

CampbellReith
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Pyramid Park, Bury

Land Quality Statement

For
Bury Council

Project No.
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Campbell Reith Hill LLP
No. 1 Marsden Street
Manchester
M2 1HW

T: +44 (0)161 819 3060
E: manchester@campbellreith.com
W: www.campbellreith.com

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EXECUTIVE SUMMARY

SITE OUTLINE	The site is located off Market Street in Bury, Greater Manchester. It is approximately 300m to the south of Bury town centre and the approximate National Grid Reference at the centre of the site is 380500, 410315, postcode BL9 0EQ. Redevelopment proposals are currently at Masterplan stage and have not yet been finalised. It is anticipated that the final development will be predominantly residential with associated infrastructure, hardstanding and landscaped areas. A new access ramp off the existing access road from Market Street is proposed as part of the enabling works.
	The site is currently disused having more recently been used as a park with large pond. Historical maps indicate that the site was largely occupied by railway sidings, platforms, goods sheds and cattle pens in the west of the site, likely associated with the former abattoirs to the northwest. Extensive ground workings to reduce site levels around 1890's appear to have taken place to facilitate the expansion of the railway sidings. Later, the site was used as public open space and a pond was present in the central and eastern section of the site along with three large pyramid features, still present today.
	The ground conditions generally consist of varying thicknesses of Made Ground over Glacial Deposits comprising a mix of clays and sands. The underlying mudstone bedrock of the Pennine Lower Coal Measures was encountered at several locations typically between 3m and 7m below ground level.
ENVIRONMENTAL SETTING	The site is considered to have a Moderate hydrogeological Sensitivity associated with the presence of superficial and bedrock Secondary A Aquifers, and a Low / Moderate hydrological Sensitivity due to presence of the River Irwell and River Roch over 700m from the site
GEOTECHNICAL HAZARDS	The ground investigation identified a number of geotechnical risks at the site: ▪ Significant thicknesses of Made Ground ▪ Shallow groundwater ▪ Waterlogged soils in and around the former pond area ▪ Possible presence of boulders in the Made Ground and Glacial Deposits ▪ Hard obstructions i.e. concrete in the Made Ground ▪ Low to medium volume change potential soils. ▪ Ground conditions aggressive to buried concrete. ▪ Large variations in site level and consequent need for earthworks
CONTAMINATION ISSUES	Risk Summary: ▪ End Users. A LOW – MODERATE RISK has been identified for site end users associated with the presence of asbestos in soils. Statistical assessment indicates no significant risk from other soil contaminants which exceed the residential with plant uptake end use criteria. ▪ Groundwater. A LOW RISK has been identified from the potential migration of dissolved phase and mobile contaminants to the underlying Secondary A Aquifer. A benzo(a)pyrene DWS exceedance was encountered at one location, but the low permeability Glacial Till will limit migration. ▪ Surface Water. A LOW RISK has been identified from migration of potential contaminants given the nearest surface watercourse is >700m from the site. ▪ Ground Gas Characteristic Situation. The site has been classified as Characteristic Situation 2 (low risk), and gas protection measures are required. However, flow rates were sporadic between visits and therefore further monitoring is advised. No vapour risk has been identified.

	▪ Groundworks. A LOW – MODERATE RISK has been identified based on the assumption that basic health and safety provisions are in place. The type of RPE required for asbestos will be defined by the JIWG decision support tool. ▪ Waste Soils. A total of 5 no. samples were classified as Hazardous in accordance with WM3 due to elevated TPH concentrations. The remaining 47 no. were Non-Hazardous. ▪ Services. The presence of TPH and PAH concentrations in soils indicates a possible need for protection of public water supply pipework, such as the use of organic resistant pipework. ▪ Japanese Knotweed was identified in the marshy grassland adjacent the road overpass during a Phase 1 habitat survey by TEP.
GEOTECHNICAL RECOMMENDATIONS	Traditional shallow strip foundations are anticipated to be viable where the Glacial Deposits are present within the top 2m of site (subject to the final levels strategy) and the proposed loading is modest (i.e. low-rise structures). In areas underlain by considerable thicknesses of Made Ground and/ or high loading (i.e. high-rise structures) are proposed, ground improvement methods (i.e. vibro stone columns) or a piled foundation solution may be required. Foundations placed within the Glacial Clays will need to be deepened to account for the volume change potential of the cohesive soils. Suspended floor slabs will also be required across this area of site due to the soil volume change potential. Chemical laboratory test results suggest a concrete class of DS-3 is required. Additional testing is recommended in the mudstone bedrock if deeper foundations (i.e. piles) are considered. A preliminary CBR of 3% is considered suitable for road and pavement design however, testing of the pavement formation will be required to verify this. Near surface soils are frost susceptible. The soakaway tests could not be undertaken due to water ingress near to existing ground surface; a soakaway drainage strategy is therefore not likely to be viable. Provisions for pumping may be required where excavations are excavated below the groundwater table and/or left open for significant periods of time.
RECOMMENDATIONS	▪ Soils. A capping layer is required for any soft landscaped areas due to the presence of asbestos. ▪ Groundwater. No remediation of the groundwater is required. ▪ Ground Gas. Currently assessed as CS which indicates the need for gas protection measures. However, additional monitoring visits are recommended following completion of enabling works and confirmation of final site development proposals. ▪ Services. The infrastructure designer should assess requirements for pipework with respect to hydrocarbon contamination and consult statutory utility companies. ▪ Waste Soils. A preliminary waste classification exercise has been carried out. Additional assessment may be required to enable more accurate budget costs to be developed regarding soil disposal. ▪ Site Work Controls. A watching brief should be maintained throughout the earthworks to identify any as yet unidentified contaminations that may be present, particularly at excavation formation level. ▪ It is recommended that any hydrocarbon impacted soils are excavated and removed off site if deemed unsuitable for reuse following compliance testing. ▪ As asbestos has been detected, groundworks should be undertaken by a suitably qualified Contractor in accordance with the Control of Asbestos Regulations 2012, associated Approved Code of Practice (ACoP) and guidance prepared by CL:AIRE and the Joint Industry Working Group (JIWG), and CIRIA.

	▪ There is the potential for impacted Made Ground to be present beneath the existing pyramid structures. Therefore, the nature and composition of the soils beneath the pyramid structures will need to be assessed appropriately. ▪ An invasive species specialist should be consulted to confirm the best approach to remediate the area of the current Japanese Knotweed stand in the east of the site.
DOCUMENTATION	This report should be submitted as part of the planning process. It is likely that further documentation, such as a Remediation Specification and Verification Report, will be required to discharge contamination related planning conditions. An Earthworks Specification has been issued under a separate cover.

1.0 INTRODUCTION

1.1 Appointment

1.1.1 This geo-environmental and geotechnical report has been produced by Campbell Reith Hill LLP (CampbellReith) on behalf of Bury Council (the Client) relating to Pyramid Park, Bury (hereafter referred to as the site). The limitations associated with this report follow the main text.

1.1.2 Figures showing the site location, layout and intended development are presented in Appendix 1.

1.2 Objectives

1.2.1 The objective of the report is to provide:

- a description of the site;
- a summary of the site's geo-environmental setting and history;
- a conceptual site model and a generic quantitative risk assessment for contamination;
- outline remedial recommendations;
- a preliminary geotechnical evaluation;
- a geotechnical risk assessment; and,
- a Hazardous Properties Assessment and waste soil classification.

1.3 Basis of Assessment

1.3.1 The standards upon which this report is based are summarised in the Environmental Risk Assessment Standards and Supporting Information section, which follows the main text.

1.3.2 The report is based upon a site reconnaissance visit, regulatory consultations and desk study /ground investigation information. Readily available site-specific reports/ information as detailed in Table 1.1. Technical references are included as footnotes throughout the report.

Table 1.1 Information Reviewed

Reference Details		Author	Reference
Phase 1 Habitat Survey	Drawing Number G9302.007A, dated October 2023	The Environment Partnership (TEP)	[1]
Preliminary Ecological Assessment	Ref: 9302.02.001, dated October 2023	The Environment Partnership (TEP)	[2]
Geotechnical and Geo-Environmental Desk Study Report (including Groundsure report Ref. CAR1-8402039)	Ref: 13819-CRH-XX-XX-RP-LQ-0001, dated March 2022	CampbellReith	[3]
Phase 2 Interpretative Report (Contamination)	Ref: 13819-CRH-XX-XX-RP-LQ-0002, dated July 2022	CampbellReith	[4]
Factual Report on Site Investigation for Land at Townside Fields, Bury	Ref: M1062/01, dated April 2022	Dunelm Geotechnical and Environmental	[5]

Reference Details		Author	Reference
Factual Report Pyramid Park, Bury	Ref: PN234595, dated February 2024	Geotechnics	[6]
Factual Report Pyramid Park	Ref: 17-777-R1-2, dated September 2024	e3p	[7]

1.4 Technical Competence

1.4.1 This report has been authored by Shauna McLoughlin BSc Ph.D MIEnvSc (Senior Environmental Scientist) and Rose Ashmore MSci MSc FGS (Senior Geotechnical Engineer), checked by Tom Samson MEng CEng MICE (Associate) and reviewed by Peter Kenny BSc CSci FGS, MIEnvSc (Associate).

2.0 SITE DESCRIPTION AND ENVIRONMENT SETTING

2.1 Site Location

2.1.1 The site location is presented in Figure 1, Appendix 1. The site is located off Market Street in Bury, Greater Manchester. It is approximately 300m to the south of Bury town centre and the approximate National Grid Reference at the centre of the site is 380500, 410315, postcode BL9 0EQ.

2.2 Site Layout

2.2.1 An annotated site layout plan is presented in Figure 2, Appendix 1. The site forms a roughly rectangular shaped parcel of land covering an approximate area of 3.0 hectares.

2.2.2 The site comprises a low-lying central area of relatively flat land with slopes leading up to surrounding higher ground present along the northern and southern areas of the site. A masonry arch bridge (Market Street) forms the eastern boundary of the site and a small parcel of land is located beyond adjacent Town Field Close. The bridge abutments are formed into the slopes in the north and south of the site. An access track slopes down along the southern boundary from vehicle access gates off Market Street. Pedestrian access can also be gained from the east via Town Fields Close.

2.2.3 Three large pyramid features, predominantly grass covered, are present in the western area of the site. A former pond is present in the central and eastern areas of the site. The ground in this area remained boggy / saturated (noting that the site visit was undertaken following a prolonged period of heavy rainfall), and small areas of standing water were noted.

2.2.4 The majority of the site comprises marsh/marshy grassland, semi-improved neutral grassland, continuous bramble scrub with small areas of broadleaved woodland as detailed in the TEP Habitat Survey [1]. Footpaths are also present in the west of the site, leading around the pyramid features.

2.3 Surrounding Land-Use

2.3.1 Land to the north of the site is occupied Bury College buildings (Woodbury Centre and Business Solutions) and areas of car parking. To the east, a small parcel of undeveloped land is presented leading towards residential properties around Town Fields Close. A railway line is present to the south, beyond which is Bury College and residential properties on Westminster Street. Tramlines form the western site boundary with a multi-storey car park and hotel located beyond.

2.4 Invasive Plant Species

2.4.1 The invasive plant species Japanese Knotweed has been historically recorded within the site boundary by Greater Manchester Ecology Unit. TEP produced a Preliminary Ecological Assessment Report [2] after an updated Phase 1 Habitat Survey [1] was carried out in October 2023.

2.4.2 The TEP Preliminary Ecological Assessment details that a stand of Japanese Knotweed is present within the marshy grassland habitat which was once occupied by a lake. The Japanese knotweed is located adjacent to the road overpass on the eastern section of the site.

2.4.3 The TEP report recommended that prior to development, the Japanese Knotweed should be controlled and treated in line with an invasive species management plan.

2.5 Redevelopment Proposal

2.5.1 The proposed site redevelopment is shown in Figure 3, Appendix 1.

2.5.2 At this stage, redevelopment proposals are at Masterplan stage and have not yet been finalised. Masterplan options currently include a variety of mixed-use residential and commercial schemes, with associated access, infrastructure, hardstanding and landscaped areas. Additionally, limited residential development, most likely in the eastern area of the site, is anticipated to include private garden areas.

2.5.3 Current proposals are to prepare the site for future development with the construction of a new access road off Market Street and the creation of development platforms.

2.5.4 Based on the anticipated development to include both managed and private residential properties, the end user sensitivity following redevelopment of the site is considered as Moderate – High.

2.6 Geology

2.6.1 The site geology as recorded by the BGS is presented as Figure 4a and 4b, Appendix 1.

2.6.2 The site geology is summarised in Table 2.1 and is based on the existing site-specific information included in the desk study research [3].

2.6.3 The BGS GeoIndex[1] shows two historical boreholes are present to the south of the site. The boreholes record cohesive Made Ground overlying cohesive and granular Glacial Deposits which in turn overlies mudstone and sandstone of the Pennine Lower Coal Measures with a weathered upper profile.

Table 2.1 Summary of Anticipated Geology

Strata	Typical Description
Made Ground	Firm to stiff sandy clay with gravel of brick / possible rail ballast / mining waste and colliery spoil.
Superficial Deposits	
Glacial Deposits	Firm to stiff sandy clay and medium dense sandy gravel and sand with occasional cobbles and boulders.
Glaciofluvial Deposits	Sand and gravel with cobbles and boulders.

[1] British Geological Survey (BGS) GeoIndex (https://mapapps2.bgs.ac.uk/geoindex/home.html)

Strata	Typical Description
Bedrock	
Pennine Lower Coal Measures (PLCM)	Mudstone and siltstone interbedded with subordinate medium-grained sandstones, seatearths and coal seams (upper weathered profile reduced to clay / sand / gravel).

Structural Geology

2.6.4 The published BGS map[2] indicates the bedrock dips towards the west-southwest by 5° to 15° although the inherently complex faulting of the coal seams results in a variable dip across the area. Several northwest to southeast trending faults with downthrows to the southwest and northeast are present in the surrounding area. One such fault with a southwest downthrow is located 15m beyond the south-western corner of the site. Smaller unrecorded and complex faulting is likely to be present within the underlying coal measures.

Coal Seams

2.6.5 The Cannel Coal Seam outcrops approximately 225m southwest of the site and the Arley Coal Seam 148m northeast. The downthrow of the fault to the southwest has juxtaposed the older Arley Coal to a similar level of the Cannel Seam. Owing to the southerly dip of the strata it is anticipated that the Arley seam is located at some depth beneath the site.

2.6.6 The Arley seam is recorded to have a thickness of 0.9m to 2.0m. The seam is anticipated to terminate at the location of the fault at the south-western corner of the site. The published BGS information[3] indicates that this seam was exploited via deep mining, crop working and opencast excavation.

2.7 Natural Ground Hazards

2.7.1 A summary of the Hazard Ratings for natural ground subsidence hazards from the Groundsure Report [3] are presented in Table 2.2 and assessed against available information on ground conditions to provide updated hazards ratings.

Table 2.2 Summary of Natural Ground Subsidence Hazards

Hazard	Groundsure Hazard Rating	Comment
Shrink swell clays	Very Low	Ground conditions predominantly low to intermediate plasticity.
Running sands	Very Low	Running sand conditions are unlikely. May occur if water table rises.
Compressible deposits	Very Low - Negligible	Soft clays were encountered during the ground investigation as discussed in Section 6.0.
Collapsible deposits	Very Low - Negligible	Collapsible deposits are unlikely to be present.

[2] British Geological Survey (BGS) Drift and solid Sheet 85, 1:50,000 scale map.
[3] British Geological Survey (BGS) Geology of the Manchester district: a brief explanation of the geological map Sheet 85 Manchester, 2012

Hazard	Groundsure Hazard Rating	Comment
Landslides	Very Low	Slope stability problems are not likely to occur within the site area.
Ground dissolution	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution.

2.8 Coal Mining

2.8.1 A review of the Coal Authority's Interactive Map[4] has been undertaken indicating the following:

- Two mine entries are located approximately 50m to the south of the site;
- The site is not with a development high risk area;
- Probable shallow workings are located adjacent to the eastern boundary of the site;
- A worked coal outcrop is indicated approximately 70m to the east of the site; and,
- The site is within a surface coal resource area.

2.9 Seismicity

2.9.1 The national forward to BS EN 1998-1:2004+A1:2013 'Eurocode 8: Design of Structures for Earthquake Resistance – Part 1' states there are no requirements in the UK to consider seismic loading, and the whole of the UK may be considered an area of very low seismicity in which the provisions of EN 1998 need not apply.

2.10 Hydrogeology

2.10.1 The site hydrogeology has been assessed using desk study information provided by Groundsure [3] and the MAGIC website[5] and is summarised in Table 2.3.

Table 2.3 Summary of Hydrogeology

Type	Description
Superficial Deposits: [Glacial Till] [Glaciofluvial Deposits]	Secondary A Aquifer. Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Bedrock Geology: [Pennine Lower Coal Measures Formation]	Secondary A Aquifer. Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.
Groundwater Vulnerability	Noted as moderate based on a combined classification for both superficial and bedrock aquifers.
Source Protection Zone (SPZ)	None located within 1km of the site.
Groundwater Bodies	Northern Manchester Carboniferous Aquifers. Overall water quality rating noted as poor (2019).

[4] BGS Coal Authority Interactive viewer (http://mapapps.bgs.ac.uk/coalauthority/home.html)
[5] Multi Agency Geographic Information for the Countryside (MAGIC Map). Department for Environment, Food & Rural Affairs. https://magic.defra.gov.uk/magicmap.aspx

2.10.2 The site is considered to have a Moderate Sensitivity with respect to hydrogeology. The sensitivity is based upon the definitions provided in NHBC R&D66[6], as amended to include the requirements of the Water Framework Directive and the EA's River Basin Catchment Plans.

2.11 Hydrology

2.11.1 The site hydrology has been assessed using desk study information provided by Groundsure [3] and the MAGIC website[5] and is summarised in Table 2.4.

Table 2.4 Summary of Hydrology

Type	Distance	Description
Surface Waters	On site	Former Pond in central and eastern section of site.
	700m W	River Irwell, overall water quality rating Moderate, 2019.
	780m E	River Roch, overall water quality rating Moderate, 2019.
Surface Water Catchment	On site (east)	River Roch (Spodden to Irwell).
	On site (west)	River Irwell (Rossendale STW to Roch).
Surface Water Abstractions	745m NW	For general use, operated by Cemex UK Materials Limited.
Surface Water Flooding	On site	Flood Zone 1 [3].

2.11.2 The site is considered to have a Low/Moderate sensitivity with respect to hydrology. The sensitivity is based upon the guidance detailed for the hydrogeological assessment above.

2.12 Radon

2.12.1 With reference to the Groundsure Report [3] and the Radon Atlas of England and Wales[7], the site is located in an area where <1% of homes are above the action level for radon.

2.12.2 As such the associated risk to any structures and buildings proposed in the area is considered to be LOW, where radon protection measures are not required for new buildings.

2.12.3 If basements are proposed as part of the site redevelopment, radon risk should be reconsidered.

2.12.4 BRE Report BR 211[8]: notes that all basements are at increased risk of elevated levels of radon regardless of geographic location, because more walls are in contact with the ground as well as the floor, and reduced natural ventilation below ground level increases the risk of elevated radon levels. In addition, the Management of Health and Safety at Work Regulations (1999)[9] require the assessment of health and safety risks and both the Health and Safety Executive (HSE) and Public Health England (PHE) state that this should include the measurement of radon for occupied below ground workplaces (occupied for more than 1 hour per week/52 hours of the year), irrespective of whether a site is situated in a radon affected area. This is

[6] Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 Volume 1 (Environment Agency, NHBC and CIEH)
[7] Radon Atlas for England and Wales (https://www.ukradon.org/information/ukmaps)
[8] BRE Report BR 211 Radon: Guidance on Protective Measures for New Buildings. 2023
[9] The Management of Health & Safety at Work Regulations 1999, Legislation.gov.uk

the responsibility of the Employer. For residential developments, Public Health England advise that consideration should be given to testing for radon if the basement includes a room that is used regularly.

2.13 Sensitive Land Uses

2.13.1 A review has been made of Designated Ecological and Heritage sites using desk study information provided by Groundsure [3] and the MAGIC website[5] and is summarised in Table 2.6. The main purpose of this is to identify receptors that may be at risk due to potential contamination at the site.

Table 2.5 Summary of Designated Sites

Type	Description
Ecological	No records within 1km
Heritage	Several Grade II Listed buildings located between 163m and 249m
	Conservation area (Bury Town Centre) located 105m to the northwest

3.0 SITE HISTORY AND INDUSTRIAL SETTING

3.1 Site History

3.1.1 Information relating to the site history has been obtained by reference to historical plans provided in the Groundsure report [3]. This is summarised for the site and its surroundings in Tables 3.1 and 3.2.

Table 3.1 Site History

Date	Development
1849 – 1851	An area of land in the northwest of the site appears to be part of a network of ornamental gardens, which extend off site to the north. The extreme eastern area of the site is occupied by a small building and grounds. Railway lines/sidings are present along the southern area of the site, generally running east to west. A bridge is present in the southeast area of the site, spanning the railway lines in the south. Three rectangular structures are present in the western area of the site, associated with the railway lines.
1890 - 1891	The majority of the site is shown to be occupied by railway lines/sidings and is labelled as a “goods station”. The site now appears to be within a cutting, with slopes shown along the northern and southern areas of the site. The bridge in the southeast has now been extended to span across the full eastern area of the site and is noted as Market Street. The rectangular buildings in the west of the site are noted as “goods sheds” and further small buildings are now shown in the east, one of which is noted as a “signal box”. Two irregular shaped structures are located adjacent to the goods shed in the west, possibly part of a platform for the railway lines.
1908 – 1910	Cattle pens are shown in the northwest of the site and a crane is present adjacent to the goods sheds. A signal bridge is located in the south.
1928 – 1938	No significant changes noted.
1955 – 1959	A tank is shown adjacent to the southern site boundary.
1976 – 1984	Railway infrastructure and associated buildings including the goods sheds have been cleared from site. A pond is located in the central and eastern area of the site. In the west, three large pyramid shaped features are present and a further pyramid is present straddling the eastern boundary. Site is noted as “Townside Field”. A small triangular shaped feature is also present in the central area of the site within the pond. A subway is show on the western site boundary linking the site to the west beneath the adjacent railway lines.
1992	No significant changes noted.
2001 – Present	No significant changes noted.

Table 3.2 Adjacent Land History

Date	Development
1849 -1851	Majority of land immediately to the north remains free from significant development. An area of ornamental gardens extends off site to the north. Railway lines extend off site to the east and west. A rope walk is located to the east of the site and land immediately to the south remains undeveloped with the exception of railway lines to southwest, beyond which, sloping ground is detailed. A woollen mill, station and goods sheds are present to the west.
1890 – 1891	An abattoir is present approximately 30m to the northwest of the site. Extensive residential development is now shown on the land adjacent to the northeast of the site and extensive railway sidings lead off site to the east. A small reservoir is located beyond the railway lines to the southwest of the site. The mill to the west is now noted as “cotton waste”.
1908 – 1910	The abattoir to the northwest has been extended and the layout of the good shed to the west has been altered with the addition of some smaller buildings. A further railway line leading from the southwest is shown to the south of the site, within a cutting. An area of ground workings is present approximately 180m to the southeast.
1928 – 1938	A school and bakery are now shown to the north of the site. A school is also present to the south beyond the railway lines along with associated playing fields.
1955 – 1959	Bury Technical College is located immediately to the north of the site.
1976 – 1984	A garage and a works are now located to the northeast of the site, where the bakery was formerly located. A college is now located to the south. The Town Hall is located approximately 120m to the west of the site, beyond a subway and carpark area.
2010	The college to the south has been extended.

3.1.2 In summary, the site was largely occupied by railway sidings with goods sheds and cattle pens in the west of the site, likely associated with the former abattoirs to the northwest. Extensive ground workings to reduce site levels around 1890’s appear to have taken place to facilitate the expansion of the railway sidings. Later, the site was used as public open space and a pond was present in the central and eastern section of the site along with three large pyramid features, still present today.

3.2 Regulatory Consultation

3.2.1 Environmental Health team at Bury Council have been contacted with regards to the current status and proposed redevelopment of the site.

3.2.2 The Council has confirmed that they do not currently hold any information relating to ground conditions at the site. The Council notes that the site was historically used as railway land with lines, sidings and a goods station and was later developed as a lake and area of public open

space. The Council states that if the site is to be redeveloped, characterisation of the ground conditions including sampling of soils will be required.

3.2.3 The council has identified several landfill sites located within 250m of the site. This includes a landfill named as Peel College, Bury (Ref: C087) located adjacent to the south of the site and was noted to have been backfilled with unknown materials pre-licensing act (1974).

3.2.4 Land to the west of the site is also noted to be a landfill (not identified as such within the Groundsure Report) (Ref: C078). The Council states that the land was filled with inert waste as part of a reclamation scheme in 1973. Ground investigations from 2005/06 are stated to have encountered reworked natural clays over shallow demolition wastes. This site was redeveloped in 2000s for use as a hotel, offices and car park and remedial measures including earthworks and gas protection measures are stated to have been completed.

3.2.5 It is noted that no areas of land at or near to the site have been determined as Contaminated Land under Part 2A of the Environmental Act (EPA) 1990. As the site has previous potentially contaminating land use, the site is considered to be a potential site of concern by the council, however, the site is not high priority for investigation under Part 2A of the EPA. The Council further states that it would be prudent to conduct assessments and sampling to indicate potential problems which may require further investigation and/or remedial action.

3.2.6 It is confirmed that the site is not located in an area affected by radon. There are no records associated with nuisance incidents or pollution incidents within the last 12 months.

3.2.7 The eastern area of the site, in the area of the former lake, is designated as a Site of Biological Importance (SBI).

3.2.8 The Environmental Report from Bury Council is included in Appendix 2.

3.3 Unexploded Ordnance (UXO)

3.3.1 A preliminary review has been made of the UXO risk presented by the site based upon CIRIA C681[10] ('Unexploded Ordnance (UXO) – A guide for the construction industry') and the assessment matrices presented in Tables 5.1-5.3 therein.

3.3.2 Reference to the Zetica unexploded bomb risk maps [9] indicates that the site is located within a "low" risk area in relation to the potential presence of unexploded ordnance being present on site.

3.3.3 Notwithstanding this, any works that disturb the ground such as demolition and groundworks should include UXO tool-box talks and further advice sought from a specialist if suspicious articles are encountered.

3.4 Tunnels and Infrastructure

3.4.1 Historical plans indicate that a subway was previously present on the western site boundary. A masonry arched bridge (Market Street) also spans the east of the site in a roughly north-north-west to south-south-east orientation.

[10] CIRIA C681 'Unexploded Ordnance (UXO) – A guide for the construction industry' 2009.

3.4.2 Given the extensive nature of previous development across the site service ducts, basements and substructures should be anticipated to be present. Utility plans indicate the presence of a masonry arch culvert that enters the site on the north eastern boundary and follows the northern edge of the former pond.

3.4.3 It should be noted that the above review does not constitute a formal review of all buried structures and utilities that may be present at the site.

3.5 Previous Ground Investigation Report

3.5.1 The site has been subject to a previous preliminary ground investigation by CampbellReith with the findings presented in a Land Quality Statement [4]. The LQS report included a conceptual model for the site ground conditions (soil, water and gas), a generic quantitative risk assessment for human health and gas, and outline recommendations for land contamination issues. A summary of the report is presented below.

3.5.2 The intrusive works were carried out by Dunelm Geotechnical and Environmental between 31st January and 3rd February 2022 with details included in the factual report [5]. The investigation comprised the following:

- 6 no. Windowless Sample Boreholes (WS01-WS06) to a maximum depth of 4.45m below ground level.
- 10 no. Trial Pits (TP01-TP04, TP04A, TP05-TP09) to a maximum depth of 4.00m below ground level.

3.5.3 The report details the presence of Made Ground comprising sandy gravelly clay and gravelly clayey sand with ash, varying in thickness from 0.20m and 4.45m bgl. A total of 6 no. trial pits and 2 no. window sample boreholes were terminated within the Made Ground, therefore the full thickness was not proven.

3.5.4 Glacial Deposits, generally described as light grey and brown slightly gravelly silt, with gravel comprising siltstone and mudstone, were encountered in TP05, TP06, TP08, TP09 and WS01 to WS04.

3.5.5 No groundwater strikes were observed during the ground investigation. Monitoring wells installed in boreholes WS01 to WS06 encountered standing water at depths between 0.56m and 1.83m bgl. However, WS01 was recorded as dry on 1 no. visit.

3.5.6 A strong hydrocarbon odour was noted in the Made Ground at 2.20m bgl in TP03 and at 0.50 – 2.60m bgl in TP09. No visual evidence of potential contamination was observed.

3.5.7 A human health risk assessment was carried out by CampbellReith based on the assessment of thirteen samples collected from the site. Contaminant concentrations were not considered elevated when compared to the screening levels used for a residential with plant uptake end-use. In addition, asbestos was not detected in any of the eight samples analysed.

3.5.8 CampbellReith assessed the risk to end users to be LOW-MODERATE mainly due to the presence of suspected hydrocarbon impacted soils. Given the limited coverage of the preliminary investigation, further assessment was required to refine the contamination risk.

3.5.9 Gas and groundwater monitoring was carried out on three occasions between 3rd and 31st March 2022. During the monitoring, methane concentrations were not detected, and carbon dioxide concentrations were generally detected between 1.6% to 6.4%. However, an absence of flow rates was recorded across the rounds of gas monitoring, with the exception of WS05 which recorded 0.1 l/hr on 1 no. visit. As such, the ground gas risk was initially classified as a Characteristic Situation 1 'Very Low Gas Risk'. However, due to the concentration of carbon dioxide exceeding 5%, further gas monitoring is required to confirm the gas regime on site and whether an increase to CS2 should be considered.

3.6 Current Industrial Setting

3.6.1 Table 3.3 summarises identified industrial features, which may present a potential source of contamination to the site based upon the Groundsure report [3] which should be consulted for further details. Unless otherwise stated, only those features that are within the stated review distances have been included.

Table 3.3 Industrial Setting

Type	Distance Reviewed	Distance from Site	Description
Contaminated land register entries and notices	<500m	-	None identified.
Landfills	<250m	On site	Historical Landfill Historical Mapping. Railway Cuttings, no further details supplied. (*)
		8m S	EA historical landfill site. Site address given as Peel College, Greater Manchester (Ref: C087). No further details provided.
		129m NW & 198m W	EA historical landfill site. Railway cutting east and west of Manchester Road, Bury (Ref: RD/LIC/503/88, C077). Licence holder Bury MBC, June 1988. Waste type noted as inert.
		226m S	EA historical landfill site. Wellington Road, Bury, Greater Manchester (Ref: C085). Operator: County Borough of Bury, October 1971. Waste type noted as industrial, commercial household, liquid, sludge.
Waste Transfer/Treatment Stations	<100m	-	None identified.
Potentially Infilled Land	<250m	On site	Infilled ground – artificial deposit.
			Made ground – artificial deposit.
			Worked ground – void.
		15m NW	Infilled ground – artificial deposit.
		236m S	Worked ground – void.

Type	Distance Reviewed	Distance from Site	Description
		240m S	Made ground – artificial deposit.
		249m S	Worked ground – void.
		249m S	Worked ground – void.
Pollution Incidents	<50m	On site	None identified.
Environmental Permits	<150m	-	None noted, other than those covered under waste.
Discharge Consents	<100m	-	None identified.
Abstractions	<250m	-	None identified.
Fuel Stations	<200m	141m NE	Angouleme Way, Bury (noted as obsolete).
Contemporary trade directory entries – active	<100m	0 – 100m	Includes: business park, industrial estate, substation, tram and railway lines and infrastructure.
Contemporary trade directory entries – non active	<100m	0 – 100m	Includes: tanks, railways, railway buildings, railway station, goods station, abattoirs and cattle pens, substations, rope walk, garages, reservoir, cuttings and unspecified pits.
Control of Major Accident Hazards (COMAH) Sites	<500m	-	None identified.

(* note, corresponded from Groundsure indicates "*these are referring to old railway sidings/cuttings, goods stores etc. which have been identified in the past land use section")*

3.6.2 The features that are highlighted (in bold) are those that are considered to require further consideration from a risk perspective.

4.0 PRELIMINARY CONCEPTUAL SITE MODEL

4.1 Introduction

4.1.1 Current practice for land contamination evaluation comprises the identification of contaminant source-pathway-receptor pollutant linkages. The sources have been identified in Table 4.1 and Table 4.2 provides a list of the potential contaminant linkages together with the rationale for the site investigation that was carried out.

4.2 Potential Sources of Contamination

4.2.1 Table 4.1 summarises the potential contamination sources that have been identified on or near the site. The potential contaminant types associated with these is then given based upon a review of industry profiles and anecdotal information:

Table 4.1 Potential Sources of Contamination

Feature on or near site	Potential Contaminant
Presence of Made Ground indicated in the south east of the site (BGS plans) and infilled ground in the west and to the west of the site. Made Ground is also anticipated to be present associated with previous development, including ash and railway ballast. Additionally, the nature and composition of the material within the pyramids is unknown. Made Ground may also include coal mining derived waste/spoil.	M, IC, OC (TPH, PAH, VOC, SVOC), ACM, GG, CF.
Potential presence of impacted Made Ground and natural soils associated with former land use including railway land, substation, abattoirs, garages and works.	M, IC, OC (TPH, PAH, VOC, SVOC, PCB), ACM, GG. Abattoirs have a notional potential for pathogens; however, this will diminish over time.
Notes: M – Metals and metal compounds. IC – Inorganic Compounds (including acids and alkalis, sulphates, sulphides, ammonia and others), OC – Organic Compounds (including TPH – Total Petroleum Hydrocarbons, PAH – Polycyclic Aromatic Hydrocarbons, VOC – Volatile Organic Compounds, SVOC - Semi Organic Compounds, phenols). ACM – Asbestos Containing Materials / Asbestos in Soil. R - Radioactivity. PCB – Poly chlorinated biphenyls. GG – Ground Gases (including both 'bulk gasses' and volatile compounds). CF – Elevated Calorific Values.	

4.2.2 Given the previous land use and extensive development across the site, there is the potential for a wide range of below ground infrastructure including tanks, pipelines, drains and adits that may locally contain contamination.

4.2.3 Made Ground associated with the use of the site as railway land is anticipated to be present. This is likely to contain ballast type materials, which can include steam locomotive ash. Additionally, materials used as infill may have been sourced from the general area and therefore has the potential to contain a wide array of contamination, including asbestos.

4.2.4 The Made Ground indicated to be present in the south east of the site (and leading off to the south) on geological plans may potentially contain coal mining waste arisings, some of which

may have a high calorific value. Such materials have a notational potential to combust under the right conditions and may be present locally across the site.

4.3 Targeted Potential Contaminant Linkages

4.3.1 Table 4.2 provides a list of the potential contaminant linkages together with the rationale for the site investigation design.

Table 4.2 Targeted Potential Contaminant Linkages

Issue	Exploration
End user exposure to Made Ground soils.	General investigation coverage across the site with sampling from soils within the top 1m of the site.
Tanks	Trial pits and boreholes with installations provided for ground gas, vapour and groundwater monitoring and sampling.
Potential vertical migration of contamination to underlying groundwater	Targeted and general site coverage. Boreholes with targeted groundwater specific installations provided.
Ground gas and vapour generation from the Made Ground infilling and boiler rooms	Targeted ground gas monitoring installations within the proposed building footprints.

4.3.2 Considering the past and current uses of the site, a contamination analysis suite should be applied that considered metals, semi-metals, inorganic chemicals and speciated hydrocarbon contaminants in order to provide data for human health risk assessment. In addition, the presence of asbestos in soils should be appraised by testing. Such testing should be completed in accordance with UKAS and MCERTS standards. Subject to the determination of the final objectives of the ground investigation, the test suite may also be modified to facilitate the classification of waste soil arisings.

4.3.3 The findings of the intrusive investigation of the potential contaminant sources and pathways are reported in Section 5.0. This has informed the Generic Quantitative Risk Assessment presented in Section 7.0, Waste Soils in Section 8.0, Revised Conceptual Site Model in Section 9.0, and the subsequent conclusions and recommendations regarding risk in Section 11.0.

5.0 SITE INVESTIGATION

5.1 Scope of Works

2023 Ground Investigation

5.1.1 The second phase of intrusive works were carried out by Geotechnics between 15th and 30th November 2023 to inform the site enabling works. The factual report [6] is provided in Appendix 3.

5.1.2 The exploratory locations are shown on Figure 5, Appendix 1. A summary of the exploratory holes is given below:

- 19 no. machine dug trial pits (SA101, SA102, TP101 to TP104, TP106 to TP110, TP112, TP116A, and TP118 to TP123) were excavated to a maximum depth of 4.00m bgl;
- 6 no. hand-dug pits (HP111, HP113 to HP115, HP117E and HP117W) were excavated to a maximum depth 1.10m bgl.
- 8 no. 150mm diameter cable percussive boreholes (BH101 to BH108) were sunk to a maximum depth of 11.77m bgl.

5.1.3 TP105 was not carried out due to access problems encountered from the existing trees.

5.1.4 TP112 was terminated at shallow depth due to substantial inflow of standing water. As a result, scheduled machine dug trial pits TP111, and TP113 to TP115, which were located in close proximity to TP112, were subsequently replaced by hand-dug trial pits. Machine dug trial pit TP117 was also replaced by HP117W and HP117E given the proximity to the Market Street bridge abutments.

5.1.5 HP111 and HP113 to HP115 were terminated at shallow depth due to substantial inflow of standing water, noting that these exploratory holes are located within the former pond area. HP117W and HP117E were terminated at 0.9m due to rapid inflow of groundwater.

5.1.6 A concrete obstruction was encountered in TP104 at 2.40m. In addition, obstructions were noted in BH103 and BH105 log records within the Glacial Deposits. Chiselling during drilling of the cable percussive boreholes was recorded in the Made Ground at BH107 at 2.00m to 2.30m and 5.50m to 5.60m bgl.

5.1.7 Chiselling was also undertaken at BH103 from 1.50m to 1.60m, BH104 from 6.80 to 7.00m, BH105 from 1.20m to 1.40m, BH106 from 5.50m to 5.70m and, BH107 from 11.30m to 11.40m.

2024 Ground Investigation

5.1.8 An additional phase of intrusive works was carried out by e3p on the 11th and 18th July 2024 to supplement the existing information for the site enabling works. This included additional investigation of the material within the pyramid structures and the ground conditions in the former pond area. The factual report [7] is provided in Appendix 3.

5.1.9 The exploratory locations are shown on Figure 5, Appendix 1. A summary of the exploratory holes is given below:

- 10 no. machine dug trial pits (TP201 to TP210) were excavated to a maximum depth of 4.20m bgl;
- 3 no. window sample boreholes (WS101 to WS103) were sunk to a maximum depth of 2.09m bgl.
- 8 no. dynamic cone penetrometer (DCP) tests to a maximum depth of 0.94m bgl to obtain approximate CBR% beneath the proposed access roads.

5.1.10 WS201 to WS203 were terminated at shallow depths due to SPT refusals on suspected cobbles within the Glacial Till.

5.1.11 TP201 to TP203, TP205, TP209, and TP210 terminated in the very stiff clay and TP204, TP206 to TP208 terminated on suspected cobbles within the Glacial Till.

5.1.12 Materials associated with the former railway land were encountered within the Pyramid Structures, this included old railway sleepers in TP202 at 0.40m to 1.50m bgl, and old railway tracks uncovered in TP203 at approximately 2.10m bgl.

5.1.13 A plastic liner was encountered in TP204 to TP210 at approximately 0.19m bgl which is associated with the former pond lining.

5.1.14 An old drainage pipe was encountered in TP202 at 0.40m bgl at the southern end of the trial pit.

5.2 Monitoring Installations

5.2.1 The ground conditions encountered with respect to the monitoring installations are summarised in Table 5.1. Visits have been made to site on 3 no. occasions between 10th and 31st January 2024 to monitor gas and water levels within the installations and to obtain samples.

Table 5.1 Standpipe Summary

Exploratory Hole	Response Zone (m bgl)	Response Zone (m OD)	Standpipe Diameter (mm)	Full Strata Depth (m bgl)	
BH101	2.00 - 6.00	84.35 – 80.35	50	2.00 – 6.00	Sandy gravelly clay (Glacial Clays)
BH102	0.50 – 1.50	86.24 – 85.24	50	0.50 – 1.50	Sandy gravelly clay (Glacial Clays)
	4.50 – 7.50	82.24 – 79.24	33	4.50 – 7.50	Mudstone
BH103	1.00 – 6.80	85.05 – 79.25	50	1.00 – 6.80	Sandy gravelly clay (Glacial Clays)
BH104	2.00 – 5.00	83.51 – 80.51	50	2.00 – 5.00	Sandy gravelly clay (Glacial Clays)
BH105	1.40 – 4.00	84.81 – 82.21	50	1.40 – 4.00	Sandy gravelly clay (Glacial Clays)

Exploratory Hole	Response Zone (m bgl)	Response Zone (m OD)	Standpipe Diameter (mm)	Full Strata Depth (m bgl)	
BH106	1.00 – 2.50	84.83 – 83.03	50	1.00 – 1.80	Clayey sand (Glacial Sands)
				1.80 – 2.50	Sandy gravelly clay (Glacial Clays)
	4.00 – 7.00	81.53 – 78.53	19	4.00 – 6.90	Sandy gravelly clay (Glacial Sands)
				6.90 – 7.00	Mudstone
BH107	1.00 – 4.00	89.59 – 86.59	50	1.00 – 4.00	Made Ground
	6.50 – 8.50	84.09 – 82.09	19	6.50 – 8.50	Gravelly sand (Glacial Sands)
BH108	1.00 – 3.00	84.57 – 82.57	50	1.00 – 3.00	Clayey gravel (Glacial Sands)

5.3 Groundwater Observations

5.3.1 Water strikes observed during the site works and the results of the monitoring visits are summarised in Table 5.2.

Table 5.2 Groundwater Observations

Exp Hole	Water Strikes				Standing Water Level During Monitoring			
	Struck		Rose to		Shallowest		Deepest	
	m bgl	m OD	m bgl	m OD	m bgl	m OD	m bgl	m OD
BH101	-	-	-	-	3.18	83.17	3.19	83.16
BH102 (33mm)	-	-	-	-	4.31	83.56	4.69	82.05
BH102 (50mm)					1.13	83.56	1.23	85.51
BH103	0.00	86.05	-	-	2.92	82.87	3.34	82.71
BH104	-	-	-	-	2.82	82.33	3.81	81.7
BH105	-	-	-	-	0.19	83.03	0.48	85.73
BH106 (19mm)	2.00	83.53	1.00	84.53	1.13	82.35	1.31	84.22
BH106 (50mm)					2.37	82.35	2.81	82.72
BH107 (19 mm)	7.00	83.59	6.00	84.59	5.97	87.41	6.05	84.54
BH107 (50mm)					Dry	Dry	Dry	Dry

Exp Hole	Water Strikes				Standing Water Level During Monitoring			
	Struck		Rose to		Shallowest		Deepest	
	m bgl	m OD	m bgl	m OD	m bgl	m OD	m bgl	m OD
BH108	0.20	85.37	0.00	85.57	0.13	82.39	0.37	85.20
HP111	0.00	85.64	-	-	-	-	-	-
HP113	0.00	85.58	-	-	-	-	-	-
HP114	0.00	85.56	-	-	-	-	-	-
HP115	0.00	85.56	-	-	-	-	-	-
HP117E	0.90	85.06	-	-	-	-	-	-
HP117W	0.90	85.04	-	-	-	-	-	-
SA101	0.40	85.71	-	-	-	-	-	-
SA102	0.15	85.94	-	-	-	-	-	-
TP103	1.70	85.07	-	-	-	-	-	-
TP106	1.20	86.36	-	-	-	-	-	-
TP112	0.00	85.52	-	-	-	-	-	-
TP116A	2.30	83.69	-	-	-	-	-	-
TP201	3.10	82.75	-	-	-	-	-	-
TP202	1.00	84.55	-	-	-	-	-	-
TP203	3.00	82.55	-	-	-	-	-	-
TP204	-	-	-	-	-	-	-	-
TP205	-	-	-	-	-	-	-	-
TP206	0.30	85.30	-	-	-	-	-	-
TP207	-	-	-	-	-	-	-	-
TP208	0.20	85.30	-	-	-	-	-	-
TP209	0.10 1.80	83.70 82.00	-	-	-	-	-	-
TP210	0.10 1.60	87.55 86.05	-	-	-	-	-	-
WS201	-	-	-	-	-	-	-	-
WS202	0.50	85.00	-	-	-	-	-	-
WS203	1.00	84.50	-	-	-	-	-	-

5.3.2 Groundwater monitoring was undertaken between the 10th and 31st January 2024 as part of the Geotechnics ground investigation. The cable percussive boreholes (BH101, BH102, BH104 to BH108) were monitored on three visits, and BH103 was monitored on two visits.

5.3.3 Groundwater was generally encountered in the shallow 50mm diameter standpipes at depths between 0.13m bgl (BH108) and 3.81m bgl (BH104). However, it should be noted that the monitoring standpipe installed in location BH107 was dry on all 3 no. visits. Due to the shallow groundwater levels encountered in BH105 and BH108, the response zones were completely submerged.

5.3.4 Groundwater was encountered in the deeper 19mm and 33mm diameter standpipes installed in BH102, BH106 and BH107 at depths between 2.37m and 6.05m bgl. As a result, the response zones were submerged.

5.4 Geotechnical Testing

5.4.1 In-situ testing was undertaken for geotechnical purposes and samples were obtained for appropriate laboratory analysis. Site based geotechnical testing is summarised in Table 5.3. Any limitations to the testing that require consideration during the evaluation of the data are described in the following paragraphs.

Table 5.3 In-situ Tests (Geotechnical)

Test Type and Reference	2022 Dunelm GI	2023 Geotechnics GI	2024 e3p GI
Standard penetration test (BS EN ISO 22476-3:2005+A1:2011)	17	49	6
Dynamic Cone Penetration test (TRL Probe Method)			8

5.4.2 Although a standardised test, uncorrected Standard Penetration Test (SPT) 'N' values display a considerable amount of scatter. Calibrated SPT hammers were used by the ground investigation contractor and in our appraisal (given in Section 6.0) and the results have been normalised to 'N_{60}' in accordance with Eurocode 7[11]. Correcting the tests with respect to energy ratio to determine 'N_{60}' reduces the scatter but does not eliminate it.

5.4.3 Some grossly elevated SPT N values, likely due to encountering boulders within the Glacial Deposits were recorded between 2m and 6m below ground level. These are not considered representative of the stratum as a whole and have therefore been discounted from subsequent analysis.

5.4.4 The SPT undertaken in BH107 at 6.00m straddles two strata and so is considered to be representative of neither and has been discounted from subsequent analysis.

5.4.5 Geotechnical laboratory testing is summarised in Table 5.4.

[11] EN 1997-2:2007 Eurocode 7 Geotechnical design – Part 2 Ground Investigation and Testing

Table 5.4 Laboratory Tests (Geotechnical)

Test type and reference (BS 1377: 1990 unless stated*)	2022 Dunelm GI	2023 Geotechnics GI	2024 e3p GI
Water (Moisture) Content (BS EN ISO 17892-1/ Part 2:3.2)	5	43	6
Liquid and plastic limits and plasticity index (BS EN ISO 17892-12:2018/ Part 2:4.3, 5.3 and 5.4)	5	28	4
Particle size distribution - wet sieving (BS EN ISO 17892-4/ Part 2:9.2)	3	14	4
Particle size distribution - sedimentation by pipette method (BS EN ISO 17892-5)		3	1
Dry Density/Moisture Content relationship determination - 2.5 kg Hammer (Part 4: 3.3)		22	1
California Bearing Ratio (CBR) Measurement – recompacted (Part 4: 7)		6	2
Moisture Condition Value Calibration Tests (Part 4: 5.5)		14	
Shear Strength Estimation using Hand Vane (Manufacturer's Instructions)		56	
Unconsolidated Undrained Triaxial Test (BS EN ISO 17892-8:2018)		1	
Organic matter content (Part 3:3)		4	
Water soluble sulphate content 2:1 aqueous extract (BRE SD1 2005)	4	20	
Total sulphur content (BRE SD1 2005)	4	20	
Acid soluble sulphate content (BRE SD1 2005)	4	20	
Soil pH (BRE SD1 2005)	4	20	
Sulphate content in groundwater (BRE SD1 2005)		7	
Groundwater pH (BRE SD1 2005)		7	

*Note, due to contamination being detected in the Made Ground some samples were tested in a separate laboratory. These samples were all tested using the BS 1377:1990 test methodologies.

5.4.6 As with in-situ testing, it is necessary to consider the limitations associated with any laboratory testing and to review any potentially anomalous results. In all geotechnical tests, it should be noted the specimen is selected from a much larger volume of material, which may have an inherent degree of variability, particularly in Made Ground.

5.4.7 Water content determinations on disturbed samples may not be wholly representative due to disturbance arising from the sampling process. In addition, moisture content results can be influenced by climatic factors and it cannot be guaranteed that the values determined at the time of investigation will be the same as those that prevail at the time of construction.

5.4.8 Obtaining coarse-grained soils from cable tool boreholes can result in a loss of fine materials due to the nature of the sampling process. This can have an influence on the results of particle size distribution analyses.

5.4.9 Determinations of undrained shear strength can be affected by sample disturbance. Whilst this is reduced by the use of UT100 sampling equipment, it cannot be fully eliminated and requires due consideration in appraising the results, especially where an elevated number of blows were required to retrieve the sample. Determinations of undrained shear strength can also be affected by the presence of fissures. The application of a suitable confining pressure in the test can reduce this, but fissures can still affect the results when present.

5.4.10 Sampling and preparation of samples for California Bearing Ratio tests in laboratory may result in the material tested not being fully representative of the soils in their in-situ state. Of particular note is the need to compact the sample prior to testing. Even when done at natural moisture content this state of compaction is likely to differ from that of the soil in its situ state. However, this may inform an understanding of the effects of proof rolling.

5.4.11 The above factors have been considered in the appraisal of geotechnical results given in Section 6.0.

5.5 Contamination Observations and Testing

5.5.1 Olfactory and visual evidence of potential contamination is summarised in Table 5.5 and includes observations relating to organic materials that may indicate a ground gas risk potential.

Table 5.5 Summary of Evidence of Contamination

Exploratory Hole	Depth (m bgl)	Strata	Comment
SA101	0.10 – 0.70	Made Ground	Clinker
SA102	0.10 – 0.50	Made Ground	Clinker
TP101	0.30 – 0.80	Made Ground	Clinker
TP102	0.60 – 1.50	Made Ground	Clinker
	1.50 – 4.00	Made Ground	Hydrocarbon odour, clinker, coal, plant remains
TP103	0.20 – 1.70	Made Ground	Oily sheen on soil and perched groundwater, hydrocarbon odour, clinker, steel
TP104	0.10 – 2.20	Made Ground	Clinker, timber
TP106	0.00 – 0.20	Topsoil	Clinker
	0.20 – 1.30	Made Ground	Clinker, plastic
	1.30 – 3.40	Made Ground	Strong hydrocarbon odour, clinker
TP107	0.0 – 1.50	Made Ground	Clinker
	1.50 – 3.30	Made Ground	Slight hydrocarbon odour, clinker
	1.50 – 4.00	Made Ground	Strong hydrocarbon odour

Exploratory Hole	Depth (m bgl)	Strata	Comment
TP108	0.10 – 2.00	Made Ground	Clinker
TP109	0.00 – 2.20	Made Ground	Clinker
	2.90 – 3.00	Made Ground	Asphalt
TP110	0.2 – 0.7	Made Ground	Ash
TP116A	0.40 – 0.80	Made Ground	Ash
TP119	0.00 – 0.20	Topsoil	Clinker
	0.20 – 3.00	Made Ground	Organic material, clinker
	3.00 – 3.70	Made Ground	Clinker
TP120	0.30 – 0.60	Made Ground	Clinker
	0.60 – 2.20	Made Ground	Coal
TP121	0.00 – 0.20	Topsoil	Clinker
	0.20 – 2.00	Made Ground	Clinker
	2.00 – 3.70	Made Ground	Clinker, coal, timber
	3.70 – 4.00	Made Ground	Clinker, decayed plant remains
TP122	0.00 – 0.40	Made Ground	Clinker
	0.40 – 0.80	Made Ground	Clinker, asphalt
TP123	0.40 – 0.70	Made Ground	Ash, hydrocarbon odour
BH101	1.20 – 2.45	Sandy gravelly clay	Coal fragments
BH102	0.10 – 0.20	Made Ground	Ash
	0.20 – 0.50	Made Ground	Coal, ash, wood fragments
BH103	0.00 – 0.90	Made Ground	Ash
BH104	0.50 – 1.00	Made Ground	Ash
BH107	0.30 – 1.20	Made Ground	Clinker
	1.20 – 6.10	Made Ground	Slag
TP201	0.30 – 3.00	Made Ground	Timber, sweet odour
	3.00 – 3.60	Made Ground	Slag, timber, sweet odour
TP202	0.40 – 1.50	Made Ground	Ash, slight sweet odour at 0.4m
TP203	0.30 – 1.80	Made Ground	Sweet odour
	1.80 – 3.50	Made Ground	Ash, clinker, slag, very sweet odour
TP210	0.20 – 0.60	Made Ground	Sweet odour
	1.50 – 1.80	Made Ground	Ash

5.5.2 Table 5.6 summarises the chemical suites that were analysed based upon the preliminary conceptual model and observed site conditions.

Table 5.6 Laboratory Tests (Environmental)

Test type	2022 Dunelm GI	2024 Geotechnics GI	2024 e3p GI
SOIL			
General Suite: pH, moisture content, metals and inorganics, phenol, speciated polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH)	13	39	10
Total organic carbon	7	11	10
Asbestos screen	8	18	9
Speciated petroleum hydrocarbons + BTEX	2	6	
Volatile organic compounds (VOCs) & semi-volatile organic compounds (SVOCs)		2	6
BTEX			6
WATER			
General Suite: pH, metals and inorganics, phenol, total polycyclic aromatic hydrocarbons (PAHs) and total petroleum hydrocarbons (TPH).		7	
Speciated polycyclic aromatic hydrocarbons (PAHs)		7	
Speciated petroleum hydrocarbons		4	
BTEX		1	
Volatile organic compounds (VOCs) & semi-volatile organic compounds (SVOCs)		1	
Speciated phenols		1	

5.5.3 It should be noted that following completion of the 3 phases of ground investigation, the proposed site boundary has been amended and the eastern parcel of land beyond Market Street is no longer included. Therefore, the 6 no. soil samples and 1 no. groundwater sample from the eastern parcel have not been included in the Generic Quantitative Risk Assessment in Section 7.0.

6.0 GEOTECHNICAL EVALUATION

6.1 Ground Conditions

6.1.1 The ground conditions encountered during the site investigation generally consisted of varying thicknesses of Made Ground over Glacial Deposits comprising a mix of clays and sands. The underlying mudstone bedrock of the Pennine Lower Coal Measures was encountered at several locations between 3m and 11m below ground level (bgl).

6.1.2 The general distribution of each stratum is shown in Table 6.1.

Table 6.1 Soil Profile

Stratum	From (m bgl)		To (m bgl)		Thickness (m)
	Range	Characteristic	Range	Characteristic	Range
Topsoil	0.00	0.00	0.01 to 0.50	<0.5	0.10 to 0.50
Made Ground	0.00 to 0.50	0.00	0.30 to 6.10	Variable across site	0.20 to 6.10
Glacial Deposits	0.10 to 6.10	<2	3.00 to 6.90	6 to 7	2.20 to 6.40
Mudstone (PLCM)	3.00 to 6.90	6 to 7	Not determined	-	-

PLCM = Pennine Lower Coal Measures

6.1.3 The ground model as outlined in Table 6.1 broadly agrees with the conditions anticipated however, isolated areas of deep Made Ground were found to be present across the site as discussed in the following sections and highlighted in Figure 6, Appendix 1.

6.1.4 The findings from BH107 have not been considered in Table 6.1 as this borehole was undertaken at a higher level at the top of the access road.

6.1.5 The following sections comprise discussion of each stratum and include the data provided from the 2022 ground investigation [5] in addition to the 2023 [6] and 2024 [7] investigations

6.2 Topsoil

6.2.1 Topsoil was encountered at thirty-seven of the sixty-two exploratory hole locations. Generally, it was recorded to depths of 0.20m however, locally was found to 0.50m bgl within BH104, BH106 and HP115. The full extent of the topsoil was not determined within some of the hand dug pits (HP111 and HP113 to HP115) due to ingress of water near the surface. The ingress of water is likely associated with the former pond that previously occupied this area of site.

6.2.2 The Topsoil typically comprises brown/ dark grey slightly sandy gravelly clay with some roots and rootlets.

6.2.3 It is noted that no topsoil was logged during the previous ground investigation carried out by Dunelm [5]. The log descriptions appear to have categorised the material as Made Ground and it is therefore considered in the following section.

6.2.4 No geotechnical testing was undertaken on samples from the Topsoil due to the minor thickness and inherent engineering variability.

6.3 Made Ground

6.3.1 Made Ground was encountered in the majority of the exploratory hole locations indicating a cover of Made Ground exists across the site. The thickness of Made Ground is variable ranging from <1m to 6m. In several locations the base of the Made Ground was not determined as highlighted in Figure 6, Appendix 1.

6.3.2 Areas of thicker Made Ground are situated within the pyramid features and the embankment running along the southern boundary. In these areas the thickness of Made Ground reaches in excess of 4m but reduces around the base of the pyramids to between 1m and 2m.

6.3.3 Beyond the pyramid structures and embankment, isolated spots of deep Made Ground were also recorded within TP01, TP04A, WS06 and TP110 as marked on Figure 6, Appendix 1.

6.3.4 The Made Ground has been broadly separated into two main units; “Fine Made Ground” dominated by clays and silts and “Granular Made Ground” comprising mainly sands and gravels.

6.3.5 The Fine Made Ground stratum generally comprises slightly sandy slightly gravelly clays with low to medium cobble content of sandstone and bricks. The gravel typically contains angular to sub rounded clasts of sandstone, siltstone, mudstone, clinker and brick fragments. Rootlets and organic material were noted at some locations with hydrocarbon odour described locally.

6.3.6 The Granular Made Ground soils typically include fine to coarse sands and gravels of siltstone, sandstones, mudstone, brick fragments, clinker and occasional concrete fragments. Medium cobble content was recorded at several locations with angular to sub angular limestone recorded in TP101 to 0.30m bgl.

6.3.7 Black asphalt was encountered at depth in TP109 at 2.90m bgl. In addition, a concrete obstruction was recorded at the base of TP104 at 2.40m bgl.

6.3.8 The drilling records show that chiselling was undertaken in BH107 at 2.00m and 5.50m bgl. It is anticipated that the obstructions comprise large cobbles and boulders present within the Made Ground forming the embankment.

6.3.9 Based on the available exploratory hole information from the 2023 investigation [6] an estimated two thirds of the Made Ground is dominated with clays (Fine Made Ground) with the other third comprising sand and gravel dominant soil (Granular Made Ground). However, the converse was recorded during the most recent investigation with most Made Ground described as being sands or gravels. This indicates that the Made Ground is highly variable across the site.

6.3.10 Exploratory holes targeting the former pond (TP204-TP209 and WS201-WS203) suggest the Made Ground ranges in thickness from 0.70m to 1.80m in this area. A plastic liner was recorded at 0.19m bgl in several locations; this is believed to be the former pond liner. The Made Ground encountered across the former pond typically comprises fine to medium sand

with varying content of gravel. Localised areas of clay or gravel dominant soils were also reported.

In-situ testing

6.3.11 Seventeen SPTs were carried out within the Made Ground, thirteen in the Granular Made Ground and the remaining four being within the Fine Made Ground. The N_{60} values are presented in Figure 7, Appendix 1. The N_{60} values within the Fine Made Ground range between 9 and 43 with the N_{60} values within the Granular Made Ground ranging between 9 and 152. Between ground level and 3m the SPT N_{60} values are generally between 15 and 30 indicating medium dense soils[12]. It should be noted that the majority of the SPTs undertaken were within the embankment along the southern boundary; no SPTs were carried out within the Pyramid structures.

6.3.12 N_{60} values of 9 and 10 were recorded in the Granular Made Ground present across the former pond (WS201-203) indicating loose to medium dense material in this area.

6.3.13 Assuming an empirical relationship of $c_u = 5 \times N_{60}$ (where C_u = undrained shear strength) the correlated undrained shear strength of the Fine Made Ground within the embankment is approximately 200kPa suggesting very high strength material.

6.3.14 An N_{60} value of 9 was recorded in the Fine Made Ground encountered in the former pond indicating an undrained shear strength of around 50kPa, however it should be noted that only a single SPT was undertaken in this stratum.

Laboratory Shear Vane Tests

6.3.15 Twenty-three laboratory shear vane tests (HSV) were undertaken on five samples of Fine Made Ground at varying moisture contents. A plot of the recorded undrained shear strengths vs moisture content, presented in Figure 11a, Appendix 1, indicates that the undrained shear strength generally falls below 50kPa where the moisture content is above 20% although, three tests recorded undrained shear strengths below 50kPa where the moisture content was between 15% and 20%.

Moisture Content and Atterberg Limit

6.3.16 A total of eleven moisture content tests were undertaken along with ten Atterberg limit determinations. The results are summarised in Table 6.2 below and schematics of the test results are presented in Figure 8 and Figure 9, Appendix 1.

Table 6.2 Summary of Atterberg limit determinations of Made Ground

Soil Parameters	No. of tests	Range of results
Moisture Content (%)	11	12 to 33
Liquid Limit (%)	10	31 to 49

[12] BS 5930:2015+A1:2020 Code of practice for ground investigations

Soil Parameters	No. of tests	Range of results
Plastic Limit (%)	10	19 to 24
Plasticity Index (%)	10	8 to 28
Modified Plasticity Index (%)	10	5 to 24

6.3.17 The modified plasticity index values suggest low to medium volume change potential in accordance with NHBC guidance[13]. When plotted on the Casagrande chart the results indicate the Made Ground to be a low to intermediate plasticity clay as shown on Figure 9, Appendix 1.

6.3.18 The characteristic constant volume angle of shearing resistance (ϕ'_{cv}) of the Fine Made Ground encountered during the ground investigation is estimated to be 25° based on guidance from BS 8004:2015[14]. Note the ϕ'_{cv} value provided is a cautious estimate as Made Ground is inheritably variable, and caution should be taken when applying characteristic parameters to this unit.

Particle Size Distribution (PSD) tests

6.3.19 Twelve particle size distribution (PSD) tests were carried out on samples collected from the Made Ground (three being of Fine Made Ground) recording the following particle size distributions:

Table 6.3 Particle Side Distribution Results of Made Ground

	Fine Made Ground	Granular Made Ground
Cobbles (%)	0 to 37	0 to 47
Gravel (%)	13 to 33	24 to 81
Sand (%)	23 to 47	12 to 66
Silt (%)	17	8
Clay (%)	8	3
Fines (%)	7 to 48	2 to 14

6.3.20 The PSD results suggest relatively low amounts of silt and clay present within the two samples described in the field as being clay dominant. This discrepancy may be due to the high cobble content within both samples; the surrounding matrix may contain higher proportions of clays.

6.3.21 The PSD tests undertaken in the Granular Made Ground samples generally agree with the infield descriptions indicating sand and gravel dominant soils with minor amounts of clay and silt. The cobble content within the material is generally below 10% however it is recorded to be as high as 47% within a sample from TP01 at 0.50m bgl.

[13] NHBC Standards, London, 2024
[14] BS 8004:2015+A1:2020 Code of practice for foundations

6.3.22 The Uniformity Coefficients (U_c) within the two samples of Fine Made Ground were calculated to be 112 and 523.

6.3.23 The Uniformity Coefficients (U_c) calculated from the samples of Granular Made Ground range between 10 and 567.

6.3.24 A characteristic constant volume angle of shearing resistance (ϕ'_{cv}) of the Granular Made Ground is estimated to be 34° based on guidance from BS 8004:2015.

Moisture Condition Value

6.3.25 Five Moisture Condition Value (MCV) relationship tests were undertaken on samples of the Made Ground. The results are presented in Figure 11a, Appendix 1.

Remoulded California Bearing Ratio

6.3.26 Five remoulded California Bearing Ratio (CBR) tests were carried out on samples of Fine Made Ground at the natural moisture content. The results are as follows:

- CBR (%): 0.5 to 1.3
- Moisture Content (%): 16 to 32
- Bulk Density (Mg/m^3): 1.82 to 2.16
- Dry Density (Mg/m^3): 1.38 to 1.86
- Percent Removed from 20mm sieve (%): 13 to 46

6.3.27 Remoulded California Bearing Ratio (CBR) tests were carried out on samples of Granular Made Ground collected from a pyramid structure (TP203) and beneath the former pond (TP208) at the natural moisture content. The results are as follows:

- CBR (%): 13 & 27
- Moisture Content (%): 14 to 17
- Bulk Density (Mg/m^3): 1.89 & 2.11
- Dry Density (Mg/m^3): 1.62 & 1.85
- Percent Removed from 20mm sieve (%): 8 & 40

6.3.28 The results suggest that the CBR is significantly higher within the Granular Made Ground comparable to the Fine Made Ground.

Dry Density/Moisture Content

6.3.29 Nine dry density/moisture content relationship tests were undertaken on samples of Made Ground using a 2.5kg rammer, six being on samples of Fine Made Ground and the remaining three tests on samples of Granular Made Ground. The results are as follows:

Table 6.4 Optimum Moisture Content Results of Made Ground

	Fine Made Ground	Granular Made Ground
Particle Density (Mg/m^3)	2.50 to 2.65	2.50 to 2.70
Maximum Dry Density (Mg/m^3)	1.66 to 1.78	1.67 to 1.92
Optimum Moisture Content (%)	15 to 19	12 to 16

6.3.30 Based on the moisture content results discussed above (and presented in Figure 8, Appendix 1) the natural moisture content of the Fine Made Ground material is generally above the optimum moisture content.

Organic Matter

6.3.31 Four organic matter content tests were carried out on samples of the Fine Made Ground. Organic matter contents (OMC) of between 1% to 4% were recorded with loss on ignition (LoI) values of 3% to 6%. The results suggest these samples contain slightly organic material[15].

6.4 Glacial Deposits

6.4.1 Where the base of the Made Ground was determined it was found to be underlain by Glacial Deposits. The Glacial Deposits encountered across the site generally comprise either clay or fine to medium sands. The glacial soils have therefore been separated into two sub-units, Glacial Clays and Glacial Sands.

6.4.2 The Glacial Clays are generally described as comprising firm to stiff dark grey-brown slightly sandy slightly gravelly clay. The gravel typically consists of sub angular to sub rounded clasts of mudstone, siltstone and sandstone. Locally the clays are described as being soft to firm up to depths of 10m bgl and low content of siltstone and sandstone was recorded.

6.4.3 Soils interpreted to be Glacial Clays encountered during the 2024 additional ground investigation [8] are described as being stiff to very stiff high strength gravelly CLAY. The gravel comprises angular to sub rounded mudstone, sandstone and siltstone.

6.4.4 The Glacial Sands typically comprise sands with varying content of clays and gravel. In some locations the soils are described as very sandy gravel with the gravel consisting of subrounded to rounded clasts of various lithologies. Low to medium cobble content is also present locally, comprising siltstone and sandstone. The Glacial Sands encountered during the additional ground investigation [8] are locally reported to comprise gravels with cobble content of angular to sub rounded sandstone clasts although the clasts were recovered as gravelly sands following disturbance from the excavator.

6.4.5 The drilling records show that chiselling was undertaken in the Glacial Clays in BH103 at 1.50m, BH105 at 1.20m and BH106 at 5.50m bgl. It is anticipated that the obstructions indicate large cobbles or boulders present within the Glacial Deposits. Shallow refusal was also reported in WS201, WS202 and WS203 at depths of 1.86m, 1.72m and 2.09m bgl respectively.

[15] BS 5930:2015+A1:2020 Code of practice for ground investigations

In-situ testing

6.4.6 Thirty-eight SPTs were carried out within the Glacial Deposits, thirty-three of which were in the Glacial Clays and the remaining five within the Glacial Sands; the results are presented in Figure 7, Appendix 1 (note, as discussed in Section 5.3 the results of five tests have been excluded from the analysis).

6.4.7 The N_{60} values within the Glacial Clays were recorded to be between 14 and 85. The N_{60} values within the Glacial Sands range between 18 and 24 indicating medium dense soils[16]. Three anomalously high N_{60} values reported at the base of WS201, WS202 and WS203 are believed to be on cobbles of sandstone and not representative of the surrounding matrix.

6.4.8 Assuming an empirical relationship of $c_u = 5 \times N_{60}$ the correlated undrained shear strength (c_u) within the Glacial Clays ranges between 72kPa and 423kPa (excluding the anomalous high results). A schematic of the results, plotted against depth is presented in Figure 10, Appendix 1.

Laboratory Shear Vane Tests

6.4.9 Thirty-three laboratory shear vane tests (HSV) were undertaken on nine samples of Glacial Clays at varying moisture contents. A plot of the recorded undrained shear strengths vs moisture content, presented in Figure 11b, Appendix 1, indicates that the undrained shear strength generally falls below 50kPa where the moisture content is above 15%.

Moisture Content and Atterberg Limit

6.4.10 A total of forty-one moisture content tests and twenty-eight Atterberg limits were undertaken on the Glacial Deposits. The results are summarised in Table 6.2 below and schematics of the test results are presented in Figure 8 and Figure 9, Appendix 1.

Table 6.5 Summary of Atterberg limit determinations of Glacial Deposits

Soil Parameters	No. of tests	Range of results
Moisture Content (%)	41	7 to 24
Liquid Limit (%)	28*	26 to 48
Plastic Limit (%)	28*	11 to 20
Plasticity Index (%)	28*	11 to 28
Modified Plasticity Index (%)	28*	5 to 27

* Sample from TP120 at 2.70m bgl recorded as being non plastic

6.4.11 The modified plasticity index values indicate low volume change potential (in accordance with NHBC guidance[17]) in twenty-five of the twenty-eight samples tested. Two of the three samples suggesting medium volume change potential recorded a Modified Plasticity Index of 21%, this is only marginally above the maximum limit for low volume change potential classification

[16] BS 5930:2015+A1:2020 Code of practice for ground investigations
[17] NHBC Standards, London, 2024

(20%) therefore, a characteristic volume change potential of low is deemed appropriate for the Glacial Clays. When plotted on the Casagrande chart the results indicate low to intermediate plasticity clay as shown on Figure 9, Appendix 1.

6.4.12 The characteristic constant volume angle of shearing resistance (ϕ'_{cv}) of the Glacial Clays is estimated to be 26° based on guidance from BS 8004:2015[18].

Undrained Triaxial Compression Test

6.4.13 A single undrained triaxial compression test was carried out on a sample of the Glacial Clays collected from BH107 at 9.00m to 9.45m bgl. The test recorded a failure strength of 101kPa indicating high strength soils[19]. It should be noted that a coarse gravel particle was noted to be present within the sample which may have affected the test results.

6.4.14 The bulk density was measured as 2.25Mg/m^3 with a dry density of 1.97Mg/m^3. The natural moisture content of the sample was recorded as 14%.

Particle Size Distribution (PSD) tests

6.4.15 Nine particle size distribution (PSD) tests were carried out on samples of Glacial Deposits (three being within the Glacial Clays) recording the following particle size distribution:

Table 6.6 Particle Size Distribution Results of Glacial Deposits

	Glacial Clays	Glacial Sands
Cobbles (%)	0	0 to 10
Gravel (%)	2 to 39	4 to 75
Sand (%)	24 to 35	17 to 86
Silt (%)	52	10
Clay (%)	15	6
Fines (%)	30 to 67	4 to 17

6.4.16 The PSD results suggests that the Glacial Clay comprises sandy clay/silt with variable content of gravel. The Glacial Sands show five of the six samples are relatively consistent indicating slightly silty slightly clayey sands and gravel with low cobble content.

6.4.17 The Uniformity Coefficient within the three samples of Glacial Sands was calculated to be between 4 to 383.

6.4.18 The Uniformity Coefficient calculated from a sample of Glacial Clays was calculated to be 13.

6.4.19 The constant volume angle of shearing resistance (ϕ'_{cv}), based on guidance from BS 8004:2015[20], is cautiously estimated to be 35° for the Glacial Sands.

[18] BS 8004:2015+A1:2020 Code of practice for foundations
[19] BS 5930:2015+A1:2020 Code of practice for ground investigations
[20] BS 8004:2015+A1:2020 Code of practice for foundations

Moisture Condition Value

6.4.20 Nine Moisture Condition Value (MCV) tests were undertaken on samples of the Glacial Deposits with eight of the tests undertaken on samples of Glacial Clays. The results are presented in Figure 11b, Appendix 1.

Remoulded California Bearing Ratio

6.4.21 One remoulded California Bearing Ratio (CBR) test was carried out on a sample of Glacial Clay, the results are as follows:

- CBR (%): 0.9 to 1.5
- Moisture Content (%): 13
- Bulk Density (Mg/m^3): 2.22
- Dry Density (Mg/m^3): 1.96
- Percent Retained removed from 20mm (%): 24

Dry Density/Moisture Content

6.4.22 Fourteen dry density/moisture content relationship tests were carried out on the Glacial Deposits using a 2.5kg rammer, six being undertaken on samples of Glacial Clays and the remaining eight on samples of Glacial Sands. The results are as follows:

Table 6.7: Optimum Moisture Content Results of Glacial Deposits

	Glacial Clays	Glacial Sands
Particle Density (Mg/m^3)	2.65 to 2.75	2.65 to 2.75
Maximum Dry Density (Mg/m^3)	1.85 to 2.03*	1.81 to 2.08
Optimum Moisture Content (%)	10 to 14*	9 to 14

*Anomalous results from TP103 not included

6.4.23 The results from the sample collected from TP103 at 3.00m recorded a Maximum Dry Density of 1.69Mg/m^3 and an Optimum Moisture Content of 18%. These results are significantly different to the other five tests carried out on the Glacial Clays and suggests potential variability within this stratum.

6.4.24 Based on the moisture content results discussed above (and presented in Figure 8, Appendix 1) the natural moisture content of the Glacial Clays is above the optimum moisture content in nearly all samples tested.

6.5 Pennine Lower Coal Measures

6.5.1 The underlying mudstone bedrock is interpreted to be part of the Pennine Lower Coal Measures (PLCM). The bedrock was encountered at eight locations from 3.00m to 11.40m bgl. The top contact of the bedrock was generally recorded to be between c. 79m and 81m OD with the exception of BH102 and BH105 where the contact was found to be higher (around 82m to 84m OD).

6.5.2 The bedrock was found to comprise extremely weak to very weak blue grey Mudstone recovered as gravel in the cable percussive boreholes.

In-situ testing

6.5.3 Eleven SPTs were carried out within the Mudstone, the results are presented in Figure 7, Appendix 1. The calculated N_{60} values range between 42 and 300.

6.5.4 Assuming an empirical relationship of UCS = 10 x N_{60} the correlated unconfined compressive strength (UCS) within the Pennine Lower Coal Measure ranges between 0.45MPa and 3.00MPa suggesting extremely weak to very weak rock[21].

Moisture Content and Atterberg Limit

6.5.5 Two moisture content tests were caried out on samples of the mudstone recording moisture contents of 11% and 13%.

6.6 Ground Aggressivity

6.6.1 Twenty-four soil samples, comprising fourteen from the Made Ground, seven from the Glacial Deposits and three from the mudstone were subjected to pH and water-soluble sulphate determinations. A summary of the results is included in Table 6.8.

Table 6.8 BRE Suite Test Results in reference to BRE SD1

Strata	No. Tests	pH	Sulphate Aqueous Extract as SO4 (mg/l)		Acid Soluble Sulphate (%)	Concrete Class Classification
			Range	Characteristic value		
Made Ground	10	6.7 to 10.3	40 to 974	796	0.04 to 1.16	DS-2 AC-2
Glacial Deposits	7	7.1 to 8.4	20 to 61	58	0.01 to 0.03	DS-1 AC-1
Mudstone	3	8.0 to 8.4	63 to 77	72	0.02 to 0.04	DS-1 AC-1

6.6.2 The samples were also subjected to total sulphur and acid soluble sulphate content testing to allow an assessment to be made in relation to the potential thaumasite form of concrete attack. A summary of the results is included in the Table 6.9.

Table 6.9 Modified Concrete Class Classification in reference to BRE Digest SD1

Strata	No. Tests	Total Potential Sulphates (%)		Oxidisable Sulfides (%)	Modified Concrete Class Classification
		Range	Characteristic value		
Made Ground	10	0.09 to 1.08	0.87	0.00 to 0.78	DS-3 AC-3

[21] BS 5930:2015+A1:2020 Code of practice for ground investigations

Strata	No. Tests	Total Potential Sulphates (%)		Oxidisable Sulfides (%)	Modified Concrete Class Classification
		Range	Characteristic value		
Glacial Deposits	7	0.03 to 0.27	0.15	0.00 to 0.24	No modification required
Mudstone	3	0.06 to 0.09	0.09	0.02 to 0.07	No modification required

6.6.3 Seven groundwater samples were also tested for pH and sulphate as SO_4 concentrations. The results recorded pHs of 7.2 to 7.6 and SO_4 concentrations of 6mg/l to 180mg/l.

6.7 Groundwater Conditions

6.7.1 Groundwater observations during the field work and the subsequent monitoring are described in Section 5.0 and are summarised in Table 5.2.

6.7.2 Groundwater seepages were recorded near the surface across the area of the former pond within the hand dug pits (HP111, HP113 to HP115 and HP117W/E) and the soakaway locations (SA101 and SA102). Photos of this area of site taken in November 2023 show the ground to be waterlogged. This was believed to be, in part, due to the presence of a former pond liner preventing infiltration into the ground. A liner was later identified to be present in several exploratory holes during the subsequent investigation (in July 2024) at 0.19m bgl.

6.7.3 Water strikes were also reported in several trial pits during the July 2024 investigation. These strikes were typically within the top 1m from ground surface within the Made Ground.

6.7.4 The groundwater monitoring results suggest that, beyond the former pond area, perched groundwater is present near the contact between the Made Ground and underlying Glacial Deposits. Generally, the perched water appears to lie at approximately 84.50m to 85.50m OD with local pockets of water up to 86m to 87m OD within WS05 and WS06.

6.7.5 Deeper groundwater, within the Glacial Deposits, lies at approximately 82m to 84m OD across the western half of site.

6.8 Permeability

6.8.1 Two infiltration tests were due to be undertaken in SA1 and SA2. Due to ingress of groundwater at the surface the tests were not able to be carried out.

6.9 Dynamic Cone Penetrometers (DCPs)

6.9.1 Shallow refusals were encountered at three locations, DCP101A, DCP103A and DCP103B at depths of 0.31m, 0.49m and 0.32m bgl respectively. The remaining five DCPs reached depths of between 0.70m to 0.93m bgl recording CBR values of 7% or greater.

Exploratory hole records from the previous investigations [6,7] suggest the probes are likely to have been undertaken within Made Ground largely consisting of sands and gravels.

7.0 GENERIC QUANTITATIVE RISK ASSESSMENT

7.1 Assessment Framework

7.1.1 In order to assess the risk to the identified human, controlled water and gas risk receptors the collected data have been compared against generic screening values. The guidance used to / select or calculate these values is provided in the Environmental Risk Assessment section at the rear of the report text.

7.2 Soil

7.2.1 The generic risk assessment incorporates the soil chemical data from the enabling works ground investigations conducted in 2023 and 2024, and the preliminary ground investigation conducted by CampbellReith in 2022 [4]. The exploratory hole locations in the eastern parcel, which is no longer part of the site boundary have been excluded from the assessment.

7.2.2 With respect to risk to end users, the soil screening values for a residential with plant uptake end use, as defined in Environment Agency Guidance SR3[22], have been selected based upon the proposed mixed-use commercial and residential development which will likely include residential properties with private gardens. The assessment assumes a Soil Organic Matter (SOM) content of 6% based on average site derived SOM data from the Made Ground and Glacial Till of 8.1%.

7.2.3 The results have been reviewed for evidence of potential zoning across the site and/or between the various soil strata, rather than screening the site in its entirety. As a consequence, the statistical assessment has treated the site as two separate Zones. Zone A incorporates the general soils sampled from across the of the pyramid park site. Zone B incorporates the soils sampled from within the pyramid structures. As reprofiling of soils is anticipated as part of the site enabling works and given the raised nature of the pyramid structures, the assessment has included all samplings including those collected from >1.0m depth where Made Ground was encountered. Additional tables are presented where appropriate to reflect distinct ground characteristics relevant to the conceptual model.

7.2.4 The results were compared against the screening values and are summarised in Table 7.1. The statistical assessment methodology is based on CL:AIRE's Professional Guidance[23], as detailed in the Environmental Risk Assessment section to the rear of this report. In summary, the 95% Upper Confidence Limit (95% UCL) of the mean concentration of the sample population/s has been calculated where there were exceedances of the screening value. Where the 95%UCL exceeds the screening values, these results are highlighted and discussed. The remainder are not considered indicative of significant contamination for the proposed end use and are not discussed further. Where there are suspected outliers and this is interpreted to be localised contamination (i.e. 'hotspot'), then these were treated as a separate sample zone.

[22] Environment Agency, Updated Technical Background to the CLEA Model, Science Report: SC050021/SR3, 2009
[23] CL:AIRE Comparing Soil Contamination Data with a Critical Concentration (v1.1 February 2021)

General Soils

Table 7.1 Summary of Soil Analysis Table Zone A – General Soils

Contaminant	Units	Exceeding	Max	95% UCL	GAC
Metals & Inorganics					
Arsenic	mg/kg	1 / 35	37	14.1	37 [B]
Boron	mg/kg	0 / 34	6	-	530 [A]
Beryllium	mg/kg	3 / 34	5.1	1.22	1.7 [A]
Cadmium	mg/kg	0 / 35	1	-	22 [B]
Chromium	mg/kg	0 / 35	880	-	910 [A]
Chromium - Hexavalent	mg/kg	0 / 34	<1	-	21 [B]
Copper	mg/kg	0 / 35	490	-	2900 [A]
Lead	mg/kg	1 / 35	240	68.5	200 [B]
Mercury	mg/kg	0 / 35	0.29	-	42 [A]
Nickel	mg/kg	0 / 35	82	-	140 [A]
Selenium	mg/kg	0 / 34	1.5	-	270 [A]
Vanadium	mg/kg	0 / 34	450	-	480 [A]
Zinc	mg/kg	0 / 35	400	-	4800 [A]
Cyanide	mg/kg	0 / 35	1.4	-	24 [C]
Total Petroleum Hydrocarbons					
EPH >C10-12	mg/kg	0 / 29	57	-	420 [A]
EPH >C12-16	mg/kg	0 / 30	360	-	710 [A]
EPH >C16-21	mg/kg	1 / 30	1200	175	980 [A]
EPH >C21-40	mg/kg	- / 9	150	-	n/a
TPH >C6-40	mg/kg	1 / 5	430	292	150 [A]
EPH/TPH >C6-8	mg/kg	0 / 5	<1	-	350 [A]
EPH/TPH >C8-10	mg/kg	0 / 5	<1	-	150 [A]
EPH/TPH >C10-12	mg/kg	0 / 5	5.3	-	420 [A]
EPH/TPH >C12-16	mg/kg	0 / 5	24	-	710 [A]
EPH/TPH >C16-21	mg/kg	0 / 5	110	-	980 [A]
EPH/TPH >C21-36	mg/kg	1 / 21	2100	411	1700 [A]
EPH/TPH >C36-40	mg/kg	0 / 21	150	-	1700 [A]
Aliphatics >C5-6	mg/kg	0 / 3	<0.01	-	160 [A]
Aliphatics >C6-8	mg/kg	0 / 3	<0.01	-	530 [A]
Aliphatics >C8-10	mg/kg	0 / 3	<0.01	-	150 [A]
Aliphatics >C10-12	mg/kg	0 / 3	5.1	-	760 [A]
Aliphatics >C12-16	mg/kg	0 / 3	42	-	4300 [A]
Aliphatics >C16-21	mg/kg	0 / 3	110	-	110000 [A]
Aliphatics >C21-35	mg/kg	0 / 3	31	-	110000 [A]
Aliphatics >C35-44	mg/kg	0 / 3	<3.4	-	110000 [A]
Aliphatics >C10-35	mg/kg	- / 3	180	-	n/a
Aromatics >C5-7	mg/kg	0 / 3	<0.01	-	350 [A]
Aromatics >C7-8	mg/kg	0 / 3	<0.01	-	790 [A]
Aromatics >C8-10	mg/kg	0 / 3	<0.01	-	200 [A]
Aromatics >C10-12	mg/kg	0 / 3	<0.9	-	420 [A]
Aromatics >C12-16	mg/kg	0 / 3	11	-	710 [A]
Aromatics >C16-21	mg/kg	0 / 3	50	-	980 [A]
Aromatics >C21-35	mg/kg	0 / 3	60	-	1700 [A]
Aromatics >C35-44	mg/kg	0 / 3	<1.4	-	1700 [A]

BTEX					
Benzene	mg/kg	0 / 5	<0.1	-	0.87 [B]
Toluene	mg/kg	0 / 5	<0.1	-	790 [A]
Ethylbenzene	mg/kg	0 / 5	<0.1	-	280 [A]
Xylene (Total)	mg/kg	0 / 3	<0.1	-	320 [A]
O-Xylene	mg/kg	0 / 2	<0.01	-	350 [A]
m,p xylenes	mg/kg	0 / 2	<0.01	-	320 [A]
Methyl tert-butyl ether	mg/kg	0 / 2	<0.01	-	220 [D]
Polycyclic Aromatic Hydrocarbons					
Naphthalene	mg/kg	0 / 39	5	-	13 [A]
Acenaphthylene	mg/kg	0 / 36	0.5	-	1000 [A]
Acenaphthene	mg/kg	0 / 37	12	-	1200 [A]
Fluorene	mg/kg	0 / 37	20	-	930 [A]
Phenanthrene	mg/kg	0 / 37	29	-	470 [A]
Anthracene	mg/kg	0 / 37	6.5	-	11000 [A]
Fluoranthene	mg/kg	0 / 37	19	-	930 [A]
Pyrene	mg/kg	0 / 37	19	-	2100 [A]
Benzo (a) anthracene	mg/kg	0 / 37	6.6	-	13 [A]
Chrysene	mg/kg	0 / 37	7.4	-	27 [A]
Benzo (b) fluoranthene	mg/kg	2 / 37	8.9	1.32	3.7 [A]
Benzo (k) fluoranthene	mg/kg	0 / 37	3.2	-	100 [A]
Benzo (a) pyrene	mg/kg	1 / 37	7.4	1.1	5 [B]
Indeno (1,2,3 - cd) pyrene	mg/kg	0 / 37	4.4	-	42 [A]
Dibenzo (ah) anthracene	mg/kg	3 / 37	0.92	0.156	0.31 [A]
Benzo (ghi) perylene	mg/kg	0 / 37	4.7	-	350 [A]
Speciated Phenols					
Phenol	mg/kg	0 / 11	<0.5	-	430 [A]
2,4 - Dimethylphenol	mg/kg	0 / 2	<0.5	-	120 [D]
2-Chlorophenol	mg/kg	0 / 2	<0.5	-	14 [A]
Phenol (Monohydric)	mg/kg	0 / 21	0.9	-	430 [A]
Other Organics					
Tribromomethane	mg/kg	0 / 2	<0.01	-	17 [D]
Bromodichloromethane	mg/kg	0 / 2	<0.01	-	0.084 [D]
Carbon tetrachloride	mg/kg	0 / 2	<0.01	-	2 [A]
Chloroethane	mg/kg	0 / 1	<0.002	-	26 [D]
Chloromethane	mg/kg	0 / 1	<0.001	-	0.019 [D]
Vinyl chloride	mg/kg	0 / 2	<0.01	-	0.017 [B]
cis 1,2 - Dichloroethene	mg/kg	0 / 2	<0.01	-	0.52 [D]
Trans - 1,2 - Dichloroethene	mg/kg	0 / 2	<0.01	-	0.99 [D]
1,1 - Dichloroethane	mg/kg	0 / 2	<0.01	-	11 [D]
1,1 - Dichloroethene	mg/kg	0 / 2	<0.01	-	1.2 [D]
Trichloroethene	mg/kg	0 / 2	<0.01	-	0.043 [B]
1,1,2 - Trichloroethane	mg/kg	0 / 2	<0.01	-	3.7 [D]
Tetrachloroethene	mg/kg	0 / 2	<0.01	-	1.6 [B]
Hexachloroethane	mg/kg	0 / 2	<0.5	-	1.6 [D]
1,2 - Dichloropropane	mg/kg	0 / 2	<0.01	-	0.12 [D]
1,2,4 - Trimethylbenzene	mg/kg	0 / 2	<0.01	-	2.8 [D]
Styrene	mg/kg	0 / 2	<0.01	-	55 [D]

iso - Propylbenzene	mg/kg	0 / 2	<0.01	-	89 [D]
n-propylbenzene	mg/kg	0 / 2	<0.01	-	270 [D]
2 - Chloronaphthalene	mg/kg	0 / 2	<0.5	-	31 [D]
2,4 - Dinitrotoluene	mg/kg	0 / 2	<0.5	-	8.7 [D]
2,6 - Dinitrotoluene	mg/kg	0 / 2	<0.5	-	4.8 [D]
Bromobenzene	mg/kg	0 / 2	<0.01	-	6.6 [D]
Butyl benzyl phthalate	mg/kg	0 / 2	<0.5	-	8200 [D]
Diethyl phthalate	mg/kg	0 / 2	<0.5	-	700 [D]
1,4-Dichlorobenzene	mg/kg	0 / 3	<0.5	-	350 [A]
1,2,4-Trichlorobenzene	mg/kg	0 / 4	<0.5	-	15 [A]
2,4-Dichlorophenol	mg/kg	0 / 2	<0.5	-	31 [A]
1,3-Dichlorobenzene	mg/kg	0 / 3	<0.5	-	2.5 [A]
Di-n-butyl phthalate	mg/kg	0 / 2	<0.5	-	76 [D]
2,4,6-Trichlorophenol	mg/kg	0 / 2	<0.5	-	39 [A]
1,2-Dichlorobenzene	mg/kg	0 / 3	<0.5	-	130 [A]
Hexachlorobenzene (HCB)	mg/kg	0 / 2	<0.5	-	5.6 [A]
Hexachlorobutadiene (HCBD)	mg/kg	0 / 3	<0.5	-	1.9 [A]
Miscellaneous					
1,2-Dichloroethane	mg/kg	0 / 2	<0.01	-	0.31 [B]
Chlorobenzene	mg/kg	0 / 2	<0.01	-	2.4 [A]
bis (2 - ethylhexyl) phthalate	mg/kg	0 / 2	<0.5	-	1400 [D]
Di - n - octyl phthalate	mg/kg	0 / 2	<0.5	-	4300 [D]
Aldrin	mg/kg	0 / 1	<0.2	-	7.1 [A]
alpha-Hexachlorocyclohexane	mg/kg	0 / 1	<0.2	-	1.4 [A]
beta-Hexachlorocyclohexane	mg/kg	0 / 1	<0.2	-	0.5 [A]
gamma-Hexachlorocyclohexane	mg/kg	0 / 1	<0.2	-	0.37 [A]
2,3,4,6-Tetrachlorophenol	mg/kg	0 / 2	<0.2	-	75 [A]
Dieldrin	mg/kg	0 / 1	<0.2	-	3.7 [A]
Pentachlorobenzene	mg/kg	0 / 1	<5	-	25 [A]
1,1,1,2 - Tetrachloroethane	mg/kg	0 / 2	<0.01	-	8.3 [A]
Chloroform	mg/kg	0 / 2	<0.01	-	4.2 [A]
1,1,1-Trichloroethane	mg/kg	0 / 2	<0.01	-	40 [A]
Dichloromethane	mg/kg	0 / 1	<0.01	-	2.1 [D]
Carbon Disulphide	mg/kg	0 / 1	<0.05	-	0.62 [A]
1,2,3 Trichlorobenzene	mg/kg	0 / 2	<0.01	-	8.8 [A]
Pentachlorophenol (PCP)	mg/kg	0 / 1	<0.1	-	14 [A]

Residential with Plant Uptake assuming 6.0% SOM Generic Assessment Criteria (GAC)

[A] LQM/CIEH Suitable for use Levels (S4UL). Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL 3036. All rights reserved. Top two consumption group applied.

[B] Defra Category 4 Screening Levels (C4SLs)

[C] Acute Risk GAC (SoBRA derived)

[D] GAC derived using CLEA v1.071

[E] GAC derived using CLEA v1.071 and SGV report spreadsheet

7.2.5 Statistical assessment indicates that there are no identified outliers within the general soils dataset.

Metals and Inorganics

7.2.6 Exceedances of beryllium have been identified in a total of 3 no. samples of the soils retrieved from BH107, located on the access road, and TP116A and TP123 which are located within the southern edge of the former pond area and in close proximity to the northern boundary, respectively.

7.2.7 A single exceedance of lead was also encountered in TP110 at 0.20m bgl which is located to the north of the former pond in close proximity to the northern site boundary.

7.2.8 For both lead and beryllium, the calculated 95% UCL are below the relevant GAC and are therefore not indicative of widespread contamination requiring further consideration.

Polycyclic Aromatic Hydrocarbons (PAH)

7.2.9 The concentrations of PAH compounds benzo(b)fluoranthene and dibenzo(ah)anthracene recorded in the samples of Made Ground collected from TP110 at 0.20m and TP210 at 0.40m bgl are above the GACs. A single exceedance of benzo(a)pyrene was also recorded in TP210 at 0.40m bgl which is located within the former pond area, adjacent the bridge arch. The calculated 95% UCL was below the relevant GAC for the PAH compounds, therefore no further consideration is required.

Petroleum Hydrocarbons (TPH)

7.2.10 Exceedances of TPH fractions EPH >C16-21 and EPH/TPH >C21-36 have been recorded in BH101 at 0.5m bgl which is located adjacent to the pyramid structures and within the general area of the former good sheds. Again, the calculated 95% UCL was below the corresponding GAC and therefore has not been considered further.

7.2.11 An elevated concentration of TPH >C6-40 was recorded in TP210 at 0.40m. The calculated 95% UCL was above the corresponding GAC, however, this is based on the GAC for Aromatic (>C8-10) / Aliphatic (>C8-10) which is used as a worst-case scenario. There are no assessment criteria available for the sum of total petroleum hydrocarbon fractions.

Summary – General Soils

7.2.12 Based on the current masterplan, none of the contaminant exceedances are located within the proposed soft landscaped areas or private gardens, therefore the risk of direct exposure to end users is minimised. Additionally, there is proposed to be a programme of site enabling works prior to final development. It is anticipated that cover soils will be required in landscaped areas and for private gardens however, these will not be installed as part of the enabling works.

Pyramid Structures

Table 7.2 Summary of Soil Analysis Zone B - Pyramid Structures

Contaminant	Units	Exceeding	Max	95% UCL	GAC
Metals & Inorganics					
Arsenic	mg/kg	0 / 25	27	-	37 [B]
Boron	mg/kg	0 / 25	1.3	-	530 [A]
Beryllium	mg/kg	1 / 25	2.9	0.978	1.7 [A]

Contaminant	Units	Exceeding	Max	95% UCL	GAC
Cadmium	mg/kg	0 / 25	0.9	-	22 [B]
Chromium	mg/kg	0 / 25	32	-	910 [A]
Chromium - Hexavalent	mg/kg	0 / 25	<1	-	21 [B]
Copper	mg/kg	0 / 25	390	-	2900 [A]
Lead	mg/kg	2 / 25	850	169	200 [B]
Mercury	mg/kg	0 / 25	0.3	-	42 [A]
Nickel	mg/kg	0 / 25	42	-	140 [A]
Selenium	mg/kg	0 / 25	0.83	-	270 [A]
Vanadium	mg/kg	0 / 25	75	-	480 [A]
Zinc	mg/kg	0 / 25	260	-	4800 [A]
Cyanide	mg/kg	1 / 25	24	2.95	24 [C]
Total Petroleum Hydrocarbons					
EPH >C10-12	mg/kg	0 / 20	39	-	420 [A]
EPH >C12-16	mg/kg	0 / 20	320	-	710 [A]
EPH >C16-21	mg/kg	2 / 20	1600	348	980 [A]
TPH >C6-40	mg/kg	4 / 5	8800	6420	150 [A]
EPH/TPH >C6-8	mg/kg	0 / 5	<1	-	350 [A]
EPH/TPH >C8-10	mg/kg	0 / 5	2.5	-	150 [A]
EPH/TPH >C10-12	mg/kg	0 / 5	100	-	420 [A]
EPH/TPH >C12-16	mg/kg	0 / 5	600	-	710 [A]
EPH/TPH >C16-21	mg/kg	1 / 5	2600	1860	980 [A]
EPH/TPH >C21-36	mg/kg	2 / 17	3100	834	1700 [A]
EPH/TPH >C36-40	mg/kg	0 / 17	190	-	1700 [A]
Aliphatics >C5-6	mg/kg	0 / 4	<0.01	-	160 [A]
Aliphatics >C6-8	mg/kg	0 / 4	<0.01	-	530 [A]
Aliphatics >C8-10	mg/kg	0 / 4	<0.01	-	150 [A]
Aliphatics >C10-12	mg/kg	0 / 4	<1.5	-	760 [A]
Aliphatics >C12-16	mg/kg	0 / 4	<1.2	-	4300 [A]
Aliphatics >C16-21	mg/kg	0 / 4	6.9	-	110000 [A]
Aliphatics >C21-35	mg/kg	0 / 4	68	-	110000 [A]
Aliphatics >C35-44	mg/kg	0 / 3	<3.4	-	110000 [A]
Aliphatics >C5-35	mg/kg	0 / 1	75	-	150 [A]
Aromatics >C5-7	mg/kg	0 / 4	<0.01	-	350 [A]
Aromatics >C7-8	mg/kg	0 / 4	<0.01	-	790 [A]
Aromatics >C8-10	mg/kg	0 / 4	<0.01	-	200 [A]
Aromatics >C10-12	mg/kg	0 / 4	18	-	420 [A]
Aromatics >C12-16	mg/kg	0 / 4	32	-	710 [A]
Aromatics >C16-21	mg/kg	0 / 4	90	-	980 [A]
Aromatics >C21-35	mg/kg	0 / 4	160	-	1700 [A]
Aromatics >C35-44	mg/kg	0 / 3	<1.4	-	1700 [A]
BTEX					
Benzene	mg/kg	0 / 10	<0.01	-	0.87 [B]
Toluene	mg/kg	0 / 10	<0.01	-	790 [A]
Ethylbenzene	mg/kg	0 / 10	<0.01	-	280 [A]
Xylene (Total)	mg/kg	0 / 4	<0.01	-	320 [A]
O-Xylene	mg/kg	0 / 6	<0.01	-	350 [A]
m,p xylenes	mg/kg	0 / 6	<0.01	-	320 [A]
Methyl tert-butyl ether	mg/kg	0 / 6	<0.01	-	220 [D]

Contaminant	Units	Exceeding	Max	95% UCL	GAC
Polycyclic Aromatic Hydrocarbons					
Naphthalene	mg/kg	0 / 36	4	-	85 [B]
Acenaphthylene	mg/kg	0 / 31	0.5	-	1000 [A]
Acenaphthene	mg/kg	0 / 31	11	-	1200 [A]
Fluorene	mg/kg	0 / 31	7.6	-	930 [A]
Phenanthrene	mg/kg	0 / 31	57	-	470 [A]
Anthracene	mg/kg	0 / 31	14	-	11000 [A]
Fluoranthene	mg/kg	0 / 31	74	-	930 [A]
Pyrene	mg/kg	0 / 31	66	-	2100 [A]
Benzo (a) anthracene	mg/kg	3 / 31	34	7.03	13 [A]
Chrysene	mg/kg	2 / 31	36	6.94	27 [A]
Benzo (b) fluoranthene	mg/kg	12 / 31	42	7.78	3.7 [A]
Benzo (k) fluoranthene	mg/kg	0 / 31	15	-	100 [A]
Benzo (a) pyrene	mg/kg	8 / 31	33	6.36	5 [B]
Indeno (1,2,3 - cd) pyrene	mg/kg	0 / 31	20	-	42 [A]
Dibenzo (ah) anthracene	mg/kg	12 / 31	4.3	0.83	0.31 [A]
Benzo (ghi) perylene	mg/kg	0 / 31	18	-	350 [A]
Speciated Phenols					
Phenol	mg/kg	0 / 9	<0.5	-	430 [A]
2,4 - Dimethylphenol	mg/kg	0 / 6	<0.5	-	120 [D]
2-Chlorophenol	mg/kg	0 / 6	<0.5	-	14 [A]
Phenol (Monohydric)	mg/kg	0 / 17	2.2	-	430 [A]
Other Organics					
Tribromomethane	mg/kg	0 / 6	<0.01	-	17 [D]
Bromodichloromethane	mg/kg	0 / 6	<0.01	-	0.084 [D]
Carbon tetrachloride	mg/kg	0 / 6	<0.01	-	2 [A]
Chloroethane	mg/kg	0 / 5	<0.002	-	26 [D]
Chloromethane	mg/kg	0 / 5	<0.001	-	0.019 [D]
Vinyl chloride	mg/kg	0 / 6	<0.01	-	0.017 [B]
cis 1,2 - Dichloroethene	mg/kg	0 / 6	<0.01	-	0.52 [D]
Trans - 1,2 - Dichloroethene	mg/kg	0 / 6	<0.01	-	0.99 [D]
1,1 - Dichloroethane	mg/kg	0 / 6	<0.01	-	11 [D]
1,1 - Dichloroethene	mg/kg	0 / 6	<0.01	-	1.2 [D]
Trichloroethene	mg/kg	0 / 6	<0.01	-	0.043 [B]
1,1,2 - Trichloroethane	mg/kg	0 / 6	<0.01	-	3.7 [D]
Tetrachloroethene	mg/kg	0 / 6	<0.01	-	1.6 [B]
Hexachloroethane	mg/kg	0 / 9	<0.5	-	1.6 [D]
1,2 - Dichloropropane	mg/kg	0 / 6	<0.01	-	0.12 [D]
1,2,4 - Trimethylbenzene	mg/kg	0 / 6	<0.01	-	2.8 [D]
Styrene	mg/kg	0 / 6	<0.01	-	55 [D]
iso - Propylbenzene	mg/kg	0 / 6	<0.01	-	89 [D]
n-propylbenzene	mg/kg	0 / 6	<0.01	-	270 [D]
2 - Chloronaphthalene	mg/kg	0 / 6	<0.5	-	31 [D]
2,4 - Dinitrotoluene	mg/kg	0 / 6	<0.5	-	8.7 [D]
2,6 - Dinitrotoluene	mg/kg	0 / 6	<0.5	-	4.8 [D]
Bromobenzene	mg/kg	0 / 6	<0.01	-	6.6 [D]
Butyl benzyl phthalate	mg/kg	0 / 6	<0.5	-	8200 [D]
Diethyl phthalate	mg/kg	0 / 6	<0.5	-	700 [D]

Contaminant	Units	Exceeding	Max	95% UCL	GAC
1,4-Dichlorobenzene	mg/kg	0 / 11	<0.5	-	350 [A]
1,2,4-Trichlorobenzene	mg/kg	0 / 12	<0.5	-	15 [A]
2,4-Dichlorophenol	mg/kg	0 / 6	<0.5	-	31 [A]
1,3-Dichlorobenzene	mg/kg	0 / 11	<0.5	-	2.5 [A]
Di-n-butyl phthalate	mg/kg	0 / 6	<0.5	-	76 [D]
2,4,6-Trichlorophenol	mg/kg	0 / 6	<0.5	-	39 [A]
1,2-Dichlorobenzene	mg/kg	0 / 11	<0.5	-	130 [A]
Hexachlorobenzene (HCB)	mg/kg	0 / 6	<0.5	-	5.6 [A]
Hexachlorobutadiene (HCBD)	mg/kg	0 / 11	<0.5	-	1.9 [A]
Miscellaneous					
1,2-Dichloroethane	mg/kg	0 / 6	<0.01	-	0.31 [B]
Chlorobenzene	mg/kg	0 / 6	<0.01	-	2.4 [A]
bis (2 - ethylhexyl) phthalate	mg/kg	0 / 6	<0.5	-	1400 [D]
Di - n - octyl phthalate	mg/kg	0 / 6	<0.5	-	4300 [D]
Aldrin	mg/kg	0 / 4	<0.2	-	7.1 [A]
alpha-Hexachlorocyclohexane	mg/kg	0 / 4	<0.2	-	1.4 [A]
beta-Hexachlorocyclohexane	mg/kg	0 / 4	<0.2	-	0.5 [A]
gamma-Hexachlorocyclohexane	mg/kg	0 / 4	<0.2	-	0.37 [A]
2,3,4,6-Tetrachlorophenol	mg/kg	0 / 5	<0.2	-	75 [A]
Dieldrin	mg/kg	0 / 4	<0.2	-	3.7 [A]
Pentachlorobenzene	mg/kg	0 / 4	<5	-	25 [A]
1,1,1,2 - Tetrachloroethane	mg/kg	0 / 6	<0.01	-	8.3 [A]
Chloroform	mg/kg	0 / 6	<0.01	-	4.2 [A]
1,1,1-Trichloroethane	mg/kg	0 / 6	<0.01	-	40 [A]
Dichloromethane	mg/kg	0 / 5	<0.05	-	2.1 [D]
Carbon Disulphide	mg/kg	0 / 4	<0.05	-	0.62 [A]
1,2,3 Trichlorobenzene	mg/kg	0 / 6	<0.01	-	8.8 [A]
Pentachlorophenol (PCP)	mg/kg	0 / 1	<0.1	-	14 [A]

Residential with Plant Uptake assuming 6.0% SOM Generic Assessment Criteria (GAC)

[A] LQM/CIEH Suitable for use Levels (S4UL). Copyright Land Quality Management Limited reproduced with permission; Publication Number S4UL 3036. All rights reserved. Top two consumption group applied.

[B] Defra Category 4 Screening Levels (C4SLs)

[C] Acute Risk GAC (SoBRA derived)

[D] GAC derived using CLEA v1.071

[E] GAC derived using CLEA v1.071 and SGV report spreadsheet

7.2.13 Statistical assessment indicates that there are no outliers within the soil dataset from the pyramid structures.

Metals and Inorganics

7.2.14 From the samples collected from the pyramid structures, a single exceedance of beryllium has been recorded in TP108 at 0.2m bgl. Exceedances of lead were recorded in TP107 at 3.3m bgl and TP203 at 2.0m bgl. The calculated 95% UCL for both beryllium and lead were below the corresponding GAC and are therefore not considered further.

Polycyclic Aromatic Hydrocarbons (PAH)

7.2.15 The concentration of the PAH compounds benzo(a)anthracene and chrysene have been recorded above the GAC in 1 no. sample. However, the calculated 95% UCL concentrations are below the corresponding GAC.

7.2.16 Exceedances in benzo(a)pyrene have been recorded in 5 no. soil samples, exceedances in dibenzo(ah)anthracene have been recorded in 7 no. soil samples, and exceedances in benzo(b)fluoranthene have been recorded in 8 no. soil samples collected from the pyramids. The calculated 95% UCL concentrations for the three PAH compounds are above the corresponding GAC.

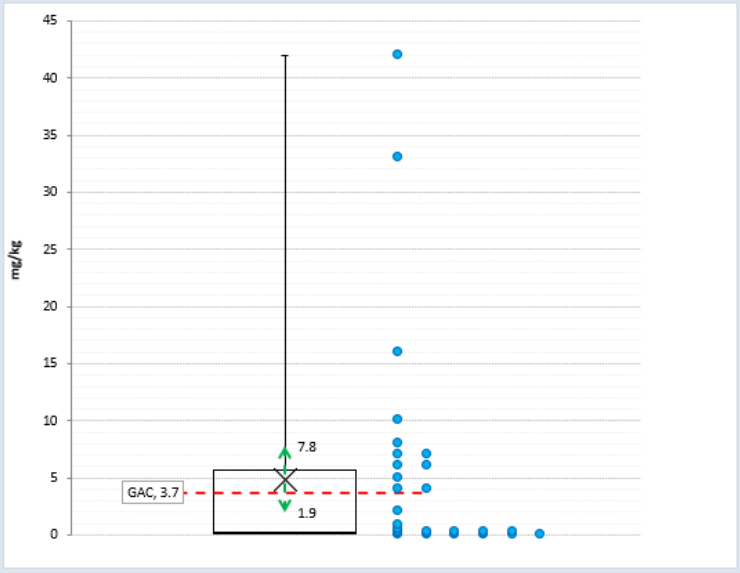
7.2.17 In accordance with the guidance on applying statistics to land contamination decision-making CL:AIRE (2020), the results for the contaminants exceeding the screening criteria have been plotted on a box plot and table of associated statistics below.

Table 7.3 Summary of Soil Analysis – Localised PAH Contamination in the Pyramids

Contaminant	Hole ID	Concentration (mg/kg)	GAC (mg/kg)	Depth (m bgl)
Benzo(b)fluoranthene	TP201	6.5*	3.7	0.2
	TP201	16*	3.7	2.0
	TP202	5.7*	3.7	0.4
	TP203	42*	3.7	2.0
	TP106	6.5	3.7	2.8
	TP108	10	3.7	0.2
	TP107	7.7	3.7	3.3
	TP119	3.8	3.7	3.0
Benzo(a)pyrene	TP201	5.5	5	0.2
	TP201	14	5	2.0
	TP203	33*	5	2.0
	TP107	6.4	5	3.3
	TP108	7.9	5	0.2
Dibenzo(ah)anthracene	TP201	0.69*	0.31	0.2
	TP201	1.8*	0.31	2.0
	TP202	0.64*	0.31	0.4
	TP203	4.3*	0.31	2.0
	TP203	0.5	0.31	3.5
	TP106	0.46	0.31	2.8
	TP107	0.6	0.31	3.3
	TP108	1	0.31	0.2

**Peak concentration with the lowest Limits of Detection (LOD) from duplicate tests.*

GRAPH 7.1 Statistical Summary of Soil Benzo(b)fluoranthene Concentrations in the Pyramids

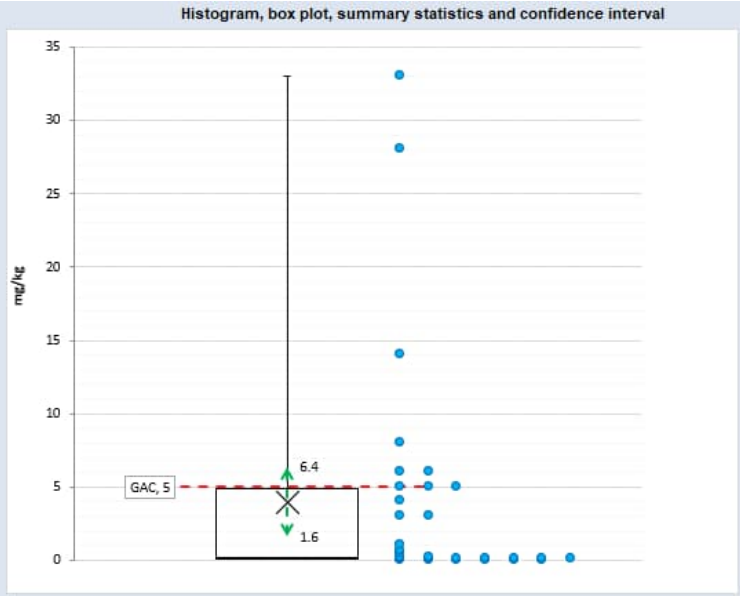


Benzo (b) fluoranthene Statistics

Sample number	31
Maximum	42
Upper Quartile	5.65
Median	0.28
Lower Quartile	0.115
Minimum	0.029999999
Number exceeding	12 / 31
GAC value	3.7
Mean 'X'	4.9
Standard deviation	9.6
IQR	5.5
95% Confidence Interval	
1.9	7.8

Maximum value potential outlier

GRAPH 7.2 Statistical Summary of Soil Benzo(a)pyrene Concentrations in the Pyramids

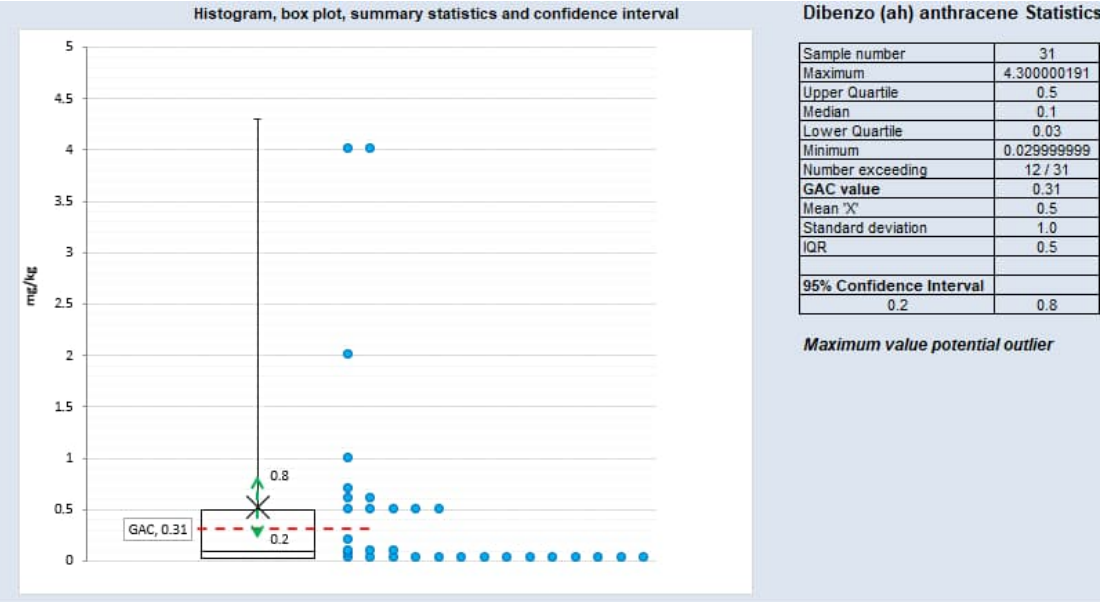


Benzo (a) pyrene Statistics

Sample number	31
Maximum	33
Upper Quartile	4.85
Median	0.21
Lower Quartile	0.1
Minimum	0.029999999
Number exceeding	8 / 31
GAC value	5
Mean 'X'	4.0
Standard deviation	7.8
IQR	4.8
95% Confidence Interval	
1.6	6.4

Maximum value potential outlier

GRAPH 7.3 Statistical Summary of Soil Dibenzo(ah)anthracene Concentrations in the Pyramids



Dibenzo (ah) anthracene Statistics

Sample number	31
Maximum	4.300000191
Upper Quartile	0.5
Median	0.1
Lower Quartile	0.03
Minimum	0.029999999
Number exceeding	12 / 31
GAC value	0.31
Mean 'X'	0.5
Standard deviation	1.0
IQR	0.5
95% Confidence Interval	
0.2	0.8

Maximum value potential outlier

7.2.18 It should be noted, the testing for some of the contaminants was duplicated in different chemical suites, therefore the number exceeding appears higher in the box plots than the number of samples that were actually tested.

7.2.19 Table 7.3 and the corresponding box plots show the highest concentrations of the three PAH compounds were encountered in 2 no. samples retrieved from TP201 at 2.0m bgl and TP203 at 2.0m bgl from the 2024 ground investigation. Removal of these samples in the statistical assessment gives a calculated 95% UCL concentration below the corresponding GACs.

Table 7.4 Soil Description Exceedances

Hole ID	Depth (m bgl)	Associated Soil Description
TP201	2.0	MADE GROUND: Brown sandy gravelly clay. Gravel is fine to coarse, angular to sub rounded of brick and concrete. With fragments of plastic and timber (Sweet odour encountered).
TP203	2.0	MADE GROUND: Black gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of concrete, ash, brick and clinker. With fragments of slag and metal rebar (Old railway tracks uncovered at 2.10 m bgl) (Very sweet odour encountered).

7.2.20 The engineer's log descriptions for the 2 no. samples indicate man-made inclusions associated with the former railway land and goods sheds. Ash and ballast along historical railway sidings are known potential sources of PAH contamination. A sweet odour was also noted in the Made Ground at the specified sampling depths, which is typical of creosote noting that timber and sleepers were recorded to be present. Any material within the pyramids with visual or olfactory evidence of contamination will not be reused on site without further testing, treatment and or risk assessment.

Petroleum Hydrocarbons

7.2.21 Exceedances of EPH >C16-21 and EPH/TPH >C21-36 have been identified in TP108 at 0.2m bgl and in TP107 at 3.3m bgl. Again, calculated 95% UCL concentrations for the TPH fractions were all below the corresponding GAC and are therefore not considered to be representative of significant risk.

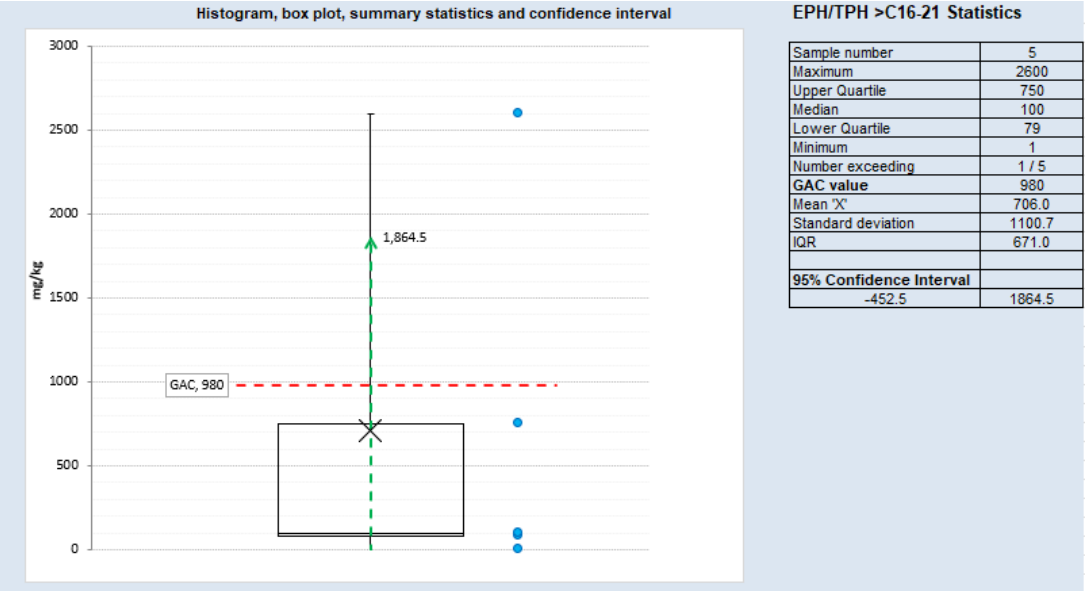
7.2.22 A single exceedance of EPH/TPH >C16-21 has been identified in sample TP201 at 2.0m bgl. The calculated 95% UCL concentration is above the corresponding GAC as shown below. However, it is noted that the GAC is based on aromatic >C16-21 and does not take into account the aliphatic fraction which has a GAC of 110000 mg/kg.

Table 7.5 Summary of Soil Analysis – Localised Petroleum Hydrocarbon Contamination in the Pyramids

Contaminant	Hole ID	Concentration (mg/kg)	GAC (mg/kg)	Depth (m bgl)
EPH/TPH >C16-21	TP201	2600	980	2.0

7.2.23 Long chain hydrocarbons are typical of lubricating oils and greases[24] which are typically encountered on railway land where locomotives have stood for significant periods of time.

GRAPH 7.4 Statistical Summary of Soil EPH/TPH >C16-21 Concentrations in the Pyramids



7.2.24 An elevated concentration of TPH >C6-40 was recorded in 4 no. samples. The calculated 95% UCL was above the corresponding GAC. As mentioned above, this is based on the GAC for Aromatic (>C8-10) / Aliphatics (>C8-10) which is used as a worst-case scenario. There are no assessment criteria available for the sum of total petroleum hydrocarbon fractions.

7.2.25 VOCs / SVOCsThere were no exceedances of VOCs and SVOCs from the samples collected and tested from the pyramids.

[24] CL:AIRE Petroleum Hydrocarbons in Groundwater, 2017

Summary – Pyramid Structures

7.2.26 A total of 25 no. samples of soil were retrieved from the pyramid structures and screened for the general suite of contaminants. The volume of material within the pyramid structures, based on topographical information is approximately 6,000m^3. Therefore, this equates to approximately 1 no. sample tested for every 240m^3 of material within the pyramids, which is considered to present a reliable and representative dataset for the purpose of the soil screening exercise.

7.2.27 Typically, the chemical composition of the materials tested in the pyramids is similar to that of the General Made Ground tested from across the site.

7.2.28 The samples retrieved from the pyramid structures during the preliminary ground investigation (TP02 and TP03), showed no recorded exceedances when compared to the soil screening values. The soil samples retrieved from the pyramid structures during the enabling works ground investigations show no recorded exceedances of phenols, volatile organic compounds and semi-volatile organic compounds when compared to the soil screening values.

7.2.29 However, a single exceedance in EPH/TPH >C16-21 was identified, and exceedances of PAHs compounds were identified in samples of the Made Ground, these contaminants are associated with the former railway land materials.

7.2.30 Based on the chemical test results, it is anticipated that the soils from the pyramid structures, following processing and/or treatment, will generally be suitable for use as general fill beneath roads, buildings and in landscaped areas under suitable cover. It is not proposed to reuse hydrocarbon impacted materials within areas of proposed buildings.

7.3 Asbestos

7.3.1 It is noted that there are no UK generic quantitative assessment criteria for asbestos in soils. A summary of the results for asbestos is presented below. Additional guidance on this topic is presented in CIRIA C733[25].

7.3.2 A total of 8 no. samples of Made Ground soils were screened for the presence of asbestos as part of the preliminary ground investigation, however no asbestos was positively identified.

7.3.3 A total of 18 no. samples were screened for the presence of asbestos during the 2023 enabling works ground investigation, with positive identification recorded in 8 no. samples. Subsequently, the positive samples were subjected to more detailed quantification analysis.

7.3.4 A further 8 no. samples were screened for the presence of asbestos during the 2024 enabling works ground investigation, however no asbestos was positively identified.

7.3.5 It should be noted that suspected asbestos containing materials were not encountered during any of the intrusive works.

7.3.6 A summary of the results for asbestos is presented in Table 6.3.

[25] CIRIA - Asbestos in soil and made ground: a guide to understanding and managing risks, March 2014

Table 7.6 Asbestos analysis results

Exploratory Hole	Depth (m bgl)	Asbestos Analysts Comments	Concentrations (% w/w)
TP102	0.60 – 0.90	Chrysotile bundles	<0.001
TP107	1.50 – 1.70	Chrysotile present as fibre bundles	0.002
TP108	0.20 – 0.40	Chrysotile present as fibre bundles	<0.001
TP121	2.00 – 2.30	Chrysotile present as fibre bundles	<0.001
TP121	3.80 – 4.00	Chrysotile present as fibre bundles	<0.001
BH102	0.50	Microscopic bundle of amosite	0.009
BH103	0.50	Bundle of amosite	0.005
BH107	0.30 – 1.20	Chrysotile present as fibre bundles	<0.001

7.3.7 Asbestos in the form of fibre bundles of amosite or chrysotile were recorded in the 8 no. samples of the variable Made Ground. Quantification analysis was undertaken on all positive samples with the recorded concentration of asbestos within these samples ranging from <0.001% to 0.009%.

7.3.8 It should be noted that the majority of the positive samples recorded concentrations <0.001% which is the limit of detection for quantification. However, the soil sample from TP107 (1.50-1.70m bgl), located on one of the pyramids, recorded a concentration of 0.002% and samples of General Made Ground from BH102 (0.50m bgl) and BH103 (0.50m bgl) recorded amosite concentrations of 0.009% and 0.005%, respectively.

7.3.9 Where asbestos was detected in soils from the pyramid structures, asbestos concentrations ranged from <0.001% to 0.002% and comprised only chrysotile.

7.3.10 Due to the occurrence of asbestos in the shallow Made Ground soils, this presents a risk to ground workers during the proposed enabling works and future site redevelopment. Any excavation works, or works that will disturb the Made Ground soils, has the potential to release asbestos fibres into the air which can then be breathed in.

7.3.11 As such, all works that will disturb the Made Ground should be undertaken in line with the requirements of the Control of Asbestos Regulations, 2012 (CAR, 2012), in accordance with the associated Approved Code of Practice (ACoP), as well as guidance prepared by CL:AIRE, the Joint Industry Working Group (JIWG) and CIRIA.

7.3.12 Practical measures such as dust suppression, wetting and reassurance air monitoring for dust and asbestos in air are recommended as minimum provisions during groundworks involving sustained periods of disturbance of the Made Ground. The moisture content of the Made Ground soils being worked is a major consideration in terms of dust and potential fibre generation and therefore simple and practical measures to avoid dust should be substantially effective in minimising the risk of asbestos release to air.

7.4 Controlled Waters

7.4.1 A controlled water risk assessment has been undertaken using as available Drinking Water Standards (DWS). The nearest surface water feature is the River Irwell, located 700m to the west. Therefore, EQS values were not used in this assessment as the risk to surface waters is considered negligible.

7.4.2 The site is not located within 1km of a source protection zone or groundwater abstraction license. The site is considered to have moderate sensitivity with respect to hydrogeology primarily due to the underlying Secondary A aquifers.

7.4.3 Groundwater samples were obtained from borehole locations BH101 to BH106 and BH108 on 24th January 2024. The installations were screened within the Glacial Till deposits and the Pennine Lower Coal Measures bedrock. No groundwater samples were retrieved during the preliminary ground investigation.

7.4.4 No hydrocarbon odours were noted during the groundwater monitoring and there was no evidence of free phase product in the samples retrieved.

7.4.5 The statistics associated with groundwater analysis are summarised in Table 7.4.

7.4.6 It should be noted that the groundwater sample retrieved from BH108 is located in the eastern parcel, which is outside of the planning application boundary and therefore this sample has been excluded from the assessment.

Table 7.7 Summary of Water Analysis

Contaminant	Units	Exceeding	Max	Mean	GAC
Metals & Inorganics					
Arsenic	ug/l	0/ 6	8.9	-	10[w*]
Boron	ug/l	0/ 6	92	-	1000[w]
Cadmium	ug/l	0/ 6	0.2	-	5[w]
Chromium	ug/l	0/ 6	0.49	-	50[w]
Chromium - Hexavalent	ug/l	- / 6	<7	-	n/a
Copper	ug/l	0/ 6	1.2	-	2000[w]
Lead	ug/l	0/ 6	0.29	-	10[w*]
Mercury	ug/l	0/ 6	<0.01	-	1[w*]
Nickel	ug/l	0/ 6	6.7	-	20[w]
Selenium	ug/l	0/ 6	0.97	-	10[w]
Zinc	ug/l	0/ 6	95	-	3000[x]
Cyanide	ug/l	0/ 6	1	-	50[w]
Cyanide Free	ug/l	- / 6	1.1	-	n/a
Thiocyanate	ug/l	- / 6	35	-	n/a
Sulphate as SO4	ug/l	0/ 6	180000	-	250000[w]
Sulphide	ug/l	- / 6	80	-	n/a
Total Petroleum Hydrocarbons					
EPH >C10-40	ug/l	- / 6	670	-	n/a
Aliphatics >C5-6	ug/l	0/ 4	<0.1	-	15000[y]
Aliphatics >C6-8	ug/l	0/ 4	<0.1	-	15000[y]

Contaminant	Units	Exceeding	Max	Mean	GAC
Aliphatics >C8-10	ug/l	0/ 4	<0.1	-	300[y]
Aliphatics >C10-12	ug/l	0/ 4	<1	-	300[y]
Aliphatics >C12-16	ug/l	0/ 4	<1	-	300[y]
Aliphatics >C16-21	ug/l	0/ 4	<1	-	100[x]
Aliphatics >C21-35	ug/l	0/ 4	<1	-	100[x]
Aliphatics >C5-35	ug/l	0/ 4	<10	-	300[y]
Aromatics >C5-7	ug/l	0/ 4	<0.1	-	10[y]
Aromatics >C7-8	ug/l	0/ 4	<0.1	-	700[y]
Aromatics >C8-10	ug/l	0/ 4	<0.1	-	300[y]
Aromatics >C10-12	ug/l	0/ 4	<1	-	90[y]
Aromatics >C12-16	ug/l	0/ 4	<1	-	90[y]
Aromatics >C16-21	ug/l	0/ 4	<1	-	90[y]
Aromatics >C21-35	ug/l	0/ 4	<1	-	90[y]
BTEX					
Benzene	ug/l	0/ 2	<1	-	1[w*]
Toluene	ug/l	0/ 2	<1	-	700[x]
Ethylbenzene	ug/l	0/ 2	<1	-	300[x*]
m,p xylenes	ug/l	0/ 1	<2	-	500[x]
O-Xylene	ug/l	0/ 1	<1	-	500[x]
Xylene (Total)	ug/l	0/ 1	<1	-	500[x*]
Methyl tert-butyl ether	ug/l	0/ 1	<1	-	15[x]
Polycyclic Aromatic Hydrocarbons					
Naphthalene	ug/l	- / 6	0.24	-	n/a
Acenaphthylene	ug/l	- / 6	<0.01	-	n/a
Acenaphthene	ug/l	- / 6	0.07	-	n/a
Fluorene	ug/l	- / 6	0.02	-	n/a
Phenanthrene	ug/l	- / 6	0.08	-	n/a
Anthracene	ug/l	- / 6	0.01	-	n/a
Fluoranthene	ug/l	- / 6	0.05	-	n/a
Pyrene	ug/l	- / 6	0.06	-	n/a
Benzo (a) anthracene	ug/l	- / 6	0.02	-	n/a
Chrysene	ug/l	- / 6	0.03	-	n/a
Benzo (b) fluoranthene	ug/l	0/ 6	0.03	-	0.1[w*]
Benzo (k) fluoranthene	ug/l	0/ 6	0.02	-	0.1[w*]
Benzo (a) pyrene	ug/l	1/ 6	0.02	0.01	0.01[w*]
Indeno (1,2,3 - cd) pyrene	ug/l	0/ 6	0.03	-	0.1[w*]
Dibenzo (ah) anthracene	ug/l	- / 6	<0.01	-	n/a
Benzo (ghi) perylene	ug/l	0/ 6	0.02	-	0.1[w*]
PAH(Total)	ug/l	- / 6	0.6	-	n/a
Speciated Phenols					
Phenol	ug/l	0/ 2	<1	-	200[x]
2,4 - Dimethylphenol	ug/l	- / 2	<1	-	n/a
Phenol (Monohydric)	ug/l	0/ 6	15	-	200[x]

Contaminant	Units	Exceeding	Max	Mean	GAC
Organics					
Bromodichloromethane	ug/l	0/ 1	<4	-	100[w]
Tribromomethane	ug/l	0/ 1	<1	-	100[w]
Carbon tetrachloride	ug/l	0/ 1	<1	-	3[w*]
Chloroethane	ug/l	- / 1	<1	-	n/a
Chloromethane	ug/l	- / 1	<1	-	n/a
Vinyl chloride	ug/l	1/ 1	<1	-	0.5[w*]
cis 1,2 - Dichloroethene	ug/l	0/ 1	<1	-	50[x]
Trans - 1,2 - Dichloroethene	ug/l	0/ 1	<1	-	100[v]
1,1 - Dichloroethane	ug/l	- / 1	<1	-	n/a
1,1 - Dichloroethene	ug/l	- / 1	<1	-	n/a
Trichloroethene	ug/l	0/ 1	<1	-	10[w*]
1,1,2 - Trichloroethane	ug/l	- / 1	<1	-	n/a
Tetrachloroethene	ug/l	0/ 1	<1	-	10[w]
1,2,4 - Trimethylbenzene	ug/l	- / 1	<1	-	n/a
1,2 - Dichloropropane	ug/l	0/ 1	<1	-	40[x*]
Styrene	ug/l	0/ 1	<1	-	20[x*]
iso - Propylbenzene	ug/l	0/ 1	<1	-	4000[v]
n-propylbenzene	ug/l	- / 1	<1	-	n/a
2 - Chloronaphthalene	ug/l	- / 1	<1	-	n/a
2,4 - Dinitrotoluene	ug/l	- / 1	<1	-	n/a
2,6 - Dinitrotoluene	ug/l	- / 1	<1	-	n/a
Bromobenzene	ug/l	- / 1	<1	-	n/a
Butyl benzyl phthalate	ug/l	- / 1	<1	-	n/a
Diethyl phthalate	ug/l	- / 1	<1	-	n/a
Di-n-butyl phthalate	ug/l	- / 1	<1	-	n/a
Pentachlorophenol (PCP)	ug/l	0/ 1	<1	-	9[x*]
Other organics					
1,1,1,2 - Tetrachloroethane	ug/l	0/ 1	<1	-	400[v]
1,1-Dichloropropene	ug/l	0/ 1	<1	-	20[x]
1,2-Dichlorobenzene	ug/l	0/ 1	<1	-	1000[x*]
1,2-Dichloroethane	ug/l	0/ 1	<1	-	3[w]
1,3-Dichloropropane	ug/l	0/ 1	<1	-	20[x*]
1,4-Dichlorobenzene	ug/l	0/ 1	<1	-	300[x*]
2,4,6-Trichlorophenol	ug/l	0/ 2	<1	-	200[x*]
Chlorobenzene	ug/l	0/ 1	<1	-	10[x]
Chloroform	ug/l	0/ 1	<1	-	100[w*]
cis1,3-Dichloropropene	ug/l	0/ 1	<1	-	20[x]
Dibromochloromethane	ug/l	0/ 1	<1	-	100[w*]
Dichloromethane	ug/l	1/ 1	<27	-	20[x]
Hexachlorobutadiene (HCBD)	ug/l	1/ 1	<1	-	0.6[x*]
trans-1,3-Dichloropropene	ug/l	0/ 1	<1	-	20[x]

7.4.7 All groundwater samples retrieved from this ground investigation show no recorded exceedances of metals, inorganics, petroleum hydrocarbons, BTEX compounds, phenols, volatile organic compounds and semi-volatile organic compounds when compared to the drinking water standards (DWS). However, an exceedance of benzo(a)pyrene was recorded in one groundwater sample, which is discussed further below.

7.4.8 It is noted that the LODs achieved for by the laboratory for VOC compounds vinyl chloride, dichloromethane and hexachlorobutadiene are slightly greater than the published DWS.

Polycyclic Aromatic Hydrocarbons

7.4.9 A single marginal exceedance of benzo(a)pyrene (0.02ug/l) was recorded in the groundwater sample retrieved from BH105 when compared to the DWS value.

7.4.10 The response zone for BH105 was placed in the Glacial Till deposits and no visual or olfactory evidence of contamination was noted in the corresponding soils or overlying Made Ground at this location. Additionally, elevated concentrations of benzo(a)pyrene were not identified in the Made Ground soils sampled from BH105 (0.05mg/kg BaP). No obvious contaminant source has been identified on-site, and therefore it could be a result of the overall poor water quality of the aquifer.

7.4.11 Given the absence of any nearby potable water abstractions and the low permeability of the Glacial Till beneath the site which will limit migration, the risk to controlled waters from benzo(a)pyrene is not considered significant.

7.5 Ground Gas

7.5.1 Following the intrusive investigation the potential sources of ground gas generation that could potentially affect the site have been assessed. These comprise:

- On-Site Sources: Ground gas generation is possible from Made Ground deposits and any areas of infill.
- Off-Site Sources: Several historical landfills are present within the vicinity of the site.

7.5.2 Gas at the site primarily presents a concern following ingress into confined spaces both during and after construction.

7.5.3 Made Ground was encountered across the majority of the site, with maximum depths ranging from 0.30m to 6.10m bgl. Analysis of the representative Made Ground samples recorded concentrations of total organic carbon (TOC) ranging from <0.5% to 27.0%, with an average recorded concentration of 5.1%. Organic materials such as ash, clinker and coal have been identified in the Made Ground soil which can give high TOC results that do not represent the risk of gas emissions from such material, as stated in CL:AIRE RB 17[26]

7.5.4 Bury council has identified several landfill sites located within 250m of the site. This includes a landfill named as Peel College, Bury (Ref: C087) located adjacent to the south of the site and was noted to have been backfilled with unknown materials pre-licensing act (1974). Land to the west of the site is also noted to be a landfill (not identified as such within the Groundsure

[26] CL:AIRE Research Bulletin RB 17 (November 2023) ISSN 2047-6450 (online)

Report) (Ref: C078). Bury Council states that the land was filled with inert waste as part of a reclamation scheme in 1973. Based on the data and information summarised above the potential risk for ground gas generation is considered to be Low to Moderate. The monitoring data has been assessed to confirm this.

7.5.1 To date, six monitoring rounds have been conducted over the period of the two investigations. This comprised three visits to monitor ground gas in the window sample boreholes (WS01 to WS06) installed during the preliminary ground investigation, undertaken between the 3rd and 31st March 2022 and a further three visits to monitor ground gas in the cable percussive boreholes (BH101 to BH108), undertaken between 10th and 31st January 2024.

7.5.2 A worst-case Gas Screening Value (GSV) has been calculated for each monitoring location and these are presented in Table 7.5. These are based on credible worst-case concentrations and flows. Non-representative data not included in the calculations are discussed separately below the table. The data from both ground investigations has been included in the ground gas assessment.

Table 7.8 Summary Gas Screening Values

Borehole	Worst Case Concentration (%) and Flow (l/hr)			Gas Screening Value (l/hr)	
	CH_4	CO_2	Flow	CH_4	CO_2
BH101	<0.1	0.6	1.3	0.0013	0.0078
BH102	<0.1	2.7	<0.1	0.0001	0.0027
BH103	<0.1	3.0	5.5	0.0055	0.1650
BH104	0.1	2.3	0.7	0.0007	0.0161
BH106	0.1	0.7	4.8	0.0048	0.0336
BH107	<0.1	0.2	0.1	0.0001	0.0002
WS01	<0.1	0.5	<0.1	0.0001	0.0005
WS02	<0.1	0.4	<0.1	0.0001	0.0004
WS03	<0.1	4.4	<0.1	0.0001	0.0044
WS05	<0.1	6.4	0.1	0.0001	0.0064
WS06*	<0.1	1.6	<0.1	0.0001	0.0016

All percentage figures are by measurement of volume. Concentrations and flows are based on steady state conditions + gas sample taken.

*WS06 is on the eastern parcel of land which is no longer within the planning application boundary.

7.5.3 Due to the shallow groundwater levels encountered in BH105 and BH108 on all three monitoring visits, the response zones were completely submerged. As a result, maximum steady flow rates of 20.4 l/hr and 11.1 l/hr were recorded which are not considered to represent actual site conditions. Therefore, the gas screening values were not calculated at these locations.

7.5.4 Similarly, the deeper 33mm and 19mm monitoring wells installed in BH102, BH106 and BH107 had submerged response zones and therefore, were not used in the ground gas assessment.

7.5.5 The data presented are considered representative and appropriate for recommendations to be made regarding ground gas risk, however, it is noted that each set of monitoring instrumentation has only been monitored on three occasions each over the two investigations.

7.5.6 Steady-state gas flow rates were generally not recorded across the three rounds of gas monitoring in the preliminary ground investigation, with the single exception of WS05 on 3rd March 2022, where an average flow rate of 0.1 l/hr was recorded. However, flow rates above 0.1 l/hr were recorded in BH101, BH103, BH104, and BH106 during the monitoring in the enabling works ground investigation. A maximum steady flow rate of 5.5 l/hr was recorded in BH103 on the 31st January 2024. It should be noted that the elevated flow rates were sporadic over the three visits, with negative flow rates also recorded.

7.5.7 No detectable concentrations of methane were recorded across the three rounds of monitoring in the preliminary ground investigation. The maximum concentration of methane recorded in the three visits from this ground investigation was 0.1%, recorded in BH104 on 10th January 2024 and BH106 on 31st January 2024.

7.5.8 Elevated concentrations of carbon dioxide above 1.5% were recorded during the monitoring in WS03, WS05, and WS06 in the preliminary ground investigation and in BH102, BH103 and BH104 in this ground investigation. The maximum carbon dioxide concentration of 6.4% v/v was recorded in WS05 during the monitoring visit on the 31st March 2022.

7.5.9 Depressed oxygen concentrations of less than 18% v/v were recorded during the monitoring in WS03, WS05 and WS02 from the preliminary ground investigation and in BH101, BH103, BH104, and BH106 from this ground investigation. The lowest oxygen concentration of 2.8% v/v was recorded in WS05 during the monitoring visit on the 21st January 2022. Generally, the low oxygen concentrations corresponded to elevated carbon dioxide concentrations.

7.5.10 Carbon monoxide was detected at concentrations of 1.0ppm on 1 no. monitoring visit in WS01 and WS05 from the preliminary investigation, and in BH107 and BH106 during this ground investigation. The maximum carbon monoxide concentration was recorded in BH106 on 31st January 2024.

7.5.11 No detectable concentrations of hydrogen sulphide were detected at any of the monitoring locations across all six visits.

7.5.12 A worst-case Gas Screening Value (GSV) for the site has been calculated using the maximum recorded carbon dioxide concentration of 6.4% v/v and a flow rate of 5.5 l/hr which calculates a GSV of 0.352 l/hr.

Recommendations

7.5.13 Based upon the conceptual site model, as informed by the intrusive investigation and monitoring data, the site is currently considered to be representative of CIRIA Characteristic Situation 2 (low risk). This is mainly due to sporadic steady flow rates recorded during the enabling works ground investigation. Typically, flow rates were not recorded during monitoring of the installations fitted during the preliminary ground investigation, therefore, further gas monitoring is recommended to confirm the ground gas risk and appropriate mitigation

measures following completion of the enabling works phase and based on final site development proposals.

7.5.14 Reference to Table 4 of BS8485:2015+A1:2019[27] presents a matrix of different building types against CIRIA Characteristic Situations that provides indicative scores for gas protection. The proposed development has not been finalised and masterplan options currently include a variety of mixed-use residential and commercial schemes. A worst-case Type A building is therefore assumed, as defined in Table 3 of BS8485:2015+A1:2019[28], the gas protection score required is 3.5.

7.5.15 Tables 5 - 7 of BS8485:2015+A1:2019[27], attribute a score for each gas protection measure proposed. As such, the following measures are appropriate to guard against potential risks arising from ground gas ingress through future building footprints:

- Passive sub floor dispersal layer (gas protection score 1.5)
- Gas resistant membrane (gas protection score 2)

7.5.16 Independent verification of the gas membrane installation must be carried out in accordance with the requirements detailed in CIRIA C735[27].

7.6 Volatile Organic Compounds

7.6.1 A photo ionisation detector (PID) was used to measure VOC concentrations in the ground gas installation during the visit on the 31st January 2024. Excluding the monitoring wells with groundwater in the response zones, the maximum VOC concentration recorded was 0.5ppm in BH104 and BH103 which are considered low risk.

[27] BS8485:2015+A1:2019 Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings
[28] CIRIA C735 Good practice on the testing and verification of protection systems for buildings against hazardous ground gases. 2014

8.0 WASTE SOILS

8.1 Hazardous Properties

8.1.1 A hazardous properties assessment (HPA) has been carried out in accordance with the current Environmental Agency technical guidance on classification of hazardous waste, WM3[29] The data have been assessed using the HazWasteOnline[30] waste classification tool and the outputs are included as Appendix 4 Asbestos is not included in the HPA and is discussed separately in Section 8.2.

8.1.2 In total, the HPA has been carried out for 13 no. soil samples collected during the preliminary ground investigation in 2022. Of these, no samples have been identified as containing hazardous properties and thus would potentially be classified as hazardous waste.

8.1.3 In total, the HPA has been carried out for 49 no. soil samples collected during the enabling works ground investigations in 2023 and 2024. Of these, 7 no. samples have been identified as containing hazardous properties and thus would potentially be classified as hazardous waste. These are detailed in Table 8.1.

Table 8.1 Summary of Samples with Hazardous Properties

Exploratory Hole	Depth (m)	Hazardous Property	Contaminant
BH101	0.5	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP106	2.8	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP107	3.3	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP108	0.2	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP110	0.2	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP202	0.4	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group
TP203	2.0	HP 3(i), HP 7, HP 11	TPH (C6 to C40) petroleum group

8.1.4 In addition, 24 no. samples were identified as ‘potentially hazardous’; however, these are due to flammable liquid waste properties, which, given the nature of the materials (soils) is not considered to be appropriate. These assumptions should be confirmed with the receiving landfill.

8.2 Asbestos

8.2.1 Asbestos is not included in the HazWasteOnline[30] assessment. If the waste contains fibres that are free and dispersed, then the waste will be hazardous if the waste as a whole contains

[29] https://www.hazwasteonline.com/

0.1% or more asbestos. Also, if waste contains identifiable pieces of asbestos containing material (i.e. any particle of a size that can be identified as potentially being asbestos by a competent person if examined by the naked eye), then the waste is regarded as hazardous.

8.2.2 Asbestos was not visually identified during the intrusive investigations in all the exploratory holes installed. However, asbestos was identified in 8 no. out of 34 no. soil samples scheduled for laboratory testing from both the preliminary and enabling works ground investigations by CampbellReith. These are detailed below:

- TP102 at 0.60 – 0.90m: Chrysotile – bundles, <0.001%
- TP121 at 2.00 – 2.30m: Chrysotile – fibre bundles, <0.001%
- TP121 at 3.80 – 2.30m: Chrysotile – fibre bundles, <0.001%
- TP107 at 1.50 – 1.70m: Chrysotile – fibre bundles, 0.002%
- BH107 at 0.30 – 1.20m: Chrysotile – fibre bundles, <0.001%
- TP108 at 0.20 – 0.40m: Chrysotile – fibre bundles, <0.001%
- BH102 at 0.50m: Amosite – microscopic bundle, 0.009%
- BH103 at 0.50m: Amosite – bundle, 0.005%

8.2.3 Quantification analysis was undertaken on the 8 no. samples found to contain asbestos. A total of 5 no. samples contained <0.001% chrysotile which is the limits of detection. However, 0.002% chrysotile was detected in the sample retrieved from TP107, 0.009% amosite was detected in the sample from BH102, and 0.005% amosite in the sample from BH103. The absence of any visual asbestos on site, and the quantification results suggest the Made Ground soils tested are not considered hazardous due to the presence of asbestos.

8.3 Waste Compliance: Waste Acceptance Criteria (WAC) Results

8.3.1 Waste Acceptance Criteria (WAC) analysis has not been undertaken at this time. Landfill Waste Acceptance Criteria (WAC) analysis (specifically leaching test results) must not be used for waste classification or hazardous waste assessment purposes. This is done instead via the HPA detailed in Section 8.1.

8.3.2 WAC results are instead indicative of whether soils pre-classified as non-hazardous are acceptable for disposal as inert waste; or, whether soils pre-classified as hazardous waste are suitable for disposal at a hazardous waste landfill – if not, then pre-treatment will be needed prior to disposal. There are no WAC for non-hazardous landfills.

8.3.3 It should be noted that waste regulations[31] state that "If the wastes are contaminated or contain other material or substances such as metals, asbestos, plastics, chemicals, etc. to an extent which increases the risk associated with the waste sufficiently to justify their disposal in other classes of landfills, they may not be accepted in a landfill for inert waste". Topsoil and peat are also excluded from the inert waste definition.

[31] Landfill (England and Wales) Regulations 2002 (as amended), Council Decision of 19 December 2002 pursuant to Article 16 of and Annex II of Directive 1999/31/EC (2003/33/EC)

8.3.4 Material was found to contain ash, clinker and slag and therefore confirmation of its suitability for disposal as inert waste should be obtained from the landfill as this may constitute a breach of its operating license.

8.4 Landfill Tax

8.4.1 With respect to soils disposal at landfill reference should be made to HMRC Excise Notice LFT1[32]. There are two rates of tax, both of which are charged on a per weight basis: the lower rate applies to those less polluting wastes listed in the Landfill Tax (Qualifying Material) Order 2011, as amended, and the standard rate applies to all other taxable waste. The only determining factor as to whether waste is lower rated is whether it is listed in the Landfill Tax (Qualifying Material) Order 2011. Whether or not waste is considered to be inert for environmental protection purposes is not relevant to matters of tax liability and a separate assessment should be made for this as the cost differential is significant. Equally, the fact that waste is listed in the Landfill Tax (Qualifying Material) Order 2011 does not mean that the waste is inert for environmental protection purposes.

[32] HMRC Excise Notice LFT1: a general guide to Landfill Tax

9.0 REVISED CONCEPTUAL SITE MODEL

9.1.1 The potential contamination linkages, as detailed in Table 4.2, have been investigated and assessed. The Conceptual Site Model (CSM) can now be revised to account for site-specific data, which informs the risks associated with the proposed development and, therefore, enables appropriate remedial measures to be recommended.

9.2 Classification of Risk

9.2.1 Risk is defined by the combination of two factors: i) the probability of an occurrence (expressed as a likelihood); and ii) the consequence of it happening (expressed as a severity). The definitions of these categories are included in the Environmental Risk Assessment Standards and Supporting Information section to the rear of this report, together with definitions of the classifications of probability and consequence, but the procedure for classifying risk is summarised in Table 9.1.

Table 9.1 Classification of Risk

Probability (Likelihood)		Consequence			
		Severe	Medium	Mild	Minor
	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

9.2.2 A qualitative risk assessment for the receptors identified in Table 4.2 is presented below in Tables 9.2 - 9.6.

Table 9.2 Groundworkers (Assuming Basic PPE)*

Pathway	Risk	Comments
Ingestion of soil/dust	Low	Redevelopment or maintainance of the site will involve ground workers coming into contact with the underlying soils and water. Elevated PAH compounds were identified in Made Ground samples from the pyramids associated with former railway materials. The general soil chemical results are not considered indicative of significant contamination. Asbestos has been identified as chrysotile and amosite bundles (<0.001% to 0.009%) which present
Inhalation of soil/dust	Moderate	
Dermal contact with soil/dust/water	Low	
Inhalation of vapour from soil/dust	Low-Moderate	
Inhalation of vapour from groundwater	Low	
Migration of soil gases to confined spaces	Low-Moderate	

Pathway	Risk	Comments
		a risk of inhalation during the disturbance of soils. Practical measures such as dust suppression, wetting and reassurance air monitoring for dust and asbestos in air are recommended. Hydrocarbon and sweet odours were noted in several locations within the Made Ground soils, primarily within the area of the pyramids. Concentrations of carbon dioxide above 1.5% and depleted oxygen concentrations have been recorded which poses a potential acute risk to groundworkers in excavations and confined spaces. Normal Health and Safety precautions associated with a site where potential contamination may exist (of the levels identified), will mitigate the general risk. The type of RPE required for asbestos will be defined by the JIWG decision support tool. There is a potential risk if previously unforseen contamination is later found to be present.

* Additional assessments are required by the Contractor in relation to asbestos risk.

Table 9.3 End Users during Occupation

Pathway	Risk	Comments
Inhalation of dust	Moderate	The proposed development plans have not been finalised, however it is anticipated that communal green spaces and private residential gardens will be present. Elevated PAH compounds were identified in Made Ground samples from the pyramids associated with former railway materials. The general soil chemical results are not considered indicative of significant contamination. Asbestos has been identified as chrysotile and amosite bundles (<0.001% to 0.009%). Made Ground soils will require appropriate clean cover soils, which should be
Ingestion of soil/dust	Low	
Dermal contact with soil/dust/water	Low	
Consumption of vegetables/plants	Low	
Inhalation of vapour from soil/dust	Low-Moderate	
Inhalation of vapour from groundwater	Low	
Migration of soil gases to confined spaces/structure	Low – Moderate	
Movement of contaminants to engineered structures (e.g. water pipes)	Low – Moderate	
Uptake by flora/fauna	Low	

Pathway	Risk	Comments
		implemented as part of final site development. Soils impacted by hydrocarbons are not proposed for reuse on site without further risk assessment, treatment and verification. At this stage, a precautional CS2 classification has been determined due to the elevated carbon dioxide and sporadic flow rates. As positive flow rates are sporadic, further gas monitoring is advised to determine ground gas protection measures for the final development once confirmed. A watching brief should also be maintained throughout all groundworks. There is a potential risk if previously unforeseen contamination is later found to be present.

Table 9.4 Controlled Waters

Pathway	Risk	Comments
Migration of water borne contaminants from site to surface waters	Low	Nearest surface watercourse >700m from site. The site is underlain by superficial and bedrock Secondary A Aquifers. The underling Aquifer has an overall poor water quality rating. Elevated PAH compounds were identified in Made Ground samples from the pyramids associated with former railway materials. No significant contamination identified on site from the analysis of the general soils. Hydrocarbon and sweet odours were noted in the Made Ground soils and a marginal DWS exceedance in benzo(a)pyrene was identified in the groundwater retrieved from BH105. However, low permeability clay (Glacial Till) encountered across the site will limit migration of dissolved phase
Migration of water borne contamination from off site	Low	
Migration of contamination from surface and/or subsurface to groundwater	Low	

Pathway	Risk	Comments
		contaminants. The site is not located within a source protection zone.

Table 9.5 Buildings

Pathway	Risk	Comments
Movement of contaminants to engineered structures (e.g. water pipes)	Low - Moderate	Consideration will be required with respect to potable supply pipework due to the presence of Made Ground, which has been shown to contain hydrocarbons. Liaison with the water supply provider will be required to determine if remedial actions are required.
Migration and accumulation of flammable gases beneath the building footprint.	Low	No elevated concentrations of methane were encountered during the ground gas monitoring.

Table 9.6 Offsite Receptors

Pathway	Risk	Comments
Dermal contact with soil/dust/water	Low	Asbestos has been identfied as chrysotile and amosite bundles (<0.001% to 0.009%) which pose a risk via inhalation due to disturbance during the construction phase. Off site residential properties with gardens are located in close proximity to the sourthern boundary, however railway land seperates the parcel of land. Practical measures such as dust suppression, wetting and reassurance air monitoring for dust and asbestos in air are recommended. Hydrocarbon and sweet odours were noted in the Made Ground soils and a marginal DWS exceedance in benzo(a)pyrene was identified in the groundwater from BH105. However, the presence of low permeability clay will reduce the potential for migration of contamination to off-site receptors.
Inhalation/ingestion of dust	Low - Moderate	
Inhalation of vapour from soil/dust	Low	
Inhalation of vapour from groundwater	Low	
Migration of soil gases to confined spaces/structure	Low	
Movement of contaminants to engineered structures (e.g. water pipes)	Low	

10.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

10.1 Introduction

10.1.1 It is proposed to redevelop the site with a predominantly residential development with associated access, infrastructure, hardstanding and landscaped areas. Private gardens are anticipated for a small number of plots. Current proposals, although still at the masterplan stage, are indicated in Figure 3, Appendix 1.

10.1.2 The primary purpose of this report is to identify risk, allow design development and inform cost estimates. Further investigation will be required once proposals are fully developed, and a detailed Geotechnical Design Report should be prepared.

10.2 Key Considerations

10.2.1 The ground investigation has identified a number of geotechnical risks at the site. These are summarised below and discussed in more detail in the following sections.

- Significant thicknesses of Made Ground locally present
- Shallow groundwater
- Soft waterlogged soils in and around the former pond area
- Possible presence of boulders in the Made Ground and Glacial Deposits
- Hard obstructions i.e. concrete in the Made Ground
- Low to medium volume change potential soils.
- Ground conditions aggressive to buried concrete.
- Large variations in site level and consequent need for earthworks

10.3 Foundations

10.3.1 As described in Section 6, much of the site is underlain by Made Ground over Glacial Deposits of interbedded firm to stiff clays and medium dense sands.

10.3.2 It is anticipated that traditional shallow foundations i.e. strip and trench fill foundations may be viable where foundations are placed within the Glacial Deposits. In the current conditions the top of Glacial Deposits is generally between 1m and 2m bgl however, in areas of deep Made Ground (as discussed in Section 6.0) the top of the Glacial Deposits is likely to be too deep for shallow foundations to be viable. In addition, proposed high rise structures, with high loads, may require alternative foundation solutions.

10.3.3 Assuming foundations of up to 1m width with a founding depth of c. 1m, an allowable bearing resistance of 150kPa could be considered for strip foundations founded in medium dense sand or firm clays.

10.3.4 Foundation depths should be determined in accordance with Chapter 4.2 of the NHBC Standards[33], based on a low volume change (shrink-swell) potential. They should also be taken below any desiccated soils and 300mm below any live roots encountered during the ground investigation or during excavation.

[33] NHBC Standards 2023 https://nhbc-standards.co.uk/

10.3.5 The foundation stratum should be carefully inspected for the presence of soft spots and to ensure the structures do not cross variable stratum to avoid differential settlement. Should ground conditions significantly differ to those described within this report, a geotechnical engineer should be notified, and the foundation design reviewed.

10.3.6 Following excavation of the foundation trenches, concrete should be placed as soon as possible to avoid softening/loosening of the ground. This is especially vital where shallow groundwater is present. In addition, it is recommended that an allowance for pumping of any foundation trenches is made where ingress of groundwater is likely to occur.

10.3.7 Where foundations depths in excess of 1.5m bgl are required to satisfy Chapter 4.2 of the NHBC Standards[33], the inside faces of external foundations will require heave protection measures. The measures required should be based on those given in Chapter 4.2 of the NHBC Standards[33], based on a low volume change potential, minimum void dimensions area as follows:

- 0mm against side of foundation and ground beam
- 50mm under ground beams, and suspended in-situ concrete
- 200mm under suspended precast concrete and timber floors

10.4 Ground Improvement

10.4.1 With respect to ground improvement options, the advice of reputable specialist contractors experienced in the ground conditions considered here should be sought. They should be responsible for the selection of appropriate equipment and the final design of the treatment.

10.4.2 At the time of writing, it is understood that earthworks are proposed to be carried out to re-profile the site and construct a new access ramp from Market Street (B6218). Following confirmation of these works and finalisation of the proposed re-development masterplan, ground improvement techniques could be considered should traditional foundation solutions not be viable. Given below is a discussion in relation to forms of ground treatment more commonly adopted in the UK.

10.4.3 Depending on the proposed upfilling of the site installation of vibro stone columns (VSCs) could be undertaken through the engineered fill (placed as part of the initial earthworks). Upon treatment, an allowable bearing capacity in the region of 100-140kN/m^2 would be anticipated.

10.4.4 Should any form of ground improvement be adopted this should be informed by a suitable design trial and the main works validated by an appropriate programme of testing.

10.4.5 Should ground improvement be implemented then it should be possible to adopt pad or strip footings or a 'semi-raft' foundation, depending on the nature and degree of treatment.

10.5 Piles

10.5.1 The advice of reputable piling specialists, experienced in the ground conditions considered here, should be sought. They should be responsible for the selection of appropriate piling

equipment and the final design of the piles. Given below are some initial comments and preliminary design resistances.

10.5.2 The potential for obstructions in the Made Ground and Glacial Deposits will require consideration in determining the most appropriate approach to piling operations and the selection of appropriate equipment. This may require consideration to be given to pre-excavation/pre boring of such features.

10.5.3 It is envisaged that the piles would extend to suitable depths into competent bedrock of the PLCM. It is anticipated that high bearing capacities will be achieved by either bearing on, or rock socketing into the mudstone. The safe working load achievable by piled foundations will be highly dependent on the pile installation technique utilised.

10.5.4 Bored piles would potentially require casing to support the pile bore through the Made Ground and underlying Glacial Deposits.

10.5.5 Due to the presence of shrinkable soils at shallow depths across some of the site, the specialist pile designer should consider the impact of shrinking/swelling and desiccation within their pile design. Note where pile caps are placed in granular dominated soils (i.e. sands) void formers to mitigate shrink/swell action are not required.

10.5.6 Preliminary safe working loads have been made as per methods outlined in Tomlinson[34] for bored and cast in place of continuous flight auger (CFA) piles, considering various diameter piles. It should be noted that the mudstone recovered in the ground investigation was highly disturbed by the cable percussive borehole techniques. As such, the nature of the rock quality is not known. It is advised that rotary cored boreholes are undertaken should piled foundations be considered.

10.5.7 Table 10.1 below provides indicative safe working loads for individual piles.

Table 10.1 Safe Working Loads for Rotary Bored or CFA piles

Pile Diameter (mm)	Safe Working Load (kN) Pile length (m)		
	8m	12m	16m
300	515	845	1,175
450	600	1,095	1,590
600	680	1,340	2,000

10.5.8 It is noted that these calculations are for preliminary design purposes only and further investigation will be required. In addition, the final design will ultimately require consideration against appropriately factored design actions as detailed in EC0 and EC7.

10.5.9 Table 10.1 is based on the following assumptions:

- Proposed installed from existing ground level.
- Ground model as follows:

[34] Pile Design and Construction Practice, Tomlinson and Woodward, 5th ed: 2008.

- 0.00 – 2.00: Made Ground - No resistance provided
- 2.00 – 4.00: Glacial Clay – Cu = 120kN/m^2, α = 0.5
- 4.00 – 6.00: Glacial Clay – Cu = 200kN/m^2, α = 0.5
- 6.00+: Mudstone – UCS = 750kN/m^2, α = 0.35

- The self-weight of the pile and the weight of soil removed/displaced during pile construction approximately cancel each other.
- The potential for negative skin friction not taken into account.
- Smearing of rock socket caused by dragdown of clay or degradation of the rock not taken into account.
- No load testing of working or preliminary piles.
- A Factor of Safety of 3 on the ultimate working load.
- Pile spacing of at least 3 x pile diameter.
- Structural design check on pile slenderness and reinforcement not undertaken.

10.5.10 The adoption of maintained load tests in accordance with EC7 would enable increased capacities or shorter piles to be adopted. The piling specialist may choose to adopt alternative parameters to those outlined above however, their suitability should be verified by an experienced geotechnical engineer.

10.5.11 Note that should levels be built up then pile design should also take into account the long-term settlement or collapse of potential metastable materials, including associated negative skin friction within the Made Ground.

10.6 Floor slabs

10.6.1 Floor slabs should be suspended on the foundations placed over areas underlain by clays of Made Ground or Glacial Deposits owing to them having up to medium volume change potential. The void dimensions to accommodate the occurrence of heave associated with any suspended floor slabs should be determined in accordance with the NHBC Standards[13].

10.6.2 Within the zone of influence of trees previously removed, to be retained or removed as part of the development, suspended floor slabs are recommended because of the potential for heave. Void formers are required in accordance with Chapter 4.2 of the NHBC Standards[13] based on medium volume change potential where placed in Made Ground or low volume change potential when placed in Glacial Clays.

10.6.3 Any soft spots identified should be excavated and replaced with compacted granular fill or lean mix concrete.

10.7 Earthworks

10.7.1 Earthworks are proposed to re-profile the site and construct a new access ramp leading from Market Street. At the time of writing the re-profiling proposal has not yet been finalised.

10.7.2 It is assumed that a large proportion of the earthworks will involve distributing the material currently within the pyramid features situated in the western area of site. The log records suggest these structures comprise a mix of Granular Made Ground and Fine Made Ground material. Due to the inherent variability of Made Ground it is anticipated that, should the soil be used as site won material for the earthworks, it will require sorting and screening. In addition, any oversize particles or unacceptable materials will need to be removed.

10.7.3 Based on the available information it is anticipated that the Fine Made Ground material will be classified as a 2A, wet cohesive, or 2C, stony cohesive, fill material in accordance with SHW 600[35].

10.7.4 The natural moisture content results within the top 1m of the soils indicate that they are above the optimum moisture content (OMC) as shown in Figure 8, Appendix 1 and drying of the soils is likely to be required.

10.7.5 The particle size distribution tests of the Granular Made Ground suggest it would generally be classified as a 1A well graded granular material.

10.7.6 Based on the available data the Glacial Sands are also anticipated to largely comprise class 1A well graded granular material although locally may fall within 1B uniformly graded granular material. The Glacial Clay typically comprises soil that falls within class 2A wet cohesive material. However, it is not anticipated that significant volumes of Glacial Deposits will be won from excavations.

10.7.7 Limited geotechnical testing was undertaken within the Made Ground within the former pond, however the material was generally granular in nature. Further testing is required to ascertain the suitability of these soils for reuse, however it is anticipated that the material would require conditioning prior to reuse.

10.7.8 Note an Earthwork Specification for the site has been undertaken under a separate cover.

10.8 Road Pavements

10.8.1 Based on the understanding of the proposed earthworks strategy at the time of writing it is understood that pavements will likely be founded within the existing Made Ground, the Glacial Deposits and on engineered fill placed to locally rise site levels. Due to the variable formation conditions, pavement surfaces should be constructed in flexible materials such as bituminous compounds or block paving.

10.8.2 Laboratory CBR tests undertaken at the natural moisture content presented CBR values of around 1% (with some values as low as 0.5%). Results from in-situ testing undertaken along the route of proposed pavements suggest CBR values c. 7% within Made Ground comprising sands and gravels.

10.8.3 The CBR value to be adopted would depend on the nature of the fill specification adopted and the as built quality of the fill. Based on the current test results, a preliminary CBR value of 3%

[35] Specification for Highway Works Series 600 Earthworks

is recommended assuming any unsuitable founding strata (e.g. loose or soft material) will be removed.

10.8.4 Additional testing of the fill just prior to road construction is recommended so as to confirm matters.

10.8.5 Laboratory test results are indicative of frost susceptibility.

10.9 Buried Concrete

10.9.1 In the consideration of sulphate attack on buried concrete, reference has been made to BRE Special Digest 1[36], which classifies the site as a brownfield site with mobile groundwater conditions. Additionally, as Pennine Lower Coal Measures can be pyrite bearing, it has also been necessary to assess the potential for the thaumasite form of attack. The results of the concrete classification tests received have indicated a DS-3 classification in the Made Ground, together with the pH values indicates that an ACEC AC-3 should be adopted.

10.9.2 DS-1 classification with ACEC AC-1 could be considered where foundations are placed within the Glacial Deposits however, if these are placed through any significant thickness of Made Ground DS-3 AC-3 concrete should be used.

10.9.3 Should deeper foundations (i.e. piles) be considered within the underlying mudstone bedrock it is recommended that additional testing is carried out.

10.10 Drainage

10.10.1 It is not considered likely that drainage will have to be suspended, although this will depend on the magnitude of settlements that are expected once the design has been developed further.

10.10.2 Any proposed drainage and other services will likely be affected by heave resulting from the presence of low to medium volume change potential of soils, which will be pronounced in areas of vegetation. Consequently, consideration should be given to laying drainage with increased falls and flexible service connections as per NHBC Chapter 4.2.

10.10.3 Frost susceptible soils are present on site therefore drainage should be placed at sufficient depth to avoid the impacts of frost heave where appropriate.

10.10.4 Due to the cohesive soils, drainage infrastructure should be wrapped in geotextile to prevent the ingress of fines and silting up of drainage systems. Scour protection should also be considered on site particularly within drainage channels, swales or ditches.

10.11 Soakaway Drainage

10.11.1 The soakaway tests were not able to be undertaken due to water ingress within the trial pits. It has therefore been concluded that large-scale soakaway drainage is not likely to be feasible and that an alternative drainage strategy may be required.

[36] BRE Special Digest 1: 2005 Concrete in aggressive ground

10.12 Excavations

10.12.1 As described above, shallow groundwater was encountered across the central area of the site. Thus, provisions for pumping may be required.

10.12.2 Spalling of the trial pits was recorded locally, and the stability of excavation faces within the Made Ground and Glacial Sands cannot be relied on. Allowance should be made for battering faces back to a safe angle of repose or providing shuttering. Support or battering of the excavation faces to a safe angle of repose will be required for all excavations where man entry is necessary, the nature and extent of which will need to be evaluated under CDM regulations.

10.13 General Construction Advice

10.13.1 It should be possible to use conventional excavators to form excavations in the soils encountered during the investigation. However, obstructions may be encountered locally within the Made Ground and Glacial Deposits.

10.13.2 For any load bearing formations, careful inspection should be undertaken to ensure placement in competent natural strata unless ground treatment has been carried out and properly validated. Any soft spots identified should be excavated and replaced with compacted granular fill or lean mix concrete. Concrete should be placed as soon as possible following excavation to avoid softening of the ground. A similar recommendation is also made for road pavement formations, although compacted granular fill could be used instead of concrete.

10.13.3 Any relict foundations or other subterranean structures beneath the footprint of the proposed buildings should be fully grubbed out. Such excavations should be surveyed and backfilled with an acceptable granular fill, placed and compacted to an engineering specification. The same recommendations are made for excavations that may be required to remove soil contamination.

10.13.4 In areas of road pavements and hard standing, relict subterranean structures should be broken down to around 1m below finished site level to minimise the risk of differential settlement due to the presence of hard spots. In soft landscaped areas, it may be possible to limit such operations to 0.50m bgl.

10.14 Recommendations for Further Work

10.14.1 The preceding sections have attempted to establish the general ground conditions across the site and provide broad recommendations for the proposed development. Should significant changes be made, further investigation and analysis may be necessary to allow detailed design.

11.0 ENVIRONMENTAL CONCLUSIONS AND RECOMMENDATIONS

11.1.1 Desk study and subsequent site investigation information have confirmed the respective levels of risk to receptors (future residents, groundwater, etc.) associated with the proposed predominantly residential development. The risks and any remedial requirements are summarised for the long-term receptors in Sections 11.2 – 11.5. Sections 11.6 – 11.7 summarise the risks and remedial requirements for groundworkers and services. Sections 11.8 - 11.10 then detail the requirements for further investigation and/or assessment, reporting, and waste soils management.

11.1.2 Remedial recommendations, primarily based on the proposed enabling works package rather than the final development, are provided based on the current understanding of the site. These requirements should be re-assessed following any additional investigations /assessments that are may be carried out since these could lead to their modification. Detailed remedial works should be finalised in a Groundworks/ Remediation Specification.

11.2 Data Uncertainties

11.2.1 Additional monitoring for bulk gases is recommended to confirm the requirements for ground gas protection measures once the development plans have been finalised. Currently the site has been classified as Characteristic Situation 2. However, sporadic high and negative flow rates were recorded on the last three monitoring visits. A number of monitoring wells had flooded response zones and therefore these were excluded from the assessment.

11.3 Summary of Risk and Remedial Requirements – Soils / End Users

11.3.1 The assessment generally identified a LOW-MODERATE risk to future residents of the site due to the potential release of asbestos fibres from the soils.

11.3.2 Asbestos was detected in 8 no. samples of shallow Made Ground as bundles of chrysotile and amosite with concentrations ranging from <0.001% to 0.009%.

11.3.3 The primary exposure pathway relates to the inhalation of fugitive asbestos fibres. In order to mitigate risks to end users it is recommended that a clean cover system of chemically validated soils is installed within all areas of soft landscaped areas. The thickness of this capping layer should be 600mm in private garden areas and 450mm in communal landscaped areas. A break or marker layer such as geotextile should be placed at the base of the capping layer to indicate the presence of asbestos, if present. Alternatively, placing building footprints or areas of hardstanding (e.g., roads, car parks) over the asbestos impacted soils will mitigate the risk of exposure to end users. It is anticipated that cover soils will be placed and validated as part of the site redevelopment works and not during the proposed enabling works.

11.3.4 In addition, any excavations should be backfilled with soils which are suitable for use and in accordance with the appropriate Remediation and/or Groundworks Specification compiled by the Engineer.

11.3.5 Based on the chemical test results, it is anticipated that the soils from the pyramid structures, following processing and/or treatment, will generally be suitable for use as general fill beneath

roads, buildings and in landscaped areas under suitable cover. Compliance testing of the Made Ground will be required to confirm its suitability for reuse.

11.3.6 Made Ground materials encountered in several locations were also found to contain coal, ash, clinker and slag. Hydrocarbon and sweet odours were also reported during the intrusive works. It is not proposed to reuse hydrocarbon impacted materials within areas of proposed buildings without further risk assessment, compliance sampling and testing, noting that the proposed excavation and processing of the Made Ground will result in a degree of degradation of organic contaminants.

11.3.7 Imported materials for soft landscaped areas will require provision for testing in accordance with the Remediation Specification and compliance with an agreed set of limiting values will be required. Records as detailed within the Remediation Specification and/or Groundworks Specification should be maintained to certify the source, chemical suitability and appropriate placement of the soils.

11.4 Summary of Risk and Remedial Requirements – Controlled Waters

11.4.1 The qualitative assessment identified a LOW RISK for groundwater due to the presence of low permeability Glacial Till overlying the bedrock Secondary A Aquifer and the site is not located within 1km of a source protection zone

11.4.2 The qualitative assessment identified a LOW RISK for surface waters as the site is located >700m from the nearest surface water course.

11.4.3 A marginal groundwater exceedance in benzo(a)pyrene (0.02ug/l) has been detected at one borehole location when compared to the conservative drinking water standard value. However, no significant contamination was encountered during the ground investigation which may pose a risk to controlled waters.

11.4.4 Therefore, based on the investigations undertaken to date, remedial works are not required at this stage for controlled waters.

11.5 Summary of Risk and Remedial Requirements – Ground Gas / Vapours

11.5.1 The risk from ground gas is LOW and the site has been preliminarily classified as CIRIA Characteristic Situation 2 (CS2). The Made Ground was proven to a maximum depth of 6.10m bgl, however, this was in the location of the existing ramp for the access track, the organic load of the Made Ground is likely elevated due to the presence of ash, clinker and coal. Elevated concentrations of carbon dioxide above 1.5% and sporadic flow rates were recorded during the monitoring.

11.5.2 Based on the current data, the requirement for ground gas protection measures should be confirmed following confirmation of final development plans and completion of additional monitoring post completion of the enabling works phase.

11.5.3 A sweet odour was noted in the Made Ground at 4 no. locations, however elevated concentrations of VOCs were not detected during the monitoring or testing of associated samples of soil and groundwater.

11.6 Additional Remedial Recommendations

11.6.1 In addition to the requirements noted above, a watching brief should be maintained throughout the groundworks in order to identify any previously undetected areas of contamination, such as asbestos containing materials and/or stained/odorous soils. These should be assessed by an Environmental Consultant if identified.

11.6.2 Hydrocarbon odours were encountered in the Made Ground soils at 5 no. locations within the vicinity of the pyramid structures and northern boundary. Hydrocarbon stained soils and a sheen on perched groundwater was also encountered in TP103. It is recommended that impacted soils are excavated and stockpiled for testing prior to reuse if suitable or off site removal if deemed unacceptable material.

11.7 Groundworkers

11.7.1 The qualitative assessment identified a potentially LOW-MODERATE risk to groundworkers who may come into contact with contaminated soils and waters. The primary exposure pathway relates to the inhalation of fugitive asbestos fibres.

11.7.2 The Contractor should prepare risk assessments and method statements in view of the identified and foreseeable ground conditions and include these within the Health and Safety Plan: for example, these should consider worker protection from skin contact, ingestion and inhalation of contaminants, asbestos in soils and ground gas. In order to achieve satisfactory control, CampbellReith recommend that Health and Safety provisions in accordance with HSE Publication HS(G) 66[37] and CIRIA Report 132[38] are considered. The Contractor must also control matters such as any contracted CDM responsibilities.

11.7.3 In relation to presence of asbestos in soils, the Contractor should formulate their working arrangements in view of the requirements of the Control of Asbestos Regulations (2012)[39] and the associated ACoP (L143)[40]. Additional interpretation on the application of these regulations is presented in publications prepared by CL:AIRE (CAR-SOIL™)[41] and additional guidance is provided in CIRIA C765[42].

11.7.4 It is advised that practical measures such as dust suppression, wetting and reassurance air monitoring for dust and asbestos in air are put in place as minimum provisions during groundworks involving sustained periods of disturbance of the Made Ground.

11.8 Services

11.8.1 The presence of TPH and PAH concentrations in the soil indicates a possible need for protection of public water supply pipework, such as the use of organic resistant pipework. The infrastructure designer should assess requirements for pipework with respect to soil

[37] HSG 66 Protection of workers and the general public during the development of contaminated land. 1991
[38] CIRIA REP R 132 Guide for safe working on contaminated sites. 1996
[39] HSE Control of Asbestos Regulations, 2012
[40] HSE Managing and Working with Asbestos, L143. 2013
[41] CL:AIRE. Joint Industry Working Group. Control of Asbestos Regulations 2012, Interpretation for Managing and Working with Asbestos in Soil and Construction and Demolition Materials, 2016; and the associated JIWG decision support tool, 2017
[42] CIRIA C765 Asbestos in Soil and Made Ground Good Practice Site Guide, 2017

contamination and consult statutory utility companies and relevant guidance as necessary. Guidance on this topic is presented in UKWIR Report 'Publication UKWIR Report[43].

11.9 Additional Site Investigation/Assessment

11.9.1 Additional monitoring for bulk gases will be required to confirm the site's ground gas regime and requirements for ground gas protection measures once the development plans are finalised. This should include monitoring of the existing installations, if they remain following completion of the enabling works, however it should be noted that ground conditions may vary significantly following these works. Should any elevated concentrations of bulk gases be encountered, sampling and analysis of gas should be undertaken to provide confirmation of the concentrations recorded.

11.9.2 There is the potential for impacted Made Ground to be present beneath the existing pyramid structures. Therefore, the nature and composition of the soils beneath the pyramid structures will need to be assessed to a minimum depth of approximately 1.0m from existing ground level (i.e. the ground level currently surrounding the pyramids), this is anticipated to comprise a reduced level excavation in this area.

11.9.3 An invasive species specialist should be consulted to confirm the best approach to remediate the area of the current Japanese Knotweed stand in the east of the site.

11.10 Remediation and Verification Documents

11.10.1 A Remediation/Groundworks Specification should be produced to ensure that the recommendations made in this report are correctly carried out and recorded during the site works. The Specification should:

- detail the requirements associated with remedial works, such as hot spot removal dimensions, frequency of soil testing etc.;
- specify the necessary requirement for inspections/ record keeping/ actions for unforeseen contamination and Contractor's method statements, together with appropriate validation);
- detail the requirements for the control of imported material;
- provide appropriate guidance on the production of method statements relating to health and safety, work with asbestos containing materials, etc.;
- provide details regarding waste soil management; and,
- provide details of what is required in the Verification Report.

11.10.2 On completion of the remedial works and / or earthworks, a Verification Report should be produced to demonstrate that the works have been successfully carried out in accordance with the Remediation Specification such that the site is suitable for its proposed end use. As well as being a likely requirement of the planning process, the report can also be used to provide assurance to funders and / or future site purchasers that the site has been successfully remediated.

[43] Publication UKWIR Report Ref 10/WM/03/21: Guidance for the Selection of Water Supply Pipes to be used in Brownfield Sites - Final Project Report, as amended by the Contaminated Land Assessment Guidance (Water UK, January 2014)

11.10.3 The Remediation Specification and Verification Report will require submission to the Local Authority for review and approval as part of the planning process, to fulfil the requirements of the anticipated land quality planning condition. Failure to submit the required documentation could result in refusal to discharge associated Land Quality Planning Conditions, and discussions should be held with the relevant Officer at an early stage to ensure all necessary information is obtained and collated for their review and approval. Additional discussions may be required with the NHBC if the final proposed scheme involve a residential end use and/or Building Control; such matters are not detailed herein. Once the Remediation Specification is approved, it will be the Contractor's obligation to fulfil the agreed requirements and to produce the Verification Report.

11.11 Waste Management

11.11.1 A hazardous properties assessment (HPA) of waste soils has been undertaken as part of a preliminary waste assessment. Of the 52 no. samples analysed from both investigations, 5 no. would be classified as hazardous waste if excavated for disposal.

11.11.2 The hazardous waste is generally restricted to the western section of the site within or adjacent the existing pyramid structures. Another hazardous sample was located towards the northern boundary. The HPA does not include the presence of asbestos. Asbestos was detected in 8 no. samples of Made Ground as bundles of chrysotile and amosite. Quantification results were all below 0.1% and no visual asbestos was identified on site, therefore the samples can remain non-hazardous where indicated by the assessment.

11.11.3 The soil results can be used for information by the Contractor as a basis for waste soil classification and disposal purposes; however, additional testing may be required, particularly if non- representative soils are uncovered such as those that are stained, odorous or containing asbestos.

11.11.4 All waste related activities must be undertaken in accordance with the Waste Management and Landfill Regulations. Any proposed reuse of materials must be in accordance with the Waste (England and Wales) Regulations 2011 (as amended) and will likely require one or more of the following: Environmental Permit, Exemption, Materials Management Plan.

11.11.5 With respect to waste soils disposal, as a minimum, the following information should be collected and retained by the Contractor for subsequent validation:

- source and origin of the waste;
- information on the process producing the waste;
- European Waste Catalogue code and characteristics of material;
- for hazardous waste, definition of the relevant properties according to the Hazardous Waste Directive (Annex III 91/689/EC);
- confirmation that waste is not prohibited waste;
- appearance of the waste;
- landfill class; and,
- Duty of Care records including full and completed chain of custody documentation.

11.11.6 The final waste classification is the responsibility of the Contractor and should be determined in conjunction with the receiving landfill and in liaison with the Environment Agency (and their technical guidance). It is noted that, depending on the landfill selected, additional soils testing information and independent verification of the materials of the materials being received by the landfill may be required.

11.11.7 As the correct classification of waste may have a significant impact on the redevelopment budget, the waste classification should be reviewed independently at an early stage in the project management stage. In addition, contractors should be asked to confirm that their tenders consider the full requirements of the Landfill Directive and associated waste legislation. This is to ensure waste is correctly classified and costed at the inception of the project.

11.11.8 A separate assessment should be made for the rate of Landfill Tax (where applicable) in accordance with HMRC Excise Notice LFT1[32].

ENVIRONMENTAL RISK ASSESSMENT STANDARDS AND SUPPORTING INFORMATION

Normative Standards

Contamination

The report has been produced in general accordance with the procedures for ground investigation, interpretation and reporting set out in Land Contamination Risk Management (LCRM) (England) BS 5930:2015 (+A1:2020), BS 10175:2011 (+A2:2017) and BS EN 1997 (Eurocode 7).

This assessment considers the objectives of the National Planning Policy Framework which requires information to demonstrate that a site is suitable for its new use (taking account of ground conditions and land instability) and not capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990 (after remediation). The NPPF requires adequate site investigation information, prepared by a competent person.

Geotechnics

The geotechnical appraisal has been carried out in accordance with Eurocode 7. Sections 2, 3, 5 and 6, together with Appendix C, comprise the Ground Investigation Report. Preliminary geotechnical recommendations are presented in Section 10 and these should be verified in a Geotechnical Design Report once structural details of the proposed development are confirmed.

Soil Screening Values

The Environment Agency (EA) has published non-statutory technical guidance for Regulators and their advisors to assess the chronic risk posed to human health from land contamination, known as the Contaminated Land Exposure Assessment (CLEA) Framework. Following a number of updates, CLEA v1.071 is the current version of the EA's risk assessment software.

Soil Guideline Values (SGVs) were produced by DEFRA/EA and Generic Assessment Criteria (GACs) have been produced by CampbellReith and others. These are based on the CLEA model and supporting guidance (SR2[44] and SR3[22]). With respect to toxicity, SGV/S4UL/in-house GAC are based on health criteria values (HCV), as defined in SR2, which represent a tolerable/minimal level of risk.

In 2014 DEFRA released C4SL (Category 4 Screening Levels) for 6 No. contaminants (As, benzene, BaP, Cd, Cr (VI) and Pb), along with the associated Policy Companion Document and an Erratum[45]. They are based on a low level of toxicological concern (LLTC) and are, by definition, less conservative than HCV. They represent contaminant soil concentrations, which present a low level of risk within the context of Part 2A, i.e. they are representative of Category 4 sites. In the Contaminated Land Statutory Guidance[46], sites under Part 2A assessments are categorised 1 - 4, with Category 1 being definitely Part 2A and Category 4 definitely not Part 2A ('where there is no risk or the level of risk posed is low').

[44] Environment Agency Report Ref: SC050021/SR2 – Human Health Toxicological Assessment of Contaminants in Soil. January 2009
[45] SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Revision 2. September 2014
[46] Environmental Protection Act 1990: Part 2A, Contaminated Land Statutory Guidance, April 2012

DEFRA have confirmed that C4SLs can be used in the planning regime and DCLG (Department for Communities and Local Government) amended Planning Practice Guidance (PPG) on Land Affected by Contamination (12 June 2014)[47] which stated that C4SLs provide a simple test for deciding when land is suitable for use and definitely not contaminated land'. On 03 September 2014 the Secretary for the Environment, Lord de Mauley, issued a letter to all Local Authorities, which references DCLG's PPG and confirms that C4SLs could be used in planning and provide a simple test for establishing when sites are suitable for use. The LCRM also states 'Where an SGV and a C4SL are available for the same contaminant, we expect you to use the C4SL'.

LQM/CIEH issued S4ULs in December 2014 for 89 contaminants (metals, BTEX, banded TPH, speciated PAH, chlorinated solvents, phenols, chlorophenols, chlorobenzenes, pesticides and a number of miscellaneous others). The S4ULs have generally adopted the revisions to the exposure modelling that were developed in the production of the C4SLs. Critically, however, they are based on HCVs to produce concentrations, which are indicative of a minimal/tolerable level of risk. CampbellReith have produced GACs which use the same approach to that taken by LQM but also uses the top two approach to homegrown produce that was developed for the C4SLs.CampbellReith's GACs (and S4ULs) are therefore used as the preliminary stage of soil assessments since they are indicative of minimal/tolerable level of risk. If these are exceeded, then the C4SLs are used (if available and shown to be appropriate for the particular assessment) to determine if the risk could be described as low.

Selection of Appropriate [Tier 2] Soil Screening Values

The CLEA model is based upon defined exposure scenarios and six generic land uses have been established for the C4SLs and S4ULs. These set out a discrete set of circumstances where exposure may occur, including a source, the pathways, and the exposed population.

The three generic land use scenarios used in the development of SGVs are:

- commercial/industrial;
- allotments; and,
- residential with plant uptake;
- residential without plant uptake;
- public open space (residential);
- public open space (parks)

It is noted that the CLEA screening values are generic and not always applicable. Where the CLEA conceptual model is not appropriate it will be necessary to develop site-specific Detailed Quantitative Risk Assessment screening values as a further stage of assessment.

It is noted that the CLEA model does not consider risks from contaminated waters beneath the site to human health and the model also assumes that no free product is present. Should such conditions exist at the subject site the requirement for application of an alternative risk assessment model should be

[47] http://planningguidance.planningportal.gov.uk/blog/guidance/land-affected-by-contamination/land-affected-by-contamination-guidance/

assessed. Alternatively, construction workers are potentially exposed to acute risk and therefore require separate consideration.

Statistical Analysis of Soil Analytical Results

Statistical analysis of soil sample analytical results has been undertaken in accordance with CL:AIRE Professional Guidance: Comparing Soil Contamination Data with a Critical Concentration (v1.1 February 2021).

This approach emphasises the use of summary statistics - primarily the use of confidence intervals around mean soil contaminant concentrations - as only one tool in assessing soil contamination data. Key questions being asked are:

1 - what is the true mean contaminant concentration for the averaging zone or area being sampled?; and,

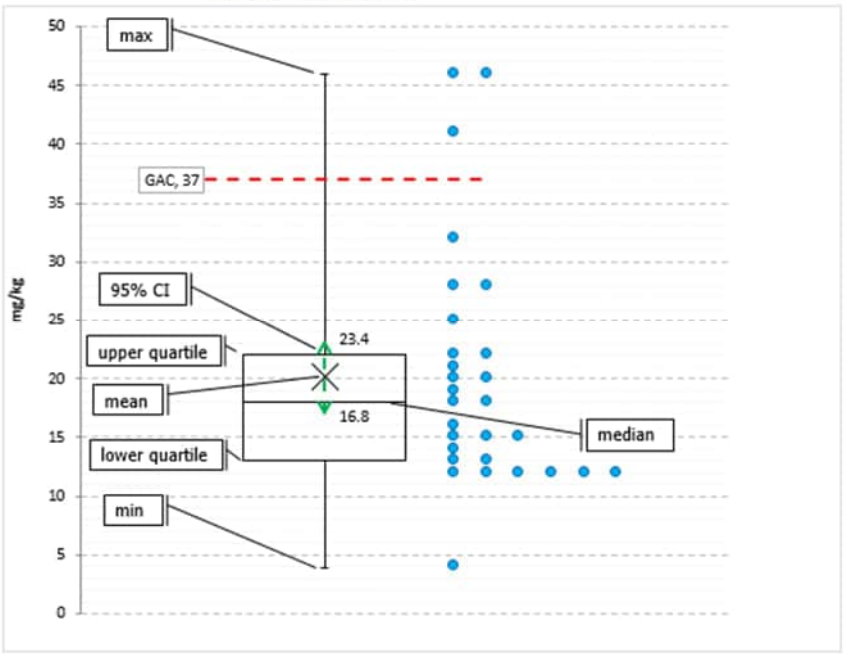
2 - does our sampling strategy and Conceptual Site Model (CSM) allow us to answer the first question?

For a planning scenario, when the distribution of the contaminant concentration data is well understood by the CSM, the question is then asked 'can we confidently say that the mean concentration is below the critical concentration?'; while for a Part 2A scenario the question is 'can we say on the balance of probabilities that the mean concentration is above the critical concentration'.

Site information is reviewed to determine if zoning of the site is appropriate. This includes assessment of: history and differing land uses, known areas of infilling, anecdotal information, exploratory hole logging and images of soil profiles, and looking for any discernible pattern in the results themselves. Additional summary tables are presented where appropriate to reflect distinct zones relevant to the CSM. The soil results may also be assessed as an averaging area where the end use dictates, for example for an area of proposed residential housing with gardens and a separate area of public open space.

An example is shown below of dot and box plots and summary statistics from assessment of the soil sample analysis results. This summary aids in interpreting the results and checking that they 'make sense' in relation to the CSM. For example, if the mean and upper confidence interval are below the critical concentration, yet there are results that still exceed, are these results from the expected distribution, or is there a separate zone or soil layer which these results represent? Looking at all of the site information and always trying to better understand the CSM is essential to interpreting the results. It may be that insufficient information has been gathered in order to confidently answer the key questions posed.

Example Dot & Box Plots



Example Summary Statistics

Sample number	29
Maximum	46
Upper Quartile	22
Median	18
Lower Quartile	13
Minimum	3.9
GAC value	37
Number exceeding	3 / 29
Mean 'X'	20.1
Standard deviation	10.3
Interquartile range	9.0
95% Confidence Interval	
16.8	23.4

The 95% confidence intervals are adopted under planning scenarios in order to be risk conservative and aid in decision making. Use of a narrower confidence interval i.e. 80%, or even the mean may be used, if deemed appropriate by the Local Authority, under a Part 2A scenario. The use of confidence intervals in our assessments is underpinned by the Central Limit Theorem, which can be briefly stated as 'The distribution of sample means converge to a normal distribution as the sample size increases'. The confidence intervals are calculated:

- Lower confidence limit (LCL) = Sample Mean – T × Standard Error
- Upper confidence limit (UCL) = Sample Mean + T × Standard Error

Where T is the T-statistic as derived from the Student T distribution based on the desired confidence level C% and the number of degrees of freedom (sample size -1).

The confidence intervals calculated in this way assume that the sample mean comes from a normal distribution regardless of what distribution the individual samples themselves come from. However, the Central Limit Theorem, and therefore this assumption, only holds if the sample size is sufficiently large. How many samples is 'sufficient' varies from site to site, and the sampling strategy must take into account the sampling pattern and frequency that will be required.

There are three main types of sample result distribution: symmetric (following a normal distribution); log-symmetric (log-transformed values follow a normal distribution); or, fat-tailed (with one or more extreme values in the results). While the confidence intervals may be applied to the mean for all three types of distribution, it is apparent that this may be increasingly skewed towards either very small or very large values within the results.

In addition to visually assessing the distribution, a potential outlier test is applied. This is calculated as values that are greater than 1.5 times the interquartile range. These values are flagged for further assessment. The CSM is revisited to see if there is either evidence of diffuse contamination poorly mixed

with 'cleaner' soils, or there is the potential for 'hotspot/s'. If the latter, then the results are assessed separately and further delineation of the hotspot could be carried out.

Water Screening Values

This assessment considers potential risks to controlled waters (groundwater and surface waters) in relation to risks from any historical contamination. The most stringent test is that defined for Contaminated Land under Part 2A of the Environmental Protection Act, 1990. However, it should be recognised that a wider evaluation of risk is considered within the planning regime and EA's Land Contamination Risk Management.

The Environment Agency has a wider policy agenda for the protection of controlled waters that will impinge upon judgements in relation to land contamination issues. This includes those for the Water Framework Directive and Groundwater Directive and wider legislation for both groundwater, surface water and associated elements (such as fisheries)[48].

The results of water analysis have been compared to screening values selected to assess the potential risk to the identified controlled water receptors in the Conceptual Model. The specific standards utilised for this purpose are considered in the assessment table footnotes and typically comprise: Environmental Quality Standards for the protection of aquatic life; Surface Water Standards; EC, UK and WHO Drinking Water Standards; or Background water quality (where no applicable standard exists).

The initial assessment considers the sensitivity of the receptor in the selection of the screening value. Advice for this purpose has been obtained principally from Environment Agency Technical Advice to Third Parties on Pollution of Controlled Waters for Part 2A of the Environmental Protection Act 1990, No 07/02, EA, 2002 (INFO-RA2-3e), as informed by the EA's GP3.

Where a viable potential contaminant linkage is considered to be present and the screening criteria exceeded, a Qualitative Risk Assessment is presented with associated recommendations. Depending on the specific objectives, policy and practice of the Environment Agency, discussion of water screening values may be subsequently required.

The water quality standards have been chosen in accordance with section 4.2 of the EA's Remedial Targets Methodology as informed by the EA's Groundwater Protection Guides (2017).

Generic Screening Values

The sources of the screening values and associated guidance are provided below.

	Key Guidance
Soil	LQM/CIEH S4ULs for Human Health Risk Assessment.*
	Defra Development of Category 4 Screening Levels Main Report and associated documents
	GAC derived in-house using Environment Agency CLEA Version 1.071 software, Environment Agency Science Reports SC050021 SR2/SR3, LQM/CIEH S4UL, and application of the top two approach to homegrown produce.
	CIRIA - Asbestos in soil and made ground: a guide to understanding and managing risks, March 2014
Water	EA Groundwater Protection Guides, March 2017.

[48] Refer to Environmental Agency Publications for Groundwater Protection Policy and Practice (GP3)

	Key Guidance
	The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015
	Water Environment (Water Framework Directive) (England and Wales) (Amendment) Regulations 2015
	EC and UK Drinking Water Standards.
	WHO Drinking Water Standards.
	Background Water Quality.
Gas	CIRIA C748, 'Guidance on the use of plastic membranes as VOC vapour barriers'.
	CIRIA C735, 'Good practice on the testing and verification of protection systems for buildings against hazardous ground gases'.
	BS 8576:2013, 'Guidance on investigations for ground gas – permanent gases and VOCs'
	CIRIA Report C665, 'Assessing Risks Posed by Hazardous Ground Gases to Buildings'
	CIRIA Report C682, 'VOCs Handbook: investigating, assessing and managing risks from inhalation of VOCs at land affected by contamination'
	British Standard BS:8485+A1:2019, 2015, 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'.
	CIRIA Report 150 'Methane Investigation Strategies'.
	BRE 414 'Protective Measures for Housing on Gas Contaminated Land', 2001.
	The Building Regulations 2000, Approved Document C, Section 2. Updated 2004.
	BR211, 'Radon: Guidance on Protective Measures for New Buildings', 2015.
	Health Protection Agency Publication HPA RPD-033, 2007,' Indicative Atlas of Radon in England and Wales.

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DEFINITIONS OF CONSEQUENCE, PROBABILITY AND RISK

The categories of risk have been based upon those defined in the Guidance for the Safe Development of Housing on Land Affected by Contamination, R&D66: 2008 Volume 1 (Environment Agency, NHBC and CIEH). The classification process is shown in the table below. In summary, risk is defined by the combination of two factors: i) the probability of an occurrence (expressed as a likelihood); and ii) the consequence of it happening (expressed as a severity).

Classification of Risk

Probability (Likelihood)		Consequence			
		Severe	Medium	Mild	Minor
	High likelihood	Very high risk	High risk	Moderate risk	Low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

The key to the classification is that the designation of risk is based upon the consideration of both:

a) the magnitude of the potential consequence (i.e. severity).

[takes into account both the potential severity of the hazard and the sensitivity of the receptor]

b) the magnitude of probability (i.e. likelihood).

[takes into account both the presence of the hazard and receptor and the integrity of the pathway]

Classification of Consequence

Classification	Definition	Examples
Severe	Highly elevated concentrations likely to result in "significant harm" to human health as defined by the EPA 1990, Part 2A, if exposure occurs. Equivalent to EA Category 1 pollution incident including persistent and/or extensive effects on water quality; leading to closure of a potable abstraction point; major impact on amenity value or major damage to agriculture or commerce.	Significant harm to humans is defined in circular 01.2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Major fish kill in surface water from large spillage of contaminants from site. Highly elevated concentrations of List I and II substances present in groundwater close to small potable abstraction (high sensitivity).

Classification	Definition	Examples
	Major damage to aquatic or other ecosystems, which is likely to result in a substantial adverse change in its functioning or harm to a species of special interest that endangers the long-term maintenance of the population. Catastrophic damage to crops, buildings or property.	Explosion, causing building collapse (can also equate to immediate human health risk if buildings are occupied).
Medium	Elevated concentrations which could result in "significant harm" to human health as defined by the EPA 1990, Part 2A if exposure occurs. Equivalent to EA Category 2 pollution incident including significant effect on water quality; notification required to abstractors; reduction in amenity value or significant damage to agriculture or commerce. Significant damage to aquatic or other ecosystems, which may result in a substantial adverse change in its functioning or harm to a species of special interest that may endanger the long-term maintenance of the population. Significant damage to crops, buildings or property.	Significant harm to humans is defined in circular 01/2006 as death, disease*, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. Damage to building rendering it unsafe to occupy e.g. foundation damage resulting in instability. Ingress of contaminants through plastic potable water pipes.
Mild	Exposure to human health unlikely to lead to "significant harm". Equivalent to EA Category 3 pollution incident including minimal or short lived effect on water quality; marginal effect on amenity value, agriculture or commerce. Minor or short lived damage to aquatic or other ecosystems, which is unlikely to result in a substantial adverse change in its functioning or harm to a species of special interest that would endanger the long-term maintenance of the population. Minor damage to crops, buildings or property.	Exposure could lead to slight short-term effects (e.g. mild skin rash). Surface spalling of concrete.

Classification	Definition	Examples
Minor	No measurable effect on humans. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects of damage to buildings, structures and services.	The loss of plants in a landscaping scheme. Discoloration of concrete.

Classification of Probability

Classification	Definition	Examples
High likelihood	There is potential contaminant linkage and an event would appear very likely in the short-term and almost inevitable over the long-term, or there is evidence at the receptor of harm or pollution.	*a) Elevated concentrations of toxic contaminants are present in soils in the top 0.5m in a residential garden.* *b) Ground/groundwater contamination could be present from chemical works, containing a number of USTs, having been in operation on the same site for over 50 years.*
Likely	There is potential contaminant 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.	*a) Elevated concentrations of toxic contaminants are present in soils at depths of 0.5-1.0m in a residential garden, or the top 0.5m in public open space.* *b) Ground/groundwater contamination could be present from an industrial site containing a UST present between 1970 and 1990. The tank is known to be single skin. There is no evidence of leakage although there are no records of integrity tests.*
Low likelihood	There is potential contaminant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a long period such an event would take place, and is less likely in the shorter term.	*a) Elevated concentrations of toxic contaminants are present in soils at depths >1m in a residential garden, or 0.5-1.0m in public open space.* *b) Ground/groundwater contamination could be present on a light industrial unit constructed in the 1990s containing a UST in operation over the last 10 years – the tank is double skinned but there is no integrity testing or evidence of leakage.*

Classification	Definition	Examples
Unlikely	There is potential contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.	a) *Elevated concentrations of toxic contaminants are present below hardstanding.* b) *Light industrial units <10 yrs old containing a double-skinned UST with annual integrity testing results available.*

Note: A potential contaminant linkage must first be established before probability is classified. If there is no pollution linkage then there is no potential risk. If there is no potential contaminant linkage then there is no need to apply tests for probability and consequence.

For example, if there is surface contamination and a principal aquifer is present at depth, but this principal aquifer is overlain by an aquiclude of significant thickness then there is no pollution linkage and the risks to the principal aquifer are not assessed. The report should identify both the source and the receptor but state that because there is no linkage there are no potential risks.

Description of the Classified Risks

Very high risk

There is a high probability that severe harm could arise to a designated receptor from an identified hazard at the site without remediation action OR there is evidence that severe harm to a designated receptor is already occurring. Realisation of that risk is likely to present a substantial liability to be site owner/or occupier. Investigation is required as a matter of urgency and remediation works likely to follow in the short-term.

High risk

Harm is likely to arise to a designated receptor from an identified hazard at the site without remediation action. Realisation of the risk is likely to present a substantial liability to the site owner/or occupier. Investigation is required as a matter of urgency to clarify the risk. Remediation works may be necessary in the short-term and are likely over the longer term.

Moderate risk

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, and if any harm were to occur it is more likely, that the harm would be relatively mild. Further investigative work is normally required to clarify the risk and to determine the potential liability to site owner/occupier. Some remediation works may be required in the longer term.

Low risk

It is possible that harm could arise to a designated receptor from identified hazard, but it is likely at worst, that this harm if realised would normally be mild. It is unlikely that the site owner/or occupier would face substantial liabilities from such a risk. Further investigative work (which is likely to be limited) to clarify the risk may be required. Any subsequent remediation works are likely to be relatively limited.

Very low risk

It is a low possibility that harm could arise to a designated receptor, but it is likely at worst, that the harm if realised would normally be mild or minor.

No potential risk

There is no potential risk if no pollution linkage has been established.

LIMITATIONS

Environmental & Geotechnical Interpretative Reports

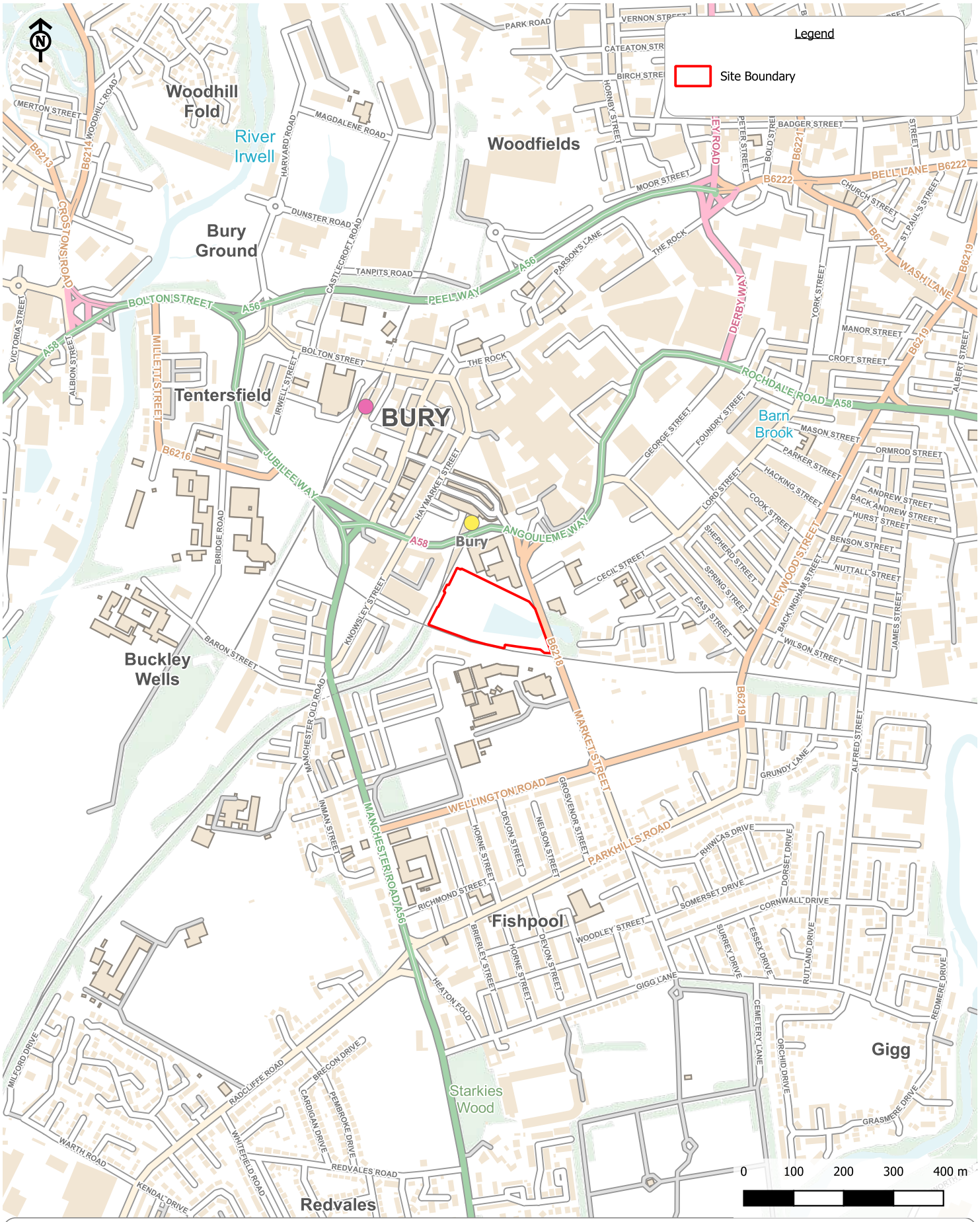
1. This report provides available factual data for the site obtained only from the sources described in the text and related to the site on the basis of the location information provided by the client.
2. Where any data or information supplied by the client or other external source, including that from previous studies, has been used, it has been assumed that the information is correct. No responsibility can be accepted by CampbellReith for inaccuracies within this data or information. In relation to historic maps the accuracy of maps cannot be guaranteed and it should be recognized that different conditions on site may have existed between and subsequent to the various map surveys
3. This report is limited to those aspects of historical land use and enquiries related to environmental matters reported on and no liability is accepted for any other aspects. The opinions expressed cannot be absolute due to the limit of time and resources implicit within the agreed brief and the possibility of unrecorded previous uses of the site and adjacent land.
4. The material encountered and samples obtained during on-site investigations represent only a small proportion of the materials present on the site. There may be other conditions prevailing at the site which have not been revealed and which have therefore not been taken into account in this report. These risks can be minimised and reduced by additional investigations. If significant variations become evident, additional specialist advice should be sought to assess the implications of these few findings.
5. The generalised soil conditions described in the text are intended to convey trends in subsurface conditions. The boundaries between strata are approximate and have been developed on interpretations of the exploration locations and samples collected.
6. Water level and gas readings have been taken at times and under conditions stated on the exploration logs. It must be noted that fluctuations in the level of groundwater or gas may occur due to a variety of factors, which may differ from those prevailing at the time the measurements were taken.
7. Please note that CampbellReith cannot accept any liability for observations or opinions expressed regarding the absence or presence of asbestos or on any product or waste that may contain asbestos. We recommend that an asbestos specialist, with appropriate professional indemnity insurance, is employed directly by the client in every case where asbestos may be present on the site or within the buildings or installations. Any comments made in this report with respect to asbestos, or asbestos containing materials, are only included to assist the client with the initial appraisal of the project and should not be relied upon in any way.
8. The findings and opinions expressed are relevant to those dates of the reported site work and should not be relied upon to represent conditions at substantially later dates.
9. This report is produced solely for the benefit of the client, and no liability is accepted for any reliance placed upon it by any other party unless specifically agreed in writing.

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Appendix 1

Figures

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Figure 7: SPT vs Depth Plot
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Figure 10: Undrained Shear Strength
Figure 11a: MCV results - Made Ground
Figure 11b: MCV results - Glacial Deposits



Pyramid Park Enabling Works

Client: Homes England

Figure 1:
Site Location

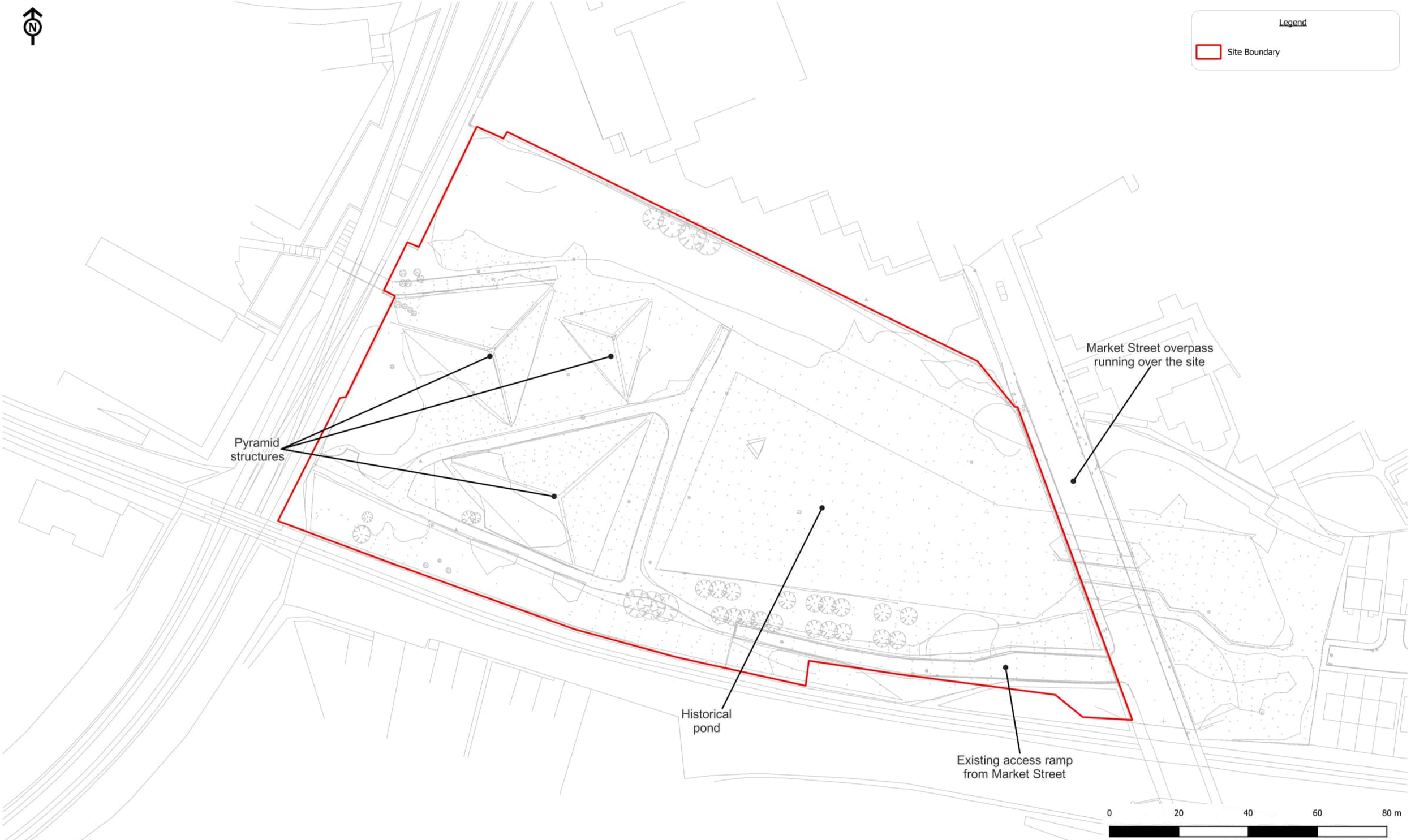
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Figure 2:
Site Layout

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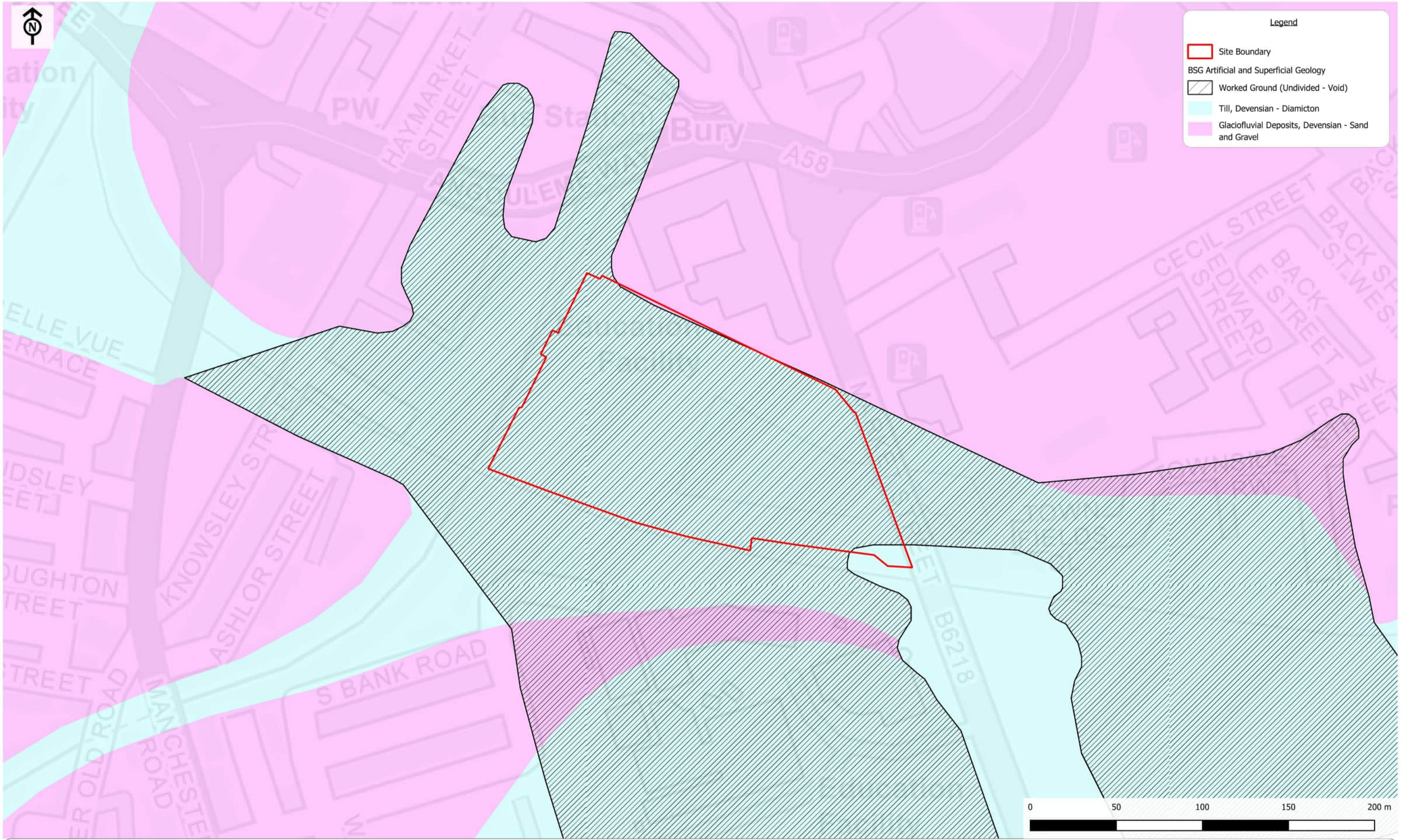
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Figure 3:
Proposed Layout

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Figure 4a:
Artificial and Superficial Geology as indicated by BGS

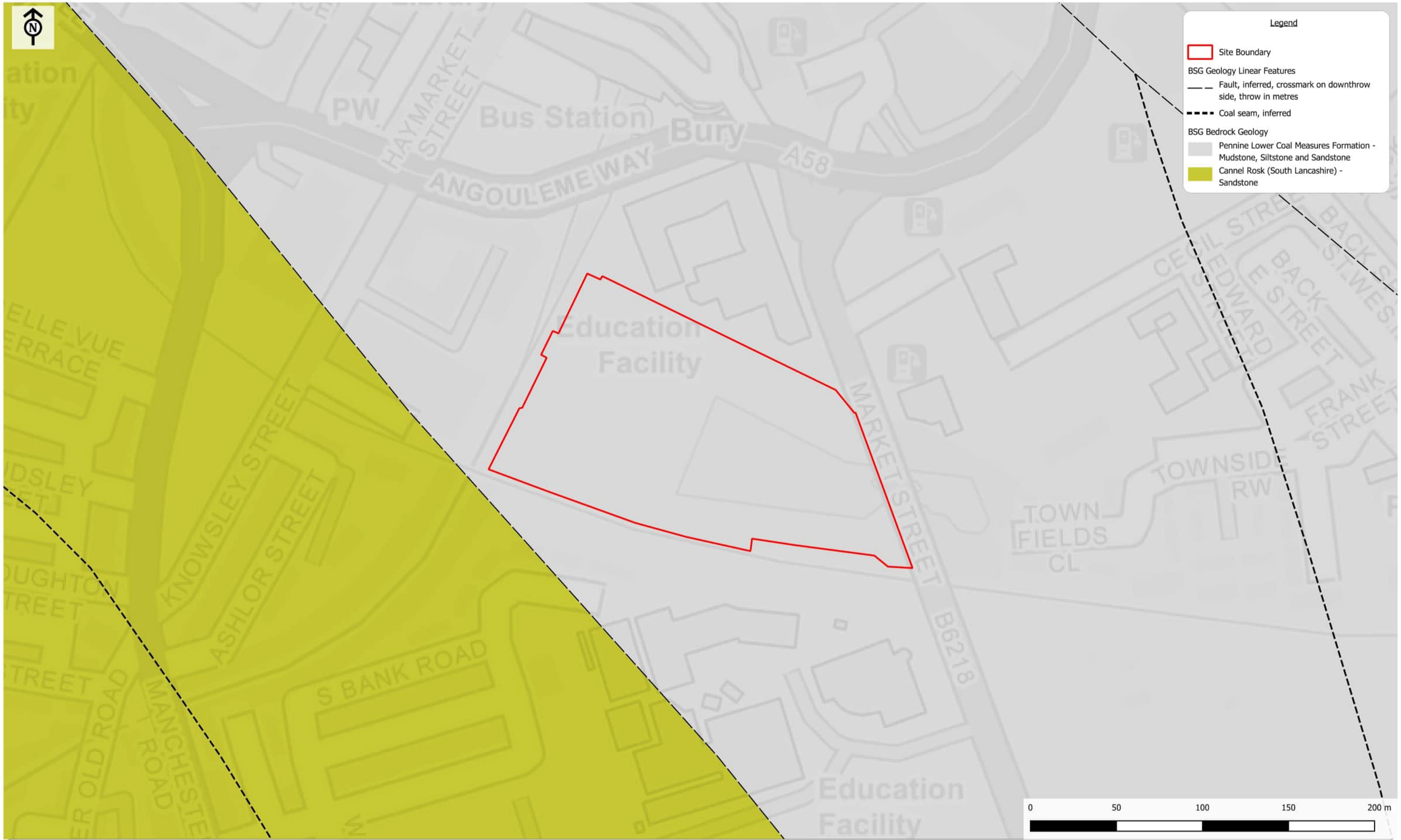
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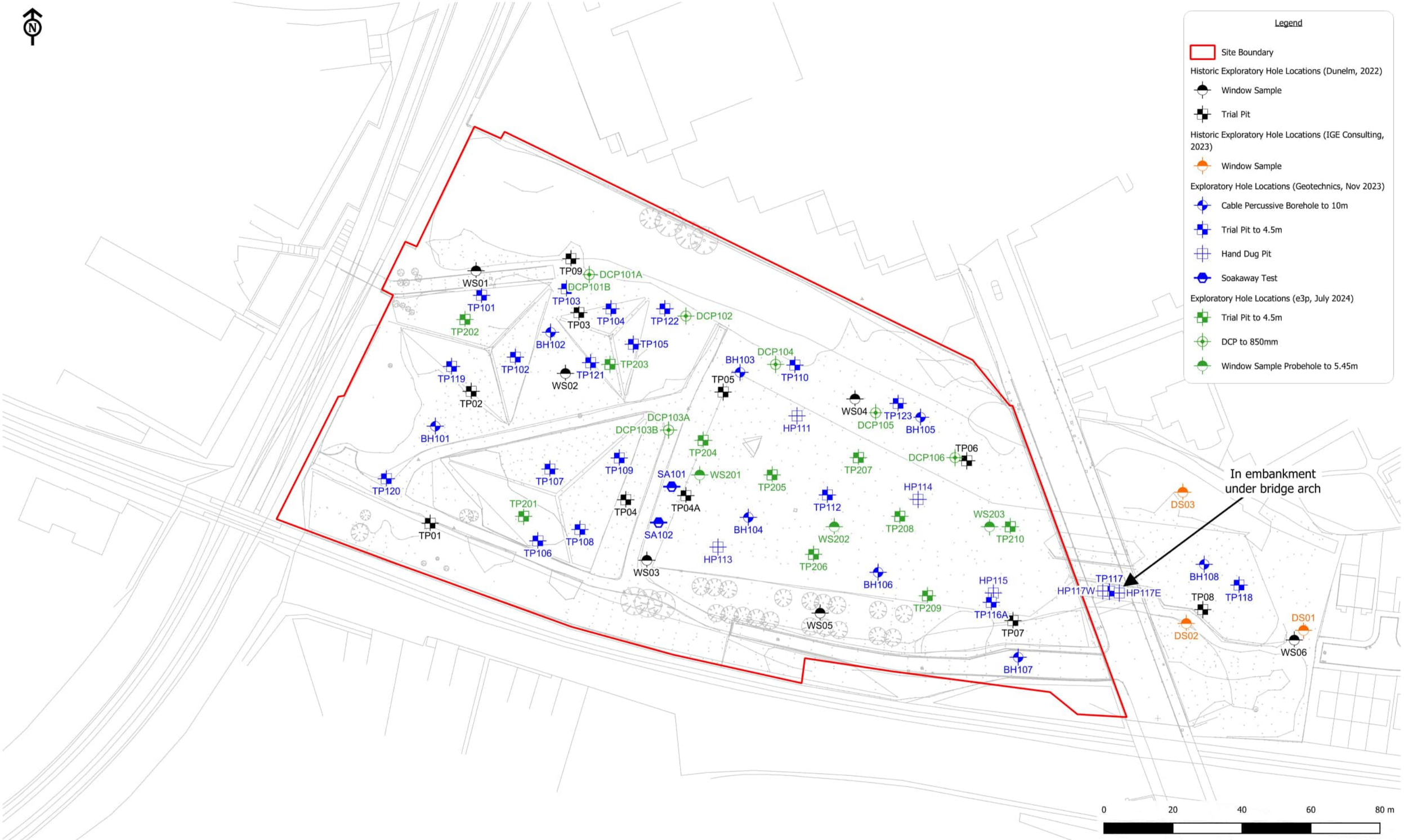
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Figure 4b:
Bedrock Geology as indicated by BGS

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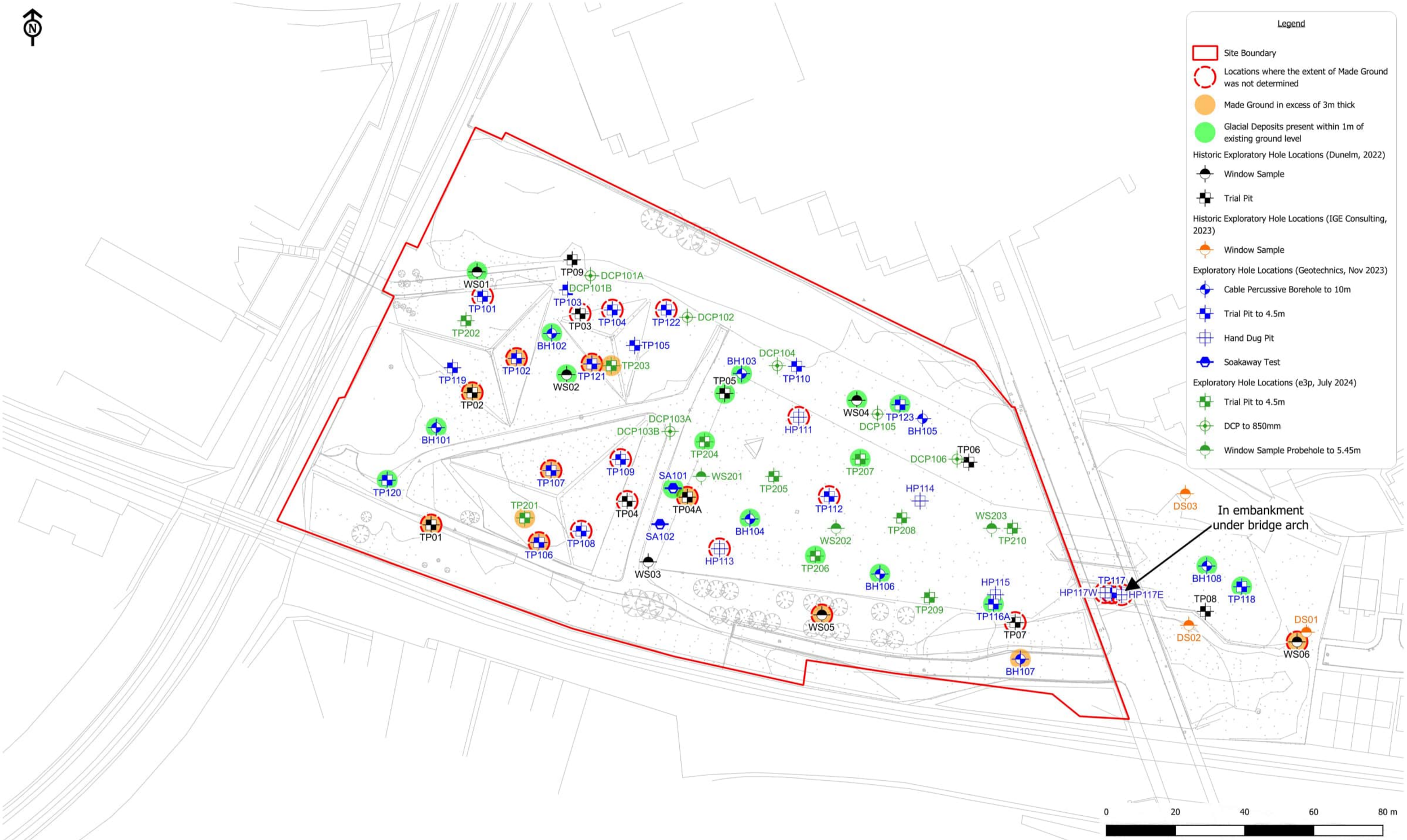
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Figure 5:
As Built Exploratory Hole Location Plan

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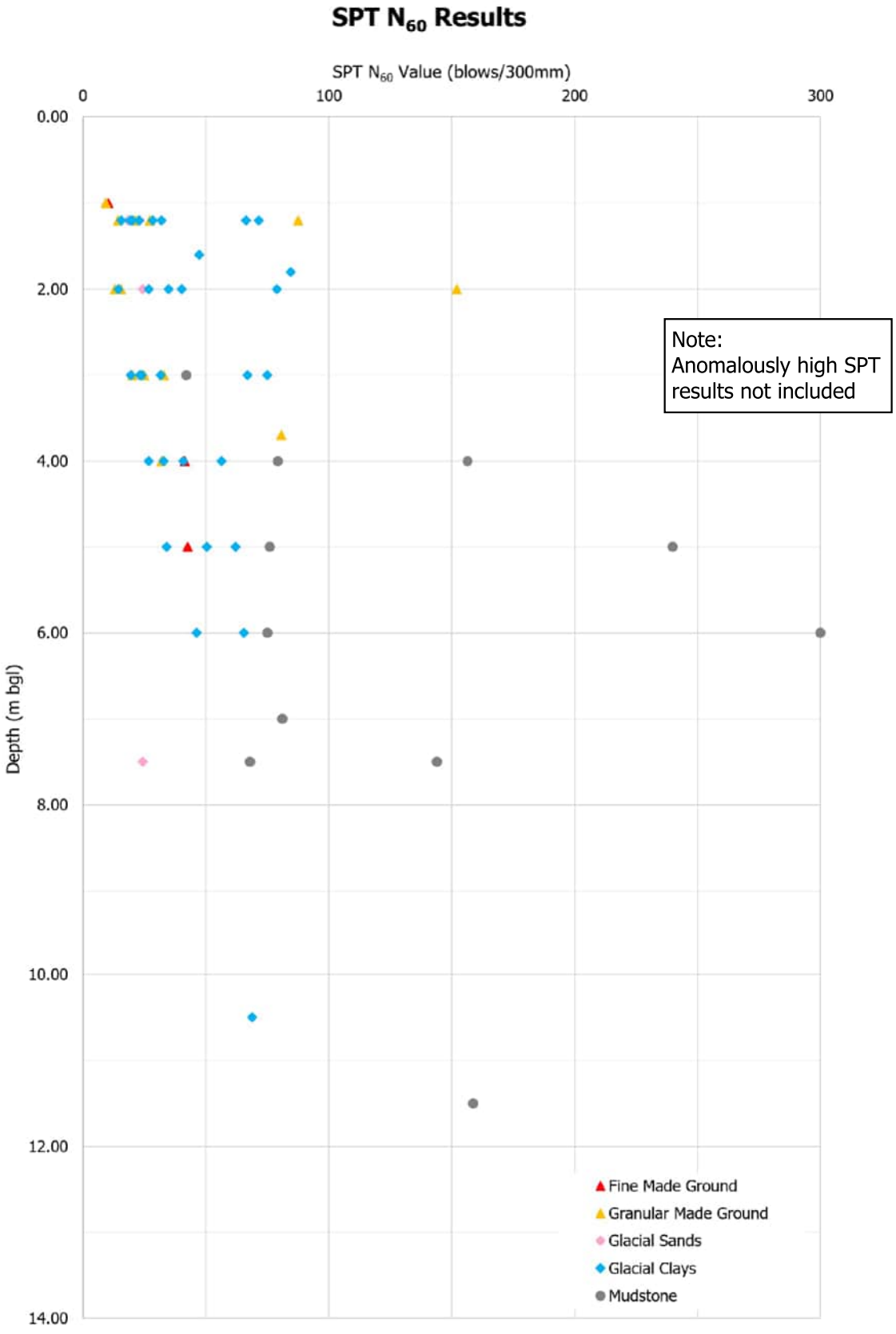
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Figure 6:
Ground Model

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Figure 7:
SPT vs Depth

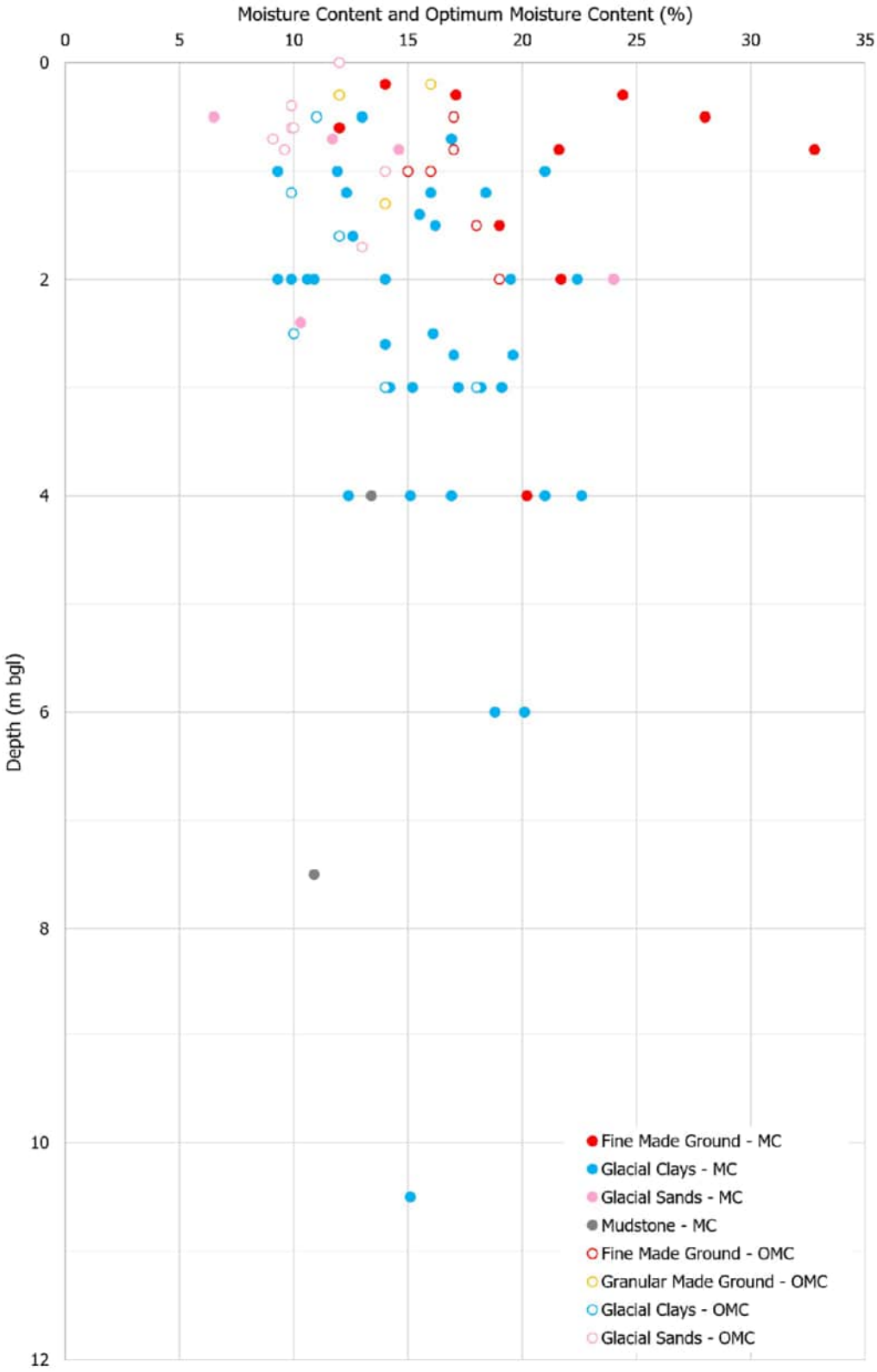
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Note:
OMC = Optimum Moisture Content
MC = Moisture Content

MC and OMC vs Depth



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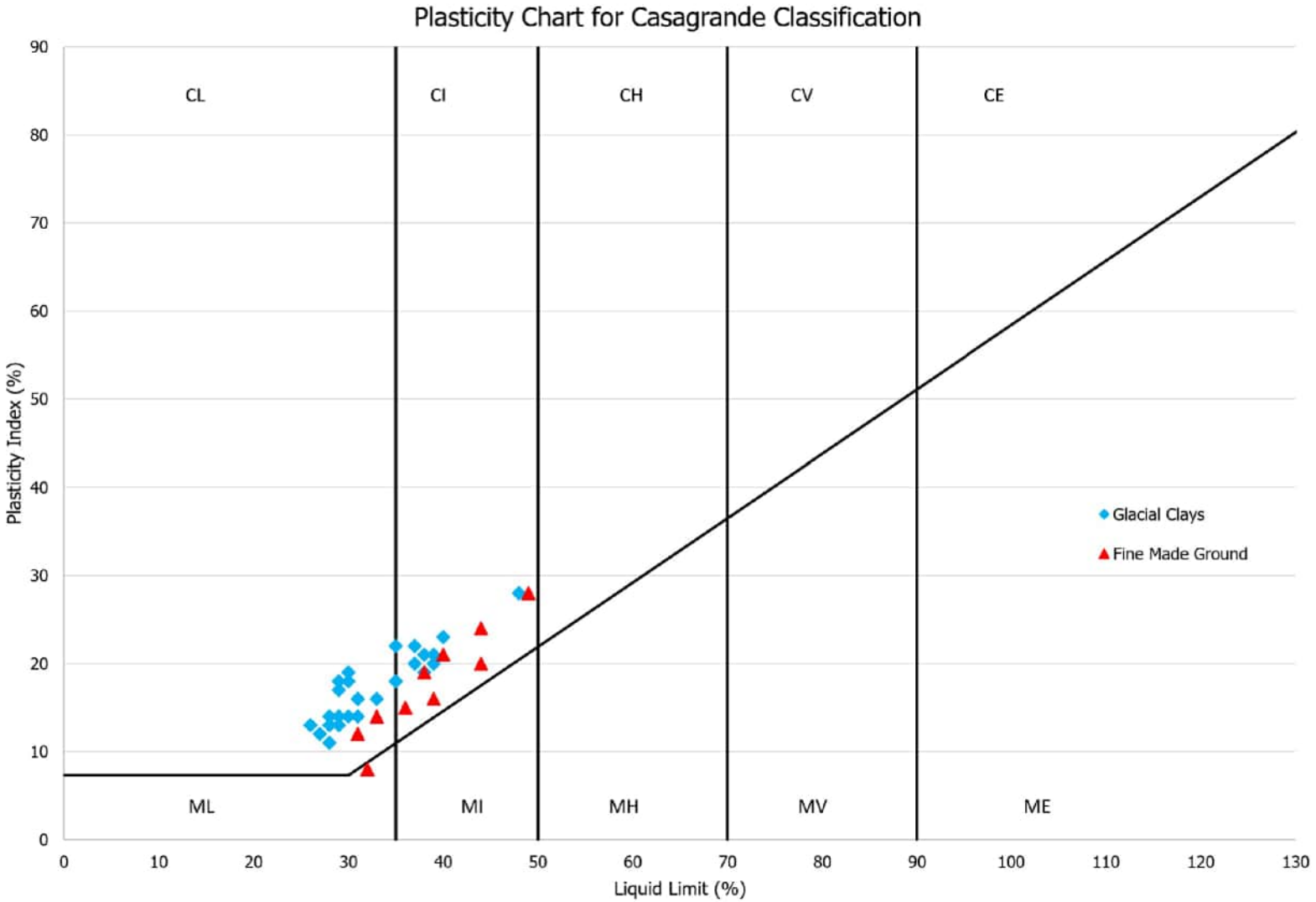
Figure 8:
Moisture Content & OMC vs Depth

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Figure 9:
Casagrande chart

Scale: NTS@A4

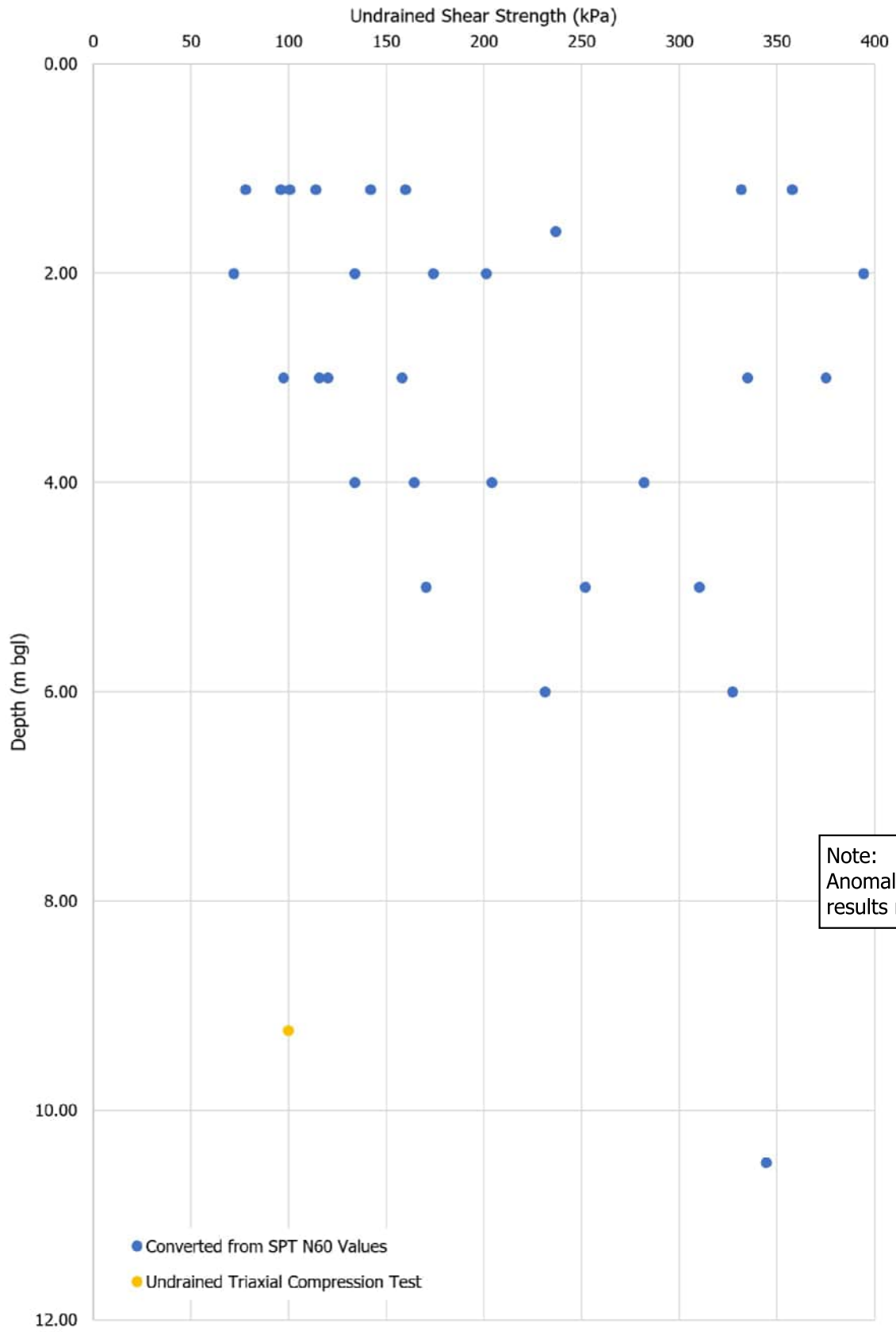
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Undrained Shear Strength of Glacial Clays



Note:
Anomalously high SPT results not included

Pyramid Park Enabling Works

Client: Homes England

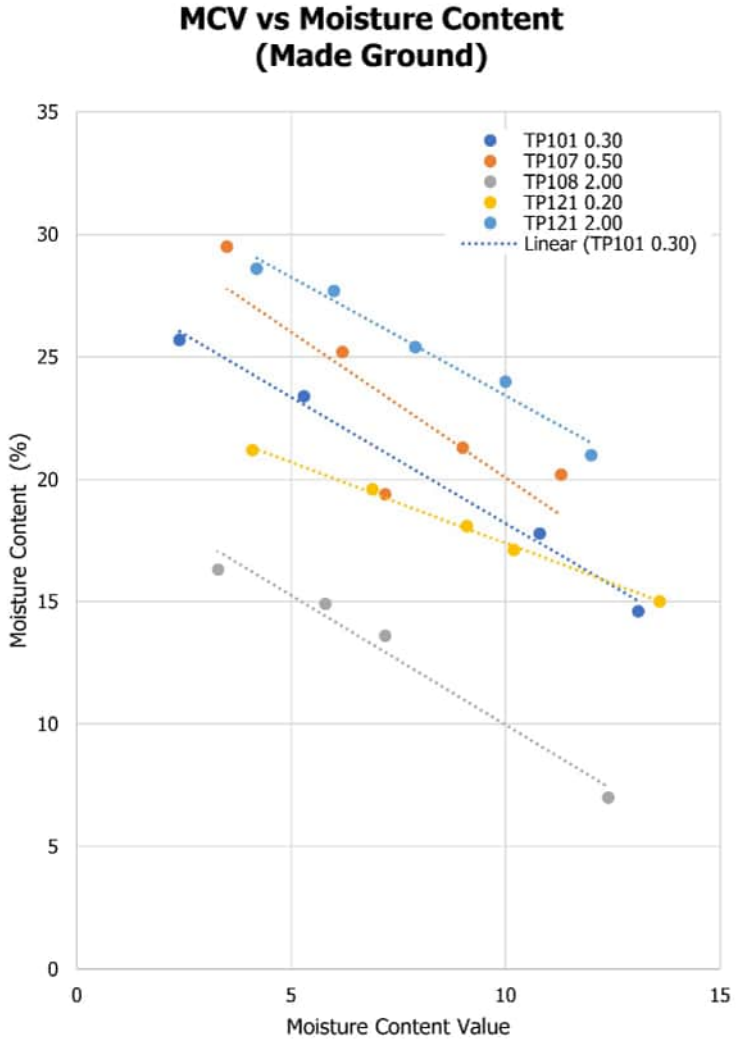
Figure 10:
Glacial Clays Undrained Shear Strength Results

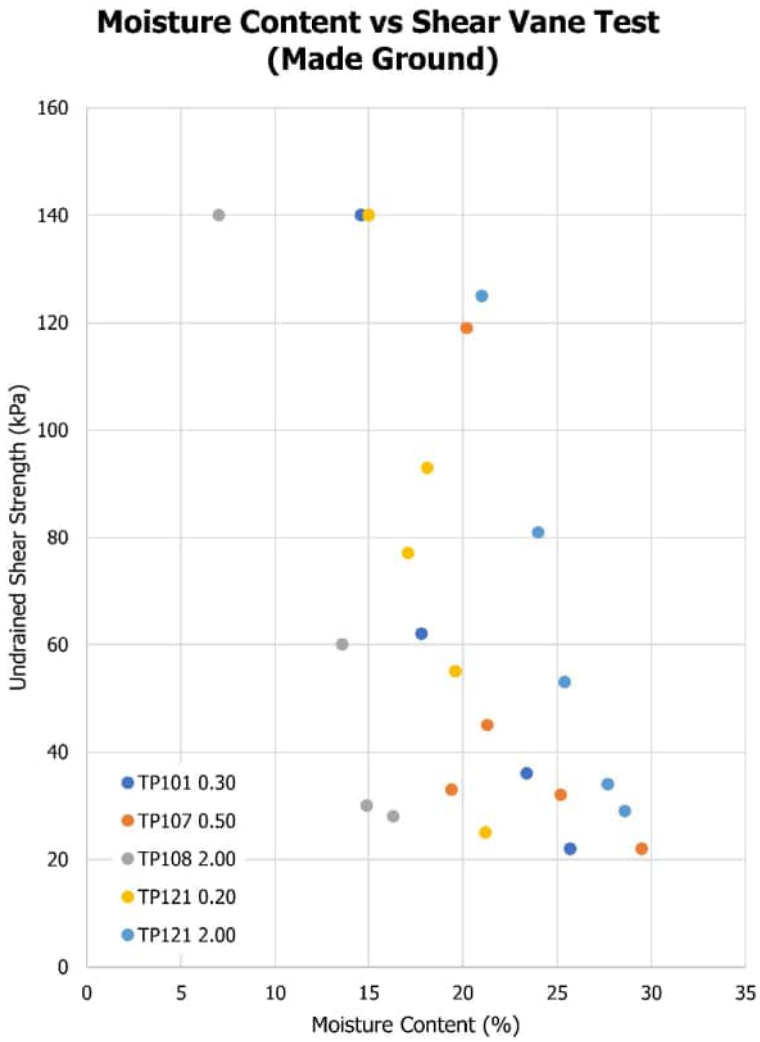
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Date (Revision History): 11/09/2024 (P1, First Issue, 25/03/24, RLF; P2, Additional GI, 11/09/24, RLF)

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Pyramid Park Enabling Works

Client: Homes England

Figure 11a:
Made Ground MCV Results

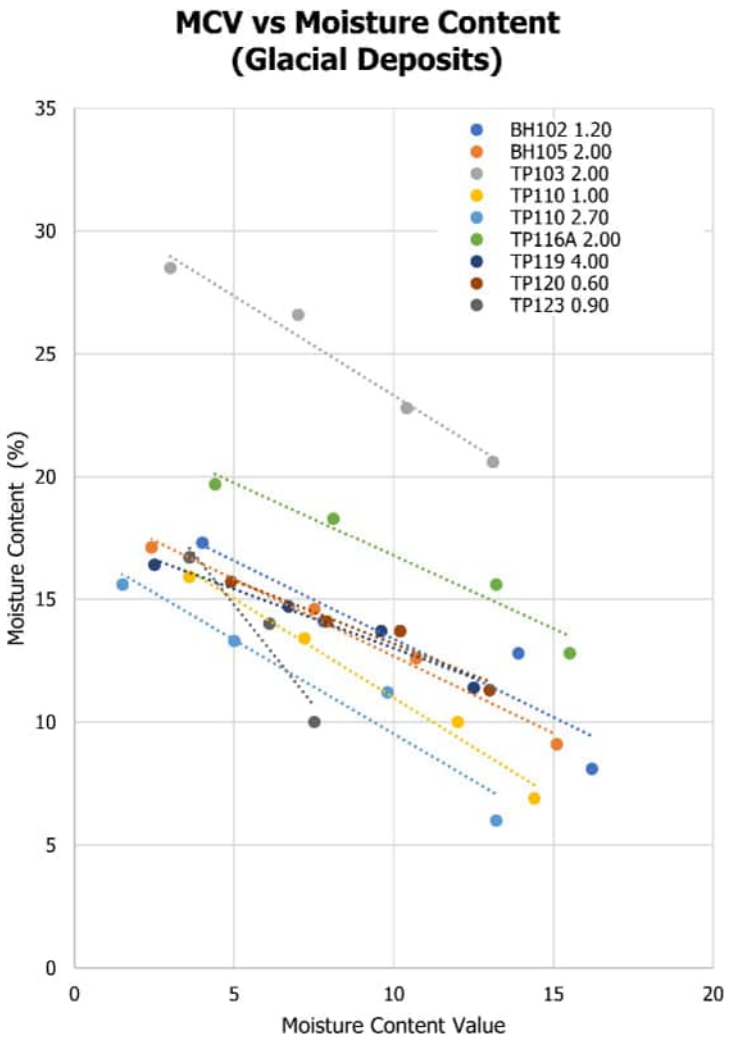
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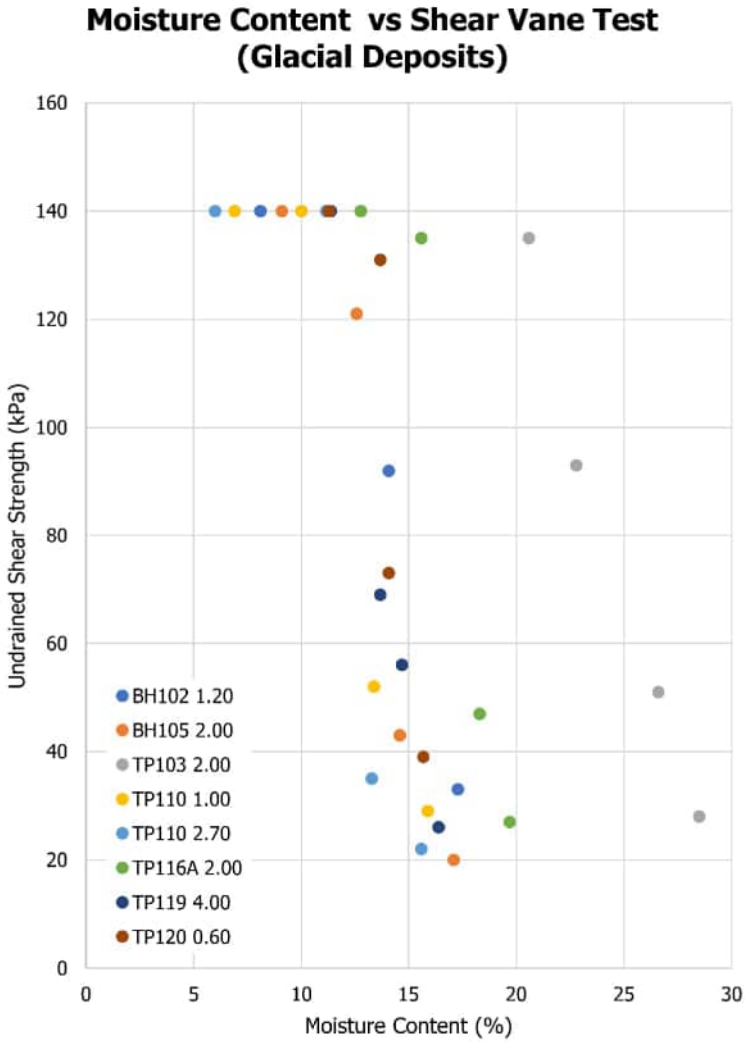
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Date (Revision History): 25/03/2024 (P1, First Issue, 25/03/24, RLF)

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Pyramid Park Enabling Works

Client: Homes England

Figure 11b:
Glacial Deposit MCV Results

Scale: NTS@A4

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Drg No - Status/Revision: 14111-CRH-XX-XX-FG-G-7022 - P1
File location: N:\14000 - 14249\14111 M - Pyramid Park Enabling Works\Project_Workspaces\LQS (pdf in Outputs)
Date (Revision History): 25/03/2024 (P1, First Issue, 25/03/24, RLF)

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Appendix 2

Desk Study Information

Bury Council Environmental Search Report
(Ref: ES859.120122.1), dated January 2022

Geoff Little OBE
Chief Executive

Our Ref ES859.120122.1
Your Ref EH390824503
Date 12 January 2022
Please ask for Judith Scott
Direct Line 0161 253 5581
Direct Fax 0161 253 5563
E-mail j.scott@bury.gov.uk

Donna Ball
Executive Director, Operations

Peter Kenny
Campbell Reith
No 1 Marsden Street
Manchester
M2 1HW

Dear Peter

ENVIRONMENTAL SEARCH REQUEST
Townside Fields, Market Street, Bury

Further to your recent enquiry regarding the above site, the Environment Section holds the following information:

The site is approximately 3 hectares in area and is located at National Grid Reference 380503 410331. The current OS plan is attached showing its location.

Please be careful to check the approximate scales on each plan enclosed as some will vary depending on the search parameters.

Contamination issues at or immediately adjacent to the site

This Section does not hold any information relating to the ground conditions at the site. It is not known what, if any ground contamination exists at the site.

The site has historically been in use a railway line, railway sidings, a goods shed, a goods station, and was later developed as a lake and area of open space. Please see attached historical maps and aerial photographs attached.

If the site is to be redeveloped, it is likely that as a minimum a preliminary risk assessment and characterisation of ground conditions including sampling of the soils will be required along with a watching brief during ground works under the planning regime.

This Section holds the following information relating to the ground conditions adjacent to the site. The location of these reports is shown on the attached plan.

CL001b Southbank Road, Bury

The following report was submitted in support of a planning application for a housing development:

Privacy Policy
Please visit www.bury.gov.uk/privacy to read our recently updated Privacy Policy which explains how Bury Council uses and shares your personal data to give you the best possible experience across our services.

Electronic or fax service of Legal documents is not accepted

- Ground Investigation Ltd, South Bank Road, Bury, Norwest Holst Soil Engineering Limited, Reference: MAN/TW/F9732, May 1993.

A site investigation was carried out in 1993 in support of the planning application for the housing development. The investigation concluded that gas protection measures would be required in the development. No ground sampling was carried out.

CL262 Townside Fields, Knowsley Street, Bury Council

The following reports were submitted in support of planning applications (47200, 49423, 51022 for a mixed use residential, offices and commercial development:

- Geo-Environmental Interpretive Report, Volume 1, Townside Fields, Faber Maunsell, December 2005.
- Remediation Strategy Report, Townside Fields, Faber Maunsell, Reference 53328IALE/001, July 2007.
- Remediation & preparatory Works Verification Report, Townside Fields, Reference:SS/017080/RVR-01, Capita Symonds, December 2009.
- Site Verification Report, Townside Fields, Angouleme Way, PCT and BMBC Buildings, Alderburgh Ltd, Report: 2874/LS, December 2009.
- Letter Report and Design and Installation Drawings, Faber Maunsell, Carillion, 8 January 2010.

Exceedances of contaminants were found and slightly elevated levels of ground gas. Remedial measures including gas protection measures were completed and planning conditions discharged.

CL589 Bury College Woodbury Centre, Market Street Bury

The site was investigation on support of planning application 53857 for the demolition of the building and the development of a 5 storey building.

- Phase I Appraisal, Desk Study Report, Bury College, Woodbury Centre, GRM, Reference: GRM/P5368/DS.1 December 2010.
- Phase II Appraisal, Ground Investigation Report, Bury College, Woodbury Centre, GRM, Reference: GRM/P5368/F.3, May 2011.

Soil cover system in landscaped areas and gas protection measures in the building were required. A Validation Report has not been received.

CL702 Bury Times Ltd, Market Street, Bury

The site was investigated in support of planning application 56106 for a five storey extension to the existing Enterprise Centre.

- Short Form Site Assessment for Bury Times Building, Bury, GRM, Reference: GRM/P4874/IA.1, May 2009.
- Letter Report – Additional Investigation Works, Bury College (Former Bury Times Building) Extension, GRM, Reference: P4874-BT2, 21 January 2013.

No remedial measures were required for the development.

Landfill Sites within 250 metres

The site is located within 250 of five known landfill sites, locations of which can be found on the attached plan:

Landfill Name:	**Pyramid Park**
File reference:	**C078** **Grid Ref.: 380750 410250**

The site was filled with inert subsoil as part of a Reclamation scheme with material imported from Moss Lane, Whitefield and Porritt Street, Freetown. The site is pre – licensing and was filled in 1973. The site is currently split into car parking and open space.

Site investigations carried out in 2005 and 2006 show generally reworked natural clays over shallow demolition wastes possibly from previous land uses.

The entire landfill site was redeveloped in late 2000s and early 2010s as commercial development comprising a hotel, offices and car park under Planning Application 47200. Remedial measures were carried out which included significant earthworks, gas protection measures and clean cover in soft landscaped areas.

Landfill Name:	**Wellington Road, Bury**
File reference:	**C085** **Grid Ref.: 380750 410000**

A relatively small landfill filled with mainly domestic waste with some underlying peat. The site is pre waste management licensing and is currently owned by Bury MBC and in use as public open space. Filled between 1970 and 1972. Planning Permission was granted in 1954 for tipping. Gas venting boreholes have been installed to 6.5m deep at 3m intervals linked by a shallow gravel filled trench along the west and south boundaries. A site investigation and carried out under Part 2A of the EPA 1990 in 2012 found that gas production at the site was now low and that the risk of gas migrating laterally off site was very low. Site investigation reports are available for the site which can be viewed if requested.

Landfill Name:	**Peel College, Bury**
File reference:	**C087** **Grid Ref.: 380500 410240**

The site is an infilled railway cutting. It is not known what the landfill was filled with. The site is pre – licensing act.

Landfill Name:	**Disused Railway Cutting, Bridge Road, or (Belle Vue)**
File reference:	**C093** **Grid Ref.: 380072 410400**

The site is an infilled railway cutting which is now in use as a car park. The site was filled with inert waste under Licence No. RD/LIC/650/90 first issued 1991 and surrendered in 1993. The site is owned by Bury MBC.

Landfill Name:	**Railway Cuttings East and West of Manchester Road, Bury**
File reference:	**RD/LIC/503/88** **Grid Ref.: 380135 410417**

The site is filled with inert and construction waste types. This waste was deposited by Bury MBC under licence No. RD/LIC/503/88 first issued in 1988. Most of the fill was removed to re-open a railway line now used by the East Lancashire Railway.

Please note that the boundaries indicated on the enclosed plan are approximate only and may not reflect the actual extent of fill.

Local areas of landfilling at or within influencing distance of the site may have been carried out for which we hold no records. Please consult historical maps and other sources of information to identify potential areas of filling.

Further information on landfills may be available from the Environment Agency by telephoning 08708 506 506 or visiting their Website: www.environment-agency.gov.uk and completing any on-line enquiry form. Note that the Environment Agency may make a reasonable charge for supplying this information.

Sites determined as statutory contaminated land within 250 metres

No areas of land at or near the site have been determined as Contaminated Land under Part 2A of the Environmental Protection Act (EPA) 1990.

As the site has had a previous potentially contaminating land use, the site is considered a potential site of concern. However, due to the current use of the site the site is not considered a high priority for further investigation under Part 2A of the EPA 1990 and it is considered very unlikely that the site will be investigated in the near future, unless additional evidence that there may be a significant contaminated land issue at the site comes to light.

However, if the site is to be redeveloped for a sensitive end use, it is likely that a minimum preliminary risk assessment and characterisation of ground conditions including sampling of the soils will be required along with a watching brief during ground works under the planning regime.

It would be considered prudent to conduct the above assessments and sampling to indicate potential problems which may require further investigations and / or remedial action. Extracts from historical mapping have been included for your information.

Historical maps for the site

Extracts from Ordnance Survey historical maps 1848, 1893, 1910, 1930, 1937, 1958, 1959, and 1984 are enclosed. Please refer to the maps for details of past uses at the site and surrounding land.

Aerial Photographs for the site

Aerial photography of the site from the 1940s, 1979, 1989, 1997-9, 2000, 2005 and 2011 surveys are enclosed for your information.

Please note that the quality of the earlier photography is limited, however, they do provide an extra source of information which is generally useful for the site and surrounding land.

Solid & Drift Geology for the site

The following information has been taken from the British Geological Survey 1:50000 scale digital map:

DRIFT	GLACIALFLUVIAL DEPOSITS Sand and Gravel
SOLID	LOWER COAL MEASURES

Please note that the 1:50 000 scale data may be used as a guide to the geology at a local level, but should not be relied on for site specific geology. If more-detailed information is required then the 1:10000 scale maps, which provide the most-detailed interpretations available, should be consulted.

Aquifers and groundwater vulnerability classification at the site

The Environment Agency designate aquifers based on the Water Framework Directive. The designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply) but also their role in supporting surface water flows and wetland ecosystems. The aquifer designation data is based on geological mapping provided by the British Geological Survey. Both the bedrock and superficial deposits are classified on the same scale.

Based on these designations, the bedrock beneath the site is classified as **Secondary A** (Lower Coal Measures) and the Drift Geology is **Secondary (undifferentiated)**. Please see below for the descriptions of these classifications:

Secondary A - permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

Secondary (Undifferentiated) - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

Radon Affected Areas at the site

The site is not located within a Radon Affected Area as less than 1 percent of homes are likely to be above the Action Level.

The PHE recommends a radon 'Action Level' of 200 Becquerels per cubic metre for the annual average of radon gas concentration in a home. Where 1% or more of homes are estimated to exceed the Action Level, the area should be regarded as a Radon Affected Area.

Further information on Radon can be obtained from the Health Protection Agency, from the British Geological Survey or at www.ukradon.org.

Environmental Permits at the site

We are not aware of any sites with Integrated Pollution Prevention Control (IPPC) Part A1, or Local Authority Integrated Pollution Prevention and Control (LAIPPC) Part A2 or Part B within 250m of the site.

Please note that other processes that do not fall under these regulations or are exempt may exist within influencing distance of the site of interest and may cause pollution and/or nuisance to new receptors

Statutory nuisance notices in force at the site

We have searched the Environmental Services Authority database for nuisance and pollution incidents.

No nuisance incidents have been logged against the address supplied within the last 12 months.

No pollution incidents have been logged against the address supplied within the last 12 months.

No Statutory Notices for nuisance have been served against the address supplied or the immediate area within the last 12 months.

Other information on pollution incidents may be held by the Environment Agency (contact details given above), Health & Safety Executive on www.hse.gov.uk or by contacting the Manchester office on 0161 952 8200, Greater Manchester Fire Brigade on www.manchesterfire.gov.uk and Greater Manchester Police on 0161 872 5050 or their website: www.gmp.police.uk.

Ecological designations within 250 metres

We have records of one Sites of Biological Importance (SBIs) situated on the site and no SBIs or Sites of Special Scientific Interest (SSSI) within 250m of the site.

Map ref.	Site Name	Grid Reference	Site Grade
C55	Townside	SD805103	B

Private Water Supplies within 1000 metres

We are not aware of any private water abstractions regulated under the Private Water Supplies (England) Regulations 2016 within 1000m of the site.

Air Quality Management Area (AQMA) at the site

The site is located adjacent to an area predicted to exceed the national Air Quality Objectives for Nitrogen Dioxide (NO_2) as detailed in the Air Quality (England) Regulations 2015.

It is therefore important that the site does not lead to, or significantly add to, predicted exceedences of any of the objectives detailed in the Air Quality (England) Regulations 2015. Should this be the case, we advise that an appropriate air quality impact assessment be carried out if the site were to be redeveloped.

Additionally, in line with the principles of Good Practice set out in the EPUK Guidance, we would welcome proposals to mitigate any potential impact of any redevelopment on local air quality through the provision of electric vehicle charging points to encourage the use of low emission vehicles.

Environmental Information Regulations 2004

The Environmental Information Regulations enable individuals and organisations to request environmental information held by public bodies. In the majority of cases, we will endeavour to respond to your request within 20 working days, extended to a maximum of 40 working days should the request be complex or voluminous. Public Bodies are allowed to make a reasonable charge for supplying the information requested, and we will contact you if a charge is applicable.

You are welcome to have access to any public registers or to examine the information free of charge. If you wish to do so, please contact the Council to arrange viewing.

If you are dissatisfied with your response, you have the right to complain to the Local Authority, who will conduct an internal review to try and resolve any issues or problems. Please complete a 'Report a Problem' complaint form available from our website: www.bury.gov.uk or by contacting customer services on 0161 253 5353. Should you still not be satisfied with your response, you may then appeal to the Information Commissioner. Details can be found on the following website: www.informationcommissioner.gov.uk or by contacting 01625 545 700.

Payment Receipt

I acknowledge your payment of £125.00.

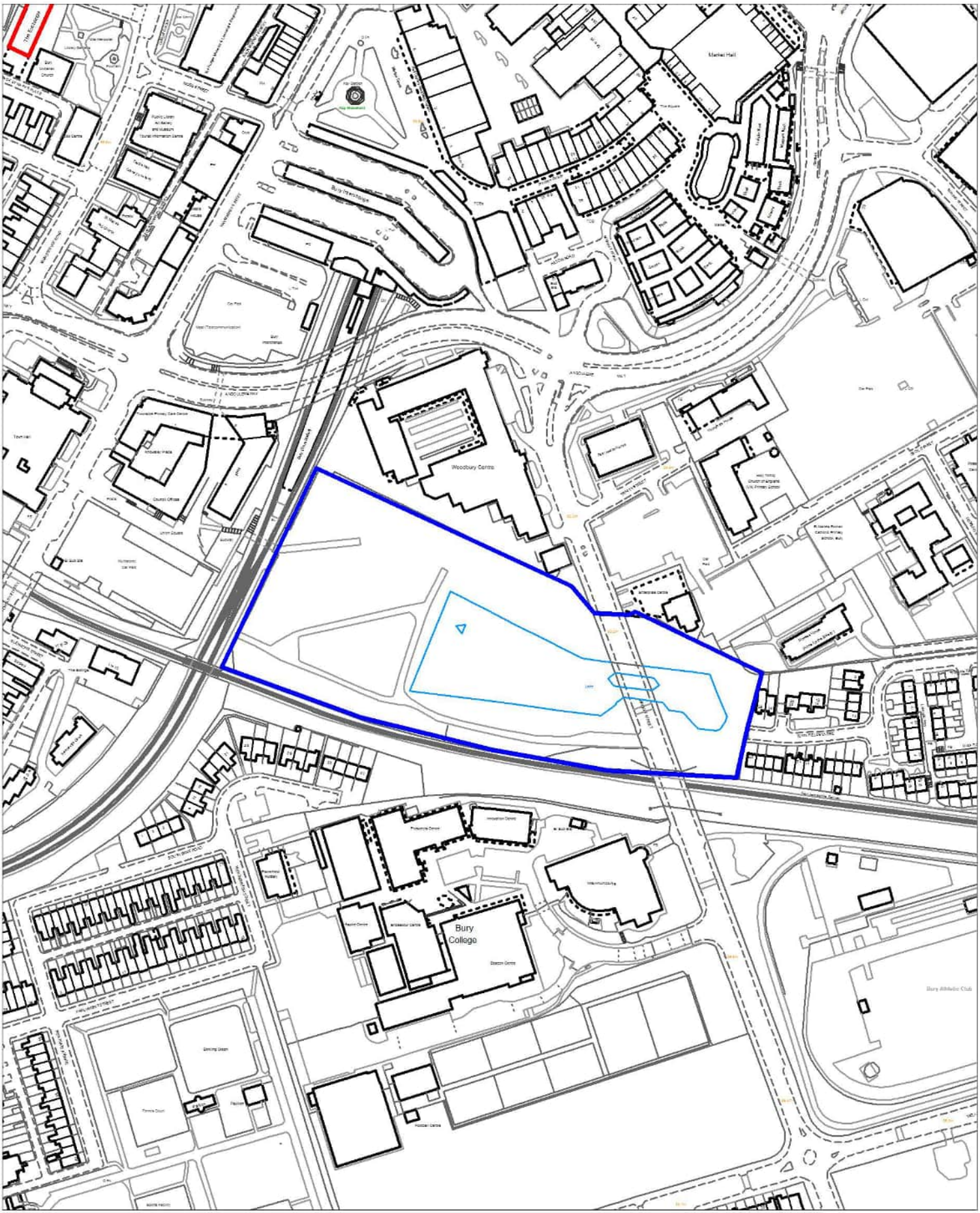
Should you require any further information please contact me on the number given above.

Yours sincerely



Judith Scott
Environmental Protection Officer

The above details are based upon records currently held by the Environment Section and are believed to be accurate at the time of printing. However, this Division can accept no responsibility for their accuracy or completeness.



KEY:

Site Boundary

TITLE: Townside Fields, Market Street, Bury

Current OS Map

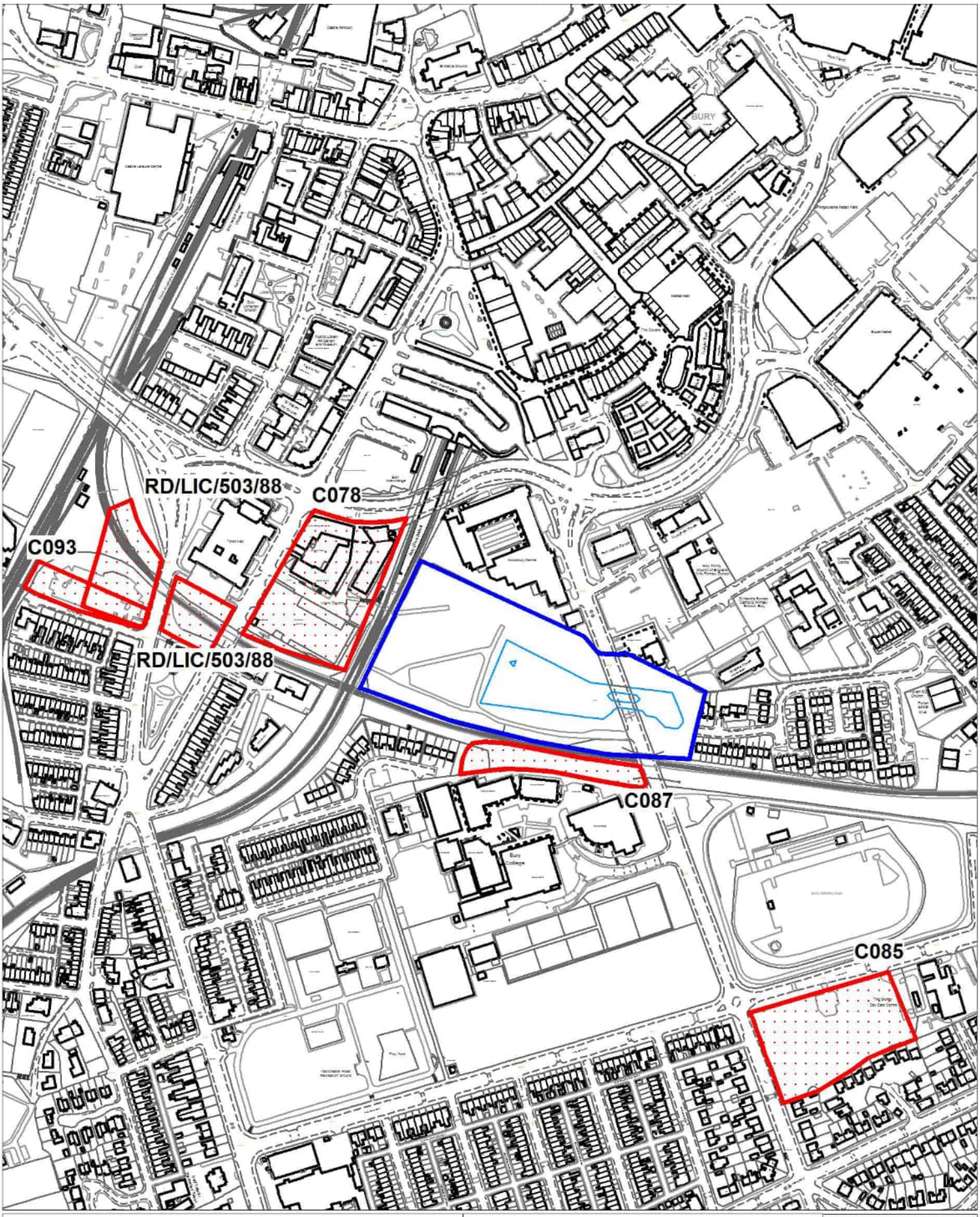
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Ordnance Survey 100023063.

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Bury COUNCIL



KEY:

Site Boundary

Landfill Sites

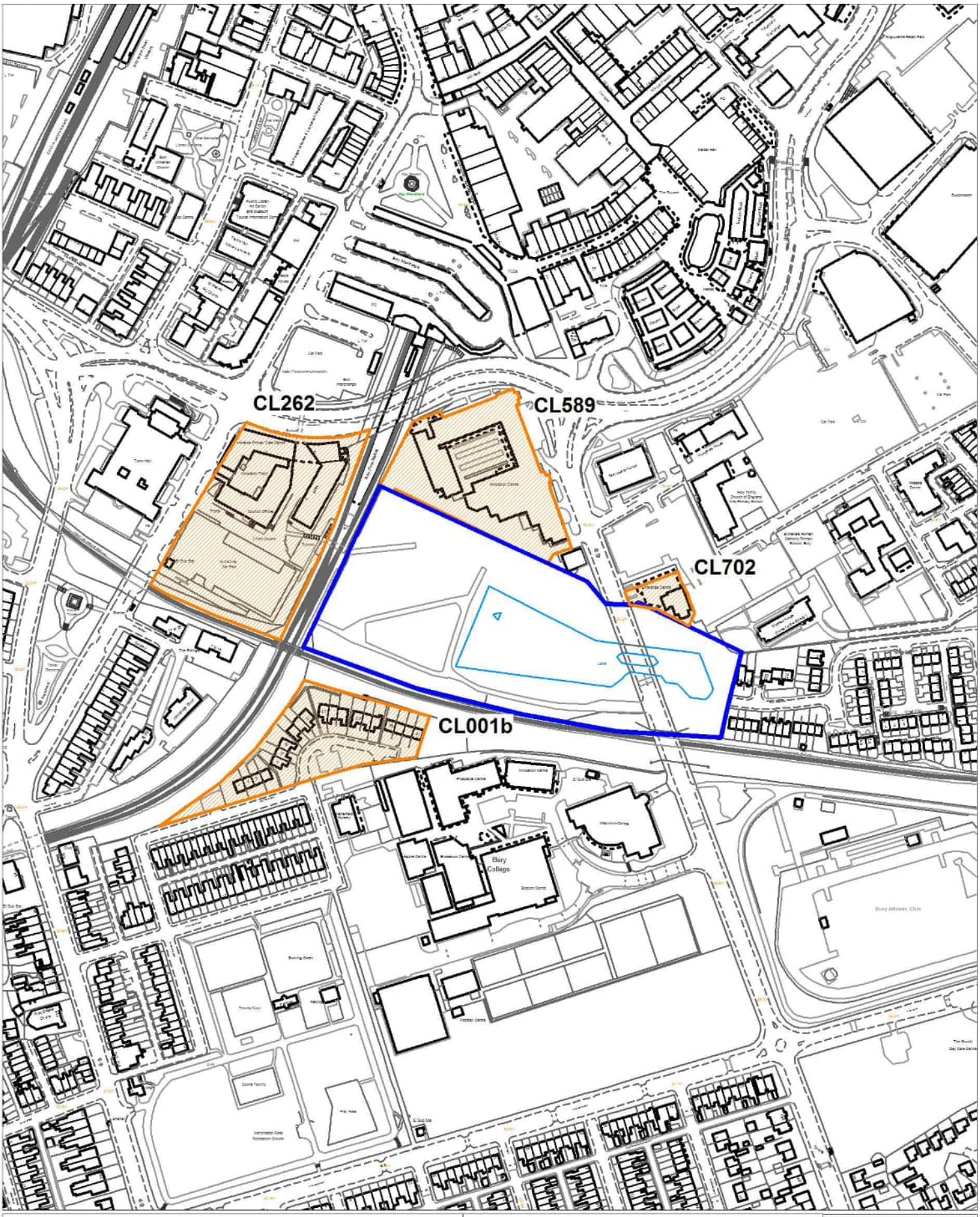
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Bury
Landfill Sites

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NGR: 805 103

SCALE: 1:3600 @ A4 Date: 11 01 2022

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KEY:

Site Boundary

Contaminated Land Files

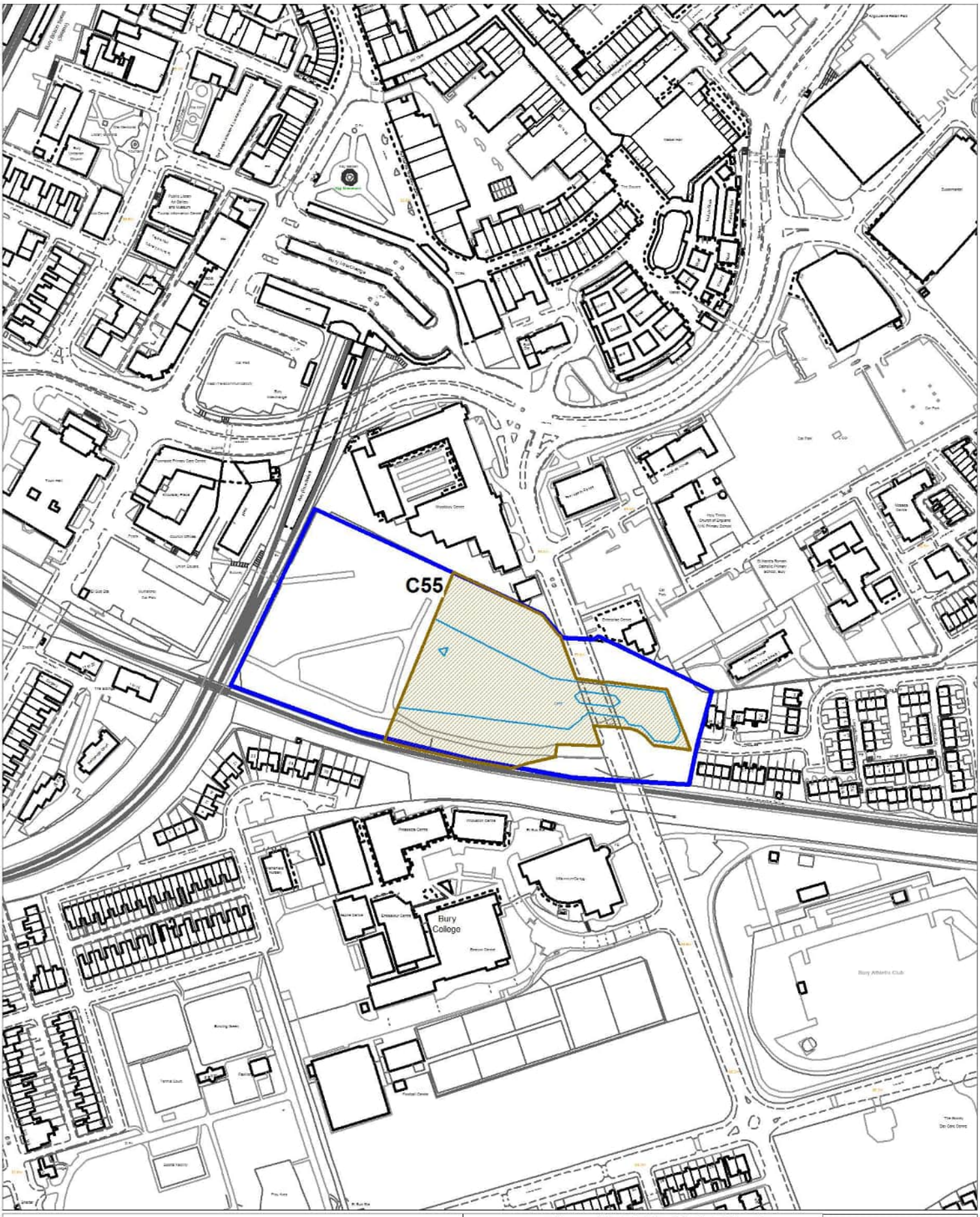
TITLE: Townside Fields, Market Street
Bury
Contaminated Land Files

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NGR: 805 103

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KEY:

Site Boundary

SBI

TITLE: Townside Fields, Market Street
Bury
Site of Biological Importance (SBI) and
Sites of Special Scientific Interest (SSSI)

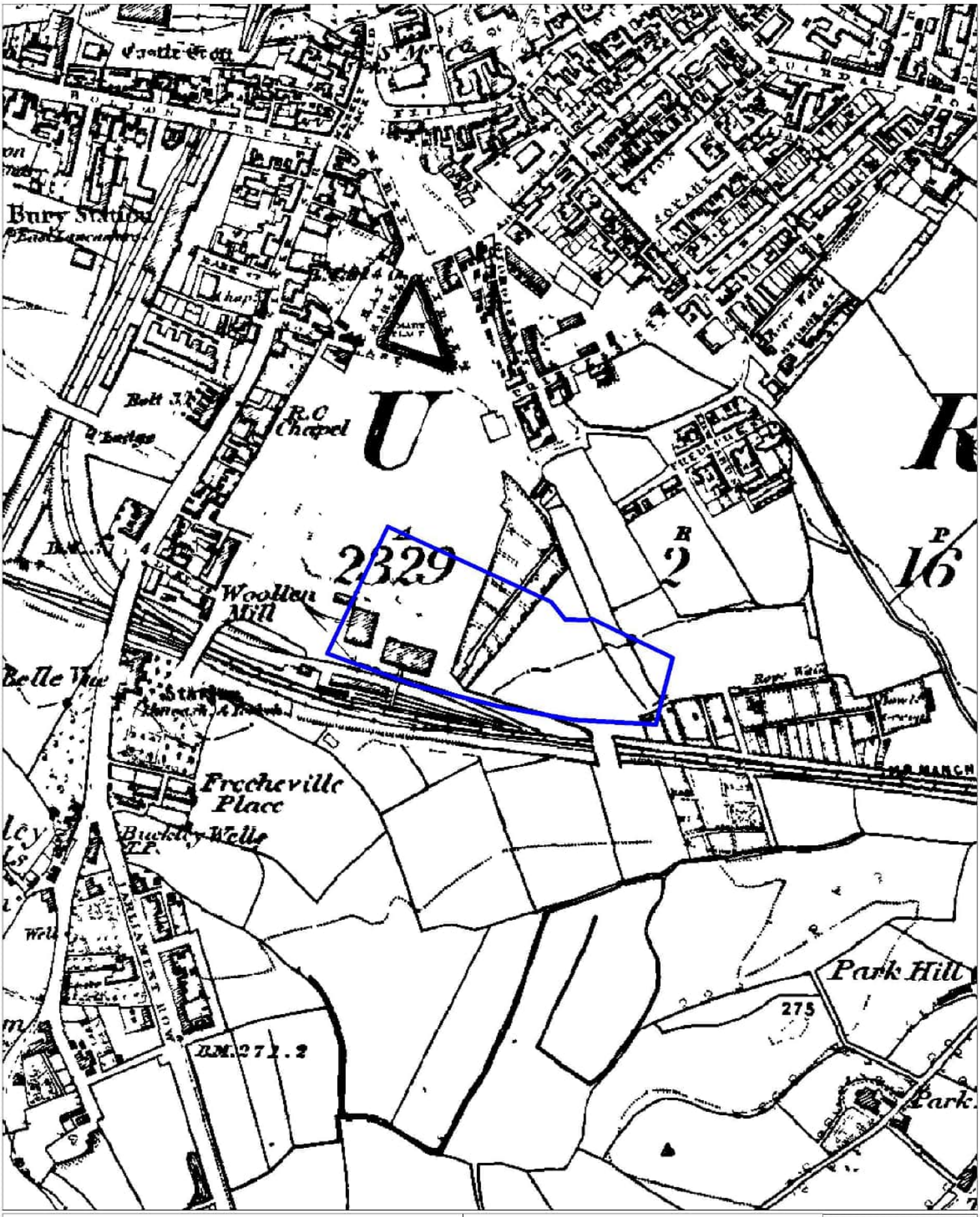
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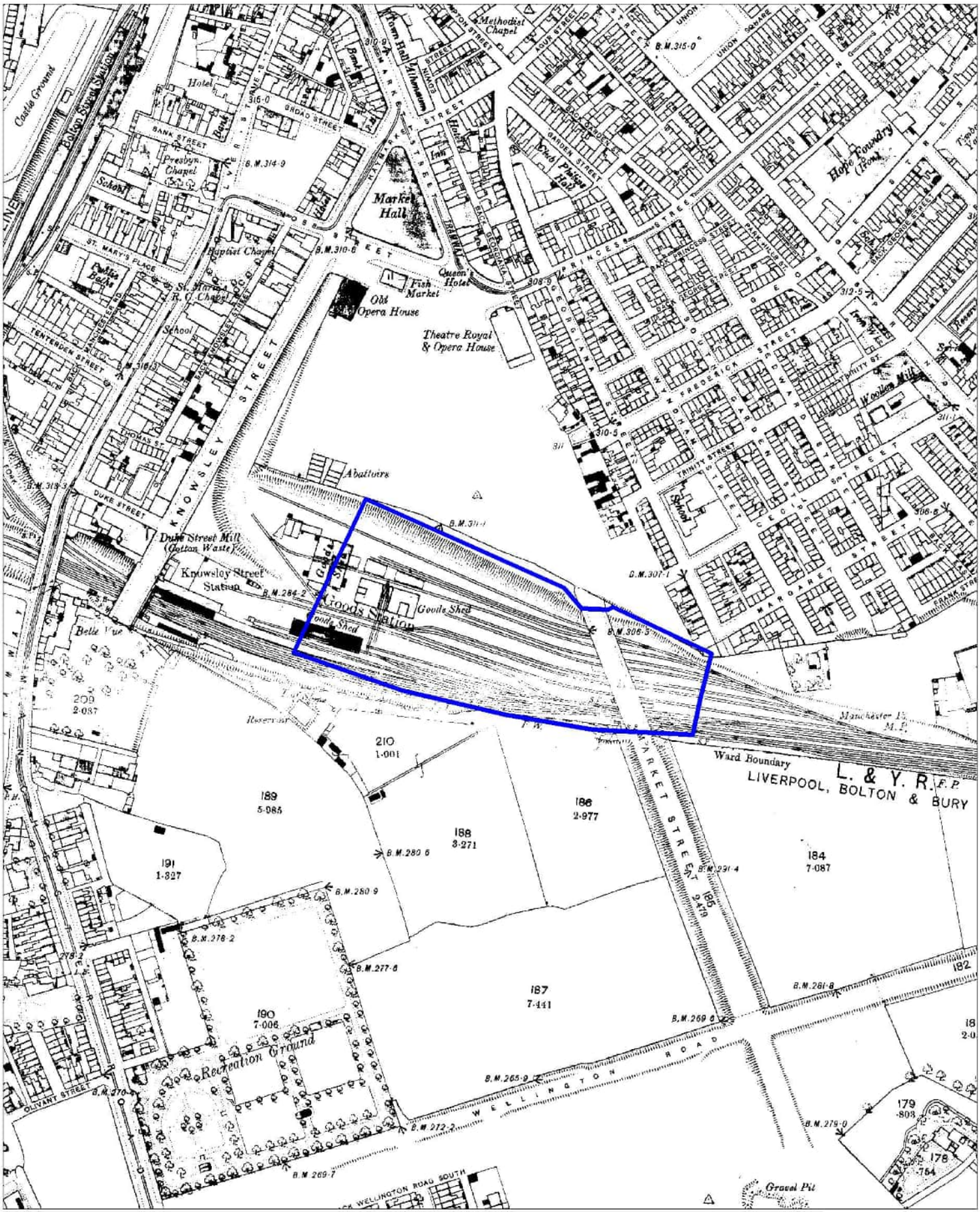
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Bury
1848 Historical Map

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KEY:

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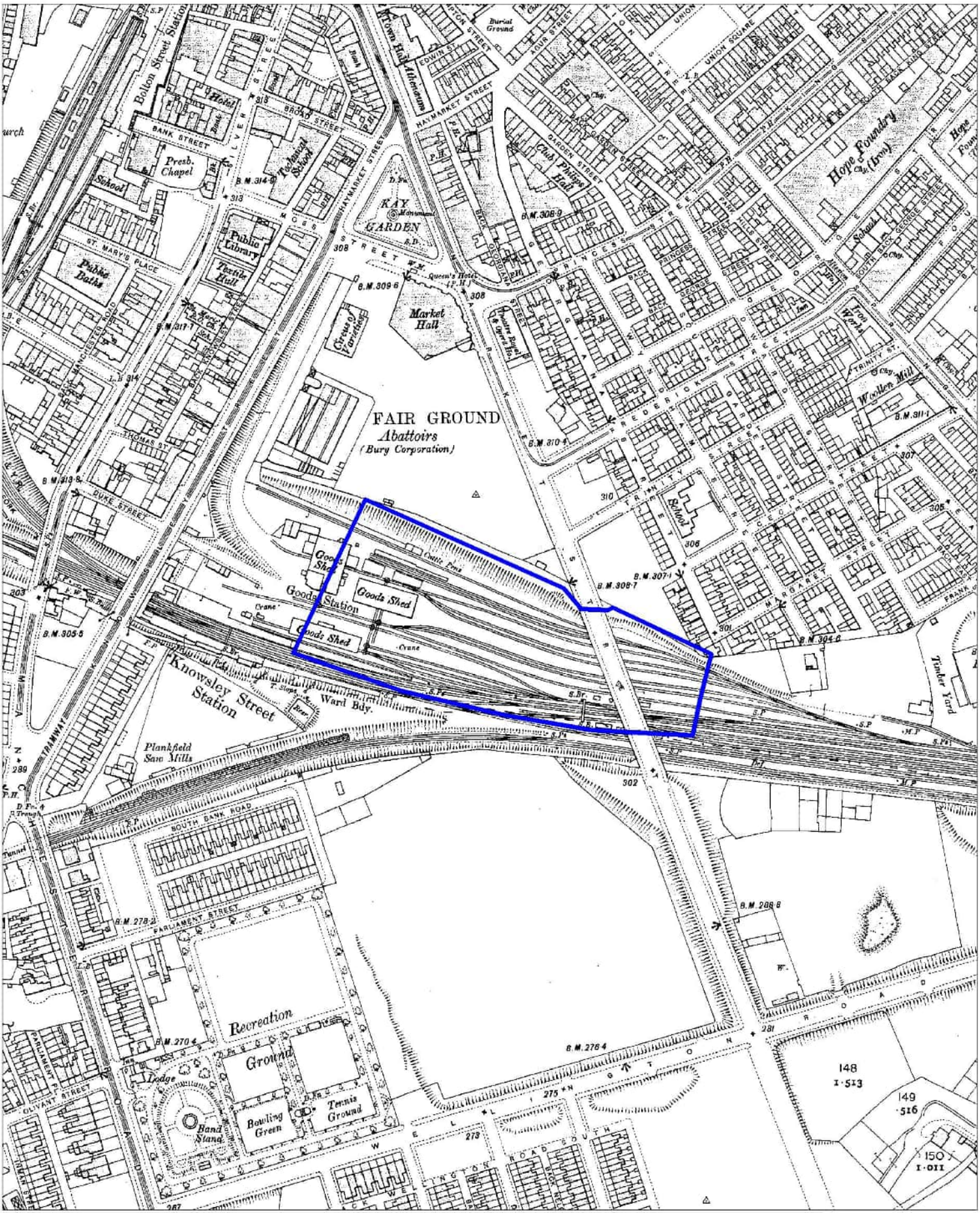
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1893 Historical Map

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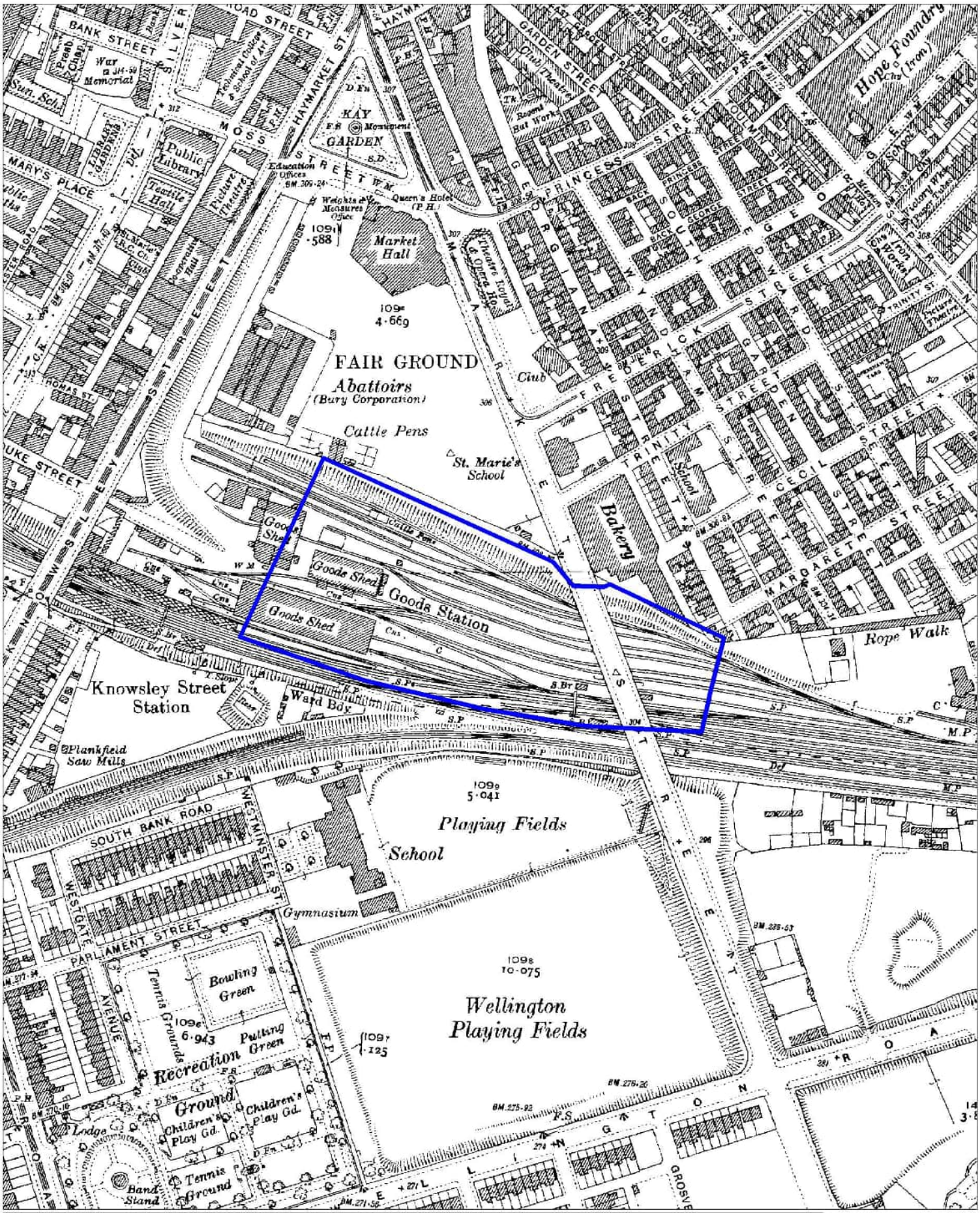
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1910 Historical Map

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Bury COUNCIL



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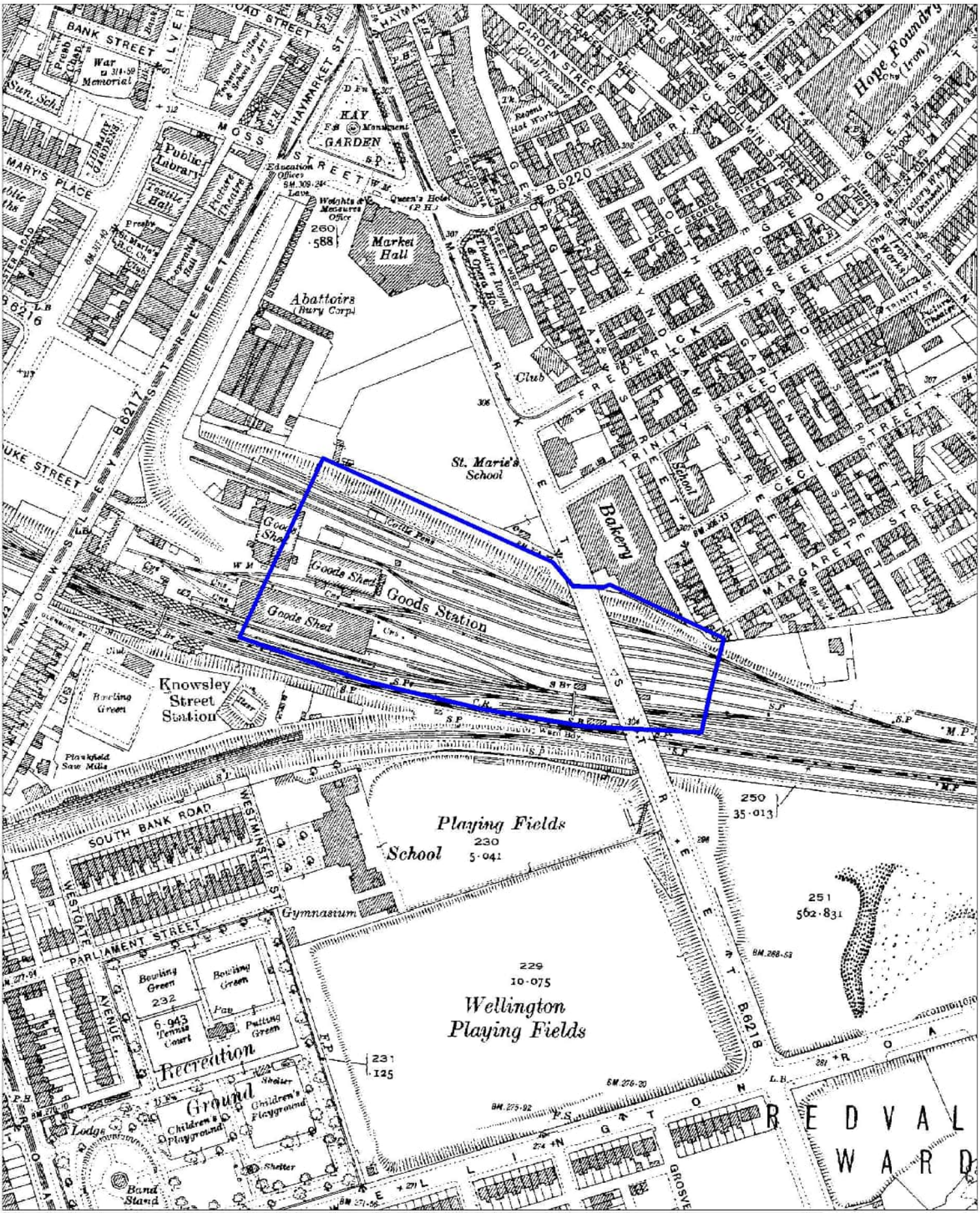
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1930 Historical Map

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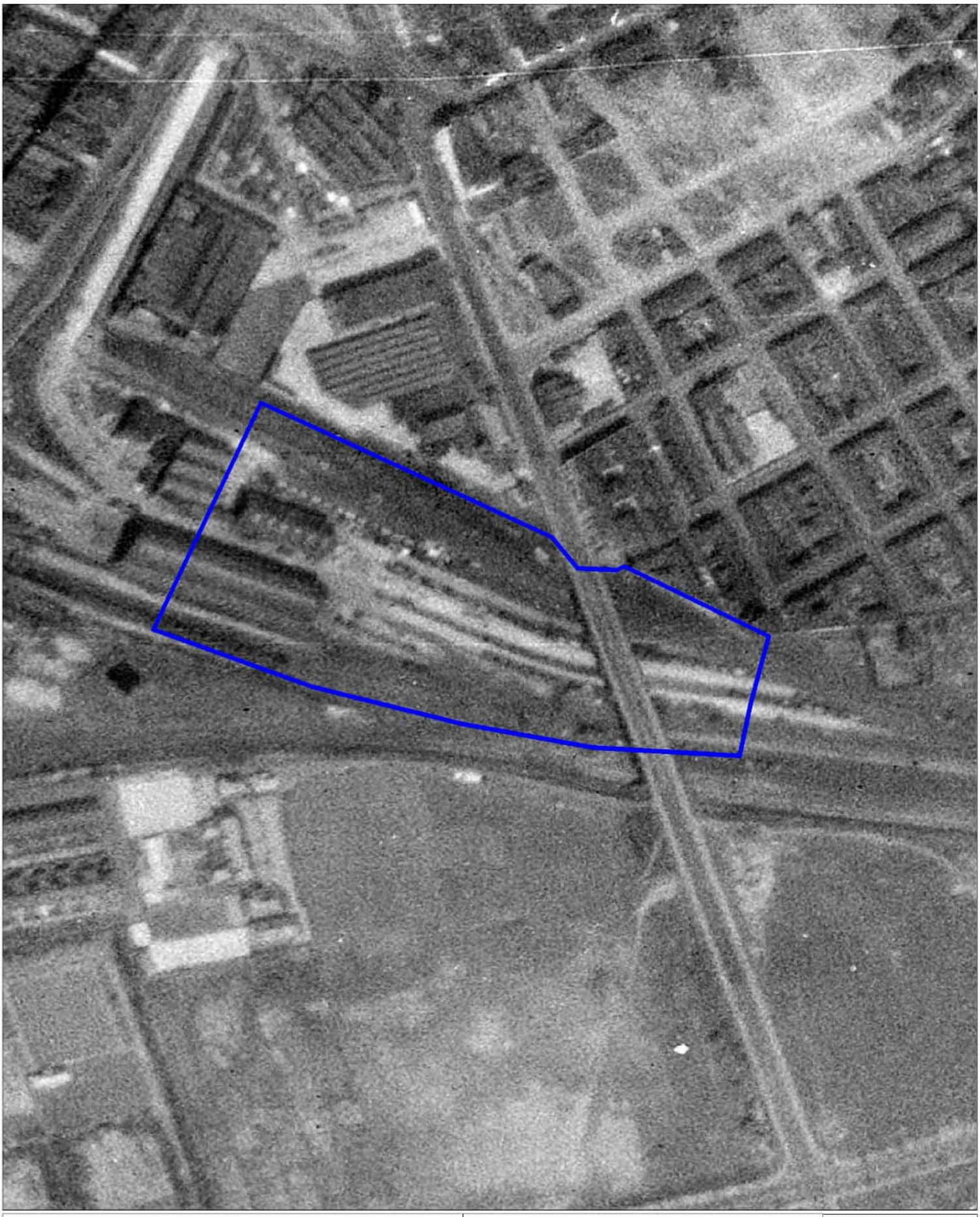
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1937 Historical Map

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Bury COUNCIL



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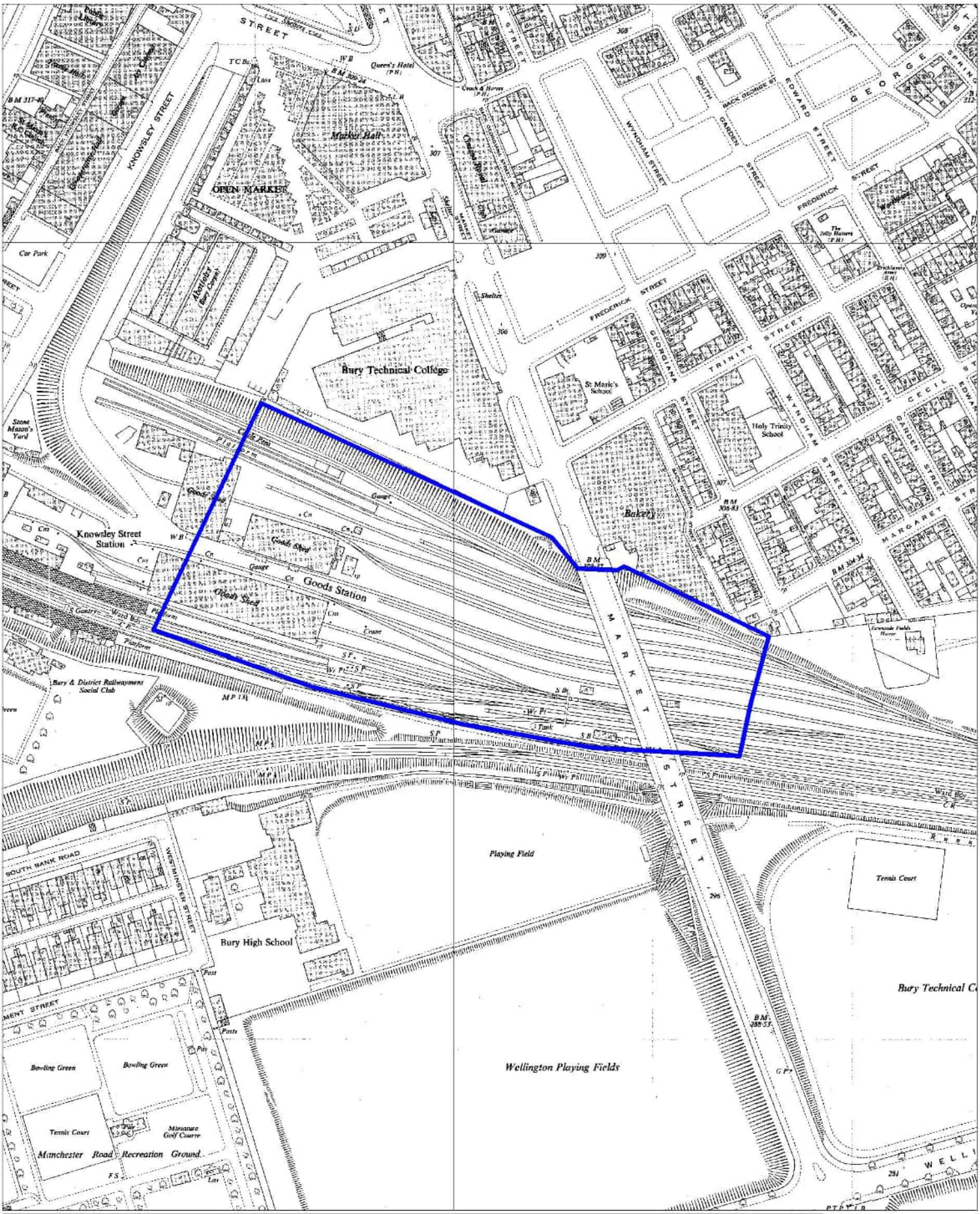
TITLE: Townside Fields, Market Street
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1940s Aerial Photo

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Bury COUNCIL



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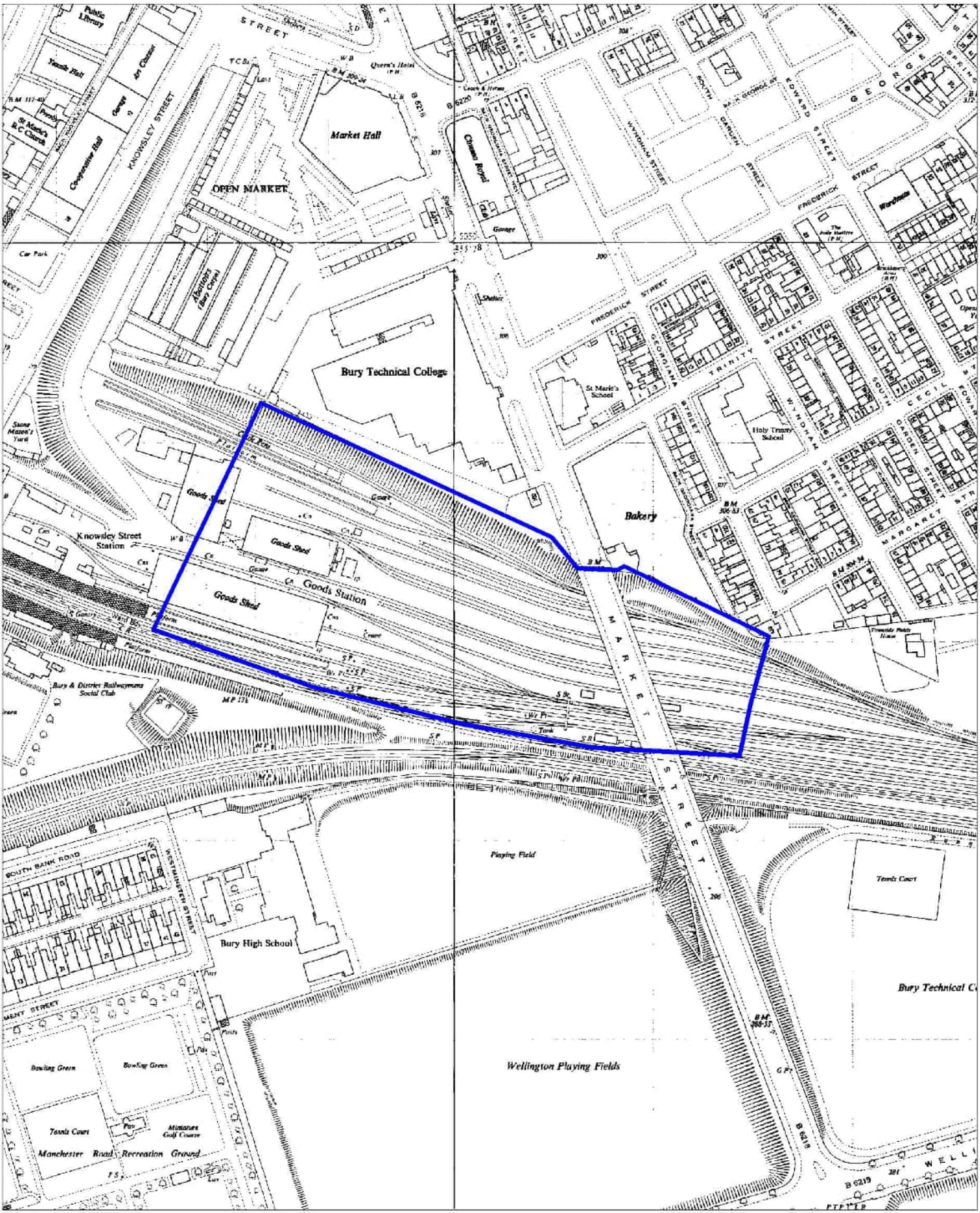
TITLE: Townside Fields, Market Street
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1958 Historical Map

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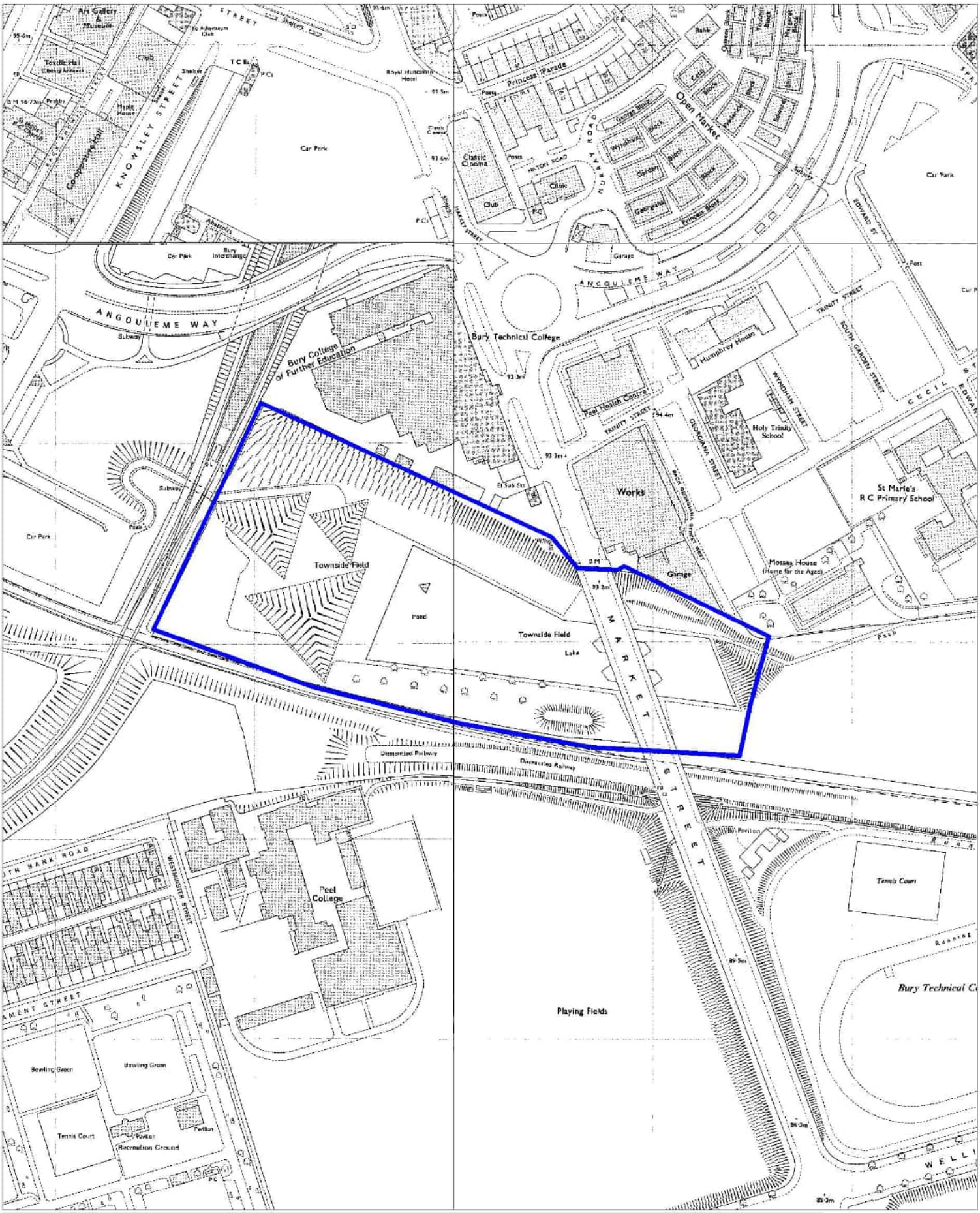
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1959 Historical Map

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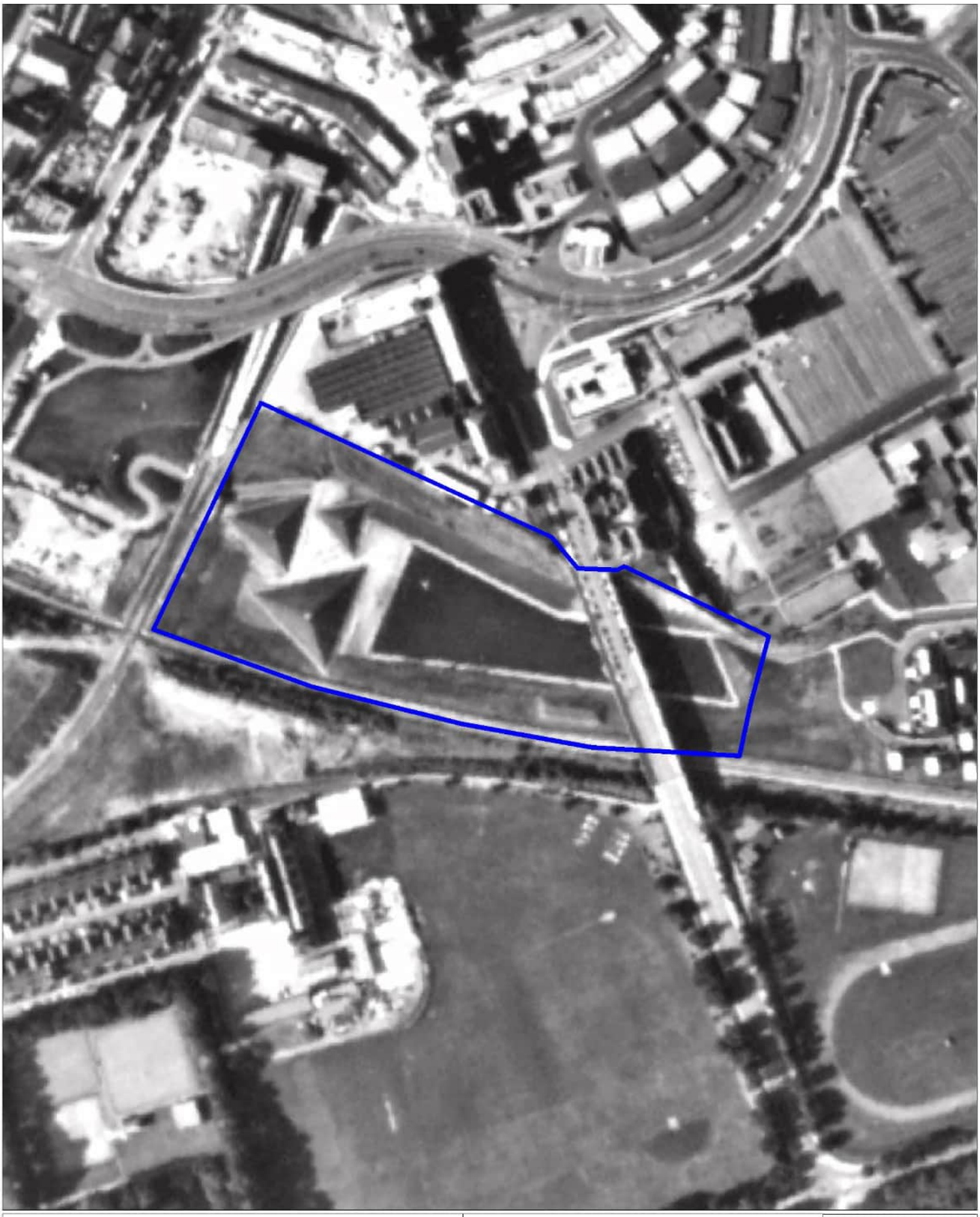
TITLE: Townside Fields, Market Street
Bury
1984 Historical Map

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NGR: 805 103

SCALE: 1:2000 @ A4 Date: 11 01 2022

Bury COUNCIL



KEY:

Site Boundary

TITLE: Townside Fields, Market Street
Bury
1979 Aerial Photo

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NGR: 805 103

SCALE: 1:2000 @ A4 Date: 11 01 2022

Bury COUNCIL



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Site Boundary

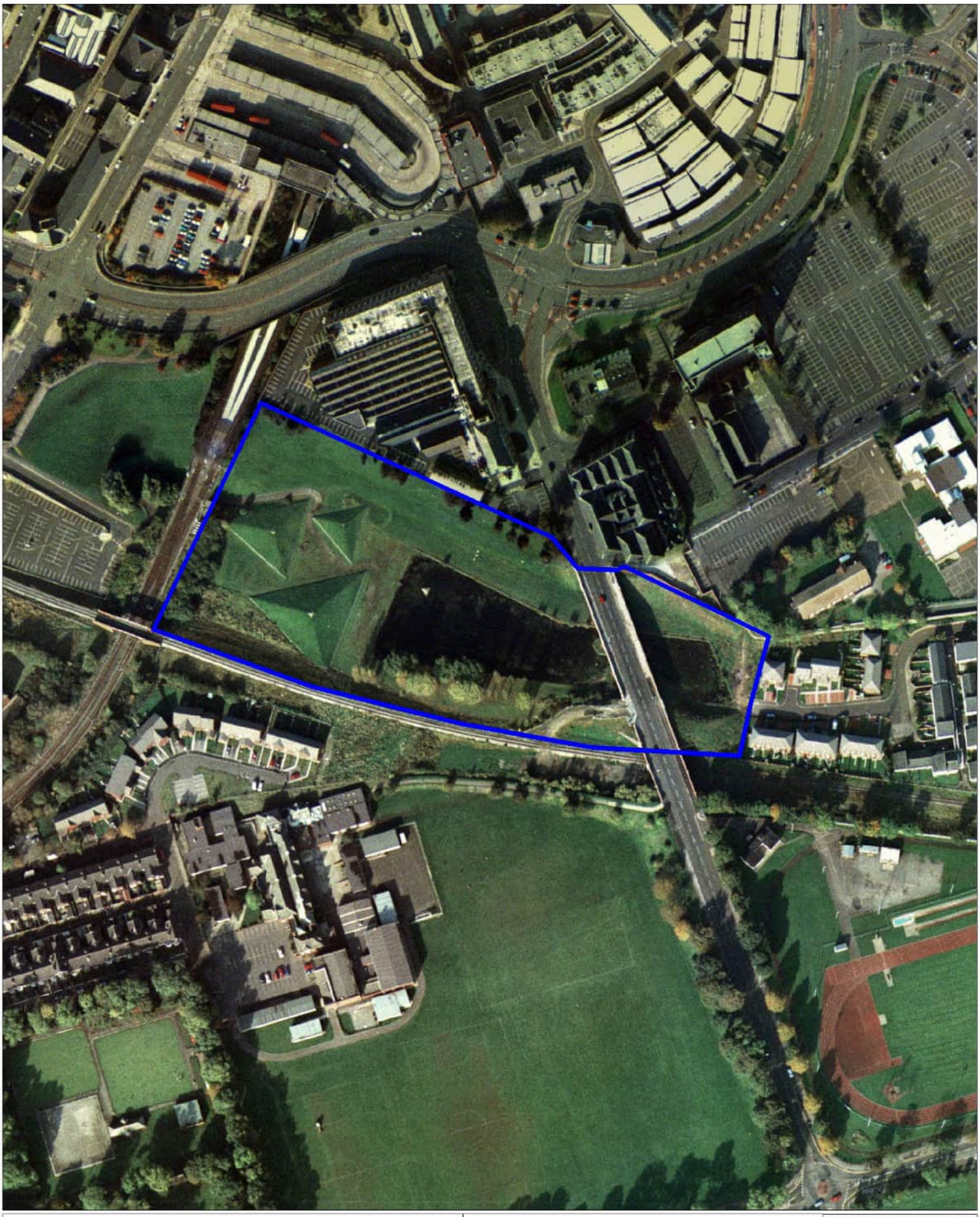
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Townside Fields, Market Street
Bury
1989 Aerial Photo

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KEY:

Site Boundary

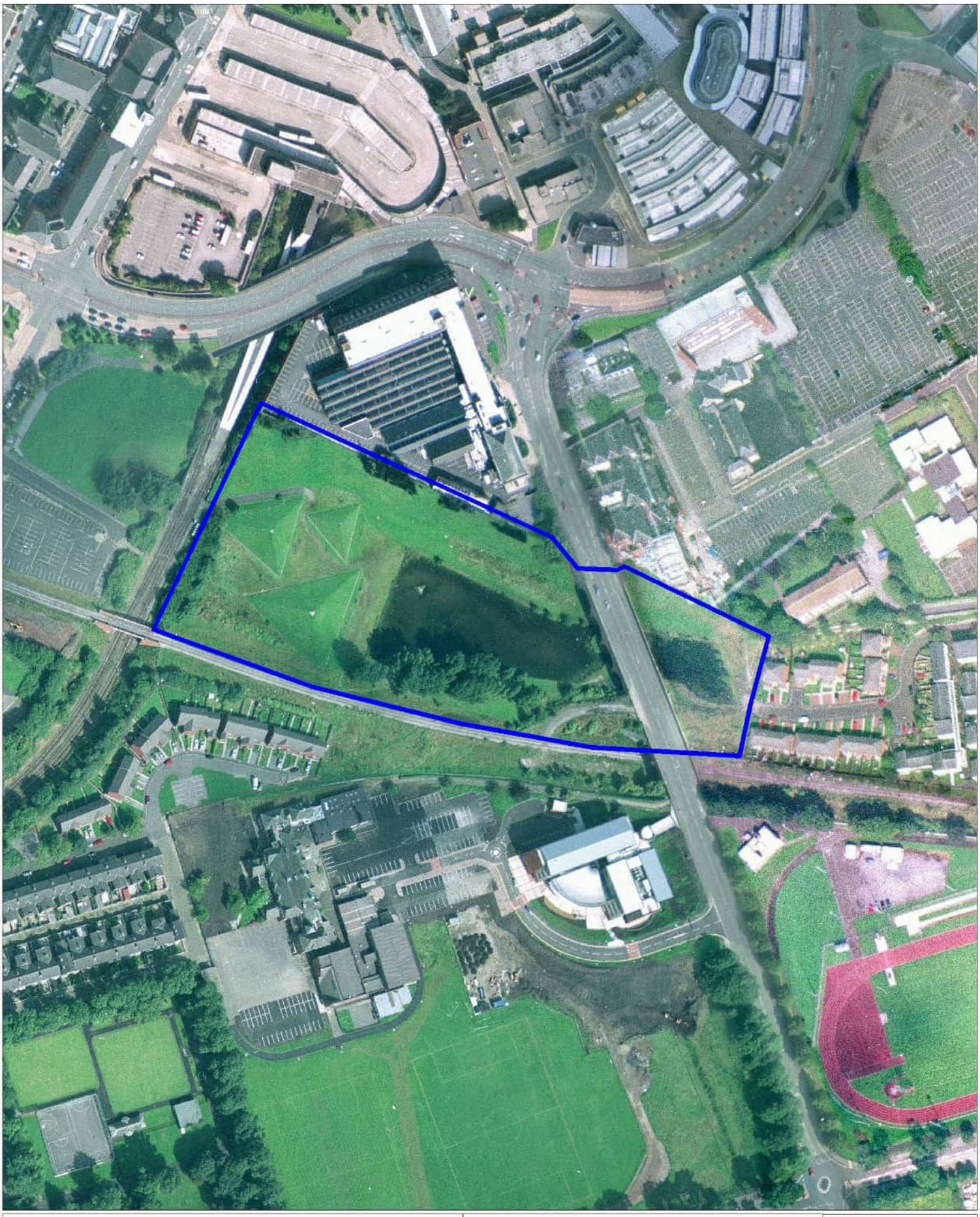
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Site Boundary

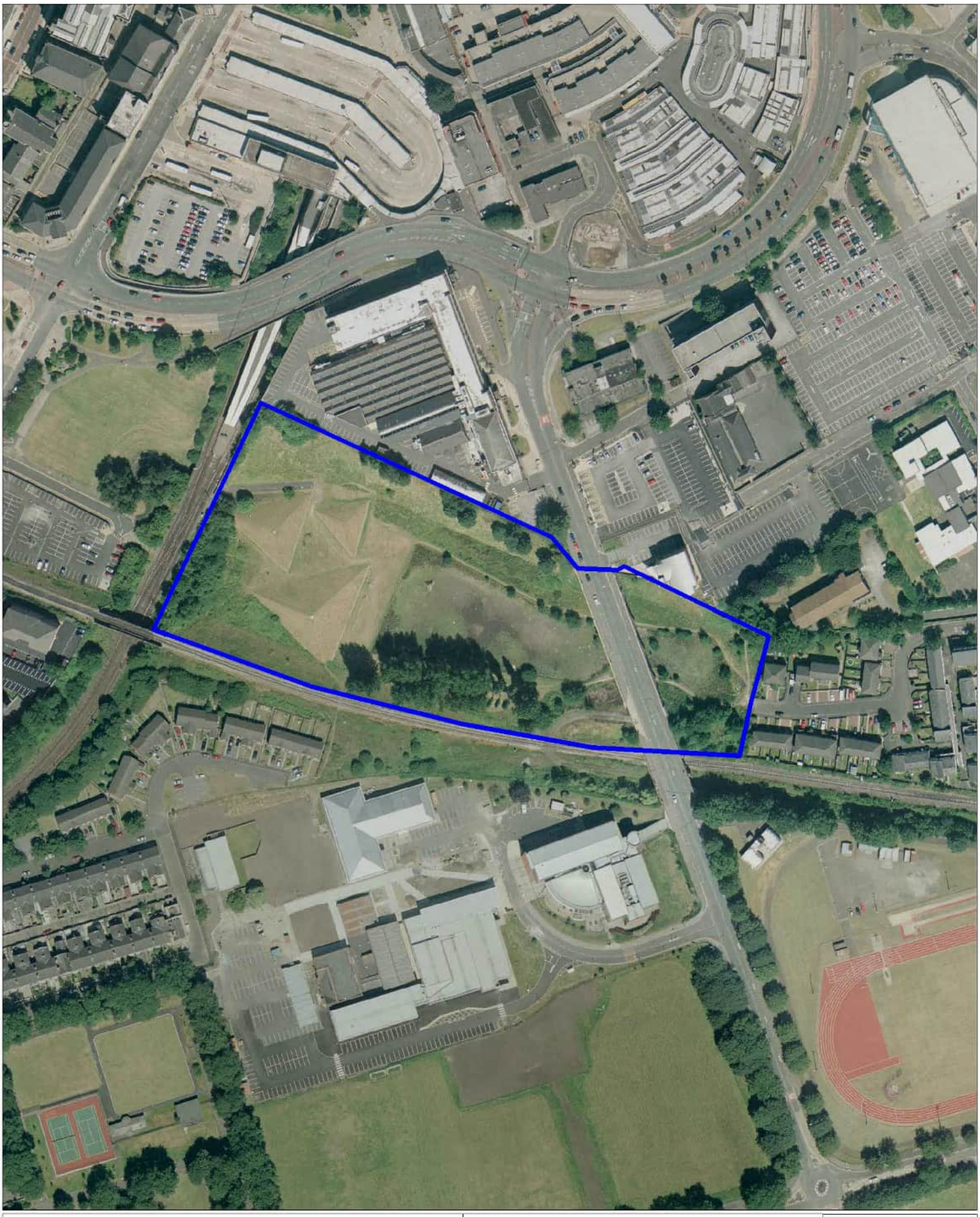
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KEY:

Site Boundary

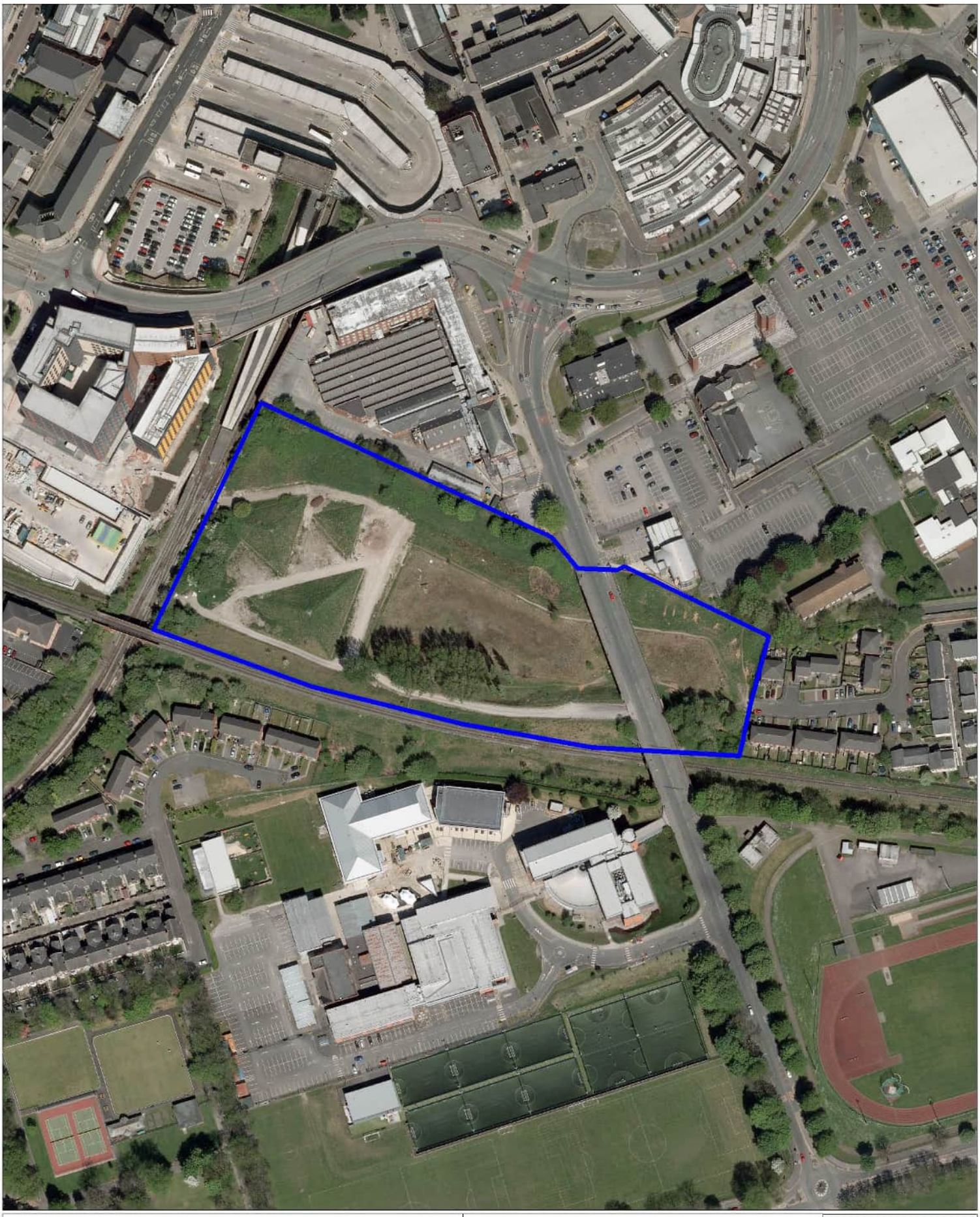
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consulting engineers

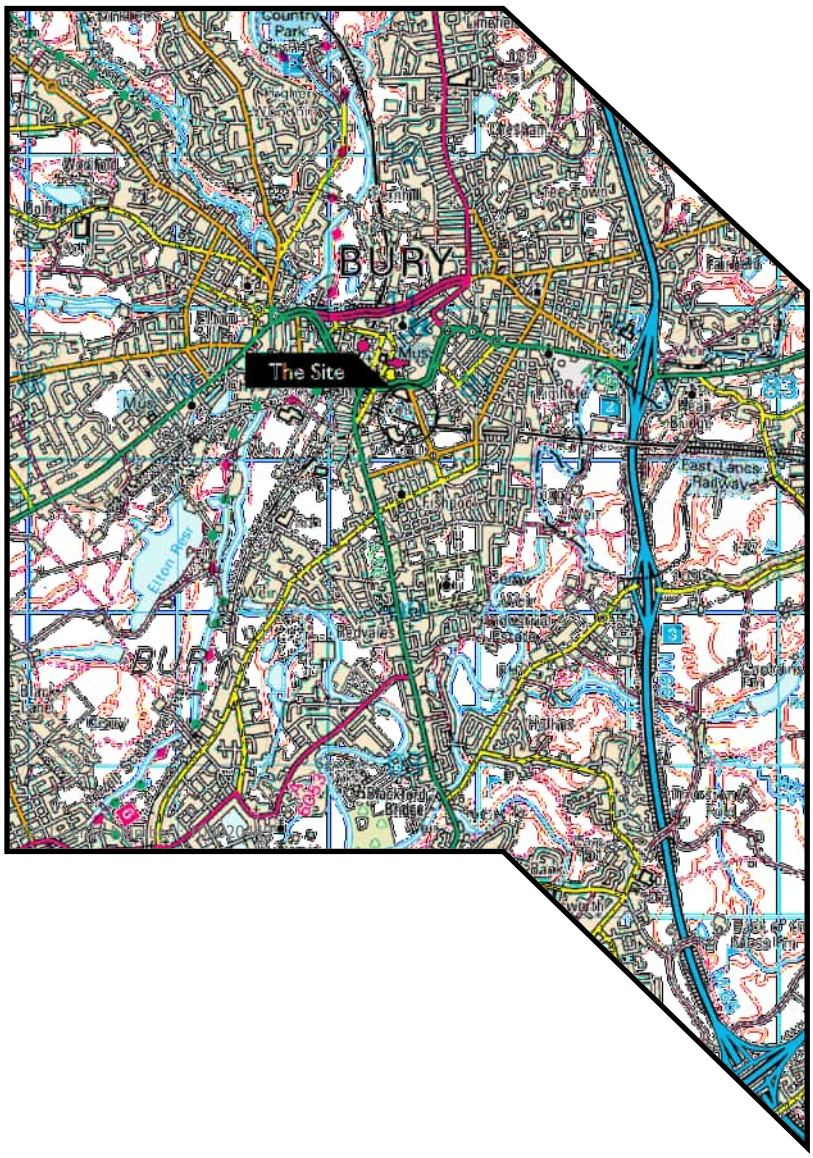
Appendix 3

Site Investigation Information

GEOTECHNICS

geotechnical and geoenvironmental specialists

Ground Investigation



www.geotechnics.co.uk

PYRAMID PARK, BURY

Factual Report

for
Campbell Reith Hill LLP

Engineer : Campbell Reith Hill LLP

Project Number PN234595

March 2024

Issuing Office
North West Office
The Geotechnical Centre
Unit 1, Borders Industrial Park
River Lane, Saltney
Chester
CH4 8RJ
Tel: 01244 671117
mail@chester.geotechnics.co.uk

Head Office
The Geotechnical Centre
203 Torrington Avenue
Tile Hill
Coventry
CV4 9UT
Tel: 02476 694664
mail@geotechnics.co.uk

South West Office
The Geotechnical Centre
Unit 5, Orchard Court
Heron Road, Sowton
Exeter
EX2 7NR
Tel: 01392 463110
mail@exeter.geotechnics.co.uk

North East Office
The Geotechnical Centre
Unit 1, Bypass Park Estate
Sherburn-in-Elmet
Leeds
LS25 6EP
Tel: 01977 525030
mail@yorkshire.geotechnics.co.uk

Factual Report

PYRAMID PARK, BURY

for
Campbell Reith Hill LLP

Engineer :
Campbell Reith Hill LLP

Project No:
PN234595
March 2024

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1.0 INTRODUCTION

A geotechnical and geo-environmental investigation was undertaken by Geotechnics Limited at the site of a proposed residential development at Pyramid Park, off Market Street, in Bury, Greater Manchester.

The site is to be developed for residential end use with a mix of town houses and 5-6 storey apartment blocks. Advanced works are proposed including remediation, the construction of a new access road and development platforms along with utilities and infrastructure.

The investigation was carried out to the instructions of the Client and Engineer, Campbell Reith Hill LLP, acting on behalf of their Client, Homes England. This report describes the work undertaken and presents the data obtained.

2.0 OBJECT AND SCOPE OF THE INVESTIGATION

The object of the investigation was to obtain information on the ground and groundwater conditions relating to the design of the proposed works within the limitations posed by trial hole numbers, locations, depths, methods adopted and the scope of approved in situ and laboratory testing.

More specifically, the ground investigation works are to inform the design of the advanced works and the aims of the investigation include:

- Confirm the ground conditions in the area of a proposed access road and associated embankment.
- Confirm the ground conditions across the wider site and determine the nature and composition of materials contained with three large pyramid structures.
- Sample the soils and Made Ground for chemical analysis to determine the presence or otherwise of
- contamination.
- Undertake groundwater and gas monitoring to characterise the hydrogeology and gassing regime.
- Determine the waste classification of materials encountered on site.
- Assess the potential risks to construction.

The investigation comprised machine-dug trial pits, cable percussion boreholes, in situ and laboratory testing and reporting. A Factual Report was also commissioned.

3.0 PRESENTATION

A description of the site and a summary of the procedures followed during the investigation process are presented in Sections 4 to 6. The factual data so obtained are presented in Appendices 2 to 11 of this report. Attention is drawn to the General Notes and Investigation Procedures presented in Appendix 12 to aid an understanding of the procedures followed and the context in which the report should be read.

In addition, data in electronic format in accordance with "The Electronic Transfer of Geotechnical Data from Ground Investigations" published by the AGS (the AGS Format) are presented together with a copy of the report in electronic PDF format.

4.0 THE SITE

4.1 Location

The site is located approximately 100 metres south of Bury Metrolink Station. It flanks the southeast to northwest running B6218 Market Street. The approximate Ordnance Survey National Grid Reference for the site is SD 805 103 and an extract from the relevant 1:50,000 Scale O.S. Map (Sheet No. 109) is included as Appendix 1.

4.2 Description

The site is trapezoidal in shape with its northern and southern site boundaries measuring approximately 300m in length, the western and eastern site boundaries being approximately 130m and 70m long, respectively.

Site is bounded by:

- an embankment leading up to the East Lancashire Railway line to the south,
- the tramlines of the Manchester Metrolink to the west,
- residential properties of Town Fields Close to the east, and by
- college buildings (the Woodbury Centre, Bury College Apprenticeships and Bury College Business Solutions) to the north.

The site comprises a low-lying central area of relatively flat land with slopes leading up to surrounding higher ground present along the northern and southern parts of the site. A masonry arch bridge carries the roadway of Market Street over the eastern section of the site. The bridge abutments are formed into the slopes in the northern and southern margins of the site. An access track slopes down along the southern boundary from vehicle access gates off Market Street. Pedestrian access can also be gained from the east, via Town Fields Close.

Three large pyramid features, predominantly grass covered, are present in the western area of the site. A former pond is present in the central and eastern areas of the site. The ground in the former pond area is liable to become boggy/saturated and waterlogged during prolonged periods of heavy rainfall leading to small areas of standing water.

Most of the site is vegetated with rough grass and scrub, with some mature and semi-mature trees present. Footpaths are also present in the west of the site, leading around the pyramid features.

4.3 Site Geology

The British Geological Survey Onshore GeoIndex website, https://mapapps2.bgs.ac.uk/geoindex/home.html, accessed on 1st December 2023, shows Artificial Ground to be present at the site, recorded as "Worked Ground (Undivided) – Void".

Worked Ground is an area where the land surface (natural or artificial) has been lowered as a result of man-made excavations. The purpose of the excavation is unspecified. Composition: void.

Based on information provided by the Client, significant thicknesses of Made Ground are anticipated on site comprising reworked natural materials with variable quantities of demolition waste materials including ash, brick, coal, clay, silt and sand. Former structural foundations are also likely to be present locally.

Underlying the Artificial Ground, Glacial Till (Diamicton) of Devensian age is indicated. Based on information provided by the Client, this Glacial Till comprises firm to very stiff brown sandy gravelly clay with lenses of sand, interbedded with Glaciofluvial Deposits comprising sand and gravel with cobbles and boulders.

Glaciofluvial Deposits (Sand and Gravel) are shown on the higher surrounding ground to the north and southwest of the site.

The underlying bedrock is shown to comprise mudstone, siltstone and sandstone strata within the Pennine Lower Coal Measures Formation, which is Carboniferous in age.

The BGS Lexicon of Named Rock Units,

https://webapps.bgs.ac.uk/lexicon/lexicon.cfm?pub=PLCM

accessed on 1st December 2023, records that the Pennine Lower Coal Measures Formation is comprised of

Interbedded grey mudstone, siltstone and pale grey sandstone, commonly with mudstones containing marine fossils in the lower part, and more numerous and thicker coal seams in the upper part.

Based on information provided by the Client, the bedrock comprises mudstone and siltstone interbedded with subordinate medium-grained sandstones, seatearths and coal seams (Its upper weathered profile is reduced to the condition of clay, sand or gravel).

The 1:50,000 scale British Geological Survey Solid Edition geological map (Sheet 85 - Manchester) dated 1997 shows the site as lying between the conjectured traces of two southeast to northwest trending faults. In both cases, the strata on the south-western side of the fault are shown to be downthrown.

The site lies on the north-western limb of a plunging anticline. The curved outcrops of the Arley Coal seam and the older Old Lawrence Rock sandstone unit are shown to the east and south-east of the site and indicate that the anticline as plunging towards the southwest. Locally the rock strata dip towards the west.

Coal has been extensively mined within the region. A Coal Authority Development High Risk Area is present to the south of the site associated with former mine entries located approximately 50m from the southern site boundary. Probable shallow mine workings are also present adjacent to the eastern site boundary, associated with a coal outcrop approximately 70m to the east.

4.4 Hydrogeology

The 1:625,000 scale Hydrogeological Map of England and Wales, published by the British Geological Survey, dated 1977 shows the underlying Coal Measures to be a concealed aquifer of limited or local potential.

The Government's DEFRA Magic Map website, https://magic.defra.gov.uk/MagicMap.aspx, accessed on 1st December 2023, shows the underlying rocks of the Pennine Lower Coal Measures Formation to be classed as a Secondary A Aquifer. The Glacial Till is classed as a Secondary (Undifferentiated) Aquifer and the nearby Glaciofluvial Deposits are classed as a Secondary A Aquifer.

5.0 PROCEDURE

5.1 Commissioning

The work was awarded following submission of a tender for work designed by the Client for ground investigation of the site in accordance with their requirements.

5.2 General

The procedures followed in this site investigation are based on *BS 5930: 2015+A1:2020 – Code of Practice for Site Investigations* and *BS 10175:2011+A2:2017 - Investigation of Potentially Contaminated Sites*. The soils and rocks encountered have been described in accordance with BS5930:2015+A1:2020 and BS EN ISO 14688-1:2018 and BS EN ISO 14689:2018.

The Exploratory Hole locations were specified by the Campbell Reith Hill LLP and their positions are shown on the Exploratory Hole Location Plan in Appendix 11. The co-ordinates and levels shown on the Exploratory Hole Records were measured using a Leica GPS survey device. The depths quoted on the exploratory hole records are in metres below ground level.

5.3 Buried Services Clearance

Prior to the investigation, available records and plans were consulted to check for the presence of buried services at the proposed exploratory hole locations and an on-site buried services clearance survey of each exploratory hole position was carried out by CMS Surveys Limited on 14th November 2023 using a cable avoidance tool (CAT) and ground penetrating radar (GPR) equipment.

At each cable percussion borehole location, an inspection pit was excavated using hand tools to a depth of 1.20m below ground level to check for the presence of underground services. Prior to and on completion of the excavation, the location was scanned using a cable avoidance tool (CAT).

5.4 Machine-Dug Trial Pits

Nineteen (19 No.) Machine-Dug Trial Pits (numbered SA101, SA102, TP101 to TP104, TP106 to TP110, TP112, TP116A and TP118 to TP123) were excavated to depths ranging between 0.40m (TP112) and 4.00m (TP107 and TP121) below ground level using a CAT 313GC 13-Tonne tracked excavator between 20th and 28th November 2023. This pitting work was supervised on site by a geotechnical / geo-environmental engineer.

On the instructions of the Client, scheduled Machine-Dug Trial Pit TP105 was cancelled due to existing trees causing access problems.

Due to substantial near-surface inflow of groundwater inundating Machine-Dug Trial Pit TP112, on the instructions of the Client, this excavation was terminated at shallow depth.

The profiles of strata or other features were recorded as excavation proceeded and measurements taken from ground level. Representative samples were taken, where appropriate, for laboratory examination and analysis and in addition, Environmental samples (ES) were recovered at the depths indicated on the Machine-Dug Trial Pit Records, presented in Appendix 2. Samples were taken directly from excavated materials deposited at the surface. Groundwater observations and trench stability notes are included on the Trial Pit Records. Available photographs of the Machine-Dug Trial Pits are presented in Appendix 3 (Due to a camera malfunction it is not possible to present photographs of some of the trial pits).

5.5 Soakaway Tests

Soakaway tests were scheduled to be carried out in Trial Pit SA101and Trial Pit SA102 at the locations marked on the Exploratory Hole Location Plan (see Appendix 11) in accordance with the method given in *BRE Digest 365 "Soakaway Design", 2016*. However, due to substantial near-surface inflows of groundwater inundating the trial pits, on the instructions of the Client, the soakaway tests were cancelled.

5.6 Hand-Dug Trial Pits

Six (6. No.) Hand-Dug Trial Pits (numbered HP111, HP113 to HP115, along with HP117E and HP117W) were excavated to depths ranging between 0.20m (HP111 and HP113) and 1.10m (HP117E and HP117W) below ground level using hand tools on 23rd and 28th November 2023. This pitting work was supervised on site by a geotechnical / geo-environmental engineer.

Due to substantial near-surface inflow of groundwater inundating Machine-Dug Trial Pit TP112, on the instructions of the Client, scheduled Machine-Dug Trial Pits numbered TP111, TP113, TP114 and TP115 located nearby were replaced by Hand-Dug Trial Pits numbered HP111, HP113, HP114 and HP115, respectively.

In addition, on the instructions of the Client, scheduled Machine-Dug Trial Pit TP117 was replaced by Hand-Dug Trial Pits HP117W and HP117E.

Due to substantial near-surface inflows of groundwater inundating Hand-Dug Trial Pits HP111, HP113, HP114 and HP115, HP117W and HP117E, on the instructions of the Client, these excavations were terminated at shallow depth.

The profiles of strata or other features were recorded as excavation proceeded and measurements taken from ground level. Representative samples were taken, where appropriate, for laboratory examination and analysis and in addition, Environmental samples (ES) were recovered at the depths indicated on the Hand-Dug Trial Pit Records, presented in Appendix 4. Samples were taken directly from excavated materials deposited at the surface. Groundwater observations and trench stability notes are included on the Trial Pit Records. Available photographs of the Hand-dug Trial Pits are presented in Appendix 5 (Due to a camera malfunction it is not possible to present photographs of some of the trial pits).

5.7 Cable Percussion Boreholes

Eight (8 No.) 150mm diameter Cable Percussion Boreholes (numbered BH101 to BH108) were sunk to depths ranging between 4.38m (BH105) and 11.77m (BH107) below ground level. The boring work was carried out between 15th and 30th November 2023.

Samples were taken from the service inspection pit, where appropriate, for laboratory examination and analysis. Representative disturbed (D and B) samples and driven open-tube thin walled (UT) samples of the soils encountered were obtained at regular intervals. In addition, Environmental Soil samples (ES) were recovered at the depths indicated on the Borehole Records, presented in Appendix 6. Soil samples taken specifically for chemical analyses were contained within appropriate receptacles and stored alongside ice packs in a cool box to preclude any sample deterioration prior to delivery to the testing laboratory.

Standard Penetration Tests (SPTs) were undertaken at the depths indicated on the Cable Percussion Borehole Records in accordance with BS EN ISO 22476-3:2005+A1:2011 to obtain a measure of the engineering properties of the proved strata. The full details of the SPT results are presented on the SPT Results Summary Sheets, included in Appendix 6, along with copies of the relevant SPT Hammer Energy Test Report.

Groundwater observations are included on the Cable Percussion Borehole Records where appropriate and any rise in water level was recorded over 20 minutes whilst the boring operations were suspended. It should be noted that the addition of water to the borehole as part of the boring process may have masked the presence of groundwater in the borehole. Where water was added it has been noted on the Cable Percussion Borehole Records.

On completion, 50mm diameter standpipes were installed in the boreholes (See Section 5.8).

5.8 Installations and Monitoring

Long-term monitoring of the groundwater levels was made possible by the installation of 19mm. 33mm and 50mm diameter standpipes as follows:

Exploratory Hole	Diameter (mm)	Standpipe Slotted Pipe (m)	Standpipe Filter Zone (m)
BH101	50	2.00 to 6.00	2.00 to 6.39
BH102	50	0.50 to 1.50	0.50 to 1.50
BH102	33	4.50 to 7.50	4.50 to 7.78
BH103	50	1.00 to 6.80	1.00 to 6.80
BH104	50	2.50 to 5.00	2.00 to 5.00
BH105	50	1.40 to 4.00	1.40 to 4.38
BH106	50	1.00 to 2.50	1.00 to 2.50
BH106	19	4.00 to 7.00	4.00 to 7.38
BH107	50	1.00 to 4.00	1.00 to 4.00
BH107	19	6.50 to 8.50	6.50 to 8.50
BH108	50	1.00 to 3.00	1.00 to 3.00

Monitoring of the gas and groundwater levels at the site commenced on 10th January 2024 with further visits on 24th and 31st January 2024. On the first visit, on 10th January 2024, it was not possible to monitor Borehole BH103 due to the cover being stuck down. On the second visit the cover was opened using hand tools enabling subsequent monitoring to be carried out.

In addition to the groundwater levels, the following parameters were measured and recorded in each standpipe using a GA5000 Gas Analyser:-

- Concentrations (% Vol) of CH_4, O_2, CO_2, along with (% LEL) CH_4 and (ppm) H_2S, CO
- Flow Rate
- Barometric Pressure
- Air Temperature

The results of the monitoring are presented in Appendix 7.

5.9 Purging and Groundwater Sampling

In order to obtain representative groundwater samples, where groundwater was present within the standpipes, purging was carried out by the removal of three times the volume of groundwater within each installation. Once the well had been successfully developed, a groundwater sample was taken to enable subsequent chemical analyses to be carried out.

Groundwater water samples taken specifically for chemical analyses were contained within appropriate receptacles (glass bottles) and stored alongside ice packs in a cool box to preclude any sample deterioration prior to immediate delivery to the testing laboratory.

This groundwater sampling work was carried out on 24th January 2024.

6.0 LABORATORY TESTING

6.1 Geotechnical

The laboratory testing schedule was specified by the Client. Unless otherwise stated, the tests were carried out in Geotechnics Limited's UKAS accredited Laboratory (Testing No. 1365) and were undertaken in accordance with the appropriate Standards as indicated below and on the Laboratory Test Certificate in Appendix 8. Any

descriptions, opinions and interpretations are outside the scope of UKAS accreditation.

The tests undertaken can be summarised as follows:-

Standard	Test Description	Quantity
BS EN ISO 17892-1:2014	Water Content Determination	40
BS EN ISO 17892-12:2018	Determination of Liquid and Plastic Limits	25
BS EN ISO 17892-4:2016	Particle Size Distribution Determination – Sieving Method	13
	Mechanical Analysis - Sedimentation	3
BS EN ISO 17892-8:2018	Unconsolidated Undrained Triaxial Test	1
BS 1377:1990 Part 4: 3.3	Dry Density/Moisture Content relationship determination. Compaction Test - British Standard (2.5 kg Hammer)	18
BS 1377:1990 Part 4: 7	California Bearing Ratio (CBR) Measurement - recompacted	5
BS 1377:1990 Part 4: 5.5	Moisture Condition Value Calibration Tests.	11
Tests carried out in accordance with the Manufacturer's Instructions	Shear Strength Estimation using Hand Vane	41

Where geotechnical testing was scheduled on soil samples with the potential for asbestos fibres to be present, this testing was carried out at the laboratories of The Testing Lab PLC (UKAS Laboratory No. 7758), as follows:

Standard	Test Description	Quantity
BS 1377:1990 Part 2: 3.2	Moisture Content Determination	3
BS 1377:1990 Part 2: 4.3 & 5.3	Liquid and Plastic Limit Determination	3
BS 1377:1990 Part 2: 9.2 & 9.3	Mechanical Analysis - Sieving	1
BS 1377:1990 Part 4: 3.3	Dry Density/Moisture Content relationship determination. Compaction Test - British Standard (2.5 kg Hammer)	4
BS 1377:1990 Part 4: 7	California Bearing Ratio (CBR) Measurement - recompacted	1
BS 1377:1990 Part 4: 5.5	Moisture Condition Value Calibration Tests.	3
Tests carried out in accordance with the Manufacturer's Instructions	Shear Strength Estimation using Hand Vane	15

The results of these geotechnical tests are presented in Appendix 8.

The following testing was carried out at the laboratories of Derwentside Environmental Testing Services Limited (UKAS Laboratory No. 2139):

Standard	Test Description	Quantity
BS 1377:1990 Part 3: 3	Organic Matter Content	4
BRE SD1 Suite D	Suite comprising:- pH Sulphate (2:1 water soluble) Sulphate (acid extractable) Sulphur (total)	20

The results of these geotechnical tests are presented in Appendix 9 (along with the contamination test results).

6.2 Contamination

Selected samples of soil and groundwater were tested at the laboratories of Derwentside Environmental Testing Services Limited (UKAS Accredited Laboratory, Number 2139) for a number of determinands in order to check on potential site contamination. The determinands were specified by the Engineer and are detailed on the results sheets in Appendix 9 (Soils) and Appendix 10 (Groundwater) together with the test result as well as the test method, accreditation and detection limit.

Signed for and on behalf of Geotechnics Limited.

Prepared by:

John Knowles,
BSc (Hons), PGCE, MSc, C.Geol, FGS
UK Registered Ground Engineering Adviser (RoGEP)
Principal Engineer

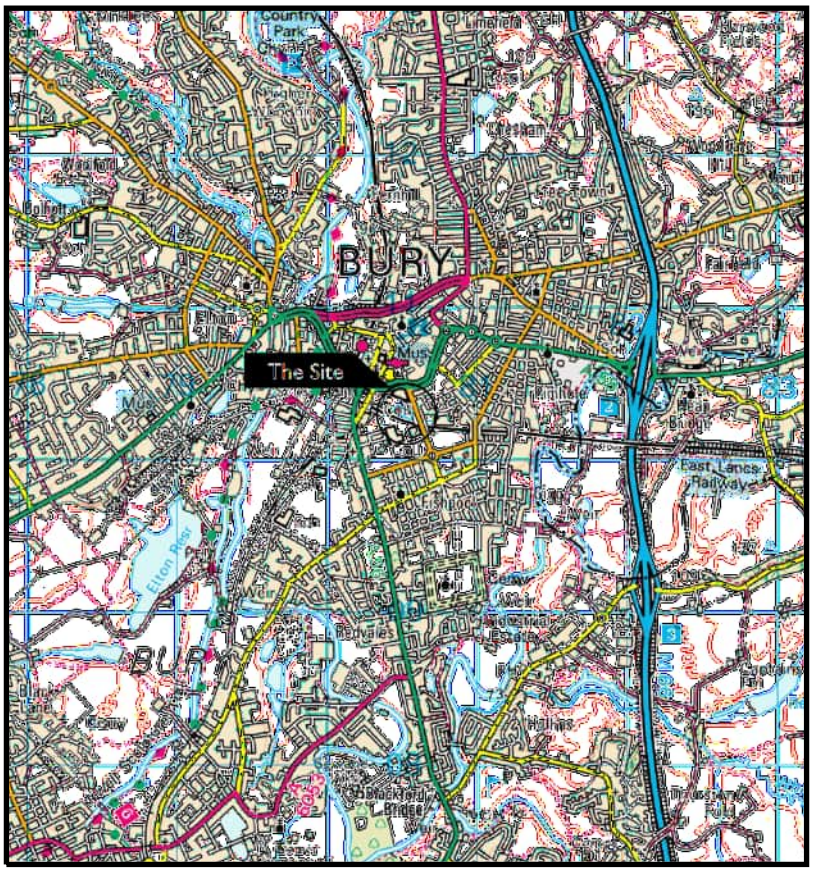
Reviewed by:

Conor Southall
BSc (Hons), FGS
Senior Engineer

APPENDIX I

Site Location Plans

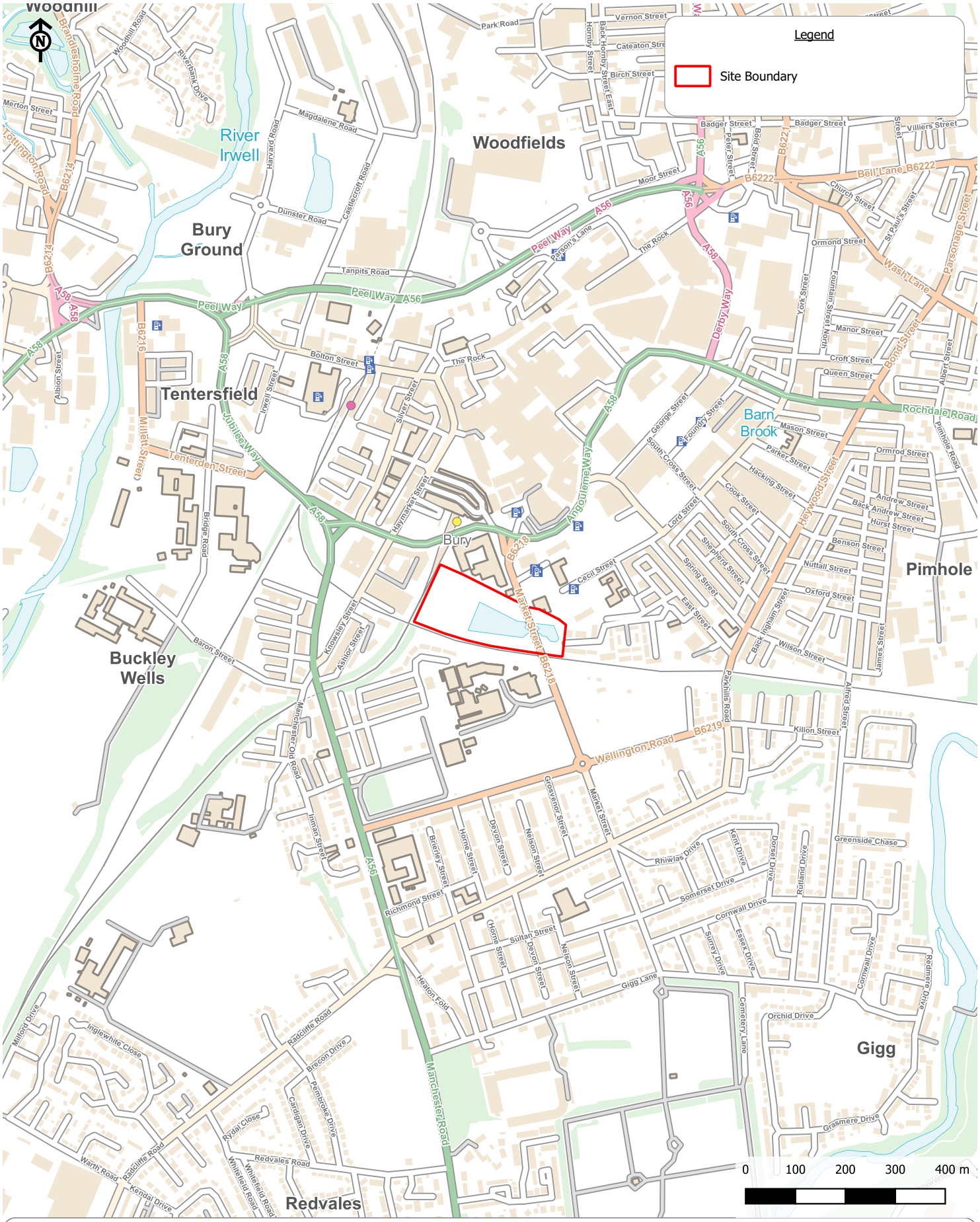
SITE LOCATION PLAN



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PYRAMID PARK, BURY
for
Campbell Reith Hill LLP

GEOTECHNICS
geotechnical and geoenvironmental specialists



Townside Fields, Bury

Client: Bury Council

Figure 1:
Site Location

Scale: 1:10000@A4

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Job Number: 13819
Drawn by - Checked by: RLF - PK
Drg No - Status/Revision: 13819-CRH-XX-XX-FG-G-7000 - P1
File location: N:\13750 - 13999\13819 M- Townside Fields Bury\Project_Workspaces (pdf in Outputs)
Date (Revision History): 06/01/2022 (P1, First Issue, 06/01/22, RLF)

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consulting engineers
LONDON 020 7340 1700 ☐ ☒ MANCHESTER 0161 819 3060
REDHILL 01737 784 500 ☐ ☐ BIRMINGHAM 01675 467 484
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APPENDIX 2

Machine-Dug Trial Pit Records

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

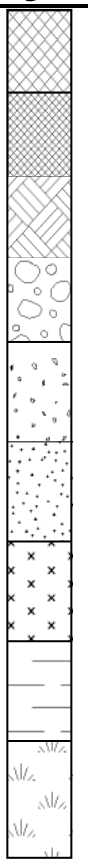
Depth Water Rose To

Instrumentation

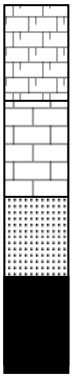


Strata

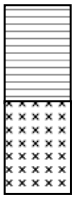
Legend



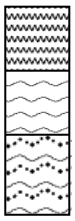
Note: Composite soil types shown by combined symbols



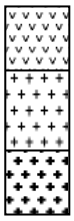
Strata, Continued



Metamorphic Rock



Igneous Rock



Backfill Materials



Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	SA101
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380461.9 E 410315.6 N	**Ground Level**	86.11 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.70	B			Grass over TOPSOIL: Soft to firm dark grey mottled black slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine of sandstone and brick fragments.	0.10		86.01
0.80 - 1.20	B			MADE GROUND: Soft to firm brown slightly gravelly sandy clay with a low angular to subangular cobble content of sandstone and bricks. Gravel is angular to subangular fine to coarse including clinker and brick fragments.	0.70		85.41
				Stiff grey mottled brownish grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mudstone, siltstone, sandstone and coal.	1.20		84.91
				End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	24/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	24/11/2023
Stability	Spalling below 0.10m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.40				Slow inflow.

Remarks Scheduled soakaway test cancelled on the instructions of the Client due to groundwater inflow.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	SA102
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380458.1 E 410305.2 N	**Ground Level**	86.09 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
				Grass over TOPSOIL: Soft to firm dark grey mottled black slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine of sandstone and brick fragments.	0.10		85.99
				MADE GROUND: Soft to firm brown slightly gravelly sandy clay with a low angular to subangular cobble content of sandstone and bricks. Gravel is angular to subangular fine to coarse including clinker and brick fragments.	0.50		85.59
				Stiff grey mottled brownish grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of mudstone, siltstone, sandstone and coal.	0.70		85.39
				End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	24/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	24/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.15				Slow inflow.

Remarks Scheduled soakaway test cancelled on the instructions of the Client due to groundwater inflow. No samples taken.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP101
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380406.8 E 410371.0 N	**Ground Level**	85.55 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			MADE GROUND: Concrete slabs.	0.02		85.53
0.00 - 0.10	ES			MADE GROUND: Soft to firm brown slightly sandy gravelly clay with many rootlets.	0.10		85.45
0.10 - 0.30	B			MADE GROUND: Grey sandy angular to subangular cobbles of limestone.	0.30		85.25
0.10 - 0.30	ES			MADE GROUND: Firm dark brown and dark grey slightly sandy slightly gravelly clay. Gravel is angular to rounded fine to coarse including various lithologies, clinker, concrete and brick fragments.	0.60		84.95
0.30 - 0.50	B				0.80		84.75
0.30 - 0.50	D		w (%) = 17				
0.30 - 0.50	ES			MADE GROUND: Brown very gravelly fine to coarse sand. Gravel is angular to subrounded fine to coarse including various lithologies, clinker, concrete and brick fragments.			
0.60 - 0.80	B						
0.60 - 0.80	D						
0.60 - 0.80	ES			MADE GROUND: Stiff brownish grey slightly sandy slightly gravelly clay. Gravel is subrounded to rounded fine to coarse of various lithologies.			
0.80 - 1.00	D		w (%) = 22				
0.80 - 1.00	ES						
				End of Excavation	2.00		83.55

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	23/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	23/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP101 terminated at 2.00m depth to avoid potential damage to adjacent access track.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP102
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380416.6 E 410353.1 N	**Ground Level**	88.42 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.30	B			Grass over MADE GROUND: Soft to firm black mottled brown slightly sandy slightly gravelly clay with some rootlets. Gravel is subangular to subrounded fine to medium of various lithologies and brick fragments.			
0.00 - 0.30	D						
0.00 - 0.30	ES						
0.60 - 0.90	B			MADE GROUND: Soft grey slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to medium of various lithologies, clinker and brick fragments.	0.60		87.82
0.60 - 0.90	D						
0.60 - 0.90	ES						
1.50 - 1.80	B			MADE GROUND: Soft to firm dark grey mottled grey slightly sandy slightly gravelly clay with a medium angular to subrounded cobble content of sandstone and bricks. Gravel is angular to subangular fine to coarse of siltstone, sandstone, coal, clinker and brick fragments. Occasional plant remains and a slight hydrocarbon odour.	1.50		86.92
1.50 - 1.80	D						
1.50 - 1.80	ES						
2.50 - 2.70	B						
2.50 - 2.70	D						
2.50 - 2.70	ES			Below 2.70m, gravel is subangular to subrounded fine to medium.			
3.70 - 4.00	B						
3.70 - 4.00	D						
3.70 - 4.00	ES			End of Excavation	4.00		84.42

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	21/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	21/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP103
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380431.4 E 410372.9 N	**Ground Level**	86.77 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Light brown to brown gravelly clayey fine to coarse sand with some rootlets. Gravel is subangular to subrounded fine to coarse of various lithologies.			
0.00 - 0.20	D				0.20		86.57
0.00 - 0.20	ES			At 0.20m, woven geotextile (Terram).			
0.30 - 0.50	B			MADE GROUND: Dark brownish grey very sandy clayey subangular to rounded fine to coarse gravel of various lithologies, clinker and sandstone. Low angular to subangular cobble content of sandstone. Occasional steel reinforcing bars.			
0.30 - 0.50	D						
0.30 - 0.50	ES						
1.00 - 1.20	B						
1.00 - 1.20	D						
1.00 - 1.20	ES						
1.50 - 1.70	B			Between 1.50-1.70m, oily sheen noted on soil and perched groundwater, hydrocarbon odour.			
1.50 - 1.70	D				1.70		85.07
1.50 - 1.70	ES			Stiff dark bluish grey slightly sandy slightly gravelly CLAY. Gravel is subangular fine of mudstone.			
2.00 - 2.20	B						
2.00 - 2.20	D		w (%) = 23				
2.00 - 2.20	ES						
3.00 - 3.30	B						
3.00 - 3.30	D		w (%) = 22				
3.00 - 3.30	ES						
				End of Excavation	3.50		83.27

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	21/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	21/11/2023
Stability	Sides spalling between 1.50-1.70m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
1.70				Slow inflow, no rise.

Remarks AGS ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP104
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380444.3 E 410367.1 N	**Ground Level**	87.34 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			Grass over TOPSOIL: Soft dark brown slightly gravelly sandy clay with occasional rootlets. Gravel is angular to subangular fine to coarse of various lithologies.	0.10		87.24
0.00 - 0.10	D						
0.00 - 0.10	ES			MADE GROUND: Soft to firm brown mottled grey slightly sandy gravelly clay. Gravel is angular to subrounded fine to coarse of various lithologies, clinker, concrete and brick fragments. Occasional pieces of timber.			
0.50 - 0.80	B						
0.50 - 0.80	D						
0.50 - 0.80	ES			Between 0.80-1.00m, black and dark grey, slightly gravelly.			
0.80 - 1.00	B						
0.80 - 1.00	D		w (%) = 33				
0.80 - 1.00	ES						
2.00 - 2.20	B						
2.00 - 2.20	D						
2.00 - 2.20	ES				2.20		85.14
2.20 - 2.40	B			MADE GROUND: Dark brown very sandy clayey angular to subangular fine to coarse gravel of brick and concrete with a medium cobble content. At 2.40m, concrete blocks.	2.40		84.94
2.20 - 2.40	D						
2.20 - 2.40	ES			End of Excavation			

Excavation

Plant	13T Tracked Excavator	**Width (B)**	0.60
Date	22/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	22/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP104 terminated at 2.40m depth on encountering a concrete obstruction.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP106
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380423.1 E 410299.9 N	**Ground Level**	87.56 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Soft to firm brown to light brown slightly sandy slightly gravelly clay with occasional rootlets. Gravel is angular to subangular fine to coarse of various lithologies, clinker and brick fragments.	0.20		87.36
0.00 - 0.20	D						
0.00 - 0.20	ES						
0.30 - 0.50	B			MADE GROUND: Firm to stiff brown and black mottled slightly sandy slightly gravelly clay. Gravel is angular to subangular fine to coarse of various lithologies, plastic, clinker and brick fragments.			
0.30 - 0.50	D		w (%) = 24				
0.30 - 0.50	ES						
				At 1.20m, Medium inflow from possible redundant pipe/duct.			
1.30 - 1.50	B			MADE GROUND: Dark grey sandy clayey angular to subrounded fine to coarse gravel of various lithologies, clinker, concrete and brick fragments. Below 1.50m, strong hydrocarbon odour.	1.30		86.26
1.30 - 1.50	D						
1.30 - 1.50	ES						
2.00 - 2.20	B						
2.00 - 2.20	D						
2.80 - 3.00	B						
2.80 - 3.00	D						
2.80 - 3.00	ES						
3.30 - 3.40	B						
3.30 - 3.40	D			End of Excavation	3.40		84.16
3.30 - 3.40	ES						

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	20/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	20/11/2023
Stability	Sides spalling below 1.50m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
1.20				Medium inflow from possible redundant pipe/duct.

Remarks

AGS ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP106 terminated at 3.40m depth due to instability of the pits sides.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP107
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380426.6 E 410320.7 N	**Ground Level**	90.40 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.30	B			Grass over MADE GROUND: Firm dark brown mottled brown slightly sandy slightly gravelly clay with a low angular to subangular cobble content of various lithologies. Occasional rootlets. Gravel is angular to subangular fine to coarse of various lithologies, clinker and brick fragments.			
0.00 - 0.30	D						
0.00 - 0.30	ES						
0.50 - 0.70	B				0.50		89.90
0.50 - 0.70	D		w (%) = 28	MADE GROUND: Soft to firm brown slightly gravelly sandy clay with occasional lenses of sand. Gravel is angular to subangular fine to coarse of siltstone, sandstone, clinker and brick fragments.			
0.50 - 0.70	ES						
1.50 - 1.70	B				1.50		88.90
1.50 - 1.70	D		w (%) = 19	MADE GROUND: Soft to firm dark brown mottled grey slightly sandy slightly gravelly clay. Gravel is angular to rounded fine to coarse of siltstone, sandstone, clinker and brick fragments. Slight hydrocarbon odour.			
1.50 - 1.70	ES						
3.30 - 3.50	B				3.30		87.10
3.30 - 3.50	D			MADE GROUND: Dark grey mottled black gravelly clayey fine to coarse sand with a medium angular cobble content of bricks. Gravel is angular to subrounded fine to coarse of various lithologies, concrete and brick fragments. Strong hydrocarbon odour.			
3.30 - 3.50	ES						
3.80 - 4.00	B						
3.80 - 4.00	D						
3.80 - 4.00	ES				4.00		86.40
				End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	22/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	22/11/2023
Stability	Sides spalling below 1.00m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

AGS ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP107 terminated at 4.00m depth due to instability of the pits sides.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP108
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380435.3 E 410303.2 N	**Ground Level**	89.14 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Soft brown slightly gravelly sandy clay with many rootlets.	0.10		89.04
0.00 - 0.20	ES			MADE GROUND: Brown gravelly clayey fine to coarse sand with occasional pockets of clay. Gravel is angular to rounded fine to coarse of various lithologies, clinker and brick fragments.			
0.20 - 0.40	B						
0.20 - 0.40	ES						
0.80 - 1.00	B						
0.80 - 1.00	ES						
2.00 - 2.20	B						
2.00 - 2.20	D		w (%) = 22	MADE GROUND: Soft dark greyish brown slightly sandy gravelly clay with occasional pockets of orangish brown sand. Gravel is subrounded fine to medium of various lithologies.	2.00		87.14
2.00 - 2.20	ES			MADE GROUND: Soft dark grey mottled black slightly sandy slightly gravelly clay with a high angular cobble content of concrete. Gravel is angular to rounded fine to coarse of various lithologies and concrete.	2.20		86.94
				End of Excavation	3.00		86.14

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	24/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	24/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Logged by SF
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP109
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380446.7 E 410323.9 N	**Ground Level**	87.81 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over MADE GROUND: Soft to firm dark grey/black slightly sandy gravelly clay with many rootlets. Gravel is subangular to subrounded fine to medium of mudstone, siltstone and sandstone. Below 0.20m, medium angular cobble content of clinker, sandstone setts and brick fragments.			
0.00 - 0.20	D						
0.00 - 0.20	ES						
0.50 - 0.80	B						
0.50 - 0.80	D						
0.50 - 0.80	ES				0.80		87.01
1.00 - 1.20	B			MADE GROUND: Firm friable dark grey and black slightly gravelly sandy clay. Gravel is angular to rounded fine to coarse of various lithologies and clinker.			
1.00 - 1.20	D						
1.00 - 1.20	ES						
2.00 - 2.20	B						
2.00 - 2.20	D						
2.00 - 2.20	ES				2.20		85.61
				MADE GROUND: Dark brown very sandy clayey angular to subrounded fine to coarse gravel of various lithologies. High cobble content.			
2.90 - 3.00	B				2.90		84.91
2.90 - 3.00	D			MADE GROUND: Black asphalt.	3.00		84.81
2.90 - 3.00	ES			End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	24/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	24/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks

ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP109 terminated at 3.00m depth within asphalt layer.

Logged by SF
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP110
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380497.6 E 410350.8 N	**Ground Level**	86.24 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Soft dark grey slightly sandy clay with many rootlets. Occasional bricks.	0.20		86.04
0.00 - 0.20	D			MADE GROUND: Black gravelly fine to coarse sand including ash. Gravel is subangular to subrounded fine to coarse of various lithologies			
0.00 - 0.20	ES						
0.20 - 0.40	B			Soft brown slightly sandy slightly gravelly CLAY with a medium cobble content. Gravel is angular to subrounded fine to coarse of various lithologies.	0.70		85.54
0.20 - 0.40	D						
0.20 - 0.40	ES			Soft to firm brown mottled orangish brown and grey slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of various lithologies. Gravel is subangular to subrounded fine to coarse of various lithologies	1.00		85.24
0.70 - 0.90	B						
0.70 - 0.90	D		w (%) = 14				
0.70 - 0.90	ES						
1.00 - 1.20	B						
1.00 - 1.20	D			Below 1.60m, firm to stiff.			
1.60 - 1.90	B						
1.60 - 1.90	D		w (%) = 17				
2.70 - 3.00	B			Firm to stiff bluish grey mottled orangish brown slightly sandy slightly gravelly CLAY with occasional pockets of sand. Gravel is subangular to subrounded fine to coarse of various lithologies.	2.70		83.54
2.70 - 3.00	D		w (%) = 13				
				End of Excavation	3.20		83.04

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	28/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP112
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380507.0 E 410313.2 N	**Ground Level**	85.52 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
				Grass over TOPSOIL: Soft dark grey slightly sandy clay with many rootlets.			
				End of Excavation	0.40		85.12

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	28/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks

Remarks

Trial Pit TP112 terminated at approximately 0.40m depth due to immediate inflow of groundwater and associated instability of pit sides. Strata obscured by immediate inflow of groundwater. No samples taken.

Local scheduled Machine-Dug Trial Pits TP111, TP113, TP114 and TP115 were replaced by Hand-Dug Trial Pits HP111, HP113, HP114 and HP115, respectively, on the instruction of the Client.

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Figure
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Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

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GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP116A
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380554.5 E 410282.1 N	**Ground Level**	85.99 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			Grass over TOPSOIL: Soft to firm dark grey mottled black slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine of sandstone and brick fragments.			
0.00 - 0.10	D						
0.00 - 0.10	ES				0.40		85.59
0.40 - 0.50	B			MADE GROUND: Black gravelly fine to coarse sand including ash. Gravel is subangular to subrounded fine to coarse of various lithologies.			
0.40 - 0.50	D						
0.40 - 0.50	ES				0.80		85.19
0.80 - 1.00	B			Dark brown very gravelly fine to coarse SAND. Gravel is subrounded to rounded fine to coarse of sandstone.			
0.80 - 1.00	D		w (%) = 15				
0.80 - 1.00	ES			Below 1.20m, slightly gravelly, clayey.			
1.20 - 1.40	B						
1.20 - 1.40	D						
1.70 - 2.00	B				1.70		84.29
1.70 - 2.00	D			Orange gravelly medium to coarse SAND. Gravel is subrounded to rounded fine to coarse of various lithologies.			
2.00 - 2.20	B				2.00		83.99
2.00 - 2.20	D		w (%) = 20	Firm dark greyish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of various lithologies.			
				End of Excavation	2.30		83.69

Excavation

Plant	13T Tracked Excavator	**Width (B)**	0.60
Date	23/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	23/11/2023
Stability	Sides collapsing.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
2.30				Medium inflow. Standing at 1.70m depth.

Remarks

Location of scheduled Trial Pit TP116 near to area of historic pond was flooded. Hence Trial Pit TP116 was cancelled and Trial Pit TP116A was carried out on banked area to the north of the historic pond instead.

ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Trial Pit TP116A terminated at 2.30m depth due to the inflow of groundwater and associated pit instability.

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Figure Sheet 1 of 1
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Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP118
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380626.3 E 410287.1 N	**Ground Level**	85.57 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			Grass over TOPSOIL: Brown gravelly clayey fine to medium sand with some rootlets. Gravel is subangular to subrounded fine to medium of various lithologies. Occasional bricks. At 0.10m, woven geotextile (Terram).	0.10		85.47
0.00 - 0.10	D		w (%) = 18				
0.00 - 0.10	ES						
0.50 - 0.80	B			Dark brown very sandy slightly clayey subangular to rounded fine to coarse GRAVEL of various lithologies.			
0.50 - 0.80	D		w (%) = 7				
0.50 - 0.80	ES						
1.00 - 1.10	B			Light brown mottled orange slightly gravelly fine to medium SAND. Gravel is subangular to rounded fine to coarse of various lithologies.	1.00		84.57
1.00 - 1.10	D			End of Excavation	1.10		84.47

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	27/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	27/11/2023
Stability	Sides collapsing below 1.10m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
1.10				Medium inflow. Standing at 0.70m depth.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP118 terminated at 1.10m depth due to the inflow of groundwater and associated pit instability.

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Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP119
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380398.1 E 410350.4 N	**Ground Level**	87.05 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Soft to firm dark brown slightly sandy slightly gravelly clay with occasional rootlets. Gravel is angular to angular fine to coarse of various lithologies, clinker and brick fragments.	0.20		86.85
0.00 - 0.20	ES			MADE GROUND: Soft to firm dark brown mottled dark grey slightly gravelly sandy clay with a medium cobble content and occasional pockets of organic material. Gravel is angular to subrounded fine to coarse of various lithologies, clinker, concrete and brick fragments.			
1.00 - 1.20	B						
1.00 - 1.20	D						
1.00 - 1.20	ES						
2.00 - 2.20	B			Below 2.00m, slightly sandy.			
2.00 - 2.20	D						
2.00 - 2.20	ES						
3.00 - 3.40	B			MADE GROUND: Dark brown gravelly clayey fine to coarse sand. Gravel is angular to rounded fine to coarse of various lithologies and clinker.	3.00		84.05
3.00 - 3.40	D						
3.00 - 3.40	ES			At 3.50m, concrete block.			
4.00 - 4.20	B			Stiff dark brownish grey slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to coarse of various lithologies.	3.70		83.35
4.00 - 4.20	D		w (%) = 11				
4.00 - 4.20	ES			End of Excavation	4.30		82.75

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	23/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	23/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP120
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380379.2 E 410317.9 N	**Ground Level**	86.22 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.30	B			Grass over TOPSOIL: Soft to firm brown slightly sandy gravelly clay with occasional rootlets. Gravel is angular to subangular fine to coarse of various lithologies and brick fragments.	0.30		85.92
0.00 - 0.30	ES						
0.60 - 0.90	B			MADE GROUND: Firm dark brown slightly sandy slightly gravelly clay with a low angular to subangular cobble content of sandstone. Gravel is angular to subangular fine to coarse of various lithologies and clinker.	0.60		85.62
0.60 - 0.90	ES						
				Stiff dark brown slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of sandstone. Gravel is subangular to rounded fine to coarse including mudstone, siltstone, sandstone and coal.			
1.50 - 1.80	B						
1.50 - 1.80	ES						
2.00 - 2.20	D		w (%) = 12				
2.20 - 2.50	D				2.20		84.02
2.20 - 2.50	ES			Firm to stiff light brown slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of siltstone and sandstone. Gravel is angular to subrounded fine to coarse including mudstone, siltstone and sandstone.			
2.50 - 2.70	B						
2.50 - 2.70	ES						
2.70 - 3.00	D		w (%) = 10	Below 2.70m, grading to stiff orangish brown mottled grey slightly sandy gravelly clay.			
				End of Excavation	3.00		83.22

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	20/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	20/11/2023
Stability	Minor spalling.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Checked by JK
Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - Trial Pit

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP121
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380438.4 E 410351.5 N	**Ground Level**	86.57 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over TOPSOIL: Soft to dark brown slightly sandy slightly gravelly clay with occasional rootlets. Gravel is angular to subangular fine to coarse of various lithologies, clinker and brick fragments.	0.20		86.37
0.00 - 0.20	D						
0.00 - 0.20	ES						
0.20 - 0.40	B			MADE GROUND: Firm dark reddish brown mottled dark grey slightly sandy slightly gravelly clay. Gravel is angular to subrounded fine to coarse of sandstone, glass, clinker and brick fragments.			
0.20 - 0.40	D		w (%) = 14				
0.20 - 0.40	ES						
1.00 - 1.30	B						
1.00 - 1.30	D						
1.00 - 1.30	ES						
2.00 - 2.30	B			MADE GROUND: Firm to stiff dark grey mottled light grey slightly sandy slightly gravelly clay. Gravel is angular to subrounded fine to coarse of coal, clinker, concrete and brick fragments.	2.00		84.57
2.00 - 2.30	D						
2.00 - 2.30	ES						
3.20 - 3.40	B						
3.20 - 3.40	D						
3.20 - 3.40	ES						
				At 3.60m, brick foundation slab on top of timbers.	3.70		82.87
3.80 - 4.00	B			MADE GROUND: Light grey very sandy clayey angular to subrounded fine to coarse gravel of various lithologies and clinker. Medium angular to subangular cobble content of sanstone. Occasional decayed plant remains.	4.00		82.57
3.80 - 4.00	D						
3.80 - 4.00	ES						
				End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	21/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	21/11/2023
Stability	Sides collapsed at 4.00m depth.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP122
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380459.9 E 410367.1 N	**Ground Level**	86.76 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	B			Grass over MADE GROUND: Soft to firm brown slightly sandy gravelly clay with some rootlets. Gravel is angular to rounded fine to coarse of siltstone, sandstone, clinker and brick fragments. At 0.20m, woven geotextile (Terram).	0.40		86.36
0.00 - 0.20	D						
0.00 - 0.20	ES						
0.40 - 0.80	B			MADE GROUND: Dark grey mottled black very sandy clayey subangular to subrounded fine to coarse gravel of siltstone, sandstone, clinker and brick fragments. Low angular to subangular cobble content of sandstone and bricks. At 0.80m, asphalt.	0.80		85.96
0.40 - 0.80	D						
0.40 - 0.80	ES			End of Excavation			

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	28/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Trial Pit TP122 terminated at 0.80m depth on encountering asphalt layer.

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Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Trial Pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	TP123
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380527.5 E 410339.7 N	**Ground Level**	86.20 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.10	B			Grass over TOPSOIL: Soft to firm dark grey slightly sandy clay with many rootlets.			
0.00 - 0.10	D						
0.00 - 0.10	ES				0.40		85.80
0.40 - 0.50	B			MADE GROUND: Black gravelly fine to coarse sand including ash. Gravel is subangular to subrounded fine to coarse of various lithologies. Hydrocarbon odour.			
0.40 - 0.50	D				0.70		85.50
0.40 - 0.50	ES			Dark greyish brown gravelly to very gravelly slightly clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of various lithologies.			
0.70 - 0.90	B				1.00		85.20
0.70 - 0.90	D		w (%) = 12	Soft to firm light greyish brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to medium of various lithologies. Grading to very clayey fine to coarse sand in places.			
0.70 - 0.90	ES						
0.90 - 1.00	B						
0.90 - 1.00	D						
2.00 - 2.20	B						
2.00 - 2.20	D						
2.40 - 2.60	B				2.40		83.80
2.40 - 2.60	D		w (%) = 10	Light grey and dark grey sandy clayey subrounded to rounded fine to coarse GRAVEL of various lithologies. Low cobble content.			
				End of Excavation	3.60		82.60

Excavation

Plant	13T Tracked Excavator.	**Width (B)**	0.60
Date	28/11/2023	**Length (C)**	3.00
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
				None encountered.

Remarks ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
07/03/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

APPENDIX 3

Machine-Dug Trial Pit Photographs

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit SA01 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit SA01 (2)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP101 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP102 (1)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP102 (2)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP102 (3)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP102 (4) Arisings

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP103 (1)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP103 (2)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP103 (3)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (2)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (3)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (4)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (5)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP106 (6) Arisings

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP107 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP107 (2)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP108 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP109 (1)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP109 (2)

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PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP110

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP112 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP112 (2)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP112 (3)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP116A

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP118 (1)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP119 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP119 (2)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP120 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP120 (2)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP122 (1)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP122 (2)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP122 (3)

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP122 (4)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP123 (1)

PHOTOGRAPHS

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit TP123 (2)

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APPENDIX 4

Hand-Dug Trial Pit Records

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

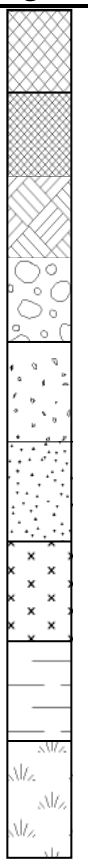
Depth Water Rose To

Instrumentation

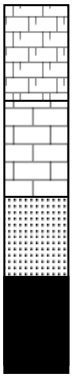


Strata

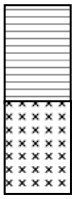
Legend



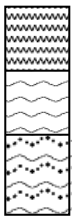
Note: Composite soil types shown by combined symbols



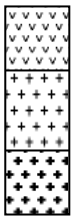
Strata, Continued



Metamorphic Rock



Igneous Rock



Backfill Materials



Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP111
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380498.2 E 410336.1 N	**Ground Level**	85.64 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	D			Grass over TOPSOIL: Soft dark grey slightly sandy clay with many rootlets.			
0.00 - 0.20	ES			End of Excavation	0.20		85.44

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	28/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.00				Water standing at ground level.

Remarks

Hand-Dug Trial Pit HP111 excavated to 0.20m depth at the location of scheduled Machine-Dug Trial Pit TP111.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

Logged by SF
Checked by JK
Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP113
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380475.3 E 410298.1 N	**Ground Level**	85.58 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	D			Grass over TOPSOIL: Brown sandy slightly clayey subrounded to rounded medium to coarse gravel of various lithologies. Some rootlets.	0.20		85.38
0.00 - 0.20	ES			End of Excavation			

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	28/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.00				Water standing at ground level.

Remarks Hand-Dug Trial Pit HP113 excavated to 0.20m depth at the location of scheduled Machine-Dug Trial Pit TP113.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP114
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380533.3 E 410311.9 N	**Ground Level**	85.56 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.20	D			Grass over TOPSOIL: Soft dark grey mottled black slightly sandy slightly gravelly clay with many rootlets. Gravel is subangular to subrounded fine to coarse of various lithologies.	0.20		85.36
0.00 - 0.20	ES			End of Excavation			

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	28/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.00				Water standing at ground level.

Remarks Hand-Dug Trial Pit HP114 excavated to 0.20m depth at the location of scheduled Machine-Dug Trial Pit TP114.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP115
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380555.1 E 410284.8 N	**Ground Level**	85.56 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	D			Grass over TOPSOIL: Soft to firm dark grey mottled black slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine of sandstone and brick fragments.			
0.00 - 0.50	ES						
				End of Excavation	0.50		85.06

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	28/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	28/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.00				Water standing at ground level.

Remarks

Hand-Dug Trial Pit HP115 excavated to 0.20m depth at the location of scheduled Machine-Dug Trial Pit TP115.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.

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Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP117E
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380591.6 E 410284.8 N	**Ground Level**	85.96 m OD

Scale 1:50

Samples and Tests				Strata			
Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.00 - 0.40	B			Grass over MADE GROUND: Dark brown very sandy clayey subangular to subrounded fine to coarse gravel of various lithologies. Medium cobble content.			
0.00 - 0.40	D						
0.00 - 0.40	ES			Below 0.40m, low subangular to subrounded cobble content of various lithologies.			
0.40 - 1.10	B						
0.40 - 1.10	D						
0.40 - 1.10	ES						
				End of Excavation	1.10		84.86

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	23/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	23/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.90				Medium inflow.

Remarks

Scheduled Machine-Dug Trial Pit TP117 was replaced by Hand-Dug Trial Pits HP117E and HP117W on the instructions of the Client.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Hand-dug Trial Pit HP117E terminated at 1.10m depth due to the inflow of groundwater.

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Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

TRIAL PIT RECORD - *Inspection pit*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Location ID	HP117W
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380586.8 E 410285.4 N	**Ground Level**	85.94 m OD

Samples and Tests | Strata | Scale 1:50

Depth	Sample Type	Stratum No.	Results	Description	Depth	Legend	Level (m OD)
0.40	B			Grass over MADE GROUND: Dark brown very sandy clayey subangular to subrounded fine to coarse gravel of various lithologies. Medium cobble content.			
0.40	D						
0.40	ES			Below 0.40m, low subangular to subrounded cobble content of various lithologies.			
1.10	B						
1.10	D			End of Excavation	1.10		84.84
1.10	ES						

Excavation

Plant	Hand tools.	**Width (B)**	0.40
Date	23/11/2023	**Length (C)**	0.40
Shoring	None.	**Date Backfilled**	23/11/2023
Stability	Stable during excavation.		

Groundwater

Depth Observed	Depth of Pit	Rose to	in Mins	Remarks
0.90				Medium inflow.

Remarks

Scheduled Machine-Dug Trial Pit TP117 was replaced by Hand-Dug Trial Pits HP117E and HP117W on the instructions of the Client.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Hand-dug Trial Pit HP117W terminated at 0.70m depth due to the inflow of groundwater.

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Figure Sheet 1 of 1
15/02/2024

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

GEOTECHNICS

APPENDIX 5

Hand-Dug Trial Pit Photographs

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit HP117E (1)

geotechnics

Project Number : PN234595

Project : PYRAMID PARK, BURY



Trial Pit HP117W (1)

APPENDIX 6

Cable Percussion Borehole Records, SPT Results Summary Sheets and SPT Hammer Energy Test Reports

DATA SHEET - Symbols and Abbreviations used on Records

Sample Types

B	Bulk disturbed sample
BLK	Block sample
C	Core sample
D	Small disturbed sample (tub/jar)
E	Environmental test sample
ES	Environmental soil sample
EW	Environmental water sample
G	Gas sample
L	Liner sample
LB	Large bulk disturbed sample
P	Piston sample (PF - failed P sample)
TW	Thin walled push in sample
U	Open Tube - 102mm diameter with blows to take sample. (UF - failed U sample)
UT	Thin wall open drive tube sampler - 102mm diameter with blows to take sample. (UTF - failed UT sample)
V	Vial sample
W	Water sample
#	Sample Not Recovered

Insitu Testing / Properties

CBRP	CBR using TRL probe
CHP	Constant Head Permeability Test
COND	Electrical conductivity
TC	Thermal Conductivity
TR	Thermal Resistivity
HV	Strength from Hand Vane
ICBR	CBR Test
IDEN	Density Test
IRES	Resistivity Test
MEX	CBR using Mexecone Probe Test
PKR	Packer Permeability Test
PLT	Plate Load Test
PP	Strength from Pocket Penetrometer
Temp	Temperature
VHP	Variable Head Permeability Test
VN	Strength from Insitu Vane
w%	Water content

(All other strengths from undrained triaxial testing)

S	Standard Penetration Test (SPT)
C	SPT with cone
N	SPT Result
-/-	Blows/penetration (mm) after seating drive
-*/- (mm)	Total blows/penetration
( )	Extrapolated value

Groundwater

Water Strike

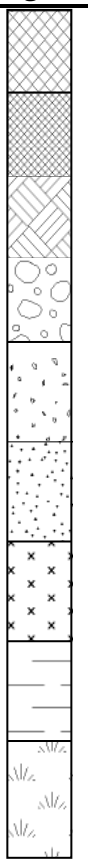
Depth Water Rose To

Instrumentation

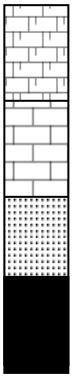


Strata

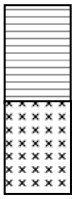
Legend



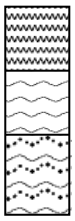
Note: Composite soil types shown by combined symbols



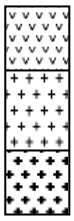
Strata, Continued



Metamorphic Rock



Igneous Rock



Backfill Materials



Rotary Core

RQD	Rock Quality Designation (% of intact core >100mm)
FRACTURE INDEX	Fractures/metre
NI	Non-intact core
NR	No core recovery
AZCL	Assumed zone of core loss

GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH101
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380393.4 E 410333.1 N	**Ground Level**	86.35 m OD

Scale 1:50

Sampling			Properties			Strata		
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Level (m OD)
0.00 - 0.80	B					Grass over TOPSOIL: Soft to firm dark brown slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine to coarse of various lithologies and brick fragments.	0.10	86.25
0.20	ES					MADE GROUND: Reddish brown sandy angular fine to coarse gravel of brick fragments.	0.30	86.05
0.50	ES					Dark brown clayey fine to coarse SAND and subangular to subrounded fine to coarse GRAVEL of various lithologies. Medium subangular to subrounded cobble content of siltstone and sandstone.		
0.80 - 1.20	B							
1.00	ES							
1.20 - 1.65		(DRY)			S19		1.20	85.15
1.20 - 1.65	D			11		Firm to stiff dark greyish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of including mudstone, siltstone and sandstone and coal fragments.		
2.00 - 2.45	UT50	1.50 (DRY)	HV = 51	18		Between 2.00-2.45m, HV, Cu = 51kPa, medium strength.		
2.50	D			9		Firm to stiff light brown slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of siltstone and sandstone. Gravel is subangular to subrounded fine to coarse including mudstone, siltstone and sandstone.	2.45	83.90
3.00 - 3.39		3.00 (DRY)			S50/ 240mm	At 3.00m, band of light brown gravelly sand.		
3.00	B							
3.00 - 3.45	D			16				
4.00 - 4.45		4.00 (DRY)			S47	Below 4.00m, very stiff.		
4.00	B							
4.00 - 4.45	D							
5.00 - 5.44		4.50 (DRY)			S50/ 290mm			
5.00	B							
5.00 - 5.45	D							
6.00 - 6.39		6.00 (DRY)			S50/ 240mm	Very weak to weak thinly laminated grey MUDSTONE (Recovered as gravel).	5.80	80.55
6.00 - 6.45	D							
						End of Borehole	6.39	79.96

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
6.39	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			15/11/23	08:00
6.39	6.00	DRY	15/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					None encountered.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
A 50mm standpipe was installed to 6.00m with a geowrapped slotted section from 2.00m to 6.00m with a flush cover installed.
Backfill details from base of hole: bentonite seal up to 6.00m, gravel filter up to 2.00m, bentonite seal up to 0.20m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by ZL
Checked by JK
Figure Sheet 1 of 2
04/03/2024

GEOTECHNICS

BOREHOLE RECORD **-** *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH101
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380393.4 E 410333.1 N	**Ground Level**	86.35 m OD

Sampling			Properties			Strata			Scale 1:50
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)

Boring				**Progress**					**Groundwater**					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by ZL
Checked by JK
Figure Sheet 2 of 2
04/03/2024

GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH102
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380426.8 E 410360.3 N	**Ground Level**	86.74 m OD

Scale 1:50

Sampling			Properties			Strata		
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Level (m OD)
0.00 - 0.50	B					Grass over TOPSOIL: Soft brown slightly sandy slightly gravelly clay with some rootlets. Gravel is subangular to subrounded fine to coarse including sandstone and brick fragments.	0.10	86.64
0.20	ES						0.20	86.54
0.50	ES					MADE GROUND: Reddish brown and black sandy angular fine to coarse gravel of ash and brick fragments.	0.50	86.24
0.50 - 1.20	B							
1.00	ES					MADE GROUND: Soft to firm dark grey slightly sandy slightly gravelly clay with a low angular to subangular cobble cobble content of sandstone and bricks. Gravel is angular to rounded fine to coarse including siltstone, sandstone, coal and brick fragments. Some ash and wood fragments.		
1.20 - 1.65		1.20 (DRY)			S16			
1.20 - 1.65	B		HV = 92,33,>14 0,>140			Firm to stiff dark greyish brown slightly sandy gravelly CLAY with occasional roots. Gravel is subangular to rounded fine to medium including mudstone, siltstone and sandstone.	1.50	85.24
1.20 - 1.65	D			17		Stiff light greyish brown and yellowish brown slightly sandy slightly gravelly CLAY with a low angular to subangular cobble content of siltstone and sandstone. Gravel is angular to subrounded fine to coarse including mudstone, siltstone and sandstone.		
1.50 - 2.00	B							
2.00 - 2.45		2.00 (DRY)			S29			
2.00 - 2.45	B							
2.00 - 2.45	D			12				
3.00 - 3.45		3.00 (DRY)			C35	Extremely weak to very weak bluish grey MUDSTONE (Recovered as dense to very dense gravel).	3.00	83.74
3.00 - 3.45	B							
4.00 - 4.26		4.00 (DRY)			S50/ 115mm			
4.00 - 4.27	D			13				
4.00 - 4.45	B							
5.00 - 5.18		5.00 (DRY)			S50/ 75mm			
5.00 - 5.18	D							
5.00 - 5.45	B							
6.00 - 6.12		6.00 (DRY)			S50/ 60mm	Below 6.00m, laminated, orangish brown.		
6.00 - 6.45	B							
6.00 - 6.45	D							
7.50 - 7.78		7.50 (DRY)			S50/ 125mm			
7.50 - 7.78	D			11		End of Borehole	7.78	78.96

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	JG/GB
7.78	0.15	Cable Percussion	JG/GB

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			16/11/23	08:00
7.78	7.50	DRY	16/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					None encountered.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
A 33mm standpipe was installed to 7.50m with a geowrapped slotted section from 4.50m to 7.50m and a 50mm standpipe was installed to 1.50m with a geowrapped slotted section from 0.50m to 1.50m with a flush cover installed.
Backfill details from base of hole: gravel filter up to 4.50m, bentonite seal up to 1.50m, gravel filter up to 0.50m, bentonite seal up to 0.20m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by SF
Checked by JK
Figure Sheet 1 of 1
04/03/2024

GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH103
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380481.7 E 410348.7 N	**Ground Level**	86.05 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.90	B					MADE GROUND: Reddish brown and black sandy angular fine to coarse gravel of ash and brick fragments.			
0.20	ES								
0.50	ES								
1.00	ES						0.90		85.15
1.20 - 1.65		1.20 (DRY)			S13	Firm to stiff greyish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium including mudstone, siltstone and sandstone.			
1.20 - 1.65	B			20					
1.20 - 1.65	D								
2.00 - 2.45		1.50 (DRY)			S12				
2.00	ES								
2.00 - 2.45	B								
2.00 - 2.45	D								
3.00 - 3.45		1.50 (DRY)			S20				
3.00 - 3.45	B								
3.00 - 3.45	D								
3.50	B					Stiff to very stiff orangish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to rounded fine to medium including mudstone, siltstone and sandstone.	3.60		82.45
4.00 - 4.45		1.50 (DRY)			S34				
4.00 - 4.45	B			16					
4.00 - 4.45	D								
5.00 - 5.45		1.50 (DRY)			S42				
5.00 - 5.45	B								
5.00 - 5.45	D								
6.00 - 6.42		1.50 (DRY)			S50/ 275mm	Below 6.00m, mottled dark bluish grey.			
6.00 - 6.43	D			21					
6.00 - 6.45	B								
6.80	B					Extremely weak to very weak laminated bluish grey MUDSTONE (Recovered as gravel).	6.80		79.25
7.50 - 7.92		1.50 (DRY)			S50/ 265mm				
7.50 - 7.92	D								
						End of Borehole	7.92		78.13

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
7.92	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			17/11/23	08:00
7.92	1.50	DRY	17/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
0.00				1.20	Surface inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. (Pit obscured by water at 0.40m depth).
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Chiselling: 1.50-1.60m for 60 minutes. Rig moved to avoid obstruction.
A 50mm standpipe was installed to 6.80m with a geowrapped slotted section from 1.00m to 6.80m with a flush cover installed.
Backfill details from base of hole: bentonite seal up to 6.80m, gravel filter up to 1.00m, bentonite seal up to 0.20m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by SF
Checked by JK
Figure Sheet 1 of 1
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GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH104
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380484.1 E 410306.7 N	**Ground Level**	85.51 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	B					Grass over TOPSOIL: Brown sandy slightly clayey subrounded to rounded medium to coarse gravel of various lithologies. Some rootlets.			
0.20	ES								
0.50	ES					MADE GROUND: Firm to stiff brown slightly sandy gravelly clay. Gravel is angular to subrounded fine to medium of siltstone and sandstone. Some ash.	0.50		85.01
0.50 - 1.20	B								
0.50 - 1.20	D								
1.00	ES					Soft to firm light orangish brown and yellowish brown slightly sandy gravelly CLAY with a low subangular to subrounded cobble content of siltstone and sandstone. Gravel is subangular to subrounded fine to coarse including mudstone, siltstone and sandstone.	1.00		84.51
1.20 - 1.60		1.20 (DRY)			C50/ 255mm				
1.20 - 1.65	B								
2.00 - 2.14		2.00 (DRY)			C50/ 70mm				
2.00	D			19					
2.00 - 2.45	B								
3.00 - 3.14		3.00 (DRY)			C50/ 70mm	Below 3.00m, slightly gravelly sandy. Gravel is fine to medium.			
3.00 - 3.45	B								
4.00 - 4.10		4.00 (DRY)			C50/ 40mm				
4.00	D			14					
4.00 - 4.45	B								
5.00 - 5.11		5.00 (DRY)			C50/ 50mm				
5.00 - 5.45	B								
6.00 - 6.11		6.00 (DRY)			C50/ 50mm	Below 6.00m, brown mottled grey.			
6.00	D								
6.00 - 6.45	B			15					
						Extremely weak to very weak bluish grey MUDSTONE (Recovered as gravel).	6.80		78.71
						End of Borehole	7.00		78.51

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	JG/GB
7.00	0.15	Cable Percussion	JG/GB

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			17/11/23	08:00
7.00	7.00	DRY	17/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
0.00				1.20	Surface inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. (Pit obscured by water from ground level).
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Chiselling: 6.80-7.00m for 30 minutes.
A 50mm standpipe was installed to 5.00m with a geowrapped slotted section from 2.00m to 5.00m with a flush cover installed.
Backfill details from base of hole: bentonite seal up to 5.00m, gravel filter up to 2.00m, bentonite seal up to 0.20m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by SF
Checked by JK
Figure Sheet 1 of 1
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GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH105
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380534.0 E 410335.7 N	**Ground Level**	86.21 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.50	B					Grass over MADE GROUND: Soft dark grey mottled black slightly sandy slightly gravelly clay with some rootlets. Gravel is angular to subrounded fine to coarse of various lithologies and brick fragments.			
0.20	ES								
0.50	ES								
0.50 - 1.20	B								
0.50 - 1.20	D								
1.00	ES								
1.20 - 1.62		1.20 (DRY)			C50/ 275mm		1.20		85.01
1.20 - 1.65	B					Firm to stiff greyish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse of various lithologies. At 1.20m, obstruction pushed to 2.00m depth**.	1.40		84.81
2.00 - 2.45		2.00 (1.50)			C22	Firm to stiff dark greyish brown slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to coarse including mudstone, siltstone and sandstone.			
2.00 - 2.45	B		HV = 121,20,>140,43						
3.00 - 3.45		3.00 (DRY)			C26	Below 3.00m, medium cobble content.			
3.00 - 3.45	B			20					
4.00 - 4.38		3.00 (DRY)			C50/ 230mm	Extremely weak to very weak bluish grey MUDSTONE.	4.00		82.21
4.00 - 4.45	B								
4.00 - 4.45	D					End of Borehole	4.38		81.83

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
4.00	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			29/11/23	08:00
4.38	3.00	DRY	29/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
					None encountered.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Chiselling: 1.20-1.40m for 60 minutes. ** Drillers description.
Water was added to assist boring between 1.20m and 2.00m.
A 50mm standpipe was installed to 4.00m with a geowrapped slotted section from 1.40m to 4.00m with an up-standing cover installed.
Backfill details from base of hole: bentonite seal up to 4.00m, gravel filter up to 1.40m, bentonite seal up to 0.20m, concrete up to ground level.
Logged in accordance with BS5930:2015 + A1:2020

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged by SF
Checked by JK
Figure Sheet 1 of 1
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GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH106
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380521.7 E 410290.8 N	**Ground Level**	85.53 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.60	B					Grass over TOPSOIL: Soft dark grey mottled black slightly sandy slightly gravelly clay with many rootlets. Gravel is subangular to subrounded fine to coarse of various lithologies.			
0.20	ES								
0.50	ES						0.50		85.03
0.60 - 1.20	B					Brown gravelly clayey fine to coarse SAND with occasional bands of clay. Gravel is subangular to subrounded fine to coarse of various litholgies.			
1.00	ES								
1.20 - 1.65		1.20 (DRY)			C15	Below 1.20m, medium dense. Grading to sand and gravel.			
1.20 - 1.65	B								
							1.80		83.73
2.00 - 2.45	B					Soft dark grey slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of siltstone and sandstone. Gravel is subrounded to rounded fine to medium including mudstone, siltstone and sandstone.	2.00		83.53
2.50	B					Brown silty fine to coarse SAND.	2.50		83.03
						Soft to firm brown mottled orange slightly gravelly sandy CLAY. Gravel is subangular to subrounded fine to medium including mudstone, siltstone and sandstone.			
3.00 - 3.45		3.00 (DRY)			S19	Below 3.00m, stiff.			
3.00 - 3.45	B			15					
3.00 - 3.45	D								
3.80	B						3.80		81.73
4.00 - 4.45		3.00 (DRY)			C27	Stiff to very stiff orangish brown slightly sandy slightly gravelly CLAY with a low subangular to subrounded cobble content of siltstone and sandstone. Gravel is subangular to rounded fine to coarse including mudstone, siltstone and sandstone.			
4.00 - 4.45	B			18					
4.00 - 4.45	D								
5.00 - 5.45		3.00 (DRY)			C28				
5.00 - 5.45	B								
5.00 - 5.45	D								
6.00 - 6.45		3.00 (DRY)			C38				
							6.90		78.63
7.00 - 7.38		3.00 (DRY)			S50/ 225mm	Extremely weak to very weak bluish grey MUDSTONE (Recovered as gravel).			
7.00 - 7.45	D								
						End of Borehole	7.38		78.15

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
7.38	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			30/11/23	08:00
7.38	3.00	DRY	30/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
2.00	2.00	1.00	20	3.00	Inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Chiselling: 5.50-5.70m for 60 minutes.
A 19mm standpipe was installed to 8.50m with a geowrapped slotted section from 6.50m to 8.50m and a 50m standpipe was installed to 4.00m with a geowrapped slotted section from 1.00m to 4.00m with an up-standing cover installed.
Backfill details from base of hole: bentonite seal up to 8.50m, gravel filter up to 6.50m, bentonite seal up to 4.00m, gravel filter up to 1.00m, bentonite seal up to 0.20m, concrete up to ground level.
Logged in accordance with BS5930:2015 + A1:2020

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged by SF
Checked by JK
Figure Sheet 1 of 1
04/03/2024

GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH107
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380562.3 E 410266.2 N	**Ground Level**	90.59 m OD

Sampling			Properties			Strata			Scale 1:50
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 0.30	B					MADE GROUND: Black asphalt.	0.10		90.49
0.20	ES					MADE GROUND: Light grey sandy angular to subangular fine to coarse gravel of limestone and concrete fragments (Sub base).	0.30		90.29
0.30 - 1.20	B					MADE GROUND: Reddish brown gravelly slightly clayey fine to coarse sand. Gravel is angular to subangular fine to coarse of clinker and brick fragments.			
0.30 - 1.20	ES								
0.50	ES								
1.00	ES								
1.20 - 1.55		1.20 (DRY)			C48/ 200mm	MADE GROUND: Greyish brown sandy clayey angular to subrounded fine to coarse gravel of siltstone, sandstone, slag, concrete and brick fragments. Low angular cobble content of concrete and bricks.	1.20		89.39
1.20 - 1.65	B								
2.00 - 2.27		2.00 (DRY)			C50/ 120mm				
2.00	ES								
2.00 - 2.45	B								
2.00 - 2.45	D								
3.00 - 3.45		3.00 (DRY)			C27	Below 3.00m, medium dense.			
3.00	ES								
3.00 - 3.45	B								
4.00 - 4.45		4.00 (DRY)			C34	MADE GROUND: Very stiff dark greyish brown slightly sandy gravelly clay. Gravel is angular to subrounded fine to coarse of siltstone, sandstone, slag, concrete and brick fragments.	4.00		86.59
4.00	ES								
4.00 - 4.45	B			20					
4.00 - 4.45	D								
5.00 - 5.45		5.00 (DRY)			C35				
5.00	ES								
5.00 - 5.45	B								
6.00 - 6.45		6.00 (DRY)			C20	Medium dense brown gravelly medium to coarse SAND. Gravel is subangular to subrounded fine to medium of various lithologies.	6.10		84.49
6.00	ES								
6.00 - 6.45	B								
7.50 - 7.95		7.60 (6.00)			C20	Below 7.50m, grading to very sandy clayey fine to coarse gravel.			
7.50 - 7.95	B								
8.50	B					Soft to firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to coarse including mudstone, siltstone and sandstone.	8.50		82.09
9.00 - 9.45	UT27	9.00 (DRY)	101			Between 9.00-9.45m, UUT, Cu = 101kPa, high strength.			
9.00 - 9.45									
10.00	D						10.00		80.59

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
11.77	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			20/11/23	08:00
2.50	2.50	DRY	20/11/23	16:00
2.50	2.50	DRY	21/11/23	08:00
11.77	11.50	DRY	21/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
7.00	7.00	6.00	20	9.00	Inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found.
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
Chiselling: 2.00-2.30m for 60 minutes, 5.50-5.60m for 60 minutes and 11.30-11.40m for 60 minutes.
A 19mm standpipe was installed to 8.50m with a geowrapped slotted section from 6.50m to 8.50m and a 50mm standpipe was installed to 4.00m with a geowrapped slotted section from 1.00m to 4.00m with an up-standing cover installed.
Backfill details from base of hole: bentonite seal up to 8.50m, gravel filter up to 6.50m, bentonite seal up to 4.00m, gravel filter up to 1.00m, bentonite seal up to 0.20m, concrete up to ground level.
Logged in accordance with BS5930:2015 + A1:2020

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged by SF
Checked by JK
Figure Sheet 1 of 2
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GEOTECHNICS

BOREHOLE RECORD **-** *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH107
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380562.3 E 410266.2 N	**Ground Level**	90.59 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
						Stiff to very stiff reddish brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium of sandstone.			
10.50 - 10.92		9.00 (DRY)			S50/ 265mm				
10.50 - 10.92	D								
10.50 - 10.95	B			17					
							11.40		79.19
11.50 - 11.76		10.50 (DRY)			S50/ 115mm	Extremely weak to very weak laminated reddish brown MUDSTONE.			
11.50 - 11.77	D						11.77		78.82
						End of Borehole			

Boring				Progress					Groundwater					
Depth	Hole Dia.	Technique	Crew	Depth of Hole	Depth Cased	Depth to Water	Date	Time	Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater

Remarks

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by SF
Checked by JK
Figure Sheet 2 of 2
04/03/2024

GEOTECHNICS

BOREHOLE RECORD - *Cable Percussion*

Project	Pyramid Park, Bury	**Engineer**	Campbell Reith Hill LLP	**Project No.**	PN234595
				Borehole	BH108
Client	Campbell Reith Hill LLP	**National Grid Coordinates**	380616.2 E 410293.1 N	**Ground Level**	85.57 m OD

Scale 1:50

Sampling			Properties			Strata			
Depth	Sample Type	Depth Cased & (to Water)	Strength kPa	w(%)	SPT N	Description	Depth	Legend	Level (m OD)
0.00 - 1.20	B					Grass over TOPSOIL: Brown sandy clayey subrounded to rounded fine to coarse gravel of various lithologies including mudstone, siltstone and sandstone. Medium cobble content. Occasional rootlets.	0.10		85.47
0.20	ES					Brown sandy clayey subrounded to rounded fine to coarse GRAVEL of various lithologies. Low subangular to subrounded cobble content of siltstone and sandstone.			
0.50	ES								
1.00	ES								
1.20 - 1.65		1.20 (1.00)			C19	Below 1.20m, medium dense.			
2.00 - 2.45		2.00 (1.00)			C20	Medium dense brown very sandy slightly clayey subrounded to rounded fine to coarse GRAVEL of various lithologies.	2.00		83.57
3.00 - 3.45		3.00 (DRY)			S16	Firm to stiff brown slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded fine to medium including mudstone, siltstone and sandstone.	3.00		82.57
3.00	B			15					
3.00 - 3.45	D								
4.00 - 4.45		3.00 (DRY)			S22				
4.00	B			19					
4.00 - 4.45	D								
5.00 - 5.39		4.50 (DRY)			S50/ 240mm	Extremely weak to very weak bluish grey MUDSTONE.	4.80		80.77
5.00 - 5.45	D					End of Borehole	5.39		80.18

Boring

Depth	Hole Dia.	Technique	Crew
1.20	0.40	Inspection Pit	DF/SF
5.39	0.15	Cable Percussion	DF/SF

Progress

Depth of Hole	Depth Cased	Depth to Water	Date	Time
0.00			22/11/23	08:00
3.00	3.00	1.00	22/11/23	16:00
3.00	3.00	DRY	23/11/23	08:00
5.39	4.50	DRY	23/11/23	16:00

Groundwater

Depth Struck	Depth Cased	Rose to	in Mins	Depth Sealed	Remarks on Groundwater
0.20		0.00	20	3.00	Inflow.

Remarks

Inspection pit hand excavated to 1.20m depth and no services were found. (Pit obscured by water from 0.20m depth).
ES sample = 1 x 60ml glass vial, 2 x 258ml amber glass jars and 1 x 1 litre plastic tub.
A 50mm standpipe was installed to 6.00m with a geowrapped slotted section from 2.00m to 6.00m with an up-standing cover installed. Backfill details from base of hole: bentonite seal up to 6.00m, gravel filter up to 2.00m, bentonite seal up to 0.20m, concrete up to ground level.

Symbols and abbrevations are explained on the accompanying key sheets.
All dimensions are in metres.

Logged in accordance with BS5930:2015 + A1:2020

Logged by ZL
Checked by JK
Figure Sheet 1 of 1
04/03/2024

GEOTECHNICS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH101	1.20	85.15	S		2	3	4	4	5	6	19	
BH101	3.00	83.35	S		6	10	12	14	18	6	50/240	
BH101	4.00	82.35	S		6	8	15	10	10	12	47	
BH101	5.00	81.35	S		8	7	20	12	9	9	50/290	
BH101	6.00	80.35	S		4	5	12	13	18	7	50/240	

Hammer No.:	AR1101	**Remarks**
Energy Ratio, Er (%):	72	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

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AGS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH102	1.20	85.54	S		4	4	4	4	4	4	16	
BH102	2.00	84.74	S		5	5	6	7	8	8	29	
BH102	3.00	83.74	C		6	7	8	9	9	9	35	
BH102	4.00	82.74	S		8	16	30	20			50/115	
BH102	5.00	81.74	S		13	17	50				50/75	
BH102	6.00	80.74	S		25		50				50/60	
BH102	7.50	79.24	S		9	15	27	23			50/125	

Hammer No.:	AR1101	**Remarks**
Energy Ratio, Er (%):	72	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

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FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH103	1.20	84.85	S		3	3	3	4	3	3	13	
BH103	2.00	84.05	S		3	3	3	3	3	3	12	
BH103	3.00	83.05	S		3	4	5	5	5	5	20	
BH103	4.00	82.05	S		3	4	7	7	8	12	34	
BH103	5.00	81.05	S		4	5	6	10	14	12	42	
BH103	6.00	80.05	S		5	5	10	10	12	18	50/275	
BH103	7.50	78.55	S		5	7	10	14	14	12	50/265	

Hammer No.:	AR1101	**Remarks**
Energy Ratio, Er (%):	72	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

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AGS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH104	1.20	84.31	C		7	10	13	15	15	7	50/255	
BH104	2.00	83.51	C		25		50				50/70	
BH104	3.00	82.51	C		25		50				50/70	
BH104	4.00	81.51	C		25		50				50/40	
BH104	5.00	80.51	C		25		50				50/50	
BH104	6.00	79.51	C		25		50				50/50	

Hammer No.:	VC 1	**Remarks**
Energy Ratio, Er (%):	73	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

Printed: 04/12/2023

AGS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH105	1.20	85.01	C		4	4	8	12	17	13	50/275	
BH105	2.00	84.21	C		5	5	5	5	6	6	22	
BH105	3.00	83.21	C		5	6	6	6	7	7	26	
BH105	4.00	82.21	C		7	8	12	16	18	4	50/230	

Hammer No.:	VC 1	**Remarks**
Energy Ratio, Er (%):	73	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

Printed: 04/12/2023

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FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH106	1.20	84.33	C		3	3	4	4	3	4	15	
BH106	3.00	82.53	S		3	4	4	5	5	5	19	
BH106	4.00	81.53	C		6	6	6	6	7	8	27	
BH106	5.00	80.53	C		6	6	5	7	8	8	28	
BH106	6.00	79.53	C		7	10	14	7	8	9	38	
BH106	7.00	78.53	S		10	10	15	18	17		50/225	

Hammer No.:	VC 1	**Remarks**
Energy Ratio, Er (%):	73	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

Printed: 04/12/2023

AGS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH107	1.20	89.39	C		5	7	10	19	19		48/200	
BH107	2.00	88.59	C		9	14	27	23			50/120	
BH107	3.00	87.59	C		4	5	6	7	7	7	27	
BH107	4.00	86.59	C		7	8	9	10	7	8	34	
BH107	5.00	85.59	C		10	7	8	9	9	9	35	
BH107	6.00	84.59	C		4	4	5	5	5	5	20	
BH107	7.50	83.09	C		5	5	6	5	4	5	20	
BH107	10.50	80.09	S		10	10	15	17	15	3	50/265	
BH107	11.50	79.09	S		2	17	27	23			50/115	

Hammer No.:	VC 1	**Remarks**
Energy Ratio, Er (%):	73	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

Printed: 04/12/2023

AGS

FIELDWORK RESULTS - *SPT Results Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Hole	Depth (m bgl)	Level (m OD)	SPT Type	SWP (mm)	Seating Drive		Test Drive				SPT 'N' Value	Uncorrected SPT 'N' value
					0 - 75 (mm)	75 - 150 (mm)	0 - 75 (mm)	75 - 150 (mm)	150 - 225 (mm)	225 - 300 (mm)		10 20 30 40 50
BH108	1.20	84.37	C		5	4	4	5	5	5	19	
BH108	2.00	83.57	C		5	5	5	5	5	5	20	
BH108	3.00	82.57	S		3	4	4	4	4	4	16	
BH108	4.00	81.57	S		5	5	5	5	6	6	22	
BH108	5.00	80.57	S		6	6	10	14	16	10	50/240	

Hammer No.:	VC 1	**Remarks**
Energy Ratio, Er (%):	73	

-/- Blows/penetration (mm) after seating

-*/- Total blows/penetration (mm)

SWP Penetration under own weight (mm)

S - SPT with split spoon sampler

C - SPT with cone

L - Split Spoon liner used

GEOTECHNICS

Printed: 04/12/2023

AGS

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:	VC 1
Test Date:	25/01/2023
Report Date:	25/01/2023
File Name:	VC 1.spt
Test Operator:	CM

Instrumented Rod Data

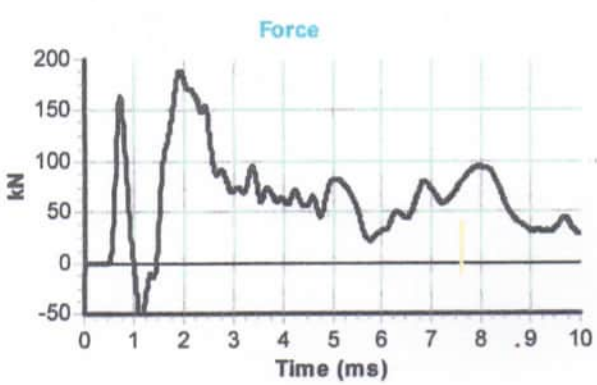
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	
Accelerometer No.2:	

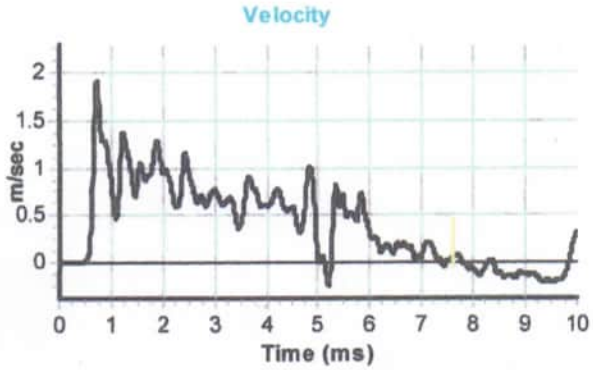
SPT Hammer Information

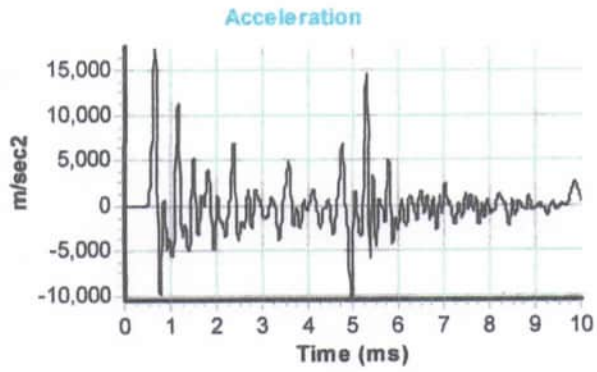
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

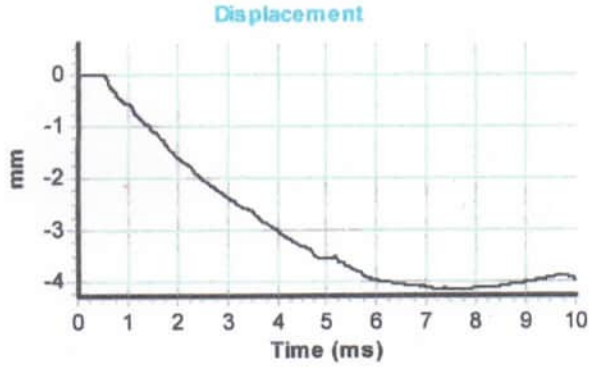
Comments / Location

VC DRILLING LTD - 83450









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	347

Energy Ratio E_r (%): **73**

Signed: J.LOCK

Title: FITTER

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:	AR1101
Test Date:	25/01/2023
Report Date:	25/01/2023
File Name:	AR1101.spt
Test Operator:	CM

Instrumented Rod Data

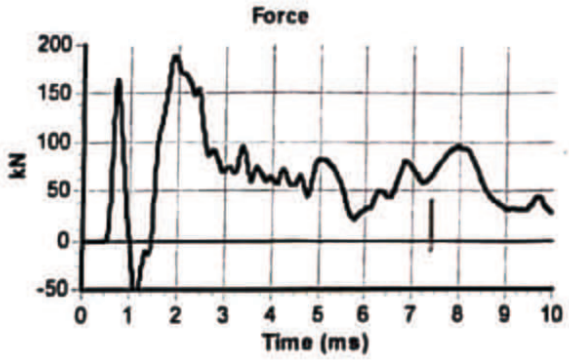
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.0
Assumed Modulus E_a (GPa):	200
Accelerometer No.1:	
Accelerometer No.2:	

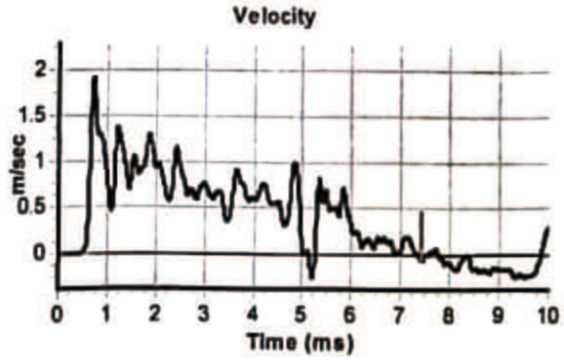
SPT Hammer Information

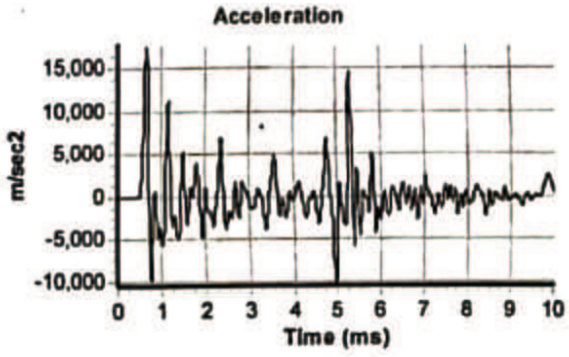
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

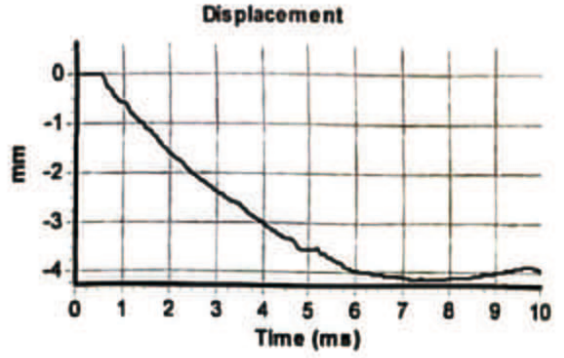
Comments / Location

VC DRILLING LTD - 83450









Calculations

Area of Rod A (mm2):	905
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	339

Energy Ratio E_r (%): **72**

Signed: J.LOCK

Title: FITTER

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APPENDIX 7

Monitoring Results

FIELDWORK - *In Situ Gas Monitoring - Visit Record*

Project Pyramid Park, Bury

Client Campbell Reith Hill LLP

Project No. PN234595

Instrument used GA5000 Tiger PID

Date 10/01/2024

Meteorological Conditions: **Ground Condition:** Wet **Precipitation:** Slight **Wind:** Light **Cloud Cover:** Overcast **Atmospheric Pressure Trend:** Steady

Location ID	Pipe Ref.	Installation Diameter (mm)	Time of Reading (hh:mm:ss)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m bgl)	Remarks
BH101	1	50	08:57:34	1.6	1.3	0.0	0.0	0.6	0.6	20.9	14.5	0	0		4.0	1020	85	3.18	6.26	
BH102	1	33	09:24:51	-0.3	-0.3	0.0	0.0	0.4	0.4	21.1	19.8	0	0		4.0	1021	80	4.34	7.48	
BH102	2	50	09:16:44	0.0	0.0	0.0	0.0	2.7	2.7	21.2	13.1	0	0		4.0	1021	84	1.23	1.63	
BH104	1	50	09:51:58	0.3	0.3	0.1	0.1	0.8	0.8	21.4	13.5	0	0		4.0	1023	86	2.82	4.39	
BH105	1	50	10:36:31	25.0	20.4	0.0	0.0	2.1	2.1	21.2	18.3	3	0		4.0	1023	80	0.48	2.16	
BH106	1	50	10:15:07	0.3	0.3	0.0	0.0	0.2	0.2	21.4	21.4	0	0		4.0	1023	78	2.37	3.83	
BH106	2	19	10:08:25	0.0	0.0	0.0	0.0	0.2	0.2	21.3	20.8	0	0		4.0	1023	79	1.13	2.07	
BH107	1	19	11:21:06	0.3	0.3	0.0	0.0	0.1	0.1	21.6	21.5	0	0		4.0	1022	78	5.97	7.66	
BH107	2	50	11:13:33	0.0	0.0	0.0	0.0	0.2	0.2	21.5	21.4	1	0		4.0	1022	78	DRY	3.98	
BH108	1	50	10:51:34	7.8	5.9	0.0	0.0	0.9	0.9	21.4	18.5	0	0		4.0	1022	81	0.13	2.30	

FIELDWORK - *In Situ Gas Monitoring - Visit Record*

Project Pyramid Park, Bury

Client Campbell Reith Hill LLP

Project No. PN234595

Instrument used GA5000

Date 24/01/2024

Meteorological Conditions: **Ground Condition:** Wet **Precipitation:** None **Wind:** Light **Cloud Cover:** Cloudy **Atmospheric Pressure Trend:** Steady

Location ID	Pipe Ref.	Installation Diameter (mm)	Time of Reading (hh:mm:ss)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m bgl)	Remarks
BH101	1	50	11:32:30	0.0	0.0	0.0	0.0	0.4	0.4	21.5	18.8	0	0		8.0	1010	81	3.18		
BH102	1	33	12:03:17	4.3	2.2	0.0	0.0	0.3	0.3	21.6	21.3	1	0		8.0	1011	78	4.31		
BH102	2	50	11:51:33	0.0	0.0	0.0	0.0	0.3	0.3	21.6	21.0	0	0		8.0	1010	79	1.17		
BH103	1	50	12:21:13	-12.1	-10.5	0.0	0.0	2.8	2.8	21.6	10.0	0	0		8.0	1012	87	2.92	7.03	
BH104	1	50	12:44:32	-7.2	-5.1	0.0	0.0	2.1	2.1	21.8	8.7	0	0		8.0	1013	89	3.81		
BH105	1	50	13:26:44	13.6	9.1	0.0	0.0	2.4	2.4	21.9	15.9	1	0		8.0	1012	82	0.19		
BH106	1	50	13:09:48	-6.3	-2.1	0.0	0.0	1.5	0.2	21.8	18.2	1	0		8.0	1013	82	2.58		
BH106	2	19	12:59:35	0.4	0.4	0.0	0.0	4.7	4.7	21.8	7.9	0	0		8.0	1013	87	1.31		
BH107	1	19	14:17:38	-0.8	-0.8	0.0	0.0	0.1	0.1	22.0	19.8	1	0		8.0	1012	80	6.05		
BH107	2	50	14:09:30	0.1	0.1	0.0	0.0	0.2	0.2	22.0	21.7	0	0		8.0	1011	78	DRY		
BH108	1	50	13:48:51	-0.3	-0.3	0.0	0.0	0.5	0.5	21.9	21.3	4	0		8.0	1013	78	0.15		

FIELDWORK - *In Situ Gas Monitoring - Visit Record*

Project Pyramid Park, Bury

Client Campbell Reith Hill LLP

Project No. PN234595

Instrument used GA5000 Tiger PID

Date 31/01/2024

Meteorological Conditions: **Ground Condition:** Moist **Precipitation:** None **Wind:** Light **Cloud Cover:** Cloudy **Atmospheric Pressure Trend:** Steady

Location ID	Pipe Ref.	Installation Diameter (mm)	Time of Reading (hh:mm:ss)	Flow (Peak) (l/hr)	Flow (Steady) (l/hr)	Methane (Peak) (% v/v)	Methane (Steady) (% v/v)	Carbon Dioxide (Peak) (% v/v)	Carbon Dioxide (Steady) (% v/v)	Oxygen (Peak) (% v/v)	Oxygen (Steady) (% v/v)	Carbon Monoxide (ppm)	Hydrogen Sulphide (ppm)	PID (ppm)	Air Temperature (°C)	Atmospheric Pressure (mb)	Diff. Pressure (Pa)	Depth to Water (m bgl)	Depth to Base (m bgl)	Remarks
BH101	1	50	09:28:28	0.4	0.4	0.0	0.0	0.7	0.6	21.7	17.2	0	0	0.1	5.0	1014	82	3.19		
BH102	1	33	10:01:59	17.2	14.6	0.0	0.0	1.0	1.0	21.8	16.4	0	0	0.2	5.0	1014	83	4.69		
BH102	2	50	09:51:15	0.0	0.0	0.0	0.0	0.4	0.4	21.7	21.5	0	0	0.1	5.0	1014	78	1.13		
BH103	1	50	10:22:39	6.1	5.5	0.0	0.0	3.0	3.0	21.9	10.7	0	0	0.5	5.0	1013	86	3.34		
BH104	1	50	10:41:33	0.7	0.7	0.0	0.0	2.3	2.3	22.0	9.8	0	0	0.5	5.0	1014	86	2.89		
BH105	1	50	11:31:04	18.2	11.1	0.0	0.0	1.8	1.8	22.2	21.0	0	0	0.3	5.0	1014	77	0.28		
BH106	1	50	11:14:26	15.7	4.8	0.1	0.1	0.7	0.7	21.9	17.5	2	0	0.4	5.0	1013	82	2.81		
BH106	2	19	11:07:45	0.2	0.2	0.0	0.0	6.0	6.0	22.1	3.3	0	0	0.8	5.0	1014	91	1.15		
BH107	1	19	12:22:10	-0.3	-0.3	0.0	0.0	0.1	0.1	22.1	19.9	1	0	0.1	5.0	1012	80	6.01		
BH107	2	50	12:14:30	0.0	0.0	0.0	0.0	0.2	0.2	22.0	21.9	0	0	0.0	5.0	1013	78	DRY		
BH108	1	50	11:51:20	0.0	0.0	0.0	0.0	0.6	0.6	22.2	21.7	0	0	0.4	5.0	1014	78	0.37		

APPENDIX 8

Laboratory Test Results - Geotechnical

Laboratory Test Certificate

Issued from:	Geotechnics Ltd The Geotechnical Centre 203 Torrington Avenue Tile Hill Coventry, CV4 9AP	**Date of issue**	14/02/2024
		Issue No.	1
		Client Ref. No.	N/A
		Samples / Material Source	
		Samples Recv'd	09/01/2024
Testing Start Date	23/01/2024	Sample State	As received
Testing Complete	14/02/2024	Sampled by	Geotechnics Limited
Comments			
Project No	PN234595		
Project Name	Pyramid Park, Bury		

Summary of Tests

Standard	Test Description	Test Quantity	UKAS
BS EN ISO 17892-1:2014	Water Content	40	Yes
BS EN ISO 17892-12:2018 Cl. 5.3 & 5.5	Liquid Limit and Plastic Limit (4 Points Method)	25	Yes
BS EN ISO 17892-4:2016 Cl. 5.2	Particle Size Distribution by Sieving Method	13	Yes
BS EN ISO 17892-4:2016 Cl. 5.4	Particle Size Distribution by Pipette Method	3	Yes
BS 1377-4:1990 Cl. 3.3	2.5 kg Rammer Dry Density/Moisture Content Relationship (Compaction)	18	Yes
BS 1377-4:1990 Cl. 7.2	California Bearing Ratio (CBR)	5	Yes
Non BS1377 Test	Shear Strength by Hand Vane	41	No
BS 1377-4:1990 Cl. 5.5	Moisture Condition Value/Moisture Content Relationship	11	Yes
BS EN ISO 17892-8:2018	Shear Strength by Unconsolidated Undrained Triaxial Test - Single Stage	1	Yes

Note: Any descriptions, opinions or interpretations are outside the scope of UKAS accreditation.
The results within this report relate only to the samples tested and received from the client.

UKAS TESTING
1365

Test Results checked and approved for issue.
Signed for and on behalf of Geotechnics Limited

Paul Smart (Laboratory Testing Manager)

L A B AWARDS
Category
Laboratory of the year
Winner
Geotechnics Ltd

GEOTECHNICS

DATA SHEET - Laboratory Test Symbols

Classification and Strength

Symbol	**C - Clay**	**M - Silt**
	(0 - containing organic matter)	
	Plasticity	L - Low
		I - Intermediate
		H - High
		V - Very High
		E - Extremely High
Ip	Plasticity Index	
%	% retained on 425 µm sieve, shown under Ip value	
w_L	Liquid Limit	
w_P	Plastic Limit	
NP	Non-Plastic	
NAT	Sample tested in natural state	
w	Water Content	
P_d	Particle Density	
Test	**Quick undrained triaxial tests**	
	SS	Single stage - 102mm diameter.
	S3	Single stage - set of 3 38mm diameter.
	MS	Multistage - 102mm diameter.
	D	Drained Test
	HV	Hand Vane
	PP	Pocket Penetrometer (kg/cm²)
	NST	Not suitable for test
γ_b	Bulk Density	
σ_3	Triaxial Cell Pressure	
$\sigma_1 - \sigma_3$	Deviator Stress	
##	Excessive Strain	
c_u	Undrained Cohesion	
c	Cohesion Intercept	
ϕ	Angle of Shearing Resistance	
Linear Shrink	Linear Shrinkage	
Stab add-	Stabiliser which is added	

Consolidation

m_v	Coefficient of Volume Compressibility
c_{v50}	Coefficient of Consolidation - Log t
c_{v90}	Coefficient of Consolidation - $\sqrt{t}$

Rock

UF	Unacceptable Failure

Chemical Analysis

Acid Soluble	Total sulphate in specimen, expressed as SO_3 %, value in brackets expressed as SO_4 %
Water Soluble	Soluble sulphate in 2:1 water : soil extract, expressed as SO_3 g/l, value in brackets expressed as SO_4 g/l
In Water	Sulphate content of groundwater, expressed as SO_3 g/l, value in brackets expressed as SO_4 g/l
pH	pH value
Organic content	Organic content expressed as a percentage of dry weight
Chloride	Chloride Ion content expressed as a percentage of dry weight

MCV, Compaction, CBR

MCV	Moisture Condition Value at natural water content
MCC	Moisture Condition Calibration
CCV	Chalk Crushing Value

Compaction

Type	2.5	= 2.5 kg Rammer
	4.5	= 4.5 kg Rammer
	V	= Vibrating Hammer
γ_b	Bulk Density	
γ_d	Dry Density	

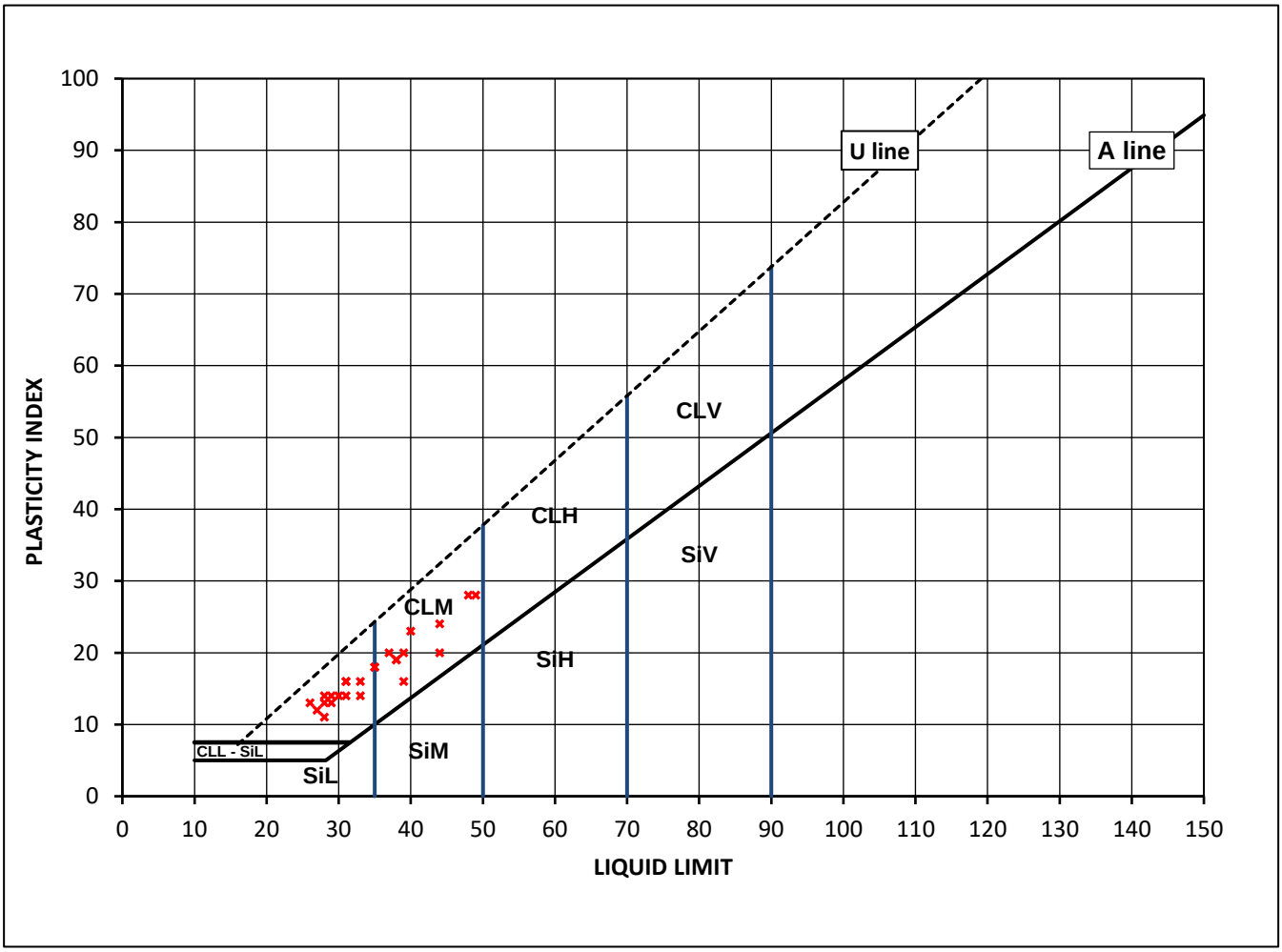
CBR California Bearing Ratio

Type	2.5	= Test on Specimen Recompacted using 2.5 kg Rammer
	4.5	= As above but using 4.5 kg Rammer
	V	= As above but using Vibrating Hammer
	M	= Test on open drive mould specimen cut in field
	S	= Soaked Specimen
Top	CBR at top of mould	
Bottom	CBR at bottom of mould	
ND	None Detected	
*	In the Sample Description denotes a laboratory only description	

GEOTECHNICS

Plasticity (A-line) Chart

Project No.	Project Name
PN234595	Pyramid Park, Bury



Legend based on BS EN ISO 14688-2:2018

		Plasticity		Liquid Limit
CL	Clay	L	Low	below 35
Si	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
	Organic	O	append to classification for organic material (eg CHO)	

Notes	Date Printed
Plotted Test results from BS EN ISO 17892-12 include 4pt and 1pt tests, unless otherwise detailed on the classification summary report. See individual results for more detail. A' line derivation above PI of 6, PI = 0.73 (LL-20)	09/02/2024

GEOTECHNICS

Summary of Classification Test Results

Project Number: PN234595

Project Name: Pyramid Park, Bury

Hole Number	Sample				Specimen Description	*w* Water Content %	Passing 425µm %	LL Liquid Limit %	PL Plastic Limit %	PI Plasticity Index %	Particle Density Mg/m³	Remarks
	Sample ID	Top (m)	Base (m)	Type								
BH101		1.20	1.65	D	Dark greyish brown slightly sandy slightly gravelly CLAY.	11.1						
BH101		2.00	2.45	UT	Brown mottled grey slightly sandy slightly gravelly CLAY.	18.4						WC - HV = 51 kPa
BH101		2.50		D	Light brown slightly sandy slightly gravelly CLAY.	9.3	39	39 4pt	19	20		
BH101		3.00	3.45	D	Light brown gravelly SAND.	16.1						
BH102		1.20	1.65	D	Dark greyish brown slightly sandy gravelly CLAY with roots.	17.2	58	38 4pt	19	19		
BH102		2.00	2.45	D	Dark brown slightly sandy slightly gravelly CLAY.	12.3	86	31 4pt	15	16		
BH102		4.00	4.27	D	Blueish grey GRAVEL.(Weathered mudstone)	13.4						
BH102		7.50	7.78	D	Blueish grey GRAVEL.(Weathered mudstone)	10.9						
BH103		1.20	1.65	B	Dark greyish brown slightly sandy slightly gravelly CLAY.	19.5	76	40 4pt	17	23		
BH103		4.00	4.45	B	Light orangeish brown slightly sandy slightly gravelly CLAY.	16.0	63	29 4pt	16	13		
BH103		6.00	6.43	D	Light orangeish brown mottled dark grey slightly sandy slightly gravelly CLAY.	21.0						
BH104		2.00		D	Light orangeish brown slightly sandy gravelly CLAY.	18.8	45	33 4pt	17	16		
BH104		4.00		D	Light orangeish brown slightly gravelly sandy CLAY.	14.0						
BH104		6.00	6.45	B	Brown mottled grey slightly sandy slightly gravelly CLAY.	15.1	90	35 4pt	17	18		
BH105		3.00	3.45	B	Brown slightly gravelly sandy CLAY.	20.1	76	31 4pt	15	16		
BH106		3.00	3.45	B	Brown slightly gravelly sandy CLAY.	15.2	77	28 4pt	14	14		
BH106		4.00	4.45	B	Brown slightly sandy slightly gravelly CLAY.	18.2	68	30 4pt	16	14		
BH107		4.00	4.45	B	MADE GROUND: Dark greyish brown slightly sandy gravelly clay.	20.2	46	39 4pt	23	16		
BH107		10.50	10.95	B	Reddish brown slightly sandy slightly gravelly CLAY.	16.9	80	28 4pt	17	11		
BH108		3.00		B	Brown slightly sandy slightly gravelly CLAY.	15.1	81	26 4pt	13	13		
BH108		4.00		B	Brown slightly sandy slightly gravelly CLAY.	19.1	79	27 4pt	15	12		
TP101		0.30	0.50	D	MADE GROUND: Dark brown and dark grey slightly sandy slightly gravelly clay.	17.1	68	38 4pt	19	19		
TP101		0.80	1.00	D	MADE GROUND: Dark grey slightly sandy slightly gravelly clay.	21.6	98	44 4pt	20	24		PI - Tested in natural condition.
TP103		2.00	2.20	D	Dark grey slightly sandy slightly gravelly CLAY.	22.6						
TP103		3.00	3.30	D	Dark grey slightly sandy slightly gravelly CLAY.	22.4	97	48 4pt	20	28		

All tests performed in accordance with BS EN ISO 17892 unless specified otherwise.

Key:

Liquid Limit

80g / 30deg fall cone with increasing water content unless specified otherwise

Sample washed through 0.425mm sieve unless specified otherwise

1pt - single point test (including factor)

* BS1377 method

Particle density

sp - small pycno

gj - gas jar BS1377

Plastic Limit

NP - Non Plastic

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UKAS TESTING

1365

GEOTECHNICS

Summary of Classification Test Results

Project Number: PN234595

Project Name: Pyramid Park, Bury

Hole Number	Sample				Specimen Description	*w* Water Content %	Passing 425µm %	LL Liquid Limit %	PL Plastic Limit %	PI Plasticity Index %	Particle Density Mg/m³	Remarks
	Sample ID	Top (m)	Base (m)	Type								
TP104		0.80	1.00	D	MADE GROUND: Black and dark grey slightly sandy slightly gravelly clay.	32.8	77	49 4pt	21	28		
TP106		0.30	0.50	D	MADE GROUND: Black slightly sandy slightly gravelly clay.	24.4	72	44 4pt	24	20		
TP108		2.00	2.20	D	MADE GROUND: Dark greyish brown slightly sandy gravelly clay.	21.7	56	33 4pt	19	14		
TP110		0.70	0.90	D	Dark brown slightly sandy slightly gravelly CLAY.	14.2	34	31 4pt	17	14		
TP110		1.60	1.90	D	Orangish brown slightly sandy slightly gravelly CLAY.	16.9	48	28 4pt	15	13		
TP110		2.70	3.00	D	Brown mottled grey slightly sandy slightly gravelly CLAY.	12.6						
TP116A		0.80	1.00	D	Dark brown slightly gravelly clayey SAND.	14.6						
TP116A		2.00	2.20	D	Dark brown slightly sandy slightly gravelly CLAY.	19.6	87	35 4pt	17	18		
TP118		0.00	0.10	D	TOPSOIL: Brown gravelly clayey sand with some rootlets.	18.4						
TP118		0.50	0.80	D	Dark brown very sandy slightly clayey GRAVEL.	6.5						
TP119		4.00	4.20	D	Dark grey slightly sandy slightly gravelly CLAY.	10.9	85	29 4pt	15	14		
TP120		2.00	2.20	D	Dark brown slightly gravelly slightly sandy CLAY.	12.4	90	37 4pt	17	20		
TP120		2.70	3.00	D	Orangish brown mottled grey slightly sandy gravelly CLAY.	9.9						WC - Insufficient fine material for Atterberg test
TP123		0.70	0.90	D	Dark brown gravelly slightly clayey SAND.	11.7						
TP123		2.40	2.60	D	Dark grey sandy clayey GRAVEL.	10.3						

All tests performed in accordance with BS EN ISO 17892 unless specified otherwise.

Key:

Liquid Limit

80g / 30deg fall cone with increasing water content unless specified otherwise

Sample washed through 0.425mm sieve unless specified otherwise

1pt - single point test (including factor)

* BS1377 method

Particle density

sp - small pycno

gj - gas jar BS1377

Plastic Limit

NP - Non Plastic

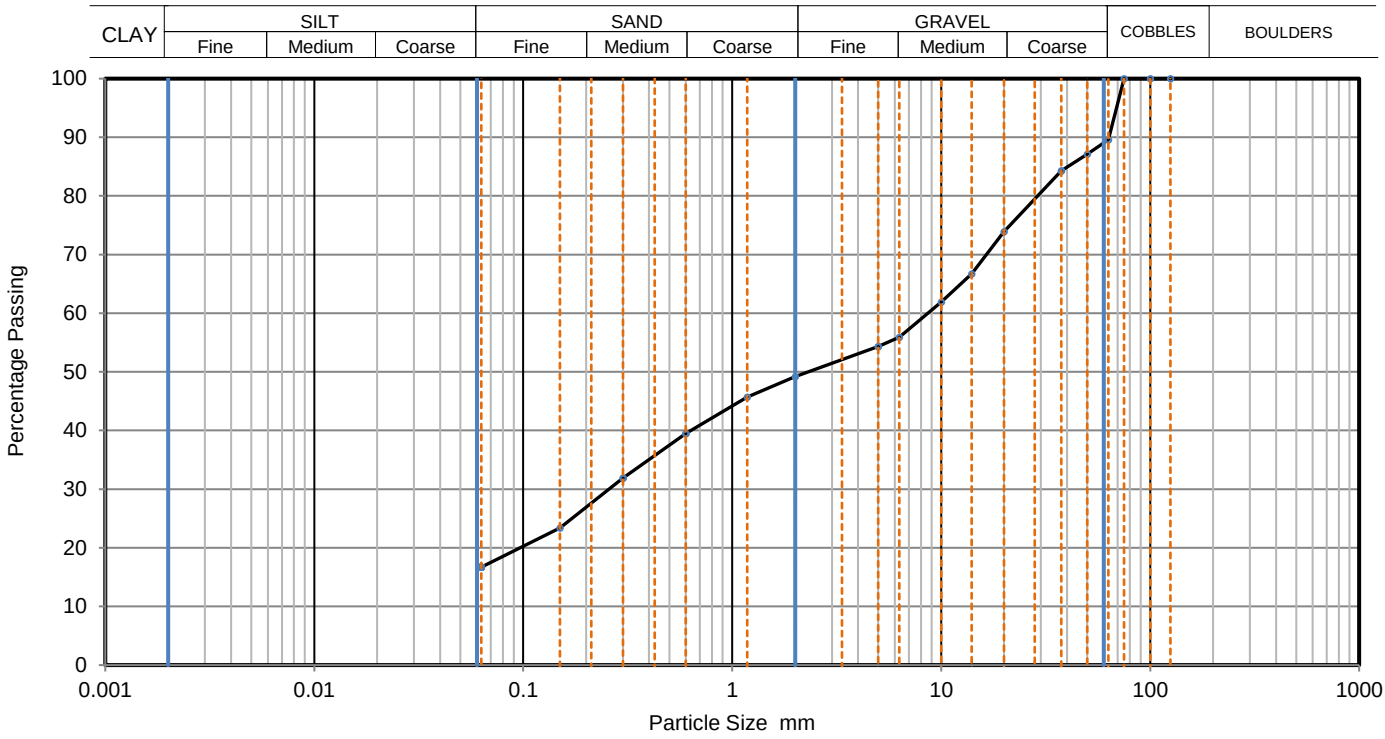
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UKAS TESTING

1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	BH101
		Sample No.	
Project Number:	PN234595	Depth m	0.80 - 1.20
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Brown clayey SAND and GRAVEL with a medium cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	90		
50	87		
37.5	84		
20	74		
14	67		
10	62		
6.3	56		
5	54		
2	49		
1.18	46		
0.6	40		
0.3	32		
0.15	23		
0.063	17		

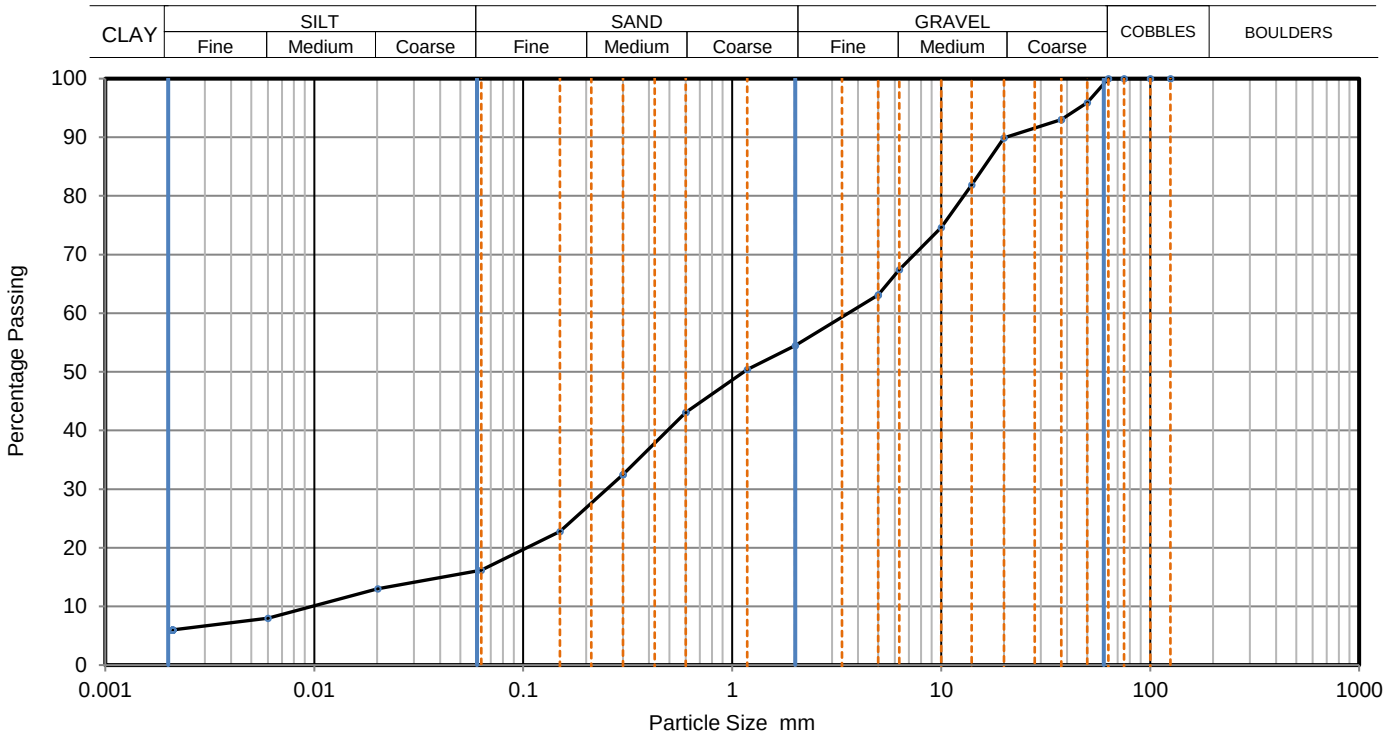
Sample Proportions	% dry mass
Cobbles	10
Gravel	40
Sand	33
Fines <0.063mm	17

Grading Analysis		
D100	mm	75
D60	mm	8.62
D30	mm	0.257
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Printed	
	14/02/2024	UKAS TESTING 1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	BH106
		Sample No.	
Project Number:	PN234595	Depth m	1.20 - 1.65
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Brown clayey SAND and GRAVEL.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	13
100	100	0.006	8
75	100	0.002	6
63	100		
50	96		
37.5	93		
20	90		
14	82		
10	75		
6.3	67		
5	63		
2	55		
1.18	50		
0.6	43		
0.3	33		
0.15	23	Particle density (assumed)	
0.063	16	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	0
Gravel	46
Sand	38
Silt	10
Clay	6

Grading Analysis		
D100	mm	63
D60	mm	3.59
D30	mm	0.251
D10	mm	0.00938
Uniformity Coefficient		380

Remarks

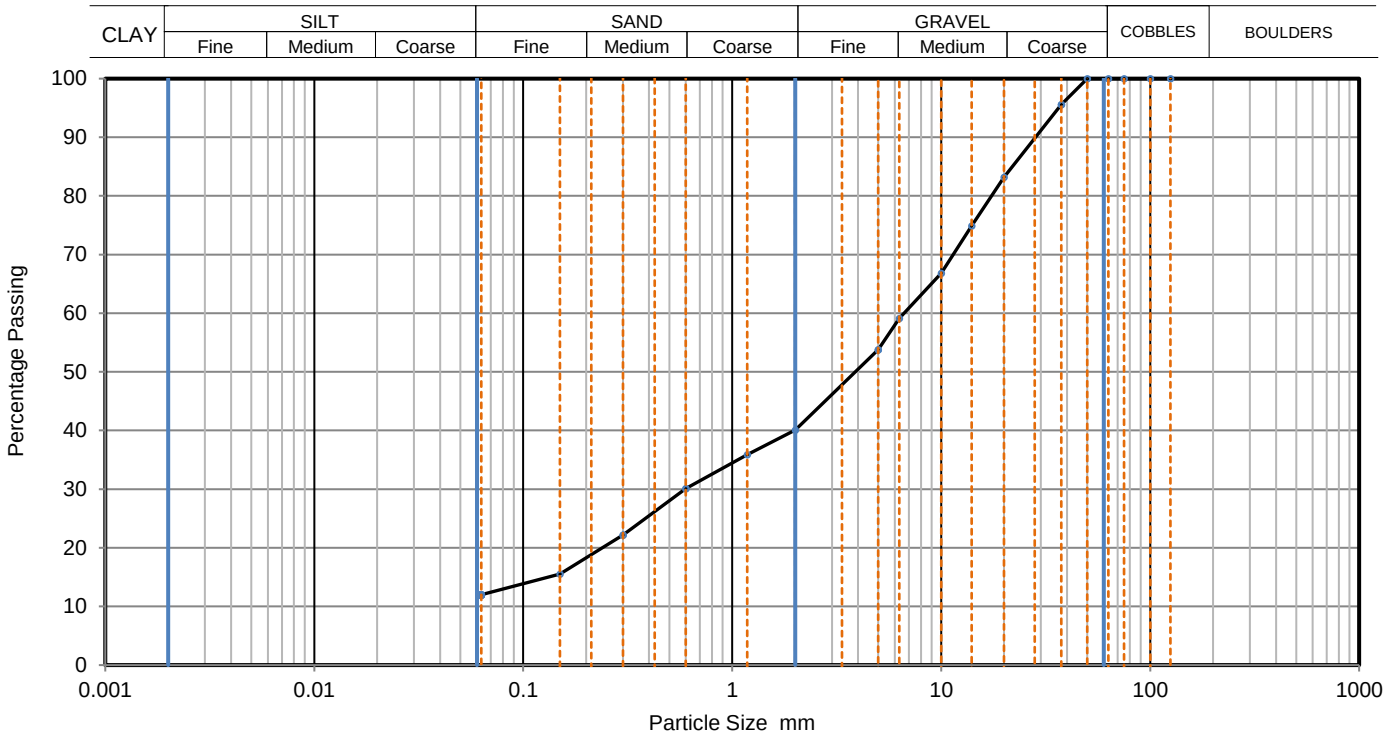
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UKAS TESTING

1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	BH107
		Sample No.	
Project Number:	PN234595	Depth m	7.50 - 7.95
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Brown very sandy clayey GRAVEL.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	96		
20	83		
14	75		
10	67		
6.3	59		
5	54		
2	40		
1.18	36		
0.6	30		
0.3	22		
0.15	16		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	60
Sand	28
Fines <0.063mm	12

Grading Analysis		
D100	mm	50
D60	mm	6.63
D30	mm	0.593
D10	mm	
Uniformity Coefficient		

Remarks

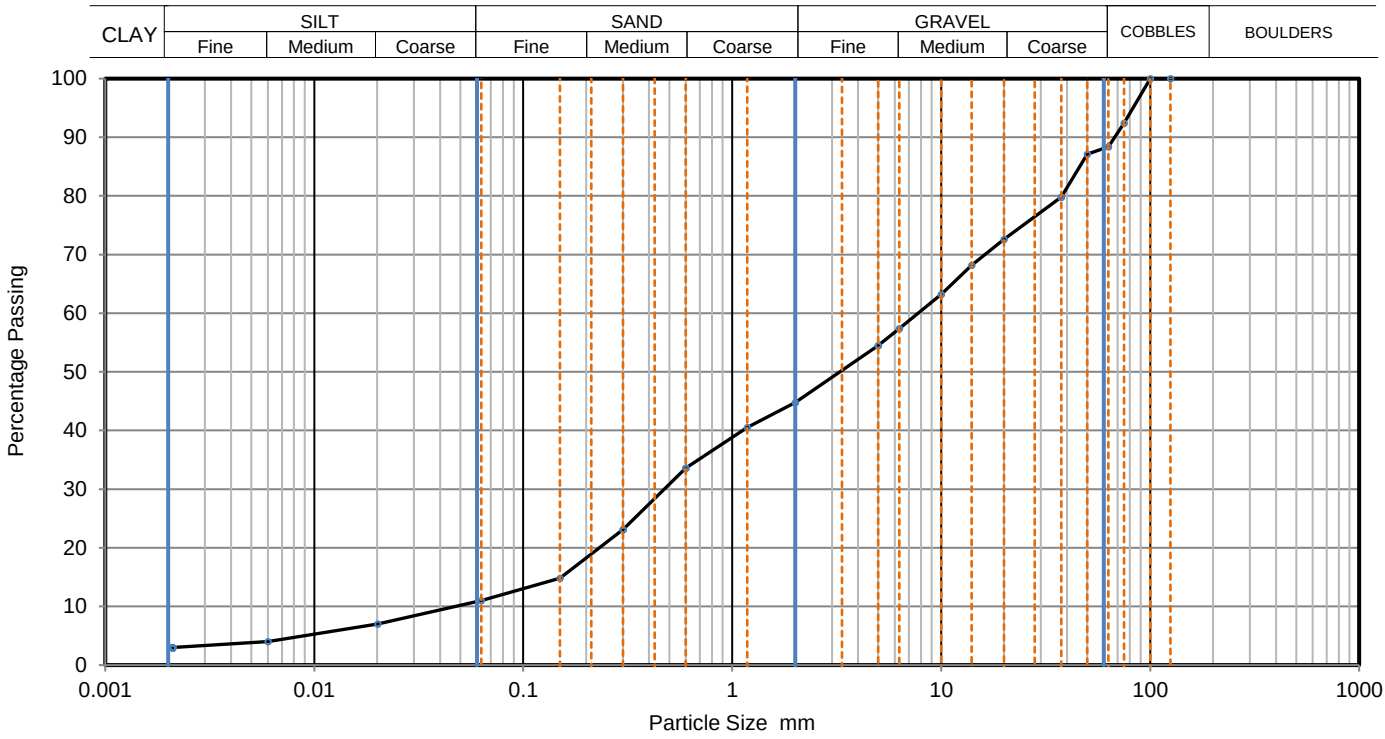
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UKAS TESTING

1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	HP117E
		Sample No.	
Project Number:	PN234595	Depth m	0.00 - 0.40
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a medium cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	7
100	100	0.006	4
75	92	0.002	3
63	88		
50	87		
37.5	80		
20	73		
14	68		
10	63		
6.3	57		
5	55		
2	45		
1.18	41		
0.6	34		
0.3	23		
0.15	15	Particle density (assumed)	
0.063	11	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	12
Gravel	43
Sand	34
Silt	8
Clay	3

Grading Analysis		
D100	mm	100
D60	mm	7.76
D30	mm	0.473
D10	mm	0.0481
Uniformity Coefficient		160

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

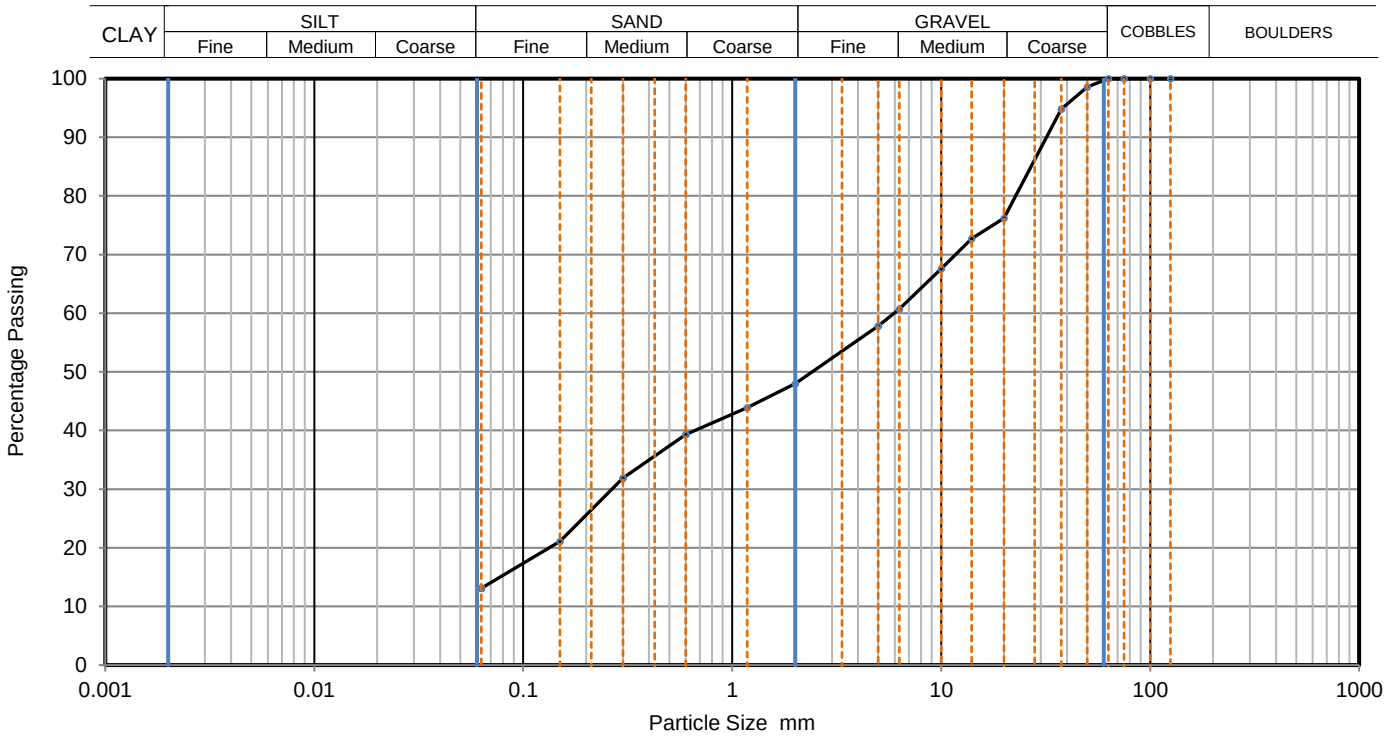
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1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP103
		Sample No.	
Project Number:	PN234595	Depth m	0.30 - 0.50
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Grey very sandy clayey gravel.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	99		
37.5	95		
20	76		
14	73		
10	68		
6.3	61		
5	58		
2	48		
1.18	44		
0.6	39		
0.3	32		
0.15	21		
0.063	13		

Sample Proportions	% dry mass
Cobbles	0
Gravel	52
Sand	35
Fines <0.063mm	13

Grading Analysis		
D100	mm	63
D60	mm	5.94
D30	mm	0.265
D10	mm	
Uniformity Coefficient		

Remarks

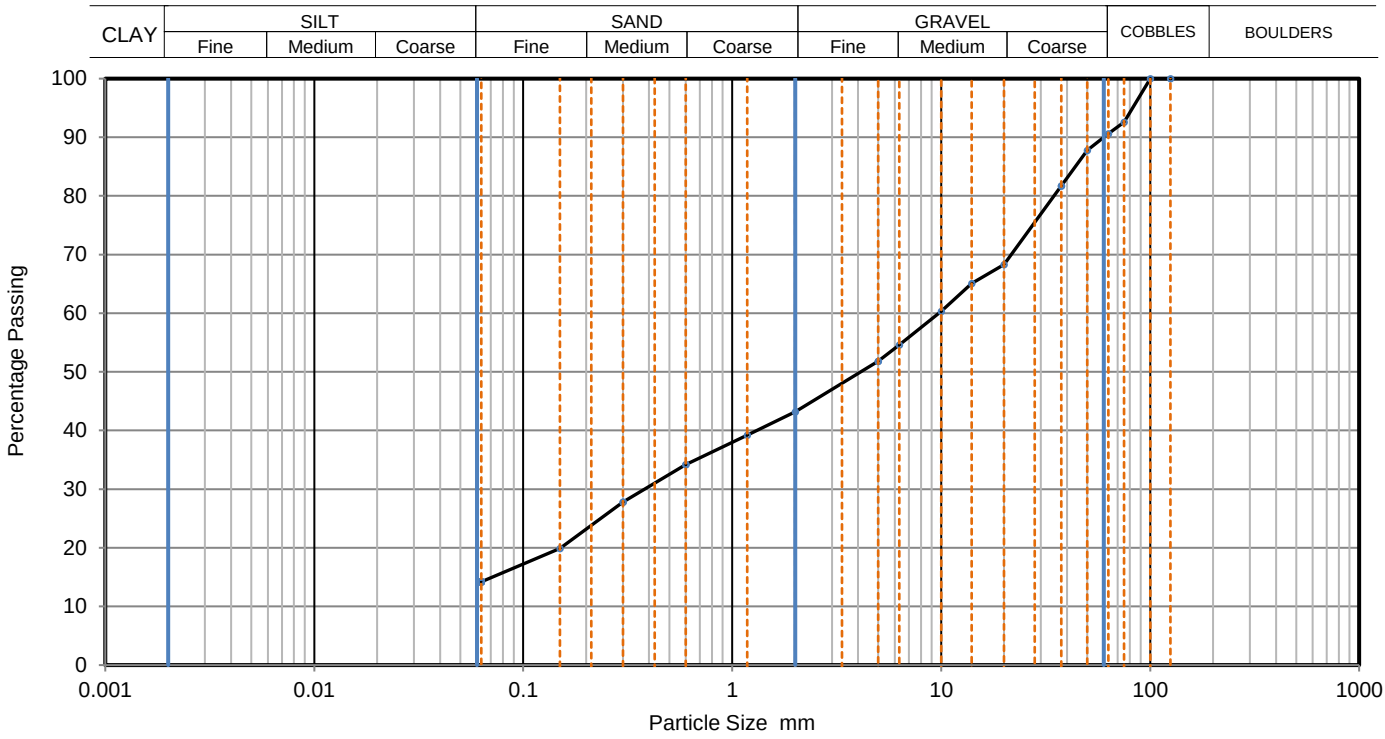
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1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP104
		Sample No.	
Project Number:	PN234595	Depth m	2.20 - 2.40
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a medium cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	93		
63	91		
50	88		
37.5	82		
20	68		
14	65		
10	60		
6.3	55		
5	52		
2	43		
1.18	39		
0.6	34		
0.3	28		
0.15	20		
0.063	14		

Sample Proportions	% dry mass
Cobbles	9
Gravel	48
Sand	29
Fines <0.063mm	14

Grading Analysis		
D100	mm	100
D60	mm	9.76
D30	mm	0.382
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

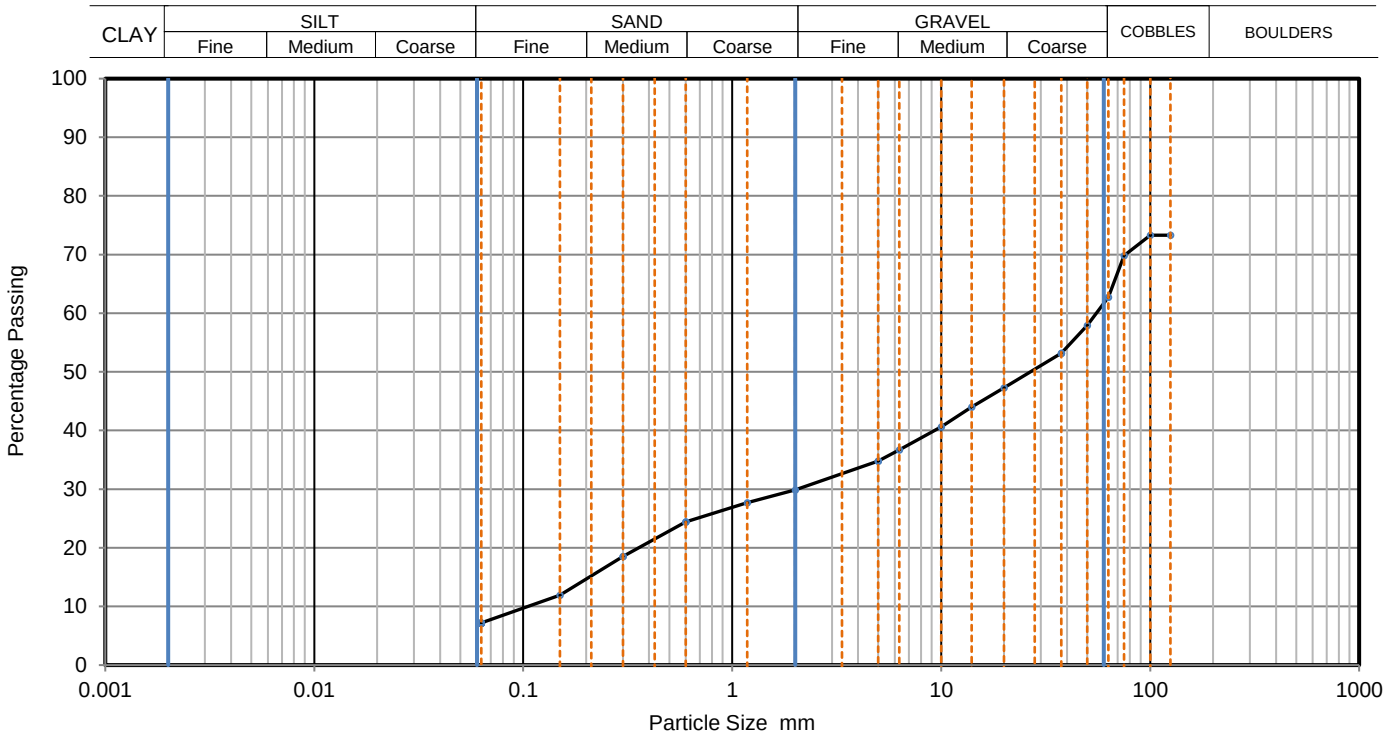
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1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP109
		Sample No.	
Project Number:	PN234595	Depth m	2.00 - 2.20
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel with a high cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	73		
100	73		
75	70		
63	63		
50	58		
37.5	53		
20	47		
14	44		
10	41		
6.3	37		
5	35		
2	30		
1.18	28		
0.6	24		
0.3	19		
0.15	12		
0.063	7		

Sample Proportions	% dry mass
Cobbles	37
Gravel	33
Sand	23
Fines <0.063mm	7

Grading Analysis		
D100	mm	
D60	mm	55.4
D30	mm	2.03
D10	mm	0.106
Uniformity Coefficient		520

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

Mass on 125mm passed 150mm

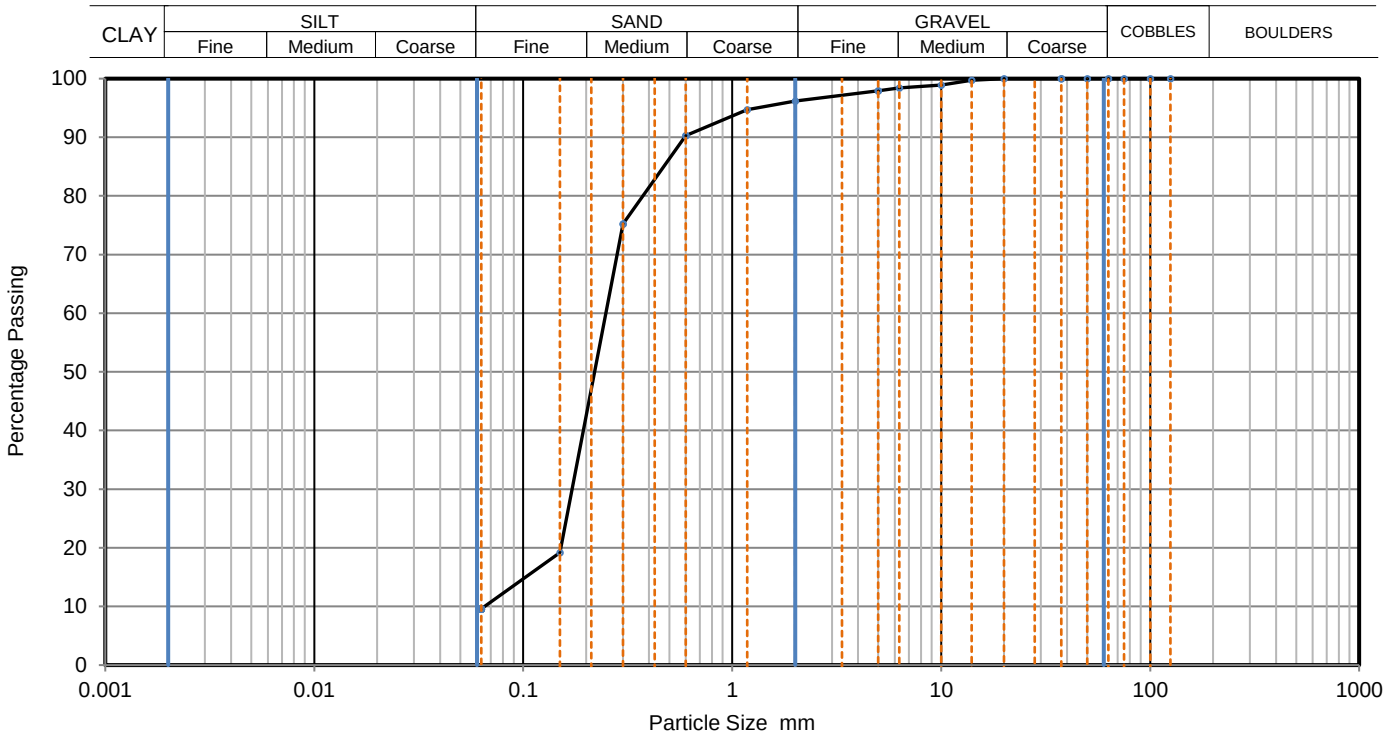
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1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP116A
		Sample No.	
Project Number:	PN234595	Depth m	1.20 - 1.40
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Dark brown slightly gravelly clayey SAND.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	100		
10	99		
6.3	98		
5	98		
2	96		
1.18	95		
0.6	90		
0.3	75		
0.15	19		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	4
Sand	86
Fines <0.063mm	10

Grading Analysis		
D100	mm	20
D60	mm	0.248
D30	mm	0.171
D10	mm	0.0652
Uniformity Coefficient		3.8

Remarks

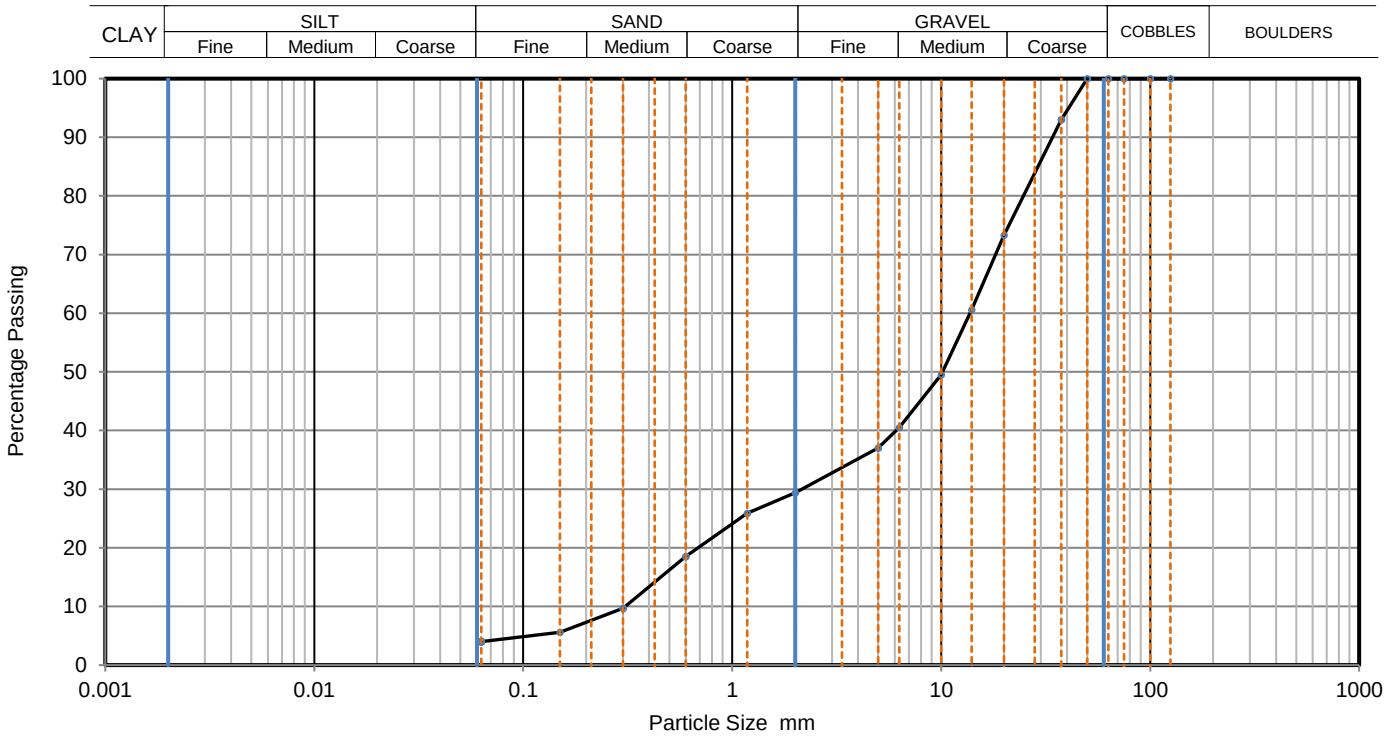
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UKAS TESTING

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GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP118
		Sample No.	
Project Number:	PN234595	Depth m	0.50 - 0.80
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Dark brown very sandy slightly clayey GRAVEL.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	93		
20	73		
14	61		
10	50		
6.3	41		
5	37		
2	29		
1.18	26		
0.6	19		
0.3	10		
0.15	6		
0.063	4		

Sample Proportions	% dry mass
Cobbles	0
Gravel	71
Sand	25
Fines <0.063mm	4

Grading Analysis		
D100	mm	50
D60	mm	13.8
D30	mm	2.15
D10	mm	0.307
Uniformity Coefficient		45

Remarks

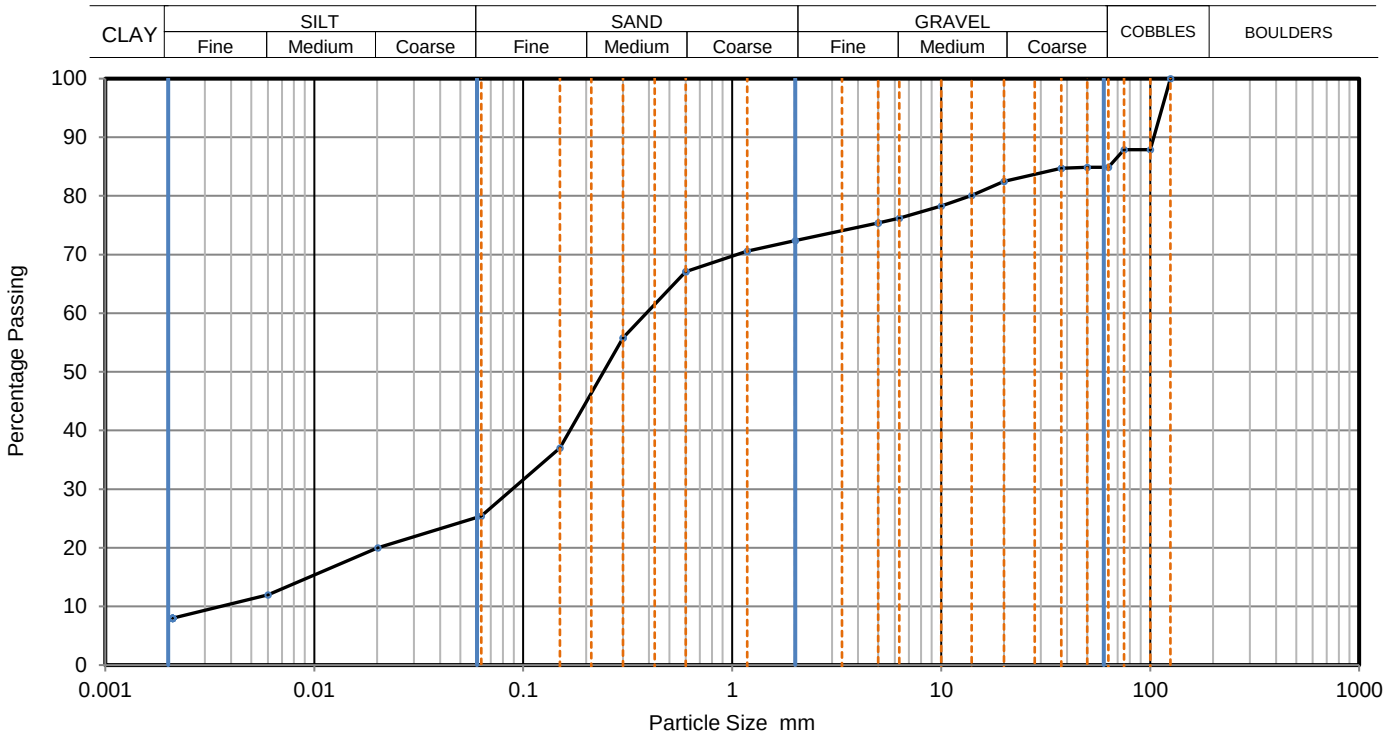
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UKAS TESTING

1365

GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP119
		Sample No.	
Project Number:	PN234595	Depth m	1.00 - 1.20
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Dark grey slightly gravelly sandy clay with a medium cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving and pipette sedimentation		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.020	20
100	88	0.006	12
75	88	0.002	8
63	85		
50	85		
37.5	85		
20	83		
14	80		
10	78		
6.3	76		
5	75		
2	72		
1.18	71		
0.6	67		
0.3	56		
0.15	37	Particle density (assumed)	
0.063	25	2.65	Mg/m3

Sample Proportions	% dry mass
Cobbles	15
Gravel	13
Sand	47
Silt	17
Clay	8

Grading Analysis		
D100	mm	125
D60	mm	0.388
D30	mm	0.089
D10	mm	0.00345
Uniformity Coefficient		110

Initial sample mass less than BS EN ISO 17892 requirements

Remarks

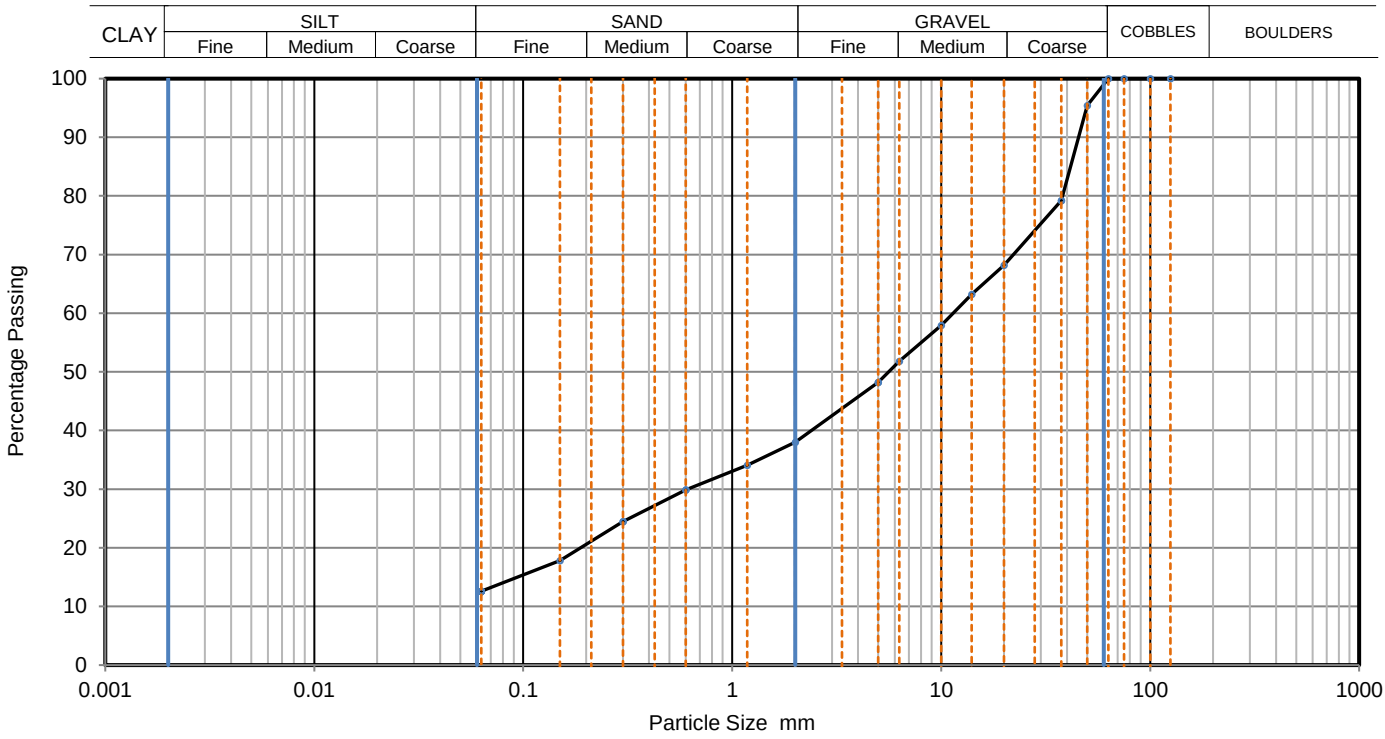
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GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP122
		Sample No.	
Project Number:	PN234595	Depth m	0.40 - 0.80
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	MADE GROUND: Dark grey very sandy clayey gravel.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	95		
37.5	79		
20	68		
14	63		
10	58		
6.3	52		
5	48		
2	38		
1.18	34		
0.6	30		
0.3	25		
0.15	18		
0.063	13		

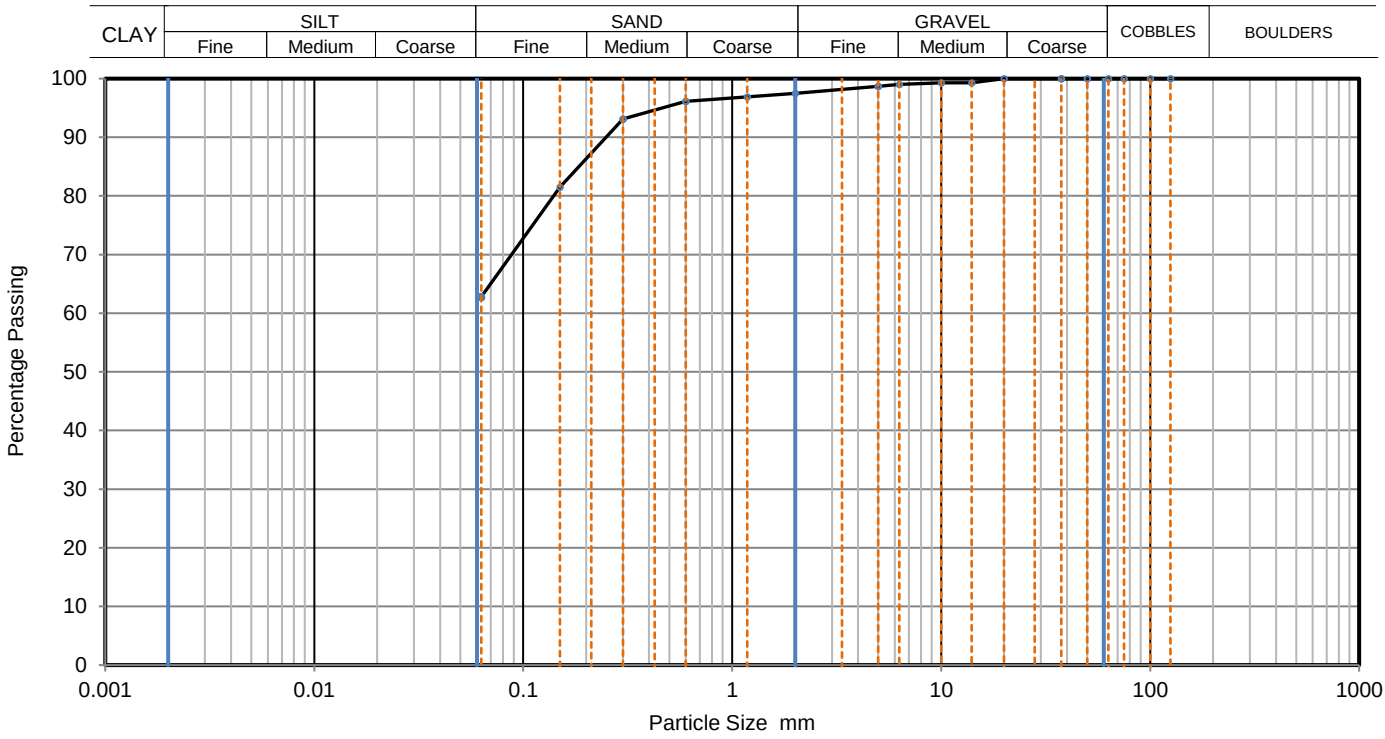
Sample Proportions	% dry mass
Cobbles	0
Gravel	62
Sand	25
Fines <0.063mm	13

Grading Analysis		
D100	mm	63
D60	mm	11.4
D30	mm	0.609
D10	mm	
Uniformity Coefficient		

Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Printed	
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GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP123
		Sample No.	
Project Number:	PN234595	Depth m	2.00 - 2.20
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Dark brown slightly gravelly sandy CLAY.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	100		
50	100		
37.5	100		
20	100		
14	99		
10	99		
6.3	99		
5	99		
2	98		
1.18	97		
0.6	96		
0.3	93		
0.15	82		
0.063	63		

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	35
Fines <0.063mm	63

Grading Analysis		
D100	mm	20
D60	mm	
D30	mm	
D10	mm	
Uniformity Coefficient		

Remarks

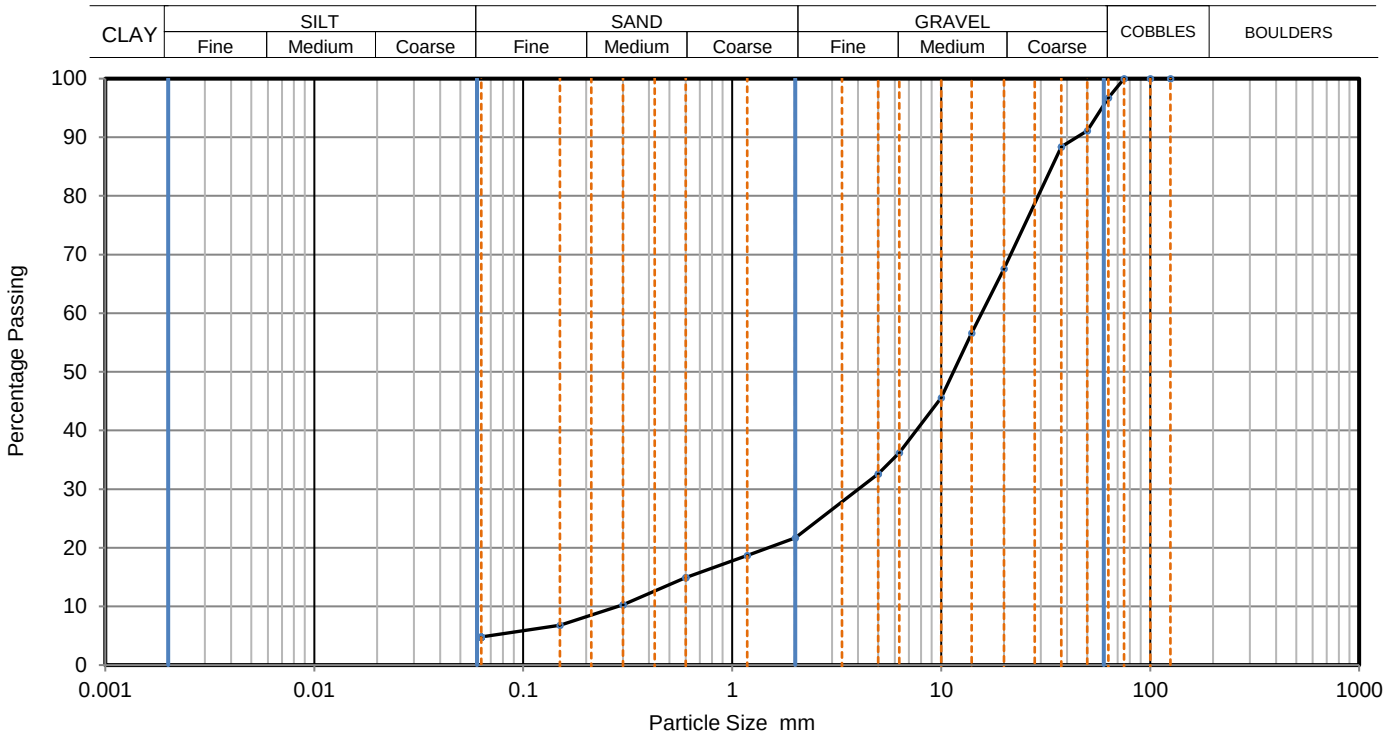
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GEOTECHNICS	PARTICLE SIZE DISTRIBUTION	Hole No.	TP123
		Sample No.	
Project Number:	PN234595	Depth m	2.40 - 2.60
Project Name:	Pyramid Park, Bury	Sample Type	B
Specimen Description	Dark brown sandy clayey GRAVEL with a low cobble content.	Specimen Depth m	
Test Method	ISO 17892 -4, by sieving on as received or wet sample		



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
100	100		
75	100		
63	97		
50	91		
37.5	88		
20	68		
14	57		
10	46		
6.3	36		
5	33		
2	22		
1.18	19		
0.6	15		
0.3	10		
0.15	7		
0.063	5		

Sample Proportions	% dry mass
Cobbles	3
Gravel	75
Sand	17
Fines <0.063mm	5

Grading Analysis		
D100	mm	75
D60	mm	15.6
D30	mm	4.02
D10	mm	0.284
Uniformity Coefficient		55

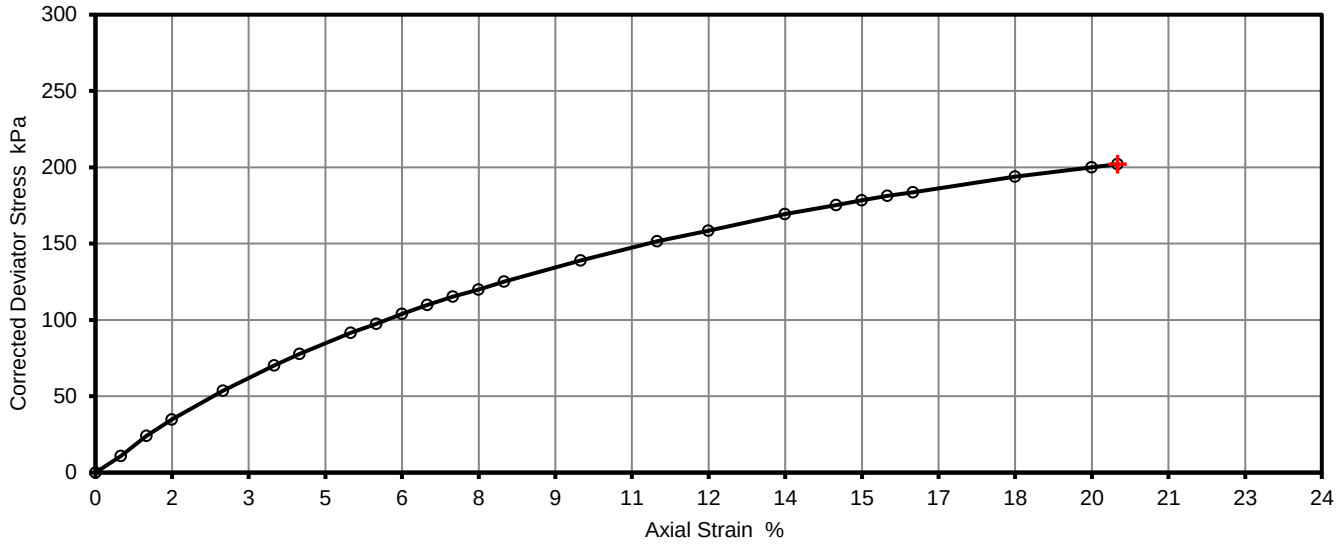
Initial sample mass less than BS EN ISO 17892 requirements

Remarks	Printed	
	14/02/2024	UKAS TESTING 1365

GEOTECHNICS	Unconsolidated Undrained Triaxial Compression Test - single specimen			Project No.	PN234595
				Hole No.	BH107
Project Name	Pyramid Park, Bury			Sample ID.	
Specimen Reference	3	Specimen Depth (m)	9.24	Depth m	9.00 - 9.45
Specimen Description	Brown mottled grey slightly sandy slightly gravelly CLAY.			Sample Type	UT
Test Method	BS EN ISO 17892-8			Date of Test	25/01/2024

Test Number		1	
Length		212.2	mm
Diameter		103.1	mm
Bulk Density		2.25	Mg/m3
Water Content		14.1	%
Dry Density		1.97	Mg/m3
Rate of Strain		1.8	%/min
Cell Pressure		180	kPa
At failure	Axial Strain	20.0	%
	Deviator Stress, (σ1 - σ3)f	202	kPa
	Undrained Shear Strength, cu	101	kPa ½(σ1 - σ3)f
	Mode of Failure	Plastic	

Deviator Stress v Axial Strain







Remarks

WC at failure Zone = 13.1% Gravel > one sixth of specimen diameter may affect test results.

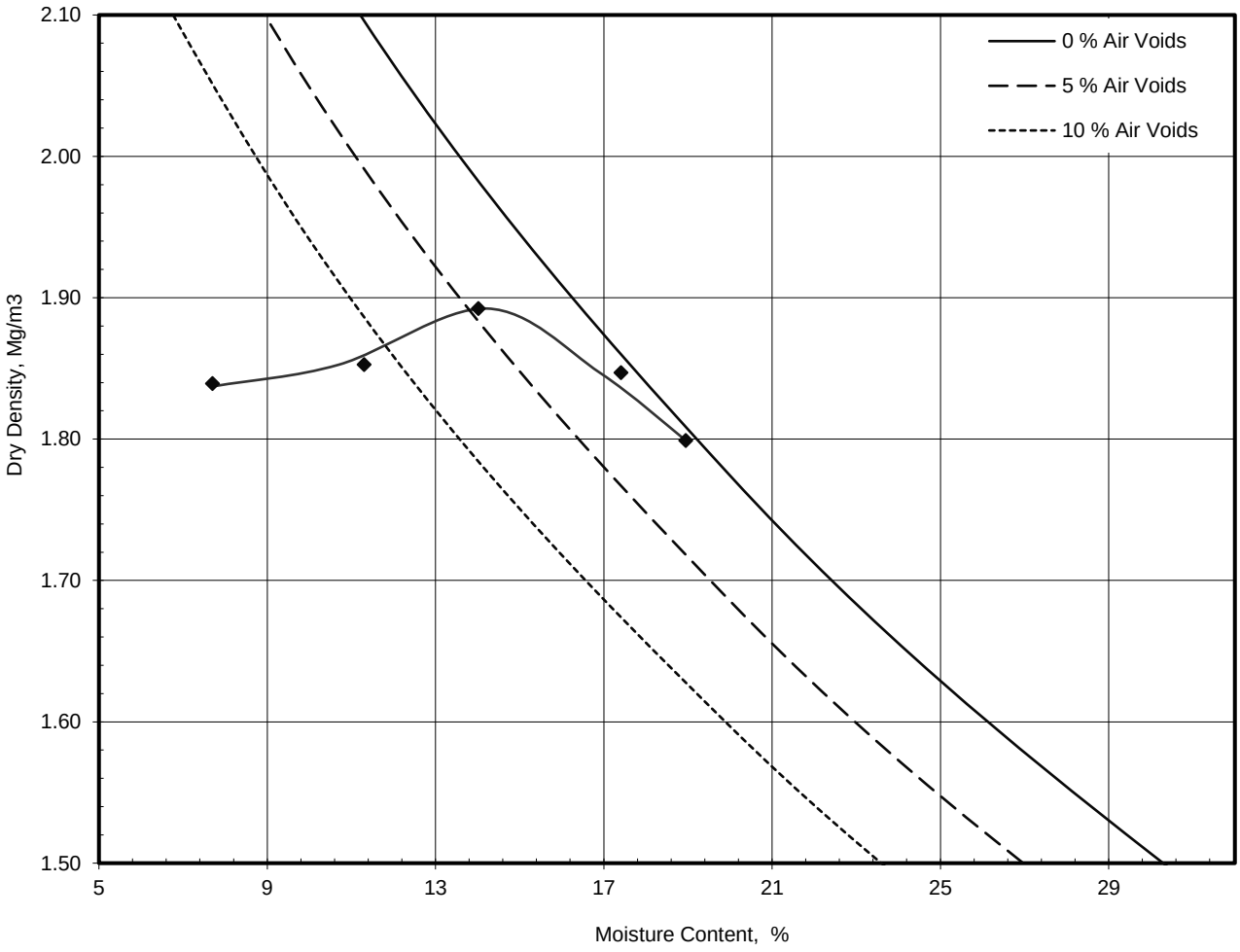
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	BH101
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Light brown slightly sandy slightly gravelly CLAY.	Depth	3.00 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	2
Material Retained on 20.0 mm Sieve	%	16
Particle Density - Assumed	Mg/m³	2.75

Maximum Dry Density	Mg/m³	**1.89**

Optimum Moisture Content	%	**14**

Remarks

NMC = 17.4%

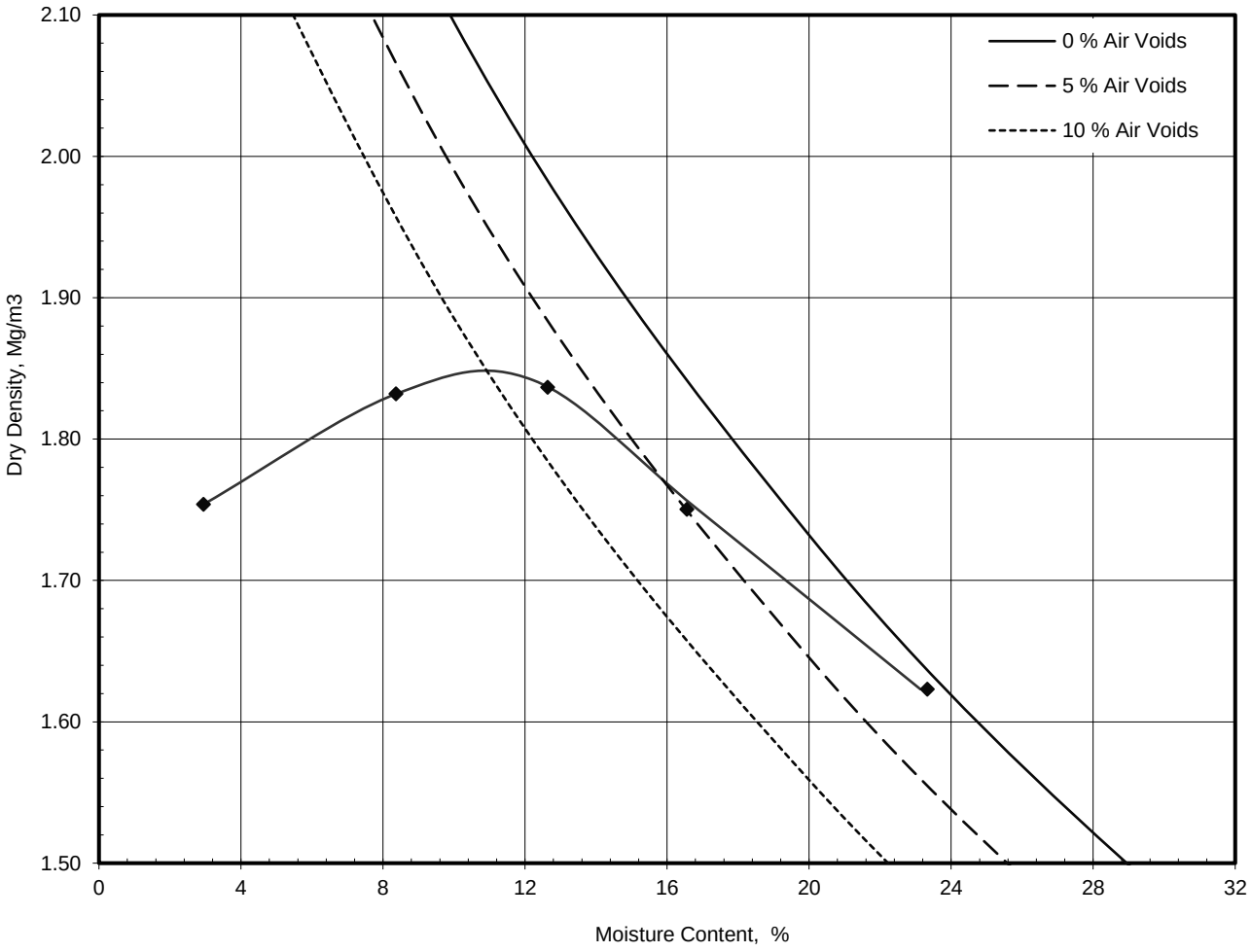
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	BH102
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Dark brown slightly sandy gravelly CLAY	Depth	0.50 - 1.20 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	9
Material Retained on 20.0 mm Sieve	%	16
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.85**

Optimum Moisture Content	%	**11**

Remarks

NMC = 12.6%

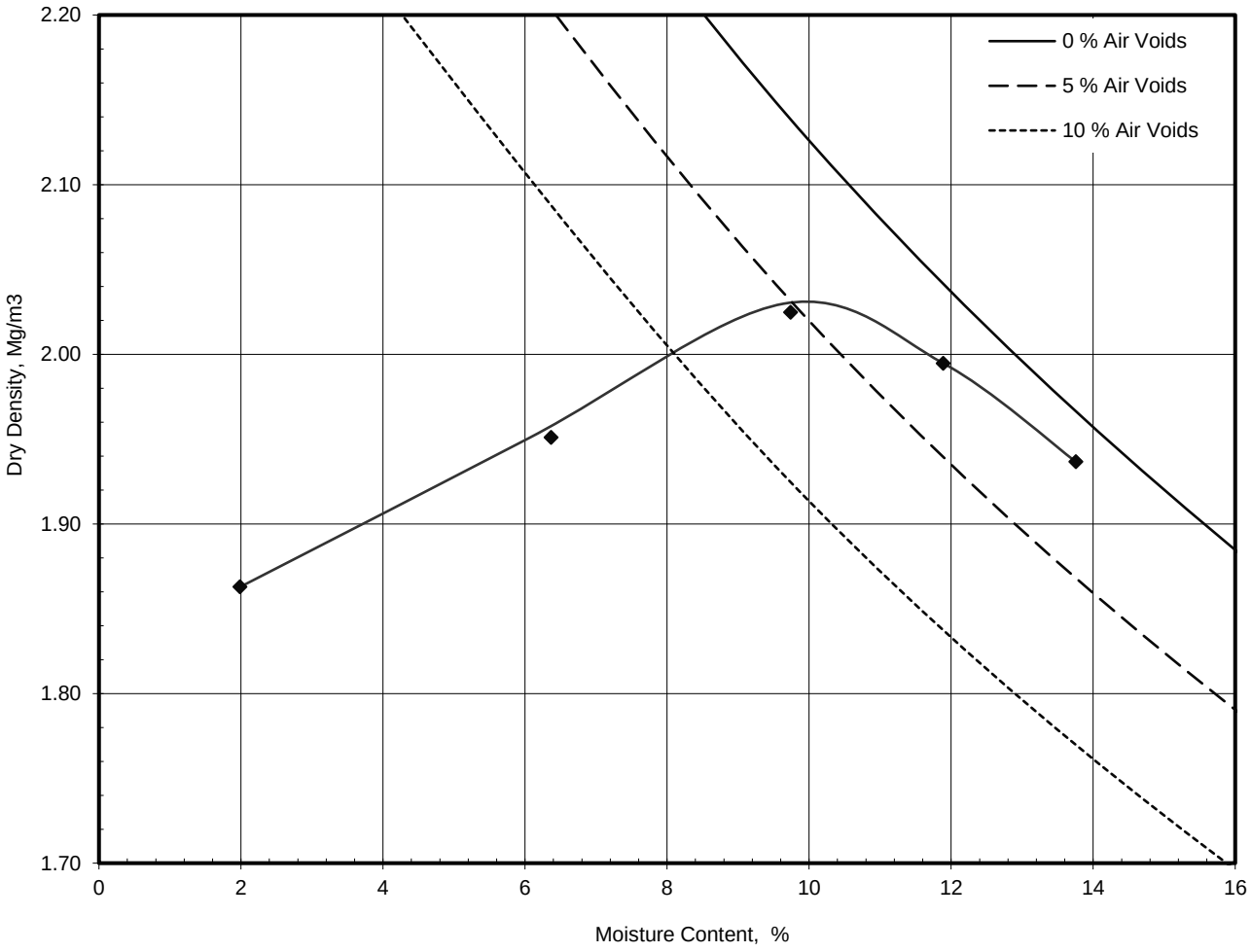
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	BH104
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Light brown slightly sandy gravelly CLAY	Depth	1.20 - 1.65 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	12
Material Retained on 20.0 mm Sieve	%	24
Particle Density - Assumed	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**2.03**

Optimum Moisture Content	%	**9.9**

Remarks

NMC = 17.5%

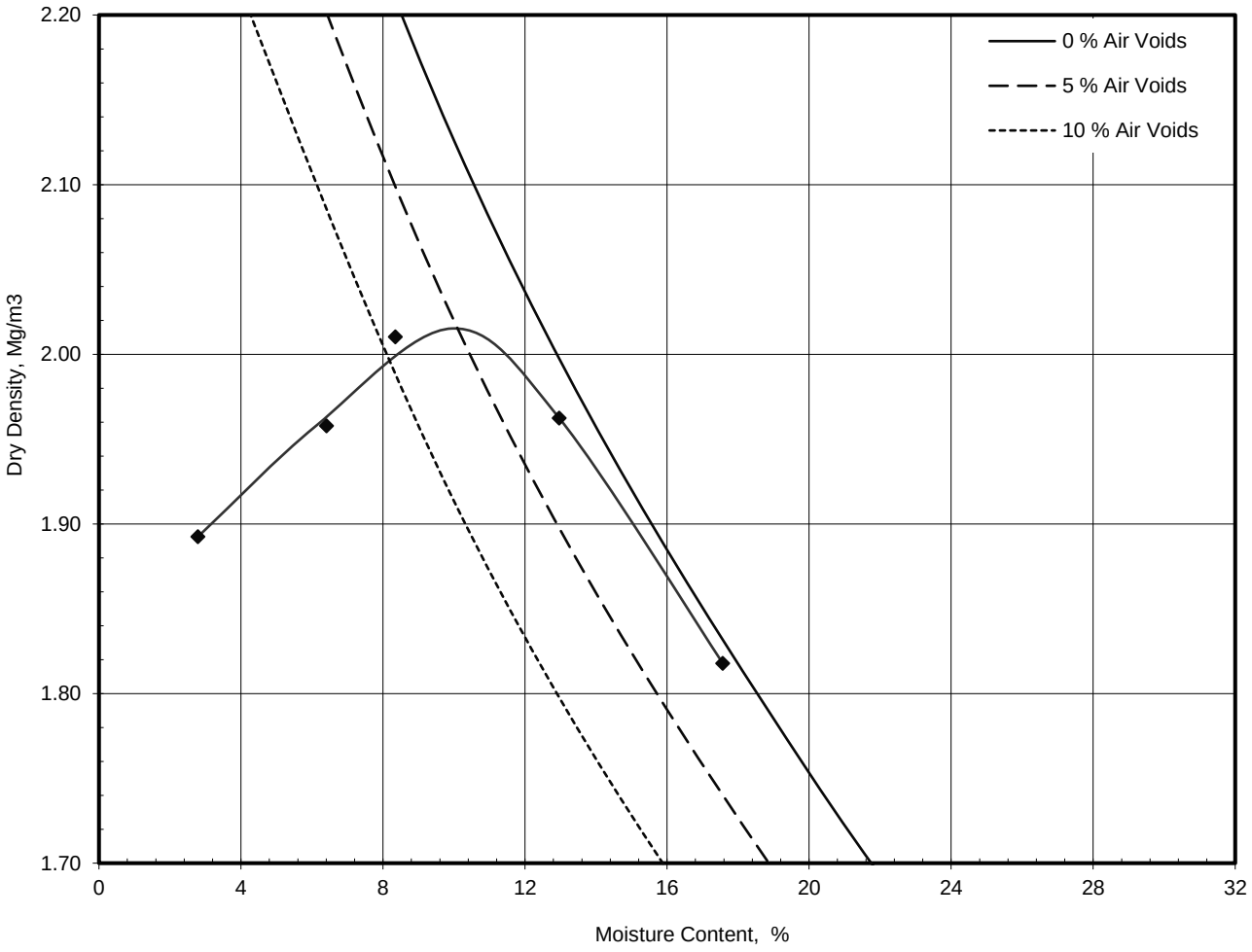
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	BH106
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Dark brown gravelly clayey SAND.	Depth	0.60 - 1.20 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	9
Particle Density - Assumed	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**2.02**

Optimum Moisture Content	%	**9.9**

Remarks

NMC = 13.0%

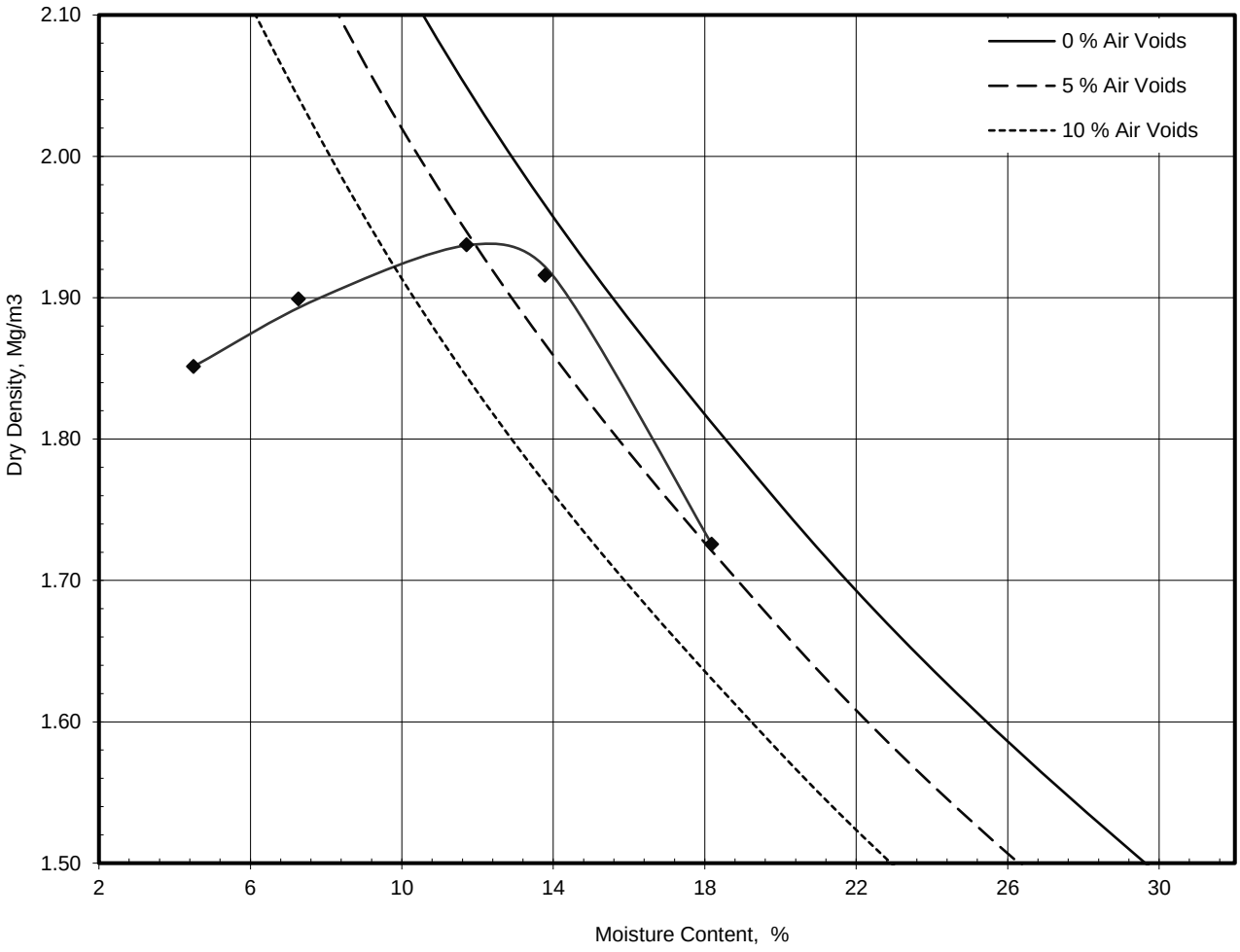
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	BH108
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Dark brown sandy clayey GRAVEL	Depth	0.00 - 1.20 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	14
Material Retained on 20.0 mm Sieve	%	32
Particle Density - Assumed	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**1.94**
Optimum Moisture Content	%	**12**

Remarks

NMC = 11.7% Material Retained 20mm > BS1377 requirements

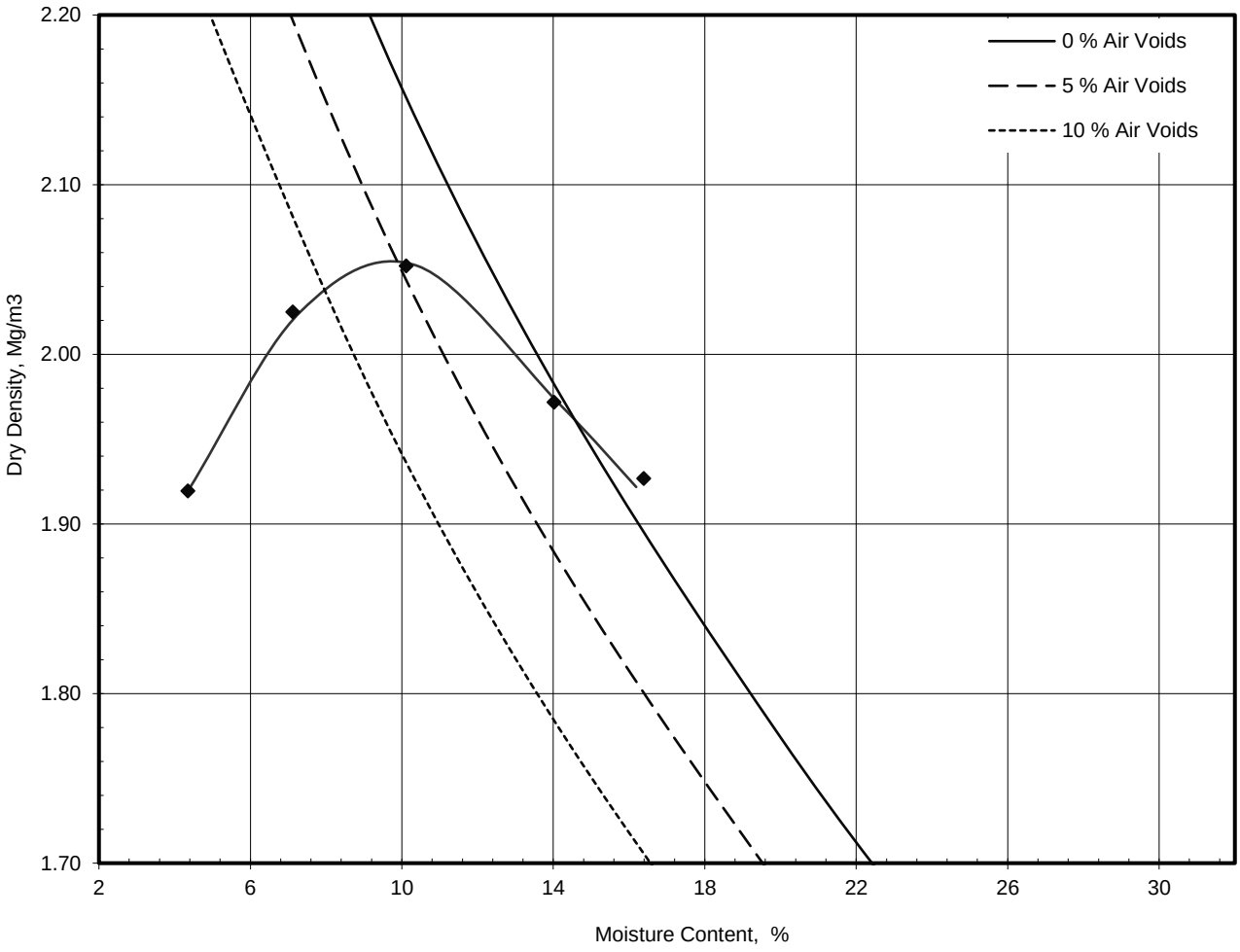
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	HP117E
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Dark brown very sandy clayey gravel	Depth	0.40 - 1.10 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	17
Material Retained on 20.0 mm Sieve	%	32
Particle Density - Assumed	Mg/m³	2.75

Maximum Dry Density	Mg/m³	**2.05**

Optimum Moisture Content	%	**9.9**

Remarks

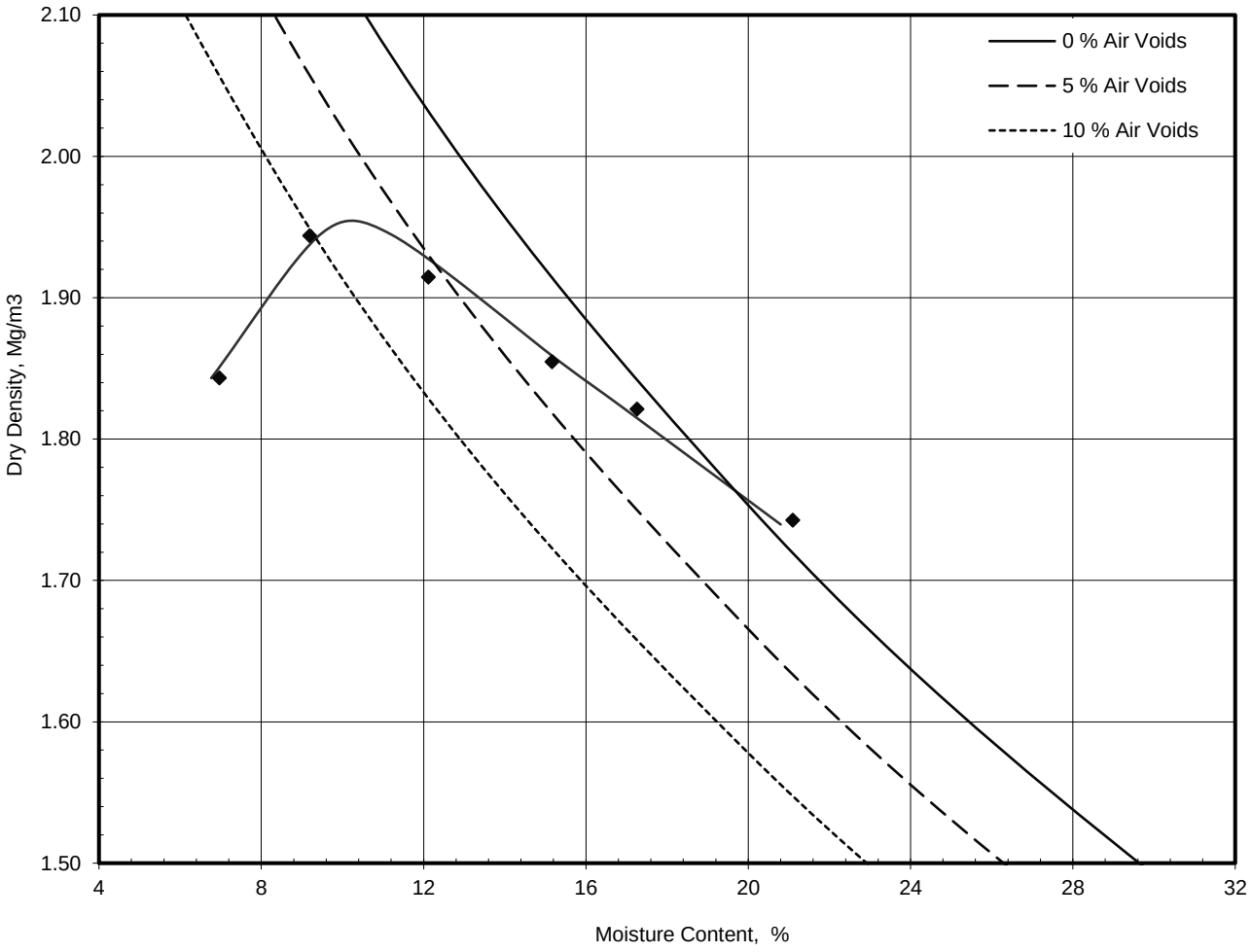
NMC = 10.1% Material retained 20mm >BS1377 requirements

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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP101
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Brown very gravelly sand	Depth	0.60 - 0.80 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	13
Material Retained on 20.0 mm Sieve	%	24
Particle Density -	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**1.95**

Optimum Moisture Content	%	**10**

Remarks

NMC = 15.2%

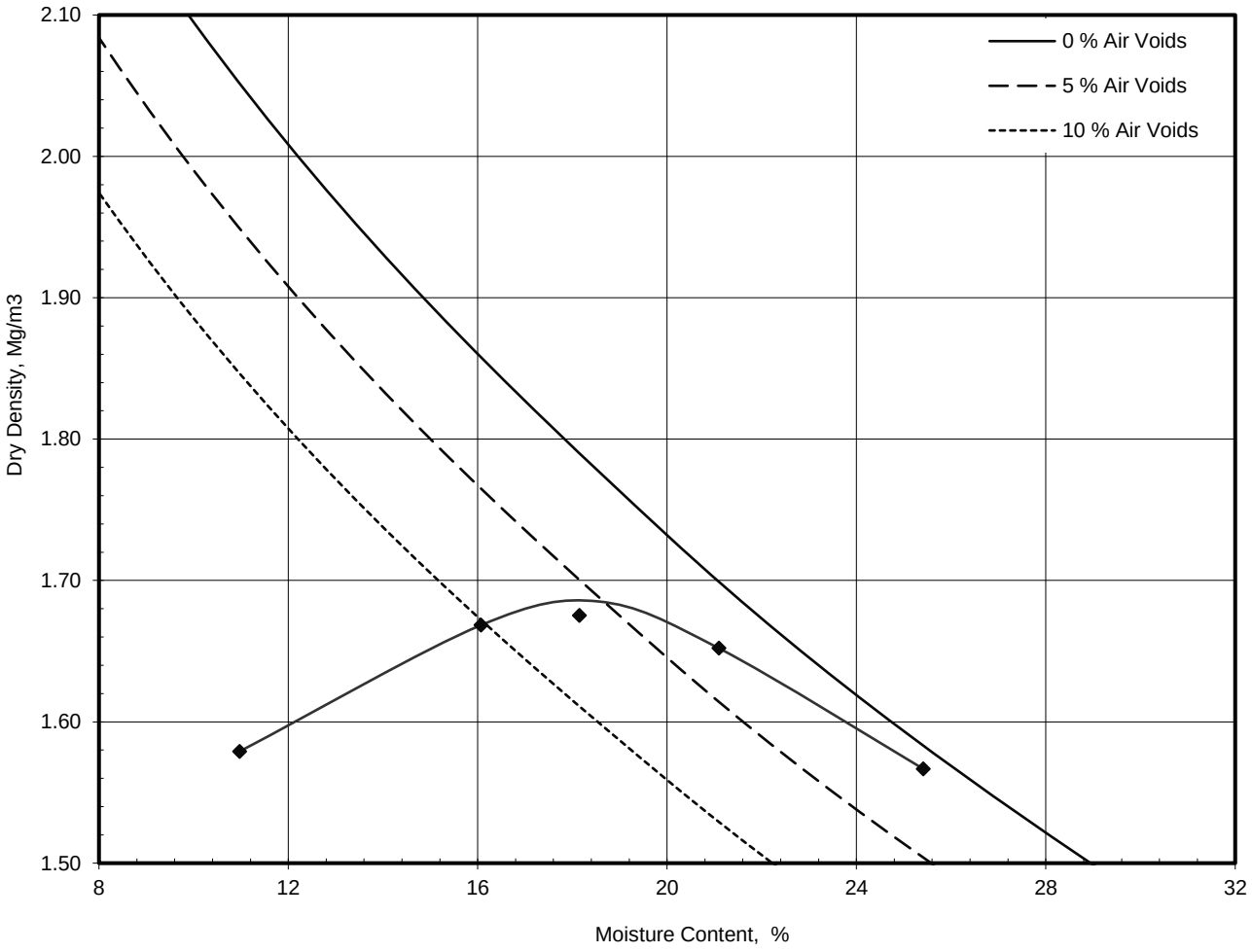
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP103
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Dark brown slightly sandy slightly gravelly CLAY.	Depth	3.00 - 3.30 m
Test Method	BS1377:Part 4:1990, clause 3.3, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		1 LITRE
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	0
Material Retained on 20.0 mm Sieve	%	0
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.69**
Optimum Moisture Content	%	**18**

Remarks

NMC = 22.5%

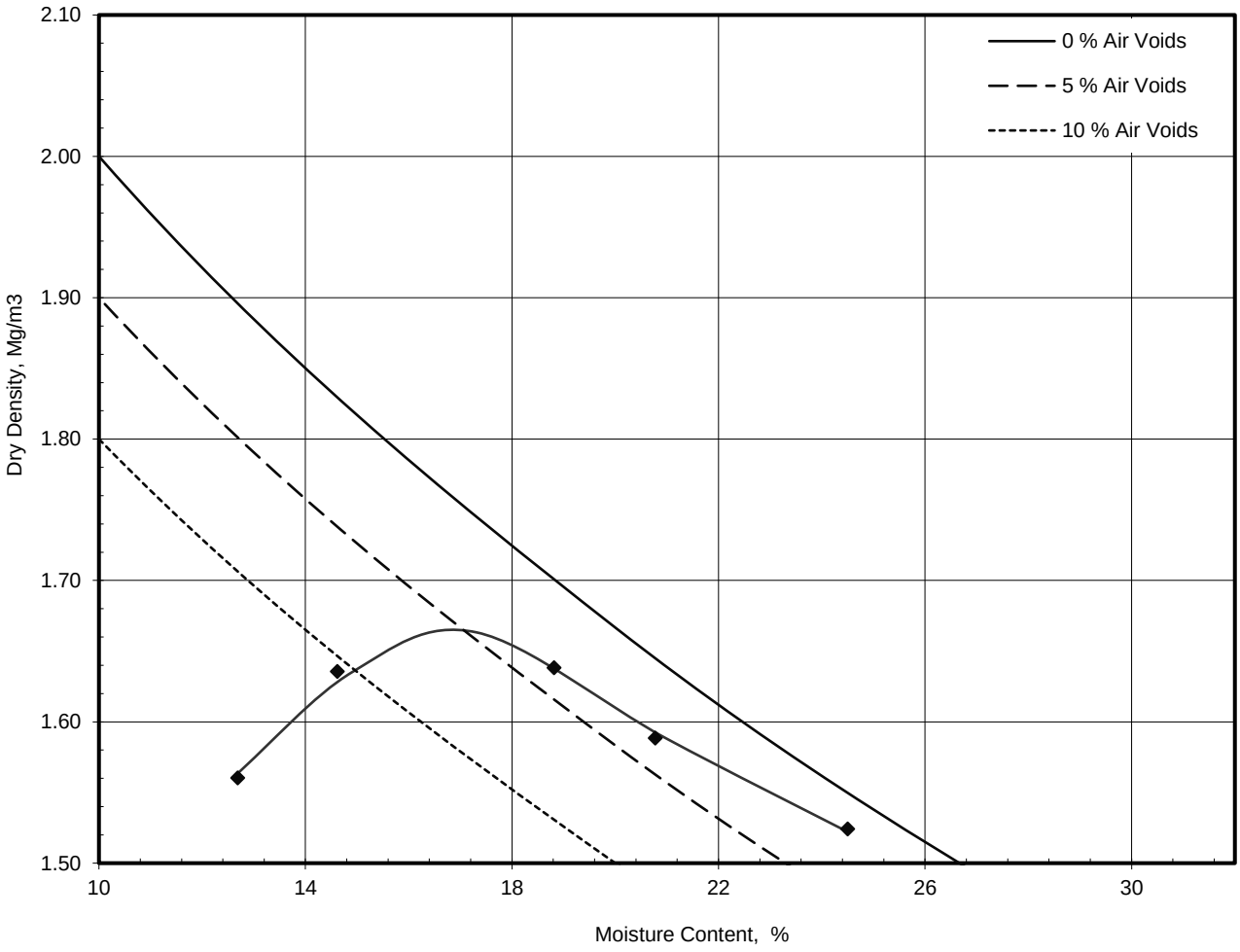
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP104
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Brown slightly sandy slightly gravelly clay.	Depth	0.80 - 1.00 m
Test Method	BS1377:Part 4:1990, clause 3.3, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		1 LITRE
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	1
Material Retained on 20.0 mm Sieve	%	1
Particle Density - Assumed	Mg/m³	2.50

Maximum Dry Density	Mg/m³	**1.67**

Optimum Moisture Content	%	**17**

Remarks

NMC = 31.2%

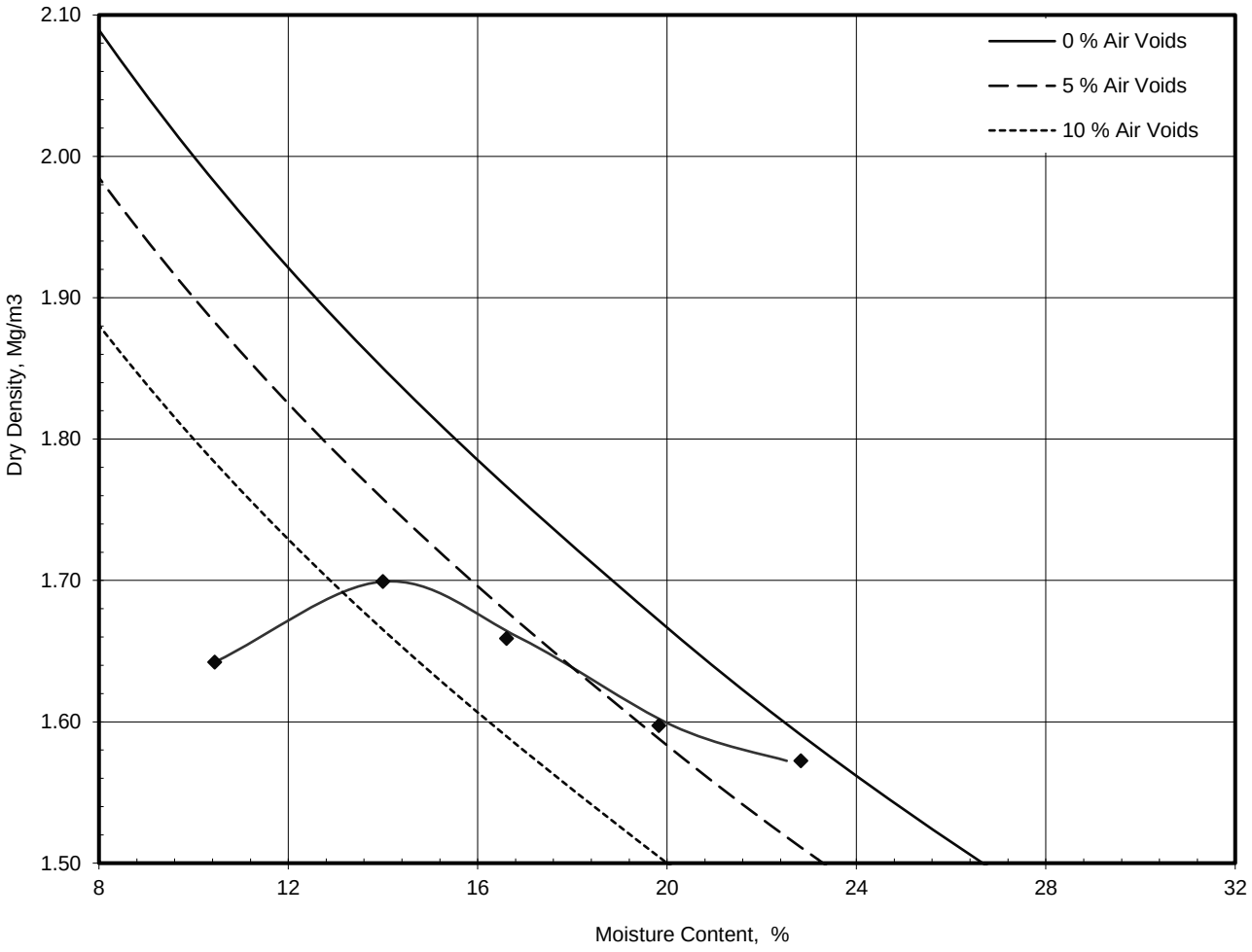
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP106
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Dark brown sandy clayey gravel.	Depth	1.30 - 1.50 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	5
Material Retained on 20.0 mm Sieve	%	23
Particle Density - Assumed	Mg/m³	2.50

Maximum Dry Density	Mg/m³	**1.70**

Optimum Moisture Content	%	**14**

Remarks

NMC = 22.8%

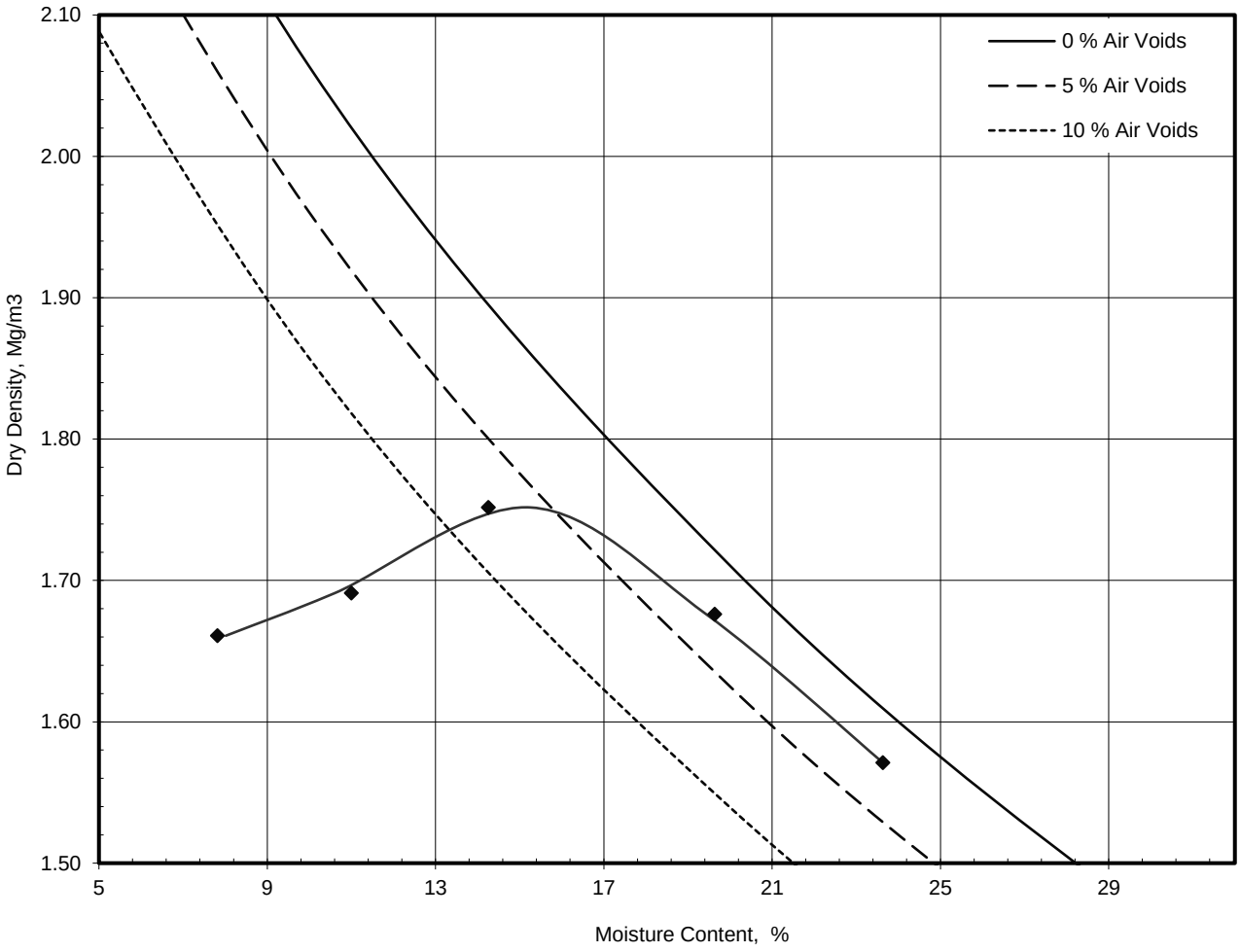
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP109
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Dark brown slightly gravelly sandy clay.	Depth	1.00 - 1.20 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	2
Material Retained on 20.0 mm Sieve	%	13
Particle Density - Assumed	Mg/m³	2.60

Maximum Dry Density	Mg/m³	**1.75**

Optimum Moisture Content	%	**15**

Remarks

NMC = 14.3%

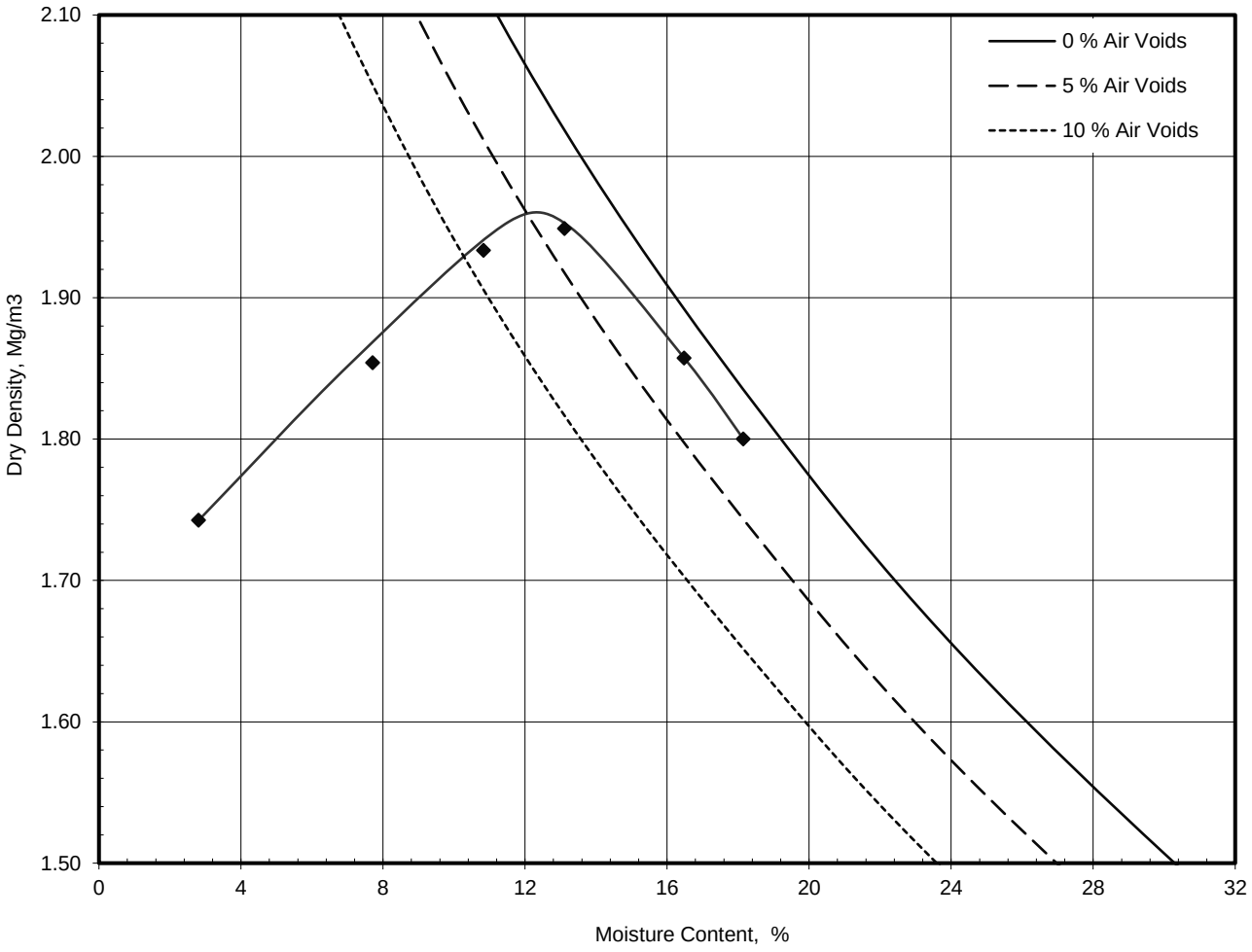
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP110
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Light brown slightly sandy slightly gravelly CLAY	Depth	1.60 - 1.90 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	5
Material Retained on 20.0 mm Sieve	%	12
Particle Density - Assumed	Mg/m³	2.75

Maximum Dry Density	Mg/m³	**1.96**
Optimum Moisture Content	%	**12**

Remarks

NMC = 13.1%

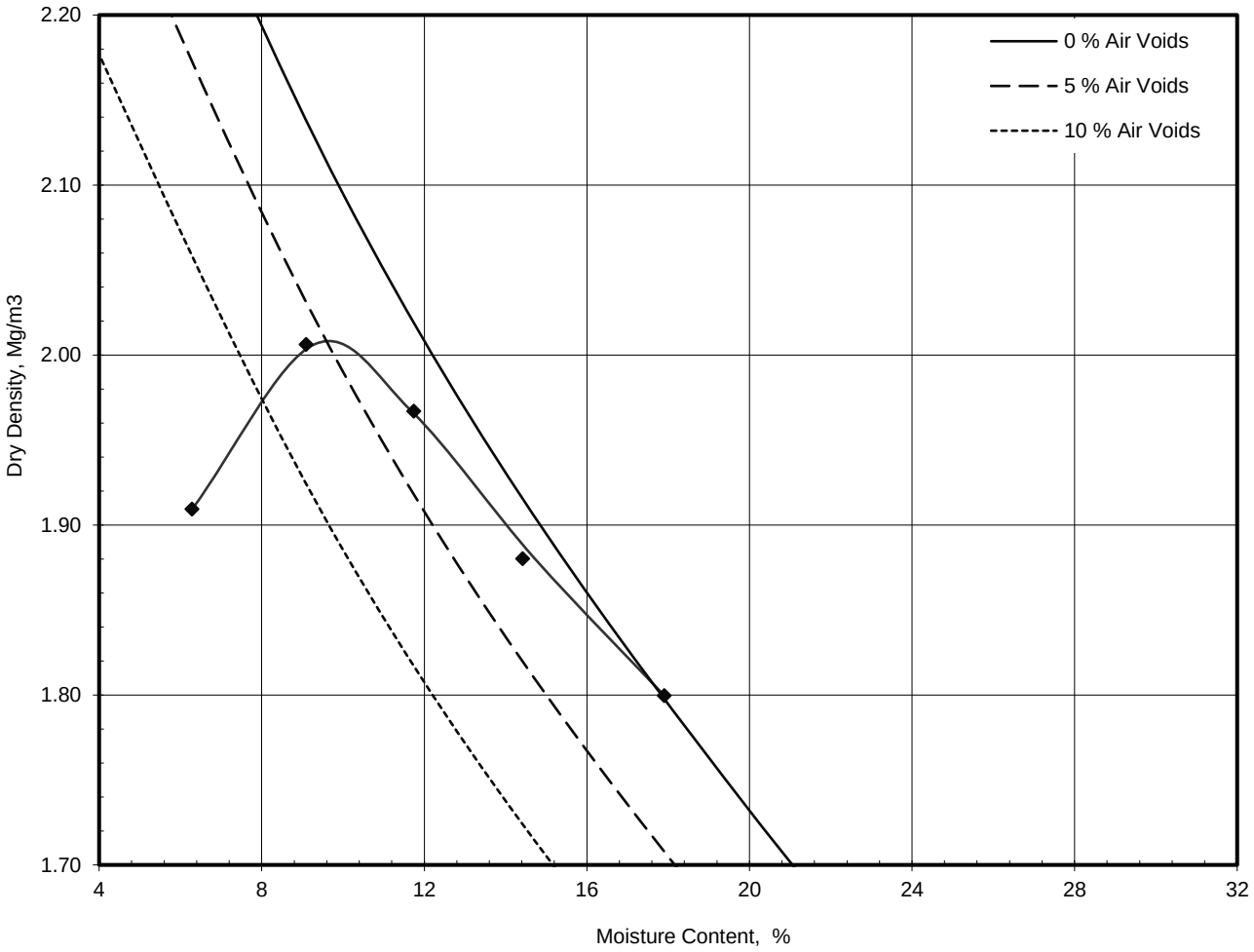
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP116A
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Brown very gravelly SAND	Depth	0.80 - 1.00 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	17
Material Retained on 20.0 mm Sieve	%	23
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**2.01**

Optimum Moisture Content	%	**9.6**

Remarks

NMC = 14.4%

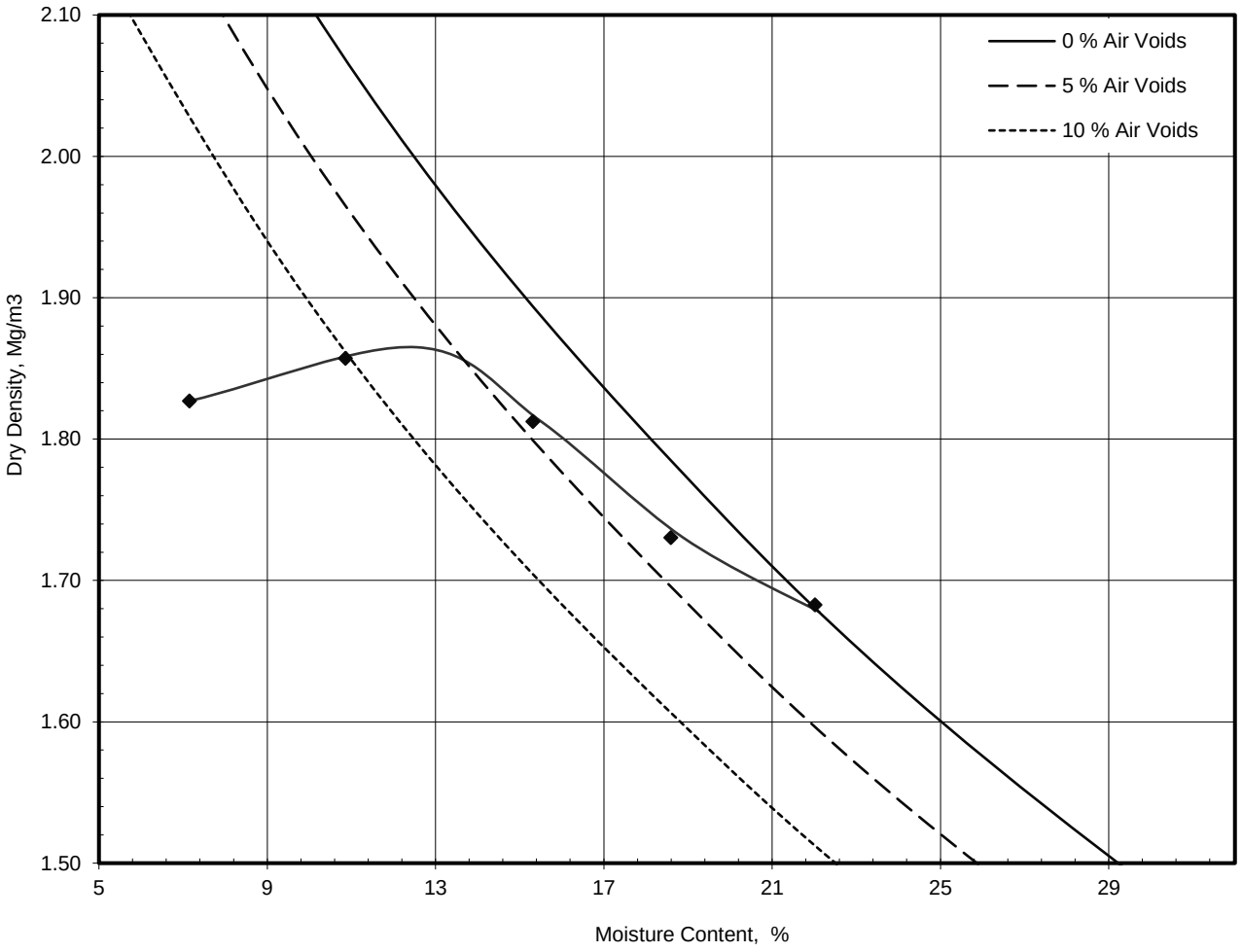
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GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP116A
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Brown gravelly SAND	Depth	1.70 - 2.00 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	2
Material Retained on 20.0 mm Sieve	%	6
Particle Density - Assumed	Mg/m³	2.67

Maximum Dry Density	Mg/m³	**1.86**

Optimum Moisture Content	%	**13**

Remarks

NMC = 18.6%

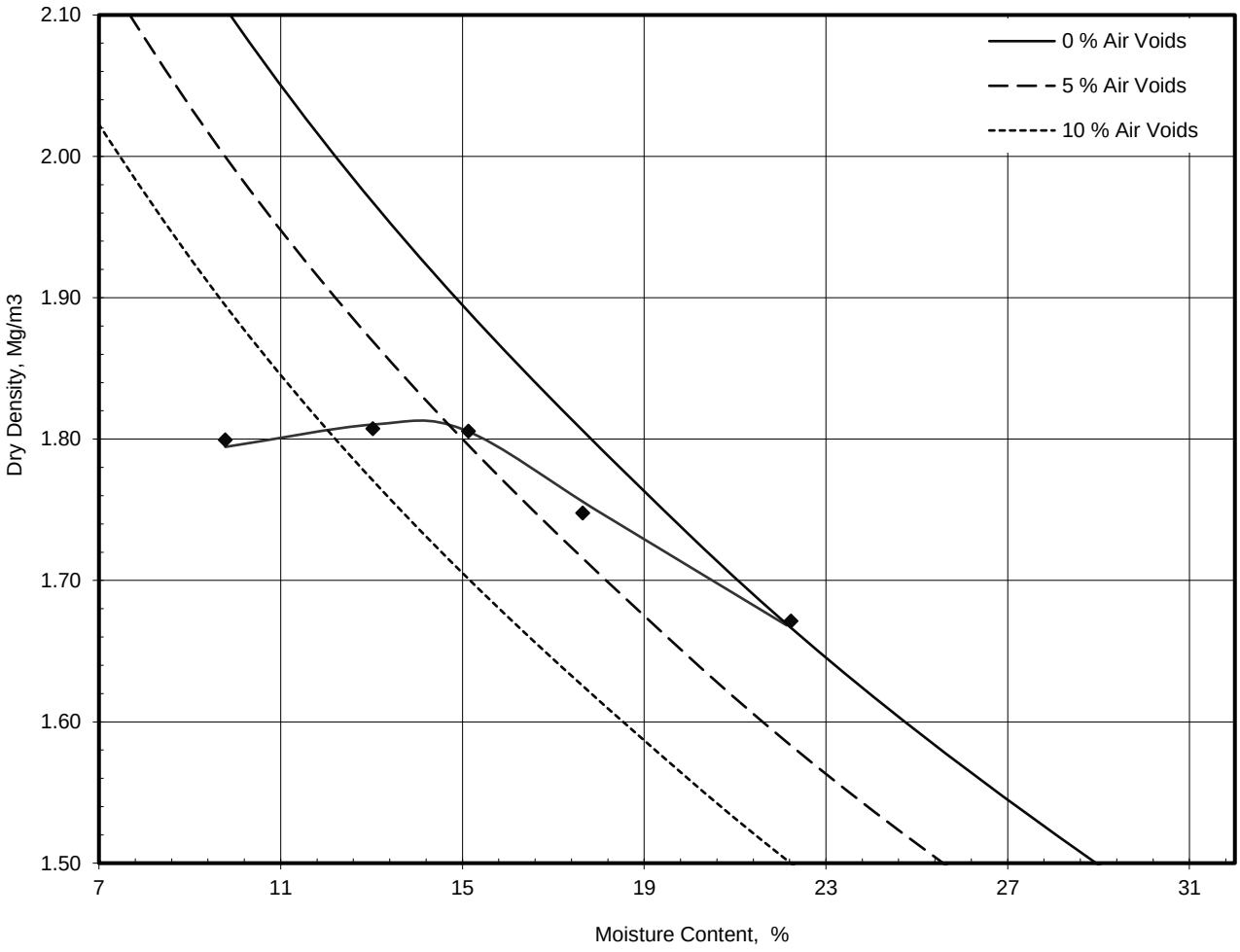
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19/02/2024

UKAS TESTING

1365

GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP118
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Brown slightly gravelly SAND	Depth	1.00 - 1.10 m
Test Method	BS1377:Part 4:1990, clause 3.3, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		1 LITRE
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	1
Material Retained on 20.0 mm Sieve	%	3
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.81**

Optimum Moisture Content	%	**14**

Remarks

NMC = 25.6%

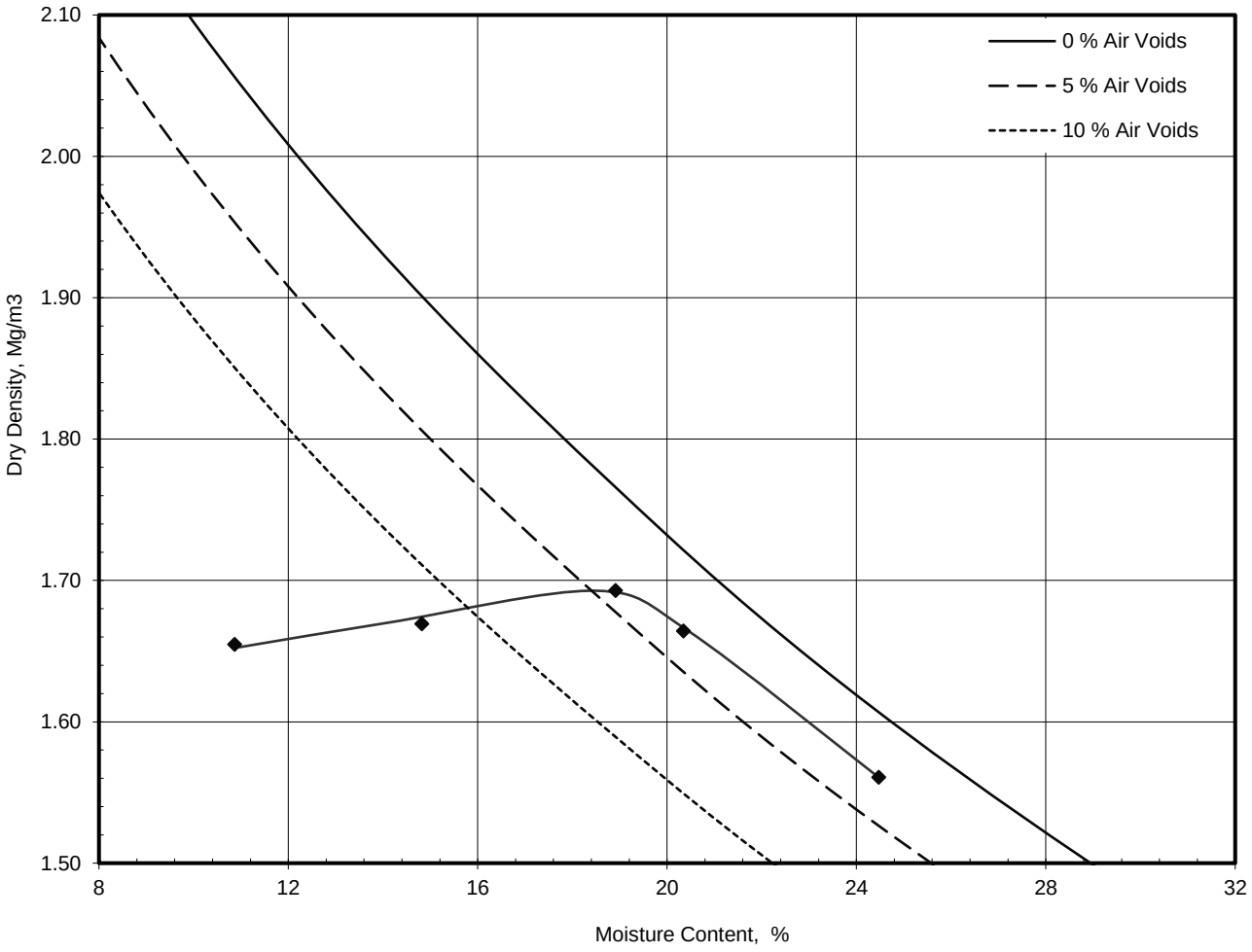
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UKAS TESTING

1365

GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP119
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	MADE GROUND: Dark brown slightly gravelly slightly sandy clay.	Depth	2.00 - 2.20 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	11
Material Retained on 20.0 mm Sieve	%	14
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.69**

Optimum Moisture Content	%	**19**

Remarks

NMC = 24.5%

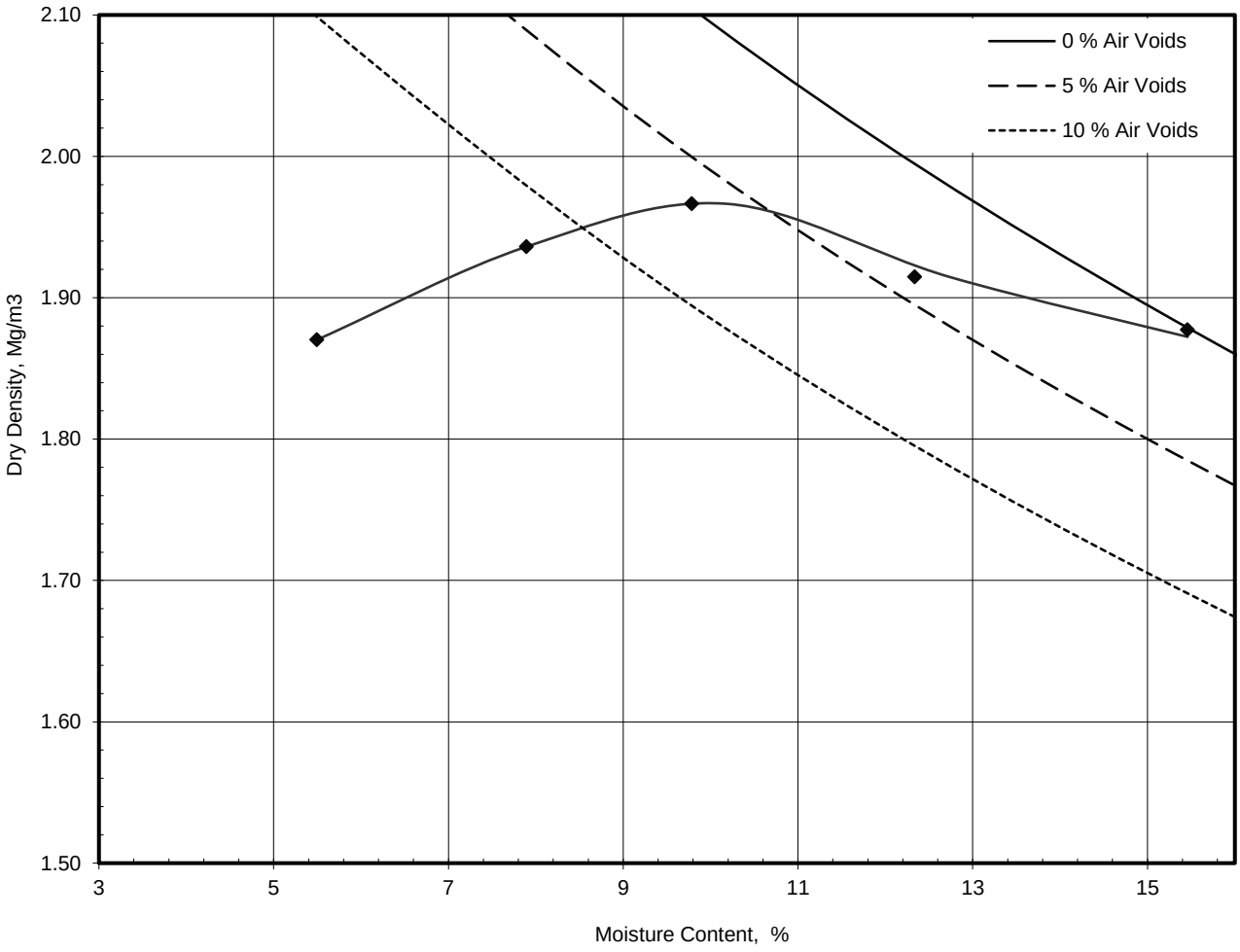
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UKAS TESTING

1365

GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP120
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Light brown mottled grey slightly sandy slightly gravelly CLAY.	Depth	2.50 - 2.70 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	4
Material Retained on 20.0 mm Sieve	%	18
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.97**

Optimum Moisture Content	%	**10**

Remarks

NMC = 9.8%

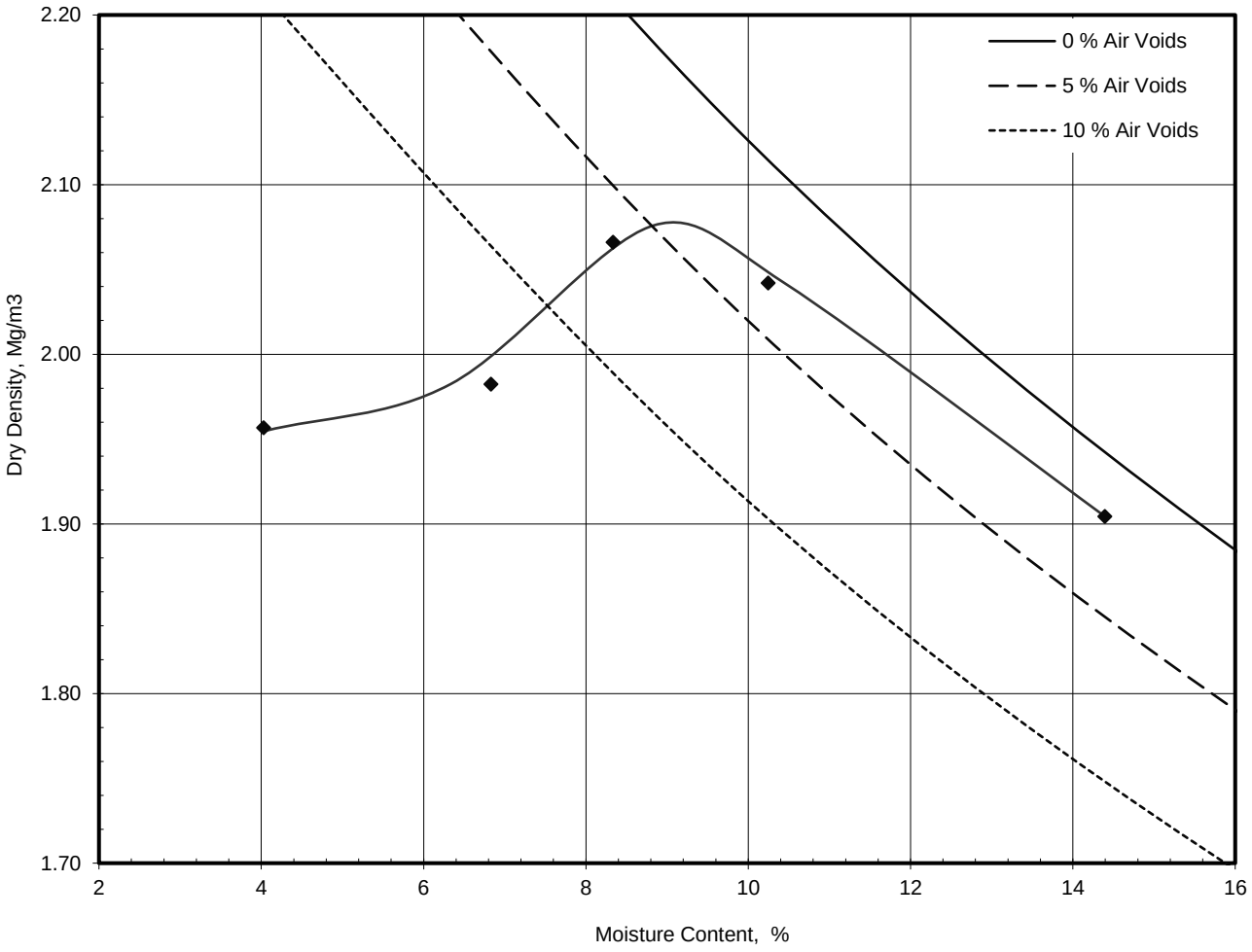
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UKAS TESTING

1365

GEOTECHNICS	**Dry Density / Moisture Content Relationship 2.5kg Compaction**	Project Number	PN234595
		Hole Number	TP123
Project Name	Pyramid Park, Bury	Sample Number	
Specimen Description	Dark grey very gravelly SAND	Depth	0.70 - 0.90 m
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer	Sample Type	B



Preparation		Material used was natural
Mould Type		CBR
Samples Used		Single sample tested.
Material Retained on 37.5 mm Sieve	%	3
Material Retained on 20.0 mm Sieve	%	14
Particle Density - Assumed	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**2.08**

Optimum Moisture Content	%	**9.1**

Remarks

NMC = 10.2%

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UKAS TESTING

1365

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	BH102
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	1.20 - 1.65
Specimen Description	Dark greyish brown slightly sandy gravelly CLAY with roots.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	02/02/2024

Sample preparation

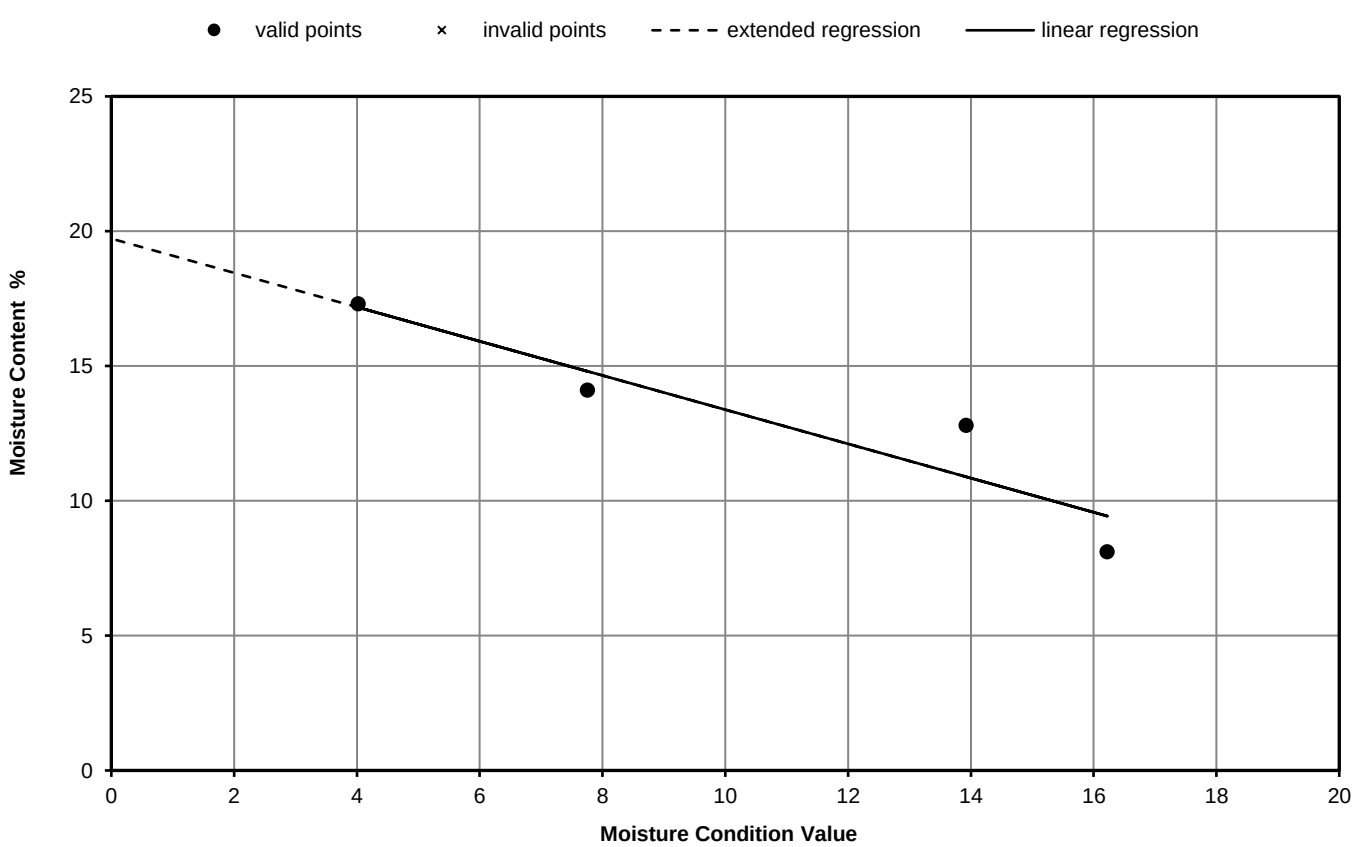
Amount of material larger than 20mm sieve removed	5.2	%
Natural Moisture Content of sample	14.1	%
Initial Moisture Content of test sample below 20mm	14.1	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	14.1	17.3	8.1	12.8	
Moisture Condition Value	7.8	4.0	16.2	13.9	
MCV report	7.8	4.0	16.2	13.9	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 92kPa	Hand Vane = 33kPa	Hand Vane = > 140kPa	Hand Vane = > 140kPa	



GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	BH105
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	2.00 - 2.45
Specimen Description	Brown slightly gravelly sandy CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	02/02/2024

Sample preparation

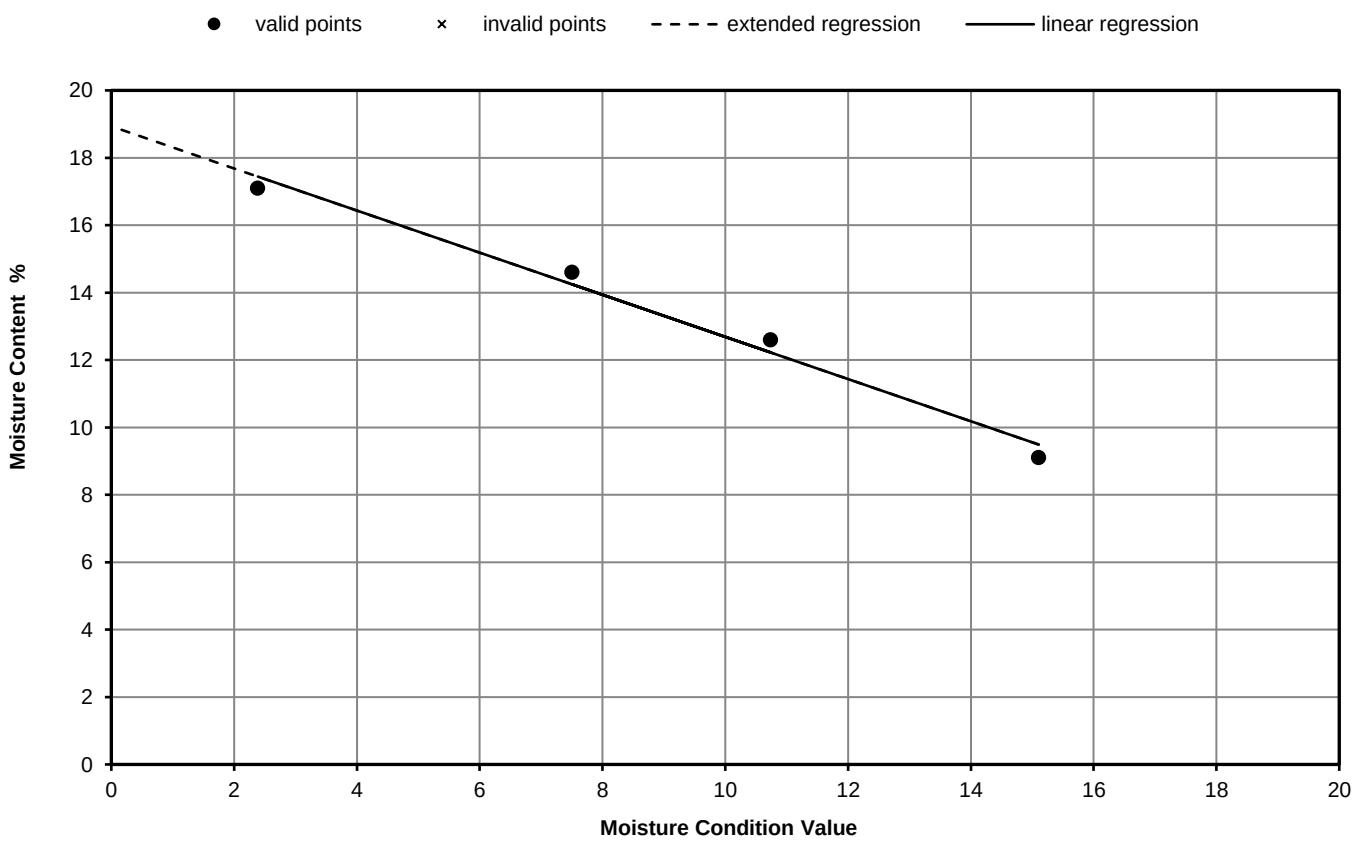
Amount of material larger than 20mm sieve removed	1.47	%
Natural Moisture Content of sample	18.8	%
Initial Moisture Content of test sample below 20mm	18.8	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	9.1	14.6	12.6	17.1	
Moisture Condition Value	15.1	7.5	10.7	2.4	
MCV report	15.1	7.5	10.7	2.4	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = >140kPa	Hand Vane = 43kPa	Hand Vane = 121kPa	Hand Vane = 20kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP101
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	0.30 - 0.50
Specimen Description	MADE GROUND: Dark brown slightly sandy slightly gravelly clay.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	02/02/2024

Sample preparation

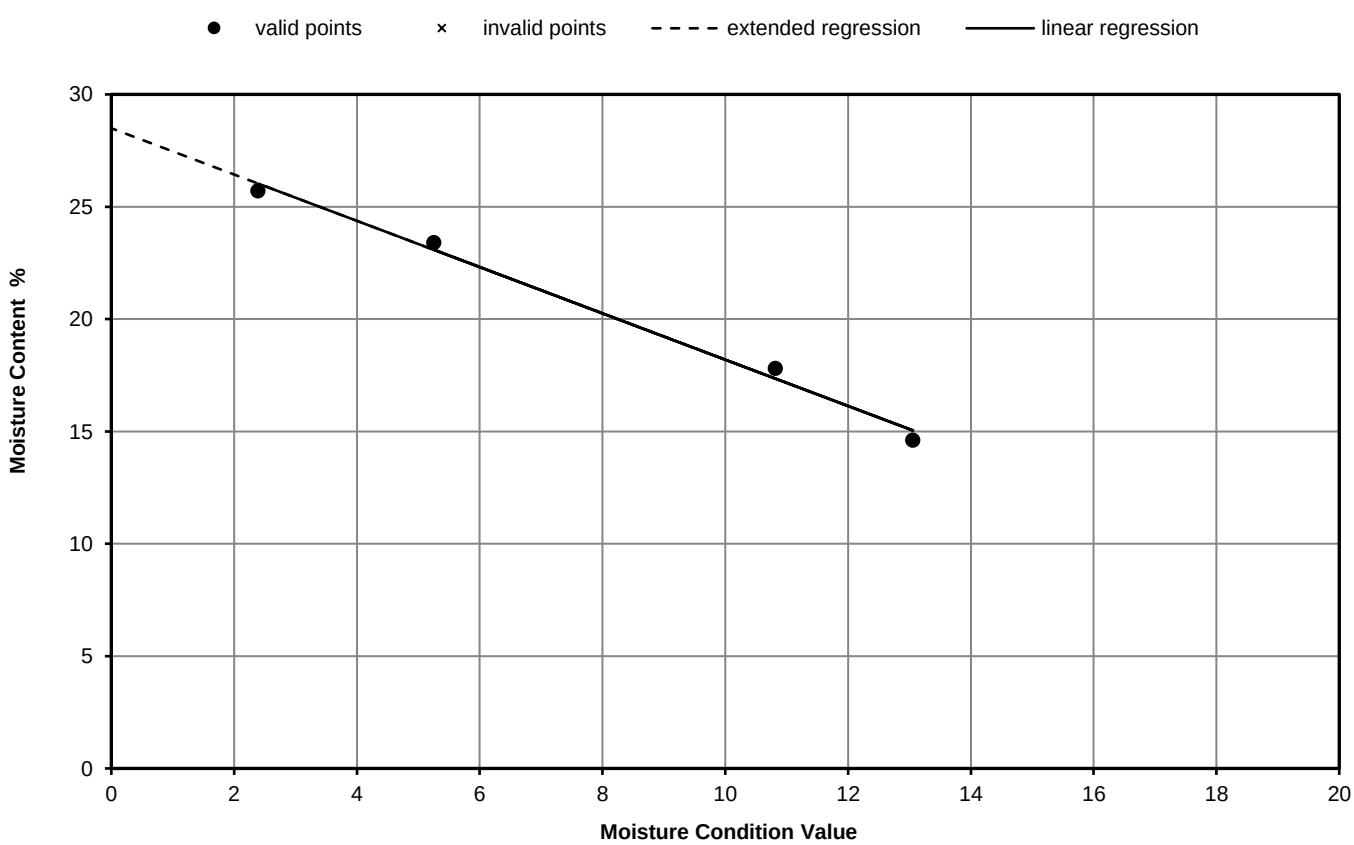
Amount of material larger than 20mm sieve removed	16.86	%
Natural Moisture Content of sample	23.4	%
Initial Moisture Content of test sample below 20mm	23.4	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	23.4	14.6	17.8	25.7	
Moisture Condition Value	5.3	13.1	10.8	2.4	
MCV report	5.3	13.1	10.8	2.4	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 36kPa	Hand Vane = >140kPa	Hand Vane = 62kPa	Hand Vane = 22kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP103
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	2.00 - 2.20
Specimen Description	Dark grey slightly sandy slightly gravelly CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	05/02/2024

Sample preparation

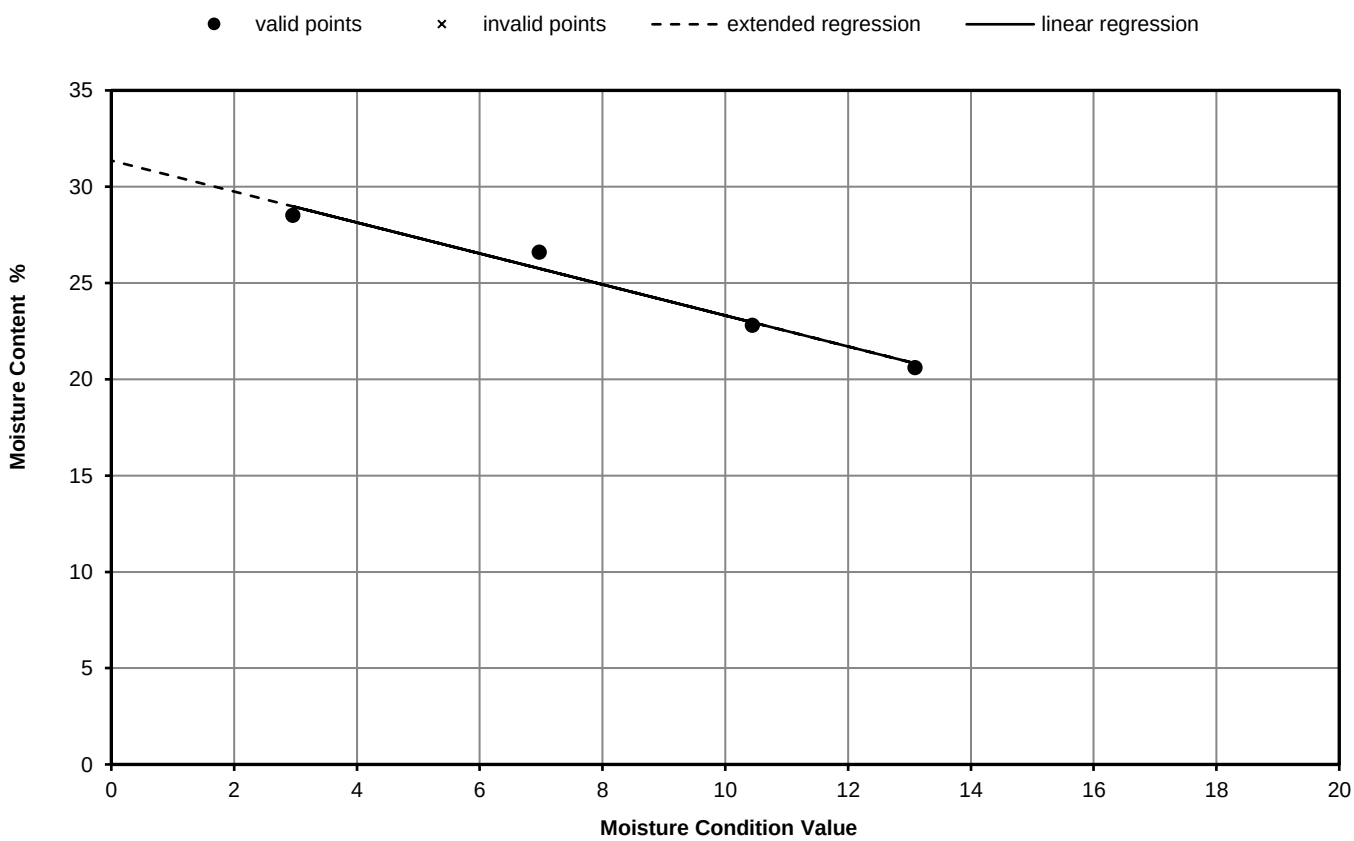
Amount of material larger than 20mm sieve removed	0	%
Natural Moisture Content of sample	10.4	%
Initial Moisture Content of test sample below 20mm	10.4	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	22.8	26.6	28.5	20.6	
Moisture Condition Value	10.4	7.0	3.0	13.1	
MCV report	10.4	7.0	3.0	13.1	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 93kPa	Hand Vane = 51kPa	Hand Vane = 28kPa	Hand Vane = 135kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP108
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	2.00 - 2.20
Specimen Description	MADE GROUND: Dark brown slightly sandy gravelly clay.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	05/02/2024

Sample preparation

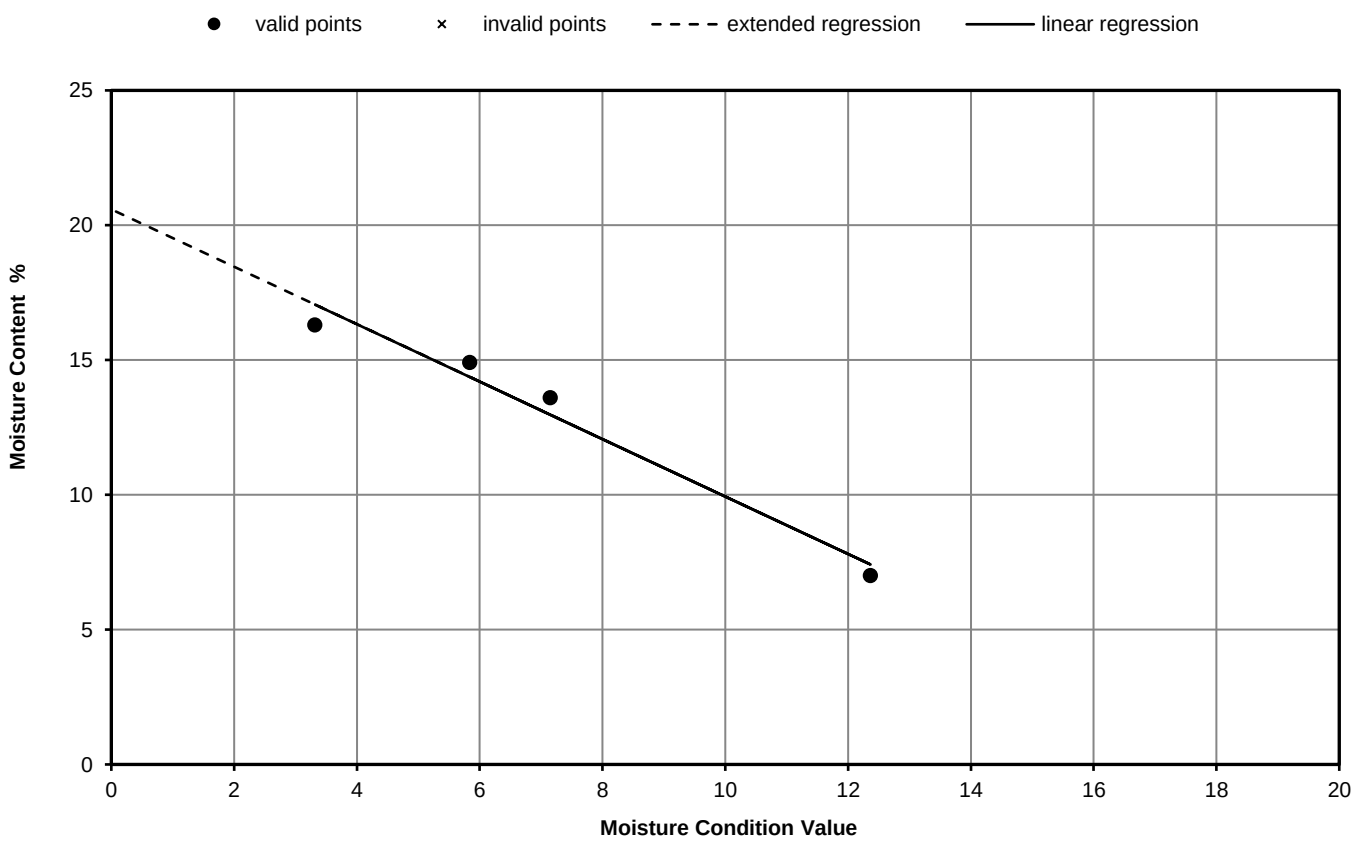
Amount of material larger than 20mm sieve removed	45.97	%
Natural Moisture Content of sample	21.5	%
Initial Moisture Content of test sample below 20mm	21.5	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	16.3	7.0	13.6	14.9	
Moisture Condition Value	3.3	12.4	7.2	5.8	
MCV report	3.3	12.4	7.2	5.8	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 28kPa	Hand Vane = >140kPa	Hand Vane = 60kPa	Hand Vane = 30kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP110
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	1.00 - 1.20
Specimen Description	Orangish brown slightly sandy slightly gravelly CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	02/02/2024

Sample preparation

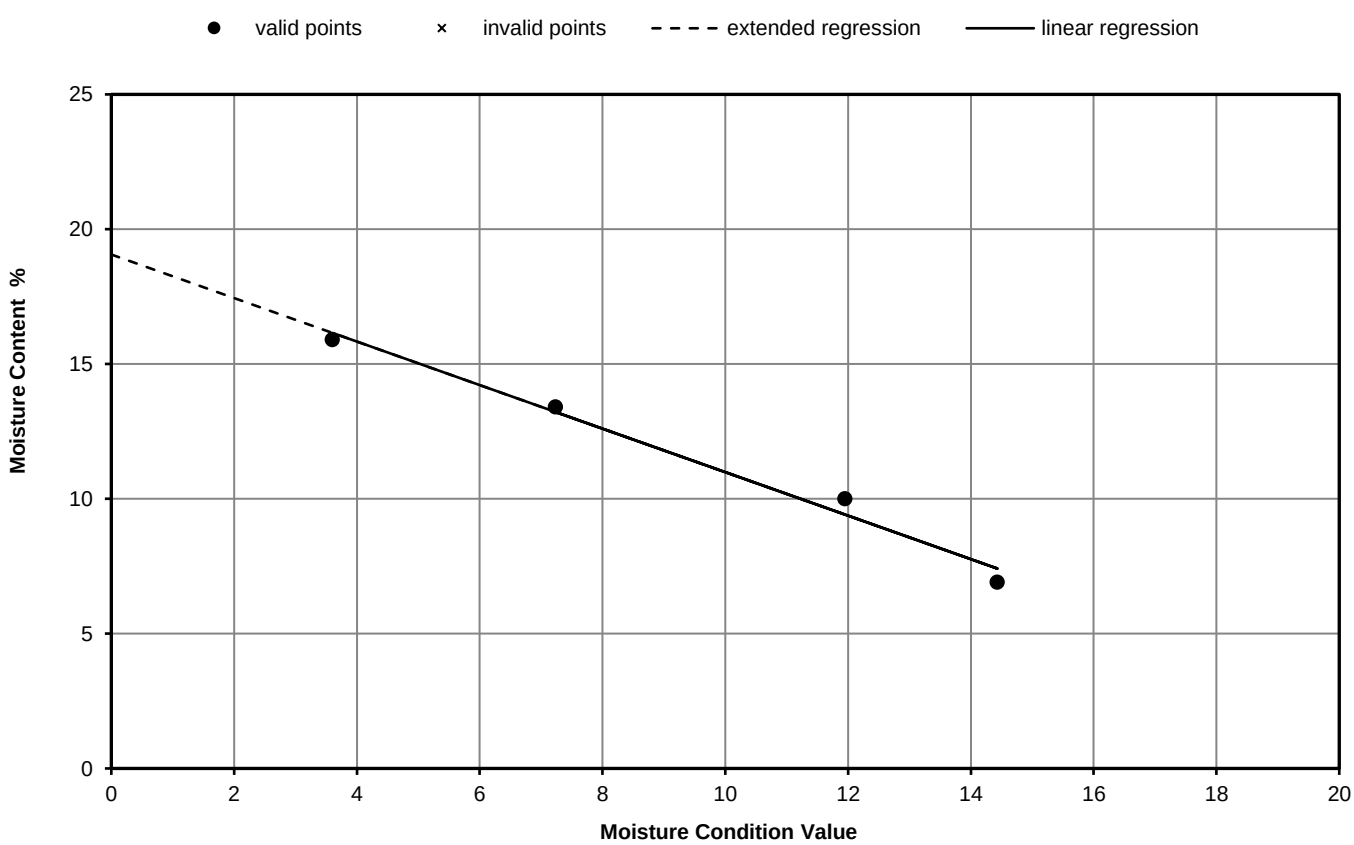
Amount of material larger than 20mm sieve removed	26.43	%
Natural Moisture Content of sample	13.4	%
Initial Moisture Content of test sample below 20mm	13.4	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	13.4	6.9	10.0	15.9	
Moisture Condition Value	7.2	14.4	12.0	3.6	
MCV report	7.2	14.4	12.0	3.6	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 52kPa	Hand Vane = >140kPa	Hand Vane = >140kPa	Hand Vane = 29kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP110
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	2.70 - 3.00
Specimen Description	Brown mottled grey slightly sandy slightly gravelly CLAY			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	05/02/2024

Sample preparation

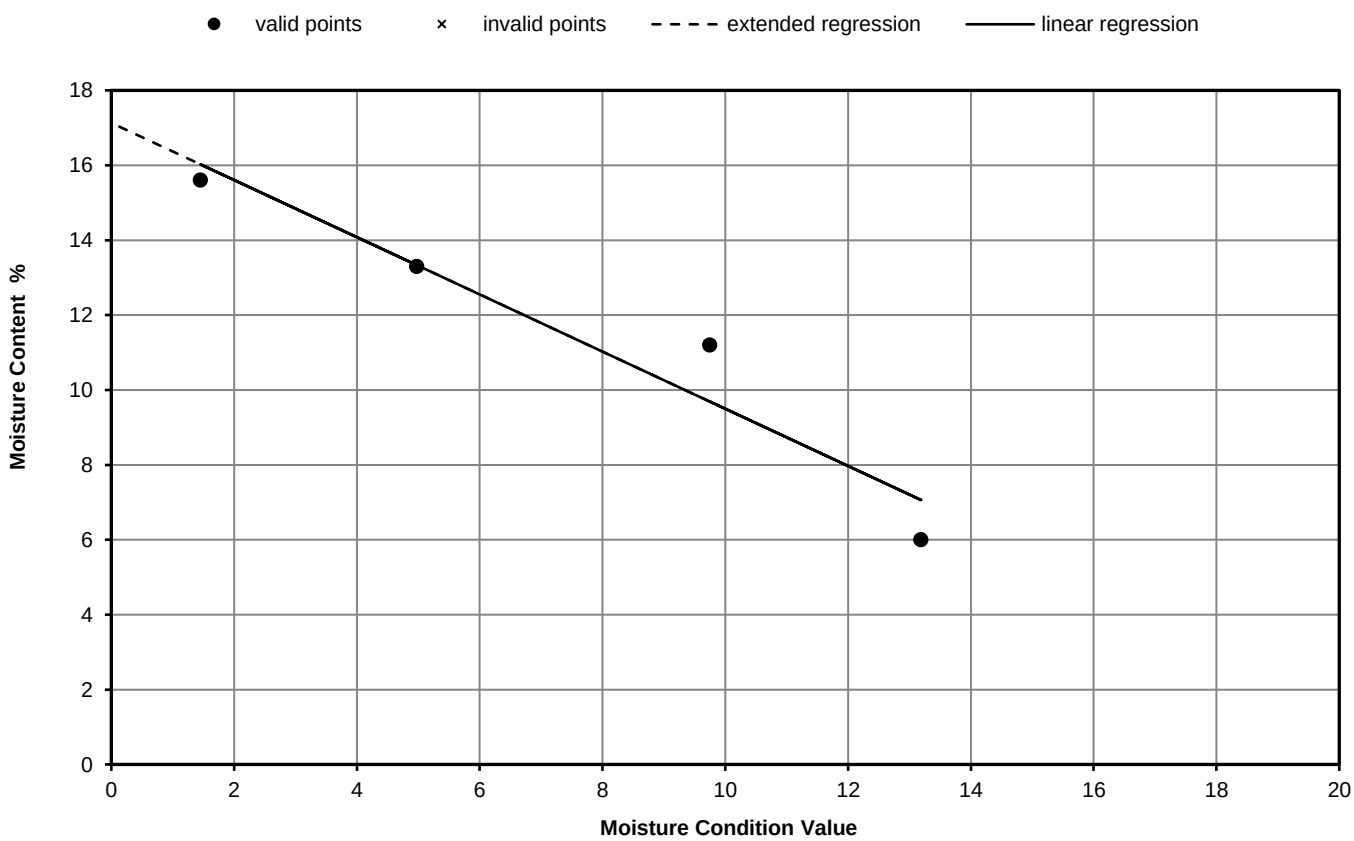
Amount of material larger than 20mm sieve removed	19.01	%
Natural Moisture Content of sample	12.7	%
Initial Moisture Content of test sample below 20mm	12.7	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	11.2	6.0	15.6	13.3	
Moisture Condition Value	9.8	13.2	1.5	5.0	
MCV report	9.8	13.2	1.5	5.0	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = 140kPa	Hand Vane = >140kPa	Hand Vane = 22kPa	Hand Vane = 35kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP116A
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	2.00 - 2.20
Specimen Description	Dark brown slightly sandy slightly gravelly CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	05/02/2024

Sample preparation

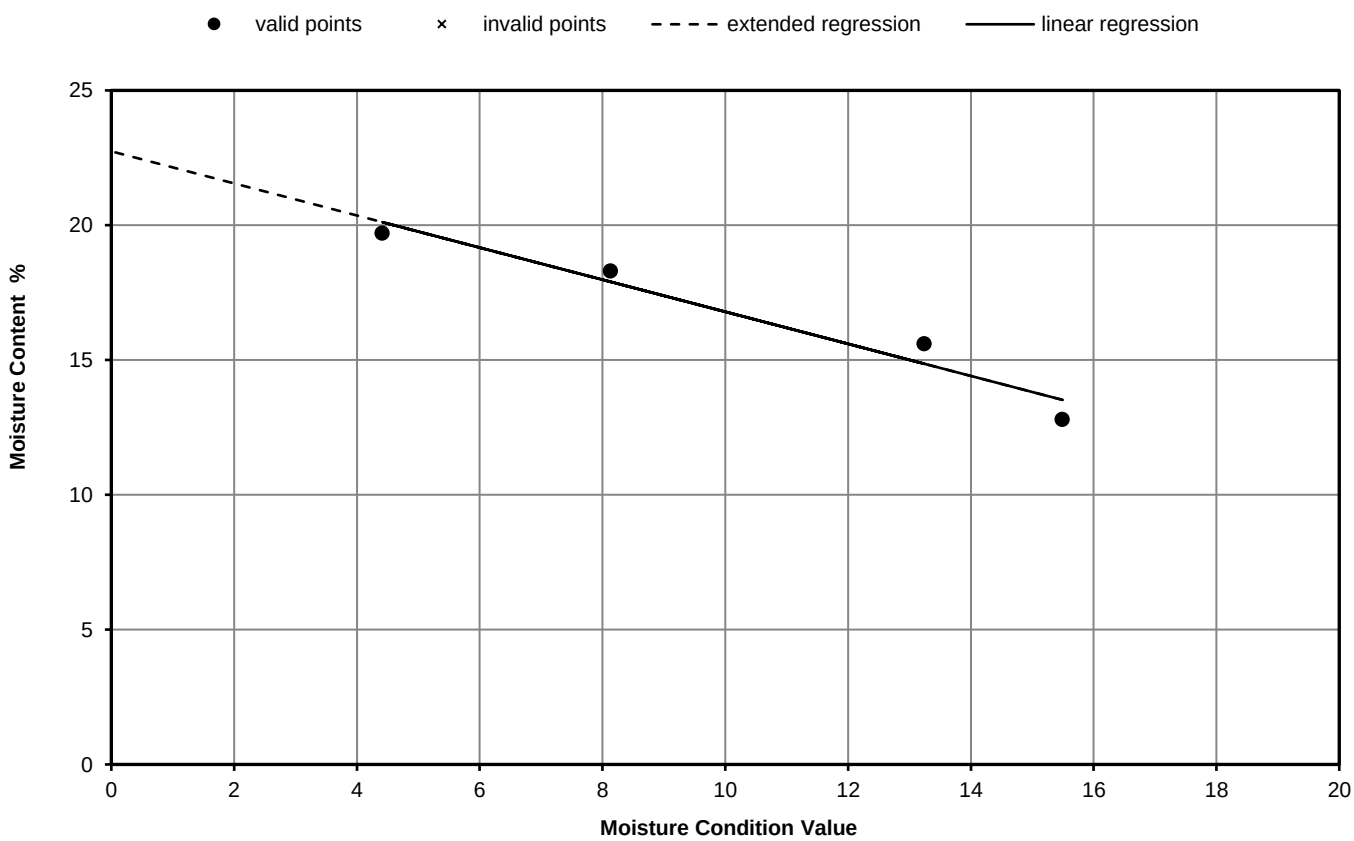
Amount of material larger than 20mm sieve removed	0	%
Natural Moisture Content of sample	18.5	%
Initial Moisture Content of test sample below 20mm	18.5	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	12.8	19.7	15.6	18.3	
Moisture Condition Value	15.5	4.4	13.2	8.1	
MCV report	15.5	4.4	13.2	8.1	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = >140kPa	Hand Vane = 27kPa	Hand Vane = 135kPa	Hand Vane = 47kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP119
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	4.00 - 4.20
Specimen Description	Dark grey slightly sandy slightly gravelly CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	06/02/2024

Sample preparation

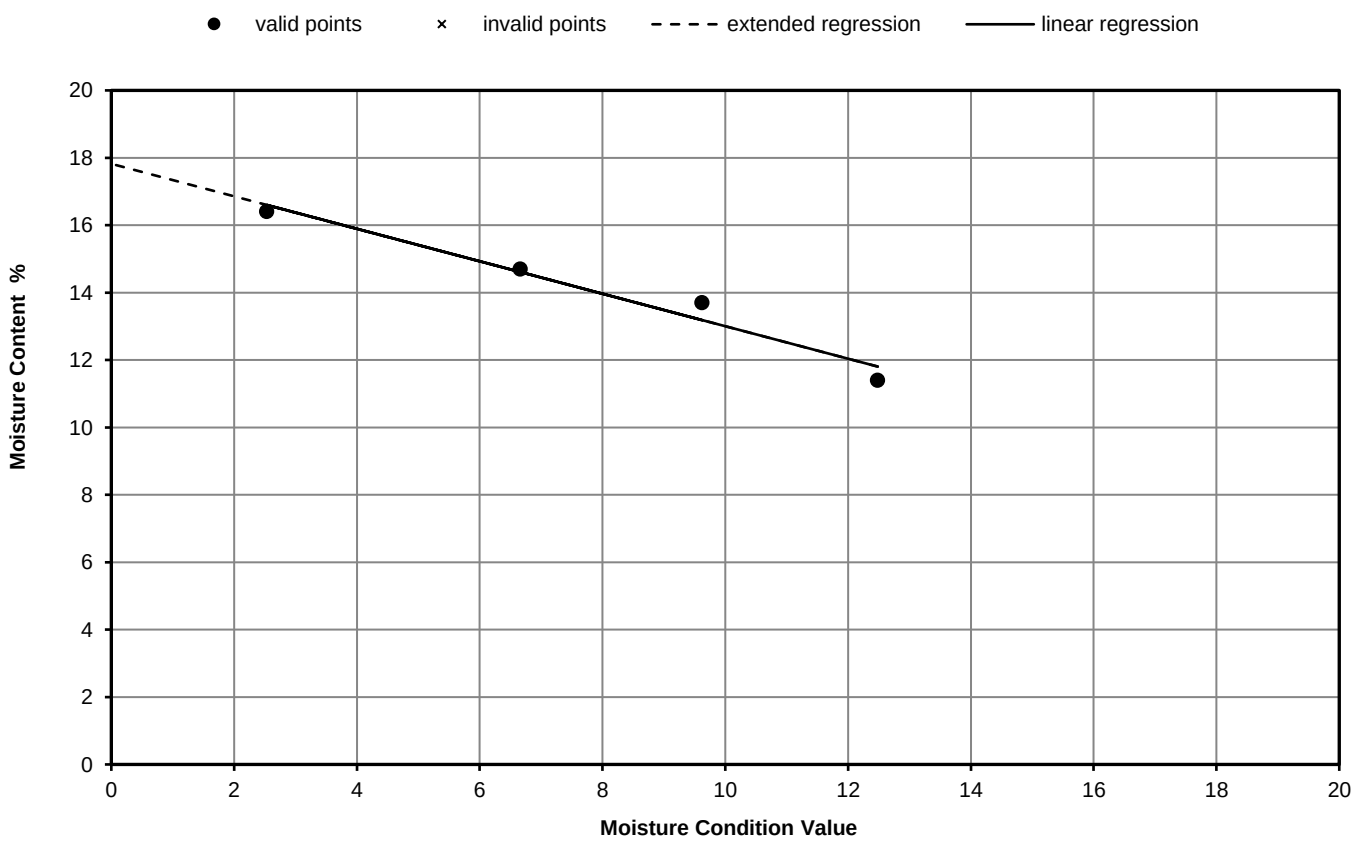
Amount of material larger than 20mm sieve removed	0	%
Natural Moisture Content of sample	11.4	%
Initial Moisture Content of test sample below 20mm	11.4	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	11.4	14.7	16.4	13.7	
Moisture Condition Value	12.5	6.7	2.5	9.6	
MCV report	12.5	6.7	2.5	9.6	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = >140kPa	Hand Vane = 56kPa	Hand Vane = 26kPa	Hand Vane = 69kPa	



UKAS TESTING

GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP120
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	0.60 - 0.90
Specimen Description	Dark brown slightly sandy slightly gravelly CLAY.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	06/02/2024

Sample preparation

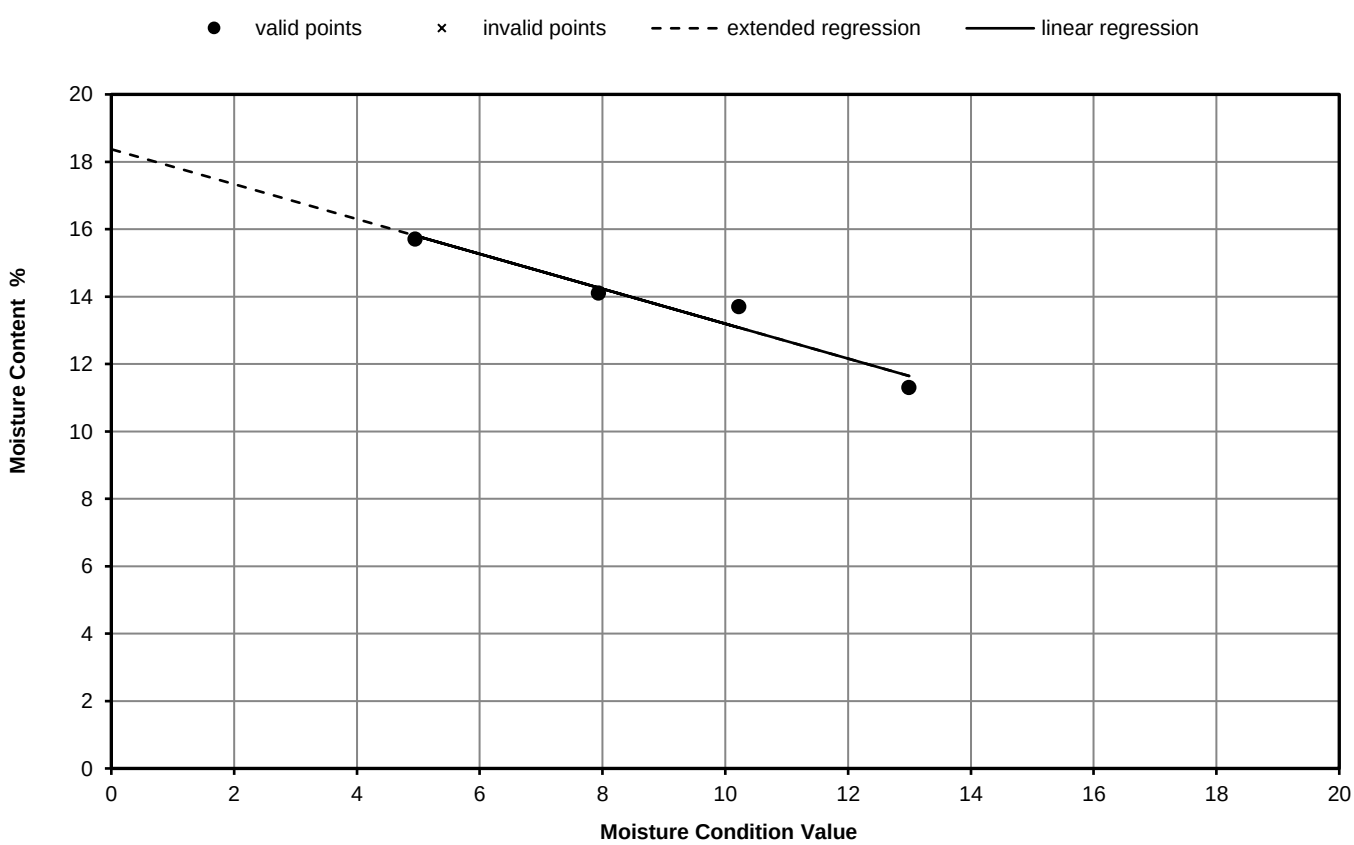
Amount of material larger than 20mm sieve removed	0.89	%
Natural Moisture Content of sample	11.3	%
Initial Moisture Content of test sample below 20mm	11.3	%

Composite of fresh and reused material tested

General remarks

Table of results

MCV Test Number	1	2	3	4	
Moisture Content, %	11.3	14.1	15.7	13.7	
Moisture Condition Value	13.0	7.9	4.9	10.2	
MCV report	13.0	7.9	4.9	10.2	
Effective / Valid data point	YES	YES	YES	YES	
Specimen remarks	Hand Vane = >140kPa	Hand Vane = 73kPa	Hand Vane = 39kPa	Hand Vane = 131kPa	



GEOTECHNICS	Moisture Condition Value / Moisture Content Relationship			Project Number	PN234595
				Hole Number	TP123
Site Name	Pyramid Park, Bury			Sample Number	
Specimen Reference	3	Specimen Depth	m	Depth (m)	0.90 - 1.00
Specimen Description	Brown gravelly SAND.			Sample Type	B
Test Method	BS1377:Part 4:1990:clause 5.5			Date started	05/02/2024

Sample preparation

Amount of material larger than 20mm sieve removed	10.12	%
Natural Moisture Content of sample	14.3	%
Initial Moisture Content of test sample below 20mm	14.3	%

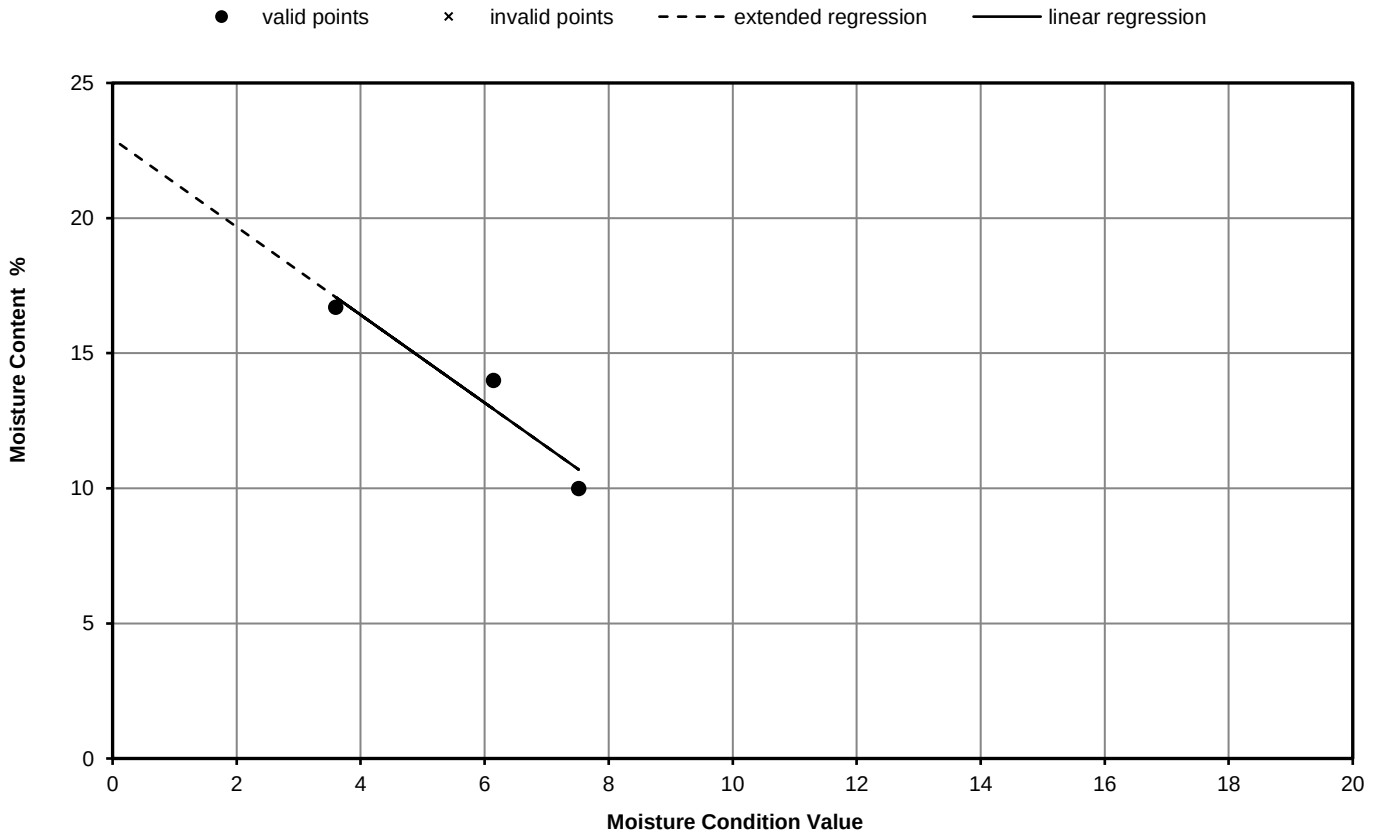
Composite of fresh and reused material tested

General remarks

Sample isn't suitable for multipoint method and best fit from the data has been presented.

Table of results

MCV Test Number	1	2	3		
Moisture Content, %	14.0	16.7	10.0		
Moisture Condition Value	6.1	3.6	7.5		
MCV report	6.1	3.6	7.5		
Effective / Valid data point	YES	YES	YES	NO	
Specimen remarks	Hand Vane - Unsuitable	Hand Vane - Unsuitable	Hand Vane - Unsuitable		



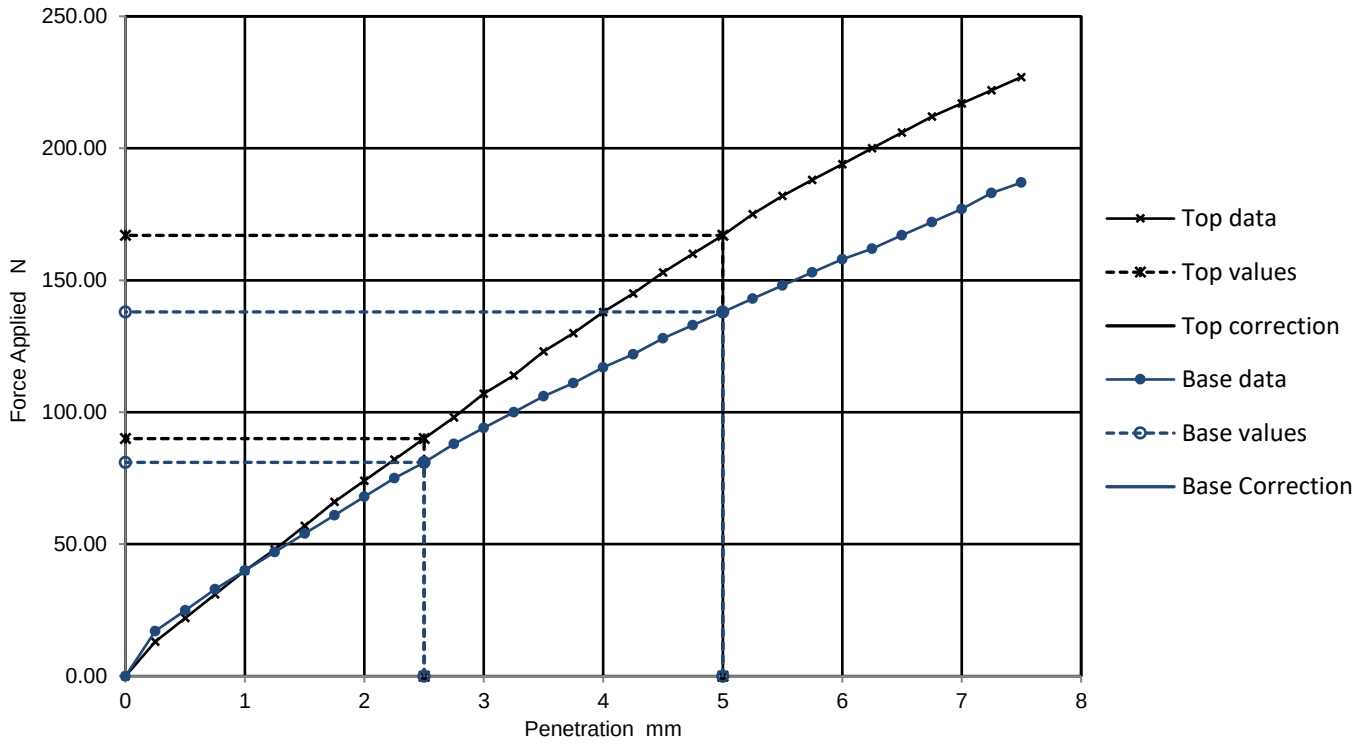
UKAS TESTING

GEOTECHNICS	California Bearing Ratio (CBR)				Project Number	PN234595
					Hole Number	BH104
Project Name	Pyramid Park, Bury				Sample Number	
Specimen Reference	2	Specimen Depth		m	Depth (m)	0.50 - 1.20
Specimen Description	MADE GROUND: Brown slightly sandy gravelly clay.				Sample Type	B
Test Method	BS1377 : Part 4 : 1990, clause 7				CBR Test Number	1

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	15	%	Dry density after soaking	1.86	Mg/m3
Initial Specimen details	Bulk density	2.16	Mg/m3	Surcharge applied	12.3 kg
	Dry density	1.86	Mg/m3	Equivalent Overburden	7 kPa
	Moisture content		%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	#Average	Moisture Content %
TOP	No	0.7	0.8	0.8	0.8	16.1
BASE	No	0.6	0.7	0.7		16.1

Remarks	Test Specific Remarks	Printed
		14/02/2024

*Soaking (if applicable) not UKAS accredited. #Average value reported if Top & Base are ± 10%

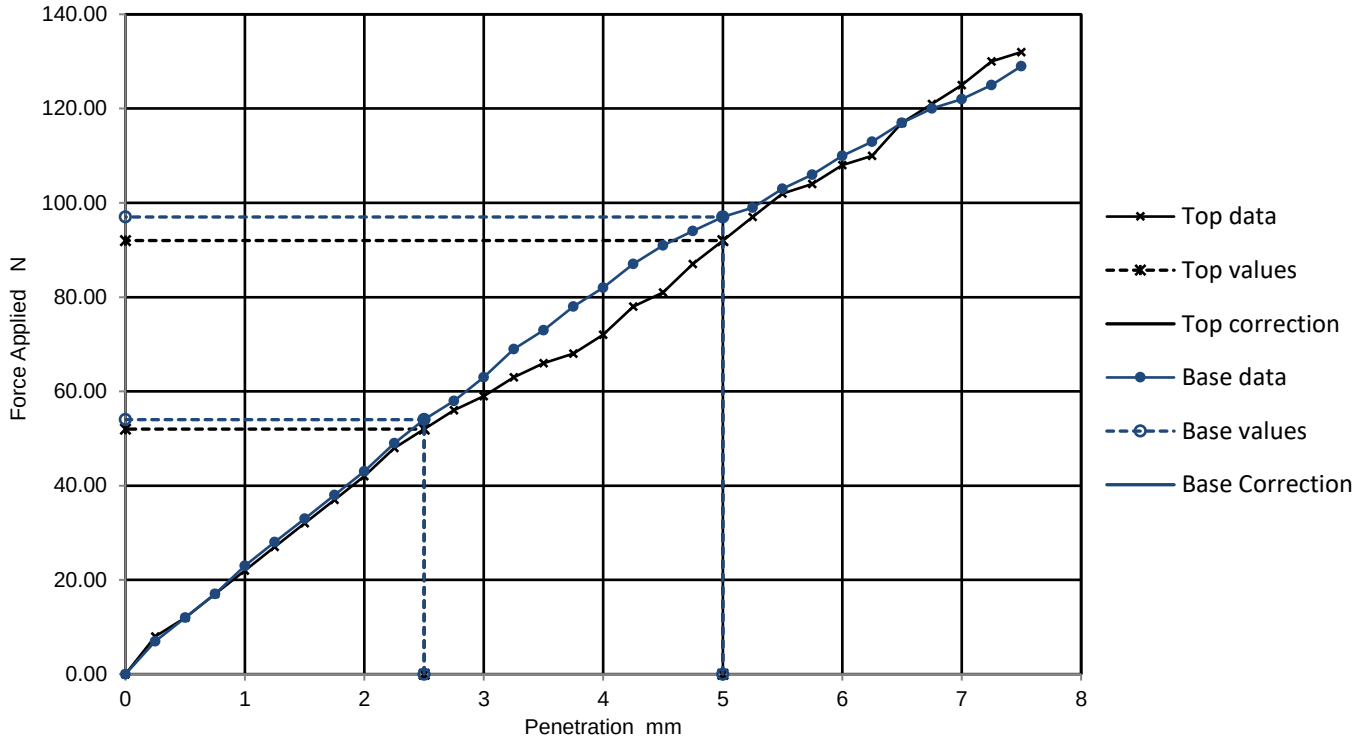
UKAS TESTING 1365

GEOTECHNICS	California Bearing Ratio (CBR)				Project Number	PN234595
					Hole Number	BH105
Project Name	Pyramid Park, Bury				Sample Number	
Specimen Reference	3	Specimen Depth		m	Depth (m)	0.50 - 1.20
Specimen Description	MADE GROUND: Dark brown slightly sandy slightly gravelly clay.				Sample Type	B
Test Method	BS1377 : Part 4 : 1990, clause 7				CBR Test Number	1

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	13	%	Dry density after soaking	1.42	Mg/m3
Initial Specimen details	Bulk density	1.84	Mg/m3	Surcharge applied	12.3 kg
	Dry density	1.42	Mg/m3	Equivalent Overburden	7 kPa
	Moisture content		%		

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	#Average	Moisture Content %
TOP	No	0.4	0.5	0.5	0.5	29.5
BASE	No	0.4	0.5	0.5		29.5

Remarks	Test Specific Remarks	Printed
		14/02/2024

*Soaking (if applicable) not UKAS accredited. #Average value reported if Top & Base are ± 10%

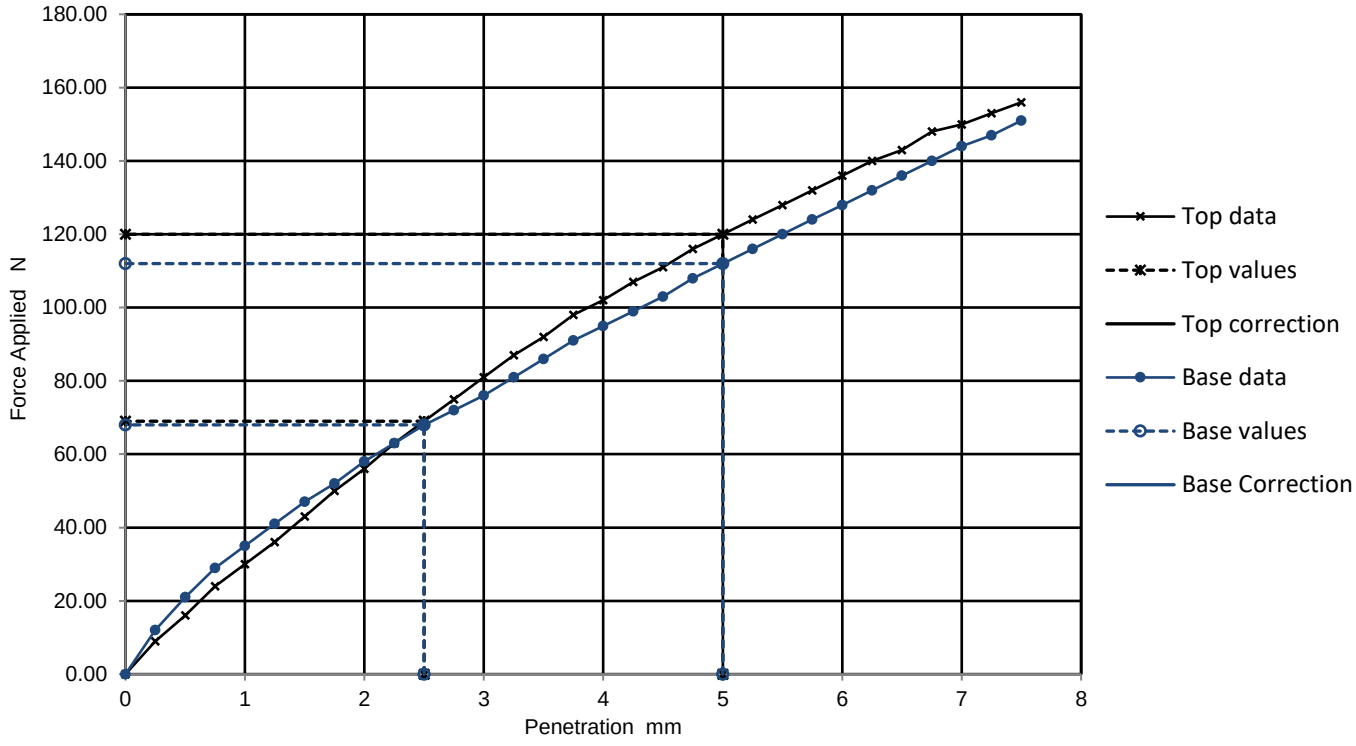
UKAS TESTING 1365

GEOTECHNICS	California Bearing Ratio (CBR)				Project Number	PN234595
					Hole Number	TP104
Project Name	Pyramid Park, Bury				Sample Number	
Specimen Reference	3	Specimen Depth		m	Depth (m)	0.50 - 0.80
Specimen Description	MADE GROUND: Brown slightly sandy gravelly clay.				Sample Type	B
Test Method	BS1377 : Part 4 : 1990, clause 7				CBR Test Number	1

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	29	%	Dry density after soaking	1.38	Mg/m3
Initial Specimen details	Bulk density	1.82 Mg/m3	Surcharge applied	12.3	kg
	Dry density	1.38 Mg/m3	Equivalent Overburden	7	kPa
	Moisture content	%			

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	#Average	Moisture Content %
TOP	No	0.5	0.6	0.6	0.6	31.9
BASE	No	0.5	0.6	0.6		32.1

Remarks	Test Specific Remarks	Printed
		14/02/2024

*Soaking (if applicable) not UKAS accredited. #Average value reported if Top & Base are ± 10%

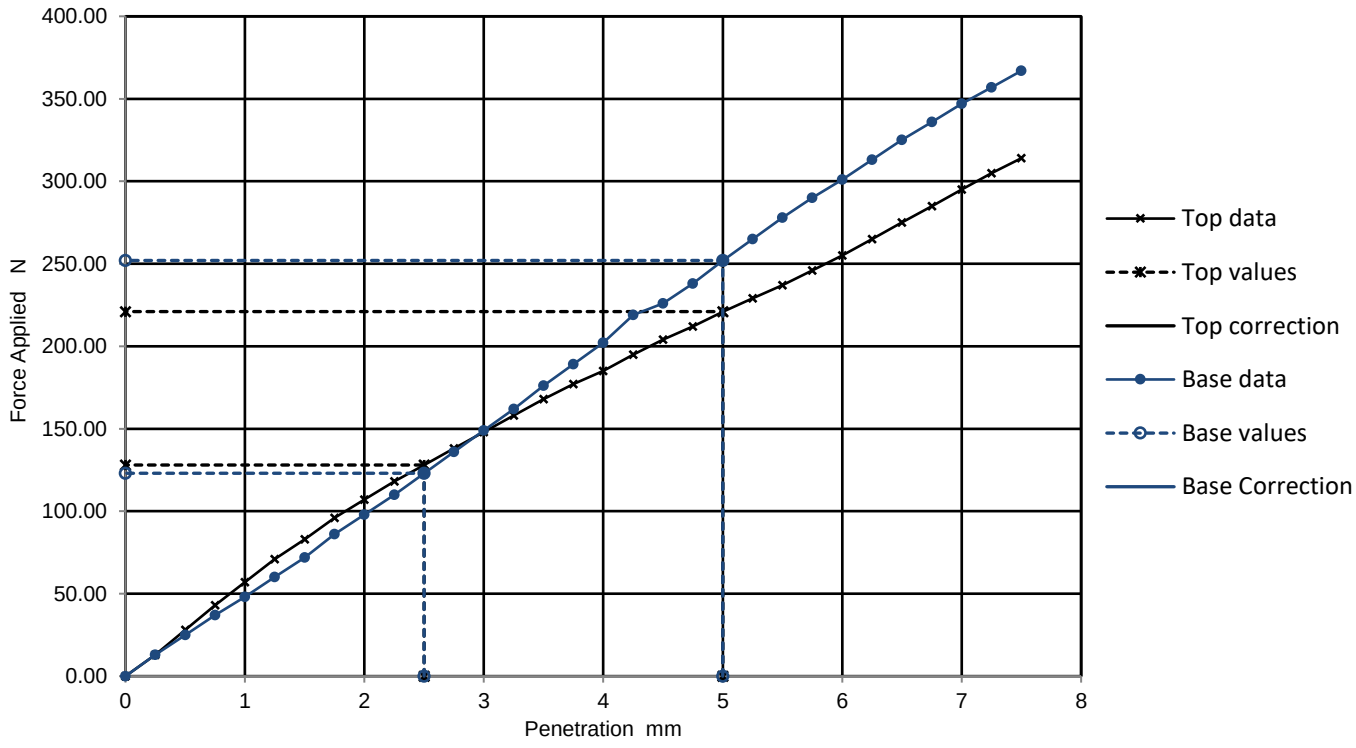
UKAS TESTING 1365

GEOTECHNICS	California Bearing Ratio (CBR)				Project Number	PN234595
					Hole Number	TP109
Project Name	Pyramid Park, Bury				Sample Number	
Specimen Reference	3	Specimen Depth		m	Depth (m)	0.50 - 0.80
Specimen Description	MADE GROUND: Dark brown slightly sandy gravelly clay.				Sample Type	B
Test Method	BS1377 : Part 4 : 1990, clause 7				CBR Test Number	1

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	46	%	Dry density after soaking	1.60	Mg/m3
Initial Specimen details	Bulk density	1.94 Mg/m3	Surcharge applied	12.3	kg
	Dry density	1.60 Mg/m3	Equivalent Overburden	7	kPa
	Moisture content	%			

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	#Average	Moisture Content %
TOP	No	1.0	1.1	1.1	1.2	21.6
BASE	No	0.9	1.3	1.3		21.2

Remarks	Test Specific Remarks	Printed	
		14/02/2024	UKAS TESTING 1365

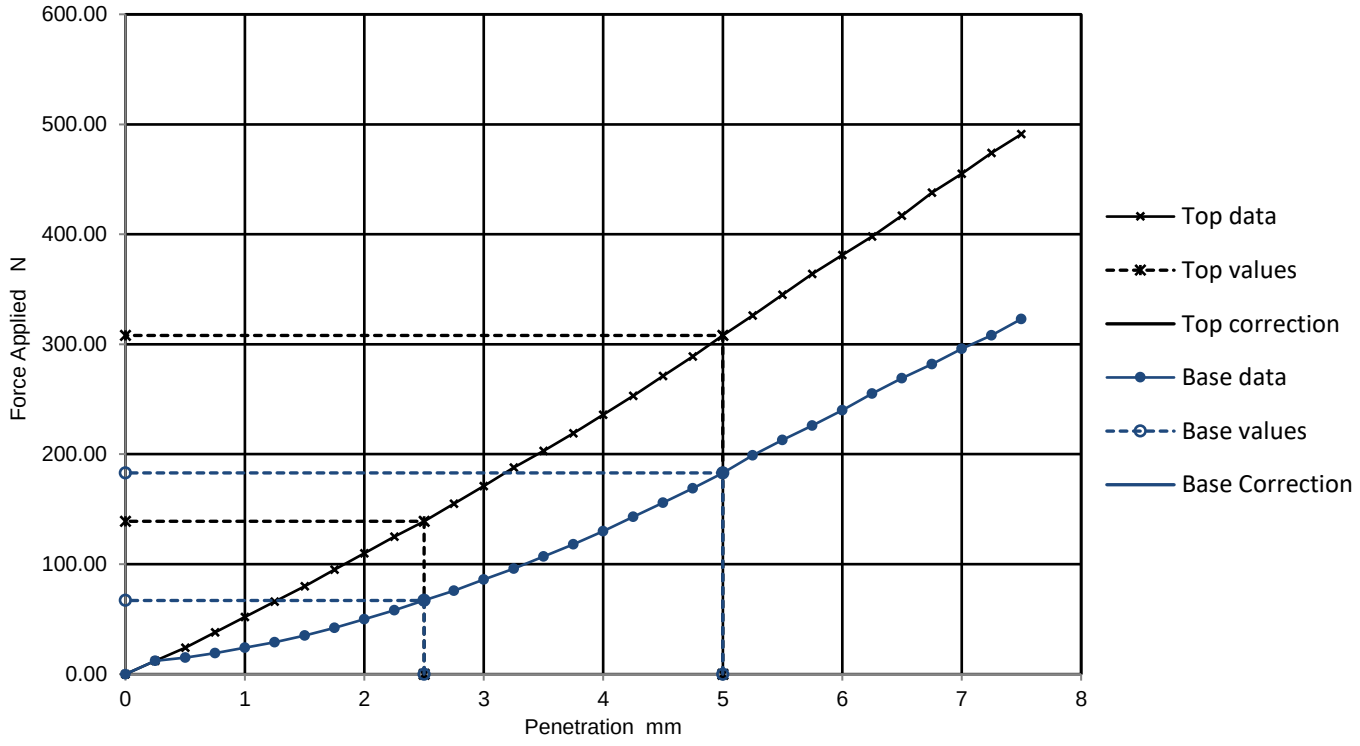
*Soaking (if applicable) not UKAS accredited. #Average value reported if Top & Base are ± 10%

GEOTECHNICS	California Bearing Ratio (CBR)				Project Number	PN234595
					Hole Number	TP110
Project Name	Pyramid Park, Bury				Sample Number	
Specimen Reference	3	Specimen Depth		m	Depth (m)	0.70 - 0.90
Specimen Description	Brown slightly sandy slightly gravelly CLAY.				Sample Type	B
Test Method	BS1377 : Part 4 : 1990, clause 7				CBR Test Number	1

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	24 %	Dry density after soaking	1.96	Mg/m3	
Initial Specimen details	Bulk density	2.22 Mg/m3	Surcharge applied	12.3	kg
	Dry density	1.96 Mg/m3	Equivalent Overburden	7	kPa
	Moisture content	%			

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, % 2.5mm	5mm	Highest	#Average	Moisture Content %
TOP	No	1.1	1.5	1.5		13.4
BASE	No	0.5	0.9	0.9		13.4

Remarks	Test Specific Remarks	Printed
		14/02/2024

*Soaking (if applicable) not UKAS accredited. #Average value reported if Top & Base are ± 10%

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The Testing Lab PLC
Unit 2 James Road
Adwick-le-Street
Doncaster
DN6 7HH

Document Transmittal Sheet

To
Geotechnics Limited
Unit 1B, Border Industrial Estate
River Lane
Saltney
Chester CH4 8RJ

Despatch Date	02/02/2024
Issue Number	2
Issuer Name	M Athorne
Issuer Signatory	M. Athorne
Date of Sample Receipt:	15/01/2024
Start Date of Test:	15/01/2024
Date of Issue of report:	02/02/2024

Report Remarks

Note: Test carried out at TTL laboratory facility as detaied in contact information

Project Name:
Pyramid Park, Bury

Project No:
J259856

Details of Report Contents

*Tests in the following list marked * are not UKAS accredited*

ITEM	Sheet Nos	Comments
Document Transmittal sheet / Contents	page(s) 1 to 1	

TESTS	Sheet Nos	Authoriser Signatory
Index Properties - Summary of Results	INDX 1 to 1	M. Athorne
Particle Size Distribution Analyses	PSD 1 to 1	M. Athorne
Compaction test, 2.5kg, light	COMPL 1 to 4	M. Athorne
California Bearing Ratio - single test	CBR 1 to 1	M. Athorne
Moisture Condition Relationship	MCVREL 1 to 3	M. Athorne
Hane Vane test - Summary of Results *	HVANE 1 to 1	M. Athorne
End of Report		

Total number of pages in this report: 12

The results contained in this report relate only to samples received in the laboratory and are tested 'as received' unless otherwise stated.Opinions and interpretations expressed in this report are outside the scope of accreditation.
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GQF-008-48
Issue 01 - Oct 22

Summary of Classification Test Results

Project No.
J259856

Project Name
Pyramid Park, Bury

Hole No.	Sample				Soil Description	Density bulk	Density dry	*w*	Passing 425µm	LL	PL	PI	Particle density	Remarks
	Ref	Top	Base	Type		Mg/m^3		%	%	%	%	%	Mg/m^3	
TP107		0.50	0.70	D	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.			28	38	31	19	12		
TP107		1.50	1.70	D	MADE GROUND: Brown slightly sandy slightly gravelly clay.			19	76	32	24	8		
TP121		0.20	0.40	D	MADE GROUND: Brown slightly sandy slightly gravelly clay.			14	79	36	21	15		

All tests performed in accordance with BS1377:1990 unless specified otherwise

Date Printed 02/02/2024

Key

Density test
Linear measurement unless :
wd - water displacement
wi - immersion in water

Liquid Limit
4pt cone unless :
cas - Casagrande method
1pt - single point test

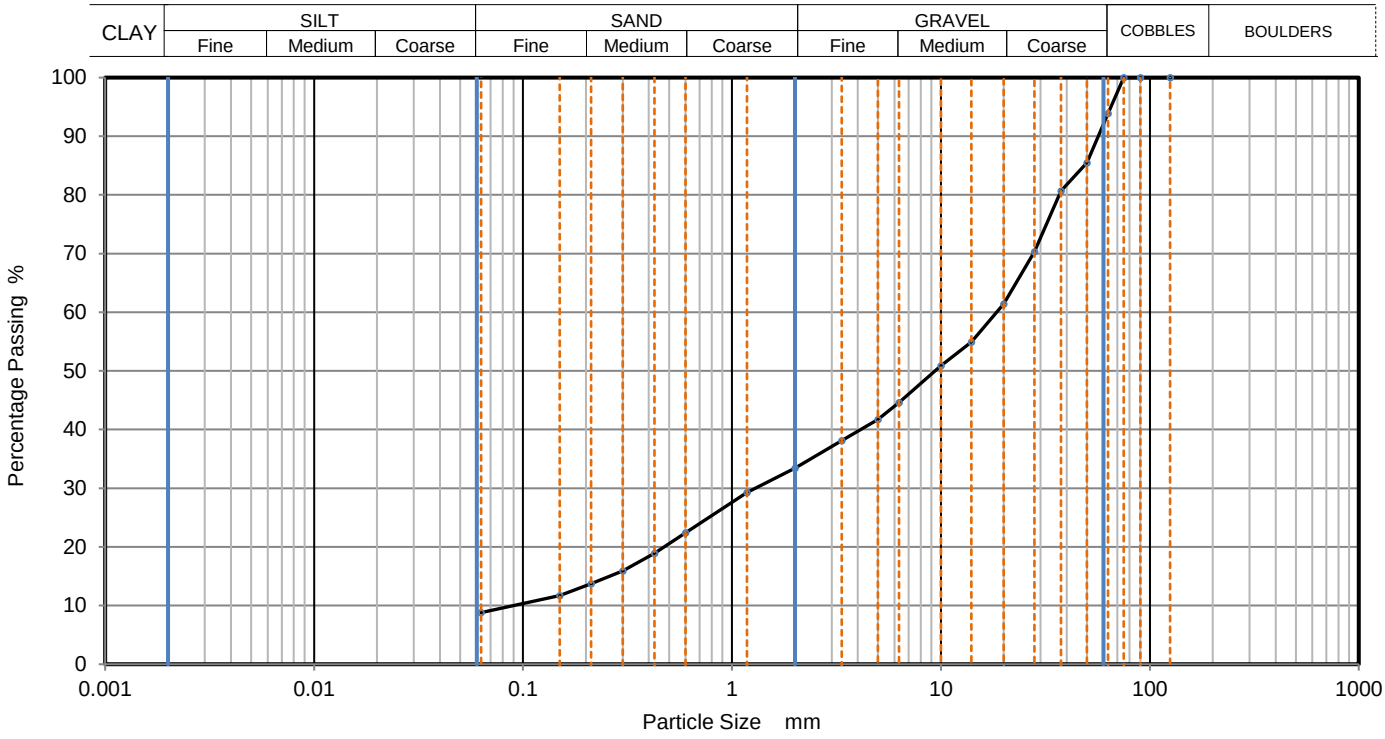
Particle density
sp - small pyknometer
gj - gas jar

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INDEX

GQF-008-55 Issue 01 - Oct 22	**PARTICLE SIZE DISTRIBUTION**			Job Ref	J259856
				Borehole/Pit No.	TP121
Project Name	Pyramid Park, Bury			Sample No.	
Soil Description	MADE GROUND: Grey very sandy clayey gravel with a medium cobble content.			Depth, m	3.80
Specimen Reference		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 2:1990, clause 9.2			KeyLAB ID	TTLP202401229



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	94		
50	86		
37.5	81		
28	70		
20	61		
14	55		
10	51		
6.3	45		
5	42		
3.35	38		
2	33		
1.18	29		
0.6	22		
0.425	19		
0.3	16		
0.212	14		
0.15	12		
0.063	9		

Dry Mass of sample, g	11504

Sample Proportions	% dry mass
Very coarse	6
Gravel	61
Sand	25
Fines <0.063mm	9

Grading Analysis		
D_{100}	mm	
D_{60}	mm	18.5
D_{30}	mm	1.29
D_{10}	mm	0.0897
Uniformity Coefficient		210
Curvature Coefficient		1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

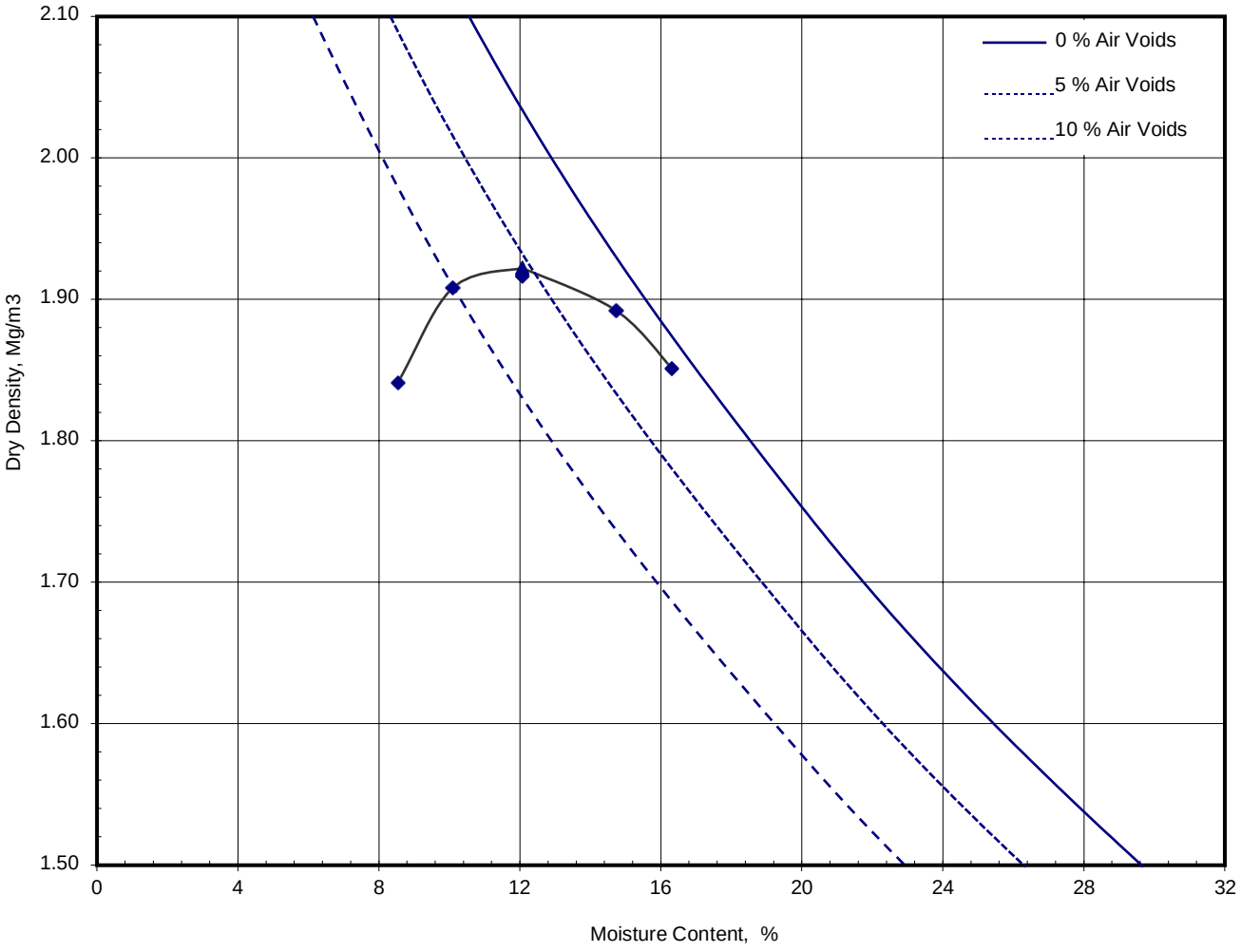
Date Printed	02/02/2024

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PSD

	Dry Density / Moisture Content Relationship **Light Compaction**			Job Ref	**J259856**
				Borehole / Pit No	BH107
Project Name	**Pyramid Park, Bury**			Sample No	
Soil Description	MADE GROUND: Reddish brown gravelly slightly clayey sand.			Depth	0.30 m
Specimen Ref.		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer			Keylab ID	TTLP2024012410

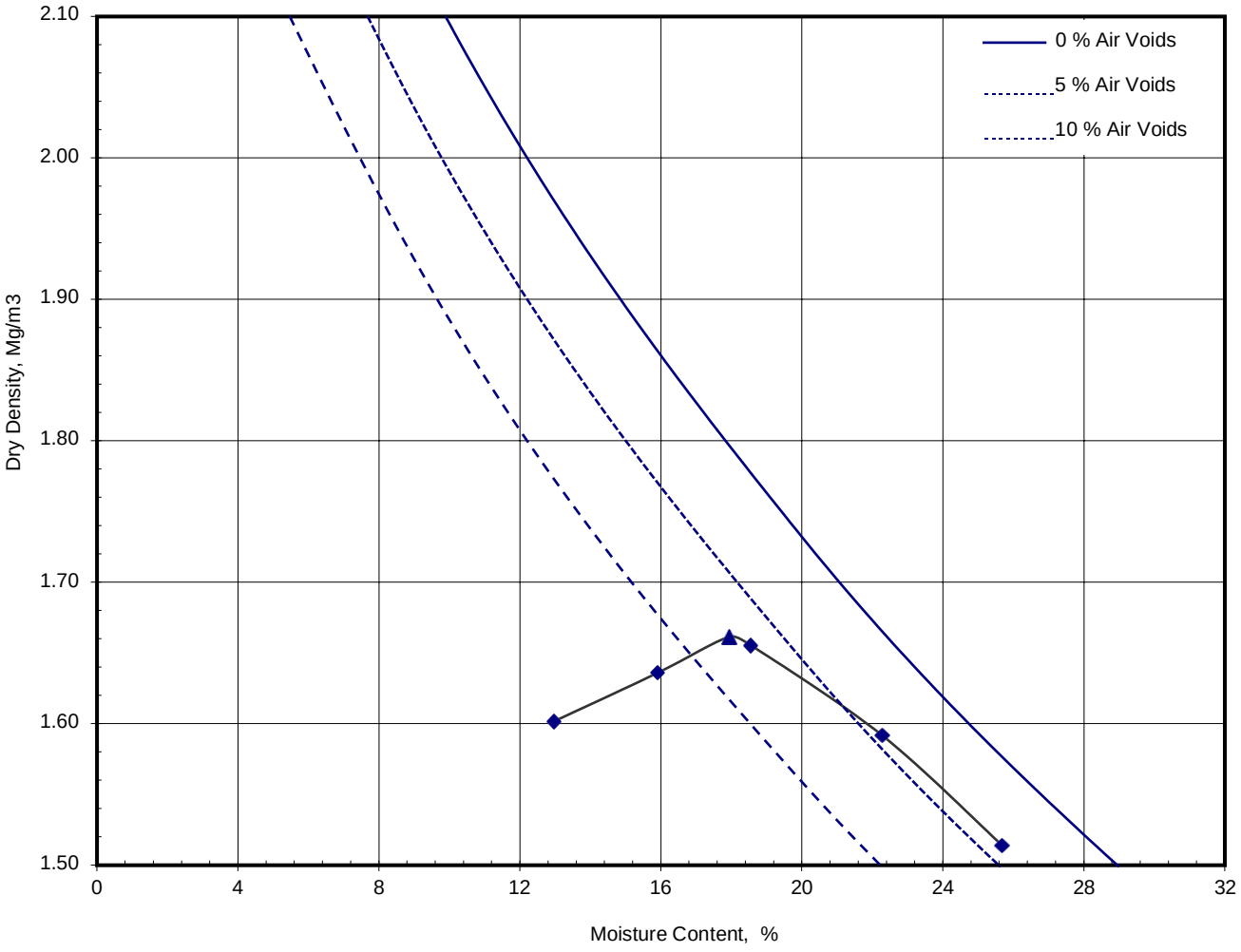


Preparation		
Mould Type		CBR
Samples Used		Composite specimens tested
Material Retained on 37.5 mm Sieve	%	10
Material Retained on 20.0 mm Sieve	%	12
Particle Density - Assumed	Mg/m³	2.70

Maximum Dry Density	Mg/m³	**1.92**
Optimum Moisture Content	%	**12**

TTL	UKAS TESTING 7758	Remarks	**COMPL**
		Date Printed: 02/02/2024	

	Dry Density / Moisture Content Relationship **Light Compaction**			Job Ref	**J259856**
				Borehole / Pit No	TP107
Project Name	**Pyramid Park, Bury**			Sample No	
Soil Description	MADE GROUND: Brown slightly sandy slightly gravelly clay.			Depth	1.50 m
Specimen Ref.		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer			Keylab ID	TTLP202401223



Preparation		
Mould Type		CBR
Samples Used		Composite specimens tested
Material Retained on 37.5 mm Sieve	%	7
Material Retained on 20.0 mm Sieve	%	6
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.66**
Optimum Moisture Content	%	**18**

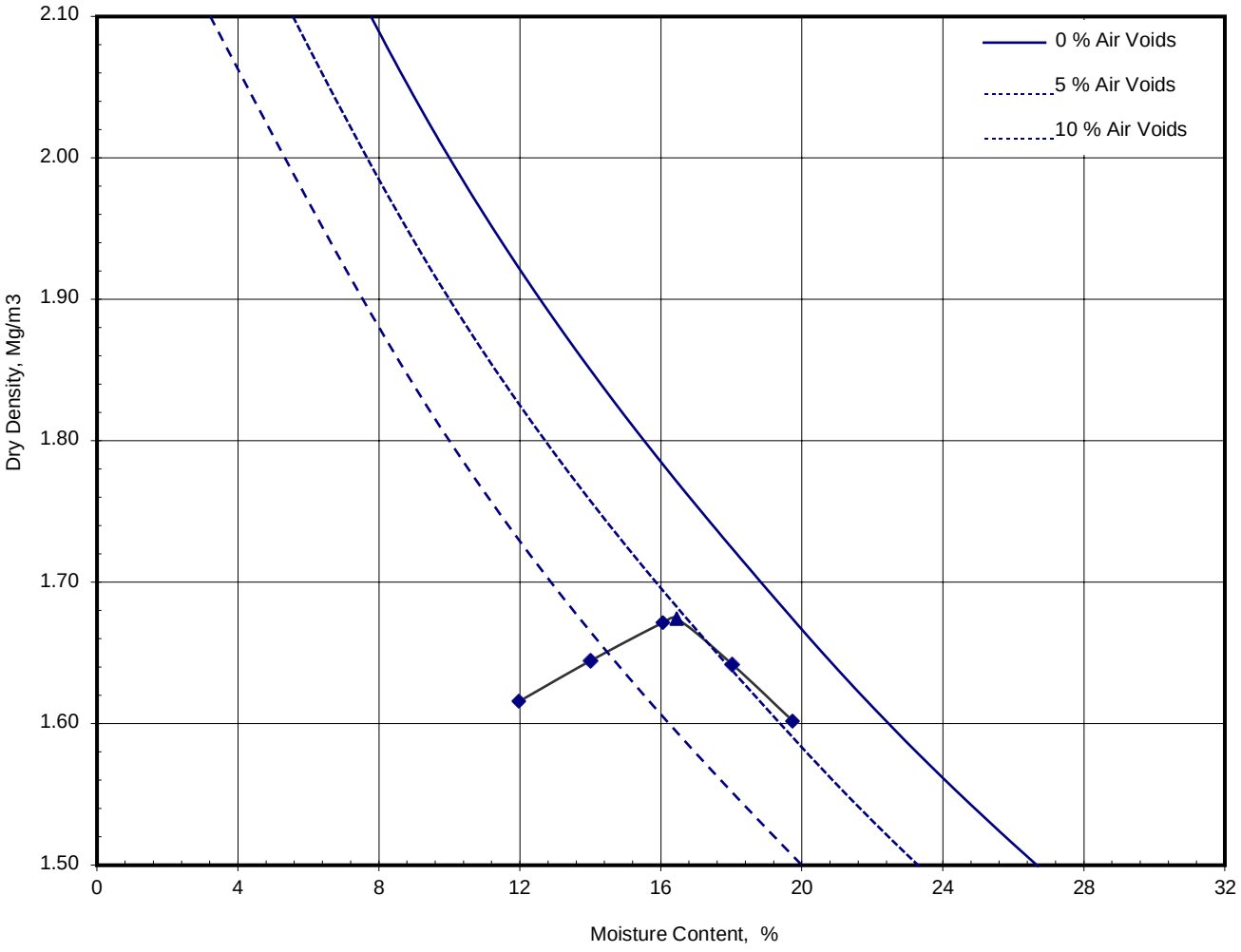
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Remarks

Date Printed	02/02/2024	

COMPL

	Dry Density / Moisture Content Relationship **Light Compaction**			Job Ref	**J259856**
				Borehole / Pit No	TP108
Project Name	**Pyramid Park, Bury**			Sample No	
Soil Description	MADE GROUND: Brown gravelly clayey sand with pockets of clay.			Depth	0.20 m
Specimen Ref.		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer			Keylab ID	TTLP2024012411

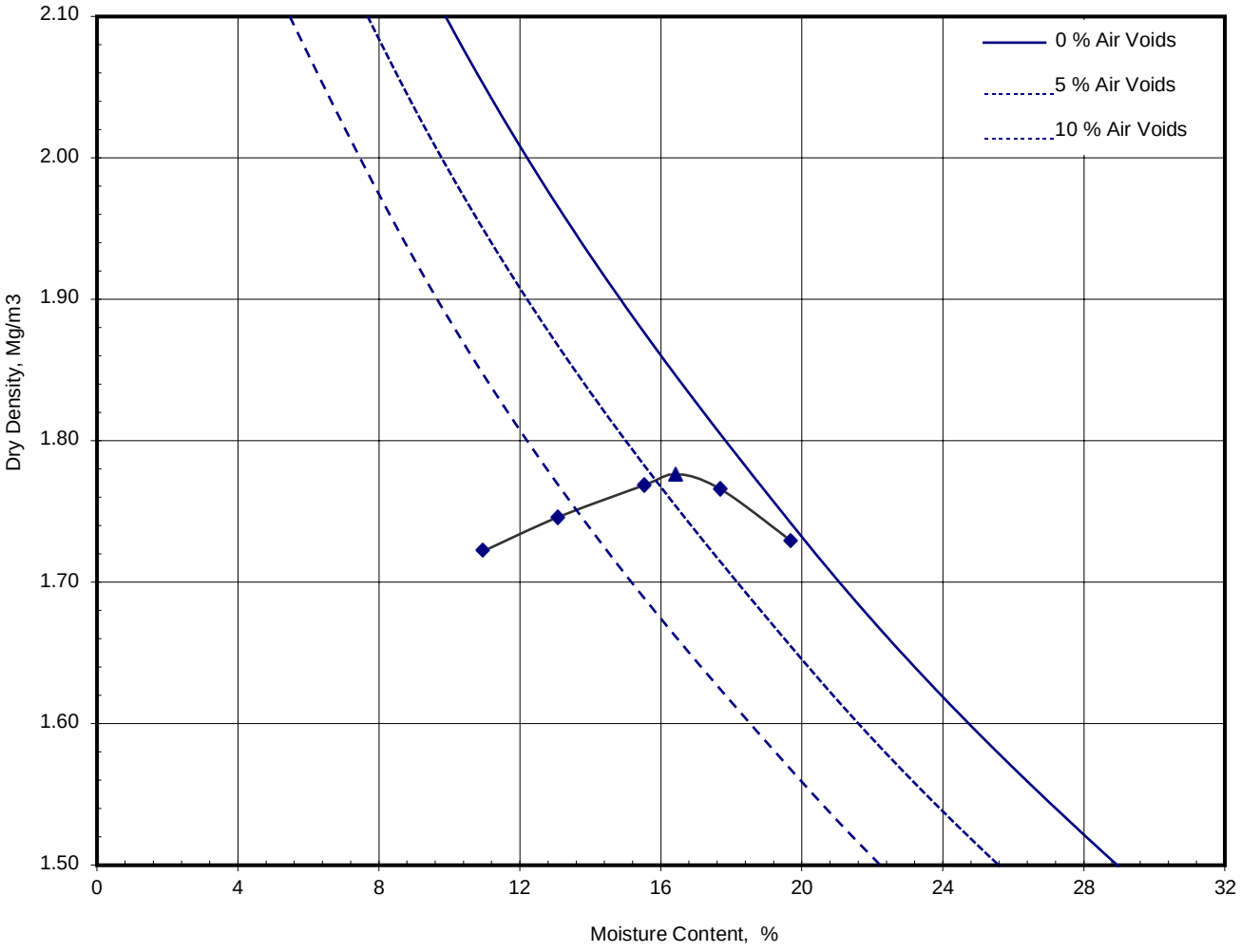


Preparation		
Mould Type		CBR
Samples Used		Composite specimens tested
Material Retained on 37.5 mm Sieve	%	5
Material Retained on 20.0 mm Sieve	%	9
Particle Density - Assumed	Mg/m³	2.50

Maximum Dry Density	Mg/m³	**1.67**
Optimum Moisture Content	%	**16**

TTL	UKAS TESTING 7758	Remarks	**COMPL**
		Date Printed: 02/02/2024	

	Dry Density / Moisture Content Relationship **Light Compaction**			Job Ref	**J259856**
				Borehole / Pit No	TP121
Project Name	**Pyramid Park, Bury**			Sample No	
Soil Description	MADE GROUND: Brown slightly sandy slightly gravelly clay.			Depth	1.00 m
Specimen Ref.		Specimen Depth	m	Sample Type	B
Test Method	BS1377:Part 4:1990, clause 3.4, 2.5kg rammer			Keylab ID	TTLP202401226



Preparation		
Mould Type		CBR
Samples Used		Composite specimens tested
Material Retained on 37.5 mm Sieve	%	5
Material Retained on 20.0 mm Sieve	%	5
Particle Density - Assumed	Mg/m³	2.65

Maximum Dry Density	Mg/m³	**1.78**
Optimum Moisture Content	%	**16**

TTL	UKAS TESTING 7758	Remarks	**COMPL**
		Date Printed: 02/02/2024	

Summary of Hand Vane Shear Strength Results

Project No.	Project Name
J259856	Pyramid Park, Bury

Hole No.	Sample				Soil Description	Average Hand Vane Result kPa	Moisture Content
	Ref	Top	Base	Type			
TP107		0.50	0.70	B	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.	22	29.5%
TP107		0.50	0.70	B	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.	32	25.2%
TP107		0.50	0.70	B	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.	44.6	21.3%
TP107		0.50	0.70	B	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.	119.3	20.2%
TP107		0.50	0.70	B	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.	33.3	19.4%
TP121		0.20	0.40	B	MADE GROUND: Brown slightly sandy slightly gravelly clay.	54.6	19.6%
TP121		0.20	0.40	B	MADE GROUND: Brown slightly sandy slightly gravelly clay.	77.3	17.1%
TP121		0.20	0.40	B	MADE GROUND: Brown slightly sandy slightly gravelly clay.	>140	15.0%
TP121		0.20	0.40	B	MADE GROUND: Brown slightly sandy slightly gravelly clay.	25.3	21.2%
TP121		0.20	0.40	B	MADE GROUND: Brown slightly sandy slightly gravelly clay.	92.6	18.1%
TP121		2.00	2.30	B	MADE GROUND: Grey slightly sandy slightly gravelly clay.	34	27.7%
TP121		2.00	2.30	B	MADE GROUND: Grey slightly sandy slightly gravelly clay.	53.3	25.4%
TP121		2.00	2.30	B	MADE GROUND: Grey slightly sandy slightly gravelly clay.	81.3	24.0%
TP121		2.00	2.30	B	MADE GROUND: Grey slightly sandy slightly gravelly clay.	124.6	21.0%
TP121		2.00	2.30	B	MADE GROUND: Grey slightly sandy slightly gravelly clay.	29	28.6%

Notes:
Tests carried out in accordance with Manufacturers Instructions

HAND VANE SUM

GQF-008-54 Issue 01 - Oct 22	**Moisture Condition Value / Moisture Content Relationship**			Job Ref	J259856
				Borehole/Pit No.	TP107
Project Name	Pyramid Park, Bury			Sample No.	
Soil Description	MADE GROUND: Brown slightly gravelly sandy clay with lenses of sand.			Depth	0.5
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202401221
Test Method	BS1377:Part4:1990:clause 5.5			Date started	18/01/2024

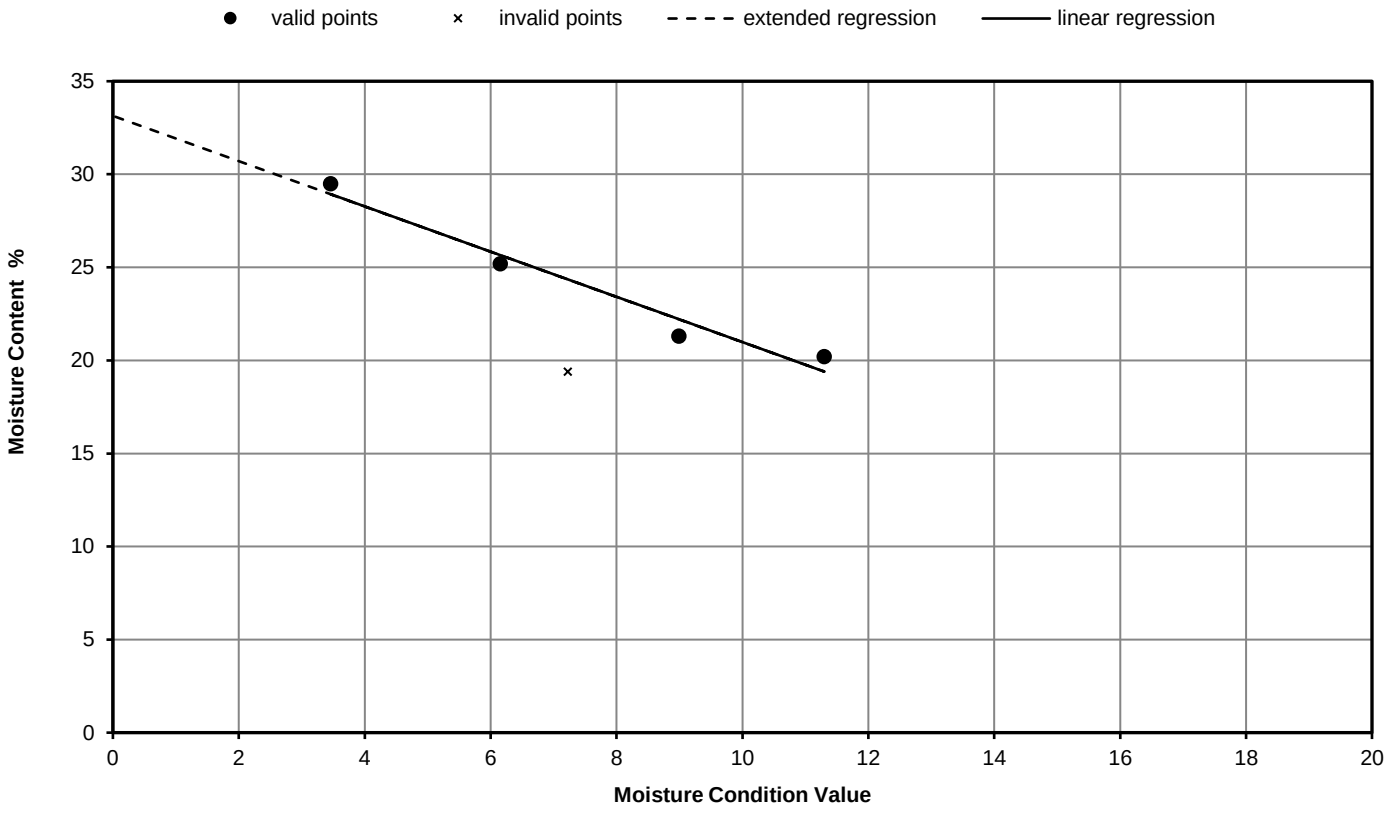
Sample preparation

Amount of material larger than 20mm sieve removed	12	%
Natural Moisture Content of sample	30	%
Initial Moisture Content of test sample below 20mm	31.2	%
Separate specimens tested		

General remarks

Table of results

MCV Test Number	1	2	3	4	5
Moisture Content, %	29.5	25.2	21.3	20.2	19.4
Moisture Condition Value	3.5	6.2	9.0	11.3	7.2
MCV report	3.5	6.2	9	11.3	7.2
Effective / Valid data point	YES	YES	YES	YES	NO
Specimen remarks	Hand Vane = 22kPa	Hand Vane = 32kPa	Hand Vane = 45kPa	Hand Vane = 119kPa	Hand Vane = 33kPa



Date Printed	22/02/2024

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MCV REL

GQF-008-54 Issue 01 - Oct 22	**Moisture Condition Value / Moisture Content Relationship**			Job Ref	J259856
				Borehole/Pit No.	TP121
Project Name	Pyramid Park, Bury			Sample No.	
Soil Description	MADE GROUND: Brown slightly sandy slightly gravelly clay.			Depth	0.2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202401225
Test Method	BS1377:Part4:1990:clause 5.5			Date started	17/01/2024

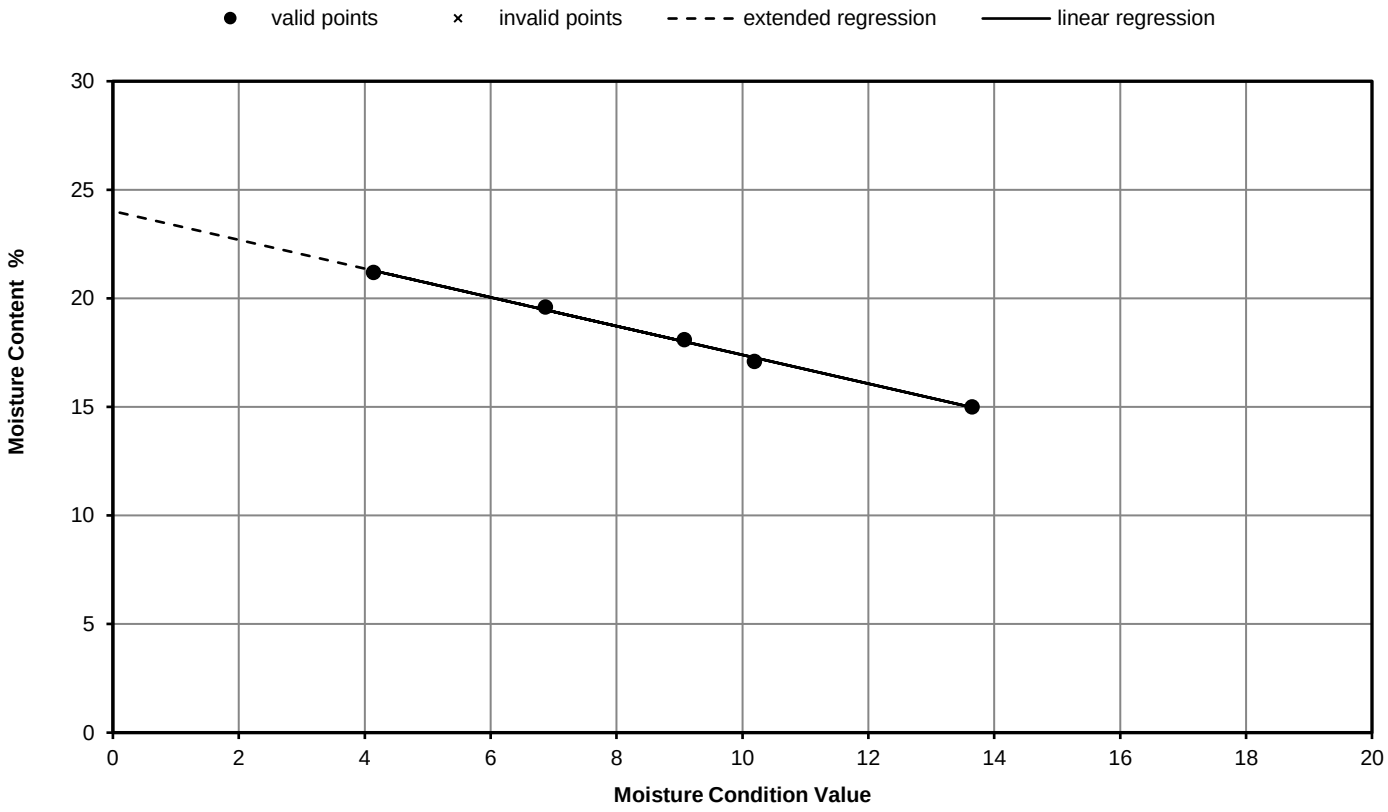
Sample preparation

Amount of material larger than 20mm sieve removed	28	%
Natural Moisture Content of sample	20	%
Initial Moisture Content of test sample below 20mm	19.6	%

General remarks

Table of results

MCV Test Number	1	2	3	4	5
Moisture Content, %	19.6	17.1	15.0	21.2	18.1
Moisture Condition Value	6.9	10.2	13.6	4.1	9.1
MCV report	6.9	10.2	13.6	4.1	9.1
Effective / Valid data point	YES	YES	YES	YES	YES
Specimen remarks	Hand Vane = 55kPa	Hand Vane = 77kPa	Hand Vane >140kPa	Hand Vane = 25kPa	Hand Vane = 93kPa



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MCV REL

GQF-008-54 Issue 01 - Oct 22	**Moisture Condition Value / Moisture Content Relationship**			Job Ref	J259856
				Borehole/Pit No.	TP121
Project Name	Pyramid Park, Bury			Sample No.	
Soil Description	MADE GROUND: Grey slightly sandy slightly gravelly clay.			Depth	2
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description				KeyLAB ID	TTLP202401228
Test Method	BS1377:Part4:1990:clause 5.5			Date started	17/01/2024

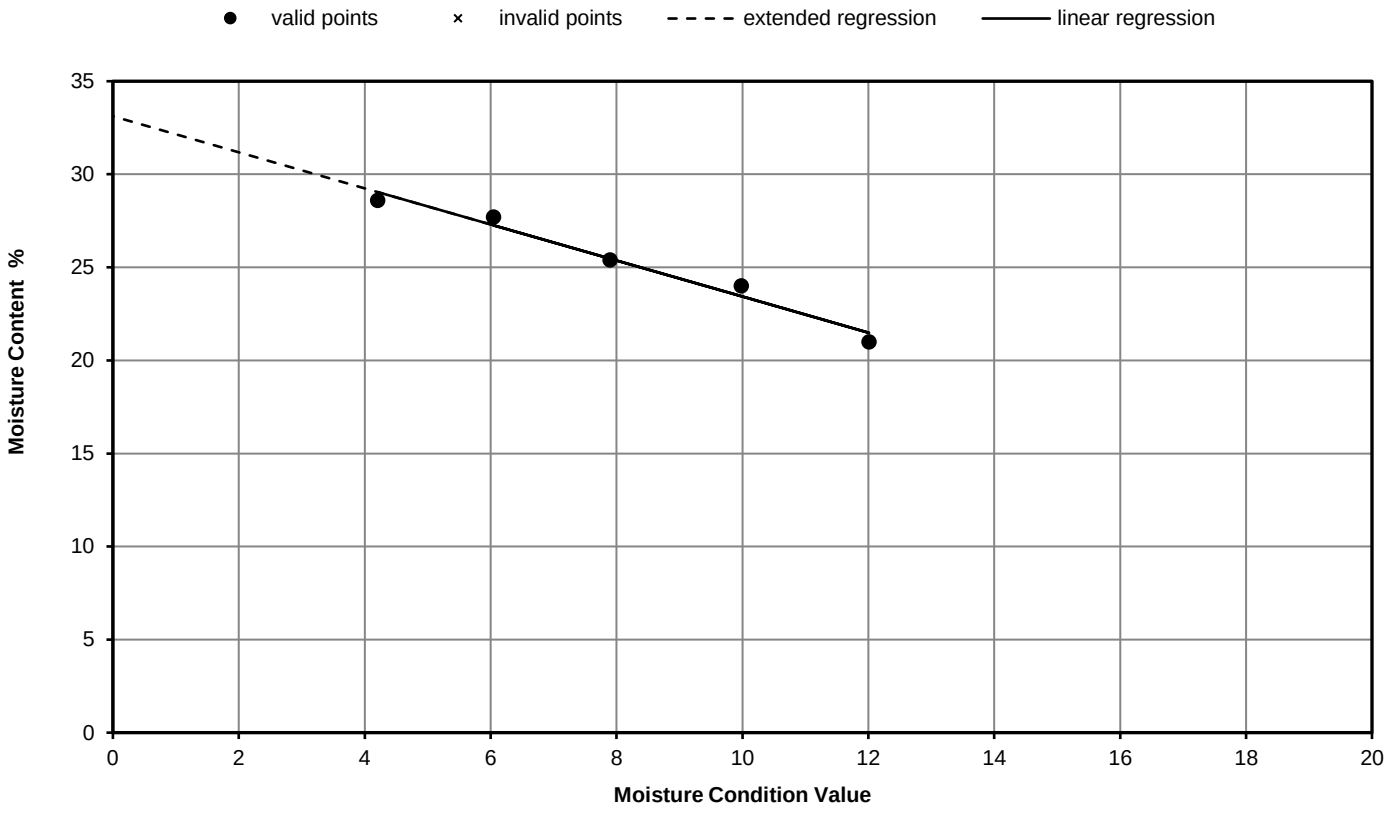
Sample preparation

Amount of material larger than 20mm sieve removed	7	%
Natural Moisture Content of sample	28	%
Initial Moisture Content of test sample below 20mm	27.7	%

General remarks

Table of results

MCV Test Number	1	2	3	4	5
Moisture Content, %	27.7	25.4	24.0	21.0	28.6
Moisture Condition Value	6.0	7.9	10.0	12.0	4.2
MCV report	6	7.9	10	12	4.2
Effective / Valid data point	YES	YES	YES	YES	YES
Specimen remarks	Hand Vane = 34kPa	Hand Vane = 53kPa	Hand Vane = 81kPa	Hand Vane = 125kPa	Hand Vane = 29kPa



Date Printed	22/02/2024

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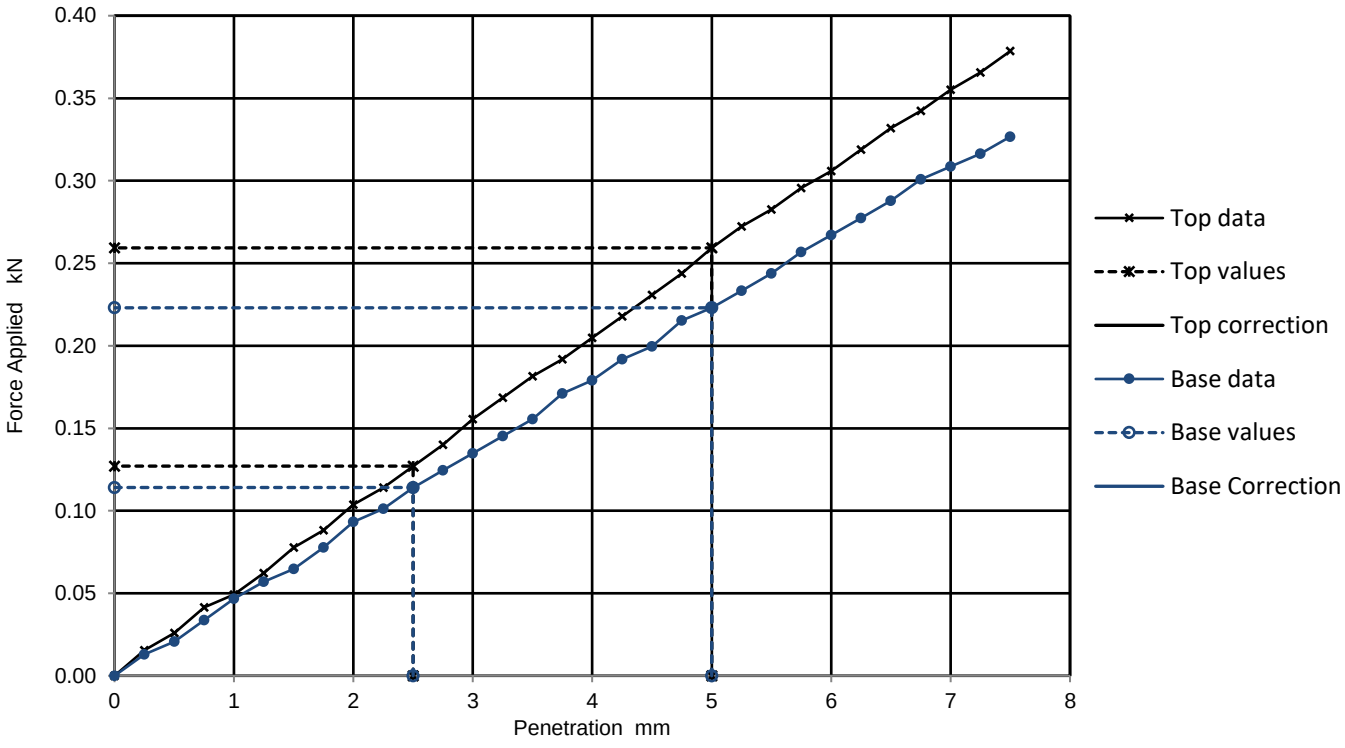
MCV REL

GQF-008-36 Issue 01 - Oct 22	**California Bearing Ratio (CBR)**			Job Ref	J259856
				Borehole/Pit No.	TP102
Project Name	Pyramid Park, Bury			Sample No.	
Soil Description	MADE GROUND: Grey slightly sandy slightly gravelly clay.			Depth m	0.60
Specimen Reference		Specimen Depth	m	Sample Type	B
Specimen Description	Dark grey slightly gravelly very sandy CLAY			KeyLAB ID	TTLP202401220
Test Method	BS1377 : Part 4 : 1990, clause 7			CBR Test Number	1

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		16	%	Dry density after soaking		Mg/m^3
Initial Specimen details	Bulk density	1.84	Mg/m^3	Surcharge applied	0	kg
	Dry density	1.42	Mg/m^3		0	kPa
	Moisture content	29.7	%			

Force v Penetration Plots



Results

	Curve correction applied	CBR Values, %				Moisture Content %
		2.5mm	5mm	Highest	Average	
TOP		0.96	1.3	1.3	1.2	29.8
BASE		0.86	1.1	1.1		28.1

Remarks

Date Printed	02/02/2024

7758

CBR

APPENDIX 9

Laboratory Test Results - Contamination (Soil)

Certificate of Analysis

Certificate Number	23-30352	*Issued:*	08-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-30352
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	12 Soil samples.
Date Received	22-Dec-23
Date Started	22-Dec-23
Date Completed	08-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-30352
Client Ref PN234595
Contract Title PYRAMID PARK

			Lab No	2282353	2282354	2282355	2282357	2282358	2282359	2282360	2282361	2282363
			.Sample ID	BH101	BH102	BH108	TP102	TP102	TP102	TP102	TP102	TP104
			Depth	5.00-5.45	6.00-6.45	5.00-5.45	0.60-0.90	0.60-0.90	1.50-1.80	2.50-2.70	3.70-4.00	0.50-0.80
			Other ID									
			Sample Type	D	D	D	D	D	D	D	D	D
			Sampling Date	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**									
Asbestos Quantification	DETSC 1102	0.001	%					< 0.001				
Inorganics												
Loss on Ignition at 440oC	DETSC 2003#	0.01	%						4.2		3.4	
pH	DETSC 2008#		pH	8.2	8.0	8.3	6.7			8.2		7.1
Organic matter	DETSC 2002#	0.1	%						3.6		1.1	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	55	77	68	970			450		430
Sulphur as S, Total	DETSC 2320	0.01	%	< 0.01	0.03	0.02	0.36			0.13		0.07
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.02	0.04	0.30			0.15		0.17

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-30352
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2282356	TP101 0.60-0.80	SOIL	NAD	none	Shannon Hope
2282358	TP102 0.60-0.90	SOIL	Chrysotile	loose	Shannon Hope
2282362	TP104 0.50-0.80	SOIL	NAD	none	Shannon Hope
2282364	TP104 0.80-1.00	SOIL	NAD	none	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 23-30352
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2282358
.Sample ID	TP102
Depth	0.60-0.90
Other ID	
Sample Type	D
Sampling Date	20/12/2023
Sampling Time	

Test	**Method**	**Units**	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na
Breakdown of Gravimetric Analysis (a)			
Mass of Sample		g	845.07
ACMs present*		type	
Mass of ACM in sample		g	
% ACM by mass		%	
% asbestos in ACM		%	
% asbestos in sample		%	
Breakdown of Detailed Gravimetric Analysis (b)			
% Amphibole bundles in sample		Mass %	na
% Chrysotile bundles in sample		Mass %	<0.001
Breakdown of PCOM Analysis (c)			
% Amphibole fibres in sample		Mass %	na
% Chrysotile fibres in sample		Mass %	na
Breakdown of Potentially Respirable Fibre Analysis (d)			
Amphibole fibres		Fibres/g	na
Chrysotile fibres		Fibres/g	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 23-30352
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2282353	BH101 5.00-5.45 SOIL	20/12/23	PT 1L		
2282354	BH102 6.00-6.45 SOIL	20/12/23	GJ 250ml		
2282355	BH108 5.00-5.45 SOIL	20/12/23	PT 1L		
2282356	TP101 0.60-0.80 SOIL	20/12/23	GJ 250ml		
2282357	TP102 0.60-0.90 SOIL	20/12/23	GJ 250ml		
2282358	TP102 0.60-0.90 SOIL	20/12/23	PT 1L		
2282359	TP102 1.50-1.80 SOIL	20/12/23	PT 1L		
2282360	TP102 2.50-2.70 SOIL	20/12/23	PT 1L		
2282361	TP102 3.70-4.00 SOIL	20/12/23	GJ 250ml		
2282362	TP104 0.50-0.80 SOIL	20/12/23	GJ 250ml		
2282363	TP104 0.50-0.80 SOIL	20/12/23	GJ 250ml		
2282364	TP104 0.80-1.00 SOIL	20/12/23	PT 1L		

Key: P-Plastic T-Tub G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-30353	*Issued:*	08-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-30353
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	5 Soil samples.
Date Received	22-Dec-23
Date Started	22-Dec-23
Date Completed	08-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-30353
Client Ref PN234595
Contract Title PYRAMID PARK

			Lab No	2282365	2282366	2282368	2282369
			.Sample ID	TP121	TP121	TP122	TP123
			Depth	2.00-2.30	3.80-4.00	0.40-0.80	2.00-2.20
			Other ID				
			Sample Type	D	D	D	D
			Sampling Date	20/12/2023	20/12/2023	20/12/2023	20/12/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Asbestos Quantification	DETSC 1102	0.001	%	< 0.001	< 0.001		
Inorganics							
pH	DETSC 2008#		pH			8.0	8.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l			180	61
Sulphur as S, Total	DETSC 2320	0.01	%			0.15	0.09
Sulphate as SO4, Total	DETSC 2321#	0.01	%			0.13	0.03

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-30353
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2282365	TP121 2.00-2.30	SOIL	Chrysotile	Chrysotile present as fibre bundles	Ben Rose
2282366	TP121 3.80-4.00	SOIL	Chrysotile	Chrysotile present as fibre bundles	Ben Rose
2282367	TP122 0.40-0.80	SOIL	NAD	none	Ben Rose

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 23-30353
Client Ref PN234595
Contract Title PYRAMID PARK

		Lab No	2282365	2282366
		.Sample ID	TP121	TP121
		Depth	2.00-2.30	3.80-4.00
		Other ID		
		Sample Type	D	D
		Sampling Date	20/12/2023	20/12/2023
		Sampling Time		
Test	**Method**	**Units**		
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na
Breakdown of Gravimetric Analysis (a)				
Mass of Sample		g	234.04	211.41
ACMs present*		type		
Mass of ACM in sample		g		
% ACM by mass		%		
% asbestos in ACM		%		
% asbestos in sample		%		
Breakdown of Detailed Gravimetric Analysis (b)				
% Amphibole bundles in sample		Mass %	na	na
% Chrysotile bundles in sample		Mass %	<0.001	<0.001
Breakdown of PCOM Analysis (c)				
% Amphibole fibres in sample		Mass %	na	na
% Chrysotile fibres in sample		Mass %	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)				
Amphibole fibres		Fibres/g	na	na
Chrysotile fibres		Fibres/g	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 23-30353
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2282365	TP121 2.00-2.30 SOIL	20/12/23	GJ 250ml		
2282366	TP121 3.80-4.00 SOIL	20/12/23	GJ 250ml		
2282367	TP122 0.40-0.80 SOIL	20/12/23	GJ 250ml		
2282368	TP122 0.40-0.80 SOIL	20/12/23	PT 1L		
2282369	TP123 2.00-2.20 SOIL	20/12/23	PT 1L		

Key: G-Glass J-Jar P-Plastic T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-30354	*Issued:*	05-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-30354
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	14 Soil samples.
Date Received	22-Dec-23
Date Started	22-Dec-23
Date Completed	05-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-30354
Client Ref PN234595
Contract Title PYRAMID PARK

			Lab No	2282372	2282376	2282377	2282378	2282379	2282380	2282381	2282382	2282383
			.Sample ID	TP106	TP109	TP110	TP116A	TP118	TP119	TP119	TP119	TP120
			Depth	1.30-1.50	2.00-2.20	1.00-1.20	1.70-2.00	1.00-1.10	1.00-1.20	2.00-2.20	3.00-3.40	2.20-2.50
			Other ID									
			Sample Type	D	D	D	D	D	D	D	D	SOIL
			Sampling Date	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023	20/12/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**									
Inorganics												
Loss on Ignition at 440oC	DETSC 2003#	0.01	%						5.5	6.5		
pH	DETSC 2008#		pH	7.7	8.0	7.6	7.9	7.1			8.8	7.7
Organic matter	DETSC 2002#	0.1	%						3.5	3.6		
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	140	50	25	23	25			290	20
Sulphur as S, Total	DETSC 2320	0.01	%	0.05	0.03	< 0.01	< 0.01	< 0.01			0.13	< 0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.04	0.01	0.02	0.02			0.19	0.01

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-30354
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2282370	TP106 0.30-0.60	SOIL	NAD	none	Josh Best
2282371	TP106 1.30-1.50	SOIL	NAD	none	Josh Best
2282373	TP107 1.50-1.70	SOIL	Chrysotile	Chrysotile present as fibre bundles	Josh Best
2282374	TP108 2.00-2.45	SOIL	NAD	none	Josh Best
2282375	TP109 0.50-0.80	SOIL	NAD	none	Josh Best

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-30354
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2282370	TP106 0.30-0.60 SOIL	20/12/23	GJ 250ml		
2282371	TP106 1.30-1.50 SOIL	20/12/23	GJ 250ml		
2282372	TP106 1.30-1.50 SOIL	20/12/23	PT 1L		
2282373	TP107 1.50-1.70 SOIL	20/12/23	GJ 250ml		
2282374	TP108 2.00-2.45 SOIL	20/12/23	PT 1L		
2282375	TP109 0.50-0.80 SOIL	20/12/23	GJ 250ml		
2282376	TP109 2.00-2.20 SOIL	20/12/23	GJ 250ml		
2282377	TP110 1.00-1.20 SOIL	20/12/23	PT 1L		
2282378	TP116A 1.70-2.00 SOIL	20/12/23	PT 1L		
2282379	TP118 1.00-1.10 SOIL	20/12/23	PT 1L		
2282380	TP119 1.00-1.20 SOIL	20/12/23	PT 1L		
2282381	TP119 2.00-2.20 SOIL	20/12/23	PT 1L		
2282382	TP119 3.00-3.40 SOIL	20/12/23	PT 1L		
2282383	TP120 2.20-2.50 SOIL	20/12/23	PT 1L		

Key: G-Glass J-Jar P-Plastic T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-00096	*Issued:*	08-Jan-24
Client	Geotechnics LTD The Geotechnical Centre Unit 1B Borders Ind. Park River Lane Saltney Chester CH4 8RJ		
Our Reference	24-00096		
Client Reference	PN234595		
Order No	ON39068		
Contract Title	Pyramid Park		
Description	11 Soil samples.		
Date Received	04-Jan-24		
Date Started	04-Jan-24		
Date Completed	08-Jan-24		
Test Procedures	Identified by prefix DETSn (details on request).		
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.		

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 24-00096
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2282760	2282761	2282762	2282766	2282768
			.Sample ID	BH105	BH106	BH107	TP117	TP121
			Depth	4.00-4.45	5.00-5.45	2.00-2.45	0.00-0.40	3.20-3.40
			Other ID					
			Sample Type	D	D	D	D	D
			Sampling Date	n/s	n/s	n/s	n/s	n/s
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Inorganics								
pH	DETSC 2008#		pH	8.4	8.4	10.3	8.2	8.3
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	63	40	620	40	82
Sulphur as S, Total	DETSC 2320	0.01	%	0.03	< 0.01	0.22	0.04	0.04
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.02	1.2	0.05	0.06

Key: # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-00096
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2282758	BH104 0.50-1.20	SOIL	NAD	none	Shannon Hope
2282759	BH105 0.50-1.20	SOIL	NAD	none	Shannon Hope
2282763	BH107 4.00-4.45	SOIL	NAD	none	Shannon Hope
2282764	TP101 0.80-1.00	SOIL	NAD	none	Shannon Hope
2282765	TP117 0.00-0.40	SOIL	NAD	none	Shannon Hope
2282767	TP117 0.40-1.10	SOIL	NAD	none	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-00096
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2282758	BH104 0.50-1.20 SOIL		GJ 250ml		
2282759	BH105 0.50-1.20 SOIL		GJ 250ml		
2282760	BH105 4.00-4.45 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
2282761	BH106 5.00-5.45 SOIL		GJ 250ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
2282762	BH107 2.00-2.45 SOIL		GJ 250ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
2282763	BH107 4.00-4.45 SOIL		GJ 250ml		
2282764	TP101 0.80-1.00 SOIL		GJ 250ml x2, GJ 60ml, PT 1L		
2282765	TP117 0.00-0.40 SOIL		GJ 250ml		
2282766	TP117 0.00-0.40 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
2282767	TP117 0.40-1.10 SOIL		PT 1L		
2282768	TP121 3.20-3.40 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	

Key: G-Glass J-Jar P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-00309	*Issued:*	10-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	24-00309
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	One Soil sample.
Date Received	22-Dec-23
Date Started	08-Jan-24
Date Completed	10-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-00309
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2283957	TP119 1.00-1.20	SOIL	NAD	none	Robertas Ciparis

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-00309
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2283957	TP119 1.00-1.20 SOIL	20/12/23	PT 1L		

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-00687	*Issued:*	16-Jan-24
Client	Geotechnics LTD The Geotechnical Centre Unit 1B Borders Ind. Park River Lane Saltney Chester CH4 8RJ		
Our Reference	24-00687		
Client Reference	PN234595		
Order No	ON39068		
Contract Title	Pyramid Park		
Description	6 Soil samples.		
Date Received	15-Jan-24		
Date Started	15-Jan-24		
Date Completed	16-Jan-24		
Test Procedures	Identified by prefix DETSn (details on request).		
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.		

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Asbestos Analysis
Soil Samples

Our Ref 24-00687
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2285931	BH102 0.50-1.20	SOIL	NAD	none	Ben Barsby
2285932	BH107 0.30-1.20	SOIL	Chrysotile	Chrysotile present as fibre bundles	Ben Barsby
2285933	TP101 0.30-0.50	SOIL	NAD	none	Ben Barsby
2285934	TP108 0.20-0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	Ben Barsby
2285935	TP109 2.00-2.20	SOIL	NAD	none	Ben Barsby
2285936	TP119 2.00-2.20	SOIL	NAD	none	Ben Barsby

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 24-00687
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2285931	BH102 0.50-1.20 SOIL		PT 1L		
2285932	BH107 0.30-1.20 SOIL		PT 1L		
2285933	TP101 0.30-0.50 SOIL		PT 1L		
2285934	TP108 0.20-0.40 SOIL		PT 1L		
2285935	TP109 2.00-2.20 SOIL		PT 1L		
2285936	TP119 2.00-2.20 SOIL		PT 1L		

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-01063	*Issued:*	23-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	24-01063
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	2 Soil samples.
Date Received	15-Jan-24
Date Started	18-Jan-24
Date Completed	23-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Asbestos Analysis

Samples

Our Ref 24-01063
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 24-01063
Client Ref PN234595
Contract Title Pyramid Park

		Lab No	2288161	2288162
		.Sample ID	BH107	TP108
		Depth	0.30-1.20	0.20-0.40
		Other ID		
		Sample Type		
		Sampling Date	n/s	n/s
		Sampling Time		
Test	**Method**	**Units**		
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**< 0.001**	**< 0.001**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	<0.001	<0.001
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na
Breakdown of Gravimetric Analysis (a)				
Mass of Sample		g	235.16	219.76
ACMs present*		type		
Mass of ACM in sample		g		
% ACM by mass		%		
% asbestos in ACM		%		
% asbestos in sample		%		
Breakdown of Detailed Gravimetric Analysis (b)				
% Amphibole bundles in sample		Mass %	na	na
% Chrysotile bundles in sample		Mass %	<0.001	<0.001
Breakdown of PCOM Analysis (c)				
% Amphibole fibres in sample		Mass %	na	na
% Chrysotile fibres in sample		Mass %	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)				
Amphibole fibres		Fibres/g	na	na
Chrysotile fibres		Fibres/g	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 24-01063
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2288161	BH107 0.30-1.20 SOIL		PT 1L		
2288162	TP108 0.20-0.40 SOIL		PT 1L		

Key: P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-01064	*Issued:*	23-Jan-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	24-01064
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	2 Soil samples.
Date Received	01-Dec-23
Date Started	18-Jan-24
Date Completed	23-Jan-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Asbestos Analysis

Samples

Our Ref 24-01064
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 24-01064
Client Ref PN234595
Contract Title Pyramid Park

		Lab No	2288163	2288164
		.Sample ID	BH102	BH103
		Depth	0.50	0.50
		Other ID		
		Sample Type	ES	ES
		Sampling Date	16/11/2023	16/11/2023
		Sampling Time		
Test	**Method**	**Units**		
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.009**	**0.005**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.009	0.005
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na
Breakdown of Gravimetric Analysis (a)				
Mass of Sample		g	14.09	10.42
ACMs present*		type		
Mass of ACM in sample		g		
% ACM by mass		%		
% asbestos in ACM		%		
% asbestos in sample		%		
Breakdown of Detailed Gravimetric Analysis (b)				
% Amphibole bundles in sample		Mass %	0.009	0.005
% Chrysotile bundles in sample		Mass %	na	na
Breakdown of PCOM Analysis (c)				
% Amphibole fibres in sample		Mass %	na	na
% Chrysotile fibres in sample		Mass %	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)				
Amphibole fibres		Fibres/g	na	na
Chrysotile fibres		Fibres/g	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 24-01064
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2288163	BH102 0.50 SOIL	16/11/23	GJ 250ml, GJ 60ml, PT 1L		
2288164	BH103 0.50 SOIL	16/11/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	24-01065-0-1	*Issued:*	05-Mar-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	24-01065-0-1
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	One Soil sample.
Date Received	22-Dec-23
Date Started	18-Jan-24
Date Completed	05-Mar-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes **This report supersedes 24-01065, amendments made**

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Asbestos Analysis

Samples

Our Ref 24-01065-0-1
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 24-01065-0-1
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2288165
.Sample ID	TP107
Depth	1.50-1.70
Other ID	
Sample Type	D
Sampling Date	20/12/2023
Sampling Time	

Test	Method	Units	
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	**0.002**
Gravimetric Quantification (a)	DETSC 1102	Mass %	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.002
Quantification by PCOM (c)	DETSC 1102	Mass %	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na
Breakdown of Gravimetric Analysis (a)			
Mass of Sample		g	232.54
ACMs present*		type	
Mass of ACM in sample		g	
% ACM by mass		%	
% asbestos in ACM		%	
% asbestos in sample		%	
Breakdown of Detailed Gravimetric Analysis (b)			
% Amphibole bundles in sample		Mass %	na
% Chrysotile bundles in sample		Mass %	0.002
Breakdown of PCOM Analysis (c)			
% Amphibole fibres in sample		Mass %	na
% Chrysotile fibres in sample		Mass %	na
Breakdown of Potentially Respirable Fibre Analysis (d)			
Amphibole fibres		Fibres/g	na
Chrysotile fibres		Fibres/g	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
denotes deviating sample

Information in Support of the Analytical Results

Our Ref 24-01065-0-1
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2288165	TP107 1.50-1.70 SOIL	20/12/23	GJ 250ml		

Key: G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-27971	*Issued:*	06-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-27971
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	One Soil sample.
Date Received	28-Nov-23
Date Started	28-Nov-23
Date Completed	06-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-27971
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2268848
.Sample ID	BH101
Depth	0.50
Other ID	
Sample Type	ES
Sampling Date	15/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	14
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	13
Beryllium	DETSC 2301#	0.2	mg/kg	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium	DETSC 2301#	0.15	mg/kg	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	69
Lead	DETSC 2301#	0.3	mg/kg	56
Mercury	DETSC 2325#	0.05	mg/kg	0.05
Nickel	DETSC 2301#	1	mg/kg	22
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	28
Zinc	DETSC 2301#	1	mg/kg	78
Inorganics				
pH	DETSC 2008#		pH	8.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Sulphide	DETSC 2024*	10	mg/kg	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.07
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	57
EPH (C12-C16)	DETSC 3311	10	mg/kg	360
EPH (C16-C21)	DETSC 3311	10	mg/kg	1200
EPH (C21-C36)	DETSC 3311	10	mg/kg	2100
EPH (C36-C40)	DETSC 3311	10	mg/kg	150
EPH (C10-C40)	DETSC 3311#	10	mg/kg	3900
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	5.0
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.11
Acenaphthene	DETSC 3303#	0.03	mg/kg	5.4
Fluorene	DETSC 3303	0.03	mg/kg	4.2
Phenanthrene	DETSC 3303#	0.03	mg/kg	27
Anthracene	DETSC 3303	0.03	mg/kg	6.5
Fluoranthene	DETSC 3303#	0.03	mg/kg	19
Pyrene	DETSC 3303#	0.03	mg/kg	19
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	4.8
Chrysene	DETSC 3303	0.03	mg/kg	4.5
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	3.3
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	1.1
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	2.6
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.87
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.28

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-27971
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2268848
.Sample ID	BH101
Depth	0.50
Other ID	
Sample Type	ES
Sampling Date	15/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	1.1
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	100
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-27971
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2268848	BH101 0.50 SOIL	15/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28325	*Issued:*	11-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28325
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	2 Soil samples.
Date Received	01-Dec-23
Date Started	01-Dec-23
Date Completed	11-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28325
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270817	2270818
			.Sample ID	BH102	BH103
			Depth	0.50	0.50
			Other ID		
			Sample Type	ES	ES
			Sampling Date	16/11/2023	16/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	12	20
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	9.3	10
Beryllium	DETSC 2301#	0.2	mg/kg	0.6	0.8
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.4
Chromium	DETSC 2301#	0.15	mg/kg	14	15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	30	55
Lead	DETSC 2301#	0.3	mg/kg	57	50
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	16	22
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	21	25
Zinc	DETSC 2301#	1	mg/kg	78	120
Inorganics					
pH	DETSC 2008#		pH	7.2	8.1
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%	3.0	5.0
Sulphide	DETSC 2024*	10	mg/kg	52	48
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.10	0.05
Petroleum Hydrocarbons					
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	11	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	37	14
EPH (C21-C36)	DETSC 3311	10	mg/kg	91	28
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	150	45
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	0.21	0.05
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.10	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	2.5	0.33
Fluorene	DETSC 3303	0.03	mg/kg	1.3	0.22
Phenanthrene	DETSC 3303#	0.03	mg/kg	2.1	2.0
Anthracene	DETSC 3303	0.03	mg/kg	0.40	0.35
Fluoranthene	DETSC 3303#	0.03	mg/kg	2.0	3.7
Pyrene	DETSC 3303#	0.03	mg/kg	1.7	3.8
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.47	1.2
Chrysene	DETSC 3303	0.03	mg/kg	0.55	1.4
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.73	1.3
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.24	0.58

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28325
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270817	2270818
			.Sample ID	BH102	BH103
			Depth	0.50	0.50
			Other ID		
			Sample Type	ES	ES
			Sampling Date	16/11/2023	16/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.52	1.3
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.20	0.35
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.06	0.14
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.38	0.62
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	13	17
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3

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Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28325
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2270817	BH102 0.50	SOIL	Amosite	microscopic bundle of amosite	Shannon Hope
2270818	BH103 0.50	SOIL	Amosite	Bundle of amosite	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28325
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2270817	BH102 0.50 SOIL	16/11/23	GJ 250ml, GJ 60ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days), EPH/TPH (14 days)	
2270818	BH103 0.50 SOIL	16/11/23	GJ 250ml x2, GJ 60ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days), EPH/TPH (14 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28329	*Issued:*	14-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28329
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	6 Soil samples.
Date Received	01-Dec-23
Date Started	01-Dec-23
Date Completed	14-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

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Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

				Lab No	2270844	2270845	2270846	2270847	2270848
				.Sample ID	TP102	TP102	TP103	TP103	TP104
				Depth	0.00-0.30	2.50-2.70	0.30-0.50	1.50-1.70	0.80-1.00
				Other ID					
				Sample Type	ES	ES	ES	ES	ES
				Sampling Date	22/11/2023	22/11/2023	22/11/2023	22/11/2023	22/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Moisture Content	DETSC 1004	0.1	%	18	14	15	22	24
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.3	11	13	11	7.7
Beryllium	DETSC 2301#	0.2	mg/kg	0.7	0.5	0.8	1.2	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.7	0.6	0.7	0.4	0.8
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.4	0.5	0.3
Chromium	DETSC 2301#	0.15	mg/kg	20	9.8	16	26	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	23	57	120	100	17
Lead	DETSC 2301#	0.3	mg/kg	14	78	170	33	20
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.05	0.26	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	25	15	20	42	18
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	24	22	29	38	26
Zinc	DETSC 2301#	1	mg/kg	52	70	150	160	63
Inorganics									
pH	DETSC 2008#		pH	7.7	8.3	8.0	8.0	7.5
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.2	0.2	0.4	0.3
Total Organic Carbon	DETSC 2084#	0.5	%	1.5				
Sulphide	DETSC 2024*	10	mg/kg	< 10	< 10	< 10	52	56
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.10	0.09	0.06	0.06
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01			
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01			
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01			
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		< 1.5			
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2			
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5			
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4			
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg		< 3.4			
Aliphatic C10-C44	DETSC 3072*	10	mg/kg		< 10			
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01			
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01			
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01			
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9			
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5			
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		< 0.6			
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4			
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg		< 1.4			
Aromatic C10-C44	DETSC 3072*	10	mg/kg		< 10			
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		< 10			
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270844	2270845	2270846	2270847	2270848
			.Sample ID	TP102	TP102	TP103	TP103	TP104
			Depth	0.00-0.30	2.50-2.70	0.30-0.50	1.50-1.70	0.80-1.00
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	22/11/2023	22/11/2023	22/11/2023	22/11/2023	22/11/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	41	12	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	190	74	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	< 10	< 10	400	160	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	< 10	36	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	670	250	11
Benzene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.10	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.10	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.10	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg		< 0.01		< 0.10	< 0.01
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.41	0.04	0.33	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.20	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	1.2	0.17	12	0.16
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.66	0.07	13	0.17
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	2.6	0.54	15	0.37
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.72	0.26	2.6	0.05
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	4.0	2.3	4.4	0.15
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	3.7	2.0	2.7	0.11
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.04	1.0	0.65	0.48	0.04
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	1.1	0.58	0.47	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.90	0.57	0.30	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.29	0.21	0.10	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.68	0.39	0.22	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.22	0.14	0.08	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	0.04	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.31	0.20	0.11	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	18	8.1	52	1.1
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	2.2	0.6	< 0.3	0.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2270847	2270848
.Sample ID	TP103	TP104
Depth	1.50-1.70	0.80-1.00
Other ID		
Sample Type	ES	ES
Sampling Date	22/11/2023	22/11/2023
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
VOCs					
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270847	2270848
			.Sample ID	TP103	TP104
			Depth	1.50-1.70	0.80-1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	22/11/2023	22/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01
SVOCs					
Phenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Aniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Benzyl Alcohol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis(2-chloroisopropyl)ether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
3&4-Methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dimethylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Bis-(dichloroethoxy)methane	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4-Dichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,2,4-Trichlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chloro-3-methylphenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Methylnaphthalene	DETSC 3433	0.1	mg/kg	0.5	< 0.1
Hexachlorocyclopentadiene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4,6-Trichlorophenol	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,4,5-Trichlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Chloronaphthalene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,4-Dinitrotoluene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
3-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dibenzofuran	DETSC 3433	0.1	mg/kg	6.6	< 0.1
2,6-Dinitrotoluene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
2,3,4,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Chlorophenylphenylether	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
4-Nitroaniline	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2-Methyl-4,6-Dinitrophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Diphenylamine	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
4-Bromophenylphenylether	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC/SVOC Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270847	2270848
			.Sample ID	TP103	TP104
			Depth	1.50-1.70	0.80-1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	22/11/2023	22/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Hexachlorobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Pentachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Di-n-butylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Butylbenzylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Bis(2-ethylhexyl)phthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Di-n-octylphthalate	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,4-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Dimethylphthalate	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
1,3-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
1,2-Dinitrobenzene	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
2,3,5,6-Tetrachlorophenol	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1
Azobenzene	DETSC 3433	0.1	mg/kg	< 0.1	< 0.1
Carbazole	DETSC 3433*	0.1	mg/kg	< 0.1	< 0.1

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28329
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2270844	TP102 0.00-0.30	SOIL	NAD	none	Robertas Ciparis
2270845	TP102 2.50-2.70	SOIL	NAD	none	Robertas Ciparis
2270846	TP103 0.30-0.50	SOIL	NAD	none	Robertas Ciparis
2270849	TP104 2.20-2.40	SOIL	NAD	none	Robertas Ciparis

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28329
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2270844	TP102 0.00-0.30 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270845	TP102 2.50-2.70 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270846	TP103 0.30-0.50 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270847	TP103 1.50-1.70 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2270848	TP104 0.80-1.00 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2270849	TP104 2.20-2.40 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28332	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28332
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	5 Soil samples.
Date Received	01-Dec-23
Date Started	01-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28332
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270859	2270860	2270861	2270862	2270863
			.Sample ID	TP107	TP107	TP107	TP121	TP121
			Depth	0.50-0.70	1.50-1.70	3.30-3.50	1.00-1.30	3.20-3.40
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	22/11/2023	22/11/2023	22/11/2023	22/11/2023	22/11/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
Moisture Content	DETSC 1004	0.1	%	22	19	21	17	13
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg	13	17	26	11	8.2
Beryllium	DETSC 2301#	0.2	mg/kg	0.8	0.8	1.5	0.9	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	1.1	1.3	0.3	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.4	0.9	0.4	0.3
Chromium	DETSC 2301#	0.15	mg/kg	20	21	29	23	15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	52	63	140	43	31
Lead	DETSC 2301#	0.3	mg/kg	100	140	850	49	55
Mercury	DETSC 2325#	0.05	mg/kg	0.09	0.10	0.24	0.22	< 0.05
Nickel	DETSC 2301#	1	mg/kg	19	20	35	22	21
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	27	59	48	28	22
Zinc	DETSC 2301#	1	mg/kg	110	130	260	180	63
Inorganics								
pH	DETSC 2008#		pH	7.7	7.6	8.1	7.9	8.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2	0.4	1.4	0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%				1.8	
Sulphide	DETSC 2024*	10	mg/kg	40	44	140	20	16
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.07	0.10	0.14	0.03	0.05
Petroleum Hydrocarbons								
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg			< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg			< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg			< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg			< 1.2		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg			< 1.5		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg			< 3.4		
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg			< 3.4		
Aliphatic C10-C44	DETSC 3072*	10	mg/kg			< 10		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg			< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg			< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg			< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg			18		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg			32		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg			45		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg			47		
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg			< 1.4		
Aromatic C10-C44	DETSC 3072*	10	mg/kg			140		
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg			140		

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28332
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2270859	2270860	2270861	2270862	2270863
			.Sample ID	TP107	TP107	TP107	TP121	TP121
			Depth	0.50-0.70	1.50-1.70	3.30-3.50	1.00-1.30	3.20-3.40
			Other ID					
			Sample Type	ES	ES	ES	ES	ES
			Sampling Date	22/11/2023	22/11/2023	22/11/2023	22/11/2023	22/11/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	39	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	14	320	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	63	1600	< 10	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	12	120	3100	< 10	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	< 10	190	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	24	200	5200	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg			< 0.01		
Ethylbenzene	DETSC 3321#	0.01	mg/kg			< 0.01		
Toluene	DETSC 3321#	0.01	mg/kg			< 0.01		
Xylene	DETSC 3321#	0.01	mg/kg			< 0.01		
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.54	2.4	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	0.10	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.11	2.0	6.0	0.06	0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	1.1	3.9	0.04	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.51	4.9	19	0.26	0.16
Anthracene	DETSC 3303	0.03	mg/kg	0.08	0.81	5.2	0.08	0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.74	5.4	24	0.41	0.22
Pyrene	DETSC 3303#	0.03	mg/kg	0.76	5.1	22	0.42	0.23
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.24	1.4	10	0.14	0.09
Chrysene	DETSC 3303	0.03	mg/kg	0.29	1.7	7.3	0.17	0.12
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.28	1.6	7.7	0.18	0.13
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11	0.59	2.5	0.06	0.04
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.21	1.2	6.4	0.14	0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.08	0.33	1.9	0.05	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.11	0.60	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.10	0.43	2.5	0.07	0.05
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.5	27	120	2.1	1.2
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	0.4	0.6	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28332
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2270862	TP121 1.00-1.30	SOIL	NAD	none	Robertas Ciparis

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28332
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2270859	TP107 0.50-0.70 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270860	TP107 1.50-1.70 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270861	TP107 3.30-3.50 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270862	TP121 1.00-1.30 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2270863	TP121 3.20-3.40 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28630	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28630
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	05-Dec-23
Date Started	05-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28630
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272317
.Sample ID	BH108
Depth	0.50
Other ID	
Sample Type	ES
Sampling Date	23/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	6.0
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	5.7
Beryllium	DETSC 2301#	0.2	mg/kg	0.5
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium	DETSC 2301#	0.15	mg/kg	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	19
Lead	DETSC 2301#	0.3	mg/kg	12
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	22
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	27
Zinc	DETSC 2301#	1	mg/kg	89
Inorganics				
pH	DETSC 2008#		pH	7.8
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Sulphide	DETSC 2024*	10	mg/kg	39
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.02
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	36
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	49
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28630
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272317
.Sample ID	BH108
Depth	0.50
Other ID	
Sample Type	ES
Sampling Date	23/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3

Information in Support of the Analytical Results

Our Ref 23-28630
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272317	BH108 0.50 SOIL	23/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28631	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28631
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	4 Soil samples.
Date Received	05-Dec-23
Date Started	05-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28631
Client Ref PN234595
Contract Title Pyramid Park

	Lab No	2272318	2272319	2272320	2272321
	.Sample ID	TP119	TP119	TP101	TP101
	Depth	1.00-1.20	3.00-3.40	0.30-0.50	0.80-1.00
	Other ID				
	Sample Type	ES	ES	ES	ES
	Sampling Date	24/11/2023	24/11/2023	22/11/2023	22/11/2023
	Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	23	18	18	17
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	15	12	9.6	9.0
Beryllium	DETSC 2301#	0.2	mg/kg	0.6	0.6	1.0	1.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.5	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.5	0.3	0.4	0.3
Chromium	DETSC 2301#	0.15	mg/kg	32	12	25	29
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	44	49	40	42
Lead	DETSC 2301#	0.3	mg/kg	75	140	26	24
Mercury	DETSC 2325#	0.05	mg/kg	0.07	0.06	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	13	35	40
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	75	24	30	33
Zinc	DETSC 2301#	1	mg/kg	93	120	92	91
Inorganics					
pH	DETSC 2008#		pH	7.4	8.2	8.2	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3	0.4	< 0.1	< 0.1
Sulphide	DETSC 2024*	10	mg/kg	110	87	95	55
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.09	0.08	0.07
Petroleum Hydrocarbons					
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	36	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	190	16	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	11	560	93	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	60	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	14	860	120	< 10
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	1.3	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.10	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	4.0	0.05	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	2.9	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.09	13	0.34	0.05
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	4.0	0.06	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.14	13	0.54	0.05
Pyrene	DETSC 3303#	0.03	mg/kg	0.12	12	0.49	0.05
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.04	4.3	0.19	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.06	4.1	0.26	0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.03	3.8	0.19	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	1.4	0.08	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	3.0	0.12	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.91	0.09	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28631
Client Ref PN234595
Contract Title Pyramid Park

	Lab No	2272318	2272319	2272320	2272321
	.Sample ID	TP119	TP119	TP101	TP101
	Depth	1.00-1.20	3.00-3.40	0.30-0.50	0.80-1.00
	Other ID				
	Sample Type	ES	ES	ES	ES
	Sampling Date	24/11/2023	24/11/2023	22/11/2023	22/11/2023
	Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.21	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	1.1	0.09	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.46	70	2.5	0.19
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	0.4	< 0.3	0.5

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28631
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2272318	TP119 1.00-1.20	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28631
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272318	TP119 1.00-1.20 SOIL	24/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2272319	TP119 3.00-3.40 SOIL	24/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2272320	TP101 0.30-0.50 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2272321	TP101 0.80-1.00 SOIL	22/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28632	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28632
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	05-Dec-23
Date Started	05-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28632
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272322
.Sample ID	TP120
Depth	0.60-0.90
Other ID	
Sample Type	ES
Sampling Date	20/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	10
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	7.5
Beryllium	DETSC 2301#	0.2	mg/kg	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2
Chromium	DETSC 2301#	0.15	mg/kg	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	25
Lead	DETSC 2301#	0.3	mg/kg	12
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	26
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	22
Zinc	DETSC 2301#	1	mg/kg	58
Inorganics				
pH	DETSC 2008#		pH	8.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1
Sulphide	DETSC 2024*	10	mg/kg	39
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28632
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272322
.Sample ID	TP120
Depth	0.60-0.90
Other ID	
Sample Type	ES
Sampling Date	20/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-28632
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272322	TP120 0.60-0.90 SOIL	20/11/23	GJ 250ml x2, GJ 60ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), Cyanide/Mono pHoh (14 days), EPH/TPH (14 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28633	*Issued:*	19-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28633
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	05-Dec-23
Date Started	05-Dec-23
Date Completed	19-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28633
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272323
.Sample ID	TP122
Depth	0.40-0.80
Other ID	
Sample Type	ES
Sampling Date	23/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	11
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	12
Beryllium	DETSC 2301#	0.2	mg/kg	1.5
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.6
Chromium	DETSC 2301#	0.15	mg/kg	14
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	82
Lead	DETSC 2301#	0.3	mg/kg	83
Mercury	DETSC 2325#	0.05	mg/kg	0.10
Nickel	DETSC 2301#	1	mg/kg	23
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	37
Zinc	DETSC 2301#	1	mg/kg	130
Inorganics				
pH	DETSC 2008#		pH	10.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.2
Sulphide	DETSC 2024*	10	mg/kg	260
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.24
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg	< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg	< 10
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	2.8
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	39
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	60
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg	< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg	100
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg	100
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28633
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272323
.Sample ID	TP122
Depth	0.40-0.80
Other ID	
Sample Type	ES
Sampling Date	23/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
EPH (C16-C21)	DETSC 3311	10	mg/kg	37
EPH (C21-C36)	DETSC 3311	10	mg/kg	91
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	140
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	0.18
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	1.7
Fluorene	DETSC 3303	0.03	mg/kg	0.71
Phenanthrene	DETSC 3303#	0.03	mg/kg	4.6
Anthracene	DETSC 3303	0.03	mg/kg	1.2
Fluoranthene	DETSC 3303#	0.03	mg/kg	7.5
Pyrene	DETSC 3303#	0.03	mg/kg	6.9
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	2.9
Chrysene	DETSC 3303	0.03	mg/kg	2.9
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	2.7
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	1.1
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	2.4
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.77
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.19
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.97
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	37
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.7

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-28633
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272323	TP122 0.40-0.80 SOIL	23/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28719	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28719
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28719
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272902
.Sample ID	BH105
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	01/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	37
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	25
Beryllium	DETSC 2301#	0.2	mg/kg	1.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.9
Chromium	DETSC 2301#	0.15	mg/kg	25
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	120
Lead	DETSC 2301#	0.3	mg/kg	110
Mercury	DETSC 2325#	0.05	mg/kg	0.19
Nickel	DETSC 2301#	1	mg/kg	27
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	34
Zinc	DETSC 2301#	1	mg/kg	250
Inorganics				
pH	DETSC 2008#		pH	7.6
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.4
Total Organic Carbon	DETSC 2084#	0.5	%	11
Sulphide	DETSC 2024*	10	mg/kg	180
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.13
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	24
EPH (C21-C36)	DETSC 3311	10	mg/kg	78
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	110
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.14
Anthracene	DETSC 3303	0.03	mg/kg	0.14
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.24
Pyrene	DETSC 3303#	0.03	mg/kg	0.23
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.06
Chrysene	DETSC 3303	0.03	mg/kg	0.11
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.08
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.04

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28719
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272902
.Sample ID	BH105
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	01/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.1
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.7

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-28719
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272902	BH105 0.20 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28720	*Issued:*	18-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28720
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	18-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28720
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272903
.Sample ID	BH106
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	30/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	29
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	16
Beryllium	DETSC 2301#	0.2	mg/kg	0.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.8
Cadmium	DETSC 2301#	0.1	mg/kg	0.6
Chromium	DETSC 2301#	0.15	mg/kg	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	77
Lead	DETSC 2301#	0.3	mg/kg	86
Mercury	DETSC 2325#	0.05	mg/kg	0.15
Nickel	DETSC 2301#	1	mg/kg	22
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	29
Zinc	DETSC 2301#	1	mg/kg	110
Inorganics				
pH	DETSC 2008#		pH	7.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3
Sulphide	DETSC 2024*	10	mg/kg	63
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	11
EPH (C16-C21)	DETSC 3311	10	mg/kg	52
EPH (C21-C36)	DETSC 3311	10	mg/kg	93
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	160
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	0.18
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.68
Fluorene	DETSC 3303	0.03	mg/kg	0.47
Phenanthrene	DETSC 3303#	0.03	mg/kg	4.0
Anthracene	DETSC 3303	0.03	mg/kg	0.97
Fluoranthene	DETSC 3303#	0.03	mg/kg	4.6
Pyrene	DETSC 3303#	0.03	mg/kg	4.2
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	1.7
Chrysene	DETSC 3303	0.03	mg/kg	1.6
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	1.9
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.64
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	1.5
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.49
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.16

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28720
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272903
.Sample ID	BH106
Depth	0.20
Other ID	
Sample Type	ES
Sampling Date	30/11/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.60
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	24
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.8

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-28720
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272903	BH106 0.20 SOIL	30/11/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28721	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28721
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	3 Soil samples.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28721
Client Ref PN234595
Contract Title Pyramid Park

	Lab No	2272904	2272905	2272906
	.Sample ID	BH107	BH107	TP116A
	Depth	1.00	2.00	0.40-0.50
	Other ID			
	Sample Type	ES	ES	ES
	Sampling Date	01/12/2023	01/12/2023	01/12/2023
	Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**	
Preparation				
Moisture Content	DETSC 1004	0.1	%	12	16	18
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	6.2	3.4	16
Beryllium	DETSC 2301#	0.2	mg/kg	0.2	5.1	2.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.3	6.0	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.3	0.4
Chromium	DETSC 2301#	0.15	mg/kg	13	15	19
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	20	17	150
Lead	DETSC 2301#	0.3	mg/kg	27	6.9	45
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.07
Nickel	DETSC 2301#	1	mg/kg	18	11	49
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	1.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	17	19	71
Zinc	DETSC 2301#	1	mg/kg	54	61	160
Inorganics				
pH	DETSC 2008#		pH	10.7	10.4	7.6
Cyanide, Total	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	1.3
Total Organic Carbon	DETSC 2084#	0.5	%			15
Sulphide	DETSC 2024*	10	mg/kg	67	55	140
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.37	0.98	0.10
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	79	< 10	20
EPH (C36-C40)	DETSC 3311	10	mg/kg	11	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	98	< 10	32
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.11	0.08	0.25
Anthracene	DETSC 3303	0.03	mg/kg	0.11	< 0.03	0.06
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.10	0.11	0.54
Pyrene	DETSC 3303#	0.03	mg/kg	0.12	0.10	0.58
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.05	0.06	0.19
Chrysene	DETSC 3303	0.03	mg/kg	0.07	0.08	0.26
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.06	0.07	0.25
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	0.11
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.05	0.06	0.19

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28721
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2272904	2272905	2272906
			.Sample ID	BH107	BH107	TP116A
			Depth	1.00	2.00	0.40-0.50
			Other ID			
			Sample Type	ES	ES	ES
			Sampling Date	01/12/2023	01/12/2023	01/12/2023
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	0.09
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.03	0.06	0.11
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.67	0.72	2.7
Phenols						
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	0.3	0.4

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28721
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2272904	BH107 1.00	SOIL	NAD	none	Barry Kelly
2272906	TP116A 0.40-0.50	SOIL	NAD	none	Barry Kelly

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28721
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272904	BH107 1.00 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		
2272905	BH107 2.00 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		
2272906	TP116A 0.40-0.50 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28722	*Issued:*	18-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28722
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	2 Soil samples.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	18-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28722
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2272907	2272908
			.Sample ID	TP110	TP123
			Depth	0.20-0.40	0.40-0.50
			Other ID		
			Sample Type	ES	ES
			Sampling Date	04/12/2023	01/12/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	27	27
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	27	26
Beryllium	DETSC 2301#	0.2	mg/kg	1.5	2.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.2	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	1.0	0.9
Chromium	DETSC 2301#	0.15	mg/kg	880	29
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	240	210
Lead	DETSC 2301#	0.3	mg/kg	240	120
Mercury	DETSC 2325#	0.05	mg/kg	0.13	0.13
Nickel	DETSC 2301#	1	mg/kg	82	64
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	61	73
Zinc	DETSC 2301#	1	mg/kg	260	240
Inorganics					
pH	DETSC 2008#		pH	7.8	10.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.5	0.2
Sulphide	DETSC 2024*	10	mg/kg	99	220
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.09	0.17
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		5.1
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		42
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		110
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		31
Aliphatic C35-C44	DETSC 3072*	3.4	mg/kg		< 3.4
Aliphatic C10-C44	DETSC 3072*	10	mg/kg		180
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		11
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		50
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		24
Aromatic C35-C44	DETSC 3072*	1.4	mg/kg		< 1.4
Aromatic C10-C44	DETSC 3072*	10	mg/kg		86
Ali/Aro C10-C44	DETSC 3072*	10	mg/kg		270
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28722
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2272907	2272908
			.Sample ID	TP110	TP123
			Depth	0.20-0.40	0.40-0.50
			Other ID		
			Sample Type	ES	ES
			Sampling Date	04/12/2023	01/12/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
EPH (C12-C16)	DETSC 3311	10	mg/kg	92	120
EPH (C16-C21)	DETSC 3311	10	mg/kg	470	480
EPH (C21-C36)	DETSC 3311	10	mg/kg	1100	170
EPH (C36-C40)	DETSC 3311	10	mg/kg	67	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	1800	770
Benzene	DETSC 3321#	0.01	mg/kg		< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg		< 0.01
Toluene	DETSC 3321#	0.01	mg/kg		< 0.01
Xylene	DETSC 3321#	0.01	mg/kg		< 0.01
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	0.49	0.43
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	1.8	0.54
Fluorene	DETSC 3303	0.03	mg/kg	1.4	0.38
Phenanthrene	DETSC 3303#	0.03	mg/kg	7.6	1.7
Anthracene	DETSC 3303	0.03	mg/kg	1.8	0.40
Fluoranthene	DETSC 3303#	0.03	mg/kg	14	2.1
Pyrene	DETSC 3303#	0.03	mg/kg	14	2.0
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	5.4	0.41
Chrysene	DETSC 3303	0.03	mg/kg	5.7	0.67
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	5.6	0.49
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	2.0	0.20
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	4.8	0.33
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	1.4	0.14
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.47	0.04
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	2.0	0.21
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	68	10
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.9	0.6

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-28722
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272907	TP110 0.20-0.40 SOIL	04/12/23	GJ 250ml x2, GJ 60ml, PT 1L		
2272908	TP123 0.40-0.50 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28723	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28723
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	2 Soil samples.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28723
Client Ref PN234595
Contract Title Pyramid Park

	Lab No	2272909	2272910
	.Sample ID	TP108	TP108
	Depth	0.20-0.40	0.80-1.00
	Other ID		
	Sample Type	ES	ES
	Sampling Date	23/11/2023	23/11/2023
	Sampling Time	n/s	n/s

Test	Method	LOD	Units		
Preparation					
Moisture Content	DETSC 1004	0.1	%	28	9.7
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	27	5.7
Beryllium	DETSC 2301#	0.2	mg/kg	2.9	0.5
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	0.3
Chromium	DETSC 2301#	0.15	mg/kg	20	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	130	21
Lead	DETSC 2301#	0.3	mg/kg	89	12
Mercury	DETSC 2325#	0.05	mg/kg	0.22	0.05
Nickel	DETSC 2301#	1	mg/kg	42	17
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	47	16
Zinc	DETSC 2301#	1	mg/kg	140	51
Inorganics					
pH	DETSC 2008#		pH	7.0	7.2
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.4	0.2
Total Organic Carbon	DETSC 2084#	0.5	%	27	
Sulphide	DETSC 2024*	10	mg/kg	160	59
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.10	0.04
Petroleum Hydrocarbons					
EPH (C10-C12)	DETSC 3311	10	mg/kg	16	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	220	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	1100	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	2300	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	120	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	3800	< 10
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	0.42	0.04
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	3.4	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	2.7	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	13	0.03
Anthracene	DETSC 3303	0.03	mg/kg	3.8	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	24	0.06
Pyrene	DETSC 3303#	0.03	mg/kg	24	0.08
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	10	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	9.2	0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	10	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	3.1	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	7.9	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28723
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2272909	2272910
			.Sample ID	TP108	TP108
			Depth	0.20-0.40	0.80-1.00
			Other ID		
			Sample Type	ES	ES
			Sampling Date	23/11/2023	23/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	2.8	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	1.0	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	3.4	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	120	0.26
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	1.3	0.4

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28723
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2272910	TP108 0.80-1.00	SOIL	NAD	none	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28723
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272909	TP108 0.20-0.40 SOIL	23/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2272910	TP108 0.80-1.00 SOIL	23/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-28724	*Issued:*	15-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-28724
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	One Soil sample.
Date Received	06-Dec-23
Date Started	06-Dec-23
Date Completed	15-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-28724
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272911
.Sample ID	TP109
Depth	1.00-1.20
Other ID	
Sample Type	ES
Sampling Date	01/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Preparation				
Moisture Content	DETSC 1004	0.1	%	19
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	15
Beryllium	DETSC 2301#	0.2	mg/kg	0.7
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.5
Chromium	DETSC 2301#	0.15	mg/kg	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	48
Lead	DETSC 2301#	0.3	mg/kg	74
Mercury	DETSC 2325#	0.05	mg/kg	0.11
Nickel	DETSC 2301#	1	mg/kg	20
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	32
Zinc	DETSC 2301#	1	mg/kg	98
Inorganics				
pH	DETSC 2008#		pH	7.4
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.3
Total Organic Carbon	DETSC 2084#	0.5	%	5.0
Sulphide	DETSC 2024*	10	mg/kg	79
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.06
Petroleum Hydrocarbons				
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	23
EPH (C21-C36)	DETSC 3311	10	mg/kg	78
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	110
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.08
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.47
Anthracene	DETSC 3303	0.03	mg/kg	0.11
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.70
Pyrene	DETSC 3303#	0.03	mg/kg	0.63
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.19
Chrysene	DETSC 3303	0.03	mg/kg	0.23
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.22
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.09
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.19

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-28724
Client Ref PN234595
Contract Title Pyramid Park

Lab No	2272911
.Sample ID	TP109
Depth	1.00-1.20
Other ID	
Sample Type	ES
Sampling Date	01/12/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.08
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.09
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.1
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.5

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-28724
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2272911	TP109 1.00-1.20	SOIL	NAD	none	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-28724
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2272911	TP109 1.00-1.20 SOIL	01/12/23	GJ 250ml x2, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-29242	*Issued:*	22-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-29242
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	4 Soil samples.
Date Received	12-Dec-23
Date Started	12-Dec-23
Date Completed	22-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-29242
Client Ref PN234595
Contract Title PYRAMID PARK

	Lab No	2275711	2275712	2275713	2275714
	.Sample ID	HP111	HP113	HP114	HP115
	Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.50
	Other ID				
	Sample Type	ES	ES	ES	ES
	Sampling Date	28/11/2023	28/11/2023	28/11/2023	28/11/2023
	Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Moisture Content	DETSC 1004	0.1	%	2.6	25	8.6	2.6
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	9.0	4.0	4.6	2.7
Beryllium	DETSC 2301#	0.2	mg/kg	0.3	0.5	0.3	0.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	0.5	0.4	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.4	< 0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	7.9	9.0	6.6	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	18	26	14	18
Lead	DETSC 2301#	0.3	mg/kg	19	41	7.0	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.07	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	8.4	10	7.9	12
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	16	21	9.5	14
Zinc	DETSC 2301#	1	mg/kg	42	73	36	61
Inorganics					
pH	DETSC 2008#		pH	7.7	6.9	8.0	8.0
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.1	0.2	< 0.1	< 0.1
Total Organic Carbon	DETSC 2084#	0.5	%			4.4	< 0.5
Sulphide	DETSC 2024*	10	mg/kg	20	24	32	20
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.06	0.04	0.05
Petroleum Hydrocarbons					
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10
EPH (C21-C36)	DETSC 3311	10	mg/kg	26	< 10	< 10	< 10
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	29	< 10	< 10	< 10
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	0.07	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.03	0.04	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.21	0.29	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	0.04	0.07	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	0.14	0.44	0.04
Pyrene	DETSC 3303#	0.03	mg/kg	0.03	0.11	0.40	0.04
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	0.14	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	0.05	0.18	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.17	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.07	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.13	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-29242
Client Ref PN234595
Contract Title PYRAMID PARK

			Lab No	2275711	2275712	2275713	2275714
			.Sample ID	HP111	HP113	HP114	HP115
			Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.50
			Other ID				
			Sample Type	ES	ES	ES	ES
			Sampling Date	28/11/2023	28/11/2023	28/11/2023	28/11/2023
			Sampling Time	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.07	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.08	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	0.60	2.1	< 0.10
Phenols							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	0.5	< 0.3	< 0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-29242
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2275711	HP111 0.00-0.20	SOIL	NAD	none	Shannon Hope
2275713	HP114 0.00-0.20	SOIL	NAD	none	Shannon Hope

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-29242
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2275711	HP111 0.00-0.20 SOIL	28/11/23	GJ 250ml x2, GJ 60ml	pH + Conductivity (7 days)	
2275712	HP113 0.00-0.20 SOIL	28/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2275713	HP114 0.00-0.20 SOIL	28/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2275714	HP115 0.00-0.50 SOIL	28/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass J-Jar P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-29300	*Issued:*	29-Dec-23

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	23-29300
Client Reference	PN234595
Order No	ON39068
Contract Title	Pyramid Park
Description	6 Soil samples.
Date Received	12-Dec-23
Date Started	12-Dec-23
Date Completed	29-Dec-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-29300
Client Ref PN234595
Contract Title Pyramid Park

			Lab No	2276116	2276117	2276118	2276119	2276120	2276121
			.Sample ID	BH104	BH104	TP106	TP106	TP117	BH106
			Depth	0.20	1.00	0.30-0.50	2.80-3.00	0.00-0.40	0.20
			Other ID						
			Sample Type	ES	ES	ES	ES	ES	ES
			Sampling Date	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	30/11/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Moisture Content	DETSC 1004	0.1	%	12	14	21	14	11	10
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	19	37	4.4	13	14	13
Beryllium	DETSC 2301#	0.2	mg/kg	1.1	1.5	< 0.2	0.8	0.9	1.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.6	< 0.2	< 0.2	< 0.2	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.2	0.2	0.3	0.4
Chromium	DETSC 2301#	0.15	mg/kg	23	27	7.3	26	23	19
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	38	60	11	30	47	73
Lead	DETSC 2301#	0.3	mg/kg	59	75	8.2	21	63	70
Mercury	DETSC 2325#	0.05	mg/kg	0.08	0.11	0.06	< 0.05	0.05	0.08
Nickel	DETSC 2301#	1	mg/kg	22	26	5.5	19	22	23
Selenium	DETSC 2301#	0.5	mg/kg	0.7	0.8	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	36	46	8.8	23	31	41
Zinc	DETSC 2301#	1	mg/kg	100	110	31	64	87	140
Inorganics									
pH	DETSC 2008#		pH	5.8	6.0	8.5	7.2	7.1	7.3
Cyanide, Total	DETSC 2130#	0.1	mg/kg	0.4	0.5	< 0.1	< 0.1	0.1	0.2
Total Organic Carbon	DETSC 2084#	0.5	%		7.2	0.6			
Sulphide	DETSC 2024*	10	mg/kg	36	52	16	12	36	28
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.09	0.11	0.03	0.05	0.05	0.15
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg				< 1.5		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg				< 1.2		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg				6.9		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg				68		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg				75		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg				< 0.01		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg				< 0.9		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg				12		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg				90		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg				160		
Aromatic C5-C35	DETSC 3072*	10	mg/kg				260		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg				330		
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	92	19	< 10

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-29300
Client Ref PN234595
Contract Title Pyramid Park

	Lab No	2276116	2276117	2276118	2276119	2276120	2276121
	.Sample ID	BH104	BH104	TP106	TP106	TP117	BH106
	Depth	0.20	1.00	0.30-0.50	2.80-3.00	0.00-0.40	0.20
	Other ID						
	Sample Type	ES	ES	ES	ES	ES	ES
	Sampling Date	08/12/2023	08/12/2023	08/12/2023	08/12/2023	08/12/2023	30/11/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	30	500	88	59
EPH (C21-C36)	DETSC 3311	10	mg/kg	< 10	< 10	54	1200	190	220
EPH (C36-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	79	11	12
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	90	1900	310	300
Benzene	DETSC 3321#	0.01	mg/kg				< 0.01		
Ethylbenzene	DETSC 3321#	0.01	mg/kg				< 0.01		
Toluene	DETSC 3321#	0.01	mg/kg				< 0.01		
Xylene	DETSC 3321#	0.01	mg/kg				< 0.01		
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.07	1.1	0.21	0.19
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.09	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.12	7.1	0.44	0.37
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.07	3.8	0.27	0.22
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.47	23	2.0	1.6
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.10	4.5	0.38	0.39
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	0.58	48	2.1	1.2
Pyrene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.60	39	2.2	1.3
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.17	7.3	0.59	0.37
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.19	7.9	0.70	0.55
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.16	6.5	0.60	0.45
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.06	2.2	0.18	0.15
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.13	5.0	0.44	0.37
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.05	1.7	0.15	0.10
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.46	0.04	0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.05	0.04	0.09	2.0	0.20	0.15
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.22	< 0.10	2.9	160	10	7.4
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.7	0.9	< 0.3	< 0.3	< 0.3	0.3

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-29300
Client Ref PN234595
Contract Title Pyramid Park

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2276116	BH104 0.20	SOIL	NAD	none	Ben Barsby
2276118	TP106 0.30-0.50	SOIL	NAD	none	Ben Barsby

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-29300
Client Ref PN234595
Contract Pyramid Park

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2276116	BH104 0.20 SOIL	08/12/23	GJ 250ml x2, GJ 60ml x2, PT 1L		
2276117	BH104 1.00 SOIL	08/12/23	GJ 250ml x2, GJ 60ml x2, PT 1L		
2276118	TP106 0.30-0.50 SOIL	08/12/23	GJ 250ml x2, GJ 60ml x2, PT 1L		
2276119	TP106 2.80-3.00 SOIL	08/12/23	GJ 250ml x2, GJ 60ml x2, PT 1L		
2276120	TP117 0.00-0.40 SOIL	08/12/23	GJ 250ml x2, GJ 60ml x2, PT 1L		
2276121	BH106 0.20 SOIL	30/11/23	GJ 250ml x2, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

APPENDIX 10

Laboratory Test Results - Contamination (Groundwater)

Certificate of Analysis

Certificate Number	24-01792	*Issued:*	05-Feb-24

Client Geotechnics LTD
The Geotechnical Centre
Unit 1B Borders Ind. Park
River Lane
Saltney
Chester
CH4 8RJ

Our Reference	24-01792
Client Reference	PN234595
Order No	ON39068
Contract Title	PYRAMID PARK
Description	7 Groundwater samples.
Date Received	29-Jan-24
Date Started	29-Jan-24
Date Completed	05-Feb-24
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Water Samples

Our Ref 24-01792
Client Ref PN234595
Contract Title PYRAMID PARK

	Lab No	2292226	2292227	2292228	2292229	2292230	2292231	2292232
	.Sample ID	BH01	BH02	BH03	BH04	BH05	BH06	BH08
	Depth							
	Other ID		19mm				19mm	
	Sample Type	EW	EW	EW	EW	EW	EW	EW
	Sampling Date	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Metals								
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.48	0.40	0.36	8.9	0.74	0.48	0.44
Boron, Dissolved	DETSC 2306*	12	ug/l	40	63	86	32	92	42	54
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	0.12	0.10	< 0.03	0.20	0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.49	0.27	< 0.25	< 0.25	< 0.25	< 0.25	0.85
Chromium, Hexavalent	DETSC 2203	7	ug/l	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.2	0.5	0.8	< 0.4	1.2	0.7	5.2
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.29	0.11	< 0.09	< 0.09	0.10	< 0.09	0.26
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	0.9	3.8	2.9	2.0	6.7	2.7	1.9
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.97	0.96	0.59	0.68	0.26	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	47	80	87	48	80	95	100
Inorganics										
pH	DETSC 2008		pH	7.2	7.2	7.3	7.4	7.3	7.5	7.6
Cyanide, Total Low Level	DETSC 2131	0.1	ug/l	1.0	0.3	0.2	0.3	0.2	0.5	0.3
Cyanide, Free Low Level	DETSC 2131	0.1	ug/l	1.1	0.2	< 0.1	0.1	< 0.1	< 0.1	0.2
Phenol - Monohydric Low Level	DETSC 2131	1.5	ug/l	8.8	9.0	7.4	15	7.2	3.3	6.2
Thiocyanate	DETSC 2130	20	ug/l	35	32	23	28	24	< 20	< 20
Sulphate as SO4	DETSC 2055	0.1	mg/l	57	120	180	36	86	120	6.1
Sulphide	DETSC 2208	10	ug/l	17	70	32	29	80	< 10	17
Sulphur (free)	DETSC 3049*	84	ug/l	< 84	< 84	< 84	< 84	< 84	< 84	< 84
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aliphatic C6-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aliphatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aliphatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aliphatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aliphatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aliphatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aliphatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10		< 10	
Aromatic C5-C7	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aromatic C7-C8	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aromatic C8-C10	DETSC 3322	0.1	ug/l		< 0.1	< 0.1	< 0.1		< 0.1	
Aromatic C10-C12	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aromatic C12-C16	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aromatic C16-C21	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aromatic C21-C35	DETSC 3072*	1	ug/l		< 1.0	< 1.0	< 1.0		< 1.0	
Aromatic C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10		< 10	
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	ug/l		< 10	< 10	< 10		< 10	
EPH (C10-C40)	DETSC 3311	10	ug/l	71	670	80	89	52	58	68
Benzene	DETSC 3322	1	ug/l		< 1.0					
Toluene	DETSC 3322	1	ug/l		< 1.0					

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water Samples

Our Ref 24-01792
Client Ref PN234595
Contract Title PYRAMID PARK

			Lab No	2292226	2292227	2292228	2292229	2292230	2292231	2292232
			.Sample ID	BH01	BH02	BH03	BH04	BH05	BH06	BH08
			Depth							
			Other ID		19mm				19mm	
			Sample Type	EW	EW	EW	EW	EW	EW	EW
			Sampling Date	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024	24/01/2024
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Ethylbenzene	DETSC 3322	1	ug/l		< 1.0					
Xylene	DETSC 3322	1	ug/l		< 1.0					
PAHs										
Naphthalene	DETSC 3304	0.05	ug/l	< 0.05	0.24	< 0.05	0.09	< 0.05	< 0.05	< 0.05
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	0.07	< 0.01	0.04	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	0.02	< 0.01	0.02	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	0.03	0.08	0.02	0.06	0.04	0.02	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	0.04	0.05	0.02	0.05	0.05	< 0.01	0.02
Pyrene	DETSC 3304	0.01	ug/l	0.05	0.05	0.02	0.04	0.06	0.01	0.03
Benzo(a)anthracene	DETSC 3304*	0.01	ug/l	0.01	0.02	< 0.01	0.02	0.02	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	0.02	0.03	0.01	0.02	0.03	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.02	0.02	< 0.01	0.02	0.03	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.01	< 0.01	< 0.01	0.01	0.02	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.01	0.03	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304	0.01	ug/l	0.01	0.01	< 0.01	0.01	0.02	< 0.01	< 0.01
PAH Total	DETSC 3304	0.2	ug/l	0.20	0.60	< 0.20	0.39	0.33	< 0.20	< 0.20
Phenols										
Phenol	DETSC 3451*	0.1	ug/l		< 0.10					
4-Chloro-3-methylphenol	DETSC 3451*	0.1	ug/l		< 0.10					
2,4-Dichlorophenol	DETSC 3451*	0.1	ug/l		< 0.10					
2,4-Dimethylphenol	DETSC 3451*	0.1	ug/l		< 0.10					
p-cresol	DETSC 3451*	0.1	ug/l		0.10					
2,6-Dimethylphenol	DETSC 3451*	0.1	ug/l		< 0.10					
2,6-Dichlorophenol	DETSC 3451*	0.1	ug/l		< 0.10					
2,4,6-Trichlorophenol	DETSC 3451*	0.1	ug/l		< 0.10					

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water VOC/SVOC Samples

Our Ref 24-01792
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2292227
.Sample ID	BH02
Depth	
Other ID	19mm
Sample Type	EW
Sampling Date	24/01/2024
Sampling Time	n/s

Test	Method	LOD	Units	
VOCs				
Dichlorodifluoromethane	DETSC 3432	1	ug/l	< 1
Chloromethane	DETSC 3432	1	ug/l	< 1
Vinyl Chloride	DETSC 3432	1	ug/l	< 1
Bromomethane	DETSC 3432	1	ug/l	< 1
Chloroethane	DETSC 3432	1	ug/l	< 1
Trichlorofluoromethane	DETSC 3432*	1	ug/l	< 1
1,1-dichloroethylene	DETSC 3432	1	ug/l	< 1
Methylene Chloride	DETSC 3432*	27	ug/l	< 27
Trans-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1
1,1-dichloroethane	DETSC 3432	1	ug/l	< 1
Cis-1,2-dichloroethylene	DETSC 3432	1	ug/l	< 1
2,2-dichloropropane	DETSC 3432*	2	ug/l	< 2
Bromochloromethane	DETSC 3432	4	ug/l	< 4
Chloroform	DETSC 3432	1	ug/l	< 1
1,1,1-trichloroethane	DETSC 3432	1	ug/l	< 1
1,1-dichloropropene	DETSC 3432	1	ug/l	< 1
Carbon tetrachloride	DETSC 3432	1	ug/l	< 1
Benzene	DETSC 3432	1	ug/l	< 1
1,2-dichloroethane	DETSC 3432	1	ug/l	< 1
Trichloroethylene	DETSC 3432*	1	ug/l	< 1
1,2-dichloropropane	DETSC 3432	1	ug/l	< 1
Dibromomethane	DETSC 3432	1	ug/l	< 1
Bromodichloromethane	DETSC 3432	4	ug/l	< 4
cis-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1
Toluene	DETSC 3432	1	ug/l	< 1
trans-1,3-dichloropropene	DETSC 3432	1	ug/l	< 1
1,1,2-trichloroethane	DETSC 3432	1	ug/l	< 1
Tetrachloroethylene	DETSC 3432	1	ug/l	< 1
1,3-dichloropropane	DETSC 3432	1	ug/l	< 1
Dibromochloromethane	DETSC 3432	1	ug/l	< 1
1,2-dibromoethane	DETSC 3432	1	ug/l	< 1
Chlorobenzene	DETSC 3432	1	ug/l	< 1
1,1,1,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1
Ethylbenzene	DETSC 3432	1	ug/l	< 1
m+p-Xylene	DETSC 3432	2	ug/l	< 2
o-Xylene	DETSC 3432	1	ug/l	< 1
Styrene	DETSC 3432	1	ug/l	< 1
Bromoform	DETSC 3432	1	ug/l	< 1
Isopropylbenzene	DETSC 3432	1	ug/l	< 1
1,1,2,2-tetrachloroethane	DETSC 3432	1	ug/l	< 1
Bromobenzene	DETSC 3432	1	ug/l	< 1

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water VOC/SVOC Samples

Our Ref 24-01792
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2292227
.Sample ID	BH02
Depth	
Other ID	19mm
Sample Type	EW
Sampling Date	24/01/2024
Sampling Time	n/s

Test	Method	LOD	Units	
1,2,3-trichloropropane	DETSC 3432	1	ug/l	< 1
n-propylbenzene	DETSC 3432	1	ug/l	< 1
2-chlorotoluene	DETSC 3432	1	ug/l	< 1
1,3,5-trimethylbenzene	DETSC 3432	1	ug/l	< 1
4-chlorotoluene	DETSC 3432	1	ug/l	< 1
Tert-butylbenzene	DETSC 3432	1	ug/l	< 1
1,2,4-trimethylbenzene	DETSC 3432	1	ug/l	< 1
sec-butylbenzene	DETSC 3432	1	ug/l	< 1
p-isopropyltoluene	DETSC 3432	1	ug/l	< 1
1,3-dichlorobenzene	DETSC 3432	2	ug/l	< 2
1,4-dichlorobenzene	DETSC 3432	1	ug/l	< 1
n-butylbenzene	DETSC 3432	1	ug/l	< 1
1,2-dichlorobenzene	DETSC 3432	1	ug/l	< 1
1,2-dibromo-3-chloropropane	DETSC 3432	1	ug/l	< 1
1,2,4-trichlorobenzene	DETSC 3432	1	ug/l	< 1
Hexachlorobutadiene	DETSC 3432	1	ug/l	< 1
1,2,3-trichlorobenzene	DETSC 3432	1	ug/l	< 1
MTBE	DETSC 3432*	1	ug/l	< 1
SVOCs				
Aniline	DETSC 3434*	1	ug/l	< 1.0
2-Chlorophenol	DETSC 3434*	1	ug/l	< 1.0
Benzyl Alcohol	DETSC 3434*	1	ug/l	< 1.0
2-Methylphenol	DETSC 3434*	1	ug/l	< 1.0
Bis(2-chloroisopropyl)ether	DETSC 3434*	1	ug/l	< 1.0
3&4-Methylphenol	DETSC 3434*	1	ug/l	< 1.0
Bis(2-chloroethoxy)methane	DETSC 3434*	1	ug/l	< 1.0
1,2,4-Trichlorobenzene	DETSC 3434*	1	ug/l	< 1.0
2-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0
Hexachlorocyclopentadiene	DETSC 3434*	1	ug/l	< 1.0
2,4,5-Trichlorophenol	DETSC 3434*	1	ug/l	< 1.0
2-Chloronaphthalene	DETSC 3434*	1	ug/l	< 1.0
2-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0
2,4-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0
3-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0
4-Nitrophenol	DETSC 3434*	1	ug/l	< 1.0
Dibenzofuran	DETSC 3434*	1	ug/l	< 1.0
2,6-Dinitrotoluene	DETSC 3434*	1	ug/l	< 1.0
2,3,4,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0
Diethylphthalate	DETSC 3434*	1	ug/l	< 1.0
4-Chlorophenylphenylether	DETSC 3434*	1	ug/l	< 1.0
4-Nitroaniline	DETSC 3434*	1	ug/l	< 1.0
Diphenylamine	DETSC 3434*	1	ug/l	< 1.0

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Water VOC/SVOC Samples

Our Ref 24-01792
Client Ref PN234595
Contract Title PYRAMID PARK

Lab No	2292227
.Sample ID	BH02
Depth	
Other ID	19mm
Sample Type	EW
Sampling Date	24/01/2024
Sampling Time	n/s

Test	Method	LOD	Units	
4-Bromophenylphenylether	DETSC 3434*	1	ug/l	< 1.0
Hexachlorobenzene	DETSC 3434*	1	ug/l	< 1.0
Bis(2-ethylhexyl)ester	DETSC 3434*	1	ug/l	< 1.0
Pentachlorophenol	DETSC 3434*	1	ug/l	< 1.0
Di-n-butylphthalate	DETSC 3434*	1	ug/l	< 1.0
Butylbenzylphthalate	DETSC 3434*	1	ug/l	< 1.0
Bis(2-ethylhexyl)phthalate	DETSC 3434*	1	ug/l	< 1.0
Di-n-octylphthalate	DETSC 3434*	1	ug/l	< 1.0
1,4-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0
Dimethylphthalate	DETSC 3434*	1	ug/l	< 1.0
1,3-Dinitrobenzene	DETSC 3434*	1	ug/l	< 1.0
2,3,5,6-Tetrachlorophenol	DETSC 3434*	1	ug/l	< 1.0
Azobenzene	DETSC 3434*	1	ug/l	< 1.0
Carbazole	DETSC 3434*	1	ug/l	< 1.0
1-Methylnaphthalene	DETSC 3434*	1	ug/l	< 1.0

Key: * -not accredited. n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 24-01792
Client Ref PN234595
Contract PYRAMID PARK

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2292226	BH01 WATER	24/01/24	GB 1L, GV x2, PB 1L	Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292227	BH02 WATER	24/01/24	GB 1L, GV x2, PB 1L	Aliphatics/Aromatics (4 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292228	BH03 WATER	24/01/24	GB 1L, GV x2, PB 1L	Aliphatics/Aromatics (4 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292229	BH04 WATER	24/01/24	GB 1L, GV x2, PB 1L	Aliphatics/Aromatics (4 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292230	BH05 WATER	24/01/24	GB 1L, GV x2, PB 1L	Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292231	BH06 WATER	24/01/24	GB 1L, GV x2, PB 1L	Aliphatics/Aromatics (4 days), Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	
2292232	BH08 WATER	24/01/24	GB 1L, GV x2, PB 1L	Chromium, Hexavalent (4 days), Kone (4 days), pH/Cond (1 days), PAH MS (4 days), EPH (4 days)	

Key: G-Glass P-Plastic B-Bottle V-Vial

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

APPENDIX 11

Exploratory Hole Location Plan

FIELDWORK RESULTS - *Location Summary*

Project Pyramid Park, Bury **Engineer** Campbell Reith Hill LLP **Project No.** PN234595

Client Campbell Reith Hill LLP

Location	Location Type	Easting (m)	Northing (m)	Ground Level (m OD)	Final Depth (m bgl)
BH101	CP	380393.4	410333.1	86.35	6.39
BH102	CP	380426.8	410360.3	86.74	7.78
BH103	CP	380481.7	410348.7	86.05	7.92
BH104	CP	380484.1	410306.7	85.51	7.00
BH105	CP	380534.0	410335.7	86.21	4.38
BH106	CP	380521.7	410290.8	85.53	7.38
BH107	CP	380562.3	410266.2	90.59	11.77
BH108	CP	380616.2	410293.1	85.57	5.39
HP111	IP	380498.2	410336.1	85.64	0.20
HP113	IP	380475.3	410298.1	85.58	0.20
HP114	IP	380533.3	410311.9	85.56	0.20
HP115	IP	380555.1	410284.8	85.56	0.50
HP117E	IP	380591.6	410284.8	85.96	1.10
HP117W	IP	380586.8	410285.4	85.94	1.10
SA101	TP	380461.9	410315.6	86.11	1.20
SA102	TP	380458.1	410305.2	86.09	0.70
TP101	TP	380406.8	410371.0	85.55	2.00
TP102	TP	380416.6	410353.1	88.42	4.00
TP103	TP	380431.4	410372.9	86.77	3.50
TP104	TP	380444.3	410367.1	87.34	2.40
TP106	TP	380423.1	410299.9	87.56	3.40
TP107	TP	380426.6	410320.7	90.40	4.00
TP108	TP	380435.3	410303.2	89.14	3.00
TP109	TP	380446.7	410323.9	87.81	3.00
TP110	TP	380497.6	410350.8	86.24	3.20
TP112	TP	380507.0	410313.2	85.52	0.40
TP116A	TP	380554.5	410282.1	85.99	2.30
TP118	TP	380626.3	410287.1	85.57	1.10
TP119	TP	380398.1	410350.4	87.05	4.30
TP120	TP	380379.2	410317.9	86.22	3.00
TP121	TP	380438.4	410351.5	86.57	4.00
TP122	TP	380459.9	410367.1	86.76	0.80
TP123	TP	380527.5	410339.7	86.20	3.60



N

Legend

- Locations By Type - CP
- Locations By Type - IP
- Locations By Type - TP

GEOTECHNICS

Unit 1B Borders Industrial Park
River Lane
Saltney
Chester CH4 8RJ

Phone: 01244 671117
Email: mail@geotechnics.co.uk
www.geotechnics.co.uk

Engineer:
Campbell Reith Hill LLP

Client:
Campbell Reith Hill LLP

Project:
Pyramid Park, Bury

Drawing Title:
Exploratory Hole Location Plan

Scale:	Date:
1:1000 at A3	**29/01/2024**
Project No.: **PN234595**	**Exploratory Hole Location Plan**

APPENDIX 12

Investigation Techniques and General Notes

INVESTIGATION TECHNIQUES

INTRODUCTION

The following brief review of Ground Investigation techniques, generally used as part of most Site Investigations in the UK, summarises their methodology, advantages and limitations. Detailed descriptions of the techniques are available and can be provided on request. This review should be read in conjunction with the accompanying General Notes.

TRIAL PITS

The trial pit is amongst the simplest yet most effective means of identifying shallow ground conditions on a site. Its advantages include simplicity, speed, potential accuracy and cost-effectiveness. The trial pit is most commonly formed using a back-acting excavator which can typically determine ground conditions to some 4 metres below ground level. Hand excavation is often used to locate, expose and detail existing foundations, features or services. In general, it is difficult to extend pits significantly below the water table in predominantly granular soils, where flows can cause instability. Unless otherwise stated, the trial pits will not have been provided with temporary side support during their construction. Under such circumstances, entrance into the pit is not permitted and hence observations will have been made from the ground surface and samples taken from the excavator bucket.

Where access for personnel is required to allow close observation of the exposed strata, the taking of samples and the carrying out of in situ tests, the sides of the trial pits (Observation Pits in BS 5930:2015) will be made safe using temporary supports or the sides battered back to a stable angle. Some limited access to such Trial Pits (Observation Pits) at depths less than 1m may be allowed in stable conditions or where the sides are benched or battered back to a safe angle.

Trends in strata type, level and thickness can be determined, shear surfaces identified and the behaviour of plant, excavation sides and excavated materials can be related to the construction process. They are particularly valuable in land slip investigations. Some types of in situ test can be undertaken in such pits and large disturbed or block samples obtained.

CABLE PERCUSSION BORING

The light Cable Percussion technique of soft ground boring, typically at a diameter of 150mm, is a well-established simple and flexible method of boring vertical holes and generally allows data to be obtained in respect of strata conditions other than rock. A tubular cutter (for cohesive soils) or shell with a flap valve (for granular soils) is repeatedly lifted and dropped using a winch and rope operating from an "A" frame. Soil which enters these tools is regularly removed and either sampled for subsequent examination or test, or laid to one side for later removal off site and licensed disposal or, if permitted by the Client, use as backfill. Steel casing will have been used to prevent collapse of the borehole sides where necessary. A degree of disturbance of soil and mixing of layers is inevitable and the presence of very thin layers of different soils within a particular stratum may not be identified. Changes in strata type can only be detected on recognition of a change in soil samples at the surface, after the interface has been passed. For the foregoing reasons, depth measurements should not be considered to be more accurate than 0.10 metre. The technique can determine ground conditions to depths in excess of 30 metres under suitable circumstances and usually causes less surface disturbance than trial pitting.

In cohesive soils cylindrical samples are retrieved by driving or pushing in 100mm nominal diameter tubes. In soft soils, piston sampling or vane testing may be undertaken. In granular soils and often in cohesive materials, in situ Standard Penetration Tests (SPT's) are performed. The SPT records the number of standard blows required to drive a 50mm diameter open or cone ended probe for 300mm after an initial 150mm penetration. A modified method of recording is used in denser strata. Small disturbed samples are obtained throughout.

ROTARY DRILLING

Rotary Drilling to produce cores by rotating an annular diamond-impregnated tube or barrel into the ground is the technique most appropriate to the forming of site investigation boreholes through rock or other hard strata. It has the advantage of being able to be used vertically or at an angle. Core diameters of less than 100mm are most common for site investigation purposes. Core is normally retrieved in plastic lining tubes. A flushing fluid such as air, water or foam is used to cool the bit and carry cuttings to the surface. Depths in excess of 60 metres can be achieved under suitable circumstances using rotary techniques, with minimal surface disturbance.

Examination of cores allows detailed rock description and generally enables angled discontinuity surfaces to be observed. However, vertical holes do not necessarily reveal the presence of vertical or near-vertical fissures or joint discontinuities. The core type and/or techniques used will depend on the ground conditions. Where open hole rotary drilling is employed, descriptions of strata result from examination at the surface of small particles ejected from the borehole in the flushing medium. In consequence, no indication of fissuring, bedding, consistency or degree of weathering can be obtained.

DYNAMIC SAMPLING

This technique involves the driving of an open-ended tube into the ground and retrieval of the soil which enters the tube. It was previously called window or windowless sampling. The term "window sample" arose from the original device which had a "window" or slot cut into the side of the tube through which samples were taken. This was superseded by the use of a thin-walled plastic liner to retrieve the soil sample from within a sampler (windowless sampling) which has a solid wall. Line diameters range from 36 to 86mm. Such samples can be used for qualitative logging, selection of samples for classification and chemical analysis and for obtaining a rudimentary assessment of strength.

Driving devices can be hand-held or machine mounted and the drive tubes are typically in 1m lengths. Depending on the type of rig used, the hole formed can be cased to prevent collapse of the borehole sides. Where the type of rig does not allow the insertion of casing, the success of this technique can be limited when soils and groundwater conditions are such that the sides of the hole collapse on withdrawal of the sampler. Obstructions within the ground, the density of the material or its strength can also limit the depth and rate of penetration of this light-weight investigation technique. Nevertheless, it is a valuable tool where access is constrained such as within buildings or on embankments. Depths of up to 10m can be achieved in suitable circumstances depending on the rig type but depths of 5m to 6m are more common.

EXPLORATORY HOLE RECORDS

The data obtained by these techniques are generally presented on Trial Pit, Borehole, Drillhole or Dynamic Sample Records. The descriptions of strata result from information gathered from a number of sources which may include published geological data, preliminary field observations and descriptions, in situ test results, laboratory test results and specimen descriptions. A key to the symbols and abbreviations used accompanies the records. The descriptions on the exploratory hole records accommodate but may not necessarily be identical to those on any preliminary records or the laboratory summaries.

The records show ground conditions at the exploratory hole locations. The degree to which they can be used to represent conditions between or beyond such holes, however, is a matter for geological interpretation rather than factual reporting and the associated uncertainties must be recognised.

DYNAMIC PROBING

This technique typically measures the number of blows of a standard weight falling over a standard height to advance a cone-ended rod over sequential standard distances (typically 100mm). Some devices measure the penetration of the probe per standard blow. It is essentially a profiling tool and is best used in conjunction with other investigation techniques where site-specific correlation can be used to delineate the distribution of soft or loose soils or the upper horizon of a dense or strong layer such as rock.

Both machine-driven and hand-driven equipment is available, the selection depending upon access restrictions and the depth of penetration required. It is particularly useful where access for larger equipment is not available, disturbance is to be minimised or where there are cost constraints. No samples are recovered and some techniques leave a sacrificial cone head in the ground. As with other lightweight techniques, progress is limited in strong or dense soils. The results are presented both numerically and graphically. Depths of up to 10m are commonly achieved in suitable circumstances.

The hand-driven DCP probing device has been calibrated by the Highways Agency to provide a profile of CBR values over a range of depths.

INSTRUMENTATION

The most common form of instrument used in site investigation is either the standpipe or else the standpipe piezometer which can be installed in investigation holes. They are used to facilitate monitoring of groundwater levels and water sampling over a period of time following site work. Normally a standpipe would be formed using rigid plastic tubing which has been perforated or slotted over much of its length whilst a standpipe piezometer would have a filter tip which would be placed at a selected level and the hole sealed above and sometimes below to isolate the zone of interest. Groundwater levels are determined using an electronic "dip meter" to measure the depth to the water surface from ground level. Piezometers can also be used to measure permeability. They are simple and inexpensive instruments for long term monitoring but response times can limit their use in tidal areas and access to the ground surface at each instrument is necessary. Remote reading requires more sophisticated hydraulic, electronic or pneumatic equipment.

Settlement can be monitored using surface or buried target plates whilst lateral movement over a range of depths is monitored using slip indicator or inclinometer equipment.

GENERAL NOTES

1. *The report is prepared for the exclusive use of the Client named in the document and copyright subsists with Geotechnics Limited. Prior written permission must be obtained to reproduce all or part of the report. It is prepared on the understanding that its contents are only disclosed to parties directly involved in the current investigation, preparation and development of the site.*

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4. *The assessment of the significance of the factual data, where called for, is provided to assist the Client and their Engineer and/or Advisers in the preparation of their designs.*

5. *The report is based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. The data from any commissioned desk study and site reconnaissance are also drawn upon. There may be special conditions appertaining to the site, however, which are not revealed by the investigation and which may not be taken into account in the report.*

6. *Methods of construction and/or design other than those proposed by the designers or referred to in the report may require consideration during the evolution of the proposals and further assessment of the geotechnical and any geoenvironmental data would be required to provide discussion and evaluations appropriate to these methods.*

7. *The accuracy of results reported depends upon the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristics of the strata as a whole (see accompanying notes on Investigation Techniques). Where such measurements are critical, the technique of investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the Company where necessary.*

8. *The samples selected for laboratory test are prepared and tested in accordance with the relevant Clauses and Parts of BS EN ISO 17892 and BS 1377 Parts 1 to 8, where appropriate, in Geotechnics Limited's UKAS accredited Laboratory, where possible. A list of tests is given.*

9. *Tests requiring the use of another laboratory having UKAS accreditation where possible are identified.*

10. *Any unavoidable variations from specified procedures are identified in the report.*

11. *Specimens are cut vertically, where this is relevant and can be identified, unless otherwise stated*

12. *All the data required by the test procedures are recorded on individual test sheets but the results in the report are presented in summary form to aid understanding and assimilation for design purposes. Where all details are required, these can be made available.*

13. *Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes, or on the possible presence of features based on either visual, verbal, written, cartographical, photographic or published evidence, this is for guidance only and no liability can be accepted for its accuracy.*

14. *The Code of Practice for Ground Investigations – BS 5930:2015 calls for man-made soils to be described as Anthropogenic Ground with soils placed in an un-controlled manner classified as Made Ground and soils placed in a controlled manner as Fill. In view of the difficulty in always accurately determining the origin of man-made soils in exploratory holes, Geotechnics Limited classify such materials as Made Ground. Where soils can be clearly identified as being placed in a controlled manner then further classification of the soils as Fill has been added to the Exploratory Hole Records.*

15. *Classification of man-made soils is based on the inspection of retrieved samples or exposed excavations. Where it is obvious that foreign matter such as paper, plastic or metal is present, classification is clear. Frequently, however, for man-made soils that arise from the adjacent ground or from the backfilling of excavations, their visual characteristics can closely resemble those of undisturbed ground. Other evidence such as site history, exploratory hole location or other tests may need to be drawn upon to provide clarification. For these reasons, classification of soils on the exploratory hole records as either Made Ground or naturally occurring strata, the boundary between them and any interpretation that this gives rise to should be regarded as provisional and subject to re-evaluation in the light of further data.*

16. *The classification of materials as Topsoil is generally based on visual description and should not be interpreted to mean that the material so described complies with the criteria for Topsoil used in BS 3882:2015. Specific testing would be necessary where such a definition is a requirement.*

17. *Ground conditions should be monitored during the construction of the works and the report should be re-evaluated in the light of these data by the supervising geotechnical engineers.*

18. *Any comments on groundwater conditions are based on observations made at the time of the investigation, unless specifically stated otherwise. It should be noted, however, that the observations are subject to the method and speed of boring, drilling or excavation and that groundwater levels will vary due to seasonal or other effects.*

19. *Any bearing capacities for conventional spread foundations which are given in the report and interpreted from the investigation are for bases at a minimum depth of 1m below finished ground level in naturally occurring strata and at broadly similar levels throughout individual structures, unless otherwise stated. Typically they are based on serviceability criteria taking account of an assessment of the shear strength and/or density data obtained by the investigation. The foundations should be designed in accordance with the good practice embodied in BS 8004:2015 - Foundations, supplemented for housing by NHBC Standards. Foundation design is an iterative process and bearing pressures may need adjustment or other measures may need to be taken in the context of final layouts and levels prior to finalisation of proposals.*

20. *Unless specifically stated, the investigation does not take account of the possible effects of mineral extraction or of gases from fill or natural sources within, below or outside the site.*

21. *The costs or economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to geotechnical or geoenvironmental considerations and hence their evaluation is outside the scope of the report.*

Factual Ground Investigation Report

Site: Pyramid Park, Bury
Reference: 17-777-R1-2
Date: September 24



E3P

Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

+ 44 (0) 161 707 9612
https://e3p.co.uk

Registered in England
CRN: 08725262

QUALITY ASSURANCE

Report reference	17-777-R1

REV REF:	DESCRIPTION	AUTHOR	CHECKED	AUTHORISED	DATE
1	First issue	JC	JS	DC	20/08/24
2	Updated in line with client comments	JC	JS	DC	02/09/24

This report has been prepared for the sole benefit, use, and information of the client. The liability of Environmental Engineering Partnership Limited T/A E3P with respect to the information contained in the report will not extend to any third party. This report has been prepared by the qualified persons as listed below.

WRITTEN BY	QUALIFICATIONS	POSITION
Jack Clayton	BSc, FGS	Graduate Consultant

REVIEWED BY	QUALIFICATIONS	POSITION
Jessica Sheridan	MeSci, FGS	Senior Consultant

AUTHORISED BY	QUALIFICATIONS	POSITION
Daniel Cox	BSc (Hons), FGS, PIEMA, MIEnvSc, Cenv	Director

1. INTRODUCTION

1.1. BACKGROUND AND OBJECTIVES

E3P has been commissioned by Campbell Reith on behalf of their client Bury Council to undertake a Ground Investigation at Pyramid Park, Bury, BL9 0EQ.

The ground investigation has been undertaken in accordance with Campbell Reith Ground Investigation Mini Spec (ref: 14111-CRH-XX-XX-SP-0002, May 2024) and Proposed Exploratory Hole Location Plan (DWG: 14111-CRH-XX-XX-FG-G-7025-P2).

Previous investigations have been undertaken across the site by Dunelm (2022), IGE Consulting (2023) and Geotechnics (2023).

The purpose of the intrusive ground investigation is to provide additional information on the nature and composition of the material contained within the pyramid structures in the west of the site, to confirm the ground conditions within the former pond area in the east of the site, and to determine the strength of the near surface soils underlying the proposed roads.

1.2. SITE DESCRIPTION

The site is located off Market Street in Bury, Greater Manchester (E 380500, N 410315, postcode).

The site comprises a low-lying central area of relatively flat land with slopes leading up to surrounding higher ground present along the northern and southern areas of the site. A masonry arch bridge (Market Street) spans the eastern section of the site. The bridge abutments are formed into the slopes in the north and south of the site. An access track slopes down along the southern boundary from vehicle access gates off Market Street.

The site was most recently used as Public Open Space (POS) with the central and eastern area of the site occupied by a large pond (now drained). The western area of the site occupied footpaths and a large man-made pyramid feature, which remains in-situ.

1.3. SITE HISTORY

The site was formerly railway land with sidings, goods sheds, signal boxes etc.

1.4. PROPOSED DEVELOPMENT

The site is being considered for onward development, most likely for residential end use, however, development proposals have not yet been finalised.

2. GROUND INVESTIGATION

2.1. PRIOR WORKS AND INVESTIGATION LIMITATIONS

2.1.1. UNDERGROUND SERVICES

A review of up-to-date statutory utility plans was undertaken alongside a review of the Technics Desktop Subsurface Utility Report. The plans identify a 900 mm diameter MAC surface water sewer entering the east of the site and terminating within the historic pond area.

A walkover was undertaken prior to mobilising to the site, an attempt was made to locate a manhole associated with the drain, however, this could not be located. Proposed exploratory hole positions within the vicinity of the recorded route of the sewer were therefore repositioned by Campbell Reith and agreed upon before advancing.

2.2. SCOPE OF INVESTIGATION

The ground investigation has been designed by Campbell Reith. E3P has completed the ground investigation in general accordance with the specification provided.

The exploratory fieldwork was completed on 11th and 18th July 2024. The works are summarised in Table 1.

Table 1 Summary of Fieldwork

RATIONALE	LOCATION	EASTING	NORTHING	APPROX. ELEVATION (m AOD)	TYPE	MAXIMUM DEPTH (m bgl)
Investigation of Former Pond	WS201	380470	410319	85.55	Window Sample Probe Hole	1.72
	WS202	380509	410304	85.50		1.86
	WS203	380554	410304	85.50		2.09
	TP204	380471	410329	85.85	Trial Pit	3.40
	TP205	380491	410319	85.55		2.70
	TP206	380503	410296	85.55		4.00
	TP207	380516	410324	85.55		3.40
	TP208	380528	410307	85.50		3.50
	TP209	380536	410284	85.60		3.00
	TP210	380560	410304	85.60		3.00

RATIONALE	LOCATION	EASTING	NORTHING	APPROX. ELEVATION (m AOD)	TYPE	MAXIMUM DEPTH (m bgl)
Investigation of Pyramid Features	TP201	380419	410307	85.50	Trial Pit	4.20
	TP202	380402	410364	83.80		2.40
	TP203	380444	410351	87.65		4.00
To Obtain Approximate CBR%	DCP101A	380438	410377	86.90	Dynamic Cone Penetrometer Test	0.31
	DCP101B	380438	410377	86.90		0.76
	DCP102	380466	410365	86.65		0.70
	DCP103A	380461	410332	86.25		0.49
	DCP103B	380461	410332	86.25		0.32
	DCP104	380492	410351	86.15		0.90
	DCP105	380521	410337	86.05		0.94
	DCP106	380544	410324	86.05		0.93

Exploratory hole locations are shown on Drawing 17-777-005 (Appendix III), with ground conditions recorded on the logs, provided in Appendix IV.

2.3. LABORATORY ANALYSIS

Selected soil samples were submitted for chemical analysis in accordance with the Campbell Reith specified test suites. Test suites include the following:

- Asbestos Screen, Arsenic, Boron, Beryllium, Chromium III, Chromium VI, Copper, Lead, Nickel, Vanadium, Selenium, Zinc.
- Cyanide (total), pH, Sulphate (total and water sol), Sulphide, Phenols (total).
- EPH Banded TPH, BTEX, VOC (speciated), PAH (USEPA 16 Speciated).
- Total Organic Carbon.

Chemtest laboratory (Eurofins) undertook the analytical work, and the testing results are included in Appendix V.

Selected samples were submitted to Murray Rix for geotechnical analysis in accordance with the Campbell Reith testing schedules. Testing included the following:

- Moisture Content.
- Atterberg Limits.
- Particle Size Distribution (PSD) – wet sieve method.
- California Bearing Ratio (CBR) on recompacted sample.
- Dry Density/Moisture relationship (2.5 kg) in CBR mould.

Laboratory analysis results are included in Appendix VI and are summarised in Section 4.

3. GROUND AND GROUNDWATER CONDITIONS

3.1. SUMMARY OF GROUND CONDITIONS

The ground investigation identified the strata set out in Table 2 below.

Table 2 Summary of Strata

LOCATION	STRATUM					
	REWORKED TOPSOIL	GRANULAR MADE GROUND	COHESIVE MADE GROUND	GRAVELLY CLAY	SAND	GRAVEL
WS201	0.00–0.10	0.10–0.30	0.30–1.40	1.40–1.86*	–	–
WS202	0.00–0.10	0.10–1.00	1.00–1.20	1.20–1.72*	–	–
WS203	0.00–0.10	0.10–1.80	–	1.80–2.09*	–	–
TP201	0.00–0.30	0.30–3.60	–	3.60–4.20*	–	–
TP202	0.00–0.40	0.40–1.50	–	1.50–2.50*	–	–
TP203	0.00–0.30	0.30–3.50	–	3.50–4.00*	–	–
TP204	0.00–0.10	0.10–0.40	0.40–0.80	0.80–1.70	–	1.70–3.40*
TP205	0.00–0.10	0.10–0.30	0.30–0.70	0.70–2.70*	–	–
TP206	0.00–0.10	0.10–1.00	–	1.00–1.70	–	1.70–4.00*
TP207	0.00–0.10	0.10–0.90	–	0.90–2.50	–	2.50–3.40*
TP208	0.00–0.10	0.10–1.80	–	1.80–3.50*	–	–
TP209	0.00–0.10	0.10–1.60	–	2.50–3.00*	1.60–2.50	–
TP210	0.00–0.10	0.10–1.80	–	1.80–3.00*	–	–

*Base of strata not proven

Exploratory hole locations are shown on Drawing 17-777-005 (Appendix III), with ground conditions recorded on the logs, provided in Appendix IV.

3.2. MADE GROUND

Made Ground has been encountered in each of the E3P exploratory hole locations from ground level to a maximum proven depth of 3.60 m bgl in TP201, which was advanced through the side wall of the southernmost pyramid feature.

Made Ground within the pyramid features (TP201-TP203) was generally found to comprise a reworked topsoil layer over brown sandy gravelly clay or gravelly fine to medium sand with gravel of fine to coarse angular to sub rounded of brick, concrete and variable plastic, timber, railway sleepers metal and clinker inclusions.

At the base of TP201 a grey fine to coarse angular to sub rounded gravel of concrete and brick was encountered (3.30-3.60 m bgl).

Within the former pond area, the maximum recorded depth of Made Ground was 1.80 m bgl (TP208 and TP210), generally deepening to the east toward the centre of the pond. The sequence of Made Ground was generally found to comprise a reworked topsoil of clayey sand with rootlets over grey gravel of sub angular to sub rounded limestone, mudstone and siltstone with plastic lining/membrane at c. 0.19 m bgl, underlain by orangish brown, occasionally grey/black, fine to medium sand with mudstone and brick inclusions.

Beneath the sandy Made Ground, a grey gravelly fine to medium sand or gravel of fine to coarse angular to sub rounded limestone, siltstone, mudstone and brick was encountered in a number of locations.

A brown clay layer was also encountered at the base of the Made Ground in WS201 and TP204.

3.3. SUPERFICIAL DEPOSITS

Superficial deposits were encountered in each of the E3P exploratory hole locations as very stiff, very high strength brown variably sandy and gravelly CLAY with gravel of fine to coarse, angular to sub rounded sandstone.

In WS202, TP204, TP206 and TP207 yellowish/orangish brown bouldery cobbly GRAVEL of fine to coarse angular to sub rounded of sandstone was encountered beneath the CLAY from depths of 1.60 m to 2.50 m bgl, deepening to the east.

A SAND layer was encountered beneath the Made Ground (1.60-2.50 m bgl) in TP209.

The base of the superficial deposits/top of rockhead was not proven.

3.4. SOLID GEOLOGY

The solid geology was not encountered during the ground investigation.

3.5. GROUNDWATER

Groundwater strikes were encountered during the site investigation. The depth of the strikes are noted on the logs in Appendix IV and summarised in Table 3 along with the approximate level (m AOD) of the strike.

Table 3 Summary Groundwater Levels

LOCATION	WATER STRIKE DEPTH (m bgl)	APPROX. WATER STRIKE LEVEL (m AOD)	REMARKS
WS202	0.50	85.00	N/A
WS203	1.00	84.50	N/A
TP201	3.10	82.75	Slow ingress in Made Ground
TP202	1.00	84.55	Slow ingress in Made Ground
TP203	3.00	82.55	Seepage in Made Ground with sheen observed
TP206	0.30	85.30	Slow ingress in Made Ground
TP208	0.20	85.60	Slow ingress in Made Ground
TP209	0.10	85.30	Seepage in Made Ground

LOCATION	WATER STRIKE DEPTH (m bgl)	APPROX. WATER STRIKE LEVEL (m AOD)	REMARKS
TP209	1.80	82.00	Seepage in Made Ground
TP210	0.10	87.55	Seepage in Made Ground
TP210	1.60	86.05	Seepage in Made Ground

3.6. VISUAL AND OLFACTORY EVIDENCE OF CONTAMINATION

Visual and olfactory evidence of potential contamination observed during the investigation is summarised in Table 4 and recorded on the logs in Appendix IV.

Table 4 Summary of Evidence of Potential Contamination

LOCATION	DEPTH (m bgl)	REMARKS
TP201	0.30–3.60	Sweet odour
TP202	0.40–1.50	Slight sweet odour
TP203	0.30–3.50	Sweet odour
TP210	0.20–0.60	Sweet odour

3.7. OBSTRUCTIONS

Obstructions were encountered during the investigation as summarised in Table 5 and recorded on the logs in Appendix IV.

Table 5 Summary of Obstructions

LOCATION	DEPTH (m bgl)	REMARKS
TP202	0.40	Drainage pipe uncovered
TP203	2.10	Railway tracks uncovered

Window sample probeholes were not completed to the target depth of 5.45 m bgl due refusals within the very stiff very high strength CLAY.

4. GEOTECHNICAL TESTING

4.1. IN-SITU STANDARD PENETRATION TESTING (SPT)

In-situ geotechnical testing was conducted using the standard penetration test (SPT) and, where the ground is granular, a 60° cone (SPT(C)) was used instead of the sampling tube.

The results are shown in the probe hole logs in Appendix IV.

4.2. SOIL CONSISTENCY

Undrained shear strength values were measured using a hand shear vane in natural cohesive strata.

The results are shown in the exploratory hole logs in Appendix IV.

4.3. pH AND SULPHATE

Chemical analyses for pH and soluble sulphate content are summarised in Table 6. Full results are presented in Appendix VI.

Table 6 Summary pH/Sulphate Concentrations

LOCATION	STRATA	DEPTH (m)	SO_4 IN 2:1 WATER/SOIL (g/l)	pH VALUE
TP201	Made Ground	0.20	< 0.010	8.0
TP201	Made Ground	2.00	0.2700	8.1
TP202	Made Ground	0.40	0.2000	8.0
TP203	CLAY	3.50	0.0250	7.9
TP205	CLAY	1.00	< 0.010	9.0
TP206	SAND	0.60	< 0.010	8.6
TP210	Made Ground	0.40	0.0300	8.2

4.4. SOIL PLASTICITY

Atterberg testing has been undertaken to determine the liquid limit, plastic limit and plasticity index of selected cohesive soils. Results are summarised in Table 7. Full results are presented in Appendix VI.

Table 7 Summary of Plasticity Index Test Results

LOCATION	DEPTH (m)	NATURAL MOISTURE CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	PASSING 425 µm SIEVE (%)	MODIFIED PLASTICITY INDEX
TP204	1.00	10.6	11	29	18	76	13.68
TP207	1.50	11.9	11	30	19	95	18.05

LOCATION	DEPTH (m)	NATURAL MOISTURE CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	PASSING 425 µm SIEVE (%)	MODIFIED PLASTICITY INDEX
WS201	1.40	16.2	12	30	18	93	16.74
WS203	2.00	15.5	12	29	17	94	15.98

4.5. PARTICLE SIZE DISTRIBUTION

Particle Size Distribution testing has been undertaken on selected samples of granular material via wet sieve to obtain information on the soil fractions. Results are summarised in Table 8. Full results are presented in Appendix VI.

Table 8 Summary of Particle Size Distribution

LOCATION	DEPTH (m)	SOIL FRACTION (%)			
		COBBLES	GRAVEL	SAND	SILT/CLAY
TP201	0.50	0	22	30	48
TP203	1.00	0	68	18	14
TP204	1.20	0	9	24	67
TP208	1.00	0	24	66	10

4.6. SOIL DENSITY/MOISTURE CONTENT RELATIONSHIP

Maximum dry density/optimum moisture content relationship analysis has been conducted on soils a 2.5 kg compaction rammer. Results are summarised in Table 9. Full results are presented in Appendix VII.

Table 9 Summary Dry Density and Moisture Content

LOCATION	TOP DEPTH (m)	LABORATORY DESCRIPTION	MOISTURE CONTENT (%)	OPTIMUM MOISTURE CONTENT (%)	MAX DRY DENSITY (mg/m³)
TP201	0.50	Made Ground	16.5	17.0	1.69

4.7. REMOULDED CBR TESTING

CBR testing using a 2.5 kg hammer has been undertaken on selected remoulded samples. Results are summarised in Table 10. Full results are presented in Appendix VII.

Table 10 Summary Remoulded CBR TestS

LOCATION	TOP DEPTH (m)	LABORATORY DESCRIPTION	MOISTURE CONTENT (%)	BULK DENSITY (MG/M3)	MAX DRY DENSITY (mg/m³)	CBR (%)
TP201	0.50	Made Ground	16.5	1.89	1.62	12.9
TP208	1.00	Made Ground	13.6	2.11	1.85	26.6

4.8. DYNAMIC CONE PENETROMETER (DCP) TESTING FOR CBR%

DCP testing was completed using a TRL probe in locations specified by Campbell Reith. Results are summarised in Table 11 and presented in Appendix VI.

Table 11 Summary of DCP Testing

LOCATION	EASTING	NORTHING	SURFACE ELEVATION (m AOD)	TYPE	TEST DEPTH (m bgl)	CBR%
DCP101A	380438	410377	86.90	Dynamic Cone Penetrometer Test	0.31	17.67–21.22 Refusal on obstruction
DCP101B	380438	410377	86.90		0.76	10.75
DCP102	380466	410365	86.65		0.70	17.14–22.85
DCP103A	380461	410332	86.25		0.49	Refusal on obstruction
DCP103B	380461	410332	86.25		0.32	18.56–42.71 Refusal on obstruction
DCP104	380492	410351	86.15		0.90	24.93–48.28
DCP105	380521	410337	86.05		0.94	19.67–46.19
DCP106	380544	410324	86.05		0.93	6.53–54.88

END OF REPORT

APPENDIX I
LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between E3P and the client as indicated in Section 1.3.

2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information it has been assumed it is correct. No attempt has been made to verify the information.

3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency. Liabilities associated with land contamination are complex and requires advice from legal professionals.

4. During the site walkover, reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover, no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not been made known or accessible.

5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.

6. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.

7. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials, this is for indicative purposes only and do not constitute or replace full and proper surveys.

8. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.

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10. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II
GLOSSARY

TERMS

ACM	Asbestos-containing material	**MMP**	Materials management plan
ADS	Acoustic design statement	**ND**	Not detected
AST	Above-ground storage tank	**NDP**	Nuclear density probe
BGS	British Geological Survey	**NMP**	Noise management plan
BSI	British Standards Institute	**NPSE**	Noise policy statement for England
BTEX	Benzene, toluene, ethylbenzene, xylenes	**NR**	Not recorded
CA	Coal Authority	**PAH**	Polycyclic aromatic hydrocarbon
CBR	California bearing ratio	**PCB**	Polychlorinated biphenyl
CIEH	Chartered Institute of Environmental Health	**PI**	Plasticity index
CIRIA	Construction Industry Research Association	**PID**	Photo ionisation detector
CLEA	Contaminated land exposure assessment	**POS**	Public open space
CML	Council of Mortgage Lenders	**PPE**	Personnel protective equipment
CoC	Contaminants of concern	**ProPG**	Professional practice guidance
CSM	Conceptual site model	**QA**	Quality assurance
DNAPL	Dense non-aqueous phase liquid (chlorinated solvents, PCB)	**SGV**	Soil guideline value
DWS	Drinking water standard	**SPH**	Separate-phase hydrocarbon
EA	Environment Agency	**SPT**	Standard penetration test
EQS	Environmental quality standard	**SVOC**	Semi-volatile organic compound
FFL	Finished floor level	**TPH**	Total and speciated petroleum hydrocarbon
GAC	General assessment criteria	**TPH CWG**	Total Petroleum Hydrocarbon (Criteria Working Group)
GL	Ground level	**UKWIR**	United Kingdom Water Infrastructure Risk
GSV	Gas screening value	**UST**	Underground storage tank
HCV	Health criteria value	**VCC**	Vibro-concrete column
ICSM	Initial conceptual site model	**VOC**	Volatile organic compound
LEL	Lower explosive limit	**VRSC**	Vibro-replacement stone columns
LMRL	Lower method reporting limit	**VSC**	Vibro-stone columns
LNAPL	Light non-aqueous phase liquid (petrol, diesel, kerosene)	**WHO**	World Health Organisation
MCV	Moisture condition value	**WRAP**	Waste and Resources Action Programme
MIBK	Methyl isobutyl ketone	**WTE**	Water table elevation

m	Metres	**ppm**	Parts per million
km	Kilometres	**mg/m^3**	Milligram per metre cubed
% v/v	Percent volume in air	**m bgl**	Metres below ground level
mb	Millibars (atmospheric pressure)	**m bcl**	Metre below cover level
l/hr	Litres per hour	**mAOD**	Metres above ordnance datum (sea level)
µg/l	Micrograms per litre (parts per billion)	**kN/m^2**	Kilonewtons per metre squared
ppb	Parts per billion	**µm**	Micrometre
mg/kg	Milligrams per kilogram (parts per million)	**SSRT**	Site Specific Remediation Target
PSD	Particle Size Distribution	**DD**	Dry Density
CL:AIRE	Contaminated Land: Applications in Real Environments	**Mc**	Moisture Content
ρ	Bulk Density	**GPR**	Ground Penetrating Radar
NDP	Nuclear Density Probe	**FFL**	Finished Floor Level
LEL	Lower Explosive Limit	**UKWIR**	UK Water Industry Research
CIRIA	Construction Industry Research and Information Association	**LOD**	Limit of Detection

APPENDIX III
DRAWINGS



Location Symbols

- WS201 — Approximate Window Sample Probehole Location
- TP201 — Approximate Trial Pit Location
- DCP101 — Approximate Dynamic Cone Penetrometer Test Location

Notes:

Phase	Issue	Date	Drawn	Checked	PM
P1	REVB	12.08.2024	CB	JS	JS
P1	REVA	24.07.2024	OW	JC	JS

Client: Campbell Reith

Job No: 17-777

Date: 12.08.2024

Drawing No: 006

Scale: 1:1000 @ A3

Job Title: Pyramid Park, Bury

Drawing Title: Exploratory Hole Location Plan

Environmental Engineering Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

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APPENDIX IV
E3P EXPLORATORY HOLE LOGS

Trial Pit Log

TrialPit No: TP201
Sheet 1 of 2

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380419.00 - 410307.00 Level: 85.85	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20 Depth 4.20	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.20	ES		0.30	85.55		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
	0.50	B					MADE GROUND: Brown sandy gravelly clay. Gravel is fine to coarse, angular to sub rounded of brick and concrete. With fragments of plastic and timber (Sweet odour encountered).
	2.00	ES					
▼ 3.10				3.30	82.55		MADE GROUND: Grey gravel. Gravel is fine to coarse, angular to sub rounded of concrete and brick. With fragments of slag and timber (Sweet odour encountered).
				3.60	82.25		Very stiff, very high strength brown gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone.
	4.00	D					

1 2 3 4

Trial Pit Photographs



Trial Pit 201



Trial Pit 201 Spoil

Remarks: 1. Terminated due to hard digging in very stiff CLAY 2. Water strike at 3.10 m bgl recorded as slow ingress 3. Sweet odour recorded 0.30-3.60 m bgl 4. W3W: monday.outfit.frog

Stability: UNSTABLE 0.00-3.60 m bgl

Trial Pit Log

TrialPit No TP201 Sheet 2 of 2

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380419.00 - 410307.00 Level: 85.85	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 x 3.20 Depth 4.20	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
	4.00	HVP	181	4.20	81.65		Very stiff, very high strength brown gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone.
							End of Pit at 4.20m

5
6
7
8



Trial Pit 201 Spoil

Remarks: 1. Terminated due to hard digging in very stiff CLAY 2. Water strike at 3.10 m bgl recorded as slow ingress 3. Sweet odour recorded 0.30-3.60 m bgl 4. W3W: monday.outfit.frog

Stability: UNSTABLE 0.00-3.60 m bgl

Trial Pit Log

TrialPit No: TP202
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380402.00 - 410364.00 Level: 85.55	Date 19/07/2024
Location: Bury		Dimensions (m): Depth 2.40 — 1.20 × 3.20	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.40	ES		0.40	85.15		MADE GROUND: Brown sandy clay, with rootlets (Re-worked Topsoil).
▼ 1.00							MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of brick and ash. With old railway sleepers and whole bricks present (Small band of gravel encountered 1.10 m bgl). Slight sweet odour.
	1.50 1.50	ES+D HVP	143	1.50	84.05		Stiff to very stiff, high to very high strength brown gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone.
	2.00	HVP	152				
				2.40	83.15		End of Pit at 2.40m

1 2 3 4

Trial Pit Photographs



Trial Pit 202



Trial Pit 202 Spoil

Remarks: 1. Terminated due to hard digging in very stiff CLAY 2. Water strike at 1.00 m bgl recorded as slow ingress 3. Old drainage pipe uncovered at 0.40 m bgl at the southern end of the pit 4. W3W: host.tides.poetic

Stability: STABLE

Trial Pit Log

TrialPit No: TP203
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380444.00 - 410351.00 Level: 85.55	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20, Depth 4.00	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.30	85.25		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
				0.90	84.65		MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of concrete and limestone. With whole bricks present (Sweet odour encountered).
	1.00	B					MADE GROUND: Light brown slightly clayey sandy gravel of fine to coarse, angular to sub rounded of concrete and limestone, with whole bricks present (Sweet odour encountered).
				1.80	83.75		MADE GROUND: Black gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of concrete, ash, brick and clinker. With fragments of slag and metal rebar (Old railway tracks uncovered at 2.10 m bgl) (Very sweet odour encountered).
	2.00	ES					
▼ 3.00							
	3.50 3.50	ES HVP	148	3.50	82.05		Stiff, high strength grey gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone and sandstone.
				4.00	81.55		End of Pit at 4.00m

1 2 3 4

Trial Pit Photographs



Trial Pit 203



Trial Pit 203 Spoil

Remarks: 1. Terminated due to hard digging in very stiff CLAY 2. Water strike at 3.00 m bgl recorded as a seepage with sheen 3. Sweet odour encountered 0.30-3.50 m bgl 4. Old railway tracks uncovered 2.10 m bgl 5. W3W: full.home.will

Stability: UNSTABLE 0.00-4.00 m bgl

Trial Pit Log

TrialPit No: TP204
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380471.00 - 410329.00 Level: 85.55	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20 Depth 3.40	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10	85.45		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
	0.20	ES		0.20	85.35		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
				0.40	85.15		MADE GROUND: Orangish brown fine to medium sand.
	0.80	ES		0.80	84.75		MADE GROUND: Brown sandy slightly gravelly clay. Gravel is fine to coarse, angular to sub rounded of concrete.
	1.00	D					Very stiff, very high strength brown gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone, mudstone and siltstone.
	1.20 1.20	B HVP	181				
				1.70	83.85		Orangish brown bouldery GRAVEL, with frequent cobbles. Gravel is fine to coarse, angular to sub rounded of sandstone (recovered as a gravelly fine to medium SAND due to the excavators bucket chipping and eroding the rock).
				3.40	82.15		End of Pit at 3.40m

1
2
3
4

Trial Pit Photographs



Trial Pit 204



Trial Pit 204 Spoil

Remarks: 1. Terminated due to hard digging in cobbles 2. W3W: factor.tribune.stands

Stability: STABLE

Trial Pit Log

TrialPit No: TP205
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380491.00 - 410319.00 Level: 85.50	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20 Depth 2.70	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.10	ES		0.10	85.40		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
				0.20	85.30		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
				0.30	85.20		MADE GROUND: Orangish brown fine to medium sand.
				0.70	84.80		MADE GROUND: Brown CLAY.
	1.00	D					Stiff to very stiff, high to very high strength brown gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone, siltstone and sandstone.
	1.00	ES					
	1.00	HVP	129				
	1.50	HVP	180				
				2.70	82.80		End of Pit at 2.70m

1
2
3
4

Trial Pit Photographs



Trial Pit 205



Trial Pit 205 Spoil

Remarks: 1. Terminated due to hard digging in very stiff CLAY 2. Old drainage pipe encovered 0.50 m bgl at the western end of the pit 3. Hand shear vane unable to penetrate the stiff clay from 2.00 m bgl. 4. W3W: shirts.arch.carbon

Stability: STABLE

Trial Pit Log

TrialPit No: TP206
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380503.00 - 410296.00 Level: 85.60	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20 Depth 4.00	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10	85.50		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
▼ 0.30				0.30	85.30		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
	0.60	ES					MADE GROUND: Orangish brown fine to medium sand.
	1.00 1.00	D HVP	116	1.00	84.60		Stiff, high strength brown sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone, mudstone and siltstone.
	1.40 1.50	B HVP	94	1.40	84.20		Firm to stiff, high strength grey slightly sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone, siltstone and sandstone.
				1.70	83.90		Yellowish/orangish brown bouldery GRAVEL, with frequent cobbles. Gravel is fine to coarse, angular to sub rounded of sandstone (recovered as a gravelly fine to medium SAND due to the excavators bucket chipping and eroding the rock).
	2.00	ES					
				4.00	81.60		End of Pit at 4.00m

1 2 3 4

Trial Pit Photographs



Trial Pit 206



Trial Pit 206 Spoil

Remarks: 1. Terminated due to hard digging in cobbles 2. Water strike at 0.30 m bgl recorded as very slow ingress 3. W3W: serve.boom.merit

Stability: STABLE

Trial Pit Log

TrialPit No: TP207
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380516.00 - 410324.00 Level: 85.60	Date 19/07/2024
Location: Bury		Dimensions (m): 1.20 × 3.20 Depth 3.40	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
				0.10	85.50		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
	0.30	ES		0.20	85.40		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
							MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of mudstone and brick.
				0.90	84.70		
	1.00 1.00	ES+B HVP	109				Stiff to very stiff, high to very high strength grey gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone and sandstone.
	1.50 1.50	D HVP	158				
	2.00	HVP	181				
				2.50	83.10		Yellowish/orangish brown bouldery GRAVEL, with frequent cobbles. Gravel is fine to coarse, angular to sub rounded of sandstone (recovered as a gravelly fine to medium SAND due to the excavators bucket chipping and eroding the rock).
				3.40	82.20		End of Pit at 3.40m

1
2
3
4

Trial Pit Photographs



Trial Pit 207



Trial Pit 207 Spoil

Remarks: 1. Terminated due to hard digging in cobbles 2. W3W: lungs.spoke.edits

Stability: STABLE

Trial Pit Log

TrialPit No: TP208
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380528.00 - 410307.00 Level: 85.50	Date 19/07/2024
Location: Bury		Dimensions (m): Depth 3.50 (1.20 × 3.20)	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
▼ 0.20	0.05	ES		0.10 0.20	85.40 85.30		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil). MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, brick, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl). MADE GROUND: Grey gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of brick.
	1.00	B					
				1.20	84.30		MADE GROUND: Orangish brown fine to medium sand.
				1.70 1.80	83.80 83.70		MADE GROUND: Grey gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of brick.
	2.00 2.00	D HVP	168				Very stiff, very high strength grey gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone and sandstone.
	2.50	HVP	158				
	2.90	ES		2.85	82.65		Brown clayey very gravelly fine to medium SAND, with occasional cobbles. Gravel is fine to coarse, angular to sub rounded of sandstone. Cobbles are sub angular to sub rounded of sandstone.
				3.50	82.00		End of Pit at 3.50m

1 2 3 4

Trial Pit Photographs



Trial Pit 208



Trial Pit 208 Spoil

Remarks: 1. Terminated due to hard digging in cobbles. 2. Water strike recorded at 0.20 m bgl recorded as very slow ingress 3. W3W: avoid.tooth.pinks

Stability: UNSTABLE 1.00-1.50 m bgl

Trial Pit Log

TrialPit No: TP209
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380536.00 - 410284.00 Level: 83.80	Date 19/07/2024
Location: Bury		Dimensions (m): Depth 3.00 — 1.20 × 3.20	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
▼ 0.10				0.10	83.70		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
				0.30	83.50		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, brick, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
	0.80	ES					MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of limestone, siltstone, mudstone and brick.
				1.00	82.80		MADE GROUND: Brown sandy gravel. Gravel is fine to coarse, angular to sub rounded of limestone, siltstone, mudstone and brick.
				1.20	82.60		MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of limestone, siltstone, mudstone and brick.
	1.60	ES		1.60	82.20		Orangish brown fine to medium SAND.
▼ 1.80	1.80	B					
	2.50	HVP	125	2.50	81.30		Stiff, high strength greyish brown slightly sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone and siltstone.
	2.80	D					
	3.00	HVP	133	3.00	80.80		End of Pit at 3.00m

1 2 3 4

Trial Pit Photographs



Trial Pit 209



Trial Pit 209 Spoil

Remarks: 1. Termianted due to hard digging in stiff CLAY 2. Water strikes at 0.10 and 1.80 m bgl both recorded as seepages 3. W3W: storm.shark.tanks

Stability: UNSTABLE 0.10-2.50 m bgl

Trial Pit Log

TrialPit No: TP210
Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380560.00 - 410304.00 Level: 87.65	Date 19/07/2024
Location: Bury		Dimensions (m): Depth 3.00 (1.20 × 3.20)	Scale 1:30
Client: Campbell Reith			Logged J. CLAYTON

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
0.10				0.10	87.55		MADE GROUND: Brown clayey fine to medium sand, with rootlets (Re-worked Topsoil).
				0.20	87.45		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of limestone, brick, mudstone and siltstone (Gravel fill) (Plastic lining encountered 0.19 m bgl).
	0.40	ES					
				0.60	87.05		MADE GROUND: Dark brown/black fine to medium sand, with fragments of plastic and metal (sweet odour encountered).
							MADE GROUND: Brownish orange fine to medium SAND.
				1.50	86.15		
1.60							MADE GROUND: Brown sandy gravel. Gravel is fine to coarse, angular to sub rounded of ash.
				1.80	85.85		Stiff to very stiff, high to very high strength grey slightly sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of mudstone, siltstone and sandstone.
	2.00	ES+B					
	2.40	HVP	160				
	3.00	D		3.00	84.65		End of Pit at 3.00m
	3.00	HVP	149				

1 2 3 4

Trial Pit Photographs



Trial Pit 210



Trial Pit 210 Spoil

Remarks: 1.Terminated due to hard digging in CLAY 2. Water strikes at 0.10 and 1.60 m bgl both recorded as seepages 3. Sweet odour encountered at 0.20-0.60 m bgl 4. W3W: boil.pints.spring

Stability: UNSTABLE 0.50-1.80 m bgl

Borehole Log

Borehole No. **WS201**

Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380470.00 - 410319.00	Hole Type WS
Location: Bury		Level: 85.55	Scale 1:50
Client: Campbell Reith		Dates: 11/07/2024 -	Logged By J. CLAYTON

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	ES		0.10 0.20 0.30	85.45 85.35 85.25		MADE GROUND: Brown slightly clayey fine to medium sand, with frequent rootlets (Re-worked Topsoil).
		1.00		N=10 (2,4/2,2,2,2,4)				MADE GROUND: Brownish grey gravel. Gravel is fine to coarse, angular to sub rounded of concrete.
		1.40 1.50 1.70	D ES	50 (25 for 10mm/50 for 10mm)	1.40 1.86	84.15 83.69		MADE GROUND: Brown fine to medium sand, with a fragment of plastic (anticipated to be a potential former pond lining). MADE GROUND: Brown sandy gravelly clay. Gravel is fine to coarse, angular to sub rounded of brick. Very stiff, very high strength brown sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone. End of borehole at 1.72 m

Remarks

1. Refusal on anticipated cobble 2. W3W: trains.mutual.afford

Borehole Log

Borehole No. **WS202**

Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380509.00 - 410304.00	Hole Type WS
Location: Bury		Level: 85.50	Scale 1:50
Client: Campbell Reith		Dates: 11/07/2024 -	Logged By J. CLAYTON

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	ES		0.10 0.20	85.40 85.30		MADE GROUND: Brown slightly clayey fine to medium sand, with frequent rootlets (Re-worked Topsoil).
	▼				0.50	85.00		MADE GROUND: Brown fine to medium sand.
					0.80	84.70		MADE GROUND: Dark brown gravelly fine to medium sand. Gravel is fine to coarse, angular to sub rounded of concrete and rare brick.
		1.00		N=9 (2,1/2,2,2,3)	1.00	84.50		
		1.20	ES		1.19 1.20	84.31 84.30		MADE GROUND: Orangish brown fine to medium sand.
		1.50	D					MADE GROUND: Brown fine to medium sand.
		1.70		50 (2,23/50 for 10mm)	1.60 1.72	83.90 83.78		MADE GROUND: Brown sandy clay. MADE GROUND: Black plastic
								Stiff, medium strength brown sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone.
								Yellow COBBLE. Cobble is angular to sub angular of sandstone.
								End of borehole at 1.86 m

Remarks

1. Refusal on anticipated cobble 2. W3W: rider.season.bike 3. Water strike encountered 0.50 m bgl

Borehole Log

Borehole No. **WS203**

Sheet 1 of 1

Project Name: Pyramid Park	Project No. 17777.	Co-ords: 380554.00 - 410304.00	Hole Type WS
Location: Bury		Level: 85.50	Scale 1:50
Client: Campbell Reith		Dates: 11/07/2024 -	Logged By J. CLAYTON

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					0.10	85.40		MADE GROUND: Brown slightly clayey fine to medium sand, with frequent rootlets (Re-worked Topsoil).
					0.30	85.20		
		0.50	ES		0.40	85.10		MADE GROUND: Grey gravel. Gravel is fine to coarse, sub angular to sub rounded of concrete.
					0.60	84.90		
	▼	1.00		N=9 (2,1/2,2,2,3)				MADE GROUND: Brown gravelly fine to medium sand. Gravel is fine to coarse, sub angular to sub rounded of concrete.
								MADE GROUND: Orangish brown fine to medium sand.
								MADE GROUND: Brown fine to medium sand.
		1.80	ES		1.80	83.70		Very stiff, very high strength brown sandy gravelly CLAY. Gravel is fine to coarse, angular to sub rounded of sandstone.
		2.00	D		2.09	83.41		End of borehole at 2.09 m
		2.00		50 (25 for 85mm/50 for 5mm)				

Remarks

1. Refusal on anticipated cobble 2. W3W: raced.comb.love 3. Water strike encountered 1.00 m bgl

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:	DART473
Test Date:	26/03/2024
Report Date:	26/03/2024
File Name:	DART473.spt
Test Operator:	MT

Instrumented Rod Data

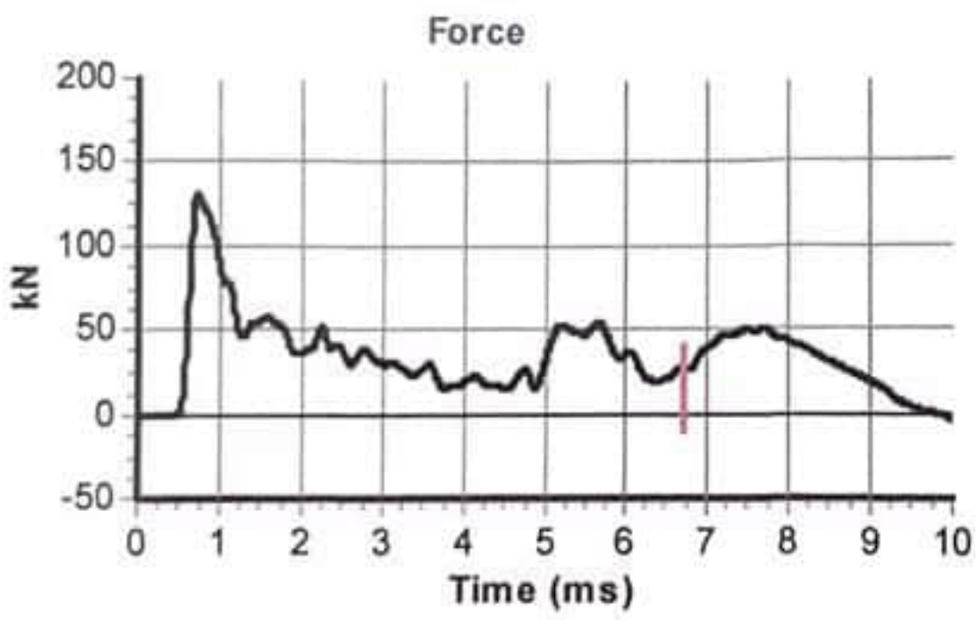
Diameter d_r (mm):	54
Wall Thickness t_r (mm):	6.4
Assumed Modulus E_a (GPa):	208
Accelerometer No.1:	72572
Accelerometer No.2:	72572

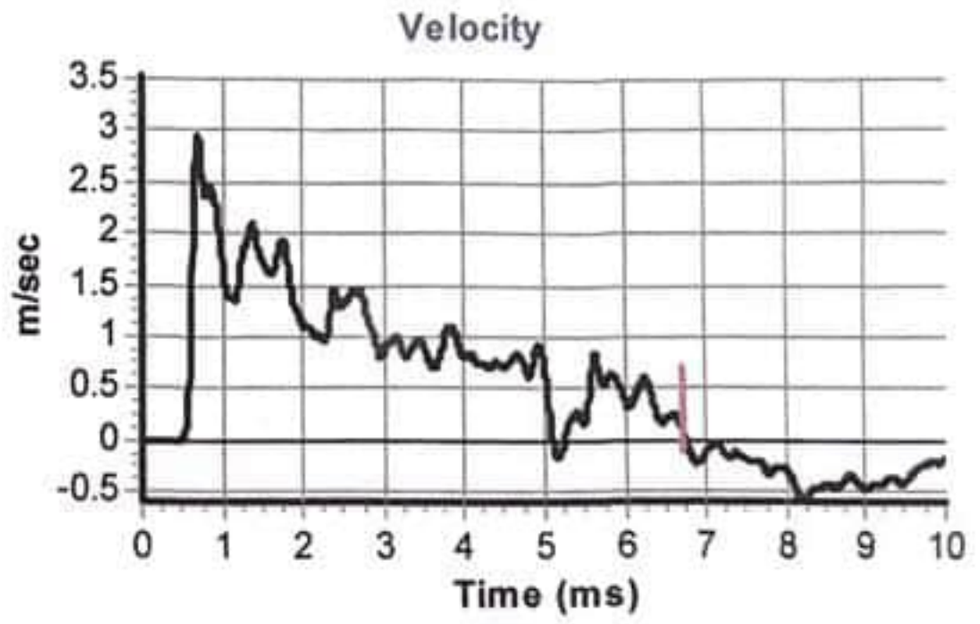
SPT Hammer Information

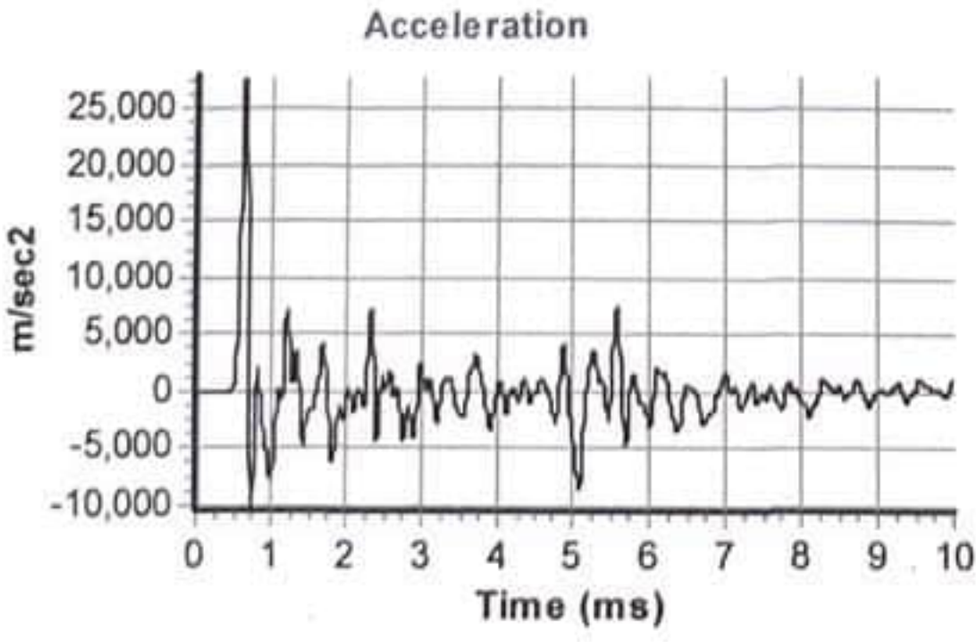
Hammer Mass m (kg):	63.5
Falling Height h (mm):	760
SPT String Length L (m):	10.0

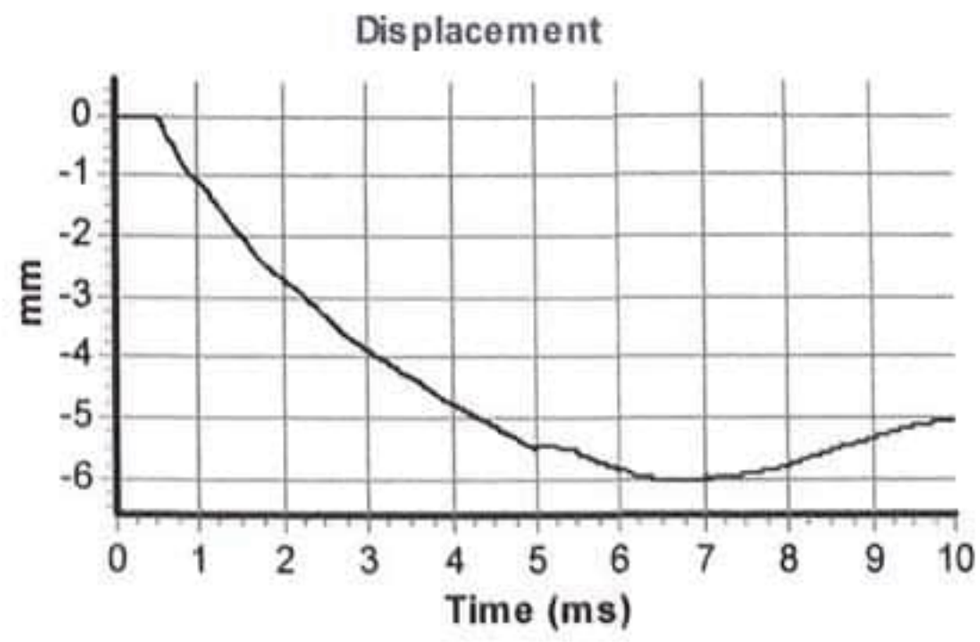
Comments / Location

P M SAMPLING LTD
88790









Calculations

Area of Rod A (mm2):	957
Theoretical Energy E_{theor} (J):	473
Measured Energy E_{meas} (J):	293

Energy Ratio E_r (%): **62**

Signed: M.TONER
Title: FITTER

The recommended calibration interval is 12 months

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APPENDIX V
CHEMICAL TESTING RESULTS

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-23577-1
Initial Date of Issue:	06-Aug-2024
Re-Issue Details:	
Client	E3P
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ
Contact(s):	jsheridan@e3p.co.uk; jclayton@e3p.co.uk
Project	Pyramid Park, Bury
Quotation No.:	Q23-31421
Order No.:	008802
No. of Samples:	8
Turnaround (Wkdays):	5
Date Approved:	06-Aug-2024
Approved By:	
Details:	David Smith, Technical Director

Date Received:	25-Jul-2024
Date Instructed:	25-Jul-2024
Results Due:	31-Jul-2024

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type		U	2192		N/A	-	-	-	-		-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	14	16	21	13	9.3	12	11	6.9
Soil Colour		N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Stones
Soil Texture		N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Sand	Loam	Sand
pH at 20C		M	2010		4.0	8.0	8.1	8.0	7.9	9.0	8.6	8.2	8.2
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	0.50	0.63	0.53	< 0.40		< 0.40	< 0.40	1.0
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	< 0.010	0.27	0.20	0.025	< 0.010	< 0.010	0.030	0.21
Total Sulphur		U	2175	%	0.010	0.10	0.16	0.17	0.080	0.080	0.010	0.040	0.20
Cyanide (Total)		M	2300	mg/kg	0.50	1.8	< 0.50	24	< 0.50	< 0.50	< 0.50	1.4	0.80
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	5.8	4.5	16	5.9	4.3	14	4.6	7.4
Sulphate (Total)		U	2430	%	0.010	0.097	0.29	0.19	0.20	0.26	< 0.010	0.081	0.27
Arsenic		M	2455	mg/kg	0.5	9.4	8.8	9.1	4.9	5.4	4.7	12	26
Beryllium		U	2455	mg/kg	0.5	0.5	< 0.5	< 0.5	0.5		< 0.5	0.7	0.5
Cadmium		M	2455	mg/kg	0.10	0.14	< 0.10	0.23	< 0.10	0.15	< 0.10	0.17	0.21
Chromium		M	2455	mg/kg	0.5	12	11	13	16	18	9.1	12	15
Copper		M	2455	mg/kg	0.50	36	41	35	18	20	15	31	53
Mercury		M	2455	mg/kg	0.05	0.30	0.09	0.17	< 0.05	< 0.05	< 0.05	0.06	0.12
Nickel		M	2455	mg/kg	0.50	16	13	16	22	26	13	21	16
Lead		M	2455	mg/kg	0.50	66	56	180	11	14	8.5	40	450
Selenium		M	2455	mg/kg	0.25	0.52	0.42	0.43	0.61	0.57	0.29	0.51	0.83
Vanadium		U	2455	mg/kg	0.5	16	24	17	18		9.4	16	27
Zinc		M	2455	mg/kg	0.50	78	57	170	45	70	43	63	92
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	6.6	7.8	7.9	1.1	1.9	0.67	1.3	12
Total Organic Carbon		M	2625	%	0.20	3.8	4.5	4.6	0.62	1.1	0.39	0.77	7.1
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.5
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	5.6	< 1.0	< 1.0	< 1.0	< 1.0	5.3	100
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	18	26	70	< 1.0	< 1.0	< 1.0	24	600
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	79	100	750	< 1.0	< 1.0	< 1.0	110	2600
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	80	110	750	< 1.0	< 1.0	< 1.0	120	1800
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	130	190	1200	< 1.0	< 1.0	< 1.0	160	3000
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	18	28	230	< 1.0	< 1.0	< 1.0	22	730

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Total TPH >C6-C40	EH_1D_Total	M	2670	mg/kg	10	320	460	3000	< 10	< 10	< 10	430	8800
Dichlorodifluoromethane		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Chloromethane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Vinyl Chloride		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Bromomethane		M	2760	µg/kg	20	< 20	< 20	< 20	< 20			< 20	< 20
Chloroethane		U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	< 2.0
Trichlorofluoromethane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,1-Dichloroethene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Dichloromethane		N	2760	µg/kg	50								< 50
Trans 1,2-Dichloroethene		N	2760	µg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Trans 1,2-Dichloroethene		M	2760	µg/kg	1.0								< 1.0
1,1-Dichloroethane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
cis 1,2-Dichloroethene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Bromochloromethane		U	2760	µg/kg	5.0								< 5.0
Trichloromethane		M	2760	µg/kg	1.0								< 1.0
1,1,1-Trichloroethane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Tetrachloromethane		M	2760	µg/kg	1.0								< 1.0
1,1-Dichloropropene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Benzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2-Dichloroethane		M	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	< 2.0
Trichloroethene		N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2-Dichloropropane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Dibromomethane		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Bromodichloromethane		M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0			< 5.0	< 5.0
cis-1,3-Dichloropropene		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	< 10
Toluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Trans-1,3-Dichloropropene		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	< 10
1,1,2-Trichloroethane		M	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	< 10
Tetrachloroethene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,3-Dichloropropane		U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	< 2.0
Dibromochloromethane		U	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	< 10
1,2-Dibromoethane		M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0			< 5.0	< 5.0
Chlorobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,1,1,2-Tetrachloroethane		N	2760	µg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
1,1,1,2-Tetrachloroethane		M	2760	µg/kg	2.0								< 2.0
Ethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
m & p-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
o-Xylene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Styrene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Tribromomethane		U	2760	µg/kg	1.0								< 1.0
Isopropylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Bromobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2,3-Trichloropropane		N	2760	µg/kg	50	< 50	< 50	< 50	< 50			< 50	< 50
N-Propylbenzene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
2-Chlorotoluene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,3,5-Trimethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
4-Chlorotoluene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Tert-Butylbenzene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2,4-Trimethylbenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Sec-Butylbenzene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,3-Dichlorobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
4-Isopropyltoluene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,4-Dichlorobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
N-Butylbenzene		U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2-Dichlorobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane		U	2760	µg/kg	50	< 50	< 50	< 50	< 50			< 50	< 50
1,2,4-Trichlorobenzene		M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
Hexachlorobutadiene		N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	< 1.0
1,2,3-Trichlorobenzene		U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	< 2.0
Carbon Disulphide		N	2760	µg/kg	50	< 50	< 50	< 50	< 50			< 50	
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0								< 1.0
Tertiary Butyl Methyl Ether (TBME)		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Tetrahydrofuran		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
trans-1,4-Dichloro-2butene		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Naphthalene		N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	
2-Hexanone		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
2-Nitropropane		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
4-Methyl-2-Pentanone (MIBK)		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
1,1,2,2-Tetrachloroethane		N	2760	µg/kg	50.0	< 50	< 50	< 50	< 50			< 50	
Pentachloroethane		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Ethyl Methacrylate		N	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	
Methyl Methacrylate		N	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0			< 2.0	
Acetone		N	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0			< 1.0	
Allyl Chloride		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Bromoform		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
2-Butanone (MEK)		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Carbon Tetrachloride		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
1-Chlorobutane		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Chloroform		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
2,2-Dichloropropane		N	2760	µg/kg	50	< 50	< 50	< 50	< 50			< 50	
Diethyl Ether		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Freon 113		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Hexachloroethane		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
Methylene Chloride		N	2760	µg/kg	10	< 10	< 10	< 10	< 10			< 10	
N-Nitrosodimethylamine		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Phenol		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2-Chlorophenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
1,3-Dichlorobenzene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
1,4-Dichlorobenzene		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
1,2-Dichlorobenzene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2-Methylphenol		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Hexachloroethane		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
N-Nitrosodi-n-propylamine		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
4-Methylphenol		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Nitrobenzene		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Isophorone		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2-Nitrophenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2,4-Dimethylphenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2,4-Dichlorophenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
1,2,4-Trichlorobenzene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Naphthalene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	3.1
4-Chloroaniline		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Hexachlorobutadiene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
4-Chloro-3-Methylphenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2-Methylnaphthalene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	2.0
4-Nitrophenol		N	2790	mg/kg	0.50								< 0.50
2,4,6-Trichlorophenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2,4,5-Trichlorophenol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
2-Chloronaphthalene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2-Nitroaniline		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Acenaphthylene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Dimethylphthalate		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2,6-Dinitrotoluene		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Acenaphthene		M	2790	mg/kg	0.50	0.63	0.84	< 0.50	< 0.50			< 0.50	11
Acetophenone		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
2-Acetylaminofluorene		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
4-Aminobiphenyl		N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10			< 0.10	
Aniline		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	
Chlorobenzilate		N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13			< 0.13	
m/p-Cresol		N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13			< 0.13	
o-Cresol		N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13			< 0.13	
Diallate cis/trans		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
3,3-Dichlorobenzidine		N	2790	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Diphenylamine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
m-Dinitrobenzene		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Ethyl methane sulfonate		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Hexachloropropene		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Isodrin		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Isosafrole cis/trans		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
3-Nitroaniline		N	2790	mg/kg	0.50								< 0.50
Dibenzofuran		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	4.9
4-Chlorophenylphenylether		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
2,4-Dinitrotoluene		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Fluorene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	7.6
Diethyl Phthalate		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
4-Nitroaniline		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Azobenzene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
4-Bromophenylphenyl Ether		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Hexachlorobenzene		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Phenanthrene		M	2790	mg/kg	0.50	4.3	4.2	4.0	< 0.50			< 0.50	53
Anthracene		M	2790	mg/kg	0.50	1.2	1.1	0.89	< 0.50			< 0.50	13
Carbazole		M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	4.2
Di-N-Butyl Phthalate		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Fluoranthene		M	2790	mg/kg	0.50	8.2	6.8	7.7	< 0.50			< 0.50	67
Pyrene		M	2790	mg/kg	0.50	7.9	6.3	7.0	< 0.50			< 0.50	63

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Butylbenzyl Phthalate		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Benzo[a]anthracene		M	2790	mg/kg	0.50	4.4	3.2	4.5	< 0.50			< 0.50	33
Chrysene		M	2790	mg/kg	0.50	4.0	2.9	4.1	< 0.50			< 0.50	30
Bis(2-Ethylhexyl)Phthalate		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Di-N-Octyl Phthalate		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50
Benzo[b]fluoranthene		M	2790	mg/kg	0.50	5.6	3.8	5.2	< 0.50			< 0.50	33
Benzo[k]fluoranthene		M	2790	mg/kg	0.50	1.9	1.3	1.9	< 0.50			< 0.50	13
Benzo[a]pyrene		M	2790	mg/kg	0.50	4.7	3.1	4.1	< 0.50			< 0.50	28
Indeno(1,2,3-c,d)Pyrene		N	2790	mg/kg	0.50	2.2	1.5	2.0	< 0.50			< 0.50	11
Dibenz(a,h)Anthracene		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	3.7
Benzo[g,h,i]perylene		M	2790	mg/kg	0.50	3.0	1.8	2.6	< 0.50			< 0.50	14
Methyl Methane sulfonate		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Methyl parathion		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
N-Nitrosodi-n-butylamine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
N-Nitrosodiethylamine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
N-Nitrosomorpholine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
N-Nitrosopiperidine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
N-Nitrosopyrrolidine		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
5-Nitro-o-toluidine		N	2790	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25			< 0.25	
Pentachlorobenzene		N	2790	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0			< 5.0	
Phenacetin		N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10			< 0.10	
Pronamide		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Safrole		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
1,2,3,5-Tetrachlorobenzene		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
Disulfoton		N	2790	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Dinoseb		N	2790	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050			< 0.050	
Benzyl Alcohol		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	
Thionazin		N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50			< 0.50	
o-Toluidine		N	2790	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10			< 0.10	
o,o,o-Triethyl phosphorothioate		N	2790	mg/kg	0.075	< 0.075	< 0.075	< 0.075	< 0.075			< 0.075	
1,3,5-Trinitrobenzene		N	2790	mg/kg	0.13	< 0.13	< 0.13	< 0.13	< 0.13			< 0.13	
Naphthalene		M	2800	mg/kg	0.10	0.52	1.5	0.38	0.46	< 0.10	< 0.10	0.44	4.0
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.40
Acenaphthene		M	2800	mg/kg	0.10	1.3	4.2	0.72	< 0.10	< 0.10	< 0.10	1.8	11
Fluorene		M	2800	mg/kg	0.10	0.75	2.8	0.50	< 0.10	< 0.10	< 0.10	1.4	6.9
Phenanthrene		M	2800	mg/kg	0.10	6.9	23	5.6	0.62	< 0.10	< 0.10	8.6	57
Anthracene		M	2800	mg/kg	0.10	1.5	5.1	1.3	< 0.10	< 0.10	< 0.10	2.6	14

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577	24-23577
Quotation No.: Q23-31421				**Chemtest Sample ID.:**		1840201	1840202	1840203	1840206	1840210	1840211	1840219	1840221
				Client Sample ID.:		TP201	TP201	TP202	TP203	TP205	TP206	TP210	TP203
				Sample Location:		MG	MG	MG	CLAY	CLAY	SAND	MG	
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	2	0.4	3.5	1	0.6	0.4	2
				Date Sampled:		18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024	18-Jul-2024
				Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**								
Fluoranthene		M	2800	mg/kg	0.10	11	32	10	0.57	< 0.10	< 0.10	15	74
Pyrene		M	2800	mg/kg	0.10	9.7	28	9.0	0.47	< 0.10	< 0.10	14	66
Benzo[a]anthracene		M	2800	mg/kg	0.10	4.6	13	4.4	< 0.10	< 0.10	< 0.10	6.6	34
Chrysene		M	2800	mg/kg	0.10	5.5	14	5.0	< 0.10	< 0.10	< 0.10	7.4	36
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	6.5	16	5.7	< 0.10	< 0.10	< 0.10	8.9	42
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	2.4	6.3	2.1	< 0.10	< 0.10	< 0.10	3.2	15
Benzo[a]pyrene		M	2800	mg/kg	0.10	5.5	14	5.0	< 0.10	< 0.10	< 0.10	7.4	33
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	3.5	8.6	3.0	< 0.10	< 0.10	< 0.10	4.4	20
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	0.69	1.8	0.64	< 0.10	< 0.10	< 0.10	0.92	4.3
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	3.6	8.6	2.9	< 0.10	< 0.10	< 0.10	4.7	18
Total Of 16 PAH's		N	2800	mg/kg	2.0	64	180	56	2.1	< 2.0	< 2.0	87	440
Phorate		N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Dimethoate		N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Parathion		N	2820	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Alpha-HCH		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Gamma-HCH (Lindane)		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Beta-HCH		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Delta-HCH		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Heptachlor		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Aldrin		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Heptachlor Epoxide		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
4,4-DDE		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Dieldrin		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Endrin		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
4,4-DDD		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
4,4-DDT		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Endosulfan Sulphate		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Methoxychlor		N	2840	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
2,3,4,6-Tetrachlorophenol		N	2900	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20			< 0.20	
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.67

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2820	Organophosphorus (O-P) Pesticides in Soils by GC-MS	Organophosphorus pesticide representative suite including Parathion, Malathion etc, plus client specific determinands	Dichloromethane extraction / GC-MS	
2840	Organochlorine (O-Cl) Pesticides in Soils by GC-MS	Organochlorine pesticide representative suite including DDT and its metabolites, 'drins' and HCH etc, plus client specific determinands	Dichloromethane extraction / GC-MS	
2900	Phenols in Soils by GC-MS	Approximately 24 substituted Phenols, including Chlorophenols	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key

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N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at ≤ 30°C prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	24-22533-1
Initial Date of Issue:	22-Jul-2024
Re-Issue Details:	
Client	E3P
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ
Contact(s):	jsheridan@e3p.co.uk; jclayton@e3p.co.uk
Project	Pyramid Park, Bury

Quotation No.:		**Date Received:**	16-Jul-2024
Order No.:	008802	**Date Instructed:**	16-Jul-2024
No. of Samples:	2		
Turnaround (Wkdays):	5	**Results Due:**	22-Jul-2024
Date Approved:	22-Jul-2024		

Approved By:



Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-22533	24-22533
Quotation No.:				**Chemtest Sample ID.:**		1836054	1836055
				Client Sample ID.:		WS203	WS203
				Sample Location:		MG	CLAY
				Sample Type:		SOIL	SOIL
				Top Depth (m):		0.5	1.8
				Date Sampled:		11-Jul-2024	11-Jul-2024
				Time Sampled:		12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type		U	2192		N/A	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	17	16
Soil Colour		N	2040		N/A	Brown	Brown
Other Material		N	2040		N/A	Stones	Stones and Roots
Soil Texture		N	2040		N/A	Sand	Clay
pH at 20C		M	2010		4.0	8.8	8.0
Boron (Hot Water Soluble)		M	2120	mg/kg	0.40	< 0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.017	< 0.010
Total Sulphur		U	2175	%	0.010	0.010	0.010
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.7	6.1
Sulphate (Total)		U	2430	%	0.010	< 0.010	0.011
Arsenic		M	2455	mg/kg	0.5	7.0	9.9
Beryllium		U	2455	mg/kg	0.5	< 0.5	0.5
Cadmium		M	2455	mg/kg	0.10	< 0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	9.1	18
Copper		M	2455	mg/kg	0.50	15	20
Mercury		M	2455	mg/kg	0.05	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	15	30
Lead		M	2455	mg/kg	0.50	10	10
Selenium		M	2455	mg/kg	0.25	< 0.25	0.55
Vanadium		U	2455	mg/kg	0.5	9.6	14
Zinc		M	2455	mg/kg	0.50	50	52
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	0.62	2.1
Total Organic Carbon		M	2625	%	0.20	0.36	1.2
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0

Results - Soil

Project: Pyramid Park, Bury

Client: E3P				**Chemtest Job No.:**		24-22533	24-22533
Quotation No.:				**Chemtest Sample ID.:**		1836054	1836055
				Client Sample ID.:		WS203	WS203
				Sample Location:		MG	CLAY
				Sample Type:		SOIL	SOIL
				Top Depth (m):		0.5	1.8
				Date Sampled:		11-Jul-2024	11-Jul-2024
				Time Sampled:		12:00	12:00
				Asbestos Lab:		DURHAM	DURHAM
Determinand	**HWOL Code**	**Accred.**	**SOP**	**Units**	**LOD**		
Total TPH >C6-C40	EH_1D_Total	M	2670	mg/kg	10	< 10	< 10
Naphthalene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	0.14
Anthracene		M	2800	mg/kg	0.10	< 0.10	0.13
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

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Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

APPENDIX VI
GEOTECHNICAL TESTING CERTIFICATES

MURRAY RIX
CONSULTANCY, SITE INVESTIGATION
CONSTRUCTION MATERIALS TESTING

TEST REPORT

Client e3p

Address Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

Contract 17-777 -
Pyramid Park, Bury

Job Number MRN 24005/165
Date of Issue 14 August 2024

Approved Signatories

S J Hutchings, O P Davies

Notes

1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.

2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.

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

4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.

5 The results included within the report are representative of the samples submitted for analysis.

6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.

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M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

DETERMINATION OF THE WATER CONTENT
(OVEN DRY)
BS EN 17892-1:2014+A1:2022

CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

DATE SAMPLED	18-Jul-24	DATE RECEIVED	24-Jul-24
DATE TESTED	26-Jul-24	SAMPLED BY	Client

Laboratory Sample Number	Site Reference	Material	Sample Location	Water Content (%)
520505	TP205 1	Brown silty slightly sandy slighlty gravelly CLAY	TP205	16.0
520506	TP206 1	Brown silty slightly sandy slighlty gravelly CLAY	TP206	18.9

COMMENT / ANOMALIES

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED 

DATE 14-Aug-24

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

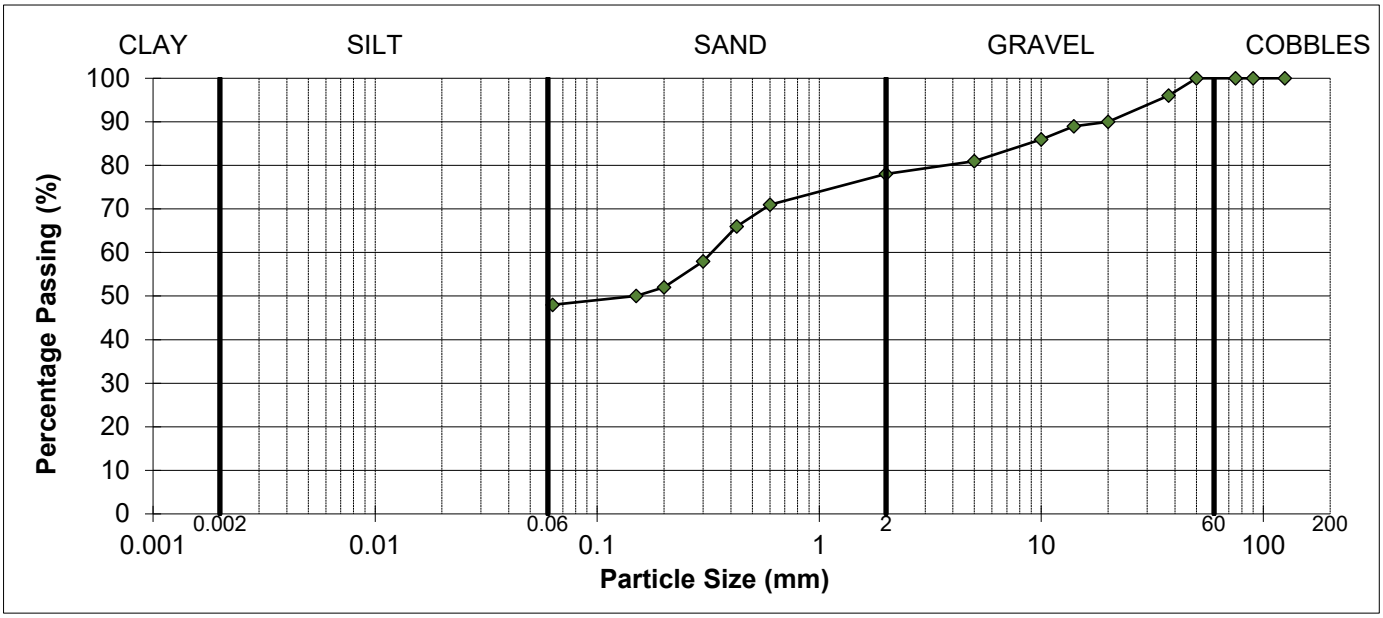
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP201 0.5	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	520501	DATE RECEIVED	24-Jul-24
DATE TESTED	26-Jul-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	100	5	81	
90	100		2	78	15-80
75	100		0.6	71	
50	100		0.425	66	
37.5	96		0.3	58	
20	90		0.2	52	
14	89		0.15	50	
10	86		0.063	48	15-80



SOIL FRACTIONS			
COBBLES	0%	SAND	30%
GRAVEL	22%	SILT / CLAY	48%

As received water content	22.2%

REMARKS
Sample complies with the advised grading specification for a 2C material (SHW 2016)

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

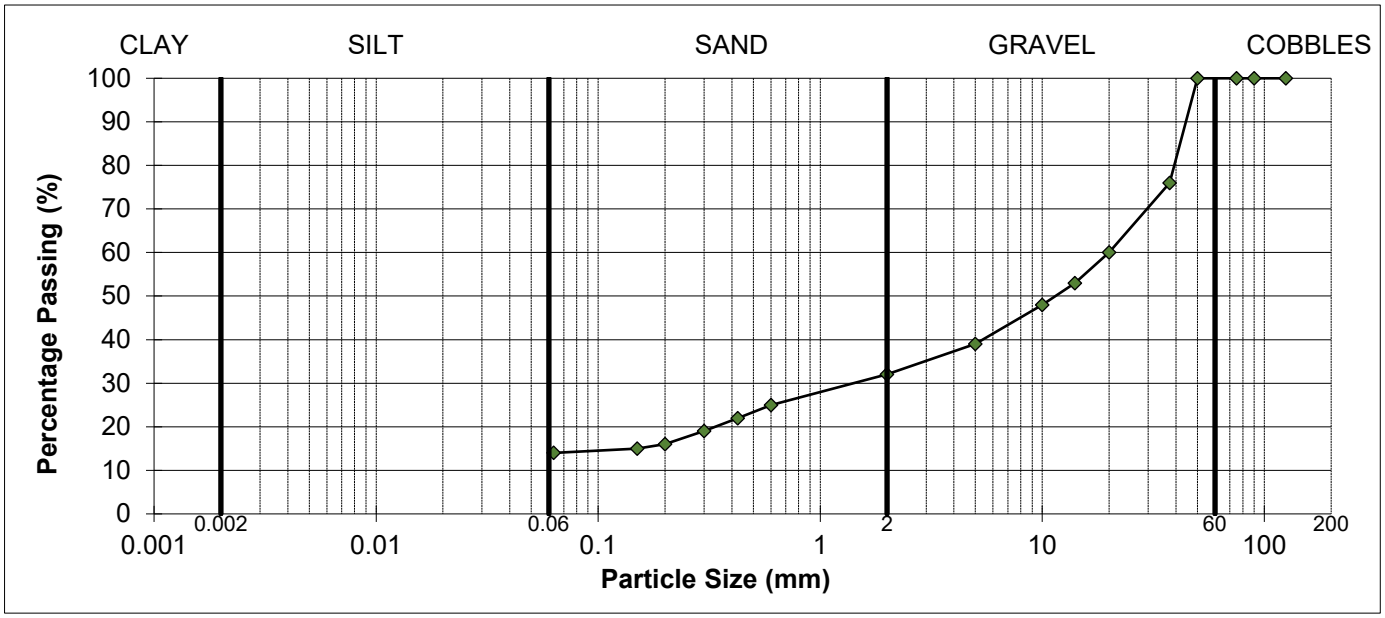
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP203 1	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	520502	DATE RECEIVED	24-Jul-24
DATE TESTED	26-Jul-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	95-100	5	39	
90	100		2	32	
75	100		0.6	25	
50	100		0.425	22	
37.5	76		0.3	19	
20	60		0.2	16	
14	53		0.15	15	
10	48		0.063	14	<15



SOIL FRACTIONS			
COBBLES	0%	SAND	18%
GRAVEL	68%	SILT / CLAY	14%

As received water content	14.9%

REMARKS

Sample complies with the advised grading specification for a 1A material (SHW 2016), Uniformity coefficient = >10

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

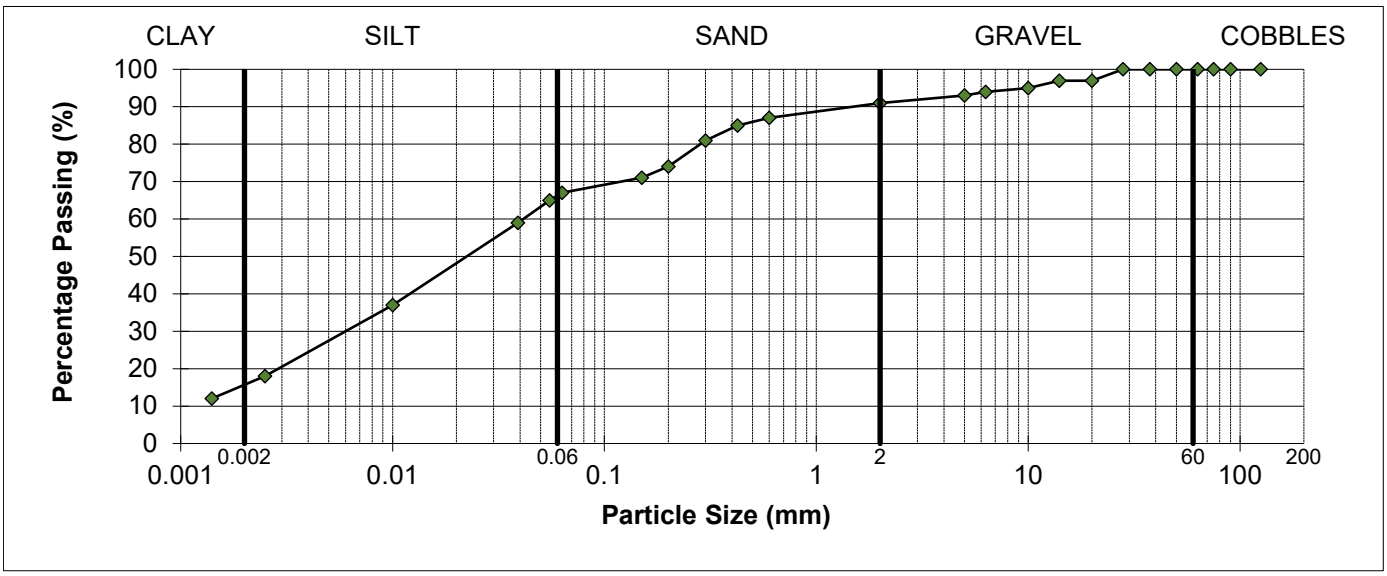
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP204 1.2	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	520504	DATE RECEIVED	24-Jul-24
DATE TESTED	25-Jul-24	SAMPLED BY	Client

MATERIAL	Brown silty sandy slightly gravelly CLAY
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2	91	
90	100		0.6	87	
75	100		0.425	85	
63	100		0.3	81	
50	100		0.2	74	
37.5	100		0.15	71	
28	100		0.063	67	
20	97		0.055	65	
14	97		0.039	59	
10	95		0.01	37	
6.3	94		0.0025	18	
5	93		0.0014	12	



SOIL FRACTIONS			
GRAVEL	9%	SILT	52%
SAND	24%	CLAY	15%

REMARKS
As received water content = 10.2%

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

M U R R A Y R I X

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

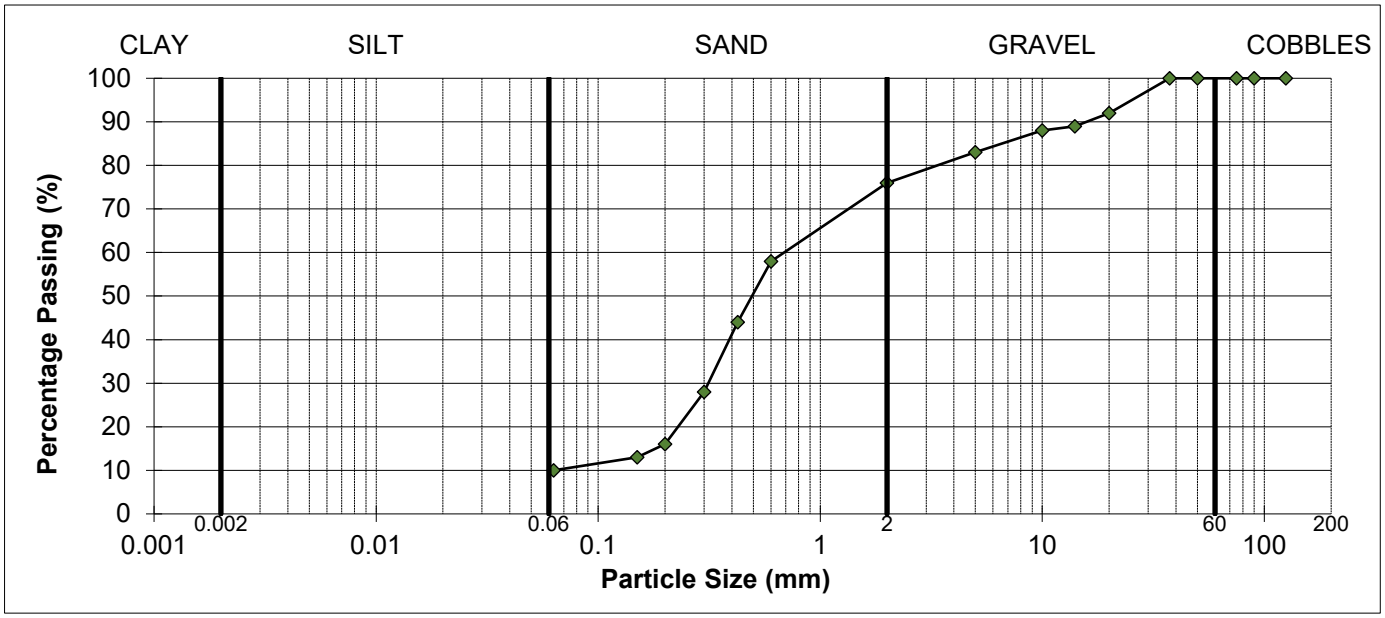
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP208 1	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	520508	DATE RECEIVED	24-Jul-24
DATE TESTED	26-Jul-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Won

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100	95-100	5	83	
90	100		2	76	
75	100		0.6	58	
50	100		0.425	44	
37.5	100		0.3	28	
20	92		0.2	16	
14	89		0.15	13	
10	88		0.063	10	<15



SOIL FRACTIONS			
COBBLES	0%	SAND	66%
GRAVEL	24%	SILT / CLAY	10%

As received water content	13.0%

REMARKS

Sample complies with the advised grading specification for a 1A material (SHW 2016), Uniformity coefficient = >10

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1280

TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER
BS 1377-2:2022 Cl.11
PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

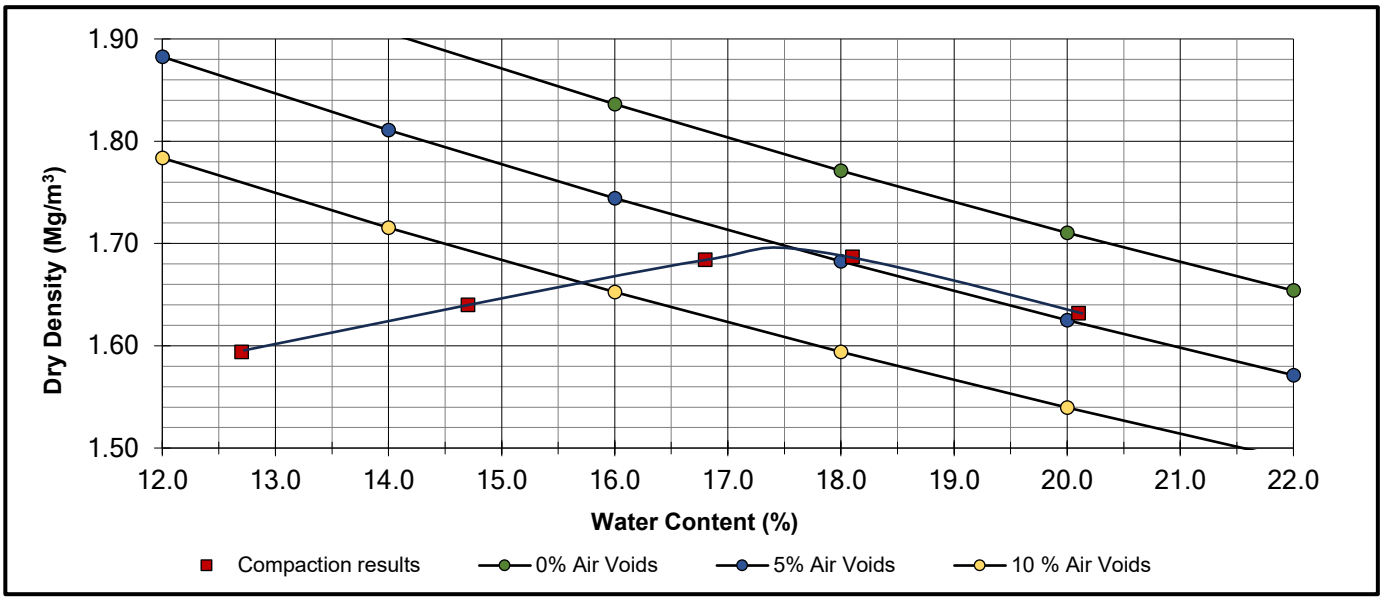
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP201 0.5	DATE SAMPLED	18-Jul-24
SAMPLE NUMBER	520501	DATE RECEIVED	24-Jul-24
DATE TESTED	26-Jul-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Won
PRE TREATMENT	Air Dried / Separate Batches

RETAINED 37.5mm	4 %	GRADING ZONE	Zone 4
RETAINED 20mm	10 %	PARTICLE DENSITY	2.60 Mg/m3 (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m^3)
1	12.7	1.594
2	14.7	1.640
3	16.8	1.684
4	18.1	1.687
5	20.1	1.632



OPTIMUM WATER CONTENT	**17**	(%)
MAXIMUM DRY DENSITY	**1.69**	(Mg/m^3)

REMARKS

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

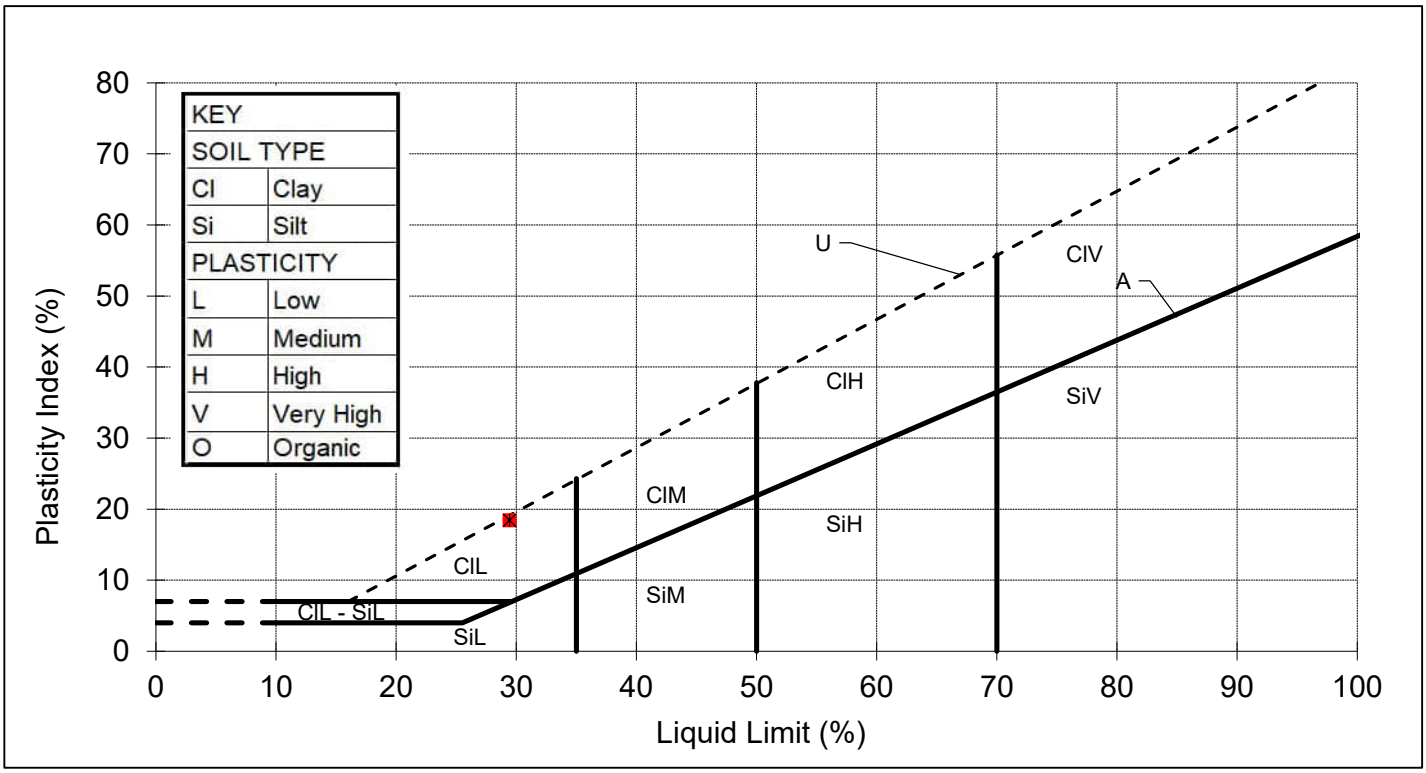
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP204 1	DATE SAMPLED	18-Jul-24
SAMPLE No.	520503	DATE RECEIVED	24-Jul-24
DATE TESTED	25-Jul-24	SAMPLED BY	Client

MATERIAL	Dark brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	16.3	28.1	1.050	
Determination 2 (avg)	16.2	28.0		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
10.6	29	11	18	76



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

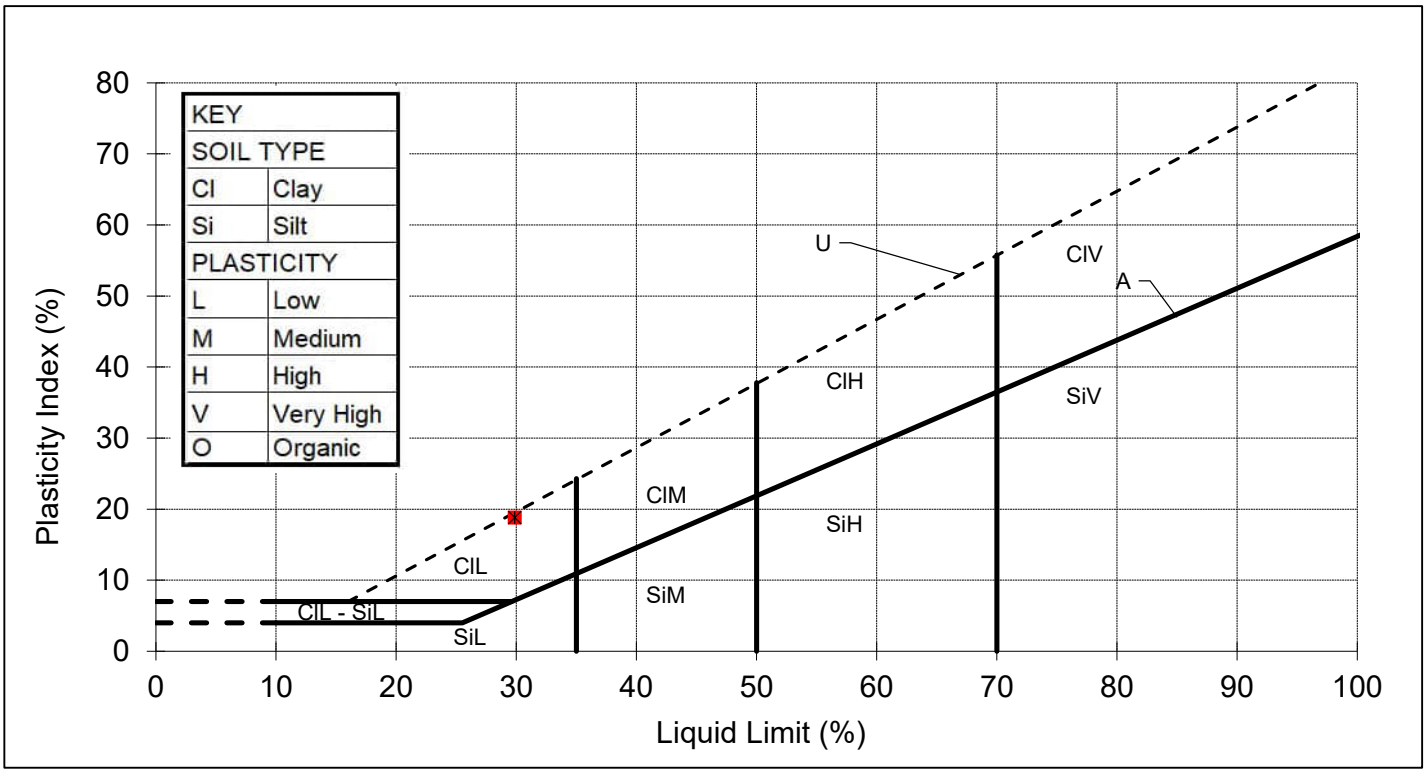
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP207 1.5	DATE SAMPLED	18-Jul-24
SAMPLE No.	520507	DATE RECEIVED	24-Jul-24
DATE TESTED	25-Jul-24	SAMPLED BY	Client

MATERIAL	Dark brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	17.8	28.9	1.033	
Determination 2 (avg)	17.7	28.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
11.9	30	11	19	95



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

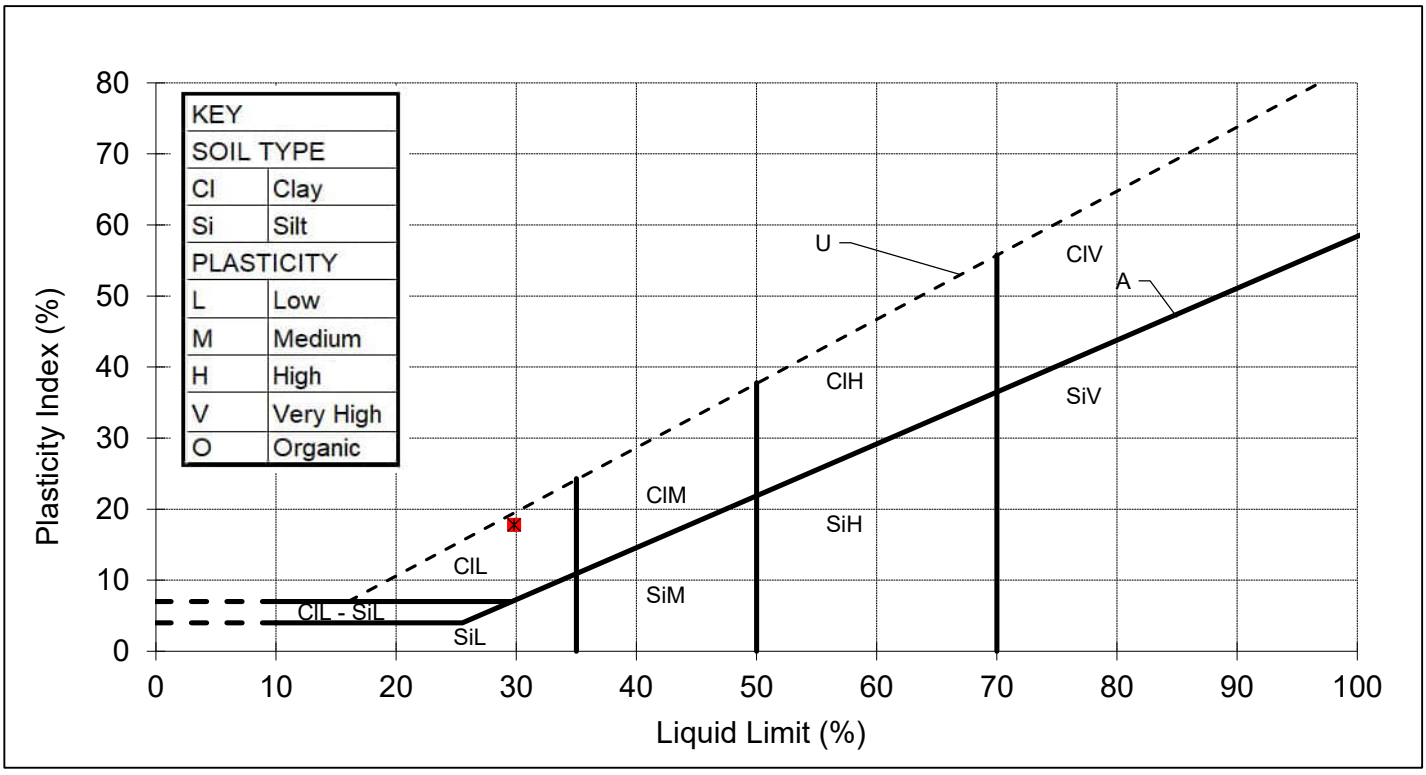
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	WS201 1.4	DATE SAMPLED	11-Jul-24
SAMPLE No.	520709	DATE RECEIVED	24-Jul-24
DATE TESTED	25-Jul-24	SAMPLED BY	Client

MATERIAL	Dark brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.5	29.7	1.008	
Determination 2 (avg)	19.5	29.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16.2	30	12	18	93



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD
PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5
WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

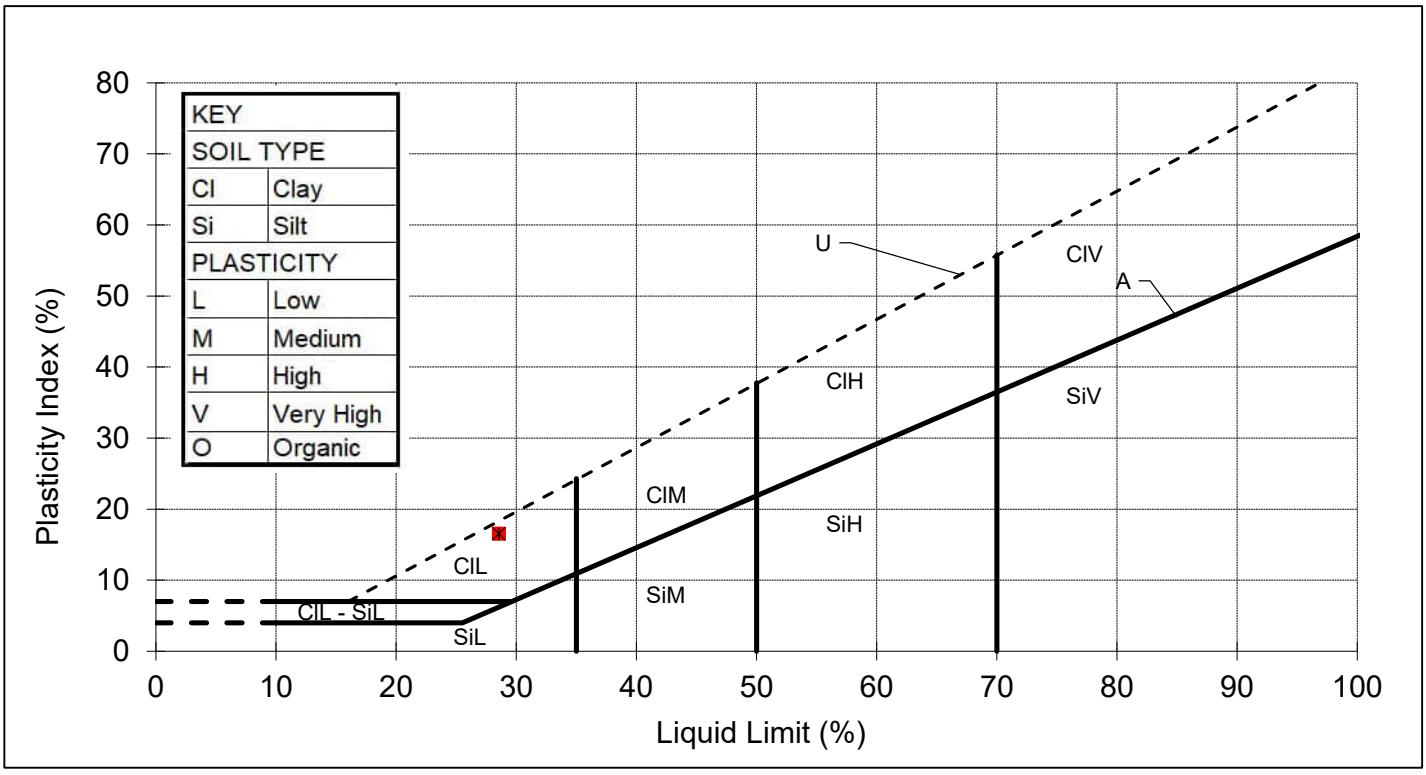
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	WS203 2	DATE SAMPLED	11-Jul-24
SAMPLE No.	520710	DATE RECEIVED	24-Jul-24
DATE TESTED	25-Jul-24	SAMPLED BY	Client

MATERIAL	Dark brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	20.0	28.6	1.000	
Determination 2 (avg)	20.0	28.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
15.5	29	12	17	94



REMARKS

SIGNED

NAME O.P. Davies BA (Hons) (Laboratory Manager) DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)
BS 1377-2:2022 Cl. 15
DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

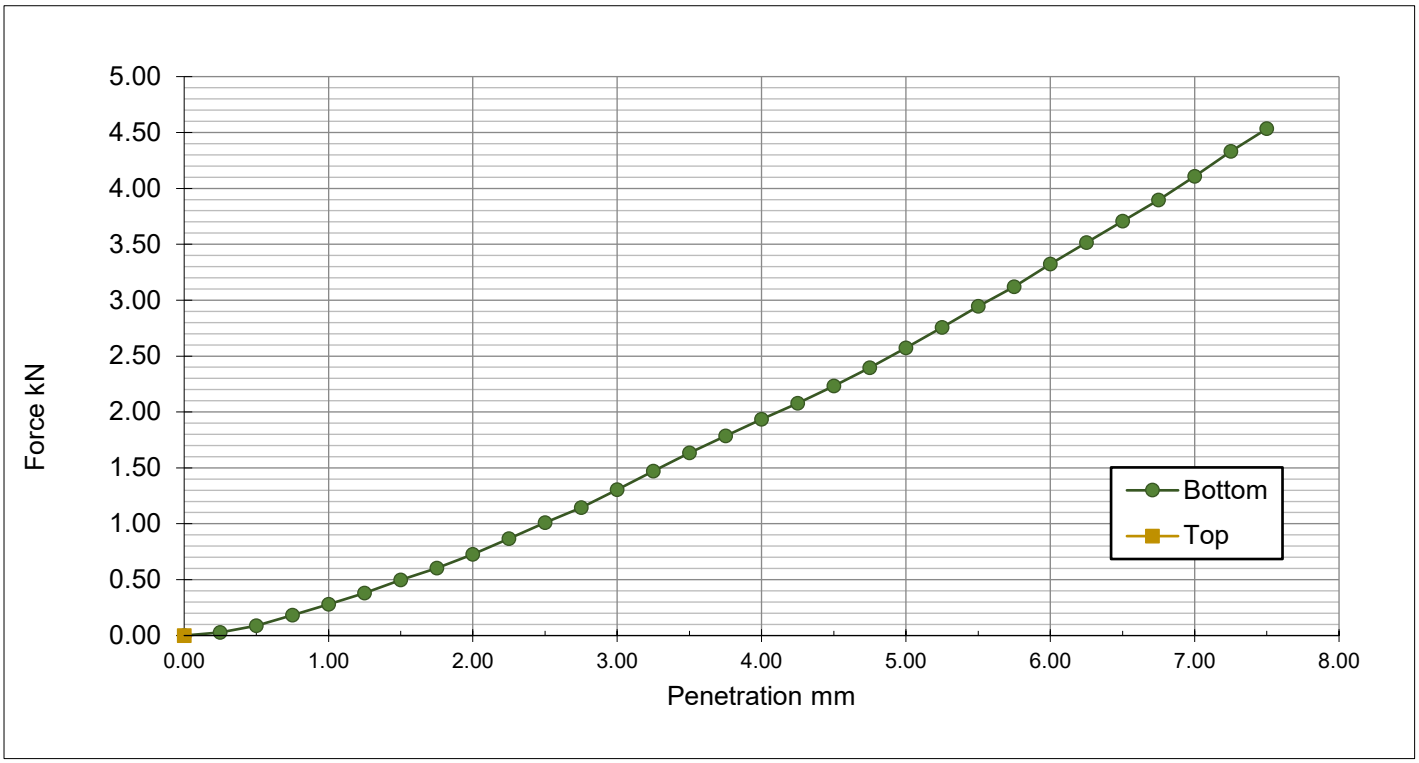
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP203 1	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	420502	DATE RECEIVED	24-Jul-24
DATE TESTED	02-Aug-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION		Dynamic Compaction, Specified Effort, 2.5 kg Rammer			
GREATER THAN 20 mm REMOVED		40 %			
BULK DENSITY	1.89 Mg/m3	MOISTURE CONTENT	16.5 %	DRY DENSITY	1.62 Mg/m3
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top	N/A	%
Bottom	12.9	%

ORIGIN CORRECTION

Top	N/A	mm
Bottom	N/A	mm

FINAL MOISTURE CONTENT

Top	N/A	%
Bottom	16.5	%

REMARKS

NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 14-Aug-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

UKAS TESTING 1580

TEST CERTIFICATE

CALIFORNIA BEARING RATIO (CBR)
BS 1377-2:2022 Cl. 15
DETERMINATION OF WATER CONTENT - BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

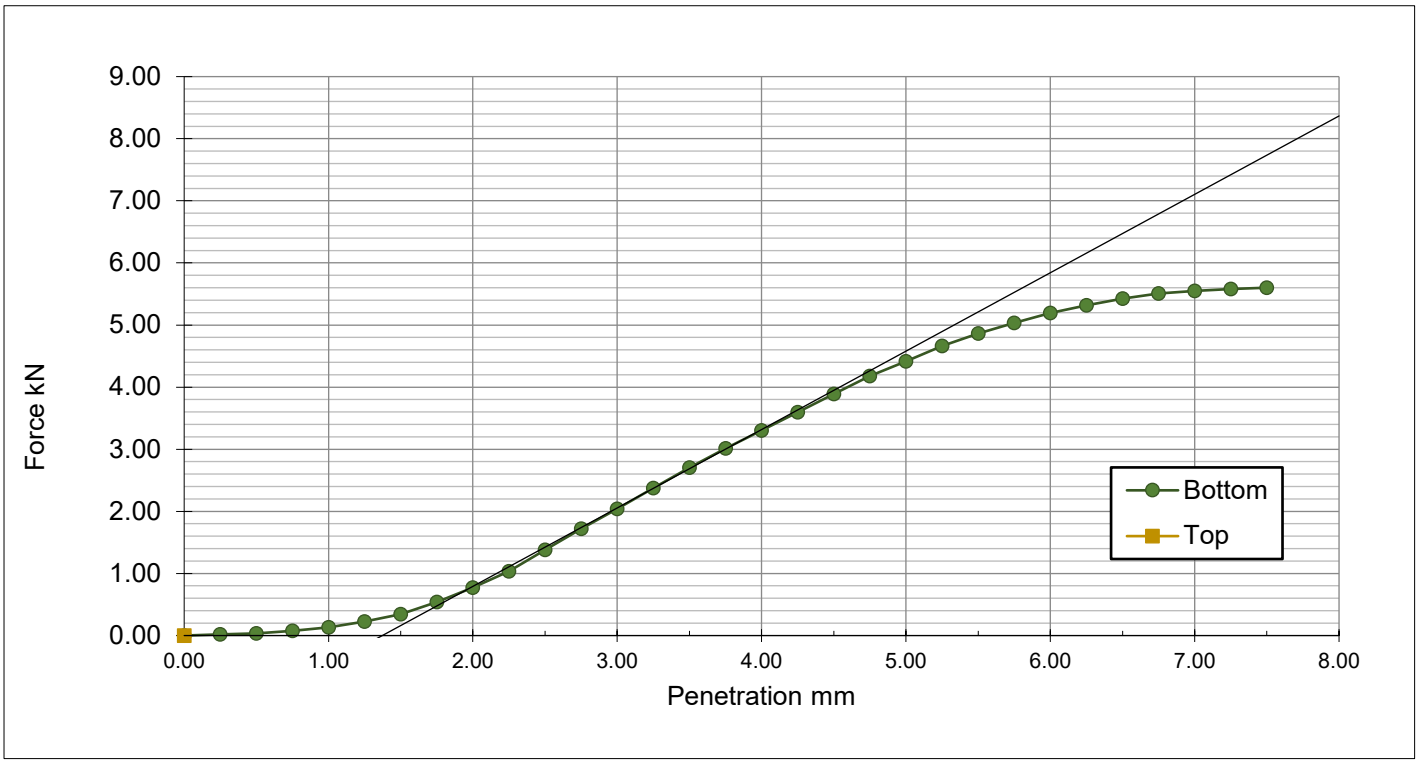
CLIENT	e3p
SITE	17-777 - Pyramid Park, Bury
JOB NUMBER	MRN 24005/165

SAMPLE LABEL	TP208 1	DATE SAMPLED	18-Jul-24
LAB SAMPLE No	420508	DATE RECEIVED	24-Jul-24
DATE TESTED	02-Aug-24	SAMPLED BY	Client

MATERIAL	Made Ground
ADVISED SOURCE	Site Investigation Sample

INITIAL CONDITIONS

SAMPLE PREPARATION		Dynamic Compaction, Specified Effort, 2.5 kg Rammer			
GREATER THAN 20 mm REMOVED		8 %			
BULK DENSITY	2.11 Mg/m3	MOISTURE CONTENT	13.6 %	DRY DENSITY	1.85 Mg/m3
TEST CONDITION	Unsoaked	MEASURED SWELL	N/A mm	SURCHARGE	2 kg



CBR VALUE

Top	N/A	%
Bottom	26.6	%

ORIGIN CORRECTION

Top	N/A	mm
Bottom	N/A	mm

FINAL MOISTURE CONTENT

Top	N/A	%
Bottom	13.6	%

REMARKS

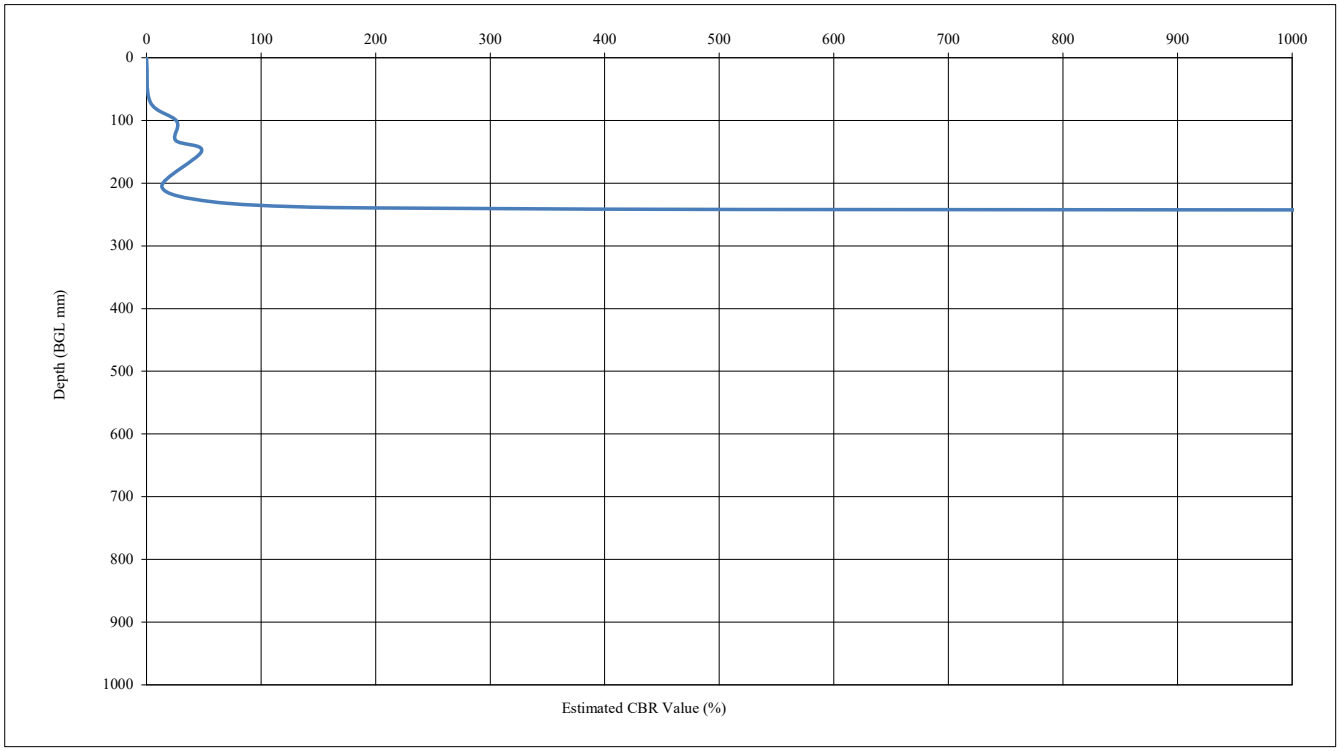
NAME O.P. Davies BA (Hons) (Laboratory Manager) SIGNED DATE 14-Aug-24

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	corner.sentences.armed
Test No.:	DCP101A	**Easting:**	380438
Initial Depth (mm BGL):	66	**Northing:**	410377
Final Depth (mm BGL):	310		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	132	7	9	14.67	17.67
132	206	13	6	12.33	21.22

Comments

Shallow refusal on inferred obstruction or coarse gravel/cobble. Reattemped as DCP101B.

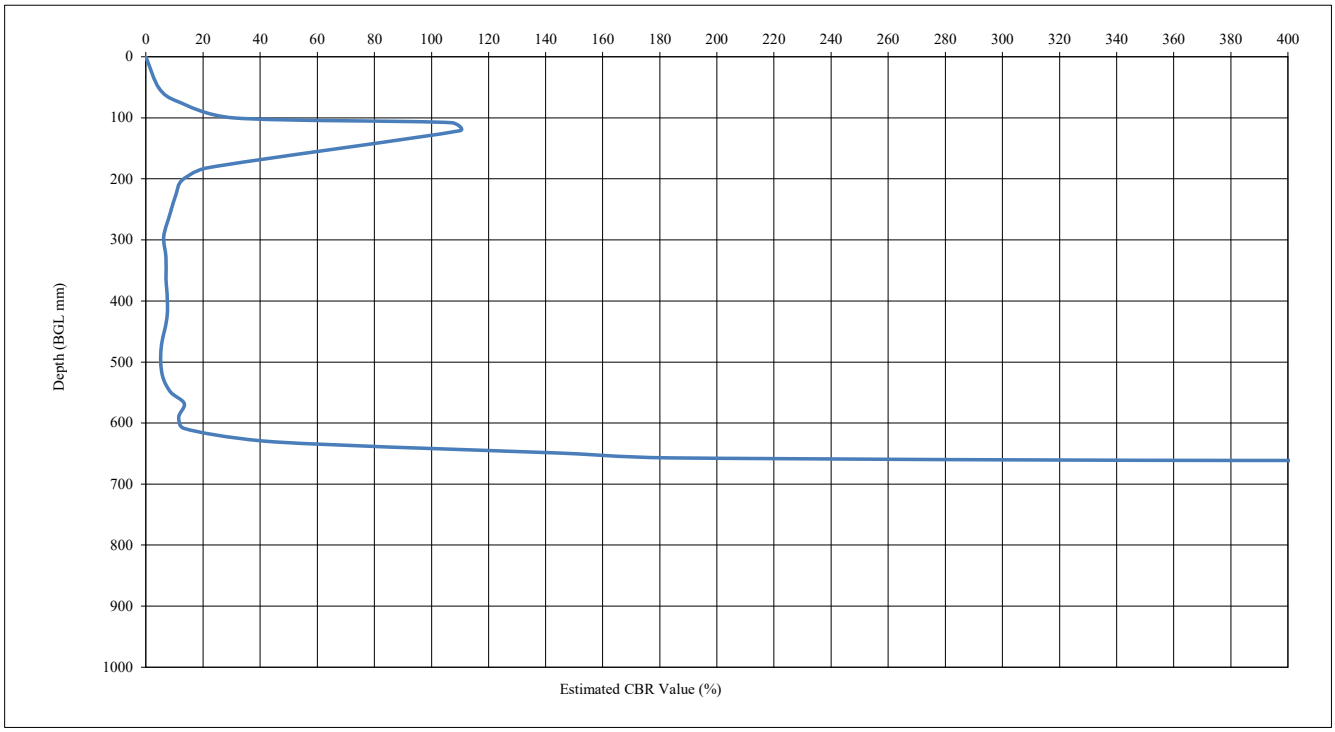
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	corner.sentence.armed
Test No.:	DCP101B	**Easting:**	380438
Initial Depth (mm BGL):	94	**Northing:**	410365
Final Depth (mm BGL):	758		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	100	5	8	12.50	20.92
100	215	13	8	14.38	18.05
215	520	26	13	23.46	10.75
520	661	30	4	35.25	6.99

Comments

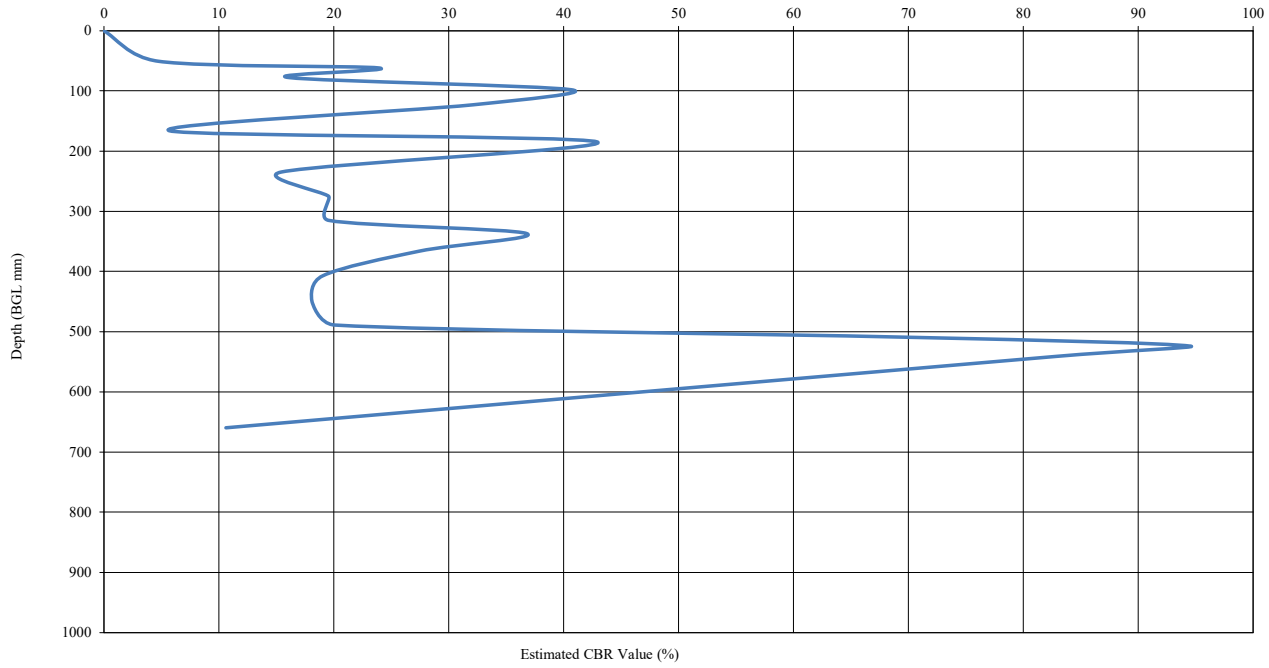
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	expose.transmitted.ended
Test No.:	DCP102	**Easting:**	380466
Initial Depth (mm BGL):	45	**Northing:**	410365
Final Depth (mm BGL):	705		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	166	10	11	15.09	17.14
166	235	16	6	11.50	22.85
235	489	37	21	12.10	21.66
489	660	57	20	8.55	31.25

Comments

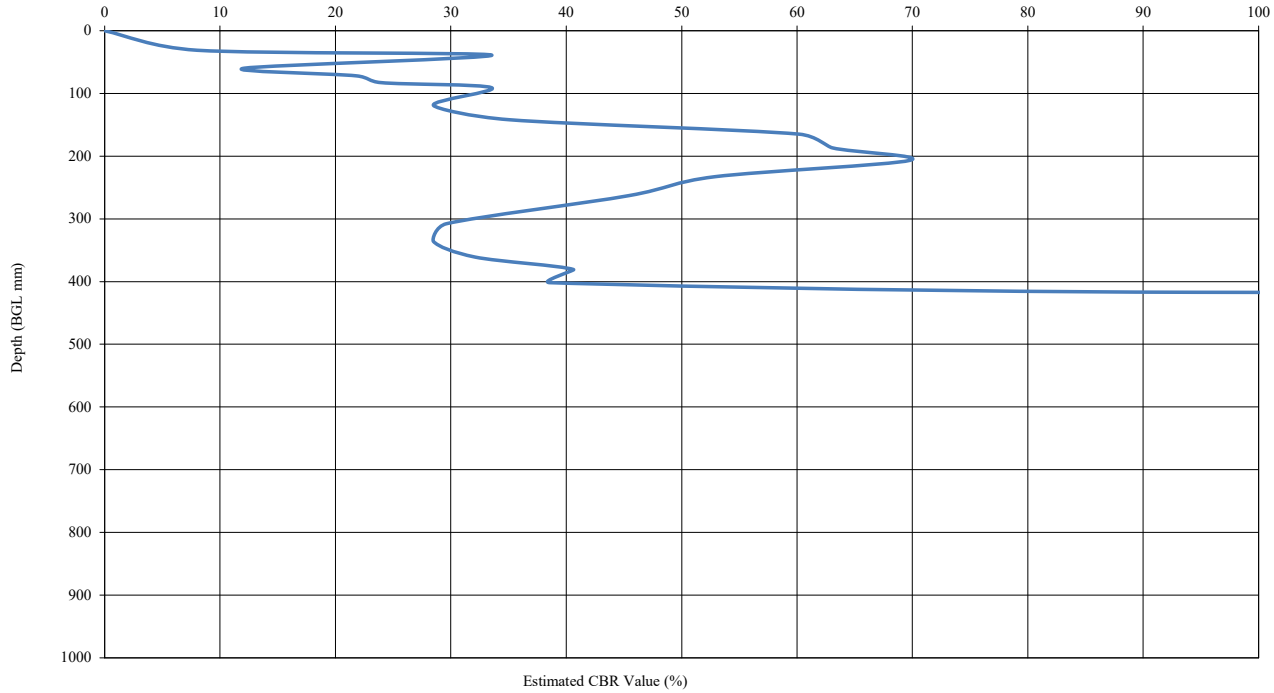
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	harp.adjust.views
Test No.:	DCP103A	**Easting:**	380461
Initial Depth (mm BGL):	65	**Northing:**	410332
Final Depth (mm BGL):	485		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	119	9	9	13.22	19.71
119	308	42	33	5.73	47.74
308	402	54	12	7.83	34.28
402	420	64	10	1.80	162.25

Comments

Shallow refusal on inferred obstruction or coarse gravel/cobble. Reattemped as DCP103B.

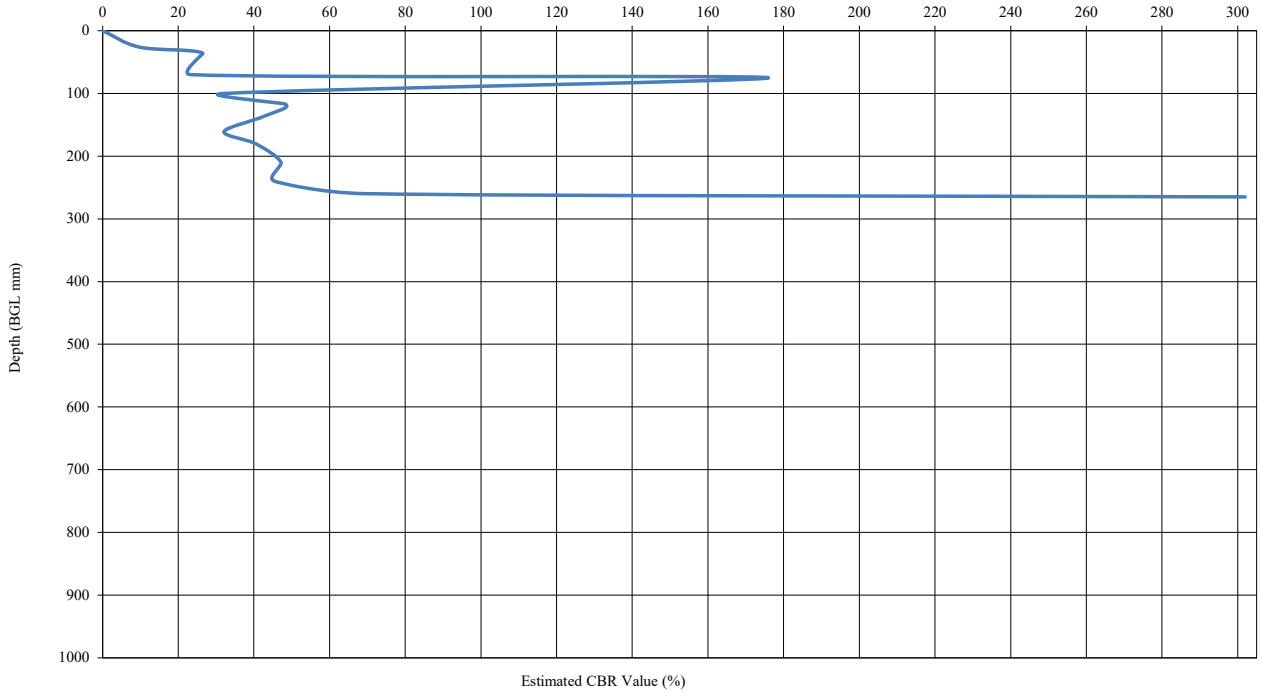
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	harp.adjust.views
Test No.:	DCP103B	**Easting:**	380461
Initial Depth (mm BGL):	50	**Northing:**	410332
Final Depth (mm BGL):	315		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	70	5	5	14.00	18.56
70	100	11	6	5.00	55.10
100	240	33	22	6.36	42.71

Comments

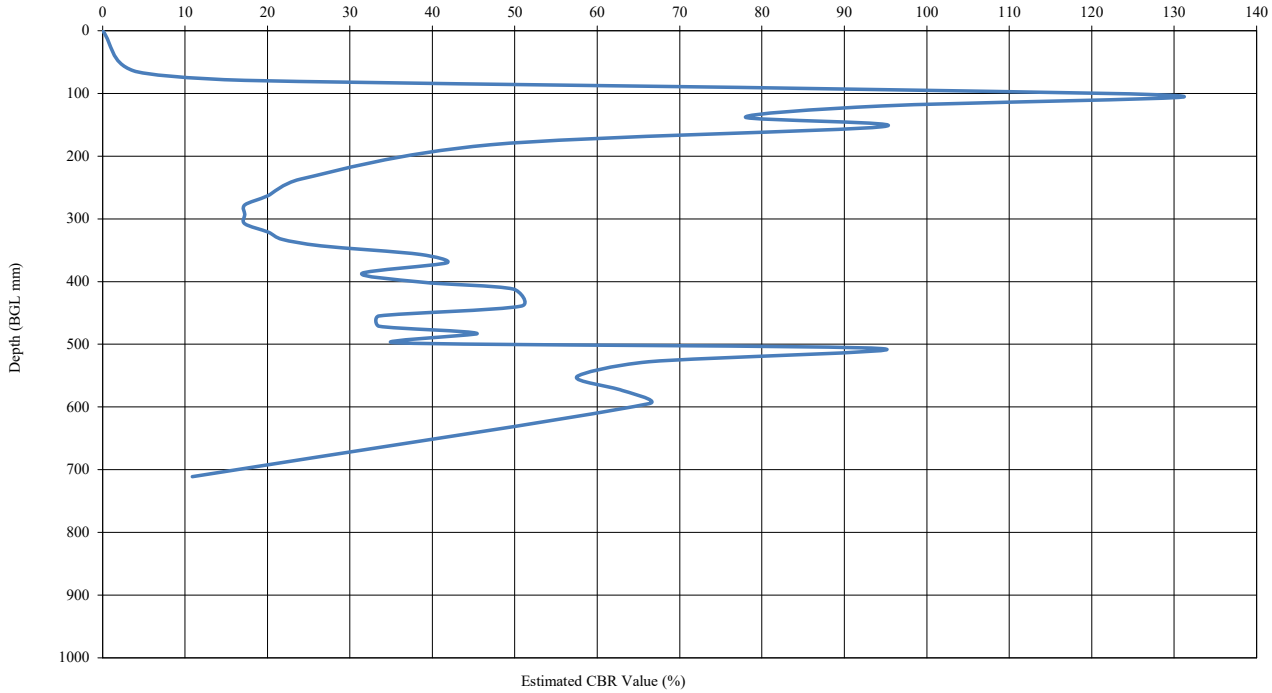
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	bubble.carry.placed
Test No.:	DCP104	**Easting:**	380492
Initial Depth (mm BGL):	62	**Northing:**	410351
Final Depth (mm BGL):	904		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	153	27	27	5.67	48.28
153	333	44	17	10.59	24.93
333	498	68	24	6.88	39.36
498	711	96	28	7.61	35.36

Comments

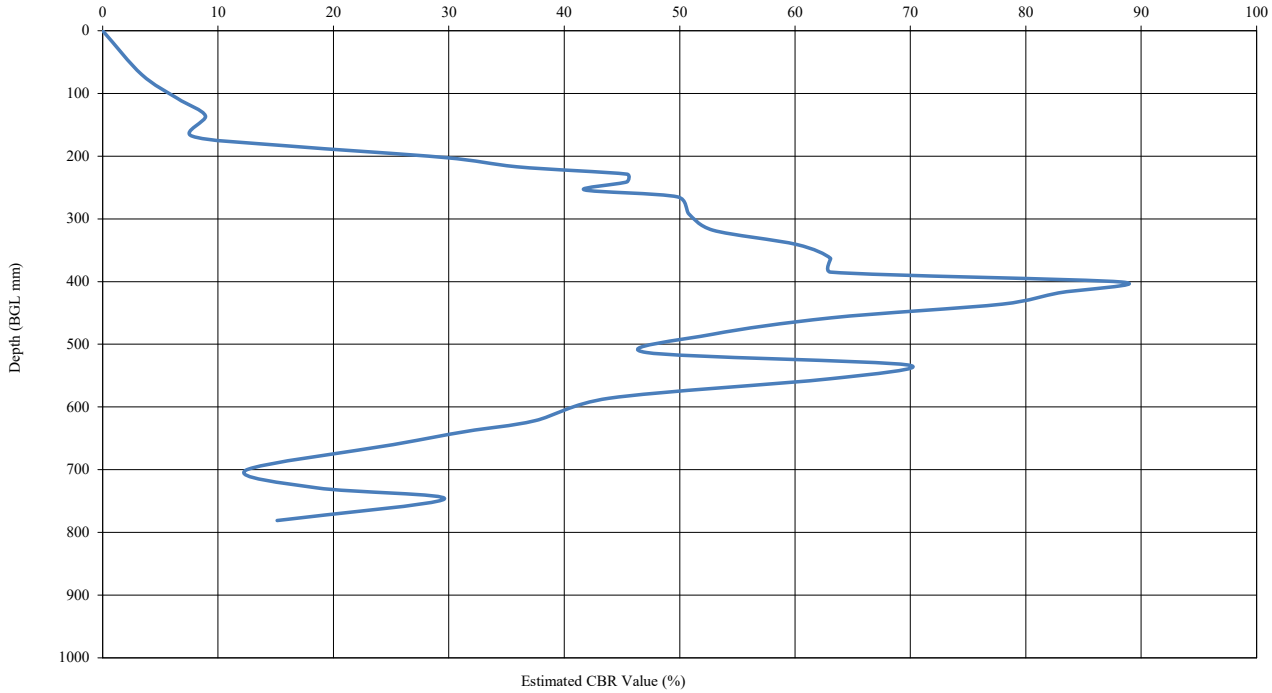
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	longer.launch.valley
Test No.:	DCP105	**Easting:**	380521
Initial Depth (mm BGL):	62	**Northing:**	410337
Final Depth (mm BGL):	936		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	168	4	8	21.00	12.09
168	363	37	33	5.91	46.19
363	513	72	35	4.29	64.86
513	622	92	20	5.45	50.31
622	781	104	12	13.25	19.67

Comments

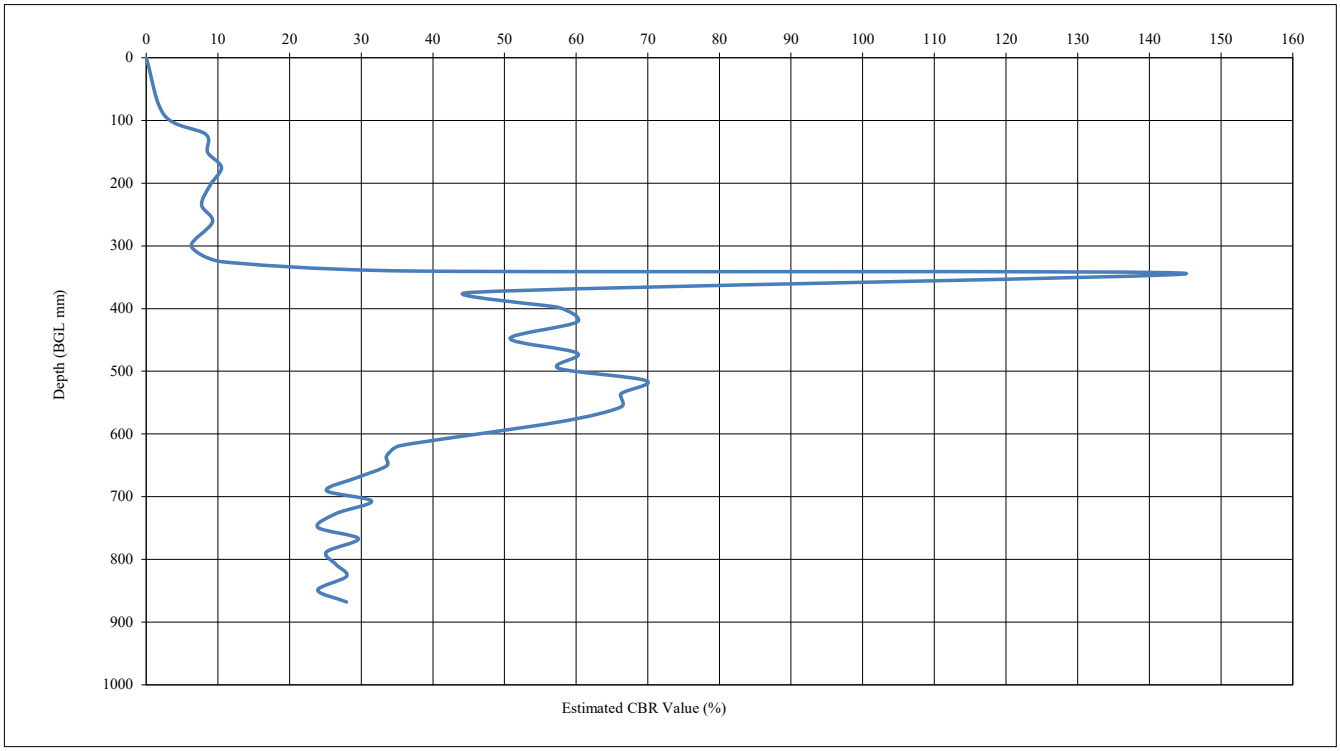
Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

Determination of Dynamic Cone Penetrometer - Estimated CBR Value (%)

Inaccordance with Highways England CS229 Data for Pavement Assessment

Site Name	Pyramid Park, Bury	**Test Date:**	11/07/2024
Site Ref	17-777	**Test Location:**	part.treat.moons
Test No.:	DCP106	**Easting:**	380544
Initial Depth (mm BGL):	62	**Northing:**	410324
Final Depth (mm BGL):	933		

Estimated California Bearing Ratio Graph



Start Depth (mm) BGL	Finish Depth (mm) BGL	No. of Blows	Blows Per Layer	DCP mm/Blows	Ave Estimated Layer (CBR %)
0	301	8	8	37.63	6.53
301	374	18	10	7.30	36.94
374	635	70	52	5.02	54.88
635	868	94	24	9.71	27.33

Comments

Site Engineer:	Checked By:	Date:	Approved By:	Date:
SJ	JC	12/07/2024	JS	12/07/2024

CampbellReith
consulting engineers

Appendix 4

Hazardous Properties Assessment

CampbellReith consulting engineers

HazWasteOnline™

Waste Classification Report

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

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

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

T6UWN-WWG91-UPXBC

Job name

13819 Townside Fields

Description/Comments

Project

13819 Townside Fields

Site

Townside Fields

Classified by

Name:
Michael Baber
Date:
12 Jul 2022 09:44 GMT
Telephone:

Company:
Campbell Reith Consulting Engineers

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

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP01 (0.5)		Non Hazardous		2
2	TP02 (0.5)		Non Hazardous		4
3	TP03 (0.5)		Non Hazardous		6
4	TP03 (2.3)		Non Hazardous		8
5	TP04A (0.2)		Non Hazardous		10
6	TP05 (0.5)		Non Hazardous		12
7	TP06 (0.2)		Non Hazardous		14
8	TP06 (0.5)		Non Hazardous		16
9	TP07 (0.5)		Non Hazardous		18
10	TP08 (0.2)		Non Hazardous		20
11	TP09 (0.5)		Non Hazardous		22
12	WS01 (0.5)		Non Hazardous		24
13	WS02 (0.5)		Non Hazardous		26

Related documents

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

Report

Created by: Michael Baber

Created date: 12 Jul 2022 09:44 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	28
Appendix B: Rationale for selection of metal species	29
Appendix C: Version	30

Classification of sample: TP01 (0.5)

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

Sample details

Sample name:
TP01 (0.5)
Moisture content:
14%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		23 mg/kg	1.32	26.638 mg/kg	0.00266 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.704 mg/kg	0.00017 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.412 mg/kg	0.000141 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.301 mg/kg	0.0000301 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		490 mg/kg	1.126	483.934 mg/kg	0.0484 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	110 mg/kg	1.56	150.508 mg/kg	0.00965 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.29 mg/kg	1.353	0.344 mg/kg	0.0000344 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		68 mg/kg	2.976	177.532 mg/kg	0.0178 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		150 mg/kg	2.774	365.019 mg/kg	0.0365 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.6 mg/kg	1.884	0.992 mg/kg	0.0000992 %	✓	
13	pH			PH		7.2 pH		7.2 pH	7.2 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				0.14	mg/kg		0.123	mg/kg	0.0000123 %	✓	
			201-581-5	85-01-8									
19		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
20		fluoranthene				0.21	mg/kg		0.184	mg/kg	0.0000184 %	✓	
			205-912-4	206-44-0									
21		pyrene				0.19	mg/kg		0.167	mg/kg	0.0000167 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				0.06	mg/kg		0.0526	mg/kg	0.00000526 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				0.08	mg/kg		0.0702	mg/kg	0.00000702 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				0.05	mg/kg		0.0439	mg/kg	0.00000439 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				0.03	mg/kg		0.0263	mg/kg	0.00000263 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.116 %		

Key

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

Classification of sample: TP02 (0.5)

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

Sample details

Sample name:
TP02 (0.5)
Moisture content:
15%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	12.629 mg/kg	0.00126 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.448 mg/kg	0.000145 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.84 mg/kg	0.000084 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.298 mg/kg	0.0000298 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		54 mg/kg	1.126	52.868 mg/kg	0.00529 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	45 mg/kg	1.56	61.036 mg/kg	0.00391 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05 mg/kg	1.353	0.0588 mg/kg	0.00000588 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19 mg/kg	2.976	49.173 mg/kg	0.00492 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		73 mg/kg	2.774	176.098 mg/kg	0.0176 %	✓	
12	confirm TPH has NOT arisen from diesel or petrol					☑					
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2 mg/kg	1.884	0.328 mg/kg	0.0000328 %	✓	
14	pH			PH		7.5 pH		7.5 pH	7.5 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0337 %		

Key

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

Classification of sample: TP03 (0.5)

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

Sample details

Sample name:
TP03 (0.5)
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	13.427 mg/kg	0.00134 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.411 mg/kg	0.000141 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.4 mg/kg	3.22	1.091 mg/kg	0.000109 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.29 mg/kg	0.000029 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		390 mg/kg	1.126	372.116 mg/kg	0.0372 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	67 mg/kg	1.56	88.566 mg/kg	0.00568 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07 mg/kg	1.353	0.0803 mg/kg	0.00000803 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20 mg/kg	2.976	50.445 mg/kg	0.00504 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		91 mg/kg	2.774	213.938 mg/kg	0.0214 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2 mg/kg	1.884	0.319 mg/kg	0.0000319 %	✓	
13	pH			PH		8.2 pH		8.2 pH	8.2 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		0.16 mg/kg		0.136 mg/kg	0.0000136 %	✓	
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		0.57 mg/kg		0.483 mg/kg	0.0000483 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				0.26	mg/kg		0.22	mg/kg	0.000022 %	✓	
			201-695-5	86-73-7									
18		phenanthrene				0.78	mg/kg		0.661	mg/kg	0.0000661 %	✓	
			201-581-5	85-01-8									
19		anthracene				0.16	mg/kg		0.136	mg/kg	0.0000136 %	✓	
			204-371-1	120-12-7									
20		fluoranthene				1.2	mg/kg		1.017	mg/kg	0.000102 %	✓	
			205-912-4	206-44-0									
21		pyrene				0.97	mg/kg		0.822	mg/kg	0.0000822 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				0.21	mg/kg		0.178	mg/kg	0.0000178 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				0.3	mg/kg		0.254	mg/kg	0.0000254 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				0.21	mg/kg		0.178	mg/kg	0.0000178 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				0.13	mg/kg		0.11	mg/kg	0.000011 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				0.06	mg/kg		0.0508	mg/kg	0.00000508 %	✓	
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				0.06	mg/kg		0.0508	mg/kg	0.00000508 %	✓	
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0718 %		

Key

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

Classification of sample: TP03 (2.3)

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

Sample details

Sample name:
TP03 (2.3)
Moisture content:
17%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	13.542	mg/kg	0.00135 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.3	mg/kg	2.775	3.084	mg/kg	0.000308 %	✓	
3		boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.2	mg/kg	3.22	0.55	mg/kg	0.000055 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.293	mg/kg	0.0000293 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		**<LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		70	mg/kg	1.126	67.361	mg/kg	0.00674 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	35	mg/kg	1.56	46.661	mg/kg	0.00299 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		**<LOD**
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		34	mg/kg	2.976	86.49	mg/kg	0.00865 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		**<LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		110	mg/kg	2.774	260.817	mg/kg	0.0261 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		**<LOD**
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.322	mg/kg	0.0000322 %	✓	
14		pH			PH		7.9	pH		7.9	pH	7.9 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.47	mg/kg		0.402	mg/kg	0.0000402 %	✓	
16		acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		acenaphthene				2	mg/kg		1.709	mg/kg	0.000171 %	✓	
			201-469-6	83-32-9									
18		fluorene				1.6	mg/kg		1.368	mg/kg	0.000137 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				4.1	mg/kg		3.504	mg/kg	0.00035 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.57	mg/kg		0.487	mg/kg	0.0000487 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				2.1	mg/kg		1.795	mg/kg	0.000179 %	✓	
			205-912-4	206-44-0									
22		pyrene				1.4	mg/kg		1.197	mg/kg	0.00012 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.23	mg/kg		0.197	mg/kg	0.0000197 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.29	mg/kg		0.248	mg/kg	0.0000248 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.14	mg/kg		0.12	mg/kg	0.000012 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.07	mg/kg		0.0598	mg/kg	0.00000598 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.08	mg/kg		0.0684	mg/kg	0.00000684 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.04	mg/kg		0.0342	mg/kg	0.00000342 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.03	mg/kg		0.0256	mg/kg	0.00000256 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0488 %		

Key

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

Classification of sample: TP04A (0.2)

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

Sample details

Sample name:
TP04A (0.2)
Moisture content:
11%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		1.5 mg/kg	1.32	1.784 mg/kg	0.000178 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.2 mg/kg	2.775	<0.555 mg/kg	<0.0000555 %		<LOD
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.1 mg/kg	1.142	0.103 mg/kg	0.0000103 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		8.5 mg/kg	1.126	8.622 mg/kg	0.000862 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	9.9 mg/kg	1.56	13.912 mg/kg	0.000892 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		3.8 mg/kg	2.976	10.189 mg/kg	0.00102 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		33 mg/kg	2.774	82.475 mg/kg	0.00825 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		8 pH		8 pH	8pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				0.04	mg/kg		0.036	mg/kg	0.0000036 %	✓	
			201-581-5	85-01-8									
19		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
20		fluoranthene				0.05	mg/kg		0.045	mg/kg	0.0000045 %	✓	
			205-912-4	206-44-0									
21		pyrene				0.04	mg/kg		0.036	mg/kg	0.0000036 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0118 %		

Key

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

Classification of sample: TP05 (0.5)

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

Sample details

Sample name:
TP05 (0.5)
Moisture content:
17%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.4 mg/kg	1.32	9.479 mg/kg	0.000948 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.66 mg/kg	0.000166 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.195 mg/kg	0.0000195 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		27 mg/kg	1.126	25.982 mg/kg	0.0026 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	13 mg/kg	1.56	17.331 mg/kg	0.00111 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		30 mg/kg	2.976	76.314 mg/kg	0.00763 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		63 mg/kg	2.774	149.377 mg/kg	0.0149 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		8.2 pH		8.2 pH	8.2 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				0.04	mg/kg		0.0342	mg/kg	0.00000342 %	✓	
			201-581-5	85-01-8									
19		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
20		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
21		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
22		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.028 %		

Key

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

Classification of sample: TP06 (0.2)

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

Sample details

Sample name:
TP06 (0.2)
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16 mg/kg	1.32	17.903 mg/kg	0.00179 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.646 mg/kg	0.000165 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.364 mg/kg	0.000136 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.387 mg/kg	0.0000387 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		45 mg/kg	1.126	42.936 mg/kg	0.00429 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	65 mg/kg	1.56	85.922 mg/kg	0.00551 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06 mg/kg	1.353	0.0688 mg/kg	0.00000688 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20 mg/kg	2.976	50.445 mg/kg	0.00504 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		95 mg/kg	2.774	223.342 mg/kg	0.0223 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.5 mg/kg	1.884	0.798 mg/kg	0.0000798 %	✓	
13	pH			PH		7.5 pH		7.5 pH	7.5 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		0.08 mg/kg		0.0678 mg/kg	0.00000678 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				0.04	mg/kg		0.0339	mg/kg	0.00000339 %	✓	
			201-695-5	86-73-7									
18		phenanthrene				0.49	mg/kg		0.415	mg/kg	0.0000415 %	✓	
			201-581-5	85-01-8									
19		anthracene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
			204-371-1	120-12-7									
20		fluoranthene				0.92	mg/kg		0.78	mg/kg	0.000078 %	✓	
			205-912-4	206-44-0									
21		pyrene				0.84	mg/kg		0.712	mg/kg	0.0000712 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				0.28	mg/kg		0.237	mg/kg	0.0000237 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				0.36	mg/kg		0.305	mg/kg	0.0000305 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				0.3	mg/kg		0.254	mg/kg	0.0000254 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.1	mg/kg		0.0847	mg/kg	0.00000847 %	✓	
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				0.2	mg/kg		0.169	mg/kg	0.0000169 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				0.08	mg/kg		0.0678	mg/kg	0.00000678 %	✓	
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0401 %		

Key

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

Classification of sample: TP06 (0.5)

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

Sample details

Sample name:
TP06 (0.5)
Moisture content:
13%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10 mg/kg	1.32	11.684 mg/kg	0.00117 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.474 mg/kg	0.000147 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.2 mg/kg	3.22	0.57 mg/kg	0.000057 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.404 mg/kg	0.0000404 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		45 mg/kg	1.126	44.836 mg/kg	0.00448 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	55 mg/kg	1.56	75.92 mg/kg	0.00487 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26 mg/kg	2.976	68.48 mg/kg	0.00685 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		400 mg/kg	2.774	981.999 mg/kg	0.0982 %	✓	
12	confirm TPH has NOT arisen from diesel or petrol					☑					
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		7.4 pH		7.4 pH	7.4 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.15	mg/kg		0.133	mg/kg	0.0000133 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.25	mg/kg		0.221	mg/kg	0.0000221 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.24	mg/kg		0.212	mg/kg	0.0000212 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.08	mg/kg		0.0708	mg/kg	0.00000708 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.12	mg/kg		0.106	mg/kg	0.0000106 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.09	mg/kg		0.0796	mg/kg	0.00000796 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.04	mg/kg		0.0354	mg/kg	0.00000354 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.05	mg/kg		0.0442	mg/kg	0.00000442 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.03	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.116 %		

Key

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

Classification of sample: TP07 (0.5)

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

Sample details

Sample name:
TP07 (0.5)
Moisture content:
15%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.8 mg/kg	1.32	10.103 mg/kg	0.00101 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.207 mg/kg	0.000121 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.298 mg/kg	0.0000298 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		26 mg/kg	1.126	25.455 mg/kg	0.00255 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	77 mg/kg	1.56	104.44 mg/kg	0.0067 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		15 mg/kg	2.976	38.821 mg/kg	0.00388 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		64 mg/kg	2.774	154.387 mg/kg	0.0154 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		7.8 pH		7.8 pH	7.8 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		0.09 mg/kg		0.0783 mg/kg	0.00000783 %	✓	
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		0.35 mg/kg		0.304 mg/kg	0.0000304 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				0.19	mg/kg		0.165	mg/kg	0.0000165 %	✓	
			201-695-5	86-73-7									
18		phenanthrene				1.8	mg/kg		1.565	mg/kg	0.000157 %	✓	
			201-581-5	85-01-8									
19		anthracene				0.48	mg/kg		0.417	mg/kg	0.0000417 %	✓	
			204-371-1	120-12-7									
20		fluoranthene				3	mg/kg		2.609	mg/kg	0.000261 %	✓	
			205-912-4	206-44-0									
21		pyrene				2.6	mg/kg		2.261	mg/kg	0.000226 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				0.98	mg/kg		0.852	mg/kg	0.0000852 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				0.89	mg/kg		0.774	mg/kg	0.0000774 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				0.82	mg/kg		0.713	mg/kg	0.0000713 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.32	mg/kg		0.278	mg/kg	0.0000278 %	✓	
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				0.62	mg/kg		0.539	mg/kg	0.0000539 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				0.22	mg/kg		0.191	mg/kg	0.0000191 %	✓	
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				0.22	mg/kg		0.191	mg/kg	0.0000191 %	✓	
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0313 %		

Key

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

Classification of sample: TP08 (0.2)

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

Sample details

Sample name:
TP08 (0.2)
Moisture content:
20%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 20% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.3 mg/kg	1.32	5.831 mg/kg	0.000583 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.156 mg/kg	0.000116 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.19 mg/kg	0.000019 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	18.765 mg/kg	0.00188 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10 mg/kg	1.56	12.998 mg/kg	0.000833 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		15 mg/kg	2.976	37.203 mg/kg	0.00372 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		52 mg/kg	2.774	120.213 mg/kg	0.012 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		7.3 pH		7.3 pH	7.3 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
19		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
20		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
21		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
22		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0197 %		

Key

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

Classification of sample: TP09 (0.5)

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

Sample details

Sample name:
TP09 (0.5)
Moisture content:
14%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	13.898 mg/kg	0.00139 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1 mg/kg	2.775	2.435 mg/kg	0.000243 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.401 mg/kg	0.0000401 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		410 mg/kg	1.126	404.925 mg/kg	0.0405 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	59 mg/kg	1.56	80.727 mg/kg	0.00518 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		29 mg/kg	2.976	75.712 mg/kg	0.00757 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		100 mg/kg	2.774	243.346 mg/kg	0.0243 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1 mg/kg	1.884	0.165 mg/kg	0.0000165 %	✓	
14	pH			PH		7.8 pH		7.8 pH	7.8 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		acenaphthene				0.05	mg/kg		0.0439	mg/kg	0.00000439 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.27	mg/kg		0.237	mg/kg	0.0000237 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.05	mg/kg		0.0439	mg/kg	0.00000439 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.54	mg/kg		0.474	mg/kg	0.0000474 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.54	mg/kg		0.474	mg/kg	0.0000474 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.18	mg/kg		0.158	mg/kg	0.0000158 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.24	mg/kg		0.211	mg/kg	0.0000211 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.18	mg/kg		0.158	mg/kg	0.0000158 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.09	mg/kg		0.0789	mg/kg	0.00000789 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.13	mg/kg		0.114	mg/kg	0.0000114 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.06	mg/kg		0.0526	mg/kg	0.00000526 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.07	mg/kg		0.0614	mg/kg	0.00000614 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		**<LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.081 %		

Key

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

Classification of sample: WS01 (0.5)

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

Sample details

Sample name:
WS01 (0.5)
Moisture content:
6.5%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 6.5% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3 mg/kg	1.32	3.719 mg/kg	0.000372 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.4 mg/kg	2.775	1.042 mg/kg	0.000104 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14 mg/kg	1.126	14.8 mg/kg	0.00148 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	9.4 mg/kg	1.56	13.767 mg/kg	0.000883 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05 mg/kg	1.353	0.0635 mg/kg	0.00000635 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	61.482 mg/kg	0.00615 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		46 mg/kg	2.774	119.822 mg/kg	0.012 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		9.2 pH		9.2 pH	9.2 pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
15	acenaphthylene		205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
16	acenaphthene		201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-695-5	86-73-7									
18		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
19		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-371-1	120-12-7									
20		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-912-4	206-44-0									
21		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-927-3	129-00-0									
22		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0215 %		

Key

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

Classification of sample: WS02 (0.5)

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

Sample details

Sample name:
WS02 (0.5)
Moisture content:
11%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.2 mg/kg	1.32	8.564 mg/kg	0.000856 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.75 mg/kg	0.000175 %	✓	
3	boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.87 mg/kg	0.000087 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.206 mg/kg	0.0000206 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		40 mg/kg	1.126	40.573 mg/kg	0.00406 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	29 mg/kg	1.56	40.752 mg/kg	0.00261 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19 mg/kg	2.976	50.945 mg/kg	0.00509 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		46 mg/kg	2.774	114.965 mg/kg	0.0115 %	✓	
12	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
13	pH			PH		8 pH		8 pH	8pH		
14	naphthalene	601-052-00-2	202-049-5	91-20-3		0.97 mg/kg		0.874 mg/kg	0.0000874 %	✓	
15	acenaphthylene		205-917-1	208-96-8		0.04 mg/kg		0.036 mg/kg	0.0000036 %	✓	
16	acenaphthene		201-469-6	83-32-9		1.2 mg/kg		1.081 mg/kg	0.000108 %	✓	

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluorene				0.89	mg/kg		0.802	mg/kg	0.0000802 %	✓	
			201-695-5	86-73-7									
18		phenanthrene				4.4	mg/kg		3.964	mg/kg	0.000396 %	✓	
			201-581-5	85-01-8									
19		anthracene				1.4	mg/kg		1.261	mg/kg	0.000126 %	✓	
			204-371-1	120-12-7									
20		fluoranthene				4.1	mg/kg		3.694	mg/kg	0.000369 %	✓	
			205-912-4	206-44-0									
21		pyrene				3.4	mg/kg		3.063	mg/kg	0.000306 %	✓	
			204-927-3	129-00-0									
22		benzo[a]anthracene				1.4	mg/kg		1.261	mg/kg	0.000126 %	✓	
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				1.3	mg/kg		1.171	mg/kg	0.000117 %	✓	
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				1.1	mg/kg		0.991	mg/kg	0.0000991 %	✓	
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.45	mg/kg		0.405	mg/kg	0.0000405 %	✓	
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				0.84	mg/kg		0.757	mg/kg	0.0000757 %	✓	
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				0.29	mg/kg		0.261	mg/kg	0.0000261 %	✓	
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				0.29	mg/kg		0.261	mg/kg	0.0000261 %	✓	
			205-883-8	191-24-2									
30		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0268 %		

Key

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

Appendix A: Classifier defined and non GB MCL determinands

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

pH (CAS Number: PH)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

confirm TPH has NOT arisen from diesel or petrol

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.

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

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

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

beryllium {beryllium oxide}

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

boron {diboron trioxide; boric oxide}

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

cadmium {cadmium oxide}

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

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

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

copper {dicopper oxide; copper (I) oxide}

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

lead {lead chromate}

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

mercury {mercury dichloride}

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

nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc chromate}

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

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}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2022.192.5237.9831 (11 Jul 2022)
HazWasteOnline Database: 2022.192.5237.9831 (11 Jul 2022)

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

CampbellReith consulting engineers

HazWasteOnline™

Waste Classification Report

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

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

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

RYZTM-8TFII-XIY1M

Job name

14111 Pyramid Park Enabling Works

Description/Comments

Project

Site

Classified by

Name:
Peter Kenny
Date:
27 Feb 2024 17:26 GMT
Telephone:

Company:
Campbell Reith Consulting Engineers Manchester

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

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Market Street, Bury, Greater Manchester **Post Code** BL9 0EQ

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Redevelopment of Pyramid Park.

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

Potential waste created during the excavation of soils.

Description of the waste

Made Ground comprising gravel of various lithologies, brick, concrete and clinker etc.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	BH101 (0.5)	0.5	Hazardous	HP 3(i), HP 7, HP 11	3
2	BH102 (0.5)	0.5	Non Hazardous		6
3	BH103 (0.5)	0.5	Non Hazardous		8
4	BH104 (0.2)	0.2	Non Hazardous		10
5	BH104 (1)	1	Non Hazardous		12
6	BH105 (0.2)	0.2	Non Hazardous		14
7	BH106 (0.2)	0.2	Non Hazardous		16
8	BH107 (1)	1	Non Hazardous		18
9	BH107 (2)	2	Non Hazardous		20
10	BH108 (0.5)	0.5	Non Hazardous		22
11	HP111 (0)		Non Hazardous		24
12	HP113 (0)		Non Hazardous		26
13	HP114 (0)		Non Hazardous		28
14	HP115 (0)		Non Hazardous		30
15	HP117E (0)		Non Hazardous		32
16	TP101 (0.3)	0.3	Non Hazardous		34
17	TP101 (0.8)	0.8	Non Hazardous		36
18	TP102 (0)		Non Hazardous		38
19	TP102 (2.5)	2.5	Non Hazardous		40
20	TP103 (0.3)	0.3	Non Hazardous		42
21	TP103 (1.5)	1.5	Non Hazardous		44
22	TP104 (0.8)	0.8	Non Hazardous		47
23	TP106 (0.3)	0.3	Non Hazardous		50
24	TP106 (2.8)	2.8	Hazardous	HP 3(i), HP 7, HP 11	52
25	TP107 (0.5)	0.5	Non Hazardous		55
26	TP107 (1.5)	1.5	Non Hazardous		57
27	TP107 (3.3)	3.3	Hazardous	HP 3(i), HP 7, HP 11	59
28	TP108 (0.2)	0.2	Hazardous	HP 3(i), HP 7, HP 11	62
29	TP108 (0.8)	0.8	Non Hazardous		65
30	TP109 (1)	1	Non Hazardous		67
31	TP110 (0.2)	0.2	Hazardous	HP 3(i), HP 7, HP 11	69
32	TP116A (0.4)	0.4	Non Hazardous		72
33	TP119 (1)	1	Non Hazardous		74
34	TP119 (3)	3	Non Hazardous		76
35	TP120 (0.6)	0.6	Non Hazardous		78
36	TP121 (1)	1	Non Hazardous		80
37	TP121 (3.2)	3.2	Non Hazardous		82
38	TP122 (0.4)	0.4	Non Hazardous		84
39	TP123 (0.4)	0.4	Non Hazardous		87

Related documents

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

Report

Created by: Peter Kenny

Created date: 27 Feb 2024 17:26 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	90
Appendix B: Rationale for selection of metal species	91
Appendix C: Version	92

Classification of sample: BH101 (0.5)

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

Sample details

Sample name:
BH101 (0.5)
Sample Depth:
0.5 m
Moisture content:
14%
(dry weight correction)

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

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.342%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.342%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.342%)

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13 mg/kg	1.32	15.056 mg/kg	0.00151 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.704 mg/kg	0.00017 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6 mg/kg	3.22	1.695 mg/kg	0.000169 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.2	mg/kg	0.00002 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		69	mg/kg	1.126	68.146	mg/kg	0.00681 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	56	mg/kg	1.56	76.622	mg/kg	0.00491 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05	mg/kg	1.353	0.0594	mg/kg	0.00000594 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22	mg/kg	2.976	57.437	mg/kg	0.00574 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		78	mg/kg	2.774	189.81	mg/kg	0.019 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		3900	mg/kg		3421.053	mg/kg	0.342 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
14		pH			PH		8.2	pH		8.2	pH	8.2 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		5	mg/kg		4.386	mg/kg	0.000439 %	✓	
16		acenaphthylene		205-917-1	208-96-8		0.11	mg/kg		0.0965	mg/kg	0.00000965 %	✓	
17		acenaphthene		201-469-6	83-32-9		5.4	mg/kg		4.737	mg/kg	0.000474 %	✓	
18		fluorene		201-695-5	86-73-7		4.2	mg/kg		3.684	mg/kg	0.000368 %	✓	
19		phenanthrene		201-581-5	85-01-8		27	mg/kg		23.684	mg/kg	0.00237 %	✓	
20		anthracene		204-371-1	120-12-7		6.5	mg/kg		5.702	mg/kg	0.00057 %	✓	
21		fluoranthene		205-912-4	206-44-0		19	mg/kg		16.667	mg/kg	0.00167 %	✓	
22		pyrene		204-927-3	129-00-0		19	mg/kg		16.667	mg/kg	0.00167 %	✓	
23		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.8	mg/kg		4.211	mg/kg	0.000421 %	✓	
24		chrysene	601-048-00-0	205-923-4	218-01-9		4.5	mg/kg		3.947	mg/kg	0.000395 %	✓	
25		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		3.3	mg/kg		2.895	mg/kg	0.000289 %	✓	
26		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		1.1	mg/kg		0.965	mg/kg	0.0000965 %	✓	
27		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		2.6	mg/kg		2.281	mg/kg	0.000228 %	✓	
28		indeno[123-cd]pyrene		205-893-2	193-39-5		0.87	mg/kg		0.763	mg/kg	0.0000763 %	✓	
29		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.28	mg/kg		0.246	mg/kg	0.0000246 %	✓	
30		benzo[ghi]perylene		205-883-8	191-24-2		1.1	mg/kg		0.965	mg/kg	0.0000965 %	✓	

#		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							
31		phenol				0.3 mg/kg		0.263 mg/kg	0.0000263 %	✓	
		604-001-00-2	203-632-7	108-95-2							
								Total:	0.39 %		

Key

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

Classification of sample: BH102 (0.5)

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

Sample details

Sample name:
BH102 (0.5)
Sample Depth:
0.5 m
Moisture content:
12%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.3 mg/kg	1.32	10.963 mg/kg	0.0011 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.487 mg/kg	0.000149 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.437 mg/kg	0.000144 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.408 mg/kg	0.0000408 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		30 mg/kg	1.126	30.158 mg/kg	0.00302 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	57 mg/kg	1.56	79.383 mg/kg	0.00509 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16 mg/kg	2.976	42.518 mg/kg	0.00425 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		78 mg/kg	2.774	193.199 mg/kg	0.0193 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		150 mg/kg		133.929 mg/kg	0.0134 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1 mg/kg	1.884	0.168 mg/kg	0.0000168 %	✓	
14	pH			PH		7.2 pH		7.2 pH	7.2 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.21 mg/kg		0.188 mg/kg	0.0000187 %	✓	

#		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		acenaphthylene				0.1	mg/kg		0.0893	mg/kg	0.00000893 %	✓	
			205-917-1	208-96-8									
17		acenaphthene				2.5	mg/kg		2.232	mg/kg	0.000223 %	✓	
			201-469-6	83-32-9									
18		fluorene				1.3	mg/kg		1.161	mg/kg	0.000116 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				2.1	mg/kg		1.875	mg/kg	0.000188 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.4	mg/kg		0.357	mg/kg	0.0000357 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				2	mg/kg		1.786	mg/kg	0.000179 %	✓	
			205-912-4	206-44-0									
22		pyrene				1.7	mg/kg		1.518	mg/kg	0.000152 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.47	mg/kg		0.42	mg/kg	0.000042 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.55	mg/kg		0.491	mg/kg	0.0000491 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.73	mg/kg		0.652	mg/kg	0.0000652 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.24	mg/kg		0.214	mg/kg	0.0000214 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.52	mg/kg		0.464	mg/kg	0.0000464 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.2	mg/kg		0.179	mg/kg	0.0000179 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.38	mg/kg		0.339	mg/kg	0.0000339 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0481 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0134%)

Classification of sample: BH103 (0.5)

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

Sample details

Sample name:
BH103 (0.5)
Sample Depth:
0.5 m
Moisture content:
20%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 20% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		10 mg/kg	1.32	11.003 mg/kg	0.0011 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	1.85 mg/kg	0.000185 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.805 mg/kg	0.0000805 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.381 mg/kg	0.0000381 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		55 mg/kg	1.126	51.603 mg/kg	0.00516 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	50 mg/kg	1.56	64.992 mg/kg	0.00417 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	54.565 mg/kg	0.00546 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		120 mg/kg	2.774	277.415 mg/kg	0.0277 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		45 mg/kg		37.5 mg/kg	0.00375 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		8.1 pH		8.1 pH	8.1 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.05 mg/kg		0.0417 mg/kg	0.00000417 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.33	mg/kg		0.275	mg/kg	0.0000275 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.22	mg/kg		0.183	mg/kg	0.0000183 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				2	mg/kg		1.667	mg/kg	0.000167 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.35	mg/kg		0.292	mg/kg	0.0000292 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				3.7	mg/kg		3.083	mg/kg	0.000308 %	✓	
			205-912-4	206-44-0									
22		pyrene				3.8	mg/kg		3.167	mg/kg	0.000317 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				1.2	mg/kg		1	mg/kg	0.0001 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				1.4	mg/kg		1.167	mg/kg	0.000117 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				1.3	mg/kg		1.083	mg/kg	0.000108 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.58	mg/kg		0.483	mg/kg	0.0000483 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				1.3	mg/kg		1.083	mg/kg	0.000108 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.35	mg/kg		0.292	mg/kg	0.0000292 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.14	mg/kg		0.117	mg/kg	0.0000117 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.62	mg/kg		0.517	mg/kg	0.0000517 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0495 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00375%)

Classification of sample: BH104 (0.2)

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

Sample details

Sample name:
BH104 (0.2)
Sample Depth:
0.2 m
Moisture content:
12%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		19 mg/kg	1.32	22.398 mg/kg	0.00224 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	2.726 mg/kg	0.000273 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.437 mg/kg	0.000144 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.204 mg/kg	0.0000204 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		38 mg/kg	1.126	38.2 mg/kg	0.00382 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	59 mg/kg	1.56	82.169 mg/kg	0.00527 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.08 mg/kg	1.353	0.0967 mg/kg	0.00000967 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	58.462 mg/kg	0.00585 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.7 mg/kg	2.554	1.596 mg/kg	0.00016 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		100 mg/kg	2.774	247.692 mg/kg	0.0248 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<**LOD**
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4 mg/kg	1.884	0.673 mg/kg	0.0000673 %	✓	
14	pH			PH		5.8 pH		5.8 pH	5.8 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.05	mg/kg		0.0446	mg/kg	0.00000446 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.05	mg/kg		0.0446	mg/kg	0.00000446 %	✓	
			205-883-8	191-24-2									
31		phenol				0.7	mg/kg		0.625	mg/kg	0.0000625 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.044 %		

Key

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

Classification of sample: BH104 (1)

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

Sample details

Sample name:
BH104 (1)
Sample Depth:
1 m
Moisture content:
14%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		37	mg/kg	1.32	42.853	mg/kg	0.00429 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.5	mg/kg	2.775	3.652	mg/kg	0.000365 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6	mg/kg	3.22	1.695	mg/kg	0.000169 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.301	mg/kg	0.0000301 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		60	mg/kg	1.126	59.257	mg/kg	0.00593 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	75	mg/kg	1.56	102.619	mg/kg	0.00658 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.11	mg/kg	1.353	0.131	mg/kg	0.0000131 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26	mg/kg	2.976	67.88	mg/kg	0.00679 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.8	mg/kg	2.554	1.792	mg/kg	0.000179 %	✓	
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		110	mg/kg	2.774	267.681	mg/kg	0.0268 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.5	mg/kg	1.884	0.826	mg/kg	0.0000826 %	✓	
14		pH			PH		6	pH		6	pH	6pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.04	mg/kg		0.0351	mg/kg	0.00000351 %	✓	
			205-883-8	191-24-2									
31		phenol				0.9	mg/kg		0.789	mg/kg	0.0000789 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0525 %		

Key

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

Classification of sample: BH105 (0.2)

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

Sample details

Sample name:
BH105 (0.2)
Sample Depth:
0.2 m
Moisture content:
37%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 37% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		25 mg/kg	1.32	24.094 mg/kg	0.00241 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	2.228 mg/kg	0.000223 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6 mg/kg	3.22	1.41 mg/kg	0.000141 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9 mg/kg	1.142	0.75 mg/kg	0.000075 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		120 mg/kg	1.126	98.618 mg/kg	0.00986 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	110 mg/kg	1.56	125.241 mg/kg	0.00803 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.19 mg/kg	1.353	0.188 mg/kg	0.0000188 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		27 mg/kg	2.976	58.656 mg/kg	0.00587 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		250 mg/kg	2.774	506.231 mg/kg	0.0506 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		110 mg/kg		80.292 mg/kg	0.00803 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4 mg/kg	1.884	0.55 mg/kg	0.000055 %	✓	
14	pH			PH		7.6 pH		7.6 pH	7.6 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.14	mg/kg		0.102	mg/kg	0.0000102 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.14	mg/kg		0.102	mg/kg	0.0000102 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.24	mg/kg		0.175	mg/kg	0.0000175 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.23	mg/kg		0.168	mg/kg	0.0000168 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.06	mg/kg		0.0438	mg/kg	0.00000438 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.11	mg/kg		0.0803	mg/kg	0.00000803 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.08	mg/kg		0.0584	mg/kg	0.00000584 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.03	mg/kg		0.0219	mg/kg	0.00000219 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.05	mg/kg		0.0365	mg/kg	0.00000365 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.04	mg/kg		0.0292	mg/kg	0.00000292 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				0.7	mg/kg		0.511	mg/kg	0.0000511 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0858 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00803%)

Classification of sample: BH106 (0.2)

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

Sample details

Sample name:
BH106 (0.2)
Sample Depth:
0.2 m
Moisture content:
10%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16 mg/kg	1.32	19.205 mg/kg	0.00192 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.4 mg/kg	2.775	3.532 mg/kg	0.000353 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.8 mg/kg	3.22	2.342 mg/kg	0.000234 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6 mg/kg	1.142	0.623 mg/kg	0.0000623 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		77 mg/kg	1.126	78.812 mg/kg	0.00788 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	86 mg/kg	1.56	121.949 mg/kg	0.00782 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.15 mg/kg	1.353	0.185 mg/kg	0.0000185 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23 mg/kg	2.976	62.231 mg/kg	0.00622 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		140 mg/kg	2.774	353.073 mg/kg	0.0353 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		300 mg/kg		272.727 mg/kg	0.0273 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.3 mg/kg	1.884	0.514 mg/kg	0.0000514 %	✓	
14	pH			PH		7.3 pH		7.3 pH	7.3 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.19 mg/kg		0.173 mg/kg	0.0000173 %	✓	

#		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		acenaphthylene	205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
17		acenaphthene	201-469-6	83-32-9		0.68	mg/kg		0.618	mg/kg	0.0000618 %	✓	
18		fluorene	201-695-5	86-73-7		0.47	mg/kg		0.427	mg/kg	0.0000427 %	✓	
19		phenanthrene	201-581-5	85-01-8		4	mg/kg		3.636	mg/kg	0.000364 %	✓	
20		anthracene	204-371-1	120-12-7		0.97	mg/kg		0.882	mg/kg	0.0000882 %	✓	
21		fluoranthene	205-912-4	206-44-0		4.6	mg/kg		4.182	mg/kg	0.000418 %	✓	
22		pyrene	204-927-3	129-00-0		4.2	mg/kg		3.818	mg/kg	0.000382 %	✓	
23		benzo[a]anthracene	200-280-6	56-55-3		1.7	mg/kg		1.545	mg/kg	0.000155 %	✓	
24		chrysene	205-923-4	218-01-9		1.6	mg/kg		1.455	mg/kg	0.000145 %	✓	
25		benzo[b]fluoranthene	205-911-9	205-99-2		1.9	mg/kg		1.727	mg/kg	0.000173 %	✓	
26		benzo[k]fluoranthene	205-916-6	207-08-9		0.64	mg/kg		0.582	mg/kg	0.0000582 %	✓	
27		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		1.5	mg/kg		1.364	mg/kg	0.000136 %	✓	
28		indeno[123-cd]pyrene	205-893-2	193-39-5		0.49	mg/kg		0.445	mg/kg	0.0000445 %	✓	
29		dibenz[a,h]anthracene	200-181-8	53-70-3		0.16	mg/kg		0.145	mg/kg	0.0000145 %	✓	
30		benzo[ghi]perylene	205-883-8	191-24-2		0.6	mg/kg		0.545	mg/kg	0.0000545 %	✓	
31		phenol	203-632-7	108-95-2		0.8	mg/kg		0.727	mg/kg	0.0000727 %	✓	
										Total:	0.0897 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0273%)

Classification of sample: BH107 (1)

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

Sample details

Sample name:
BH107 (1)
Sample Depth:
1 m
Moisture content:
12%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.2 mg/kg	1.32	7.309 mg/kg	0.000731 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.2 mg/kg	2.775	0.496 mg/kg	0.0000496 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.3 mg/kg	3.22	3.737 mg/kg	0.000374 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.408 mg/kg	0.0000408 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	20.105 mg/kg	0.00201 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	27 mg/kg	1.56	37.603 mg/kg	0.00241 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		18 mg/kg	2.976	47.833 mg/kg	0.00478 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		54 mg/kg	2.774	133.753 mg/kg	0.0134 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		98 mg/kg		87.5 mg/kg	0.00875 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		10.7 pH		10.7 pH	10.7 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.11	mg/kg		0.0982	mg/kg	0.00000982 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.11	mg/kg		0.0982	mg/kg	0.00000982 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.1	mg/kg		0.0893	mg/kg	0.00000893 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.12	mg/kg		0.107	mg/kg	0.0000107 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.05	mg/kg		0.0446	mg/kg	0.00000446 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.07	mg/kg		0.0625	mg/kg	0.00000625 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.06	mg/kg		0.0536	mg/kg	0.00000536 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.05	mg/kg		0.0446	mg/kg	0.00000446 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.03	mg/kg		0.0268	mg/kg	0.00000268 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.033 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00875%)

Classification of sample: BH107 (2)

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

Sample details

Sample name:
BH107 (2)
Sample Depth:
2 m
Moisture content:
16%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		3.4 mg/kg	1.32	3.87 mg/kg	0.000387 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		5.1 mg/kg	2.775	12.202 mg/kg	0.00122 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		6 mg/kg	3.22	16.655 mg/kg	0.00167 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.295 mg/kg	0.0000295 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17 mg/kg	1.126	16.5 mg/kg	0.00165 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	6.9 mg/kg	1.56	9.278 mg/kg	0.000595 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		11 mg/kg	2.976	28.223 mg/kg	0.00282 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		1.5 mg/kg	2.554	3.302 mg/kg	0.00033 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		61 mg/kg	2.774	145.882 mg/kg	0.0146 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		10.4 pH		10.4 pH	10.4 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.08	mg/kg		0.069	mg/kg	0.0000069 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.11	mg/kg		0.0948	mg/kg	0.00000948 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.1	mg/kg		0.0862	mg/kg	0.00000862 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.08	mg/kg		0.069	mg/kg	0.0000069 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.07	mg/kg		0.0603	mg/kg	0.00000603 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0247 %		

Key

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

Classification of sample: BH108 (0.5)

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

Sample details

Sample name:
BH108 (0.5)
Sample Depth:
0.5 m
Moisture content:
6%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.7	mg/kg	1.32	7.1	mg/kg	0.00071 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5	mg/kg	2.775	1.309	mg/kg	0.000131 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.2	mg/kg	3.22	0.608	mg/kg	0.0000608 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.216	mg/kg	0.0000216 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		19	mg/kg	1.126	20.181	mg/kg	0.00202 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	12	mg/kg	1.56	17.658	mg/kg	0.00113 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22	mg/kg	2.976	61.772	mg/kg	0.00618 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		89	mg/kg	2.774	232.924	mg/kg	0.0233 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		49	mg/kg		46.226	mg/kg	0.00462 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
14	pH			PH		7.8	pH		7.8	pH	7.8 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0386 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00462%)

Classification of sample: HP111 (0)

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

Sample details

Sample name:
HP111 (0)
Moisture content:
2.6%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 2.6% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9 mg/kg	1.32	11.582 mg/kg	0.00116 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.3 mg/kg	2.775	0.812 mg/kg	0.0000812 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.2 mg/kg	3.22	0.628 mg/kg	0.0000628 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	19.752 mg/kg	0.00198 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	19 mg/kg	1.56	28.885 mg/kg	0.00185 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		8.4 mg/kg	2.976	24.367 mg/kg	0.00244 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		42 mg/kg	2.774	113.562 mg/kg	0.0114 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		29 mg/kg		28.265 mg/kg	0.00283 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1 mg/kg	1.884	0.184 mg/kg	0.0000184 %	✓	
14	pH			PH		7.7 pH		7.7 pH	7.7 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.04	mg/kg		0.039	mg/kg	0.0000039 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.03	mg/kg		0.0292	mg/kg	0.00000292 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0222 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00283%)

Classification of sample: HP113 (0)

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

Sample details

Sample name:
HP113 (0)
Moisture content:
25%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 25% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4	mg/kg	1.32	4.225	mg/kg	0.000423 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5	mg/kg	2.775	1.11	mg/kg	0.000111 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5	mg/kg	3.22	1.288	mg/kg	0.000129 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.366	mg/kg	0.0000366 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		26	mg/kg	1.126	23.418	mg/kg	0.00234 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	41	mg/kg	1.56	51.162	mg/kg	0.00328 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07	mg/kg	1.353	0.0758	mg/kg	0.00000758 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		10	mg/kg	2.976	23.81	mg/kg	0.00238 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		73	mg/kg	2.774	162.01	mg/kg	0.0162 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.301	mg/kg	0.0000301 %	✓	
14		pH			PH		6.9	pH		6.9	pH	6.9 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.03	mg/kg		0.024	mg/kg	0.0000024 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.06	mg/kg		0.048	mg/kg	0.0000048 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.03	mg/kg		0.024	mg/kg	0.0000024 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				0.21	mg/kg		0.168	mg/kg	0.0000168 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.04	mg/kg		0.032	mg/kg	0.0000032 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.14	mg/kg		0.112	mg/kg	0.0000112 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.11	mg/kg		0.088	mg/kg	0.0000088 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.04	mg/kg		0.032	mg/kg	0.0000032 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.05	mg/kg		0.04	mg/kg	0.000004 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				0.5	mg/kg		0.4	mg/kg	0.00004 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0264 %		

Key

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

Classification of sample: HP114 (0)

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

Sample details

Sample name:
HP114 (0)
Moisture content:
8.6%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.6	mg/kg	1.32	5.593	mg/kg	0.000559 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.3	mg/kg	2.775	0.767	mg/kg	0.0000767 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.186	mg/kg	0.000119 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14	mg/kg	1.126	14.514	mg/kg	0.00145 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	7	mg/kg	1.56	10.054	mg/kg	0.000645 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		7.9	mg/kg	2.976	21.651	mg/kg	0.00217 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		36	mg/kg	2.774	91.961	mg/kg	0.0092 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
14		pH			PH		8	pH		8	pH	8pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.07	mg/kg		0.0645	mg/kg	0.00000645 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.04	mg/kg		0.0368	mg/kg	0.00000368 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				0.29	mg/kg		0.267	mg/kg	0.0000267 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.07	mg/kg		0.0645	mg/kg	0.00000645 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.44	mg/kg		0.405	mg/kg	0.0000405 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.4	mg/kg		0.368	mg/kg	0.0000368 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.14	mg/kg		0.129	mg/kg	0.0000129 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.18	mg/kg		0.166	mg/kg	0.0000166 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.17	mg/kg		0.157	mg/kg	0.0000157 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.07	mg/kg		0.0645	mg/kg	0.00000645 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.13	mg/kg		0.12	mg/kg	0.000012 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.07	mg/kg		0.0645	mg/kg	0.00000645 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.08	mg/kg		0.0737	mg/kg	0.00000737 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0158 %		

Key

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

Classification of sample: HP115 (0)

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

Sample details

Sample name:
HP115 (0)
Moisture content:
2.6%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 2.6% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		2.7 mg/kg	1.32	3.475 mg/kg	0.000347 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.3 mg/kg	2.775	0.812 mg/kg	0.0000812 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.2 mg/kg	3.22	0.628 mg/kg	0.0000628 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2 mg/kg	1.142	0.223 mg/kg	0.0000223 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	19.752 mg/kg	0.00198 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	17 mg/kg	1.56	25.845 mg/kg	0.00166 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		12 mg/kg	2.976	34.81 mg/kg	0.00348 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		61 mg/kg	2.774	164.935 mg/kg	0.0165 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		8 pH		8 pH	8pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.04	mg/kg		0.039	mg/kg	0.0000039 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.04	mg/kg		0.039	mg/kg	0.0000039 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0256 %		

Key

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

Classification of sample: HP117E (0)

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

Sample details

Sample name:
HP117E (0)
Moisture content:
11%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		14	mg/kg	1.32	16.653	mg/kg	0.00167 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.9	mg/kg	2.775	2.25	mg/kg	0.000225 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2	mg/kg	3.22	<0.644	mg/kg	<0.0000644 %		<**LOD**
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.309	mg/kg	0.0000309 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		47	mg/kg	1.126	47.673	mg/kg	0.00477 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	63	mg/kg	1.56	88.53	mg/kg	0.00568 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05	mg/kg	1.353	0.061	mg/kg	0.0000061 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22	mg/kg	2.976	58.989	mg/kg	0.0059 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		87	mg/kg	2.774	217.433	mg/kg	0.0217 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		310	mg/kg		279.279	mg/kg	0.0279 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.1	mg/kg	1.884	0.17	mg/kg	0.000017 %	✓	
14		pH			PH		7.1	pH		7.1	pH	7.1 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.21	mg/kg		0.189	mg/kg	0.0000189 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.44	mg/kg		0.396	mg/kg	0.0000396 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.27	mg/kg		0.243	mg/kg	0.0000243 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				2	mg/kg		1.802	mg/kg	0.00018 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.38	mg/kg		0.342	mg/kg	0.0000342 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				2.1	mg/kg		1.892	mg/kg	0.000189 %	✓	
			205-912-4	206-44-0									
22		pyrene				2.2	mg/kg		1.982	mg/kg	0.000198 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.59	mg/kg		0.532	mg/kg	0.0000532 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.7	mg/kg		0.631	mg/kg	0.0000631 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.6	mg/kg		0.541	mg/kg	0.0000541 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.18	mg/kg		0.162	mg/kg	0.0000162 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.44	mg/kg		0.396	mg/kg	0.0000396 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.15	mg/kg		0.135	mg/kg	0.0000135 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.04	mg/kg		0.036	mg/kg	0.0000036 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.2	mg/kg		0.18	mg/kg	0.000018 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0694 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0279%)

Classification of sample: TP101 (0.3)

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

Sample details

Sample name:
TP101 (0.3)
Sample Depth:
0.3 m
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.6 mg/kg	1.32	10.742 mg/kg	0.00107 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1 mg/kg	2.775	2.352 mg/kg	0.000235 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.387 mg/kg	0.0000387 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		40 mg/kg	1.126	38.166 mg/kg	0.00382 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	26 mg/kg	1.56	34.369 mg/kg	0.0022 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		35 mg/kg	2.976	88.279 mg/kg	0.00883 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		92 mg/kg	2.774	216.289 mg/kg	0.0216 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		120 mg/kg		101.695 mg/kg	0.0102 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		8.2 pH		8.2 pH	8.2 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.05	mg/kg		0.0424	mg/kg	0.00000424 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.34	mg/kg		0.288	mg/kg	0.0000288 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.06	mg/kg		0.0508	mg/kg	0.00000508 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.54	mg/kg		0.458	mg/kg	0.0000458 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.49	mg/kg		0.415	mg/kg	0.0000415 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.19	mg/kg		0.161	mg/kg	0.0000161 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.26	mg/kg		0.22	mg/kg	0.000022 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.19	mg/kg		0.161	mg/kg	0.0000161 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.08	mg/kg		0.0678	mg/kg	0.00000678 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.12	mg/kg		0.102	mg/kg	0.0000102 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0487 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0102%)

Classification of sample: TP101 (0.8)

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

Sample details

Sample name:
TP101 (0.8)
Sample Depth:
0.8 m
Moisture content:
17%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9 mg/kg	1.32	10.156 mg/kg	0.00102 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.1 mg/kg	2.775	2.609 mg/kg	0.000261 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.293 mg/kg	0.0000293 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		42 mg/kg	1.126	40.417 mg/kg	0.00404 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	24 mg/kg	1.56	31.996 mg/kg	0.00205 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		40 mg/kg	2.976	101.753 mg/kg	0.0102 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		91 mg/kg	2.774	215.767 mg/kg	0.0216 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		8.3 pH		8.3 pH	8.3 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.05	mg/kg		0.0427	mg/kg	0.00000427 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.05	mg/kg		0.0427	mg/kg	0.00000427 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.05	mg/kg		0.0427	mg/kg	0.00000427 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.04	mg/kg		0.0342	mg/kg	0.00000342 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				0.5	mg/kg		0.427	mg/kg	0.0000427 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0407 %		

Key

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

Classification of sample: TP102 (0)

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

Sample details

Sample name:
TP102 (0)
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.3	mg/kg	1.32	9.287	mg/kg	0.000929 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7	mg/kg	2.775	1.646	mg/kg	0.000165 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7	mg/kg	3.22	1.91	mg/kg	0.000191 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.194	mg/kg	0.0000194 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		23	mg/kg	1.126	21.945	mg/kg	0.00219 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	14	mg/kg	1.56	18.506	mg/kg	0.00119 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		25	mg/kg	2.976	63.056	mg/kg	0.00631 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		52	mg/kg	2.774	122.251	mg/kg	0.0122 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.319	mg/kg	0.0000319 %	✓	
14		pH			PH		7.7	pH		7.7	pH	7.7 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.04	mg/kg		0.0339	mg/kg	0.00000339 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0247 %		

Key

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

Classification of sample: TP102 (2.5)

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

Sample details

Sample name:
TP102 (2.5)
Sample Depth:
2.5 m
Moisture content:
14%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	12.74	mg/kg	0.00127 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5	mg/kg	2.775	1.217	mg/kg	0.000122 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.6	mg/kg	3.22	1.695	mg/kg	0.000169 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.301	mg/kg	0.0000301 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		57	mg/kg	1.126	56.294	mg/kg	0.00563 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	78	mg/kg	1.56	106.724	mg/kg	0.00684 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		15	mg/kg	2.976	39.161	mg/kg	0.00392 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		70	mg/kg	2.774	170.342	mg/kg	0.017 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
13		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.2	mg/kg	1.884	0.331	mg/kg	0.0000331 %	✓	
		006-007-00-5											
18		pH				8.3	pH		8.3	pH	8.3 pH		
				PH									
19		naphthalene				0.41	mg/kg		0.36	mg/kg	0.000036 %	✓	
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
21		acenaphthene				1.2	mg/kg		1.053	mg/kg	0.000105 %	✓	
			201-469-6	83-32-9									
22		fluorene				0.66	mg/kg		0.579	mg/kg	0.0000579 %	✓	
			201-695-5	86-73-7									
23		phenanthrene				2.6	mg/kg		2.281	mg/kg	0.000228 %	✓	
			201-581-5	85-01-8									
24		anthracene				0.72	mg/kg		0.632	mg/kg	0.0000632 %	✓	
			204-371-1	120-12-7									
25		fluoranthene				4	mg/kg		3.509	mg/kg	0.000351 %	✓	
			205-912-4	206-44-0									
26		pyrene				3.7	mg/kg		3.246	mg/kg	0.000325 %	✓	
			204-927-3	129-00-0									
27		benzo[a]anthracene				1	mg/kg		0.877	mg/kg	0.0000877 %	✓	
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				1.1	mg/kg		0.965	mg/kg	0.0000965 %	✓	
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				0.9	mg/kg		0.789	mg/kg	0.0000789 %	✓	
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				0.29	mg/kg		0.254	mg/kg	0.0000254 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				0.68	mg/kg		0.596	mg/kg	0.0000596 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				0.22	mg/kg		0.193	mg/kg	0.0000193 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.07	mg/kg		0.0614	mg/kg	0.00000614 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				0.31	mg/kg		0.272	mg/kg	0.0000272 %	✓	
			205-883-8	191-24-2									
35		phenol				2.2	mg/kg		1.93	mg/kg	0.000193 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0382 %		

Key

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

Classification of sample: TP103 (0.3)

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

Sample details

Sample name:
TP103 (0.3)
Sample Depth:
0.3 m
Moisture content:
15%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 15% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13 mg/kg	1.32	14.925 mg/kg	0.00149 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	1.931 mg/kg	0.000193 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7 mg/kg	3.22	1.96 mg/kg	0.000196 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.397 mg/kg	0.0000397 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		120 mg/kg	1.126	117.484 mg/kg	0.0117 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	170 mg/kg	1.56	230.581 mg/kg	0.0148 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.26 mg/kg	1.353	0.306 mg/kg	0.0000306 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20 mg/kg	2.976	51.761 mg/kg	0.00518 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		150 mg/kg	2.774	361.845 mg/kg	0.0362 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		670 mg/kg		582.609 mg/kg	0.0583 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2 mg/kg	1.884	0.328 mg/kg	0.0000328 %	✓	
14	pH			PH		8 pH		8 pH	8pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.04 mg/kg		0.0348 mg/kg	0.00000348 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		**<LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.17	mg/kg		0.148	mg/kg	0.0000148 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.07	mg/kg		0.0609	mg/kg	0.00000609 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				0.54	mg/kg		0.47	mg/kg	0.000047 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.26	mg/kg		0.226	mg/kg	0.0000226 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				2.3	mg/kg		2	mg/kg	0.0002 %	✓	
			205-912-4	206-44-0									
22		pyrene				2	mg/kg		1.739	mg/kg	0.000174 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.65	mg/kg		0.565	mg/kg	0.0000565 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.58	mg/kg		0.504	mg/kg	0.0000504 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.57	mg/kg		0.496	mg/kg	0.0000496 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.21	mg/kg		0.183	mg/kg	0.0000183 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.39	mg/kg		0.339	mg/kg	0.0000339 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.14	mg/kg		0.122	mg/kg	0.0000122 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.04	mg/kg		0.0348	mg/kg	0.00000348 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.2	mg/kg		0.174	mg/kg	0.0000174 %	✓	
			205-883-8	191-24-2									
31		phenol				0.6	mg/kg		0.522	mg/kg	0.0000522 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.129 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0583%)

Classification of sample: TP103 (1.5)

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

Sample details

Sample name:
TP103 (1.5)
Sample Depth:
1.5 m
Moisture content:
22%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11	mg/kg	1.32	11.905	mg/kg	0.00119 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.2	mg/kg	2.775	2.73	mg/kg	0.000273 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.056	mg/kg	0.000106 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5	mg/kg	1.142	0.468	mg/kg	0.0000468 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		100	mg/kg	1.126	92.286	mg/kg	0.00923 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	33	mg/kg	1.56	42.192	mg/kg	0.0027 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		42	mg/kg	2.976	102.462	mg/kg	0.0102 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		160	mg/kg	2.774	363.822	mg/kg	0.0364 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		250	mg/kg		204.918	mg/kg	0.0205 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<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]									
18		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 }				0.4	mg/kg	1.884	0.618	mg/kg	0.0000618 %	✓	
		006-007-00-5											
19		pH				8	pH		8	pH	8pH		
				PH									
20		naphthalene				0.33	mg/kg		0.27	mg/kg	0.000027 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				0.2	mg/kg		0.164	mg/kg	0.0000164 %	✓	
			205-917-1	208-96-8									
22		acenaphthene				12	mg/kg		9.836	mg/kg	0.000984 %	✓	
			201-469-6	83-32-9									
23		fluorene				20	mg/kg		16.393	mg/kg	0.00164 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				29	mg/kg		23.77	mg/kg	0.00238 %	✓	
			201-581-5	85-01-8									
25		anthracene				6.2	mg/kg		5.082	mg/kg	0.000508 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				4.4	mg/kg		3.607	mg/kg	0.000361 %	✓	
			205-912-4	206-44-0									
27		pyrene				2.9	mg/kg		2.377	mg/kg	0.000238 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				0.48	mg/kg		0.393	mg/kg	0.0000393 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				0.7	mg/kg		0.574	mg/kg	0.0000574 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				0.3	mg/kg		0.246	mg/kg	0.0000246 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				0.1	mg/kg		0.082	mg/kg	0.0000082 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				0.22	mg/kg		0.18	mg/kg	0.000018 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				0.11	mg/kg		0.0902	mg/kg	0.00000902 %	✓	
			205-883-8	191-24-2									
36		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-065-00-6	204-273-9	118-74-1									
										Total:	0.0875 %		

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0205%)

Classification of sample: TP104 (0.8)

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

Sample details

Sample name:
TP104 (0.8)
Sample Depth:
0.8 m
Moisture content:
24%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 24% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.7 mg/kg	1.32	8.199 mg/kg	0.00082 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.567 mg/kg	0.000157 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.8 mg/kg	3.22	2.077 mg/kg	0.000208 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.276 mg/kg	0.0000276 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		17 mg/kg	1.126	15.436 mg/kg	0.00154 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	20 mg/kg	1.56	25.158 mg/kg	0.00161 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<**LOD**
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		18 mg/kg	2.976	43.204 mg/kg	0.00432 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		63 mg/kg	2.774	140.945 mg/kg	0.0141 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		11 mg/kg		8.871 mg/kg	0.000887 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<**LOD**
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18		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 }				0.3	mg/kg	1.884	0.456	mg/kg	0.0000456 %	✓	
		006-007-00-5											
19		pH				7.5	pH		7.5	pH	7.5 pH		
				PH									
20		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				0.16	mg/kg		0.129	mg/kg	0.0000129 %	✓	
			201-469-6	83-32-9									
23		fluorene				0.17	mg/kg		0.137	mg/kg	0.0000137 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				0.37	mg/kg		0.298	mg/kg	0.0000298 %	✓	
			201-581-5	85-01-8									
25		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
26		fluoranthene				0.15	mg/kg		0.121	mg/kg	0.0000121 %	✓	
			205-912-4	206-44-0									
27		pyrene				0.11	mg/kg		0.0887	mg/kg	0.00000887 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
36		phenol				0.4	mg/kg		0.323	mg/kg	0.0000323 %	✓	
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		602-065-00-6	204-273-9	118-74-1									
										Total:	0.0243 %		

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00088%)

Classification of sample: TP106 (0.3)

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

Sample details

Sample name:
TP106 (0.3)
Sample Depth:
0.3 m
Moisture content:
21%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 21% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.4	mg/kg	1.32	4.801	mg/kg	0.00048 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.2	mg/kg	2.775	<0.555	mg/kg	<0.0000555 %		<**LOD**
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2	mg/kg	3.22	<0.644	mg/kg	<0.0000644 %		<**LOD**
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.189	mg/kg	0.0000189 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		11	mg/kg	1.126	10.235	mg/kg	0.00102 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	8.2	mg/kg	1.56	10.571	mg/kg	0.000678 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06	mg/kg	1.353	0.0671	mg/kg	0.00000671 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		5.5	mg/kg	2.976	13.528	mg/kg	0.00135 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		31	mg/kg	2.774	71.073	mg/kg	0.00711 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		90	mg/kg		74.38	mg/kg	0.00744 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
14		pH			PH		8.5	pH		8.5	pH	8.5 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.07	mg/kg		0.0579	mg/kg	0.00000579 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.12	mg/kg		0.0992	mg/kg	0.00000992 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.07	mg/kg		0.0579	mg/kg	0.00000579 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				0.47	mg/kg		0.388	mg/kg	0.0000388 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.1	mg/kg		0.0826	mg/kg	0.00000826 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.58	mg/kg		0.479	mg/kg	0.0000479 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.6	mg/kg		0.496	mg/kg	0.0000496 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.17	mg/kg		0.14	mg/kg	0.000014 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.19	mg/kg		0.157	mg/kg	0.0000157 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.16	mg/kg		0.132	mg/kg	0.0000132 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.06	mg/kg		0.0496	mg/kg	0.00000496 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.13	mg/kg		0.107	mg/kg	0.0000107 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.05	mg/kg		0.0413	mg/kg	0.00000413 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.09	mg/kg		0.0744	mg/kg	0.00000744 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0189 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00744%)

Classification of sample: TP106 (2.8)

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

Sample details

Sample name:
TP106 (2.8)
Sample Depth:
2.8 m
Moisture content:
14%
(dry weight correction)

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

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.167%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.167%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.167%)

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13 mg/kg	1.32	15.056 mg/kg	0.00151 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	1.948 mg/kg	0.000195 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.2	mg/kg	0.00002 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		30	mg/kg	1.126	29.629	mg/kg	0.00296 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	21	mg/kg	1.56	28.733	mg/kg	0.00184 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19	mg/kg	2.976	49.604	mg/kg	0.00496 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		64	mg/kg	2.774	155.742	mg/kg	0.0156 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		1900	mg/kg		1666.667	mg/kg	0.167 %	✓	
13		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
14		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
15		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
16		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
18		pH			PH		7.2	pH		7.2	pH	7.2 pH		
19		naphthalene	601-052-00-2	202-049-5	91-20-3		1.1	mg/kg		0.965	mg/kg	0.0000965 %	✓	
20		acenaphthylene		205-917-1	208-96-8		0.09	mg/kg		0.0789	mg/kg	0.00000789 %	✓	
21		acenaphthene		201-469-6	83-32-9		7.1	mg/kg		6.228	mg/kg	0.000623 %	✓	
22		fluorene		201-695-5	86-73-7		3.8	mg/kg		3.333	mg/kg	0.000333 %	✓	
23		phenanthrene		201-581-5	85-01-8		23	mg/kg		20.175	mg/kg	0.00202 %	✓	
24		anthracene		204-371-1	120-12-7		4.5	mg/kg		3.947	mg/kg	0.000395 %	✓	
25		fluoranthene		205-912-4	206-44-0		48	mg/kg		42.105	mg/kg	0.00421 %	✓	
26		pyrene		204-927-3	129-00-0		39	mg/kg		34.211	mg/kg	0.00342 %	✓	
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		7.3	mg/kg		6.404	mg/kg	0.00064 %	✓	
28		chrysene	601-048-00-0	205-923-4	218-01-9		7.9	mg/kg		6.93	mg/kg	0.000693 %	✓	
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		6.5	mg/kg		5.702	mg/kg	0.00057 %	✓	

#		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									
30		benzo[k]fluoranthene				2.2	mg/kg		1.93	mg/kg	0.000193 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				5	mg/kg		4.386	mg/kg	0.000439 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				1.7	mg/kg		1.491	mg/kg	0.000149 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.46	mg/kg		0.404	mg/kg	0.0000404 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				2	mg/kg		1.754	mg/kg	0.000175 %	✓	
			205-883-8	191-24-2									
35		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.208 %		

Key

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

Classification of sample: TP107 (0.5)

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

Sample details

Sample name:
TP107 (0.5)
Sample Depth:
0.5 m
Moisture content:
22%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 22% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13	mg/kg	1.32	14.069	mg/kg	0.00141 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8	mg/kg	2.775	1.82	mg/kg	0.000182 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.056	mg/kg	0.000106 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.375	mg/kg	0.0000375 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		52	mg/kg	1.126	47.989	mg/kg	0.0048 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	100	mg/kg	1.56	127.854	mg/kg	0.0082 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.09	mg/kg	1.353	0.0998	mg/kg	0.00000998 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		19	mg/kg	2.976	46.352	mg/kg	0.00464 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		110	mg/kg	2.774	250.128	mg/kg	0.025 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		24	mg/kg		19.672	mg/kg	0.00197 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2	mg/kg	1.884	0.309	mg/kg	0.0000309 %	✓	
14	pH			PH		7.7	pH		7.7	pH	7.7 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
17		acenaphthene				0.11	mg/kg		0.0902	mg/kg	0.00000902 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-695-5	86-73-7									
19		phenanthrene				0.51	mg/kg		0.418	mg/kg	0.0000418 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.08	mg/kg		0.0656	mg/kg	0.00000656 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.74	mg/kg		0.607	mg/kg	0.0000607 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.76	mg/kg		0.623	mg/kg	0.0000623 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.24	mg/kg		0.197	mg/kg	0.0000197 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.29	mg/kg		0.238	mg/kg	0.0000238 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.28	mg/kg		0.23	mg/kg	0.000023 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.11	mg/kg		0.0902	mg/kg	0.00000902 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.21	mg/kg		0.172	mg/kg	0.0000172 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.08	mg/kg		0.0656	mg/kg	0.00000656 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.1	mg/kg		0.082	mg/kg	0.0000082 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0471 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00197%)

Classification of sample: TP107 (1.5)

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

Sample details

Sample name:
TP107 (1.5)
Sample Depth:
1.5 m
Moisture content:
19%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 19% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		17 mg/kg	1.32	18.862 mg/kg	0.00189 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.8 mg/kg	2.775	1.866 mg/kg	0.000187 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.1 mg/kg	3.22	2.976 mg/kg	0.000298 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.384 mg/kg	0.0000384 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		63 mg/kg	1.126	59.606 mg/kg	0.00596 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140 mg/kg	1.56	183.508 mg/kg	0.0118 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1 mg/kg	1.353	0.114 mg/kg	0.0000114 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20 mg/kg	2.976	50.021 mg/kg	0.005 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		130 mg/kg	2.774	303.058 mg/kg	0.0303 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		200 mg/kg		168.067 mg/kg	0.0168 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4 mg/kg	1.884	0.633 mg/kg	0.0000633 %	✓	
14	pH			PH		7.6 pH		7.6 pH	7.6 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.54 mg/kg		0.454 mg/kg	0.0000454 %	✓	

#		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		acenaphthylene				0.05	mg/kg		0.042	mg/kg	0.0000042 %	✓	
			205-917-1	208-96-8									
17		acenaphthene				2	mg/kg		1.681	mg/kg	0.000168 %	✓	
			201-469-6	83-32-9									
18		fluorene				1.1	mg/kg		0.924	mg/kg	0.0000924 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				4.9	mg/kg		4.118	mg/kg	0.000412 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.81	mg/kg		0.681	mg/kg	0.0000681 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				5.4	mg/kg		4.538	mg/kg	0.000454 %	✓	
			205-912-4	206-44-0									
22		pyrene				5.1	mg/kg		4.286	mg/kg	0.000429 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				1.4	mg/kg		1.176	mg/kg	0.000118 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				1.7	mg/kg		1.429	mg/kg	0.000143 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				1.6	mg/kg		1.345	mg/kg	0.000134 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.59	mg/kg		0.496	mg/kg	0.0000496 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				1.2	mg/kg		1.008	mg/kg	0.000101 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.33	mg/kg		0.277	mg/kg	0.0000277 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.11	mg/kg		0.0924	mg/kg	0.00000924 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.43	mg/kg		0.361	mg/kg	0.0000361 %	✓	
			205-883-8	191-24-2									
31		phenol				0.4	mg/kg		0.336	mg/kg	0.0000336 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.075 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0168%)

Classification of sample: TP107 (3.3)

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

Sample details

Sample name:
TP107 (3.3)
Sample Depth:
3.3 m
Moisture content:
21%
(dry weight correction)

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

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.43%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.43%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.43%)

Determinands

Moisture content: 21% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26 mg/kg	1.32	28.371 mg/kg	0.00284 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.5 mg/kg	2.775	3.441 mg/kg	0.000344 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.3 mg/kg	3.22	3.459 mg/kg	0.000346 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9	mg/kg	1.142	0.85	mg/kg	0.000085 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		140	mg/kg	1.126	130.268	mg/kg	0.013 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	850	mg/kg	1.56	1095.738	mg/kg	0.0702 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.24	mg/kg	1.353	0.268	mg/kg	0.0000268 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		35	mg/kg	2.976	86.09	mg/kg	0.00861 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		260	mg/kg	2.774	596.098	mg/kg	0.0596 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		5200	mg/kg		4297.521	mg/kg	0.43 %	✓	
13		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
14		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
15		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
16		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1.4	mg/kg	1.884	2.18	mg/kg	0.000218 %	✓	
18		pH			PH		8.1	pH		8.1	pH	8.1 pH		
19		naphthalene	601-052-00-2	202-049-5	91-20-3		2.4	mg/kg		1.983	mg/kg	0.000198 %	✓	
20		acenaphthylene		205-917-1	208-96-8		0.1	mg/kg		0.0826	mg/kg	0.00000826 %	✓	
21		acenaphthene		201-469-6	83-32-9		6	mg/kg		4.959	mg/kg	0.000496 %	✓	
22		fluorene		201-695-5	86-73-7		3.9	mg/kg		3.223	mg/kg	0.000322 %	✓	
23		phenanthrene		201-581-5	85-01-8		19	mg/kg		15.702	mg/kg	0.00157 %	✓	
24		anthracene		204-371-1	120-12-7		5.2	mg/kg		4.298	mg/kg	0.00043 %	✓	
25		fluoranthene		205-912-4	206-44-0		24	mg/kg		19.835	mg/kg	0.00198 %	✓	
26		pyrene		204-927-3	129-00-0		22	mg/kg		18.182	mg/kg	0.00182 %	✓	
27		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		10	mg/kg		8.264	mg/kg	0.000826 %	✓	
28		chrysene	601-048-00-0	205-923-4	218-01-9		7.3	mg/kg		6.033	mg/kg	0.000603 %	✓	
29		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		7.7	mg/kg		6.364	mg/kg	0.000636 %	✓	

#		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									
30		benzo[k]fluoranthene				2.5	mg/kg		2.066	mg/kg	0.000207 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				6.4	mg/kg		5.289	mg/kg	0.000529 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				1.9	mg/kg		1.57	mg/kg	0.000157 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.6	mg/kg		0.496	mg/kg	0.0000496 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				2.5	mg/kg		2.066	mg/kg	0.000207 %	✓	
			205-883-8	191-24-2									
35		phenol				0.6	mg/kg		0.496	mg/kg	0.0000496 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.596 %		

Key

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

Classification of sample: TP108 (0.2)

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

Sample details

Sample name:
TP108 (0.2)
Sample Depth:
0.2 m
Moisture content:
28%
(dry weight correction)

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

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.297%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.297%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.297%)

Determinands

Moisture content: 28% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27	mg/kg	1.32	27.851	mg/kg	0.00279 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.9	mg/kg	2.775	6.288	mg/kg	0.000629 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.006	mg/kg	0.000101 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.535	mg/kg	0.0000535 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		**<LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		130	mg/kg	1.126	114.348	mg/kg	0.0114 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	89	mg/kg	1.56	108.456	mg/kg	0.00695 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.22	mg/kg	1.353	0.233	mg/kg	0.0000233 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		42	mg/kg	2.976	97.659	mg/kg	0.00977 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		**<LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		140	mg/kg	2.774	303.422	mg/kg	0.0303 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		3800	mg/kg		2968.75	mg/kg	0.297 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4	mg/kg	1.884	0.589	mg/kg	0.0000589 %	✓	
14		pH			PH		7	pH		7	pH	7pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.42	mg/kg		0.328	mg/kg	0.0000328 %	✓	
16		acenaphthylene		205-917-1	208-96-8		0.06	mg/kg		0.0469	mg/kg	0.00000469 %	✓	
17		acenaphthene		201-469-6	83-32-9		3.4	mg/kg		2.656	mg/kg	0.000266 %	✓	
18		fluorene		201-695-5	86-73-7		2.7	mg/kg		2.109	mg/kg	0.000211 %	✓	
19		phenanthrene		201-581-5	85-01-8		13	mg/kg		10.156	mg/kg	0.00102 %	✓	
20		anthracene		204-371-1	120-12-7		3.8	mg/kg		2.969	mg/kg	0.000297 %	✓	
21		fluoranthene		205-912-4	206-44-0		24	mg/kg		18.75	mg/kg	0.00188 %	✓	
22		pyrene		204-927-3	129-00-0		24	mg/kg		18.75	mg/kg	0.00188 %	✓	
23		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		10	mg/kg		7.813	mg/kg	0.000781 %	✓	
24		chrysene	601-048-00-0	205-923-4	218-01-9		9.2	mg/kg		7.187	mg/kg	0.000719 %	✓	
25		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		10	mg/kg		7.813	mg/kg	0.000781 %	✓	
26		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		3.1	mg/kg		2.422	mg/kg	0.000242 %	✓	
27		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		7.9	mg/kg		6.172	mg/kg	0.000617 %	✓	
28		indeno[123-cd]pyrene		205-893-2	193-39-5		2.8	mg/kg		2.188	mg/kg	0.000219 %	✓	
29		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		1	mg/kg		0.781	mg/kg	0.0000781 %	✓	
30		benzo[ghi]perylene		205-883-8	191-24-2		3.4	mg/kg		2.656	mg/kg	0.000266 %	✓	

#		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							
31		phenol				1.3 mg/kg		1.016 mg/kg	0.000102 %	✓	
		604-001-00-2	203-632-7	108-95-2							
								Total:	0.369 %		

Key

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

Classification of sample: TP108 (0.8)

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

Sample details

Sample name:
TP108 (0.8)
Sample Depth:
0.8 m
Moisture content:
9.7%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.7 mg/kg	1.32	6.86 mg/kg	0.000686 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.265 mg/kg	0.000126 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2 mg/kg	3.22	<0.644 mg/kg	<0.0000644 %		<**LOD**
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.312 mg/kg	0.0000312 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		21 mg/kg	1.126	21.553 mg/kg	0.00216 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	12 mg/kg	1.56	17.063 mg/kg	0.00109 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.05 mg/kg	1.353	0.0617 mg/kg	0.00000617 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		17 mg/kg	2.976	46.123 mg/kg	0.00461 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		51 mg/kg	2.774	128.971 mg/kg	0.0129 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<**LOD**
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.2 mg/kg	1.884	0.343 mg/kg	0.0000343 %	✓	
14	pH			PH		7.2 pH		7.2 pH	7.2 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.04 mg/kg		0.0365 mg/kg	0.00000365 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.03	mg/kg		0.0273	mg/kg	0.00000273 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.06	mg/kg		0.0547	mg/kg	0.00000547 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.08	mg/kg		0.0729	mg/kg	0.00000729 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.04	mg/kg		0.0365	mg/kg	0.00000365 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				0.4	mg/kg		0.365	mg/kg	0.0000365 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0232 %		

Key

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

Classification of sample: TP109 (1)

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

Sample details

Sample name:
TP109 (1)
Sample Depth:
1 m
Moisture content:
19%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 19% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15 mg/kg	1.32	16.643 mg/kg	0.00166 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7 mg/kg	2.775	1.633 mg/kg	0.000163 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.812 mg/kg	0.0000812 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.48 mg/kg	0.000048 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		**<LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		48 mg/kg	1.126	45.414 mg/kg	0.00454 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	74 mg/kg	1.56	96.997 mg/kg	0.00622 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.11 mg/kg	1.353	0.125 mg/kg	0.0000125 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		20 mg/kg	2.976	50.021 mg/kg	0.005 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		**<LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		98 mg/kg	2.774	228.459 mg/kg	0.0228 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		110 mg/kg		92.437 mg/kg	0.00924 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.3 mg/kg	1.884	0.475 mg/kg	0.0000475 %	✓	
14	pH			PH		7.4 pH		7.4 pH	7.4 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		0.03 mg/kg		0.0252 mg/kg	0.00000252 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
17		acenaphthene				0.08	mg/kg		0.0672	mg/kg	0.00000672 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-695-5	86-73-7									
19		phenanthrene				0.47	mg/kg		0.395	mg/kg	0.0000395 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.11	mg/kg		0.0924	mg/kg	0.00000924 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.7	mg/kg		0.588	mg/kg	0.0000588 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.63	mg/kg		0.529	mg/kg	0.0000529 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.19	mg/kg		0.16	mg/kg	0.000016 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.23	mg/kg		0.193	mg/kg	0.0000193 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.22	mg/kg		0.185	mg/kg	0.0000185 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.09	mg/kg		0.0756	mg/kg	0.00000756 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.19	mg/kg		0.16	mg/kg	0.000016 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.08	mg/kg		0.0672	mg/kg	0.00000672 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.09	mg/kg		0.0756	mg/kg	0.00000756 %	✓	
			205-883-8	191-24-2									
31		phenol				0.5	mg/kg		0.42	mg/kg	0.000042 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0505 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00924%)

Classification of sample: TP110 (0.2)

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

Sample details

Sample name:
TP110 (0.2)
Sample Depth:
0.2 m
Moisture content:
27%
(dry weight correction)

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

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.142%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.142%)

Hazard properties (substances considered hazardous until shown otherwise)

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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.142%)

Determinands

Moisture content: 27% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		27 mg/kg	1.32	28.07 mg/kg	0.00281 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.5 mg/kg	2.775	3.278 mg/kg	0.000328 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1.2 mg/kg	3.22	3.042 mg/kg	0.000304 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		1	mg/kg	1.142	0.899	mg/kg	0.0000899 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		240	mg/kg	1.126	212.766	mg/kg	0.0213 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	240	mg/kg	1.56	294.768	mg/kg	0.0189 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.13	mg/kg	1.353	0.139	mg/kg	0.0000139 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		82	mg/kg	2.976	192.168	mg/kg	0.0192 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		260	mg/kg	2.774	567.936	mg/kg	0.0568 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		1800	mg/kg		1417.323	mg/kg	0.142 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.5	mg/kg	1.884	0.742	mg/kg	0.0000742 %	✓	
14		pH			PH		7.8	pH		7.8	pH	7.8 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.49	mg/kg		0.386	mg/kg	0.0000386 %	✓	
16		acenaphthylene		205-917-1	208-96-8		0.03	mg/kg		0.0236	mg/kg	0.00000236 %	✓	
17		acenaphthene		201-469-6	83-32-9		1.8	mg/kg		1.417	mg/kg	0.000142 %	✓	
18		fluorene		201-695-5	86-73-7		1.4	mg/kg		1.102	mg/kg	0.00011 %	✓	
19		phenanthrene		201-581-5	85-01-8		7.6	mg/kg		5.984	mg/kg	0.000598 %	✓	
20		anthracene		204-371-1	120-12-7		1.8	mg/kg		1.417	mg/kg	0.000142 %	✓	
21		fluoranthene		205-912-4	206-44-0		14	mg/kg		11.024	mg/kg	0.0011 %	✓	
22		pyrene		204-927-3	129-00-0		14	mg/kg		11.024	mg/kg	0.0011 %	✓	
23		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		5.4	mg/kg		4.252	mg/kg	0.000425 %	✓	
24		chrysene	601-048-00-0	205-923-4	218-01-9		5.7	mg/kg		4.488	mg/kg	0.000449 %	✓	
25		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		5.6	mg/kg		4.409	mg/kg	0.000441 %	✓	
26		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		2	mg/kg		1.575	mg/kg	0.000157 %	✓	
27		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		4.8	mg/kg		3.78	mg/kg	0.000378 %	✓	
28		indeno[123-cd]pyrene		205-893-2	193-39-5		1.4	mg/kg		1.102	mg/kg	0.00011 %	✓	
29		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.47	mg/kg		0.37	mg/kg	0.000037 %	✓	
30		benzo[ghi]perylene		205-883-8	191-24-2		2	mg/kg		1.575	mg/kg	0.000157 %	✓	

#		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							
31		phenol				0.9 mg/kg		0.709 mg/kg	0.0000709 %	✓	
		604-001-00-2	203-632-7	108-95-2							
								Total:	0.267 %		

Key

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

Classification of sample: TP116A (0.4)

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

Sample details

Sample name:
TP116A (0.4)
Sample Depth:
0.4 m
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		16	mg/kg	1.32	17.903	mg/kg	0.00179 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.1	mg/kg	2.775	4.939	mg/kg	0.000494 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.091	mg/kg	0.000109 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4	mg/kg	1.142	0.387	mg/kg	0.0000387 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		150	mg/kg	1.126	143.121	mg/kg	0.0143 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	45	mg/kg	1.56	59.484	mg/kg	0.00381 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07	mg/kg	1.353	0.0803	mg/kg	0.00000803 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		49	mg/kg	2.976	123.591	mg/kg	0.0124 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		160	mg/kg	2.774	376.155	mg/kg	0.0376 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		32	mg/kg		27.119	mg/kg	0.00271 %	✓	
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1.3	mg/kg	1.884	2.076	mg/kg	0.000208 %	✓	
14		pH			PH		7.6	pH		7.6	pH	7.6 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		0.03	mg/kg		0.0254	mg/kg	0.00000254 %	✓	

#		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		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.04	mg/kg		0.0339	mg/kg	0.00000339 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.25	mg/kg		0.212	mg/kg	0.0000212 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.06	mg/kg		0.0508	mg/kg	0.00000508 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.54	mg/kg		0.458	mg/kg	0.0000458 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.58	mg/kg		0.492	mg/kg	0.0000492 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.19	mg/kg		0.161	mg/kg	0.0000161 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.26	mg/kg		0.22	mg/kg	0.000022 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.25	mg/kg		0.212	mg/kg	0.0000212 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.11	mg/kg		0.0932	mg/kg	0.00000932 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.19	mg/kg		0.161	mg/kg	0.0000161 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.09	mg/kg		0.0763	mg/kg	0.00000763 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.11	mg/kg		0.0932	mg/kg	0.00000932 %	✓	
			205-883-8	191-24-2									
31		phenol				0.4	mg/kg		0.339	mg/kg	0.0000339 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0741 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00271%)

Classification of sample: TP119 (1)

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

Sample details

Sample name:
TP119 (1)
Sample Depth:
1 m
Moisture content:
23%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 23% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		15 mg/kg	1.32	16.102 mg/kg	0.00161 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.354 mg/kg	0.000135 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.309 mg/kg	0.000131 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.5 mg/kg	1.142	0.464 mg/kg	0.0000464 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		44 mg/kg	1.126	40.276 mg/kg	0.00403 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	75 mg/kg	1.56	95.111 mg/kg	0.0061 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.07 mg/kg	1.353	0.077 mg/kg	0.0000077 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		18 mg/kg	2.976	43.555 mg/kg	0.00436 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		93 mg/kg	2.774	209.753 mg/kg	0.021 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		14 mg/kg		11.382 mg/kg	0.00114 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.3 mg/kg	1.884	0.46 mg/kg	0.000046 %	✓	
14	pH			PH		7.4 pH		7.4 pH	7.4 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.09	mg/kg		0.0732	mg/kg	0.00000732 %	✓	
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				0.14	mg/kg		0.114	mg/kg	0.0000114 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.12	mg/kg		0.0976	mg/kg	0.00000976 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.04	mg/kg		0.0325	mg/kg	0.00000325 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.06	mg/kg		0.0488	mg/kg	0.00000488 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.03	mg/kg		0.0244	mg/kg	0.00000244 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.039 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00114%)

Classification of sample: TP119 (3)

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

Sample details

Sample name:
TP119 (3)
Sample Depth:
3 m
Moisture content:
18%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	13.427 mg/kg	0.00134 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.6 mg/kg	2.775	1.411 mg/kg	0.000141 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.364 mg/kg	0.000136 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3 mg/kg	1.142	0.29 mg/kg	0.000029 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		49 mg/kg	1.126	46.753 mg/kg	0.00468 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	140 mg/kg	1.56	185.063 mg/kg	0.0119 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06 mg/kg	1.353	0.0688 mg/kg	0.00000688 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		13 mg/kg	2.976	32.789 mg/kg	0.00328 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<**LOD**
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		120 mg/kg	2.774	282.117 mg/kg	0.0282 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		860 mg/kg		728.814 mg/kg	0.0729 %	✓	
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.4 mg/kg	1.884	0.639 mg/kg	0.0000639 %	✓	
14	pH			PH		8.2 pH		8.2 pH	8.2 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		1.3 mg/kg		1.102 mg/kg	0.00011 %	✓	

#		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		acenaphthylene				0.1	mg/kg		0.0847	mg/kg	0.00000847 %	✓	
			205-917-1	208-96-8									
17		acenaphthene				4	mg/kg		3.39	mg/kg	0.000339 %	✓	
			201-469-6	83-32-9									
18		fluorene				2.9	mg/kg		2.458	mg/kg	0.000246 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				13	mg/kg		11.017	mg/kg	0.0011 %	✓	
			201-581-5	85-01-8									
20		anthracene				4	mg/kg		3.39	mg/kg	0.000339 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				13	mg/kg		11.017	mg/kg	0.0011 %	✓	
			205-912-4	206-44-0									
22		pyrene				12	mg/kg		10.169	mg/kg	0.00102 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				4.3	mg/kg		3.644	mg/kg	0.000364 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				4.1	mg/kg		3.475	mg/kg	0.000347 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				3.8	mg/kg		3.22	mg/kg	0.000322 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				1.4	mg/kg		1.186	mg/kg	0.000119 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				3	mg/kg		2.542	mg/kg	0.000254 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.91	mg/kg		0.771	mg/kg	0.0000771 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				0.21	mg/kg		0.178	mg/kg	0.0000178 %	✓	
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				1.1	mg/kg		0.932	mg/kg	0.0000932 %	✓	
			205-883-8	191-24-2									
31		phenol				0.4	mg/kg		0.339	mg/kg	0.0000339 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.129 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0729%)

Classification of sample: TP120 (0.6)

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

Sample details

Sample name:
TP120 (0.6)
Sample Depth:
0.6 m
Moisture content:
10%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.5	mg/kg	1.32	9.002	mg/kg	0.0009 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7	mg/kg	2.775	1.766	mg/kg	0.000177 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.2	mg/kg	3.22	<0.644	mg/kg	<0.0000644 %		<**LOD**
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.2	mg/kg	1.142	0.208	mg/kg	0.0000208 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		25	mg/kg	1.126	25.588	mg/kg	0.00256 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	12	mg/kg	1.56	17.016	mg/kg	0.00109 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26	mg/kg	2.976	70.348	mg/kg	0.00703 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<**LOD**
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		58	mg/kg	2.774	146.273	mg/kg	0.0146 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<**LOD**
14		pH			PH		8.3	pH		8.3	pH	8.3 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				0.4	mg/kg		0.364	mg/kg	0.0000364 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0279 %		

Key

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

Classification of sample: TP121 (1)

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

Sample details

Sample name:
TP121 (1)
Sample Depth:
1 m
Moisture content:
17%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		11 mg/kg	1.32	12.413 mg/kg	0.00124 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.9 mg/kg	2.775	2.135 mg/kg	0.000213 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.3 mg/kg	3.22	0.826 mg/kg	0.0000826 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.4 mg/kg	1.142	0.391 mg/kg	0.0000391 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		43 mg/kg	1.126	41.379 mg/kg	0.00414 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	49 mg/kg	1.56	65.326 mg/kg	0.00419 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.22 mg/kg	1.353	0.255 mg/kg	0.0000255 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	55.964 mg/kg	0.0056 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		180 mg/kg	2.774	426.792 mg/kg	0.0427 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.884	<0.188 mg/kg	<0.0000188 %		<LOD
14	pH			PH		7.9 pH		7.9 pH	7.9 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.06	mg/kg		0.0513	mg/kg	0.00000513 %	✓	
			201-469-6	83-32-9									
18		fluorene				0.04	mg/kg		0.0342	mg/kg	0.00000342 %	✓	
			201-695-5	86-73-7									
19		phenanthrene				0.26	mg/kg		0.222	mg/kg	0.0000222 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.08	mg/kg		0.0684	mg/kg	0.00000684 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.41	mg/kg		0.35	mg/kg	0.000035 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.42	mg/kg		0.359	mg/kg	0.0000359 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.14	mg/kg		0.12	mg/kg	0.000012 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.17	mg/kg		0.145	mg/kg	0.0000145 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.18	mg/kg		0.154	mg/kg	0.0000154 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.06	mg/kg		0.0513	mg/kg	0.00000513 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.14	mg/kg		0.12	mg/kg	0.000012 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.05	mg/kg		0.0427	mg/kg	0.00000427 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.07	mg/kg		0.0598	mg/kg	0.00000598 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0598 %		

Key

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

Classification of sample: TP121 (3.2)

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

Sample details

Sample name:
TP121 (3.2)
Sample Depth:
3.2 m
Moisture content:
13%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.2	mg/kg	1.32	9.581	mg/kg	0.000958 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7	mg/kg	2.775	1.719	mg/kg	0.000172 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5	mg/kg	3.22	1.425	mg/kg	0.000142 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.3	mg/kg	1.142	0.303	mg/kg	0.0000303 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31	mg/kg	1.126	30.887	mg/kg	0.00309 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	55	mg/kg	1.56	75.92	mg/kg	0.00487 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<LOD
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21	mg/kg	2.976	55.311	mg/kg	0.00553 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		63	mg/kg	2.774	154.665	mg/kg	0.0155 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
13		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1	mg/kg	1.884	<0.188	mg/kg	<0.0000188 %		<LOD
14		pH			PH		8.4	pH		8.4	pH	8.4 pH		
15		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				0.03	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
			201-469-6	83-32-9									
18		fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				0.16	mg/kg		0.142	mg/kg	0.0000142 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.03	mg/kg		0.0265	mg/kg	0.00000265 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				0.22	mg/kg		0.195	mg/kg	0.0000195 %	✓	
			205-912-4	206-44-0									
22		pyrene				0.23	mg/kg		0.204	mg/kg	0.0000204 %	✓	
			204-927-3	129-00-0									
23		benzo[a]anthracene				0.09	mg/kg		0.0796	mg/kg	0.00000796 %	✓	
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				0.12	mg/kg		0.106	mg/kg	0.0000106 %	✓	
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				0.13	mg/kg		0.115	mg/kg	0.0000115 %	✓	
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				0.04	mg/kg		0.0354	mg/kg	0.00000354 %	✓	
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				0.1	mg/kg		0.0885	mg/kg	0.00000885 %	✓	
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				0.04	mg/kg		0.0354	mg/kg	0.00000354 %	✓	
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				0.05	mg/kg		0.0442	mg/kg	0.00000442 %	✓	
			205-883-8	191-24-2									
31		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0318 %		

Key

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

Classification of sample: TP122 (0.4)

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

Sample details

Sample name:
TP122 (0.4)
Sample Depth:
0.4 m
Moisture content:
11%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.274	mg/kg	0.00143 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		1.5	mg/kg	2.775	3.75	mg/kg	0.000375 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.4	mg/kg	3.22	1.16	mg/kg	0.000116 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.6	mg/kg	1.142	0.617	mg/kg	0.0000617 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1	mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		82	mg/kg	1.126	83.174	mg/kg	0.00832 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	83	mg/kg	1.56	116.635	mg/kg	0.00748 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.1	mg/kg	1.353	0.122	mg/kg	0.0000122 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		23	mg/kg	2.976	61.67	mg/kg	0.00617 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5	mg/kg	2.554	<1.277	mg/kg	<0.000128 %		<LOD
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		130	mg/kg	2.774	324.9	mg/kg	0.0325 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		140	mg/kg		126.126	mg/kg	0.0126 %	✓	
13		benzene	601-020-00-8	200-753-7	71-43-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
15		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		**<LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.2	mg/kg	1.884	0.339	mg/kg	0.0000339 %	✓	
		006-007-00-5											
18		pH				10.3	pH		10.3	pH	10.3 pH		
				PH									
19		naphthalene				0.18	mg/kg		0.162	mg/kg	0.0000162 %	✓	
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				0.03	mg/kg		0.027	mg/kg	0.0000027 %	✓	
			205-917-1	208-96-8									
21		acenaphthene				1.7	mg/kg		1.532	mg/kg	0.000153 %	✓	
			201-469-6	83-32-9									
22		fluorene				0.71	mg/kg		0.64	mg/kg	0.000064 %	✓	
			201-695-5	86-73-7									
23		phenanthrene				4.6	mg/kg		4.144	mg/kg	0.000414 %	✓	
			201-581-5	85-01-8									
24		anthracene				1.2	mg/kg		1.081	mg/kg	0.000108 %	✓	
			204-371-1	120-12-7									
25		fluoranthene				7.5	mg/kg		6.757	mg/kg	0.000676 %	✓	
			205-912-4	206-44-0									
26		pyrene				6.9	mg/kg		6.216	mg/kg	0.000622 %	✓	
			204-927-3	129-00-0									
27		benzo[a]anthracene				2.9	mg/kg		2.613	mg/kg	0.000261 %	✓	
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				2.9	mg/kg		2.613	mg/kg	0.000261 %	✓	
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				2.7	mg/kg		2.432	mg/kg	0.000243 %	✓	
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				1.1	mg/kg		0.991	mg/kg	0.0000991 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				2.4	mg/kg		2.162	mg/kg	0.000216 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				0.77	mg/kg		0.694	mg/kg	0.0000694 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.19	mg/kg		0.171	mg/kg	0.0000171 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				0.97	mg/kg		0.874	mg/kg	0.0000874 %	✓	
			205-883-8	191-24-2									
35		phenol				0.7	mg/kg		0.631	mg/kg	0.0000631 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0728 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0126%)

Classification of sample: TP123 (0.4)

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

Sample details

Sample name:
TP123 (0.4)
Sample Depth:
0.4 m
Moisture content:
27%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 27% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26 mg/kg	1.32	27.03 mg/kg	0.0027 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		2.3 mg/kg	2.775	5.026 mg/kg	0.000503 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.7 mg/kg	3.22	1.775 mg/kg	0.000177 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.9 mg/kg	1.142	0.81 mg/kg	0.000081 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		210 mg/kg	1.126	186.171 mg/kg	0.0186 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	120 mg/kg	1.56	147.384 mg/kg	0.00945 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.13 mg/kg	1.353	0.139 mg/kg	0.0000139 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		64 mg/kg	2.976	149.985 mg/kg	0.015 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.5 mg/kg	2.554	<1.277 mg/kg	<0.000128 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		240 mg/kg	2.774	524.248 mg/kg	0.0524 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		770 mg/kg		606.299 mg/kg	0.0606 %	✓	
13	benzene	601-020-00-8	200-753-7	71-43-2		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	toluene	601-021-00-3	203-625-9	108-88-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
15	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
17		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.2	mg/kg	1.884	0.297	mg/kg	0.0000297 %	✓	
		006-007-00-5											
18		pH				10.3	pH		10.3	pH	10.3 pH		
				PH									
19		naphthalene				0.43	mg/kg		0.339	mg/kg	0.0000339 %	✓	
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<**LOD**
			205-917-1	208-96-8									
21		acenaphthene				0.54	mg/kg		0.425	mg/kg	0.0000425 %	✓	
			201-469-6	83-32-9									
22		fluorene				0.38	mg/kg		0.299	mg/kg	0.0000299 %	✓	
			201-695-5	86-73-7									
23		phenanthrene				1.7	mg/kg		1.339	mg/kg	0.000134 %	✓	
			201-581-5	85-01-8									
24		anthracene				0.4	mg/kg		0.315	mg/kg	0.0000315 %	✓	
			204-371-1	120-12-7									
25		fluoranthene				2.1	mg/kg		1.654	mg/kg	0.000165 %	✓	
			205-912-4	206-44-0									
26		pyrene				2	mg/kg		1.575	mg/kg	0.000157 %	✓	
			204-927-3	129-00-0									
27		benzo[a]anthracene				0.41	mg/kg		0.323	mg/kg	0.0000323 %	✓	
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				0.67	mg/kg		0.528	mg/kg	0.0000528 %	✓	
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				0.49	mg/kg		0.386	mg/kg	0.0000386 %	✓	
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				0.2	mg/kg		0.157	mg/kg	0.0000157 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				0.33	mg/kg		0.26	mg/kg	0.000026 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				0.14	mg/kg		0.11	mg/kg	0.000011 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.04	mg/kg		0.0315	mg/kg	0.00000315 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				0.21	mg/kg		0.165	mg/kg	0.0000165 %	✓	
			205-883-8	191-24-2									
35		phenol				0.6	mg/kg		0.472	mg/kg	0.0000472 %	✓	
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.161 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0606%)

Appendix A: Classifier defined and non GB MCL determinands

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

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

- **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

- **pH** (CAS Number: PH)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

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

beryllium {beryllium oxide}

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

boron {diboron trioxide}

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

cadmium {cadmium oxide}

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

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

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

copper {dicopper oxide; copper (I) oxide}

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

lead {lead chromate}

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

mercury {mercury dichloride}

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

nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc chromate}

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

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}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2024.30.5942.10989 (30 Jan 2024)
HazWasteOnline Database: 2024.26.5938.10982 (26 Jan 2024)

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

CampbellReith consulting engineers

HazWasteOnline™

Waste Classification Report

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

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

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

FQY82-JX689-MFCWN

Job name

14111 Pyramid Park

Description/Comments

Project

Site

Classified by

Name:
Peter Kenny
Date:
06 Sep 2024 11:02 GMT
Telephone:

Company:
Campbell Reith Consulting Engineers Manchester

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

HazWasteOnline™ Certification: -

Course	Date
Hazardous Waste Classification	-

Purpose of classification

2 - Material Characterisation

Address of the waste

Market Street, Bury, Greater Manchester **Post Code** BL9 0EQ

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Redevelopment of Pyramid Park

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

Potential waste created during the excavation of soils

Description of the waste

Made Ground comprising gravel of various lithologies, brick, concrete, and clinker etc.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP201 (0.2)	0.2	Non Hazardous		3
2	TP201 (2)	2	Non Hazardous		6
3	TP202 (0.4)	0.4	Hazardous	HP 3(i), HP 7, HP 11	9
4	TP203 (2)	2	Hazardous	HP 3(i), HP 7, HP 11	12
5	TP203 (3.5)	3.5	Non Hazardous		15
6	TP205 (1)	1	Non Hazardous		18
7	TP206 (0.6)	0.6	Non Hazardous		20
8	TP210 (0.4)	0.4	Non Hazardous		22
9	WS203 (0.5)	0.5	Non Hazardous		25
10	WS203 (1.8)	1.8	Non Hazardous		27

Related documents

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

Report

Created by: Peter Kenny

Created date: 06 Sep 2024 11:02 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	29
Appendix B: Rationale for selection of metal species	30
Appendix C: Version	31

Classification of sample: TP201 (0.2)

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

Sample details

Sample name:
TP201 (0.2)
Sample Depth:
0.2 m
Moisture content:
14%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 14% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.4 mg/kg	1.32	10.887 mg/kg	0.00109 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<**LOD**
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.5 mg/kg	3.22	1.412 mg/kg	0.000141 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.14 mg/kg	1.142	0.14 mg/kg	0.000014 %	✓	
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		36 mg/kg	1.126	35.554 mg/kg	0.00356 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	66 mg/kg	1.56	90.305 mg/kg	0.00579 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.3 mg/kg	1.353	0.356 mg/kg	0.0000356 %	✓	
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16 mg/kg	2.976	41.772 mg/kg	0.00418 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.52 mg/kg	2.554	1.165 mg/kg	0.000116 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		78 mg/kg	2.774	189.81 mg/kg	0.019 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		320 mg/kg		280.702 mg/kg	0.0281 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<**LOD**
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<**LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
17		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				1.8	mg/kg	1.884	2.975	mg/kg	0.000297 %	✓	
19		pH			PH		8	pH		8	pH	8pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		0.52	mg/kg		0.456	mg/kg	0.0000456 %	✓	
21		acenaphthylene		205-917-1	208-96-8		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
22		acenaphthene		201-469-6	83-32-9		1.3	mg/kg		1.14	mg/kg	0.000114 %	✓	
23		fluorene		201-695-5	86-73-7		0.75	mg/kg		0.658	mg/kg	0.0000658 %	✓	
24		phenanthrene		201-581-5	85-01-8		6.9	mg/kg		6.053	mg/kg	0.000605 %	✓	
25		anthracene		204-371-1	120-12-7		1.5	mg/kg		1.316	mg/kg	0.000132 %	✓	
26		fluoranthene		205-912-4	206-44-0		11	mg/kg		9.649	mg/kg	0.000965 %	✓	
27		pyrene		204-927-3	129-00-0		9.7	mg/kg		8.509	mg/kg	0.000851 %	✓	
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.6	mg/kg		4.035	mg/kg	0.000404 %	✓	
29		chrysene	601-048-00-0	205-923-4	218-01-9		5.5	mg/kg		4.825	mg/kg	0.000482 %	✓	
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		6.5	mg/kg		5.702	mg/kg	0.00057 %	✓	
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		2.4	mg/kg		2.105	mg/kg	0.000211 %	✓	
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		5.5	mg/kg		4.825	mg/kg	0.000482 %	✓	
33		indeno[123-cd]pyrene		205-893-2	193-39-5		3.5	mg/kg		3.07	mg/kg	0.000307 %	✓	
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		0.69	mg/kg		0.605	mg/kg	0.0000605 %	✓	
35		benzo[ghi]perylene		205-883-8	191-24-2		3.6	mg/kg		3.158	mg/kg	0.000316 %	✓	
36		phenol	604-001-00-2	203-632-7	108-95-2		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
37		tetrachloroethylene	602-028-00-4	204-825-9	127-18-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
38		carbon tetrachloride; tetrachloromethane	602-008-00-5	200-262-8	56-23-5		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
39		trichloroethylene; trichloroethene	602-027-00-9	201-167-4	79-01-6		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
40		vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
41		hexachlorobenzene	602-065-00-6	204-273-9	118-74-1		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
42		aldrin (ISO)	602-048-00-3	206-215-8	309-00-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
43		pentachlorobenzene				<5 mg/kg		<5 mg/kg	<0.0005 %		<**LOD**
		602-074-00-5	210-172-0	608-93-5							
								Total:	0.0688 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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 threshold of: 1000 mg/kg (0.1%) because: Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0281%)

Classification of sample: TP201 (2)

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

Sample details

Sample name:
TP201 (2)
Sample Depth:
2 m
Moisture content:
16%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8.8	mg/kg	1.32	10.016	mg/kg	0.001 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<**LOD**
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.63	mg/kg	3.22	1.749	mg/kg	0.000175 %	✓	
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		41	mg/kg	1.126	39.794	mg/kg	0.00398 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	56	mg/kg	1.56	75.301	mg/kg	0.00483 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.09	mg/kg	1.353	0.105	mg/kg	0.0000105 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		13	mg/kg	2.976	33.355	mg/kg	0.00334 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.42	mg/kg	2.554	0.925	mg/kg	0.0000925 %	✓	
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		57	mg/kg	2.774	136.316	mg/kg	0.0136 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		460	mg/kg		396.552	mg/kg	0.0397 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<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]									
18		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 }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
		006-007-00-5											
19		pH				8.1	pH		8.1	pH	8.1 pH		
				PH									
20		naphthalene				1.5	mg/kg		1.293	mg/kg	0.000129 %	✓	
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				4.2	mg/kg		3.621	mg/kg	0.000362 %	✓	
			201-469-6	83-32-9									
23		fluorene				2.8	mg/kg		2.414	mg/kg	0.000241 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				23	mg/kg		19.828	mg/kg	0.00198 %	✓	
			201-581-5	85-01-8									
25		anthracene				5.1	mg/kg		4.397	mg/kg	0.00044 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				32	mg/kg		27.586	mg/kg	0.00276 %	✓	
			205-912-4	206-44-0									
27		pyrene				28	mg/kg		24.138	mg/kg	0.00241 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				13	mg/kg		11.207	mg/kg	0.00112 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				14	mg/kg		12.069	mg/kg	0.00121 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				16	mg/kg		13.793	mg/kg	0.00138 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				6.3	mg/kg		5.431	mg/kg	0.000543 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				14	mg/kg		12.069	mg/kg	0.00121 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				8.6	mg/kg		7.414	mg/kg	0.000741 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				1.8	mg/kg		1.552	mg/kg	0.000155 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				8.6	mg/kg		7.414	mg/kg	0.000741 %	✓	
			205-883-8	191-24-2									
36		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		602-065-00-6	204-273-9	118-74-1									
42		aldrin (ISO)				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		602-048-00-3	206-215-8	309-00-2									

#		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									
43		pentachlorobenzene				<5	mg/kg		<5	mg/kg	<0.0005 %		<**LOD**
		602-074-00-5	210-172-0	608-93-5									
										Total:	0.0832 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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 threshold of: 1000 mg/kg (0.1%) because: Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0397%)

Classification of sample: TP202 (0.4)

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

Sample details

Sample name:
TP202 (0.4)
Sample Depth:
0.4 m
Moisture content:
21%
(dry weight correction)

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

Hazard properties

HP 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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.248%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.248%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.248%)

Determinands

Moisture content: 21% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.1 mg/kg	1.32	9.93 mg/kg	0.000993 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		**<LOD**
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		0.53 mg/kg	3.22	1.41 mg/kg	0.000141 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.23 mg/kg	1.142	0.217 mg/kg	0.0000217 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<LOD
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		35	mg/kg	1.126	32.567	mg/kg	0.00326 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	180	mg/kg	1.56	232.039	mg/kg	0.0149 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.17	mg/kg	1.353	0.19	mg/kg	0.000019 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16	mg/kg	2.976	39.356	mg/kg	0.00394 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.43	mg/kg	2.554	0.908	mg/kg	0.0000908 %	✓	
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		170	mg/kg	2.774	389.756	mg/kg	0.039 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		3000	mg/kg		2479.339	mg/kg	0.248 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
16		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
17		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				24	mg/kg	1.884	37.369	mg/kg	0.00374 %	✓	
19		pH			PH		8	pH		8	pH	8pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
22		acenaphthene		201-469-6	83-32-9		0.72	mg/kg		0.595	mg/kg	0.0000595 %	✓	
23		fluorene		201-695-5	86-73-7		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
24		phenanthrene		201-581-5	85-01-8		5.6	mg/kg		4.628	mg/kg	0.000463 %	✓	
25		anthracene		204-371-1	120-12-7		1.3	mg/kg		1.074	mg/kg	0.000107 %	✓	
26		fluoranthene		205-912-4	206-44-0		10	mg/kg		8.264	mg/kg	0.000826 %	✓	
27		pyrene		204-927-3	129-00-0		9	mg/kg		7.438	mg/kg	0.000744 %	✓	
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		4.5	mg/kg		3.719	mg/kg	0.000372 %	✓	
29		chrysene	601-048-00-0	205-923-4	218-01-9		5	mg/kg		4.132	mg/kg	0.000413 %	✓	
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		5.7	mg/kg		4.711	mg/kg	0.000471 %	✓	

#		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									
31		benzo[k]fluoranthene				2.1	mg/kg		1.736	mg/kg	0.000174 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				5	mg/kg		4.132	mg/kg	0.000413 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33	●	indeno[123-cd]pyrene				3	mg/kg		2.479	mg/kg	0.000248 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.64	mg/kg		0.529	mg/kg	0.0000529 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35	●	benzo[ghi]perylene				2.9	mg/kg		2.397	mg/kg	0.00024 %	✓	
			205-883-8	191-24-2									
36		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		602-065-00-6	204-273-9	118-74-1									
42		aldrin (ISO)				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<**LOD**
		602-048-00-3	206-215-8	309-00-2									
43		pentachlorobenzene				<5	mg/kg		<5	mg/kg	<0.0005 %		<**LOD**
		602-074-00-5	210-172-0	608-93-5									
										Total:	0.32 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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 threshold of: 1000 mg/kg (0.1%)
because: Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.248%)

Classification of sample: TP203 (2)

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

Sample details

Sample name:
TP203 (2)
Sample Depth:
2 m
Moisture content:
6.9%
(dry weight correction)

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

Hazard properties

HP 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"

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.823%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.823%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.823%)

Determinands

Moisture content: 6.9% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		26 mg/kg	1.32	32.113 mg/kg	0.00321 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.298 mg/kg	0.00013 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		1 mg/kg	3.22	3.012 mg/kg	0.000301 %	✓	
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.21 mg/kg	1.142	0.224 mg/kg	0.0000224 %	✓	

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		53	mg/kg	1.126	55.82	mg/kg	0.00558 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	450	mg/kg	1.56	656.611	mg/kg	0.0421 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.12	mg/kg	1.353	0.152	mg/kg	0.0000152 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		16	mg/kg	2.976	44.547	mg/kg	0.00445 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.83	mg/kg	2.554	1.983	mg/kg	0.000198 %	✓	
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		92	mg/kg	2.774	238.748	mg/kg	0.0239 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		8800	mg/kg		8231.993	mg/kg	0.823 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
16		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
17		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				0.8	mg/kg	1.884	1.41	mg/kg	0.000141 %	✓	
19		pH			PH		8.2	pH		8.2	pH	8.2 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		4	mg/kg		3.742	mg/kg	0.000374 %	✓	
21		acenaphthylene		205-917-1	208-96-8		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
22		acenaphthene		201-469-6	83-32-9		11	mg/kg		10.29	mg/kg	0.00103 %	✓	
23		fluorene		201-695-5	86-73-7		7.6	mg/kg		7.109	mg/kg	0.000711 %	✓	
24		phenanthrene		201-581-5	85-01-8		57	mg/kg		53.321	mg/kg	0.00533 %	✓	
25		anthracene		204-371-1	120-12-7		14	mg/kg		13.096	mg/kg	0.00131 %	✓	
26		fluoranthene		205-912-4	206-44-0		74	mg/kg		69.224	mg/kg	0.00692 %	✓	
27		pyrene		204-927-3	129-00-0		66	mg/kg		61.74	mg/kg	0.00617 %	✓	
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		34	mg/kg		31.805	mg/kg	0.00318 %	✓	
29		chrysene	601-048-00-0	205-923-4	218-01-9		36	mg/kg		33.676	mg/kg	0.00337 %	✓	
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		42	mg/kg		39.289	mg/kg	0.00393 %	✓	

#		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									
31		benzo[k]fluoranthene				15	mg/kg		14.032	mg/kg	0.0014 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				33	mg/kg		30.87	mg/kg	0.00309 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				20	mg/kg		18.709	mg/kg	0.00187 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				4.3	mg/kg		4.022	mg/kg	0.000402 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				18	mg/kg		16.838	mg/kg	0.00168 %	✓	
			205-883-8	191-24-2									
36		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<**LOD**
		602-065-00-6	204-273-9	118-74-1									
										Total:	0.944 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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 threshold of: 1000 mg/kg (0.1%) because: Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.823%)

Classification of sample: TP203 (3.5)

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

Sample details

Sample name:
TP203 (3.5)
Sample Depth:
3.5 m
Moisture content:
13%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.9 mg/kg	1.32	5.725 mg/kg	0.000573 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.5 mg/kg	2.775	1.228 mg/kg	0.000123 %	✓	
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		18 mg/kg	1.126	17.935 mg/kg	0.00179 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	11 mg/kg	1.56	15.184 mg/kg	0.000973 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	57.945 mg/kg	0.00579 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.61 mg/kg	2.554	1.379 mg/kg	0.000138 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		45 mg/kg	2.774	110.475 mg/kg	0.011 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
14	benzene	601-020-00-8	200-753-7	71-43-2		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
15	toluene	601-021-00-3	203-625-9	108-88-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
16		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
17		xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
18		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
19		pH			PH		7.9	pH		7.9	pH	7.9 pH		
20		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
21		acenaphthylene		205-917-1	208-96-8		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
22		acenaphthene		201-469-6	83-32-9		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
23		fluorene		201-695-5	86-73-7		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
24		phenanthrene		201-581-5	85-01-8		0.62	mg/kg		0.549	mg/kg	0.0000549 %	✓	
25		anthracene		204-371-1	120-12-7		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
26		fluoranthene		205-912-4	206-44-0		0.57	mg/kg		0.504	mg/kg	0.0000504 %	✓	
27		pyrene		204-927-3	129-00-0		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
28		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
29		chrysene	601-048-00-0	205-923-4	218-01-9		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
30		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
31		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
32		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
33		indeno[123-cd]pyrene		205-893-2	193-39-5		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
34		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
35		benzo[ghi]perylene		205-883-8	191-24-2		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
36		phenol	604-001-00-2	203-632-7	108-95-2		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
37		tetrachloroethylene	602-028-00-4	204-825-9	127-18-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
38		carbon tetrachloride; tetrachloromethane	602-008-00-5	200-262-8	56-23-5		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
39		trichloroethylene; trichloroethene	602-027-00-9	201-167-4	79-01-6		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
40		vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
41		hexachlorobenzene	602-065-00-6	204-273-9	118-74-1		<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
42		aldrin (ISO)	602-048-00-3	206-215-8	309-00-2		<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
43		pentachlorobenzene				<5 mg/kg		<5 mg/kg	<0.0005 %		<**LOD**
		602-074-00-5	210-172-0	608-93-5							
								Total:	0.0232 %		

Key

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

Classification of sample: TP205 (1)

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

Sample details

Sample name:
TP205 (1)
Sample Depth:
1 m
Moisture content:
9.3%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		5.4 mg/kg	1.32	6.523 mg/kg	0.000652 %	✓	
2	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.15 mg/kg	1.142	0.157 mg/kg	0.0000157 %	✓	
3	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
4	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20 mg/kg	1.126	20.602 mg/kg	0.00206 %	✓	
5	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	14 mg/kg	1.56	19.979 mg/kg	0.00128 %	✓	
6	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
7	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		26 mg/kg	2.976	70.799 mg/kg	0.00708 %	✓	
8	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.57 mg/kg	2.554	1.332 mg/kg	0.000133 %	✓	
9	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		70 mg/kg	2.774	177.667 mg/kg	0.0178 %	✓	
10	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
12	pH			PH		9 pH		9 pH	9pH		
13	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
14	acenaphthylene		205-917-1	208-96-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
15	acenaphthene		201-469-6	83-32-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
17		phenanthrene	201-581-5	85-01-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
18		anthracene	204-371-1	120-12-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
19		fluoranthene	205-912-4	206-44-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
20		pyrene	204-927-3	129-00-0		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
21		benzo[a]anthracene	200-280-6	56-55-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
22		chrysene	205-923-4	218-01-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
23		benzo[b]fluoranthene	205-911-9	205-99-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
24		benzo[k]fluoranthene	205-916-6	207-08-9		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
25		benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
26		indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
27		dibenz[a,h]anthracene	200-181-8	53-70-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
28		benzo[ghi]perylene	205-883-8	191-24-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
29		phenol	203-632-7	108-95-2		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
										Total:	0.0304 %		

Key

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

Classification of sample: TP206 (0.6)

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

Sample details

Sample name:
TP206 (0.6)
Sample Depth:
0.6 m
Moisture content:
12%
(dry weight correction)

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

Hazard properties

None identified

Determinands

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

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		4.7 mg/kg	1.32	5.541 mg/kg	0.000554 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	15.079 mg/kg	0.00151 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	8.5 mg/kg	1.56	11.838 mg/kg	0.000759 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		13 mg/kg	2.976	34.546 mg/kg	0.00345 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.29 mg/kg	2.554	0.661 mg/kg	0.0000661 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		43 mg/kg	2.774	106.507 mg/kg	0.0107 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
14	pH			PH		8.6 pH		8.6 pH	8.6 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0187 %		

Key

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

Classification of sample: TP210 (0.4)

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

Sample details

Sample name:
TP210 (0.4)
Sample Depth:
0.4 m
Moisture content:
11%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 11% Dry Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	14.274	mg/kg	0.00143 %	✓	
2		beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		0.7	mg/kg	2.775	1.75	mg/kg	0.000175 %	✓	
3		boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.4	mg/kg	3.22	<1.288	mg/kg	<0.000129 %		<**LOD**
4		cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		0.17	mg/kg	1.142	0.175	mg/kg	0.0000175 %	✓	
5		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
6		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		31	mg/kg	1.126	31.444	mg/kg	0.00314 %	✓	
7		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	40	mg/kg	1.56	56.21	mg/kg	0.0036 %	✓	
8		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		0.06	mg/kg	1.353	0.0732	mg/kg	0.00000732 %	✓	
9		nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		21	mg/kg	2.976	56.308	mg/kg	0.00563 %	✓	
10		selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.51	mg/kg	2.554	1.173	mg/kg	0.000117 %	✓	
11		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		63	mg/kg	2.774	157.452	mg/kg	0.0157 %	✓	
12		TPH (C6 to C40) petroleum group			TPH		430	mg/kg		387.387	mg/kg	0.0387 %	✓	
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<**LOD**
14		benzene	601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
15		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		ethylbenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
17		xylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<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]									
18		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 }				1.4	mg/kg	1.884	2.376	mg/kg	0.000238 %	✓	
		006-007-00-5											
19		pH				8.2	pH		8.2	pH	8.2 pH		
				PH									
20		naphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
21		acenaphthylene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
			205-917-1	208-96-8									
22		acenaphthene				1.8	mg/kg		1.622	mg/kg	0.000162 %	✓	
			201-469-6	83-32-9									
23		fluorene				1.4	mg/kg		1.261	mg/kg	0.000126 %	✓	
			201-695-5	86-73-7									
24		phenanthrene				8.6	mg/kg		7.748	mg/kg	0.000775 %	✓	
			201-581-5	85-01-8									
25		anthracene				2.6	mg/kg		2.342	mg/kg	0.000234 %	✓	
			204-371-1	120-12-7									
26		fluoranthene				15	mg/kg		13.514	mg/kg	0.00135 %	✓	
			205-912-4	206-44-0									
27		pyrene				14	mg/kg		12.613	mg/kg	0.00126 %	✓	
			204-927-3	129-00-0									
28		benzo[a]anthracene				6.6	mg/kg		5.946	mg/kg	0.000595 %	✓	
		601-033-00-9	200-280-6	56-55-3									
29		chrysene				7.4	mg/kg		6.667	mg/kg	0.000667 %	✓	
		601-048-00-0	205-923-4	218-01-9									
30		benzo[b]fluoranthene				8.9	mg/kg		8.018	mg/kg	0.000802 %	✓	
		601-034-00-4	205-911-9	205-99-2									
31		benzo[k]fluoranthene				3.2	mg/kg		2.883	mg/kg	0.000288 %	✓	
		601-036-00-5	205-916-6	207-08-9									
32		benzo[a]pyrene; benzo[def]chrysene				7.4	mg/kg		6.667	mg/kg	0.000667 %	✓	
		601-032-00-3	200-028-5	50-32-8									
33		indeno[123-cd]pyrene				4.4	mg/kg		3.964	mg/kg	0.000396 %	✓	
			205-893-2	193-39-5									
34		dibenz[a,h]anthracene				0.92	mg/kg		0.829	mg/kg	0.0000829 %	✓	
		601-041-00-2	200-181-8	53-70-3									
35		benzo[ghi]perylene				4.7	mg/kg		4.234	mg/kg	0.000423 %	✓	
			205-883-8	191-24-2									
36		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
37		tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-028-00-4	204-825-9	127-18-4									
38		carbon tetrachloride; tetrachloromethane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-008-00-5	200-262-8	56-23-5									
39		trichloroethylene; trichloroethene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-027-00-9	201-167-4	79-01-6									
40		vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		602-023-00-7	200-831-0	75-01-4									
41		hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		602-065-00-6	204-273-9	118-74-1									
42		aldrin (ISO)				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		602-048-00-3	206-215-8	309-00-2									

#		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							
43		pentachlorobenzene				<5 mg/kg		<5 mg/kg	<0.0005 %		<**LOD**
		602-074-00-5	210-172-0	608-93-5							
								Total:	0.0776 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
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 threshold of: 1000 mg/kg (0.1%) because: Given the nature of the materials (soils) it is not considered to be appropriate

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0387%)

Classification of sample: WS203 (0.5)

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

Sample details

Sample name:
WS203 (0.5)
Sample Depth:
0.5 m
Moisture content:
17%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 17% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7 mg/kg	1.32	7.899 mg/kg	0.00079 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5 mg/kg	2.775	<1.388 mg/kg	<0.000139 %		<LOD
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5 mg/kg	2.27	<1.135 mg/kg	<0.000113 %		<LOD
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		15 mg/kg	1.126	14.434 mg/kg	0.00144 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10 mg/kg	1.56	13.332 mg/kg	0.000855 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05 mg/kg	1.353	<0.0677 mg/kg	<0.00000677 %		<LOD
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		15 mg/kg	2.976	38.157 mg/kg	0.00382 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		<0.25 mg/kg	2.554	<0.638 mg/kg	<0.0000638 %		<LOD
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		50 mg/kg	2.774	118.553 mg/kg	0.0119 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
14	pH			PH		8.8 pH		8.8 pH	8.8 pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
17		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
18		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
19		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
20		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
21		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
22		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
31		phenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0205 %		

Key

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

Classification of sample: WS203 (1.8)

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

Sample details

Sample name:
WS203 (1.8)
Sample Depth:
1.8 m
Moisture content:
16%
(dry weight correction)

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

Hazard properties

None identified

Determinands

Moisture content: 16% Dry Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.9	mg/kg	1.32	11.268	mg/kg	0.00113 %	✓	
2	beryllium { beryllium oxide }	004-003-00-8	215-133-1	1304-56-9		<0.5	mg/kg	2.775	<1.388	mg/kg	<0.000139 %		<**LOD**
3	boron { diboron trioxide }	005-008-00-8	215-125-8	1303-86-2		<0.4	mg/kg	3.22	<1.288	mg/kg	<0.000129 %		<**LOD**
4	cadmium { cadmium oxide }	048-002-00-0	215-146-2	1306-19-0		<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<**LOD**
5	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }	024-017-00-8				<0.5	mg/kg	2.27	<1.135	mg/kg	<0.000113 %		<**LOD**
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		20	mg/kg	1.126	19.412	mg/kg	0.00194 %	✓	
7	lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	10	mg/kg	1.56	13.447	mg/kg	0.000862 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.05	mg/kg	1.353	<0.0677	mg/kg	<0.00000677 %		<**LOD**
9	nickel { nickel chromate }	028-035-00-7	238-766-5	14721-18-7		30	mg/kg	2.976	76.972	mg/kg	0.0077 %	✓	
10	selenium { nickel selenate }	028-031-00-5	239-125-2	15060-62-5		0.55	mg/kg	2.554	1.211	mg/kg	0.000121 %	✓	
11	zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		52	mg/kg	2.774	124.358	mg/kg	0.0124 %	✓	
12	TPH (C6 to C40) petroleum group			TPH		<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
13	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<**LOD**
14	pH			PH		8	pH		8	pH	8pH		
15	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
16		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
17		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
18		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
19		phenanthrene				0.14	mg/kg		0.121	mg/kg	0.0000121 %	✓	
			201-581-5	85-01-8									
20		anthracene				0.13	mg/kg		0.112	mg/kg	0.0000112 %	✓	
			204-371-1	120-12-7									
21		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
22		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
23		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
24		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
25		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
26		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
27		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
28		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
29		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
30		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
31		phenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
										Total:	0.0259 %		

Key

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

Appendix A: Classifier defined and non GB MCL determinands

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

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

pH (CAS Number: PH)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

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

beryllium {beryllium oxide}

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

boron {diboron trioxide}

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

cadmium {cadmium oxide}

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

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

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

copper {dicopper oxide; copper (I) oxide}

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

lead {lead chromate}

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

mercury {mercury dichloride}

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

nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc chromate}

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

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}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2024.235.6223.11423 (22 Aug 2024)
HazWasteOnline Database: 2024.235.6223.11423 (22 Aug 2024)

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

London

15 Bermondsey Square
London
SE1 3UN

T: +44 (0)20 7340 1700
E: london@campbellreith.com

Birmingham

Chantry House
High Street, Coleshill
Birmingham B46 3BP

T: +44 (0)1675 467 484
E: birmingham@campbellreith.com

Bristol

Unit 5.03
HERE
470 Bath Road
Bristol BS4 3AP

T: +44 (0)117 916 1066
E: bristol@campbellreith.com

Manchester

10 Chapel Walks
Manchester
M2 1HL

T: +44 (0)161 819 3060
E: manchester@campbellreith.com

Campbell Reith Hill LLP. Registered in England & Wales. Limited Liability Partnership No OC300082
A list of Members is available at our Registered Office at: 15 Bermondsey Square, London, SE1 3UN
VAT No 974 8892 43