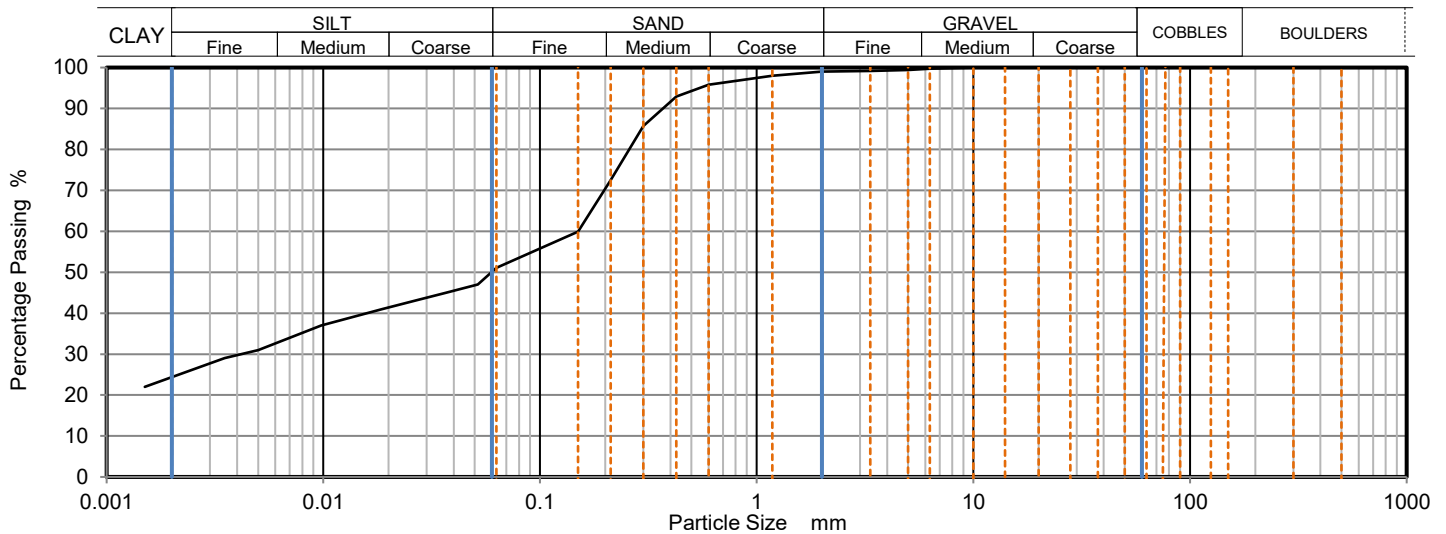
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 05/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764405
Hole No.: TP15
Sample Reference: 1
Sample Description: Brownish grey sandy silty CLAY
Sample Preparation: Sample was quartered, oven dried at 106.4 °C and broken down by hand.

Depth Top [m]: 1.90
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0517	47
300	100	0.0368	45
150	100	0.0263	43
125	100	0.0187	41
90	100	0.0098	37
75	100	0.0050	31
63	100	0.0035	29
50	100	0.0015	22
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	99		
3.35	99		
2	99		
1.18	98		
0.6	96	Particle density (assumed) 2.65 Mg/m3	
0.425	93		
0.3	86		
0.212	73		
0.15	60		
0.063	51		

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	47
Silt	27
Clay	25

Grading Analysis	
D100	mm 10
D60	mm 0.15
D30	mm 0.00446
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

Signed:

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TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS EN ISO 17892-4:2016,
BS 1377-2:2022 cl. 10



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

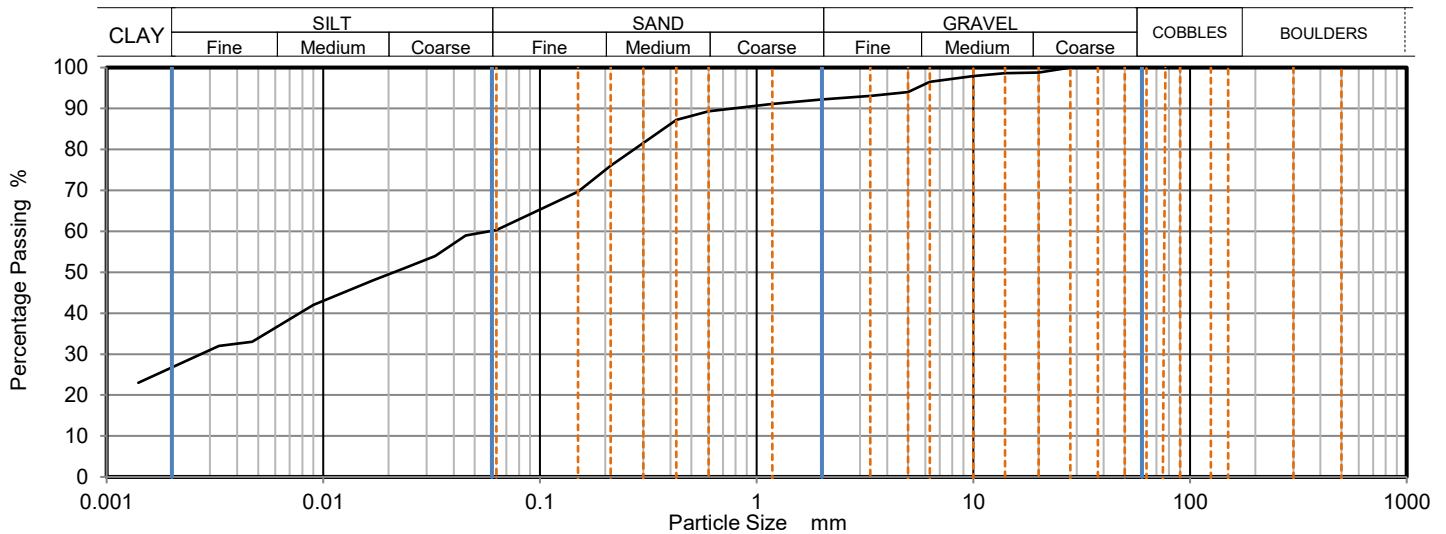
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 04/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764699
Hole No.: TP09
Sample Reference: 2
Sample Description: Brown slightly gravelly slightly sandy silty CLAY
Sample Preparation: Sample was quartered, oven dried at 106.0 °C and broken down by hand.

Depth Top [m]: 2.30
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0454	59
300	100	0.0329	54
150	100	0.0237	51
125	100	0.0170	48
90	100	0.0090	42
75	100	0.0047	33
63	100	0.0033	32
50	100	0.0014	23
37.5	100		
28	100		
20	99		
14	99		
10	98		
6.3	97		
5	94		
3.35	93		
2	92		
1.18	91		
0.6	89	Particle density (measured) 2.69 Mg/m3	
0.425	87		
0.3	82		
0.212	76		
0.15	70		
0.063	60		

Sample Proportions	% dry mass
Very coarse	0
Gravel	8
Sand	32
Silt	34
Clay	26

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with ISO 17892 -4, by sieving and hydrometer sedimentation

Remarks:

Signed:

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TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

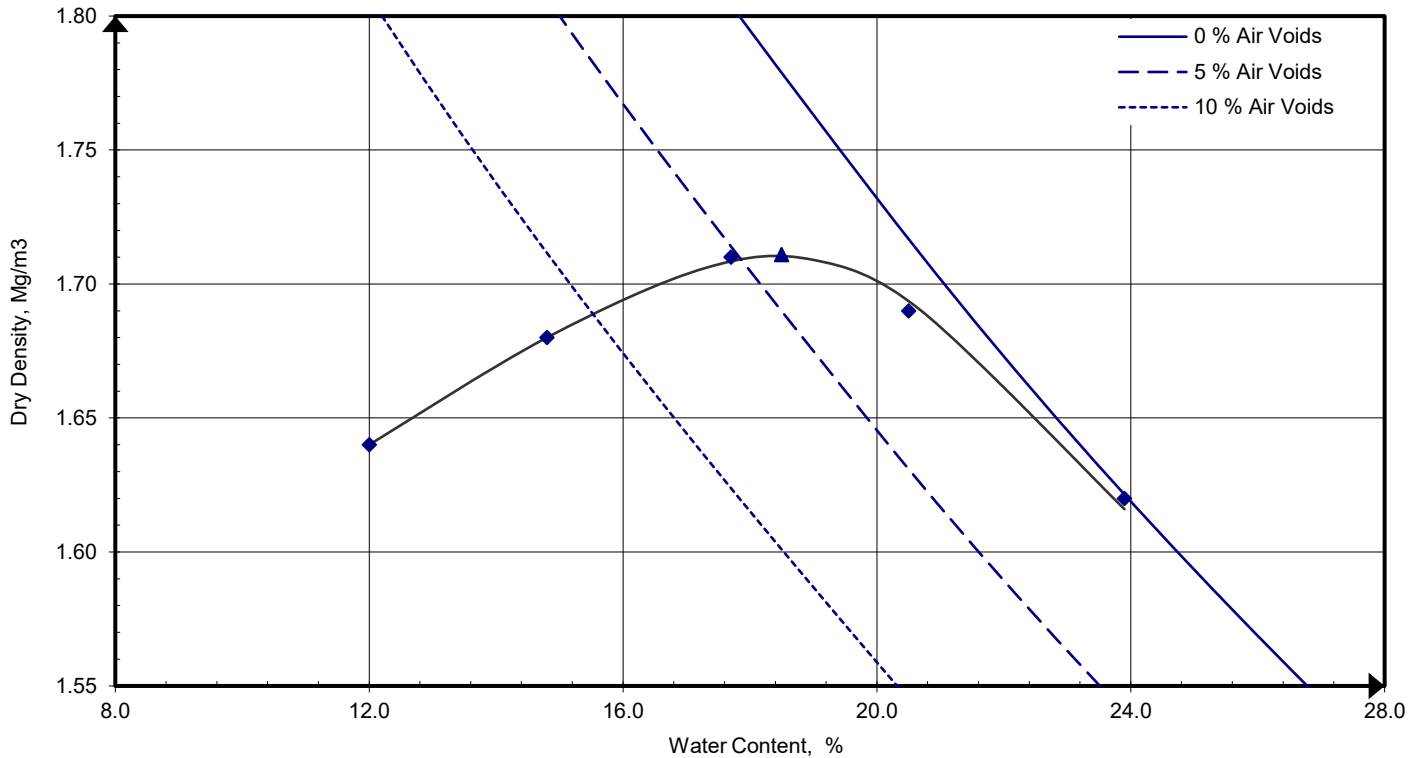
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 18/11/2025
Date Received: 25/11/2025
Date Tested: 08/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764387
Hole No.: BH01
Sample Reference: 1
Sample Description: Greyish brown CLAY
Sample Preparation: Sample was quartered and broken down by hand. Material used was natural.

Depth Top [m]: 1.00
Depth Base [m]: 1.45
Sample Type: B



Compaction Point No.	1	2	3	4	5	
Water Content	%	12.0	14.8	17.7	20.5	23.9
Dry Density	Mg/m³	1.64	1.68	1.71	1.69	1.62

Grading zone	1
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 - Assumed	Mg/m³	2.65
As received Water Content	%	18.7
Maximum Dry Density	Mg/m³	1.71

Optimum Water Content	%	19
-----------------------	---	----

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed:

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Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11



Normec
i2 Analytical

4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

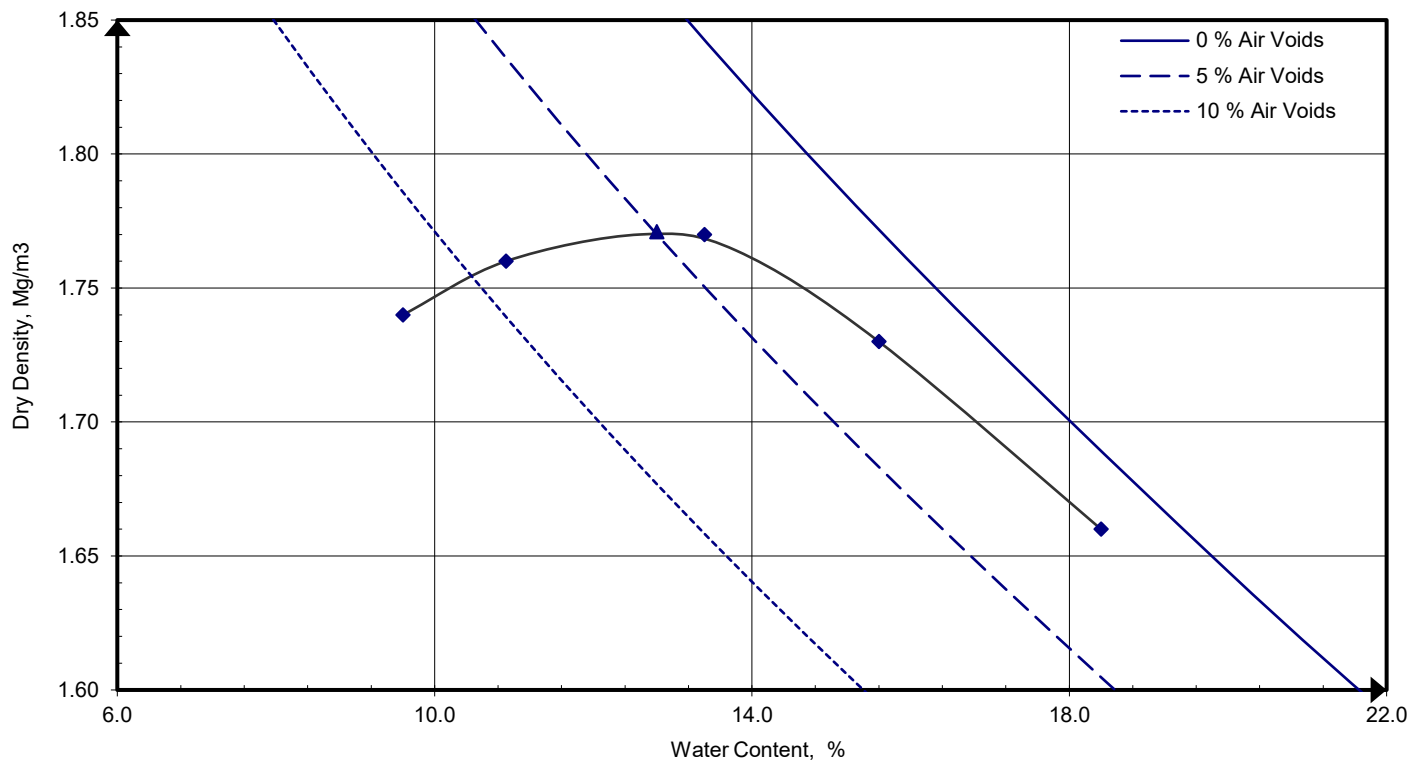
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 21/11/2025
Date Received: 25/11/2025
Date Tested: 09/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764393
Hole No.: TP03
Sample Reference: 2
Sample Description: Brownish grey clayey SAND
Sample Preparation: Sample was quartered and broken down by hand. Material used was natural.

Depth Top [m]: 1.70
Depth Base [m]: Not Given
Sample Type: B



Compaction Point No.		1	2	3	4	5
Water Content	%	9.6	10.9	13.4	15.6	18.4
Dry Density	Mg/m³	1.74	1.76	1.77	1.73	1.66

Grading zone	1
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 - Assumed	Mg/m³	2.45
As received Water Content	%	18.4
Maximum Dry Density	Mg/m³	1.77

Optimum Water Content	%	13
-----------------------	---	----

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed:

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for and on behalf of i2 Analytical Ltd

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Page 1 of 1

Date Reported: 12/12/2025

GF 599.3



TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

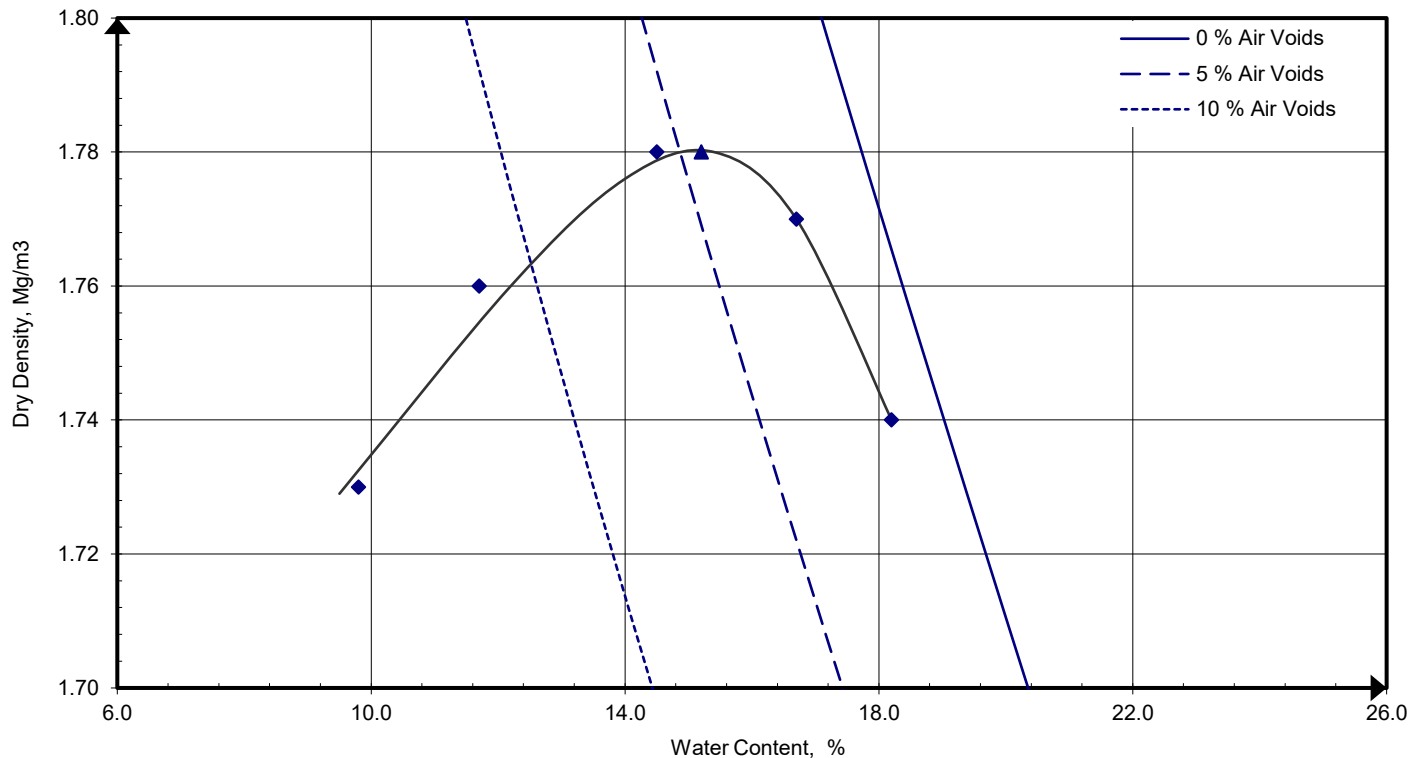
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 19/11/2025
Date Received: 25/11/2025
Date Tested: 09/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764396
Hole No.: TP05
Sample Reference: 1
Sample Description: Light brown clayey SILT
Sample Preparation: Sample was quartered and broken down by hand. Material used was natural.

Depth Top [m]: 1.30
Depth Base [m]: Not Given
Sample Type: B



Compaction Point No.	1	2	3	4	5	
Water Content	%	9.8	11.7	14.5	16.7	18.2
Dry Density	Mg/m³	1.73	1.76	1.78	1.77	1.74

Grading zone	1
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 - Assumed	Mg/m³	2.60
As received Water Content	%	9.8
Maximum Dry Density	Mg/m³	1.78

Optimum Water Content	%	15
-----------------------	---	----

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed:

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Senior Reporting Specialist
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Page 1 of 1

Date Reported: 12/12/2025

GF 599.3



TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11



Normec
i2 Analytical

4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

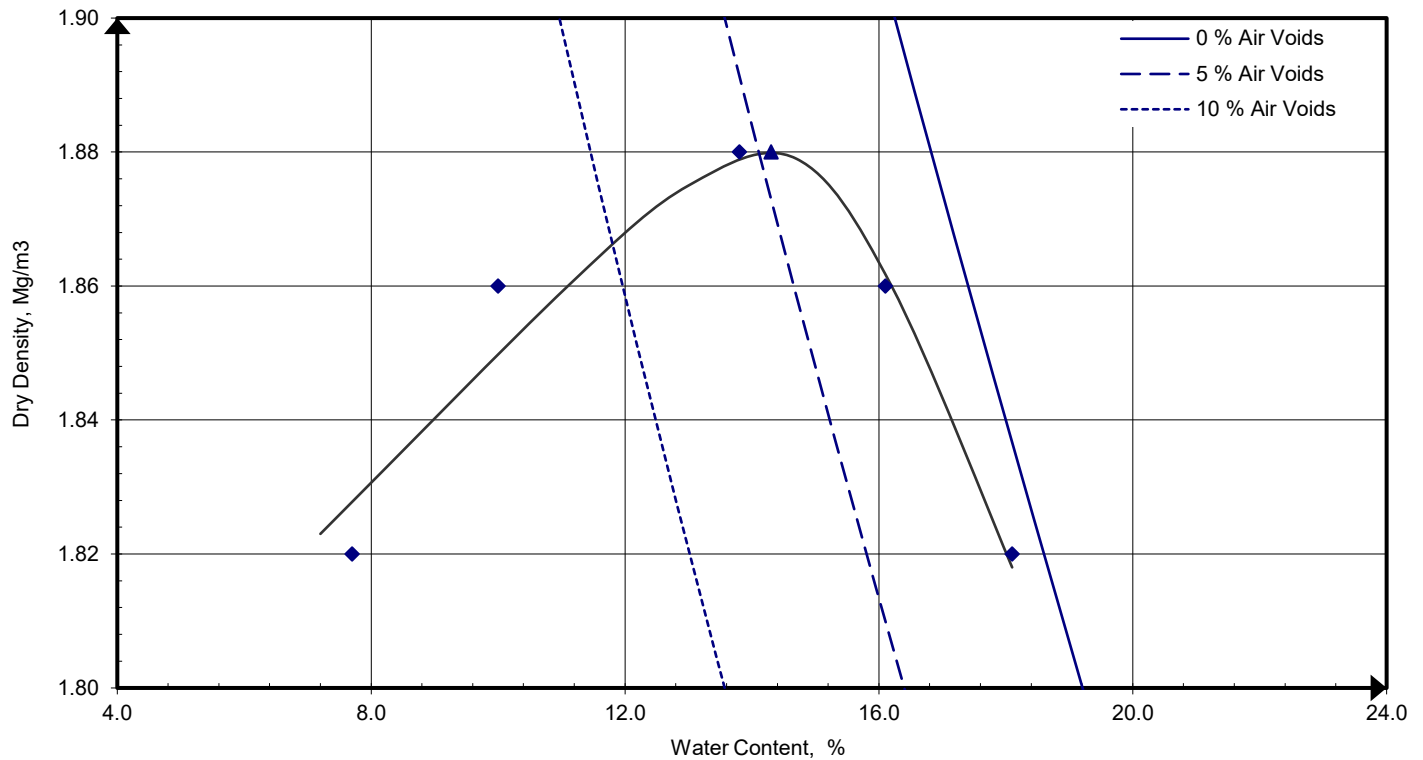
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 09/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764399
Hole No.: TP07
Sample Reference: 2
Sample Description: Brownish grey slightly gravelly slightly sandy CLAY
Sample Preparation: Sample was quartered and broken down by hand. Material used was natural.

Depth Top [m]: 2.00
Depth Base [m]: Not Given
Sample Type: B



Compaction Point No.		1	2	3	4	5
Water Content	%	7.7	10.0	13.8	16.1	18.1
Dry Density	Mg/m³	1.82	1.86	1.88	1.86	1.82

Grading zone	2
Mould Type	1 Litre
Samples Used	Single sample tested

Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	5
Particle Density - Assumed	Mg/m³	2.75
As received Water Content	%	16.1
Maximum Dry Density	Mg/m³	1.88

Optimum Water Content	%	14
-----------------------	---	----

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed:

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TEST CERTIFICATE

DETERMINATION OF DRY DENSITY/WATER CONTENT RELATIONSHIP COMPACTION METHOD USING 2.5 KG RAMMER

Tested in Accordance with: BS 1377-2: 2022, cl.11



Normec
i2 Analytical

4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

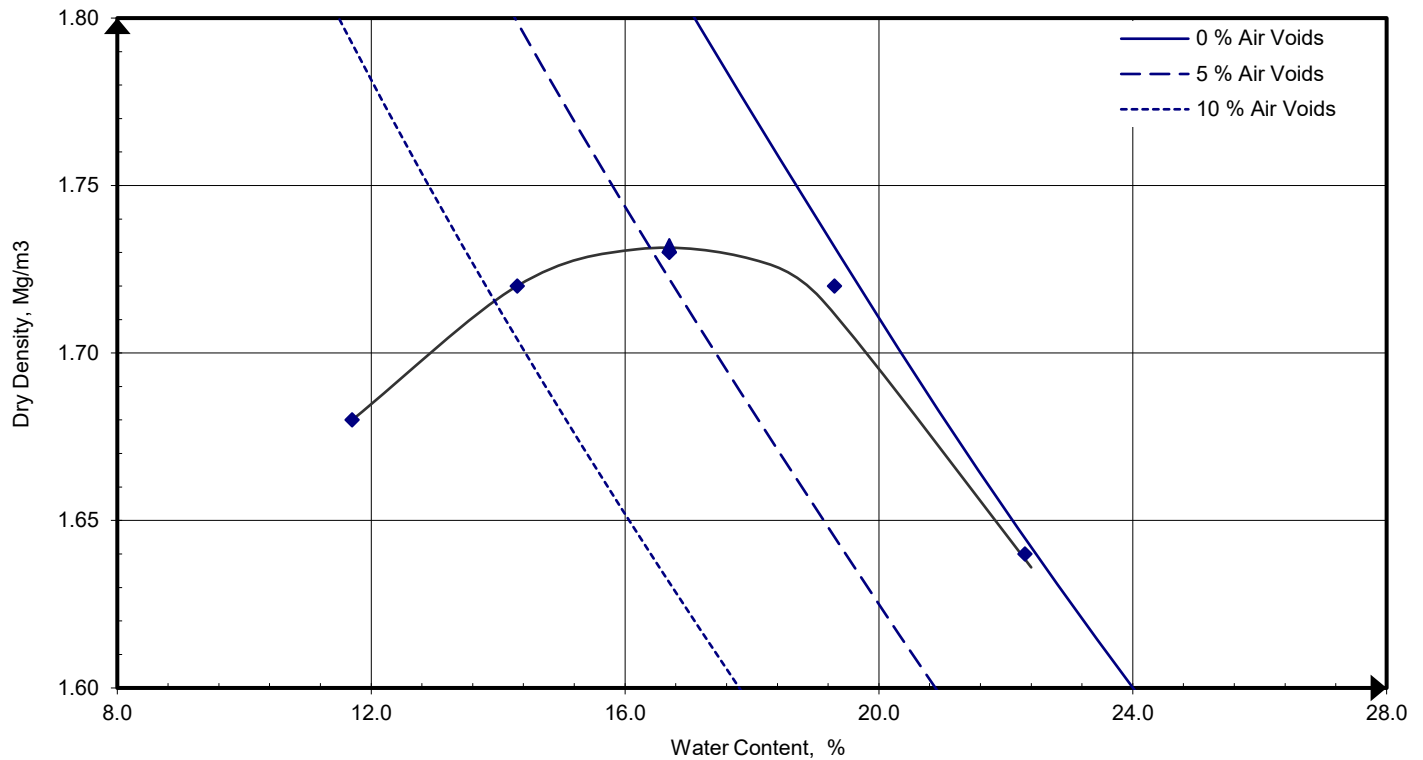
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 09/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764700
Hole No.: TP14
Sample Reference: 2
Sample Description: Brownish grey slightly gravelly slightly sandy CLAY
Sample Preparation: Sample was quartered and broken down by hand. Material used was natural.

Depth Top [m]: 2.50
Depth Base [m]: Not Given
Sample Type: B



Compaction Point No.	1	2	3	4	5	
Water Content	%	11.7	14.3	16.7	19.3	22.3
Dry Density	Mg/m³	1.68	1.72	1.73	1.72	1.64

Grading zone	2
Mould Type	1 Litre
Samples Used	Single sample tested

Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	1
Particle Density - Assumed	Mg/m³	2.60
As received Water Content	%	19.3
Maximum Dry Density	Mg/m³	1.73

Optimum Water Content	%	17
-----------------------	---	----

Note: BS 1377-2:2022, cl 11.3

Remarks:

Signed:

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Senior Reporting Specialist
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TEST CERTIFICATE

DETERMINATION OF THE CALIFORNIA BEARING RATIO (CBR)

Tested in Accordance with: BS 1377-2:2022 Cl. 15



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 19/11/2025
Date Received: 25/11/2025
Date Tested: 05/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764388
Hole No.: BH03
Sample Reference: 1
Sample Description: Brown CLAY

Depth Top [m]: 1.00
Depth Base [m]: 1.45
Sample Type: B

Specimen Preparation:

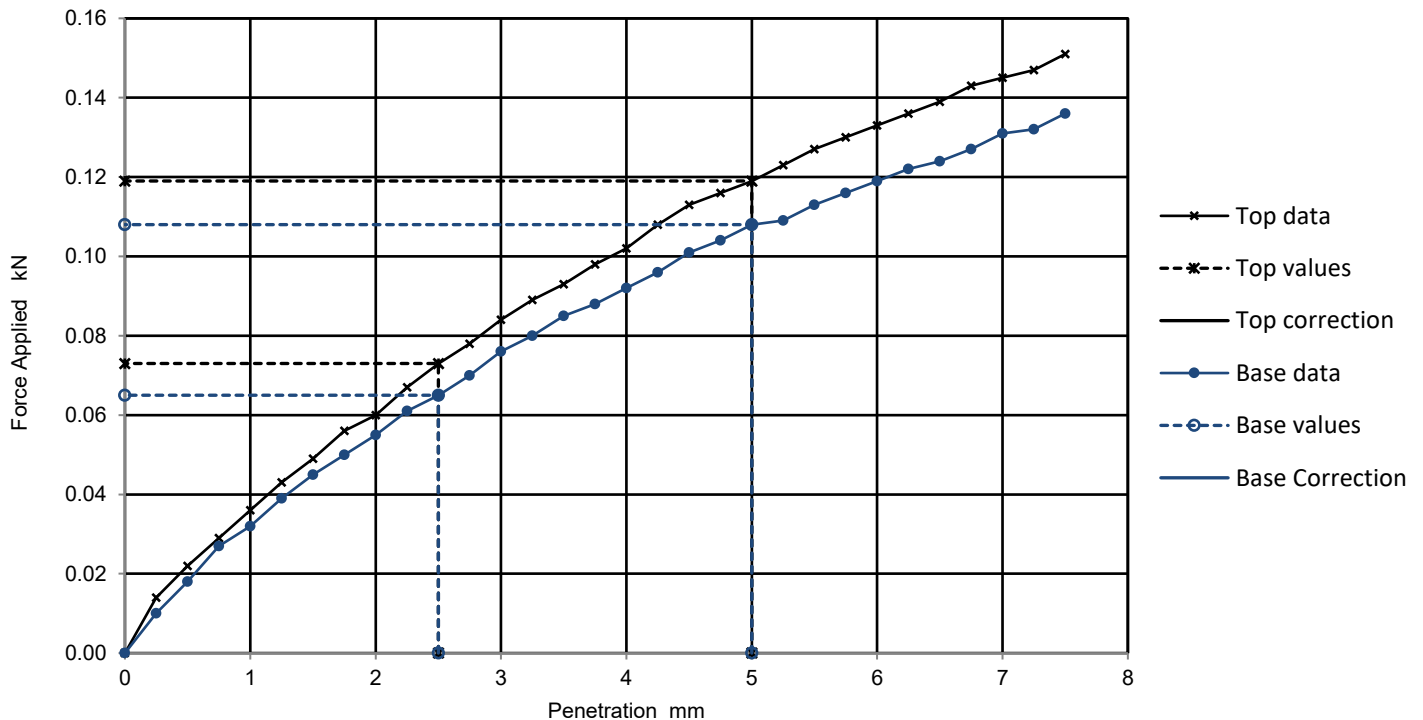
Condition Remoulded
Details Recompacted with specified standard effort using 2.5kg rammer

Soaking details Not soaked
Period of soaking days
Time to surface days
Amount of swell recorded mm
Dry density after soaking Mg/m³

Material retained on 20mm sieve removed 1 %

Initial Specimen details Bulk density 1.96 Mg/m³
Dry density 1.61 Mg/m³
Water content 21.5 %
Surcharge applied 8 kg
4.9 kPa

Force v Penetration Plots



Results

TOP
BASE

Curve correction applied	CBR Values, %			
	2.5mm	5mm	Highest	Average
No	0.55	0.6	0.6	0.57
No	0.49	0.54	0.54	

Water Content %
25
24.6

Remarks:

Test/ Specimen specific remarks:

Signed:

Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



TEST CERTIFICATE

DETERMINATION OF THE CALIFORNIA BEARING RATIO (CBR)

Tested in Accordance with: BS 1377-2:2022 Cl. 15



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 21/11/2025
Date Received: 25/11/2025
Date Tested: 05/12/2025
Sampled By: Not Given

Test Results:

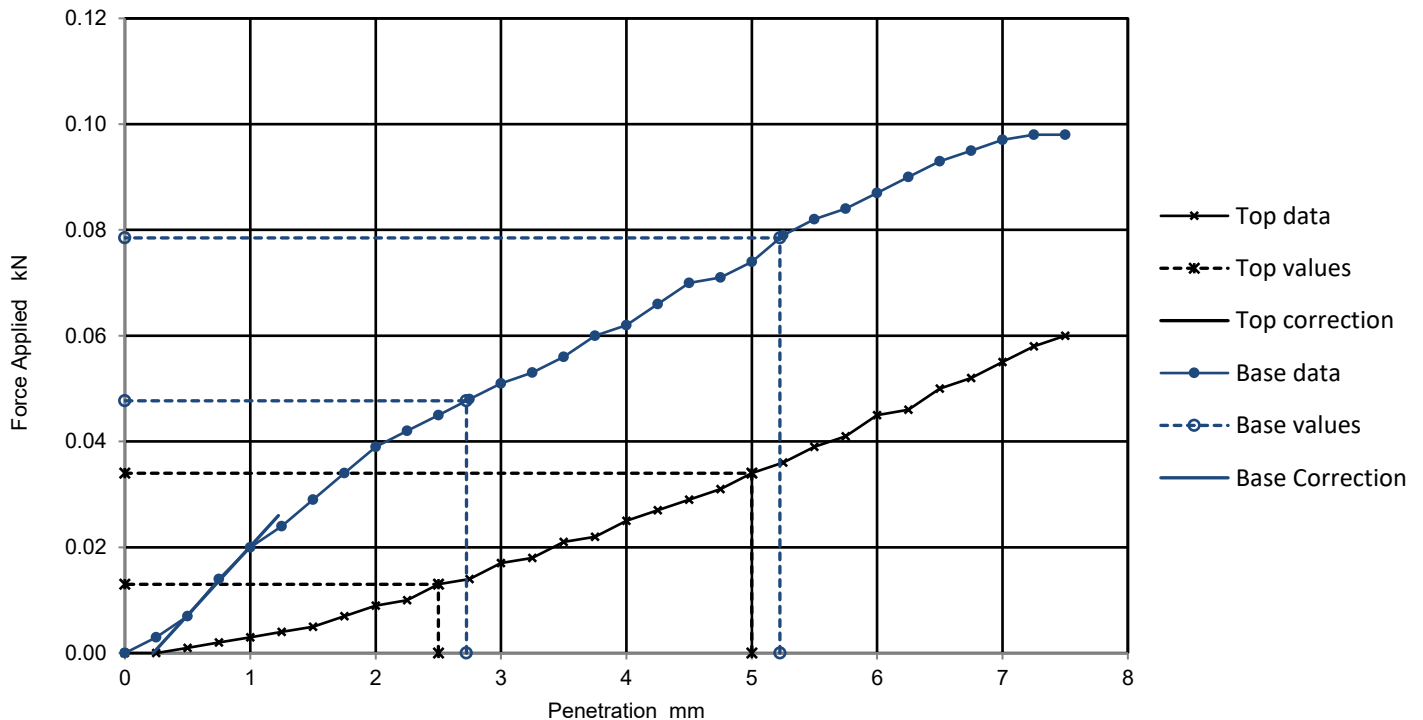
Laboratory Reference: 764392
Hole No.: TP03
Sample Reference: 1
Sample Description: Light brown very clayey SAND

Depth Top [m]: 0.60
Depth Base [m]: Not Given
Sample Type: B

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	1.92	Mg/m3	Surcharge applied		8	kg
	Dry density	1.58	Mg/m3			4.9	kPa
	Water content	21.5	%				

Force v Penetration Plots



Results

TOP
BASE

Curve correction applied	CBR Values, %			
	2.5mm	5mm	Highest	Average
No	0.098	0.17	0.17	
Yes	0.36	0.39	0.39	

Water Content %
20.5
20.2

Remarks:

Test/ Specimen specific remarks:

Signed:

Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF THE CALIFORNIA BEARING RATIO (CBR)

Tested in Accordance with: BS 1377-2:2022 Cl. 15



4041

Client: BWB Consulting Limited
Client Address: Whitehall Waterfront, 2 Riverside Way,
Leeds, LS1 4EH

Contact: Catherine Riley
Site Address: Kingsway Plot Q

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: 244498
Job Number: 25-064345-1
Date Sampled: 20/11/2025
Date Received: 25/11/2025
Date Tested: 05/12/2025
Sampled By: Not Given

Test Results:

Laboratory Reference: 764398
Hole No.: TP07
Sample Reference: 1
Sample Description: Brown CLAY

Depth Top [m]: 0.80
Depth Base [m]: Not Given
Sample Type: B

Specimen Preparation:

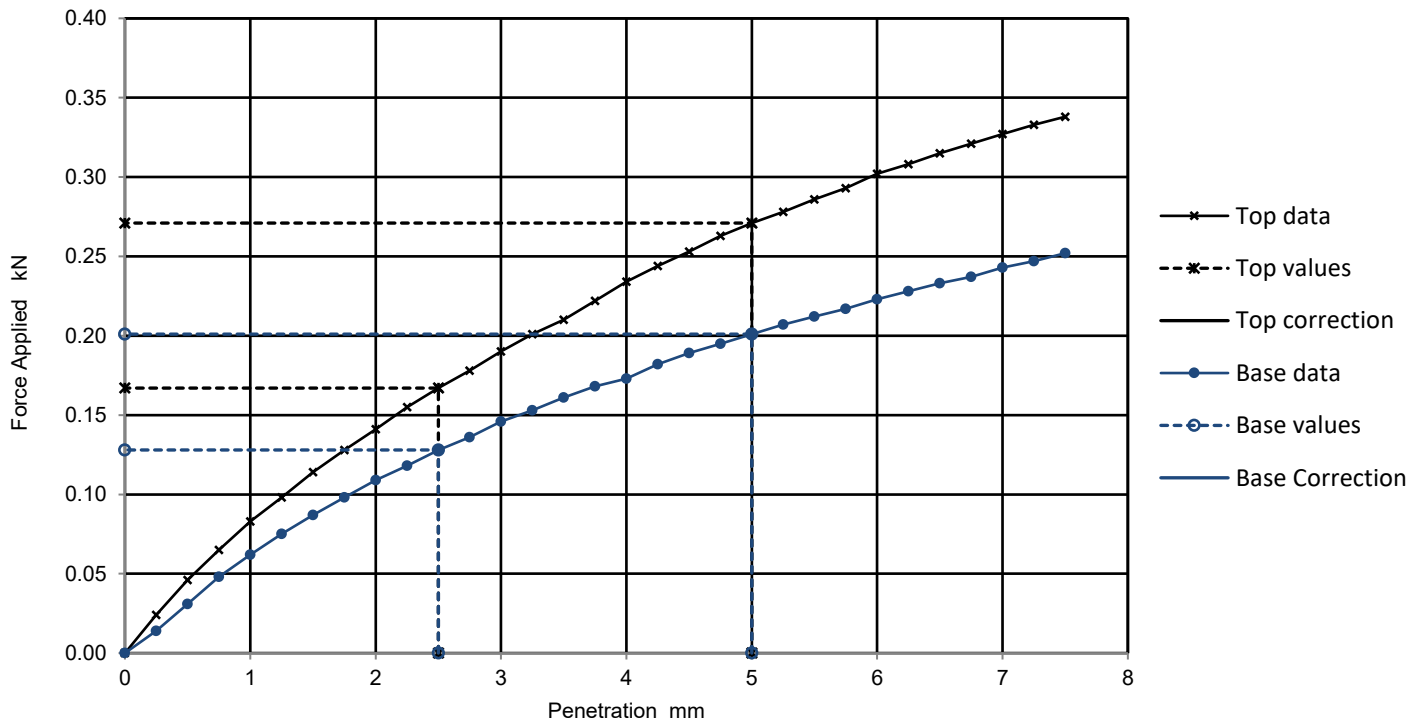
Condition Remoulded
Details Recompacted with specified standard effort using 2.5kg rammer

Soaking details Not soaked
Period of soaking days
Time to surface days
Amount of swell recorded mm
Dry density after soaking Mg/m³

Material retained on 20mm sieve removed 0 %

Initial Specimen details Bulk density 2.06 Mg/m³ Surcharge applied 8 kg
Dry density 1.75 Mg/m³ 4.9 kPa
Water content 18.0 %

Force v Penetration Plots



Results

TOP
BASE

Curve correction applied	CBR Values, %			
	2.5mm	5mm	Highest	Average
No	1.3	1.4	1.4	
No	0.97	1	1	

Water Content %
19.5
20.5

Remarks:

Test/ Specimen specific remarks:

Signed:

Monika Siewior

Monika Siewior
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd

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Page 1 of 1

Date Reported: 12/12/2025

GF 593.3

BWB Consulting Limited
Whitehall Waterfront
2 Riverside Way
Leeds
LS1 4EH

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t:

e: catherine.riley@bwbconsulting.com
james.harland@bwbconsulting.com

t: 01923 225404

f: 01923 237404

e: info-i2analytical@normecgroup.com

Analytical Report Number : 25-064347

Project / Site name:	Kingsway Plot Q	Samples received on:	25/11/2025
Your job number:	244498	Samples instructed on/ Analysis started on:	29/11/2025
Your order number:		Analysis completed by:	09/12/2025
Report Issue Number:	1	Report issued on:	09/12/2025
Samples Analysed:	6 soil samples		



Signed:

Rachel Chappell
Key Account Manager
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
air	- once the analysis is complete

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Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

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.

Analytical Report Number: 25-064347
Project / Site name: Kingsway Plot Q

Lab Sample Number	764407	764408	764409	764410	764411
Sample Reference	TP01	TP02	TP04	TP06	TP10
Sample Number	1	1	1	1	1
Water Matrix	N/A	N/A	N/A	N/A	N/A
Depth (m)	1.10	1.30	0.50	0.50	1.30
Date Sampled	19/11/2025	19/11/2025	20/11/2025	21/11/2025	20/11/2025
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	11	11	14	16
Total mass of sample received	kg	0.1	NONE	1.6	1.4	0.2	0.2	0.2

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.2	5.3	6.6	7.4	7.7
Total Sulphate as SO ₄	%	0.005	MCERTS	0.011	0.009	0.018	0.016	0.017
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	19	7.4	57	44	51
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	9.26	3.71	28.5	21.9	25.6
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.1	1	1	1.5	0.7
Total Sulphur	mg/kg	50	MCERTS	56	< 50	82	93	130
Total Sulphur	%	0.005	MCERTS	0.006	< 0.005	0.008	0.009	0.013
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (leachate equivalent)	mg/l	2.5	NONE	5.4	< 2.5	5	3.2	9.1
---------------------------------	------	-----	------	-----	-------	---	-----	-----

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-064347
Project / Site name: Kingsway Plot Q

Lab Sample Number	764412			
Sample Reference	TP11			
Sample Number	1			
Water Matrix	N/A			
Depth (m)	0.70			
Date Sampled	20/11/2025			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	16
Total mass of sample received	kg	0.1	NONE	0.2

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	6.9
Total Sulphate as SO ₄	%	0.005	MCERTS	0.013
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	20
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	9.82
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	1.4
Total Sulphur	mg/kg	50	MCERTS	92
Total Sulphur	%	0.005	MCERTS	0.009
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0

Heavy Metals / Metalloids

Magnesium (leachate equivalent)	mg/l	2.5	NONE	4.6
---------------------------------	------	-----	------	-----

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 25-064347

Project / Site name: Kingsway Plot Q

* 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 *
764407	TP01	1	1.1	Brown sand with gravel
764408	TP02	1	1.3	Brown clay and sand with gravel
764409	TP04	1	0.5	Brown clay with gravel
764410	TP06	1	0.5	Brown clay and sand with gravel
764411	TP10	1	1.3	Brown clay
764412	TP11	1	0.7	Brown clay with gravel

Analytical Report Number : 25-064347

Project / Site name: Kingsway Plot Q

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
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.	L019B	D	NONE
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	L038B	D	NONE
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
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	L038B	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	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
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' 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 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

Appendix 9 : CLEA Worksheets

STATISTICAL APPROACH FOR ASSESSING RISK TO HUMAN HEALTH FROM CONTAMINATED LAND 2008

CIEH/CLAIRE Guidance on Comparing Soil Contamination Data with a Critical Concentration May 2008

STAGE 1 QA CHECK

Are data of acceptable quality
Lab sampling errors / erroneous results
Are data sufficient to characterise area
of interest

No

Review CSM, update
sampling and
analytical strategy

STAGE 2 DATA SCREENING

Compare all data against GSAC
Do any values exceed GSAC?

No

True mean is less than
critical concentration
No action required

STAGE 3 ZONING AND OUTLIER CHECK

Plot data on bubble chart
Plot histogram
Identify and deal with non

Outliers

Assess Outliers
directly against
GSAC

Non detects to DL or DL/2
Remove outliers

STAGE 4 UPPER CONFIDENCE LIMIT

With outliers removed
do any values exceed GSAC ?

No

True mean is less than
critical concentration
No action required

Yes

With outliers removed are data normally Distributed
Histogram
Shapiro Wilkes test, q-q plot

Normal

Non-
normal

Normal Distributed data
UCL from
Students t-test

Non-normal Distributed data
UCL from
Chebychev theorem

Compare UCL to GSAC
Does UCL exceed GSAC?

No

True mean is less than
critical concentration
No action required

Yes

true mean is greater than
critical concentration
Further action required

Human Health Generic QRA Worksheet



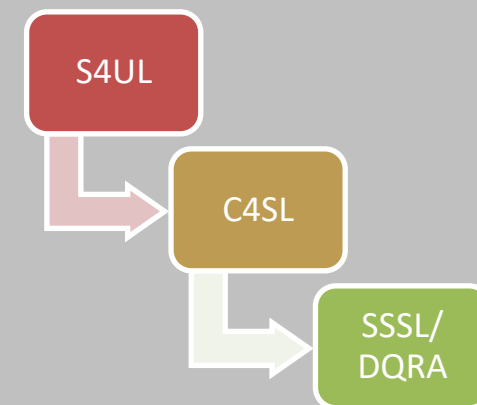
Job Name Plot Q	Job No 244498
Investigation cover Plot Q	

Define CSM – Is site represented by a standard land use?

Residential with / without homegrown produce
 Commercial / Industrial
 Public Open Space - Residential (S4UL/C4SL only)
 Public Open Space - Park (S4UL/C4SL only)

GSAC Type (BWB, LQM S4UL, C4SL, Bespoke)	LQM CIEH S4UL
Key Receptor/CSM (Residential/Commercial/POS)	S4UL Commercial
Organic Matter % (If unknown use 1%)	2.5

GSAC Hierarchy



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 Publication Number S4UL3271

V8, April 2023

	Location	Sample depth	Strata Type	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium VI	Chromium III	Copper	Lead	Inorganic Mercury	Nickel	Selenium	Vanadium	Zinc	pH	Cyanide (free)	Cyanide (Complex)	Phenol	Benzene	Toluene	Ethylbenzene	Total Xylene	TPH (EC5-6) aliphatic	TPH (>EC6-8) aliphatic	TPH (>EC9-10) aliphatic	TPH (>EC10-12) aliphatic	TPH (>EC12-16) aliphatic	TPH (>EC16-21) aliphatic	TPH (>EC21-35) aliphatic	
Detection Limit				0.5	0.5	0.5	0.4	0.1	0.5	0.5	0.5	0.5	0.05	0.5	0.25	0.5	0.5	4	0.5	0.5	0.1	1	1	1	0.001	1	1	1	1	1	1	1	
GSAC				640	22000	2	240000	190	33	8600	68000	2300	1100	980	12000	2000	730000	24.5 > 2.5	43	213	6.90E+05	4.70E+04	1.10E+08	1.30E+07	14000	5900	17000	4800	23000	82000	1700000	1700000	
TP03		0.25		12	47	0.5	< 0.2	< 0.2			10	35	45 < 0.3		8 < 1.0	15.0	37	6.3 < 1.0	< 1.0	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.008	< 0.010	< 0.010	< 1.0	< 2.0	< 8.0	< 8.0		
TP04		0.5		3	74	0.4	0.2 < 0.2	< 1.8			13	16	14 < 0.3		12 < 1.0	17.0	23	6.7 < 1.0	< 1.0	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.008	< 0.010	< 0.010	< 1.0	< 2.0	< 8.0	< 8.0		
TP05		0.15		14	88	0.7	0.6	0.3			16	67	57 < 0.3		14 < 1.0	27.0	88	6.3 < 1.0	< 1.0	< 1.0	< 1.0												
TP07		0.1																															
TP08		0.75		8	120	0.9	0.4 < 0.2	< 1.8			23	25	25 < 0.3		26 < 1.0	26.0	59	7.3 < 1.0	< 1.0	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.008	< 0.010	< 0.010	< 1.0	< 2.0	< 8.0	< 8.0		
TP09		0.2		14	220	0.6	0.7	0.3			17	37	67 < 0.3		12 < 1.0	23.0	76	5.5 < 1.0	< 1.0	< 1.0	< 1.0												
TP10		0.15		19	240	1.5	1.9	0.7			23	160	170 0.40		27 < 1.0	40.0	390	6.6 < 1.0	< 1.0	< 1.0	1.6												
TP11		0.2		11	130	0.7	0.4	0.3			16	46	55 < 0.3		12 < 1.0	21.0	91	6.2 < 1.0	< 1.0	< 1.0	< 1.0												
TP12		0.4		4	53	0.4	0.3 < 0.2				19	12	13 < 0.3		12 < 1.0	27.0	23	7.3 < 1.0	< 1.0	< 1.0	< 1.0												
TP13		0.6		7	350	0.7	0.7	0.2 < 1.8			19	32	90 < 0.3		14 < 1.0	28.0	160	7.5 < 1.0	< 1.0	< 1.0	< 1.0												
TP14 ES1		0.35		8	140	0.9	0.3 < 0.2	< 1.8			22	22	23 < 0.3		25 < 1.0	24.0	57	8.0 < 1.0	< 1.0	< 1.0	< 1.0												
TP14 ES2		1		9	460	1.1	2.3	0.8 < 1.8			19	170	170 < 0.3		19 < 1.0	30.0	340	8.0 < 1.0	< 1.0	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.008	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 8.0	82	
TP15		0.4		6.3	130	0.8	0.4 < 0.2	< 1.8			21	39	17 < 0.3		23 1.2	24	52	8 < 1.0	< 1.0	< 1.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.008								
TP08		0.75																				< 0.005	< 0.005	< 0.005	< 0.008								
TP14 ES2		1																				< 0.005	< 0.005	< 0.005	< 0.008								

	Location	Sample depth	TPH (>EC35-44) aliphatic	TPH (>EC6-7) aromatic (benzene)	TPH (>EC7-8) aromatic (toluene)	TPH (>EC8-10) aromatic	TPH (>EC10-12) aromatic	TPH (>EC12-16) aromatic	TPH (>EC16-21) aromatic	TPH (>EC21-35) aromatic	TPH (>EC35-44) aromatic	Total TPH	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(123-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Coal Tar (B(a)P as surrogate marker)
Detection Limit			1700000	46000	110000	8100	28000	37000	28000	28000	28000	500	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
GSAC												92000	92000	92000	92000	68000	22000	540000	23000	54000	170	350	44	1200	35	510	30	4000	15
TP03		0.25										13	< 0.05	< 0.05	< 0.05	< 0.05	0.24	0.05	0.45	0.43	0.26	0.27	0.38	0.16	0.25	0.14	< 0.05	0.09	0.25
TP04		0.5	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10		< 10	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP05		0.15										96	6.4	0.06	4.2	2.7	17	2.9	16	14	7.3	7.4	7.6	2.3	5.8	2.4	0.64	2.6	5.8
TP07		0.1																											
TP08		0.75	< 0.010	< 0.010	< 0.020		31	< 2.0	< 10	< 10		31	0.07	< 0.05	0.08	0.06	0.27	< 0.05	0.39	0.35	0.19	0.21	0.21	0.13	0.18	0.11	< 0.05	0.12	0.18
TP09		0.2										27	0.25	< 0.05	0.75	0.47	3.4	0.69	5	4.3	2.5	2.4	2.5	1.2	2.1	0.96	0.24	0.92	2.1
TP10		0.15										30	0.28	< 0.05	0.42	0.25	2.2	0.44	2.6	2.3	1.2	1.5	1.5	0.57	1.1	0.45	0.11	0.49	1.1
TP11		0.2										20	0.21	< 0.05	0.39	0.25	2.2	0.38	2.7	2.3	1.3	1.3	1.5	0.52	1.1	0.54	0.12	0.51	1.1
TP12		0.4									< 10	< 0.05	< 0.05	< 0.05	< 0.05	0.07	< 0.05	0.1	0.09	0.06	0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
TP13		0.6										50	0.09	< 0.05	< 0.05	< 0.05	0.29	< 0.05	0.41	0.41	0.19	0.25	0.25	0.1	0.2	0.12	0.06	0.17	0.2
TP14 ES1		0.35									< 10	0.15	< 0.05	0.05	< 0.05	0.32	0.06	0.49	0.48	0.23	0.29	0.27	0.13	0.22	0.12	< 0.05	0.15	0.22	
TP14 ES2		1	< 0.010	< 0.010	< 0.020	1	3	13	59		210	0.87	0.06	0.57	0.53	4.6	0.89	6.6	5.9	2.8	2.9	3	1.6	2.6	1.4	0.42	1.7	2.6	
TP15		0.4									< 10	< 0.05	< 0.05	< 0.05	< 0.05	0.2	< 0.05	0.27	0.26	0.13	0.16	0.16	0.07	0.12	0.08	< 0.05	0.09	0.12	
TP08		0.75									< 0.05	< 0.05	< 0.05	0.06	< 0.05	0.28	0.05	0.36	0.34	0.16	0.22	0.22	0.08	< 0.05	0.11	< 0.05	0.12	< 0.05	
TP14 ES2		1											2	0.09	0.87	0.82	5.5	0.95	7.3	6.4	2.7	2.9	3.2	1.4	2.5	1.4	0.34	1.6	2.5

Appendix 10 : Leachate Assessment Worksheets

*EQS Standard: Phenol and Benzene annual average of 300µg/l; Toluene 500µg/l for Freshwater, 400µg/l for Saltwater; 1,1,1-TCA 1,000µg/l.

Project Name:	Plot Q
Project Number:	244498
Assessment for:	Soil Leachate Assessment
Laboratory:	i2
Receptor:	Drinking Water
Receptor Water Hardness:	<40 (No Data)



100 = Assessment Criteria Exceedance)

50 = M-BAT Bioavailability Assessment Required

									Location	TP05	TP08	TP11	TP14 ES2	TP15	
									Depth	0.15	0.75	0.2	1	0.4	
									Sampling Date	19/11/2025	19/11/2025	20/11/2025	20/11/2025	20/11/2025	
									Lab Ref	765289	765291	765294	765298	765299	
	Contaminant	Units	Detection Limit	Guideline Concentration	Source	Number of Samples	Min	Max	No of Exceedences						
Heavy Metals	Arsenic	µg/l	1	10.00	UK DWS	5	< 1	4.10	0	1.50	< 1.0	< 1.0	4.10	1.20	
	Barium	mg/l	0.05	1000.00	UK DWS	5	11.00	63.00	0	63.00	56.00	11.00	62.00	63.00	
	Beryllium	µg/l	0.2	0.2	No Standard	5	< 0.2	< 0.2	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
	Boron	µg/l	10	1000.00	UK DWS	5	38.00	710.00	0	710.00	51.00	38.00	700.00	60.00	
	Cadmium	µg/l	0.08	5.00	UK DWS	5	< 0.08	< 0.08	0	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	
	Calcium	mg/l		250.00	WHO (ATO)	0	0.00	<	0						
	Chromium VI	µg/l		3.40	EQS Freshwater	0	0.00	<	0						
	Chromium III	µg/l	0.4	50.00	UK DWS	5	< 0.4	1.10	0	< 0.4	1.10	< 0.4	< 0.4	< 0.4	
	Copper	µg/l	0.7	2000.00	UK DWS	5	4.50	15.00	0	6.10	7.20	15.00	4.50	6.70	
	Lead	µg/l	1	10.00	UK DWS	5	< 1	< 1	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	Mercury	µg/l	0.5	1.00	UK DWS	5	< 0.5	< 0.5	0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Nickel	µg/l	0.3	20.00	UK DWS	5	0.90	13.00	0	13.00	1.00	2.70	7.60	0.90	
	Selenium	µg/l	4	10.00	UK DWS	5	< 4	< 4	0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	
	Vanadium	mg/l	1.7	20.00	EQS Freshwater	5	< 1.7	2.20	0	2.20	< 1.7	< 1.7	< 1.7	< 1.7	
	Zinc	µg/l	0.4	5000.00	UK DWS	5	4.50	36.00	0	36.00	6.80	12.00	34.00	4.50	
Misc Inorganics/organics	pH	pH	0.045	>6.5 - <9	UK DWS	0	0.00	< 0.045	0						
	Cyanide (Total)	µg/l	10	50.00	UK DWS	5	< 10	< 10	0	< 10	< 10	< 10	< 10	< 10	
	Sulphate as SO ₄	mg/l	0.045	250.00	UK DWS	5	5.13	1330.00	2	1330.00	18.20	5.13	1300.00	34.50	
	Chloride	mg/l		250.00	EQS Freshwater	0	0.00	<	0						
	Phenol	µg/l		7.70	EQS Freshwater	0	0.00	<	0						
	Ammoniacal Nitrogen as N	µg/l		15.00	EQS Freshwater	0	0.00	<	0						
	Dissolved Organic Carbon	mg/l		#N/A	No Standard	0	0.00	<	0						

*EQS Standard: Phenol and Benzene annual average of 300µg/l; Toluene 500µg/l for Freshwater, 400µg/l for Saltwater; 1,1,1-TCA 1,000µg/l.

Project Name:	Plot Q
Project Number:	244498
Assessment for:	Soil Leachate Assessment
Laboratory:	I2
Receptor:	Freshwater
Receptor Water Hardness:	<40 (No Data)



100 = Assessment Criteria Exceedance)

50 = M-BAT Bioavailability Assessment Required

									Location	TP05	TP08	TP11	TP14	TP15	
									Depth	0.15	0.75	0.2	1	0.4	
									Sampling Date	19/11/2025	19/11/2025	20/11/2025	20/11/2025	20/11/2025	
									Lab Ref	765289	765291	765294	765298	765299	
	Contaminant	Units	Detection Limit	Guideline Concentration	Source	Number of Samples	Min	Max	No of Exceedences						
Heavy Metals	Arsenic	µg/l	1	50.00	EQS Freshwater	5	< 1	4.10	0	1.50	< 1.0	< 1.0	4.10	1.20	
	Barium	mg/l	0.05	1000.00	UK DWS	5	11.00	63.00	0	63.00	56.00	11.00	62.00	63.00	
	Beryllium	µg/l	0.2	0.2	No Standard	5	< 0.2	< 0.2	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	
	Boron	µg/l	10	2000.00	EQS Freshwater	5	38.00	710.00	0	710.00	51.00	38.00	700.00	60.00	
	Cadmium	µg/l	0.08	0.08	EQS Freshwater	5	< 0.08	< 0.08	0	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	
	Calcium	mg/l		250.00	WHO (ATO)	0	0.00	<	0						
	Chromium VI	µg/l		3.40	EQS Freshwater	0	0.00	<	0						
	Chromium III	µg/l	0.4	4.70	EQS Freshwater	5	< 0.4	1.10	0	< 0.4	1.10	< 0.4	< 0.4	< 0.4	
	Copper	µg/l	0.7	1.00	EQS Freshwater	5	4.50	15.00	5	6.10	7.20	15.00	4.50	6.70	
	Lead	µg/l	1	1.20	EQS Freshwater	5	< 1	< 1	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	Mercury	µg/l	0.5	0.07	EQS Freshwater	5	< 0.5	< 0.5	0	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Nickel	µg/l	0.3	4.00	EQS Freshwater	5	0.90	13.00	2	13.00	1.00	2.70	7.60	0.90	
	Selenium	µg/l	4	10.00	UK DWS	5	< 4	< 4	0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	
	Vanadium	mg/l	1.7	20.00	EQS Freshwater	5	< 1.7	2.20	0	2.20	< 1.7	< 1.7	< 1.7	< 1.7	
	Zinc	µg/l	0.4	10.90	EQS Freshwater	5	4.50	36.00	3	36.00	6.80	12.00	34.00	4.50	
Misc Inorganics/organics	pH	pH	0.045	>6.5 - <9	UK DWS	0	0.00	< 0.045	0						
	Cyanide (Total)	µg/l	10	1.00	EQS Freshwater	5	< 10	< 10	0	< 10	< 10	< 10	< 10	< 10	
	Sulphate as SO ₄	mg/l	0.045	400.00	EQS Freshwater	5	5.13	1330.00	2	1330.00	18.20	5.13	1300.00	34.50	
	Chloride	mg/l		250.00	EQS Freshwater	0	0.00	<	0						
	Phenol	µg/l		7.70	EQS Freshwater	0	0.00	<	0						
	Ammoniacal Nitrogen as N	µg/l		15.00	EQS Freshwater	0	0.00	<	0						
	Dissolved Organic Carbon	mg/l		#N/A	No Standard	0	0.00	<	0						

Appendix 11 : Groundwater Screening Worksheets

*EQS Standard: Phenol and Benzene annual average of 300µg/l; Toluene 500µg/l for Freshwater, 400µg/l for Saltwater; 1,1,1-TCA 1,000µg/l.

Project Name:	Kingsway Plot Q
Project Number:	244498
Assessment for:	Water Assessment
Laboratory:	i2
Receptor:	Drinking Water
Receptor Water Hardness:	>200



100 = Assessment Criteria Exceedance)
50 = M-BAT Bioavailability Assessment Required

									Location	BH01	BH03				
									Depth	None Supplied	None Supplied				
									Sampling Date	18/12/2025	18/12/2025				
									Lab Ref	798446	798447				
	Contaminant	Units	Detection Limit	Guideline Concentration	Source	Number of Samples	Min	Max	No of Exceedences						
Heavy Metals	Arsenic	µg/l	0.15	10.00	UK DWS	2	0.42	0.43	0	0.42	0.43				
	Barium	mg/l	0.06	1000.00	UK DWS	2	91.00	170.00	0	91.00	170.00				
	Beryllium	µg/l	0.1	0.1	No Standard	2	< 0.1	< 0.1	0	< 0.1	< 0.1				
	Boron	µg/l	10	1000.00	UK DWS	2	24.00	80.00	0	24.00	80.00				
	Cadmium	µg/l	0.02	5.00	UK DWS	2	0.03	0.07	0	0.07	0.03				
	Calcium	mg/l	0.012	250.00	WHO (ATO)	2	61.00	100.00	0	61.00	100.00				
	Chromium VI	µg/l	5	3.40	EQS Freshwater	2	< 5	< 5	0	< 5.0	< 5.0				
	Chromium III	µg/l	0.2	50.00	UK DWS	2	8.70	10.00	0	10.00	8.70				
	Copper	µg/l	0.5	2000.00	UK DWS	2	1.80	2.40	0	2.40	1.80				
	Lead	µg/l	0.2	10.00	UK DWS	2	< 0.2	< 0.2	0	< 0.2	< 0.2				
	Mercury	µg/l	0.05	1.00	UK DWS	2	< 0.05	< 0.05	0	< 0.05	< 0.05				
	Nickel	µg/l	0.5	20.00	UK DWS	2	5.50	7.80	0	7.80	5.50				
	Selenium	µg/l	0.6	10.00	UK DWS	2	< 0.6	5.00	0	< 0.6	5.00				
	Vanadium	mg/l	0.2	60.00	EQS Freshwater	2	< 0.2	0.40	0	< 0.2	0.40				
	Zinc	µg/l	0.5	5000.00	UK DWS	2	3.20	11.00	0	11.00	3.20				
Misc Inorganics/organics	pH	pH	0.045	>6.5 - <9	UK DWS	2	6.90	7.40	0	6.90	7.40				
	Cyanide (Total)	µg/l	10	50.00	UK DWS	2	< 10	< 10	0	< 10	< 10				
	Sulphate as SO ₄	mg/l	0.045	250.00	UK DWS	2	33.70	51.20	0	33.70	51.20				
	Chloride	mg/l		250.00	EQS Freshwater	0	0.00	<	0						
	Phenol	µg/l	10	7.70	EQS Freshwater	2	< 10	< 10	0	< 10	< 10				
	Ammoniacal Nitrogen as N	µg/l	15	15.00	EQS Freshwater	2	170.00	200.00	2	200.00	170.00				
	Dissolved Organic Carbon	mg/l	0.1	#N/A	No Standard	2	16.20	19.00	0	16.20	19.00				

*EQS Standard: Phenol and Benzene annual average of 300µg/l; Toluene 500µg/l for Freshwater, 400µg/l for Saltwater; 1,1,1-TCA 1,000µg/l.

Project Name:	Kingsway Plot Q
Project Number:	244498
Assessment for:	Water Assessment
Laboratory:	I2
Receptor:	Freshwater
Receptor Water Hardness:	<40 (No Data)



100 = Assessment Criteria Exceedance)

50 = M-BAT Bioavailability Assessment Required

									Location	BH01	BH03				
									Depth	None Supplied	None Supplied				
									Sampling Date	18/12/2025	18/12/2025				
									Lab Ref	798446	798447				
	Contaminant	Units	Detection Limit	Guideline Concentration	Source	Number of Samples	Min	Max	No of Exceedences						
Heavy Metals	Arsenic	µg/l	0.15	50.00	EQS Freshwater	2	0.42	0.43	0	0.42	0.43				
	Barium	mg/l	0.06	1000.00	UK DWS	2	91.00	170.00	0	91.00	170.00				
	Beryllium	µg/l	0.1	0.1	No Standard	2	< 0.1	< 0.1	0	< 0.1	< 0.1				
	Boron	µg/l	10	2000.00	EQS Freshwater	2	24.00	80.00	0	24.00	80.00				
	Cadmium	µg/l	0.02	0.08	EQS Freshwater	2	0.03	0.07	0	0.07	0.03				
	Calcium	mg/l	0.012	250.00	WHO (ATO)	2	61.00	100.00	0	61.00	100.00				
	Chromium VI	µg/l	5	3.40	EQS Freshwater	2	< 5	< 5	0	< 5.0	< 5.0				
	Chromium III	µg/l	0.2	4.70	EQS Freshwater	2	8.70	10.00	2	10.00	8.70				
	Copper	µg/l	0.5	1.00	EQS Freshwater	2	1.80	2.40	2	2.40	1.80				
	Lead	µg/l	0.2	1.20	EQS Freshwater	2	< 0.2	< 0.2	0	< 0.2	< 0.2				
	Mercury	µg/l	0.05	0.07	EQS Freshwater	2	< 0.05	< 0.05	0	< 0.05	< 0.05				
	Nickel	µg/l	0.5	4.00	EQS Freshwater	2	5.50	7.80	2	7.80	5.50				
	Selenium	µg/l	0.6	10.00	UK DWS	2	< 0.6	5.00	0	< 0.6	5.00				
	Vanadium	mg/l	0.2	20.00	EQS Freshwater	2	< 0.2	0.40	0	< 0.2	0.40				
	Zinc	µg/l	0.5	10.90	EQS Freshwater	2	3.20	11.00	1	11.00	3.20				
Misc Inorganics/organics	pH	pH	0.045	>6.5 - <9	UK DWS	2	6.90	7.40	0	6.90	7.40				
	Cyanide (Total)	µg/l	10	1.00	EQS Freshwater	2	< 10	< 10	0	< 10	< 10				
	Sulphate as SO ₄	mg/l	0.045	400.00	EQS Freshwater	2	33.70	51.20	0	33.70	51.20				
	Chloride	mg/l		250.00	EQS Freshwater	0	0.00	<	0						
	Phenol	µg/l	10	7.70	EQS Freshwater	2	< 10	< 10	0	< 10	< 10				
	Ammoniacal Nitrogen as N	µg/l	15	15.00	EQS Freshwater	2	170.00	200.00	2	200.00	170.00				
	Dissolved Organic Carbon	mg/l	0.1	#N/A	No Standard	2	16.20	19.00	0	16.20	19.00				

Appendix 12 : Waste Classification

Waste Classification Report

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

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



B2D7E-QGGNV-1OWDF

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

Report is invalid if pages are removed.

Job name

244498 Plot Q

Description/Comments

Project

244498

Site

Plot Q, Kingsway,

Classified by

Name: **Timothy Hull**
Date: **27 Jan 2026 15:57 GMT**
Telephone: **0115 924 1100**
Company: **BWB Consulting Ltd**
5th Floor, Waterfront House
Station Street
Nottingham
NG2 3DQ

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

HazWasteOnline™ Certification:

CERTIFIED

Course

Hazardous Waste Classification

Date

07 Dec 2023

Next 3 year Refresher due by Dec 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Plot Q, Kingsway Business Park, Rochdale

Post Code **N/A**

SIC for the process giving rise to the waste

41201 Construction of commercial buildings

Description of industry/producer giving rise to the waste

Development of the site for Commercial use

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

Construction of foundations and drainage.

Description of the waste

Made ground and natural soils.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP03	0.25	Non Hazardous		3
2	TP04	0.50	Non Hazardous		6
3	TP05	0.15	Non Hazardous		9
4	TP08	0.75	Non Hazardous		12
5	TP09	0.20	Non Hazardous		15
6	TP10	0.15	Non Hazardous		18
7	TP11	0.20	Non Hazardous		21
8	TP12	0.40	Non Hazardous		24
9	TP13	0.60	Non Hazardous		26
10	TP14 ES1	0.35	Non Hazardous		29
11	TP14 ES2	1.00	Non Hazardous		31
12	TP15	0.40	Non Hazardous		34
13	TP08[2]	0.75	Non Hazardous		36
14	TP14 ES2[2]	1.00	Non Hazardous		38

Related documents

#	Name	Description
1	BWB Contaminated Land Suite WM3	waste stream template used to create this Job

Report

Created by: Timothy Hull

Created date: 27 Jan 2026 15:57 GMT

Appendices

	Page
Appendix A: Classifier defined and non GB MCL determinands	40
Appendix B: Rationale for selection of metal species	41
Appendix C: Version	42

Classification of sample: TP03

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

Sample details

Sample name:	LoW Code:
TP03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.25 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
20%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 20% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				12 mg/kg	1.32	15.844 mg/kg		0.00158 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.49 mg/kg	2.775	1.36 mg/kg		0.000136 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				<0.2 mg/kg	13.43	<2.686 mg/kg		<0.000269 %		<LOD
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg		<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				9.6 mg/kg	1.462	14.031 mg/kg		0.0014 %		
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				35 mg/kg	1.126	39.406 mg/kg		0.00394 %		
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	45 mg/kg		45 mg/kg		0.0045 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				7.8 mg/kg	1.579	12.32 mg/kg		0.00123 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				37 mg/kg	4.398	162.723 mg/kg		0.0163 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				6.3 pH		6.3 pH		6.3 pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
14	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									
15	TPH (C6 to C40) petroleum group				13 mg/kg		13 mg/kg	0.0013 %		
			TPH							
16	acenaphthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9							
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
18	anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		204-371-1	120-12-7							
19	benzo[a]anthracene				0.26 mg/kg		0.26 mg/kg	0.000026 %		
	601-033-00-9	200-280-6	56-55-3							
20	benzo[a]pyrene; benzo[def]chrysene				0.25 mg/kg		0.25 mg/kg	0.000025 %		
	601-032-00-3	200-028-5	50-32-8							
21	benzo[b]fluoranthene				0.38 mg/kg		0.38 mg/kg	0.000038 %		
	601-034-00-4	205-911-9	205-99-2							
22	benzo[ghi]perylene				0.09 mg/kg		0.09 mg/kg	0.000009 %		
		205-883-8	191-24-2							
23	benzo[k]fluoranthene				0.16 mg/kg		0.16 mg/kg	0.000016 %		
	601-036-00-5	205-916-6	207-08-9							
24	chrysene				0.27 mg/kg		0.27 mg/kg	0.000027 %		
	601-048-00-0	205-923-4	218-01-9							
25	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							
26	fluoranthene				0.45 mg/kg		0.45 mg/kg	0.000045 %		
		205-912-4	206-44-0							
27	fluorene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-695-5	86-73-7							
28	indeno[123-cd]pyrene				0.14 mg/kg		0.14 mg/kg	0.000014 %		
		205-893-2	193-39-5							
29	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
30	phenanthrene				0.24 mg/kg		0.24 mg/kg	0.000024 %		
		201-581-5	85-01-8							
31	pyrene				0.43 mg/kg		0.43 mg/kg	0.000043 %		
		204-927-3	129-00-0							
32	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.0306 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0013%)

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:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 m	
Moisture content:	
17%	
(no correction)	

Hazard properties

None identified

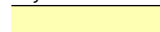
Determinands

Moisture content: 17% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				2.8 mg/kg	1.32	3.697 mg/kg	0.00037 %			
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.4 mg/kg	2.775	1.11 mg/kg	0.000111 %			
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.2 mg/kg	13.43	2.686 mg/kg	0.000269 %			
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				13 mg/kg	1.462	19 mg/kg	0.0019 %			
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.126	18.014 mg/kg	0.0018 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	14 mg/kg		14 mg/kg	0.0014 %			
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg	0.0019 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				23 mg/kg	4.398	101.152 mg/kg	0.0101 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				6.7 pH		6.7 pH	6.7 pH			
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg		<0.001 %		<LOD
			TPH								
16	benzene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
17	ethylbenzene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
18	toluene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
19	xylene				<8 µg/kg		<0.008 mg/kg		<0.0000008 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
20	acenaphthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-469-6	83-32-9								
21	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
22	anthracene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		204-371-1	120-12-7								
23	benzo[a]anthracene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
24	benzo[a]pyrene; benzo[def]chrysene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
25	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
26	benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-883-8	191-24-2								
27	benzo[k]fluoranthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
28	chrysene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	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								
30	fluoranthene				0.06 mg/kg		0.06 mg/kg		0.000006 %		
		205-912-4	206-44-0								
31	fluorene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-695-5	86-73-7								
32	indeno[123-cd]pyrene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-893-2	193-39-5								
33	naphthalene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
34	phenanthrene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-581-5	85-01-8								
35	pyrene				0.06 mg/kg		0.06 mg/kg		0.000006 %		
		204-927-3	129-00-0								
36	phenol				<1 mg/kg		<1 mg/kg		<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0179 %		

Key

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

Classification of sample: TP05

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

Sample details

Sample name:	LoW Code:
TP05	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.15 m	
Moisture content:	
31%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 31% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☒						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				14 mg/kg	1.32	18.485 mg/kg		0.00185 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.72 mg/kg	2.775	1.998 mg/kg		0.0002 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.6 mg/kg	13.43	8.058 mg/kg		0.000806 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	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								
6	chromium { chromium(III) oxide (worst case) }				16 mg/kg	1.462	23.385 mg/kg		0.00234 %		
		215-160-9	1308-38-9								
7	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								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	57 mg/kg		57 mg/kg		0.0057 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg		0.00221 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				88 mg/kg	4.398	387.017 mg/kg		0.0387 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				6.3 pH		6.3 pH		6.3 pH		
			PH								

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
14		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									
15		TPH (C6 to C40) petroleum group				96 mg/kg		96 mg/kg	0.0096 %		
				TPH							
16		acenaphthene				4.2 mg/kg		4.2 mg/kg	0.00042 %		
			201-469-6	83-32-9							
17		acenaphthylene				0.06 mg/kg		0.06 mg/kg	0.000006 %		
			205-917-1	208-96-8							
18		anthracene				2.9 mg/kg		2.9 mg/kg	0.00029 %		
			204-371-1	120-12-7							
19		benzo[a]anthracene				7.3 mg/kg		7.3 mg/kg	0.00073 %		
		601-033-00-9	200-280-6	56-55-3							
20		benzo[a]pyrene; benzo[def]chrysene				5.8 mg/kg		5.8 mg/kg	0.00058 %		
		601-032-00-3	200-028-5	50-32-8							
21		benzo[b]fluoranthene				7.6 mg/kg		7.6 mg/kg	0.00076 %		
		601-034-00-4	205-911-9	205-99-2							
22		benzo[ghi]perylene				2.6 mg/kg		2.6 mg/kg	0.00026 %		
			205-883-8	191-24-2							
23		benzo[k]fluoranthene				2.3 mg/kg		2.3 mg/kg	0.00023 %		
		601-036-00-5	205-916-6	207-08-9							
24		chrysene				7.4 mg/kg		7.4 mg/kg	0.00074 %		
		601-048-00-0	205-923-4	218-01-9							
25		dibenz[a,h]anthracene				0.64 mg/kg		0.64 mg/kg	0.000064 %		
		601-041-00-2	200-181-8	53-70-3							
26		fluoranthene				16 mg/kg		16 mg/kg	0.0016 %		
			205-912-4	206-44-0							
27		fluorene				2.7 mg/kg		2.7 mg/kg	0.00027 %		
			201-695-5	86-73-7							
28		indeno[123-cd]pyrene				2.4 mg/kg		2.4 mg/kg	0.00024 %		
			205-893-2	193-39-5							
29		naphthalene				6.4 mg/kg		6.4 mg/kg	0.00064 %		
		601-052-00-2	202-049-5	91-20-3							
30		phenanthrene				17 mg/kg		17 mg/kg	0.0017 %		
			201-581-5	85-01-8							
31		pyrene				14 mg/kg		14 mg/kg	0.0014 %		
			204-927-3	129-00-0							
32		phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
		604-001-00-2	203-632-7	108-95-2							
Total:									0.0789 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0096%)

Classification of sample: TP08

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

Sample details

Sample name:	LoW Code:
TP08	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.75 m	
Moisture content:	
13%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **13% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				7.5 mg/kg	1.32	9.902 mg/kg	0.00099 %			
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.89 mg/kg	2.775	2.47 mg/kg	0.000247 %			
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.4 mg/kg	13.43	5.372 mg/kg	0.000537 %			
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				23 mg/kg	1.462	33.616 mg/kg	0.00336 %			
		215-160-9	1308-38-9								
7	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								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	25 mg/kg		25 mg/kg	0.0025 %			
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				26 mg/kg	1.579	41.067 mg/kg	0.00411 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				59 mg/kg	4.398	259.478 mg/kg	0.0259 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				7.3 pH		7.3 pH	7.3 pH			
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				31 mg/kg		31 mg/kg	0.0031 %			
			TPH								
16	benzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
17	ethylbenzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
18	toluene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
19	xylene				<8 µg/kg		<0.008 mg/kg	<0.0000008 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
20	acenaphthene				0.08 mg/kg		0.08 mg/kg	0.000008 %			
		201-469-6	83-32-9								
21	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
		205-917-1	208-96-8								
22	anthracene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
		204-371-1	120-12-7								
23	benzo[a]anthracene				0.19 mg/kg		0.19 mg/kg	0.000019 %			
	601-033-00-9	200-280-6	56-55-3								
24	benzo[a]pyrene; benzo[def]chrysene				0.18 mg/kg		0.18 mg/kg	0.000018 %			
	601-032-00-3	200-028-5	50-32-8								
25	benzo[b]fluoranthene				0.21 mg/kg		0.21 mg/kg	0.000021 %			
	601-034-00-4	205-911-9	205-99-2								
26	benzo[ghi]perylene				0.12 mg/kg		0.12 mg/kg	0.000012 %			
		205-883-8	191-24-2								
27	benzo[k]fluoranthene				0.13 mg/kg		0.13 mg/kg	0.000013 %			
	601-036-00-5	205-916-6	207-08-9								
28	chrysene				0.21 mg/kg		0.21 mg/kg	0.000021 %			
	601-048-00-0	205-923-4	218-01-9								
29	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								
30	fluoranthene				0.39 mg/kg		0.39 mg/kg	0.000039 %			
		205-912-4	206-44-0								
31	fluorene				0.06 mg/kg		0.06 mg/kg	0.000006 %			
		201-695-5	86-73-7								
32	indeno[123-cd]pyrene				0.11 mg/kg		0.11 mg/kg	0.000011 %			
		205-893-2	193-39-5								
33	naphthalene				0.07 mg/kg		0.07 mg/kg	0.000007 %			
	601-052-00-2	202-049-5	91-20-3								
34	phenanthrene				0.27 mg/kg		0.27 mg/kg	0.000027 %			
		201-581-5	85-01-8								
35	pyrene				0.35 mg/kg		0.35 mg/kg	0.000035 %			
		204-927-3	129-00-0								
36	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0438 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0031%)

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:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
28%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 28% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				14 mg/kg	1.32	18.485 mg/kg		0.00185 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.58 mg/kg	2.775	1.61 mg/kg		0.000161 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.7 mg/kg	13.43	9.401 mg/kg		0.00094 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	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								
6	chromium { chromium(III) oxide (worst case) }				17 mg/kg	1.462	24.846 mg/kg		0.00248 %		
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				37 mg/kg	1.126	41.658 mg/kg		0.00417 %		
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	67 mg/kg		67 mg/kg		0.0067 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg		0.0019 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				76 mg/kg	4.398	334.242 mg/kg		0.0334 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				5.5 pH		5.5 pH		5.5 pH		
			PH								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number										
14		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												
15		TPH (C6 to C40) petroleum group				27	mg/kg		27	mg/kg	0.0027 %			
				TPH										
16		acenaphthene				0.75	mg/kg		0.75	mg/kg	0.000075 %			
			201-469-6	83-32-9										
17		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-917-1	208-96-8										
18		anthracene				0.69	mg/kg		0.69	mg/kg	0.000069 %			
			204-371-1	120-12-7										
19		benzo[a]anthracene				2.5	mg/kg		2.5	mg/kg	0.00025 %			
		601-033-00-9	200-280-6	56-55-3										
20		benzo[a]pyrene; benzo[def]chrysene				2.1	mg/kg		2.1	mg/kg	0.00021 %			
		601-032-00-3	200-028-5	50-32-8										
21		benzo[b]fluoranthene				2.5	mg/kg		2.5	mg/kg	0.00025 %			
		601-034-00-4	205-911-9	205-99-2										
22		benzo[ghi]perylene				0.92	mg/kg		0.92	mg/kg	0.000092 %			
			205-883-8	191-24-2										
23		benzo[k]fluoranthene				1.2	mg/kg		1.2	mg/kg	0.00012 %			
		601-036-00-5	205-916-6	207-08-9										
24		chrysene				2.4	mg/kg		2.4	mg/kg	0.00024 %			
		601-048-00-0	205-923-4	218-01-9										
25		dibenz[a,h]anthracene				0.24	mg/kg		0.24	mg/kg	0.000024 %			
		601-041-00-2	200-181-8	53-70-3										
26		fluoranthene				5	mg/kg		5	mg/kg	0.0005 %			
			205-912-4	206-44-0										
27		fluorene				0.47	mg/kg		0.47	mg/kg	0.000047 %			
			201-695-5	86-73-7										
28		indeno[123-cd]pyrene				0.96	mg/kg		0.96	mg/kg	0.000096 %			
			205-893-2	193-39-5										
29		naphthalene				0.25	mg/kg		0.25	mg/kg	0.000025 %			
		601-052-00-2	202-049-5	91-20-3										
30		phenanthrene				3.4	mg/kg		3.4	mg/kg	0.00034 %			
			201-581-5	85-01-8										
31		pyrene				4.3	mg/kg		4.3	mg/kg	0.00043 %			
			204-927-3	129-00-0										
32		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD	
		604-001-00-2	203-632-7	108-95-2										
Total:												0.0571 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0027%)

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:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.15 m	
Moisture content:	
44%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 44% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				19 mg/kg	1.32	25.086 mg/kg	0.00251 %			
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				1.5 mg/kg	2.775	4.163 mg/kg	0.000416 %			
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				1.9 mg/kg	13.43	25.517 mg/kg	0.00255 %			
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	0.7 mg/kg	1.285	0.9 mg/kg	0.00007 %			
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				23 mg/kg	1.462	33.616 mg/kg	0.00336 %			
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				160 mg/kg	1.126	180.142 mg/kg	0.018 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	170 mg/kg		170 mg/kg	0.017 %			
	082-001-00-6										
9	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								
10	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]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				390 mg/kg	4.398	1715.191 mg/kg	0.172 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				6.6 pH		6.6 pH	6.6 pH			
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				34 mg/kg		34 mg/kg		0.0034 %		
			TPH								
16	acenaphthene				0.42 mg/kg		0.42 mg/kg		0.000042 %		
		201-469-6	83-32-9								
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
18	anthracene				0.44 mg/kg		0.44 mg/kg		0.000044 %		
		204-371-1	120-12-7								
19	benzo[a]anthracene				1.2 mg/kg		1.2 mg/kg		0.00012 %		
	601-033-00-9	200-280-6	56-55-3								
20	benzo[a]pyrene; benzo[def]chrysene				1.1 mg/kg		1.1 mg/kg		0.00011 %		
	601-032-00-3	200-028-5	50-32-8								
21	benzo[b]fluoranthene				1.5 mg/kg		1.5 mg/kg		0.00015 %		
	601-034-00-4	205-911-9	205-99-2								
22	benzo[ghi]perylene				0.49 mg/kg		0.49 mg/kg		0.000049 %		
		205-883-8	191-24-2								
23	benzo[k]fluoranthene				0.57 mg/kg		0.57 mg/kg		0.000057 %		
	601-036-00-5	205-916-6	207-08-9								
24	chrysene				1.5 mg/kg		1.5 mg/kg		0.00015 %		
	601-048-00-0	205-923-4	218-01-9								
25	dibenz[a,h]anthracene				0.11 mg/kg		0.11 mg/kg		0.000011 %		
	601-041-00-2	200-181-8	53-70-3								
26	fluoranthene				2.6 mg/kg		2.6 mg/kg		0.00026 %		
		205-912-4	206-44-0								
27	fluorene				0.25 mg/kg		0.25 mg/kg		0.000025 %		
		201-695-5	86-73-7								
28	indeno[123-cd]pyrene				0.45 mg/kg		0.45 mg/kg		0.000045 %		
		205-893-2	193-39-5								
29	naphthalene				0.28 mg/kg		0.28 mg/kg		0.000028 %		
	601-052-00-2	202-049-5	91-20-3								
30	phenanthrene				2.2 mg/kg		2.2 mg/kg		0.00022 %		
		201-581-5	85-01-8								
31	pyrene				2.3 mg/kg		2.3 mg/kg		0.00023 %		
		204-927-3	129-00-0								
32	phenol				1.6 mg/kg		1.6 mg/kg		0.00016 %		
	604-001-00-2	203-632-7	108-95-2								
Total:									0.225 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0034%)

Classification of sample: TP11

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

Sample details

Sample name:	LoW Code:
TP11	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
29%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 29% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☒						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				11 mg/kg	1.32	14.524 mg/kg		0.00145 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.66 mg/kg	2.775	1.832 mg/kg		0.000183 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.4 mg/kg	13.43	5.372 mg/kg		0.000537 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	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								
6	chromium { chromium(III) oxide (worst case) }				16 mg/kg	1.462	23.385 mg/kg		0.00234 %		
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				46 mg/kg	1.126	51.791 mg/kg		0.00518 %		
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	55 mg/kg		55 mg/kg		0.0055 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg		0.0019 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				91 mg/kg	4.398	400.211 mg/kg		0.04 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				6.2 pH		6.2 pH		6.2 pH		
			PH								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number										
14		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												
15		TPH (C6 to C40) petroleum group				20	mg/kg		20	mg/kg	0.002 %			
				TPH										
16		acenaphthene				0.39	mg/kg		0.39	mg/kg	0.000039 %			
			201-469-6	83-32-9										
17		acenaphthylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD	
			205-917-1	208-96-8										
18		anthracene				0.38	mg/kg		0.38	mg/kg	0.000038 %			
			204-371-1	120-12-7										
19		benzo[a]anthracene				1.3	mg/kg		1.3	mg/kg	0.00013 %			
		601-033-00-9	200-280-6	56-55-3										
20		benzo[a]pyrene; benzo[def]chrysene				1.1	mg/kg		1.1	mg/kg	0.00011 %			
		601-032-00-3	200-028-5	50-32-8										
21		benzo[b]fluoranthene				1.5	mg/kg		1.5	mg/kg	0.00015 %			
		601-034-00-4	205-911-9	205-99-2										
22		benzo[ghi]perylene				0.51	mg/kg		0.51	mg/kg	0.000051 %			
			205-883-8	191-24-2										
23		benzo[k]fluoranthene				0.52	mg/kg		0.52	mg/kg	0.000052 %			
		601-036-00-5	205-916-6	207-08-9										
24		chrysene				1.3	mg/kg		1.3	mg/kg	0.00013 %			
		601-048-00-0	205-923-4	218-01-9										
25		dibenz[a,h]anthracene				0.12	mg/kg		0.12	mg/kg	0.000012 %			
		601-041-00-2	200-181-8	53-70-3										
26		fluoranthene				2.7	mg/kg		2.7	mg/kg	0.00027 %			
			205-912-4	206-44-0										
27		fluorene				0.25	mg/kg		0.25	mg/kg	0.000025 %			
			201-695-5	86-73-7										
28		indeno[123-cd]pyrene				0.54	mg/kg		0.54	mg/kg	0.000054 %			
			205-893-2	193-39-5										
29		naphthalene				0.21	mg/kg		0.21	mg/kg	0.000021 %			
		601-052-00-2	202-049-5	91-20-3										
30		phenanthrene				2.2	mg/kg		2.2	mg/kg	0.00022 %			
			201-581-5	85-01-8										
31		pyrene				2.3	mg/kg		2.3	mg/kg	0.00023 %			
			204-927-3	129-00-0										
32		phenol				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD	
		604-001-00-2	203-632-7	108-95-2										
Total:												0.0607 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.002%)

Classification of sample: TP12

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

Sample details

Sample name:	LoW Code:
TP12	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				3.9 mg/kg	1.32	5.149 mg/kg		0.000515 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.39 mg/kg	2.775	1.082 mg/kg		0.000108 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.3 mg/kg	13.43	4.029 mg/kg		0.000403 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg		<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				19 mg/kg	1.462	27.77 mg/kg		0.00278 %		
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	13.511 mg/kg		0.00135 %		
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	13 mg/kg		13 mg/kg		0.0013 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				12 mg/kg	1.579	18.954 mg/kg		0.0019 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				23 mg/kg	4.398	101.152 mg/kg		0.0101 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				7.3 pH		7.3 pH		7.3 pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg		<0.001 %		<LOD
			TPH								
16	acenaphthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-469-6	83-32-9								
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
18	anthracene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		204-371-1	120-12-7								
19	benzo[a]anthracene				0.06 mg/kg		0.06 mg/kg		0.000006 %		
	601-033-00-9	200-280-6	56-55-3								
20	benzo[a]pyrene; benzo[def]chrysene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
21	benzo[b]fluoranthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
22	benzo[ghi]perylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-883-8	191-24-2								
23	benzo[k]fluoranthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
24	chrysene				0.06 mg/kg		0.06 mg/kg		0.000006 %		
	601-048-00-0	205-923-4	218-01-9								
25	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								
26	fluoranthene				0.1 mg/kg		0.1 mg/kg		0.00001 %		
		205-912-4	206-44-0								
27	fluorene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-695-5	86-73-7								
28	indeno[123-cd]pyrene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-893-2	193-39-5								
29	naphthalene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
30	phenanthrene				0.07 mg/kg		0.07 mg/kg		0.000007 %		
		201-581-5	85-01-8								
31	pyrene				0.09 mg/kg		0.09 mg/kg		0.000009 %		
		204-927-3	129-00-0								
32	phenol				<1 mg/kg		<1 mg/kg		<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0185 %		

Key

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

Classification of sample: TP13

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

Sample details

Sample name:	LoW Code:
TP13	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.60 m	
Moisture content:	
16%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				6.8 mg/kg	1.32	8.978 mg/kg	0.000898 %			
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.73 mg/kg	2.775	2.026 mg/kg	0.000203 %			
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.7 mg/kg	13.43	9.401 mg/kg	0.00094 %			
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	0.2 mg/kg	1.285	0.257 mg/kg	0.00002 %			
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				19 mg/kg	1.462	27.77 mg/kg	0.00278 %			
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				32 mg/kg	1.126	36.028 mg/kg	0.0036 %			
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	90 mg/kg		90 mg/kg	0.009 %			
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				14 mg/kg	1.579	22.113 mg/kg	0.00221 %			
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD	
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				160 mg/kg	4.398	703.668 mg/kg	0.0704 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				7.5 pH		7.5 pH	7.5 pH			
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				50 mg/kg		50 mg/kg		0.005 %		
			TPH								
16	acenaphthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-469-6	83-32-9								
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
18	anthracene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		204-371-1	120-12-7								
19	benzo[a]anthracene				0.19 mg/kg		0.19 mg/kg		0.000019 %		
	601-033-00-9	200-280-6	56-55-3								
20	benzo[a]pyrene; benzo[def]chrysene				0.2 mg/kg		0.2 mg/kg		0.00002 %		
	601-032-00-3	200-028-5	50-32-8								
21	benzo[b]fluoranthene				0.25 mg/kg		0.25 mg/kg		0.000025 %		
	601-034-00-4	205-911-9	205-99-2								
22	benzo[ghi]perylene				0.17 mg/kg		0.17 mg/kg		0.000017 %		
		205-883-8	191-24-2								
23	benzo[k]fluoranthene				0.1 mg/kg		0.1 mg/kg		0.00001 %		
	601-036-00-5	205-916-6	207-08-9								
24	chrysene				0.25 mg/kg		0.25 mg/kg		0.000025 %		
	601-048-00-0	205-923-4	218-01-9								
25	dibenz[a,h]anthracene				0.06 mg/kg		0.06 mg/kg		0.000006 %		
	601-041-00-2	200-181-8	53-70-3								
26	fluoranthene				0.41 mg/kg		0.41 mg/kg		0.000041 %		
		205-912-4	206-44-0								
27	fluorene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-695-5	86-73-7								
28	indeno[123-cd]pyrene				0.12 mg/kg		0.12 mg/kg		0.000012 %		
		205-893-2	193-39-5								
29	naphthalene				0.09 mg/kg		0.09 mg/kg		0.000009 %		
	601-052-00-2	202-049-5	91-20-3								
30	phenanthrene				0.29 mg/kg		0.29 mg/kg		0.000029 %		
		201-581-5	85-01-8								
31	pyrene				0.41 mg/kg		0.41 mg/kg		0.000041 %		
		204-927-3	129-00-0								
32	phenol				<1 mg/kg		<1 mg/kg		<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0953 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.005%)

Classification of sample: TP14 ES1

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

Sample details

Sample name:	LoW Code:
TP14 ES1	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.35 m	
Moisture content:	
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 15% No Moisture Correction applied (MC)

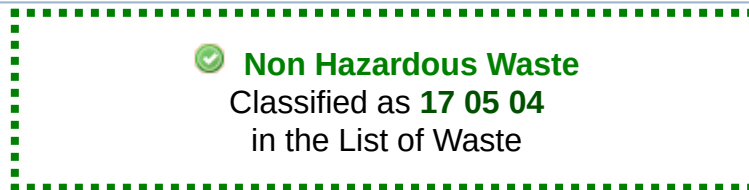
#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☒						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				7.5 mg/kg	1.32	9.902 mg/kg		0.00099 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.87 mg/kg	2.775	2.415 mg/kg		0.000241 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.3 mg/kg	13.43	4.029 mg/kg		0.000403 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg		<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				22 mg/kg	1.462	32.154 mg/kg		0.00322 %		
		215-160-9	1308-38-9								
7	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								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	23 mg/kg		23 mg/kg		0.0023 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				25 mg/kg	1.579	39.487 mg/kg		0.00395 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				57 mg/kg	4.398	250.682 mg/kg		0.0251 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				8 pH		8 pH		8pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
14	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									
15	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
16	acenaphthene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		201-469-6	83-32-9							
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
18	anthracene				0.06 mg/kg		0.06 mg/kg	0.000006 %		
		204-371-1	120-12-7							
19	benzo[a]anthracene				0.23 mg/kg		0.23 mg/kg	0.000023 %		
	601-033-00-9	200-280-6	56-55-3							
20	benzo[a]pyrene; benzo[def]chrysene				0.22 mg/kg		0.22 mg/kg	0.000022 %		
	601-032-00-3	200-028-5	50-32-8							
21	benzo[b]fluoranthene				0.27 mg/kg		0.27 mg/kg	0.000027 %		
	601-034-00-4	205-911-9	205-99-2							
22	benzo[ghi]perylene				0.15 mg/kg		0.15 mg/kg	0.000015 %		
		205-883-8	191-24-2							
23	benzo[k]fluoranthene				0.13 mg/kg		0.13 mg/kg	0.000013 %		
	601-036-00-5	205-916-6	207-08-9							
24	chrysene				0.29 mg/kg		0.29 mg/kg	0.000029 %		
	601-048-00-0	205-923-4	218-01-9							
25	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							
26	fluoranthene				0.49 mg/kg		0.49 mg/kg	0.000049 %		
		205-912-4	206-44-0							
27	fluorene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-695-5	86-73-7							
28	indeno[123-cd]pyrene				0.12 mg/kg		0.12 mg/kg	0.000012 %		
		205-893-2	193-39-5							
29	naphthalene				0.15 mg/kg		0.15 mg/kg	0.000015 %		
	601-052-00-2	202-049-5	91-20-3							
30	phenanthrene				0.32 mg/kg		0.32 mg/kg	0.000032 %		
		201-581-5	85-01-8							
31	pyrene				0.48 mg/kg		0.48 mg/kg	0.000048 %		
		204-927-3	129-00-0							
32	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.0389 %		

Key

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

Classification of sample: TP14 ES2



Sample details

Sample name:	LoW Code:
TP14 ES2	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
19%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 19% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☒						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				8.5 mg/kg	1.32	11.223 mg/kg		0.00112 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				1.1 mg/kg	2.775	3.053 mg/kg		0.000305 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				2.3 mg/kg	13.43	30.889 mg/kg		0.00309 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	0.8 mg/kg	1.285	1.028 mg/kg		0.00008 %		
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				19 mg/kg	1.462	27.77 mg/kg		0.00278 %		
		215-160-9	1308-38-9								
7	copper { dicopper oxide; copper (I) oxide }				170 mg/kg	1.126	191.401 mg/kg		0.0191 %		
	029-002-00-X	215-270-7	1317-39-1								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	170 mg/kg		170 mg/kg		0.017 %		
	082-001-00-6										
9	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								
10	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]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				340 mg/kg	4.398	1495.295 mg/kg		0.15 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				8 pH		8 pH		8pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
14	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									
15	TPH (C6 to C40) petroleum group				210 mg/kg		210 mg/kg	0.021 %		
			TPH							
16	benzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
17	ethylbenzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
18	toluene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
19	xylene				<8 µg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
20	acenaphthene				0.57 mg/kg		0.57 mg/kg	0.000057 %		
		201-469-6	83-32-9							
21	acenaphthylene				0.06 mg/kg		0.06 mg/kg	0.000006 %		
		205-917-1	208-96-8							
22	anthracene				0.89 mg/kg		0.89 mg/kg	0.000089 %		
		204-371-1	120-12-7							
23	benzo[a]anthracene				2.8 mg/kg		2.8 mg/kg	0.00028 %		
	601-033-00-9	200-280-6	56-55-3							
24	benzo[a]pyrene; benzo[def]chrysene				2.6 mg/kg		2.6 mg/kg	0.00026 %		
	601-032-00-3	200-028-5	50-32-8							
25	benzo[b]fluoranthene				3 mg/kg		3 mg/kg	0.0003 %		
	601-034-00-4	205-911-9	205-99-2							
26	benzo[ghi]perylene				1.7 mg/kg		1.7 mg/kg	0.00017 %		
		205-883-8	191-24-2							
27	benzo[k]fluoranthene				1.6 mg/kg		1.6 mg/kg	0.00016 %		
	601-036-00-5	205-916-6	207-08-9							
28	chrysene				2.9 mg/kg		2.9 mg/kg	0.00029 %		
	601-048-00-0	205-923-4	218-01-9							
29	dibenz[a,h]anthracene				0.42 mg/kg		0.42 mg/kg	0.000042 %		
	601-041-00-2	200-181-8	53-70-3							
30	fluoranthene				6.6 mg/kg		6.6 mg/kg	0.00066 %		
		205-912-4	206-44-0							
31	fluorene				0.53 mg/kg		0.53 mg/kg	0.000053 %		
		201-695-5	86-73-7							
32	indeno[123-cd]pyrene				1.4 mg/kg		1.4 mg/kg	0.00014 %		
		205-893-2	193-39-5							
33	naphthalene				0.87 mg/kg		0.87 mg/kg	0.000087 %		
	601-052-00-2	202-049-5	91-20-3							
34	phenanthrene				4.6 mg/kg		4.6 mg/kg	0.00046 %		
		201-581-5	85-01-8							
35	pyrene				5.9 mg/kg		5.9 mg/kg	0.00059 %		
		204-927-3	129-00-0							
36	phenol				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
Total:								0.221 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%) because: No free phase recorded. Negligible flammability risk.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.021%)

Classification of sample: TP15

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

Sample details

Sample name:	LoW Code:
TP15	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.40 m	
Moisture content:	
14%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 14% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☑						
			TPH_CONFIRM								
2	arsenic { arsenic trioxide }				6.3 mg/kg	1.32	8.318 mg/kg		0.000832 %		
	033-003-00-0	215-481-4	1327-53-3								
3	beryllium { beryllium oxide }				0.8 mg/kg	2.775	2.22 mg/kg		0.000222 %		
	004-003-00-8	215-133-1	1304-56-9								
4	boron { boron tribromide/trichloride/trifluoride (combined) }				0.4 mg/kg	13.43	5.372 mg/kg		0.000537 %		
			10294-33-4, 10294-34-5, 7637-07-2								
5	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg		<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
6	chromium { chromium(III) oxide (worst case) }				21 mg/kg	1.462	30.693 mg/kg		0.00307 %		
		215-160-9	1308-38-9								
7	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								
8	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	17 mg/kg		17 mg/kg		0.0017 %		
	082-001-00-6										
9	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								
10	nickel { nickel dihydroxide }				23 mg/kg	1.579	36.328 mg/kg		0.00363 %		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
11	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.2 mg/kg	1.405	1.686 mg/kg		0.000169 %		
	034-002-00-8										
12	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				52 mg/kg	4.398	228.692 mg/kg		0.0229 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
13	pH				8 pH		8 pH		8pH		
			PH								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	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										
15	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg		<0.001 %		<LOD
			TPH								
16	acenaphthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-469-6	83-32-9								
17	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
18	anthracene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		204-371-1	120-12-7								
19	benzo[a]anthracene				0.13 mg/kg		0.13 mg/kg		0.000013 %		
	601-033-00-9	200-280-6	56-55-3								
20	benzo[a]pyrene; benzo[def]chrysene				0.12 mg/kg		0.12 mg/kg		0.000012 %		
	601-032-00-3	200-028-5	50-32-8								
21	benzo[b]fluoranthene				0.16 mg/kg		0.16 mg/kg		0.000016 %		
	601-034-00-4	205-911-9	205-99-2								
22	benzo[ghi]perylene				0.09 mg/kg		0.09 mg/kg		0.000009 %		
		205-883-8	191-24-2								
23	benzo[k]fluoranthene				0.07 mg/kg		0.07 mg/kg		0.000007 %		
	601-036-00-5	205-916-6	207-08-9								
24	chrysene				0.16 mg/kg		0.16 mg/kg		0.000016 %		
	601-048-00-0	205-923-4	218-01-9								
25	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								
26	fluoranthene				0.27 mg/kg		0.27 mg/kg		0.000027 %		
		205-912-4	206-44-0								
27	fluorene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-695-5	86-73-7								
28	indeno[123-cd]pyrene				0.08 mg/kg		0.08 mg/kg		0.000008 %		
		205-893-2	193-39-5								
29	naphthalene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
30	phenanthrene				0.2 mg/kg		0.2 mg/kg		0.00002 %		
		201-581-5	85-01-8								
31	pyrene				0.26 mg/kg		0.26 mg/kg		0.000026 %		
		204-927-3	129-00-0								
32	phenol				<1 mg/kg		<1 mg/kg		<0.0001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0376 %		

Key

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

Classification of sample: TP08[2]

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

Sample details

Sample name:	LoW Code:
TP08[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.75 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **15% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	confirm TPH has NOT arisen from diesel or petrol				☒					
			TPH_CONFIRM							
2	benzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
3	ethylbenzene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
4	toluene				<5 µg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
5	xylene				<8 µg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
6	acenaphthene				0.06 mg/kg		0.06 mg/kg	0.000006 %		
		201-469-6	83-32-9							
7	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
8	anthracene				0.05 mg/kg		0.05 mg/kg	0.000005 %		
		204-371-1	120-12-7							
9	benzo[a]anthracene				0.16 mg/kg		0.16 mg/kg	0.000016 %		
	601-033-00-9	200-280-6	56-55-3							
10	benzo[a]pyrene; benzo[def]chrysene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
11	benzo[b]fluoranthene				0.22 mg/kg		0.22 mg/kg	0.000022 %		
	601-034-00-4	205-911-9	205-99-2							
12	benzo[ghi]perylene				0.12 mg/kg		0.12 mg/kg	0.000012 %		
		205-883-8	191-24-2							
13	benzo[k]fluoranthene				0.08 mg/kg		0.08 mg/kg	0.000008 %		
	601-036-00-5	205-916-6	207-08-9							
14	chrysene				0.22 mg/kg		0.22 mg/kg	0.000022 %		
	601-048-00-0	205-923-4	218-01-9							
15	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							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluoranthene	205-912-4	206-44-0		0.36 mg/kg		0.36 mg/kg	0.000036 %		
17	fluorene	201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
18	indeno[123-cd]pyrene	205-893-2	193-39-5		0.11 mg/kg		0.11 mg/kg	0.000011 %		
19	naphthalene	601-052-00-2	202-049-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
20	phenanthrene	201-581-5	85-01-8		0.28 mg/kg		0.28 mg/kg	0.000028 %		
21	pyrene	204-927-3	129-00-0		0.34 mg/kg		0.34 mg/kg	0.000034 %		
22	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.007 mg/kg		<0.007 mg/kg	<0.0000007 %		<LOD
Total:								0.0002 %		

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)
<LOD	Below limit of detection

Classification of sample: TP14 ES2[2]

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

Sample details

Sample name:	LoW Code:
TP14 ES2[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: **18% No Moisture Correction applied (MC)**

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	confirm TPH has NOT arisen from diesel or petrol				☒						
			TPH_CONFIRM								
2	benzene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
3	ethylbenzene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
4	toluene				<5 µg/kg		<0.005 mg/kg		<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
5	xylene				<8 µg/kg		<0.008 mg/kg		<0.0000008 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
6	acenaphthene				0.87 mg/kg		0.87 mg/kg		0.000087 %		
		201-469-6	83-32-9								
7	acenaphthylene				0.09 mg/kg		0.09 mg/kg		0.000009 %		
		205-917-1	208-96-8								
8	anthracene				0.95 mg/kg		0.95 mg/kg		0.000095 %		
		204-371-1	120-12-7								
9	benzo[a]anthracene				2.7 mg/kg		2.7 mg/kg		0.00027 %		
	601-033-00-9	200-280-6	56-55-3								
10	benzo[a]pyrene; benzo[def]chrysene				2.5 mg/kg		2.5 mg/kg		0.00025 %		
	601-032-00-3	200-028-5	50-32-8								
11	benzo[b]fluoranthene				3.2 mg/kg		3.2 mg/kg		0.00032 %		
	601-034-00-4	205-911-9	205-99-2								
12	benzo[ghi]perylene				1.6 mg/kg		1.6 mg/kg		0.00016 %		
		205-883-8	191-24-2								
13	benzo[k]fluoranthene				1.4 mg/kg		1.4 mg/kg		0.00014 %		
	601-036-00-5	205-916-6	207-08-9								
14	chrysene				2.9 mg/kg		2.9 mg/kg		0.00029 %		
	601-048-00-0	205-923-4	218-01-9								
15	dibenz[a,h]anthracene				0.34 mg/kg		0.34 mg/kg		0.000034 %		
	601-041-00-2	200-181-8	53-70-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	fluoranthene	205-912-4	206-44-0		7.3 mg/kg		7.3 mg/kg	0.00073 %		
17	fluorene	201-695-5	86-73-7		0.82 mg/kg		0.82 mg/kg	0.000082 %		
18	indeno[123-cd]pyrene	205-893-2	193-39-5		1.4 mg/kg		1.4 mg/kg	0.00014 %		
19	naphthalene	601-052-00-2	202-049-5	91-20-3	2 mg/kg		2 mg/kg	0.0002 %		
20	phenanthrene	201-581-5	85-01-8		5.5 mg/kg		5.5 mg/kg	0.00055 %		
21	pyrene	204-927-3	129-00-0		6.4 mg/kg		6.4 mg/kg	0.00064 %		
22	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3	0.009 mg/kg		0.009 mg/kg	0.0000009 %		
Total:								0.004 %		

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)
<LOD	Below limit of detection

Appendix A: Classifier defined and non GB MCL determinands

confirm TPH has NOT arisen from diesel or petrol (CAS Number: TPH_CONFIRM)

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

boron tribromide/trichloride/trifluoride (combined) (CAS Number: 10294-33-4, 10294-34-5, 7637-07-2)

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)

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

lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). 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.

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

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

Description/Comments: Unknown Oil

Hazard statements taken from WM3 1st Edition 2015
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

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

• **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

• **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)

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

Description/Comments:

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

Reason for additional Hazards Statement(s):

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

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

GB MCL index number: 602-039-00-4

Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

Additional Hazard Statement(s): Carc. 1A; H350

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on risk phrases

beryllium {beryllium oxide}

Worst case species based on risk phrases

boron {boron tribromide/trichloride/trifluoride (combined)}

Worst case species based on risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

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

Chromium VI not detected.

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Chromium VI not detected.

mercury {mercury dichloride}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

selenium {selenium compounds with the exception of cadmium sulposelenide and those specified elsewhere in this Annex}

Worst case species based on risk phrases

zinc {zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]}

Chromium VI not detected.

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

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**
HazWasteOnline Classification Engine Version: 2026.26.6955.12551 (26 Jan 2026)
HazWasteOnline Database: 2026.26.6955.12551 (26 Jan 2026)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

GB MCL List v7.0 - version 7.0 of 23rd September 2025

