



**Intelligent
Ground
Solutions**



Phase II Geo-Environmental Assessment

Site off Bell Lane

Bury,

BL9 6AD

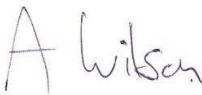
For Pearl Forecourts

27 June 2024

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1.0 Introduction

Geo² Limited were commissioned by Pearl Forecourts to conduct a Phase II Geo-Environmental Assessment of the:

Site off Bell Lane,
Bury,
BL9 6AD

The site is approximately 0.59 hectares in area and located at grid reference 381250, 411260.

1.1 Planning Application

This report has been compiled to meet the requirements of condition no3 of the planning application ref. 70253 with Bury Council:

Demolition of existing car sales building and the redevelopment of the site for a new Petrol Filling Station with associated facilities alongside a drive thru unit and a detached block of 2no. food-to-go convenience pods.

The proposed development is further detailed in Section 2.3.

1.2 Scope of Works

The scope of the investigation has been designed with consideration of guidance on Planning Practice Guidance (Land Affected by Contamination), Land Contamination: Risk Management pages of the GOV.UK web pages and the relevant requirements of the National Planning Policy Framework (NPPF) (as revised 2023) (paragraphs 174 & 183-184). The geotechnical scope of investigation was designed in consideration with BS EN 1997-1:2004 Eurocode 7: Geotechnical Design – Part 1 General Rules and BS EN 1997-2:2007 Eurocode 7: Ground Investigation and Testing. Unless specifically stated, this report does not constitute a Geotech Design Report (GDR) under Eurocode 7 guidance.

Following on from the issue of Geo²'s issue of a Phase I Preliminary Risk Assessment report (ref. 23/1433.1.1) in October 2023, this assessment has been undertaken consisting of a pre-demolition shallow ground investigation and generic quantitative risk assessment, conducted in order to establish the presence and extent of sub-surface contaminants, if any, resulting from the site's current and historic industrial land use.

The intrusive investigation was conducted on 14th and 23rd May 2024. The investigation was undertaken in accordance with Geo²'s Method Statement SMS SI 1433. The findings of the investigation are presented herein.

2.0 Description of the Site and Surroundings

2.1 Site Description

The site is located 900m northeast of the town centre of Bury. Figures 1 and 2 in Appendix A show the location of the site.

The southern end of the site is an operational car sales garage, while the northeastern area is a vehicle servicing and MOT centre, with vehicle parking across the northern and western sides of the site.

The area shown within the red site boundary on Figure A below, will be referred to throughout this document as 'the site'.

The site is located north of Bell Lane (B6222) and is bound by Bridge St and Cobden St to the west and north respectively. Commercial premises occupy the land to the east. The site is currently accessed by one ingress / egress point located on the western boundary.

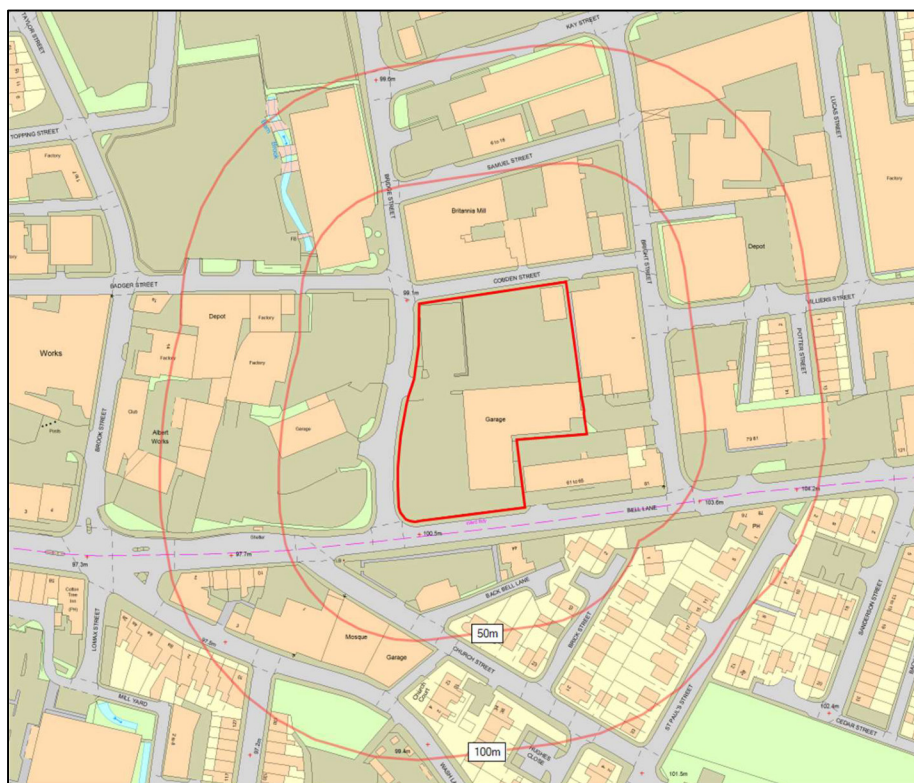


Figure A: Site Location Plan. Red is approximate site boundary and pink are 50m and 100m buffers.
Extract from Geo² Ph I PRA report.

2.2 Site Surroundings

The site is located in the town of Bury, Greater Manchester. The nearest residential properties are from 30m southeast. The surrounding land use is predominantly commercial buildings.

2.3 Proposed Development

The site is currently occupied by a car dealership and servicing / MOT garage with associated car parking.

At the time of writing this report, the proposed redevelopment of the site comprises the demolition of the existing buildings and the construction of a new a Petrol Filling Station (PFS) as well as a drive thru unit and a block of 2no take-out convenience pods.

Existing and proposed development plans for the site can be referred to within Appendix A.

The proposed development plan included in Appendix A shows the outline of the existing buildings with reference to the positioning of the new proposed buildings for easy reference:

- The new PFS building will be located in the northeastern corner of the site, encompassing the existing servicing garage and extending south.
- A retail unit will be added in the southeastern corner of the site, utilising the southern end of the existing car sales showroom building.
- The drive thru' unit will be located in the southwestern area of the site, currently occupied by hardstanding used for parking vehicles.

3.0 Desk Study Summary

The following sections summarise the pertinent details from the Geo² Phase I Preliminary Risk Assessment report (ref. 23/1433.1.1), dated Oct 2023.

3.1 Desk Study Data

Information regarding the environmental setting of the site was obtained from the Envirocheck report, which collated information from a variety of sources.

Where indicated in Table 1 below, the data from the Envirocheck report has been supplemented with additional information obtained from freely available online data.

Site Geology	BGS data indicates bedrock consists of Pennine Lower Coal Measures (PLCM) Formation, comprising interbedded mudstone, siltstone and sandstone. A fault line is mapped along the southern boundary, with PLCM bedrock on either side. Superficial deposits are indicated to comprise Devensian Till. A BGS borehole located 64m northeast records bedrock at 12.2m bgl.
Mining	A review of the Coal Authority online interactive mapping indicates that while the site is located within a coal mining reporting area, the site is not located within a Development High Risk Area (DHRA). Therefore, the risk to the proposed development from shallow coal mining is considered to be Low .
Radon	The site is in a low probability radon area (less than 1% of homes are estimated to be at or above the Action Level). As such, no radon protective measures are necessary in the construction of new dwellings or extensions.
Site Hydrogeology	The bedrock is classified as a Secondary A Aquifer. The superficial deposits are a Secondary Undifferentiated Aquifer. The site is not located within a Source Protection Zone (SPZ). The nearest groundwater abstraction point is located 191m north for manufacturing use. There are no potable groundwater abstraction points within 1km.
Site Hydrology	The nearest surface water feature is Barn Brook located 50m northwest, flowing south and it appears to become culverted at this point. The River Roch is located 870m southeast, flowing south and has a Grade C water quality. There are no potable surface water abstraction points within 1km, with the nearest abstraction point located 291m north for a manufacturing use.
Waste and Infilled Land	There are no BGS recorded landfill sites, historical landfill sites or licenced waste management facilities within 1,000m of the site. There are no areas of potentially infilled land (non-water or water) within 50m of the site that could be potential sources of noxious ground gases.
Unexploded Ordnance	A review of Zetica online risk mapping for the area indicates the site is located in a Low-risk area with respect to unexploded ordnance.

Table 1. Environmental Assessment of the Site.

3.2 Site History

Details regarding the development of the site, its immediate surroundings and potentially contaminative land uses were obtained from a review of historical maps.

Earliest mapping from 1849 shows the central area of the site was developed as a Gas Works, with a reservoir and chimney on the eastern boundary and two circular gasometers. Across the southern area of the site were two rows of terraced properties.

The gas works was relabelled as a Cotton Mill by 1891, with the former gasometers now mapped as reservoirs. The site then became a Velvet Mill in 1910, named as Freetown Mill by 1939. The mill buildings extend northwards and westwards across the site until 1960.

By the late 1970s, the entire site has been redeveloped, with all historic buildings, the chimney and the terraced properties being demolished and all reservoirs no longer mapped. Two large Garage buildings are constructed in the south. Mapping from the 1980s show further garage buildings added in the northeastern area of the site.

By 2001, the site is established as the layout seen today, with a single garage building in the northeast corner and the southern-most building reduced to only occupy the southeast corner.



3.3 Surrounding Historical Land Use

Early industrial land uses within 100m included Cotton Mills, Iron Foundries, Felt Hat Works and associated reservoirs, chimneys and tanks. Terraced housing dominated land use to the east and south.

Since the 1960s, heavy industry and terraced properties have been replaced by commercial units and semi-detached housing, with a retail park also constructed from 150m southwest.

4.0 Preliminary Risk Assessment

4.1 Source – Pathway – Receptor

UK legislation and guidance on assessing potentially contaminated land recommends the use of a risk assessment process based on a review of source/pathway/receptor relationships for various environmental media. The first stage of any risk assessment is to identify, using the desk study data and site information, the presence and extent of any hazard at the site, theoretical or demonstrable.

A key component of the overall risk assessment process is identification of “significant contaminant linkages” between contaminants and receptors. This can be accomplished through development of a site-specific conceptual model in which the potential contaminants, pathways and receptors identified on-site are described.

Each element can be defined as follows:

- **Contaminant source:** A substance either on or under the land and which has the potential to cause harm or pollution to human or environmental receptors.
- **Pathway:** A route or means by which a receptor can be exposed to or affected by a source.
- **Receptor:** A living organism or an ecological system, or controlled water, or property including buildings, crops and livestock.

The presence of all three of the above elements identifies a contamination linkage and a potentially unacceptable risk. To ensure that any risk present to, or, from the site can be appropriately managed each of these contamination linkages will be targeted by the investigation.

4.2 Hazard Identification

4.2.1 Potential On-Site Sources

Potentially contaminative on-site activities relate to the historical use of the site as a gasworks with associated gasometers and chimney, cotton mill and then velvet mill to circa 1960. Full redevelopment of the entire site to a Garage post-1960 may have resulted in the infilling of historic reservoirs and potential for asbestos fibres or fragments in soils due to poor demolition practises at the time.

As discussed in Section 3.2, it is unknown if the structures of the former gasometers and reservoirs remain in-situ beneath existing garage buildings and hard-standing. Furthermore, the material used to likely infill these structures in the 1960s is unknown and may differ substantially from the made ground soils across the remainder of the site.

The site's use as a car sales garage, MOT and servicing garage may be a source of hydrocarbon contamination, although no evidence of underground tanks were evident during the site visits.

Due to the age of the buildings on site, it is likely that asbestos materials were used in the construction of the some of the buildings.

An unknown thickness of made ground soils on site and potentially infilled reservoirs may be sources of ground gases such as carbon dioxide and methane.

4.2.2 Potential Off-Site Sources

No significant off-site sources of contamination have been identified within proximity to the site, with the site located in a historically industrial area that is now predominantly commercial land use.

4.3 Initial Conceptual Site Model

Contamination linkages arise as a result of the interconnection of the contaminant source, contamination pathways and potential receptors. The presence of a contaminant linkage indicates the potential for harm to be caused to a receptor from a potential contaminant source. These contamination linkages are used to design the site investigation, guiding the type of investigation, location of exploratory boreholes and the required sample analysis.

4.4 Risk Estimation

The objective of the qualitative risk assessment is to determine the significance of the risk, if any, which may occur as a result of the creation of pollutant linkages, which connect a potential receptor to an identified potential contaminant source at the site.

The perceived risk is based on a consideration of both the likelihood of an event (probability) occurring, and the severity of the potential consequence. Classification of these two factors is detailed in Appendix D.

4.5 Preliminary Qualitative Risk Assessment

A qualitative risk assessment was undertaken as a part of the Geo² Phase I Preliminary Risk Assessment report, in line with guidance provided in CIRIA's Contaminated Land Risk Assessment: a guide to good practice CIRIA C552, 2001. The purpose of this assessment is to determine the relative significance of the identified contamination linkages by assessing the probability of an impact occurring and by assessing the perceived severity of an impact to a receptor.

Those linkages considered to be low risk or less on the basis of the available site data will not be considered any further in this assessment. Linkages considered to be more significant are identified as presenting potentially unacceptable risk to the identified receptor and will be investigated as a part of the Phase II Geo-Environmental Assessment herein. The qualitative risk assessment is summarised in Table 2 on the following page.

Source	Pathway	Receptor	Preliminary Risk Assessment (Probability x Severity)
Potential contamination associated with historical operation of the northern area of the site as a gas works in the mid-19th Century; a cotton and velvet mill up to the 1960s; and as a car sales, MOT and servicing garage up to today. Contaminants of concern are likely to include TPHs, PAHs, VOCs, SVOCs and heavy metals. The southern area of the site was not heavily industrialised, with land use limited to terraced properties until the 1960s / 1970s when the car sales garage was constructed. Infilled gasometers and reservoirs may be a potential source of ground gases, with the composition of this infill unknown.	Leaching to groundwater, lateral and vertical flow, followed by migration within the aquifer.	Surface water: Barn Brook located 50m northwest, flowing south	Low (Low Likelihood x Mild)
		Groundwater: Secondary A Aquifer within bedrock deposits No SPZ and no potable groundwater abstractions within 1km Superficial deposits Secondary Undifferentiated Aquifer	Moderate / Low (Low Likelihood x Medium)
	Exposure to harmful vapours, hazardous ground gas and tainting of water supply	Human Health: Commercial End Users Northern area: infilled gasometers and reservoirs	Moderate (Likely x Medium)
		Human Health: Commercial End Users Southern area: terraced housing and then car sales and parking	Moderate / Low (Low Likelihood x Medium)
		Human Health: Neighbouring site users, principally within enclosed spaces	Moderate / Low (Low Likelihood x Medium)
	Direct contact, inhalation of asbestos and ingestion	Human Health: Commercial End Users Northern area: infilled gasometers and reservoirs	Moderate (Likely x Medium)
		Human Health: Commercial End Users Southern area: terraced housing and then car sales and parking	Moderate / Low (Low Likelihood x Medium)

Table 2. Identified Initial Contamination Linkages

5.0 Site Investigation

In order to provide an assessment of each of the identified contamination linkages, a shallow intrusive investigation was specified to obtain further information regarding the geology of the site and the quality of the soils and groundwater.

5.1 Site Investigation

Twelve window sample boreholes (WS01, WS02, WS04-WS10 and WS12-WS14) were advanced on 14th and 23rd May 2024 to depths of 0.75-5.50 metres below ground level (m bgl) at locations indicated on the GPR survey presented in Appendix A.

As a result of the drilling techniques, relatively undisturbed soils were able to be obtained for field and laboratory analysis and for logging of ground conditions. Field analysis comprised the examination of each of the samples for visual and olfactory indications of contamination. Analysis was also conducted for volatile hydrocarbons using a photo-ionisation detector (PID) on 14th May 2024.

Borehole positions were chosen strategically so to target areas of the site most likely to be contaminated and also to provide good coverage across the site, where accessible. Table 3 below, shows the location rationale of the advanced boreholes.

Target / Rationale for Investigation Locations	Exploratory Hole											
	WS1	WS2	WS4	WS5	WS6	WS7	WS8	WS9	WS10	WS12	WS13	WS14
General Site Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Historic Industrial Land Use	✓	✓					✓	✓	✓	✓	✓	✓
Historic Gasometers and Reservoirs											✓	✓
Historic Terraced Housing				✓	✓	✓						
Proposed New Buildings			✓	✓						✓		

Table 3. Exploratory Hole Location Rationale

5.2 Ground Conditions

The logs of the boreholes, which are presented in Appendix B, detail the ground conditions and the sampling depths together with the visual and olfactory characteristics of the soils.

While 0.25m thick topsoil was recorded at surface level in WS07, the remainder of the exploratory holes recorded hard standing at ground level from 0.05-0.33m below ground level (m bgl). Hard-standing surfacing including brick paving (WS04-WS06) in the southwestern area, tarmac (WS02, WS08, WS10 and WS14) and tarmac underlain by concrete (WS01, WS09, WS12 and WS13). WS13 in the northeastern area of the site recorded concrete to a depth of 0.60m bgl, much deeper than other areas of the site.

Granular made ground soils were encountered at all exploratory hole locations with the exception of WS12, comprising a fill of brick, mudstone and concrete. Clay (cohesive) made ground deposits were also encountered in eight of the twelve borehole locations and included gravel of brick and concrete.

Exploratory holes WS02, WS04, WS08, WS13 and WS14 were terminated within the made ground strata, further discussed in Section 5.2.1. Where the base of the made ground was encountered, this was at depths of 0.90-1.5m bgl.

Underlying the made ground, natural soils comprised firm brown slightly sandy gravelly CLAY, considered to be representative of the anticipated Devensian Till superficial deposits. Occasional relict roots or organic matter was observed.

Granular superficial deposits were recorded in WS01 and WS10 only, with thin sand lenses recorded at 4.6-4.7m and 2.7-2.8m bgl respectively, and sand also recorded in WS10 at 4.2-5.5m bgl. WS01 and WS10 are located in the northwestern corner and the centre of the northern area of the site respectively. WS09 located between these exploratory holes did not record any sand up to 4.0m bgl, indicating the thin sand lenses are not continuous across the site.

No groundwater was encountered during the shallow investigation and the base of the superficial deposits or top of bedrock was also not recorded, with the exploratory holes terminated at a maximum depth of 5.5m bgl. Local BGS boreholes indicate bedrock is at a depth of approx. 12m bgl.

Boreholes WS01, WS05-WS07, WS10, WS12 and WS14 were installed for monitoring purposes if required in the future, with the installations detailed in the exploratory hole logs included in Appendix B.

5.2.1 Obstructions

Exploratory holes WS02, WS04, WS08, WS13 and WS14 were terminated within the made ground strata, as detailed in Table 4 on the following page.

Exploratory Hole Ref.	Depth of Termination m bgl	Reason	Location on Site	Notes
WS02	1.00	SPT refusal in made ground	Western boundary, north of entrance way	Likely brick fill associated with historical phases of development and demolition
WS04	1.00	Brick cobbles	Western boundary, southern area	
WS08	0.75	Concrete	Central western area	Possible obstruction associated with historical ground levels (historic slabs?)
WS13	0.80	Concrete	Eastern boundary, central area	
WS14	5.00	Concrete	North-eastern areas	Possibly the base of the former gasometer / reservoir

Table 4. Exploratory Hole Location Rationale

5.2.2 Historic Structures

Exploratory holes WS13 and WS14 were positioned to target the locations of the historic gasometers and reservoirs, to understand if the structures were still in-situ and if any specific sources of contamination could be associated with these historic structures.

WS13 however recorded concrete to 0.60m bgl, underlain by a brick gravel made ground strata, with an additional possible concrete slab at 0.80m bgl. At this depth, the concrete coring equipment on site could not progress further to investigate the thickness of this concrete or record what the ground conditions were at depth.

WS14 was approximately located within one of the circular structures, historically labelled as a gasometer. Unfortunately, the drilling works recovered no soils from beyond 1.0m bgl. The made ground to 1.0m bgl was described as a gravel fill of brick fragments. A possible concrete floor obstruction was encountered at 5.0m bgl, with the exploratory hole then collapsing prior to the monitoring well being installed to 5.0m depth. Geo² consider that WS14 has recorded that the former gasometer / reservoir underground structures remain in-situ but infilled with demolition rubble.

5.2.3 Observed Potential Contamination

Field analysis was conducted for volatile hydrocarbons using a photo-ionisation detector (PID) on 14th May 2024. The highest concentration recorded was in WS12 at 0.80m bgl, with a PID concentration of 47.4ppm recorded in the made ground strata. This corresponded to a hydrocarbon odour observed by the Geo² engineer in this stratum. The odour and recorded

elevated PID readings reduced with depth. WS12 is located on the eastern boundary, south of the existing servicing / MOT garage.

An oily sheen was recorded on gravel made ground (0.65-0.85m bgl) in WS01, located in the northwestern area of the site. No specific odour was observed by the engineer and no further oily sheen was encountered with depth.

6.0 Laboratory Analysis

6.1 Analysis Rationale

Sixteen soil samples were selected for laboratory analysis for a broad environmental suite reflecting the historical industrial land use of the site and the current use of the site as a servicing / MOT garage since the 1960s in line with guidance provided in CIRIA's Contaminated Land Risk assessment: a guide to good practise (CIRIA C552, 2001).

All samples were placed in laboratory provided containers and stored in cool boxes prior to being transported to the laboratory under the laboratory's chain of custody documentation. The laboratory used for the ground investigation on this occasion was Envirolab, a UKAS and MCERTS accredited laboratory.

6.2 Soils Analysis

Ten made ground and six natural soil samples were analysed for a broad environmental testing suite, including pH, sulphate, metals, PAH-16 and TPH-CWG. Made ground soil samples were analysed for asbestos ID and selected samples were also analysed for VOCs and SVOCs reflecting soils where elevated PID readings were recorded (WS12 at 0.80m bgl).

The soil samples were selected from a range of depths and from across the site, to gain an understanding of site-wide ground conditions.

The analysis, conducted by a Gas Chromatography / Flame Ionisation Detector (GC/FID) and Gas Chromatography / Mass Spectrometry (GC / MS) comprised fractionation and speciation of hydrocarbons including analysis for benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE compounds. Selected samples were analysed for:

- Heavy metals by IRIS emission spectroscopy.
- Volatile and semi volatile components (including PAHs), by GC/MS.
- Asbestos Containing Materials (ACMs) by Polarised light microscopy / Gravimetry.

The analytical results were analysed for contaminants associated with the identified potentially contaminative activities and land uses. The results of soil analysis were compared using the following UK guidance:

- LQM/CIEH's Suitable for Use Levels (S4ULs)
- DEFRA Category 4 Screening Levels (C4SLs);
- EIC Soil Generic Assessment Criteria for Human Health (2010).

6.2.1 Soil Testing Results

The results of laboratory analyses on the soil samples undertaken are presented in Appendix C.

Due to the site's continued commercial land use, the soil analysis testing results have been compared against 'Commercial' end use Generic Assessment Criteria (GACs) thresholds. GAC concentrations associated with a conservative 1% Soil Organic Matter (SOM) have been utilised.

No contaminants have been recorded above Commercial GAC threshold concentrations.

6.2.2 Asbestos Fibres in Soil

Chrysotile and Amosite asbestos fibres were positively identified in WS02 (0.60-0.80m bgl) and WS04 (0.30-0.50m bgl), within made ground soil samples.

Quantification analysis recorded <0.001% and 0.002%_w in the WS02 and WS04 made ground soils respectively, further discussed in Section 8.0.

7.0 Geotechnical Report

Alongside the Geo² environmental intrusive investigation undertaken across the site, in-situ soil sampling and geotechnical laboratory analysis and infiltration testing in selected installed boreholes was undertaken.

A separate geotechnical interpretive report has been commissioned and this report will be updated again once received.

8.0 Risk Estimation

8.1 Discussion of Investigation Findings

8.1.1 Contamination in Site Soils

Reflecting the site's industrial land use and periods of construction and demolition, made ground soils were encountered at all locations and included anthropogenic material such as concrete and brick.

Where encountered, the base of the made ground strata was recorded at 0.90-1.50m bgl. The underlying natural strata comprised clay, with thin sand lenses locally.

An oily sheen was observed in gravel made ground in WS01 (0.65-0.85m bgl) while a hydrocarbon odour was recorded in made ground soils in WS12 at 0.80m bgl.

The Preliminary Risk Assessment (Section 4.5) identified a potential Moderate to Moderate / Low risk to site end users from contamination within shallow site soils. While made ground soils were encountered across the entire site, no specific sources of significant contamination were encountered, with the environmental soil analysis recording no Commercial GAC exceedances.

8.1.2 Historic Structures

WS14 potentially identified an infilled gasometer / reservoir with a concrete obstruction identified at 5.0m bgl. Unfortunately, the drilling works recovered no soils from beyond 1.0m bgl.

This structure will be within the footprint of the proposed new PFS building and may therefore present a development constraint with respect to foundation design and / or differential settlement.

It is unknown if the other reservoir structures remain in-situ beneath the existing garage building (Figure B, Section 3.2), or were removed during historic periods of redevelopment.

From a contamination point of view, the investigation has recorded no evidence of significant contamination arising from these historic structures. Furthermore, the investigation has recorded that the historic structures are set within the natural clay strata and above the groundwater table.

As the historical mapping showed the circular gasometers were relabelled as reservoirs, it is considered that these structures did retain some structural integrity at the time, and any localised contamination within the structure(s) is potentially contained within with structure(s).

8.1.3 Asbestos in Site Soils

Asbestos fibres were positively identified in made ground soils in WS02 and WS04, with quantification analysis recording <0.001% and 0.002% w/w. These exploratory holes are located on the western side of the site and the presence of asbestos in the made ground soils is considered to arise from phases of historic demolition, with asbestos products used in the construction of buildings historically.

Asbestos was not positively identified in the eight other made ground soil samples analysed, and no suspected asbestos containing materials were identified in shallow soils by the Geo² engineer during the investigation.

Consequently, it is considered that the presence of asbestos in soils presents a potential risk to construction workers, with hardstanding cover breaking the source-pathway-receptor linkage between the made ground soils and current and proposed site users.

8.1.4 Controlled Waters

The Preliminary Risk Assessment (Section 4.5) identified a potential Moderate / Low risk of the site having an adverse impact upon the groundwater receptor, due to the presence of the underlying Secondary A aquifer.

The shallow site investigation undertaken in May 2024 did not identify any groundwater up to a depth of 5.5m bgl. Furthermore, the environmental chemical analysis results reported lower concentrations of contaminants within the underlying natural soils, indicating that the low concentrations of contamination within the made ground soils is unlikely to be migrating vertically downwards through the cohesive natural soils.

8.1.5 Ground Gases

The Phase 1 PRA report identified a potential Moderate to Moderate / Low risk to site end users from ground gases arising from potentially significant thicknesses of made ground soils with organic content underlying the site, particularly in the area of the former gasometers and reservoirs in the northeastern part of the site.

Predominantly, made ground soils across the site were recorded to depths of 0.90-1.50m and included reworked natural clay, this is not considered to present as plausible source of elevated concentrations of ground gas.

Field and laboratory analysis for volatile contamination has not recorded elevated concentrations of concern, in any exploratory hole location.

8.2 Limitations and Uncertainty

It is important to note that the investigation was restricted in areas due to the presence of existing services, parked vehicles, the footprints of the existing buildings and access requirements for the operational garages on site.

WS03 and WS11 were not undertaken although are included on the exploratory hole plan in Appendix A.

Deeper concrete or brick obstructions also prevented the advancement of some boreholes to a suitable depth to investigation ground conditions, particularly in the northeastern area and the western boundary.

8.2.1 Historic Structures

Localised areas of deeper made ground or hotspots of significant contamination cannot be discounted, particularly with respect to the historic gasometer / reservoir structures.

Potentially two historic reservoir structures are located within the footprint of the new proposed PFS building and may therefore present a development constraint with respect to foundation design and / or differential settlement. Further investigation within and around these structures may be required for foundation design.

8.3 Qualitative Risk Assessment

Each of the identified potential contamination linkages in the preliminary conceptual site model (Section 4.5) is reviewed based upon the findings of the site investigation which allows a greater understanding of the ground conditions at the site, site observations, soil quality and chemical analysis.

The qualitative risk assessment is undertaken, detailed in Table 5 on the following page, in line with guidance provided in CIRIA's Contaminated Land Risk Assessment: a guide to good practice CIRIA C552, 2001. The purpose of this assessment is to determine the relative significance of the identified contamination linkages by assessing the probability of an impact occurring and by assessing the perceived severity of an impact to a receptor.

The perceived risk is based on a consideration of both the likelihood of an event (probability) occurring, and the severity of the potential consequence. Classification of these two factors is detailed in Appendix D.

Those linkages considered of low risk or less on the basis of the available site data will not be considered any further in this assessment. Linkages considered to be more significant are identified as presenting potentially unacceptable risk to the identified receptor. In these instances, further works may be considered necessary.

Source(s)	Pathway(s)	Receptor(s)	Comments	Risk	Requires Further Work
No Commercial GAC threshold exceedances recorded in shallow soils. Asbestos fibres <0.001-0.002% w/w identified in made ground soils in only two of ten made ground soil samples analysed.	Leaching to groundwater, lateral and vertical flow, followed by migration within the aquifer	Barn Brook located 50m northwest, flowing south. (controlled waters)	Natural soils comprise low permeability clay, with thin lenses of sand not continuous across the site. No shallow or perched groundwater identified during the investigation.	Very Low (Unlikely x Mild)	No
		Interbedded mudstone, siltstone and sandstone bedrock is classified as a Secondary A Aquifer. No SPZ or potable water abstraction within 1km (controlled waters)	No groundwater encountered to a depth of 5.5m bgl, with lab analysis of soil samples recording lower concentrations of contaminants within the underlying natural soils, indicating low rates of vertical migration. Natural soils comprise low permeability clay, decreasing the risk to the underlying bedrock.	Low (Unlikely x Medium)	No
	Direct contact and ingestion of contaminants and inhalation of asbestos in soils and dust	Commercial site end users. (human health)	Site soils present a low risk to human health, with no Commercial GAC threshold exceedances and low concentrations of asbestos fibres recorded in isolated instances. Concrete hardstanding will break the source-pathway-receptor linkage across the majority of the site	Low / Moderate (Low Likelihood x Medium)	Yes
		Neighbouring residents in enclosed spaces (human health)	Slightly elevated PID readings were recorded in WS12 only, associated with a hydrocarbon odour observed by the engineer. The odour decreased with depth and was localised.	Low (Unlikely x Medium)	No
		Construction workers (human health)	Construction workers excavating the ground may be exposed to asbestos fibres. Short term risk would be mitigated by use of appropriate person protection equipment (PPE) and provision of suitable welfare facilities.	Low / Moderate (Low Likelihood x Medium)	No

Source(s)	Pathway(s)	Receptor(s)	Comments	Risk	Requires Further Work
Majority of the Site No significant depths of made ground identified and no organic material within the made ground soils	Exposure to harmful vapours, hazardous ground gas and tainting of water supply	Commercial site end users, principally within enclosed areas. (human health)	No source of noxious ground gases identified across the majority of the site, with encountered made ground principally comprising low permeability reworked clay	Low (Unlikely x Medium)	No
Northeastern Area Unconfirmed depth of made ground, with a possible infilled former gasometer / reservoir identified in WS14			The concrete obstructions in WS13 and WS14 have resulted in this historically industrial area of the site not being fully investigated, with material within these structures presenting a potential source of noxious ground gases.	Moderate / Low (Low Likelihood x Medium)	Yes

Table 5. Summary of Qualitative Risk Assessment

9.0 Conclusions and Recommendations

A Phase II Geo-Environmental Assessment of the Site off Bell Lane, located at Bury, BL9 6AD was undertaken, prior to the proposed redevelopment of the site for the use as a Petrol Filling Station (PFS) as well as a drive through.

The purpose of the assessment was to evaluate the potential for risk to be posed to human health and controlled waters from historical and current industrial use of the site.

The investigation generally recorded hardstanding over granular made ground fill up to 1.5m bgl underlain by firm brown slightly sandy gravelly CLAY, considered to represent the Devensian Till. Isolated occurrences of sand lenses were noted in the northwestern corner of the site. No groundwater was encountered up to 5.5m bgl.

WS14 in the north-eastern area potentially encountered an infilled historic reservoir, with a concrete obstruction recorded at 5.0m bgl. Recovery of soils at this location was poor, with made ground soils / fill material anticipated to 5.0m bgl. The historic reservoir structures may present a constraint with respect to the design of foundations for the proposed new PFS building.

No significant visual or olfactory evidence of contamination was encountered during the investigation.

Environmental lab analysis of shallow soils has recorded low concentrations of contaminants. Chrysotile and Amosite asbestos fibres were identified in made ground soil samples from WS2 and WS04 respectively, located in the western side of the site. Quantification analysis recorded <0.001% and 0.002% w/w, indicating a low risk to site users, particularly as the soils in these areas are currently overlain by hardstanding.

Consequently, Geo² consider the risk to Commercial site end users and neighbouring residents from contamination within shallow site soils to be **Low**.

The presence of asbestos fibres in shallow soils is considered to present a **Moderate / Low** risk to construction workers during groundworks and also to future site end users in areas of soft landscaping.

Geo² consider the site soils to present a **Low** and **Very Low** risk to groundwater and surface water receptors, taking into account the low permeability of the Devensian Till and its anticipated base of 12m bgl, protecting the underlying aquifer.

As an unknown depth of made ground soils has been recorded in the northeastern area of the site, there remains a **Moderate / Low** risk of ground gases arising from thick or organic fill deposits, particularly in the areas of the historic gasometers and reservoirs.

9.1 Recommendations

The following works are recommended to address the identified risk:

- Further ground investigation within and around the former gas holders and reservoirs is recommended in order to fully characterise the ground conditions in this area and to aid foundation and floor slab design.
- In order to fully characterise the ground gas regime on site, monitoring of noxious ground gases is recommended.
- An asbestos survey is recommended prior to any demolition works commencing, with asbestos removal works to be undertaken by an appropriately qualified specialist, if required.
- Construction workers should be provided with appropriate PPE and welfare facilities if coming into contact with shallow soils during groundworks and have appropriate asbestos awareness training.
- A suitable thickness of clean and inert capping will be required in areas of soft landscaping in order to break the source-pathway-receptor linkage between asbestos in existing made ground soils and future end users.
- As redevelopment works take place on site, a watching brief should be imposed to ensure that any impacts unidentified in the site investigation can be characterised and treated appropriately, particularly within the footprints of the existing buildings. Any unidentified contaminated material should be considered in the event of a redevelopment as costs for offsite disposal of these materials may be significant.

10.0 Report Limitations

This Report was prepared by Geo² for the sole and exclusive use of the Client and for the specific purpose for which Geo² was instructed. Unless explicitly agreed otherwise, in writing, this Report has been prepared under Geo²'s Standard Terms and Conditions.

Geo² does not intend, without its written consent through a formal letter of reliance or warranty, for this Report to be disseminated to any party other than the named Client or to be used or relied upon by any party other than the named Client. Use of the Report by any other party is unauthorised and such use is at the sole risk of the user. Any party using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Geo² from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by Geo².

The recommendations contained within this Report represent Geo²'s professional opinions, based upon the information detailed within the Report, exercising the reasonable skill and care to be expected of a professional consultant holding itself out as having the competence, experience, and resources necessary for the purpose of carrying out similar work in scope and character to the services performed. The Report needs to be considered in the light of the proposal and associated limitations of scope. The Report needs to be read and considered in full and isolated sections cannot be used without full reference to other elements of the Report and any previous works referenced within the Report.

11.0 References

British Standards Institute

BS10175:2011 “Investigation of potentially contaminated land sites – code of practice”

CIRIA

C552 Contaminated Land Risk Assessment, a guide to good practise, 2001.

C665, Assessing risks posed by hazardous ground gases to buildings, 2007.

CL:AIRE

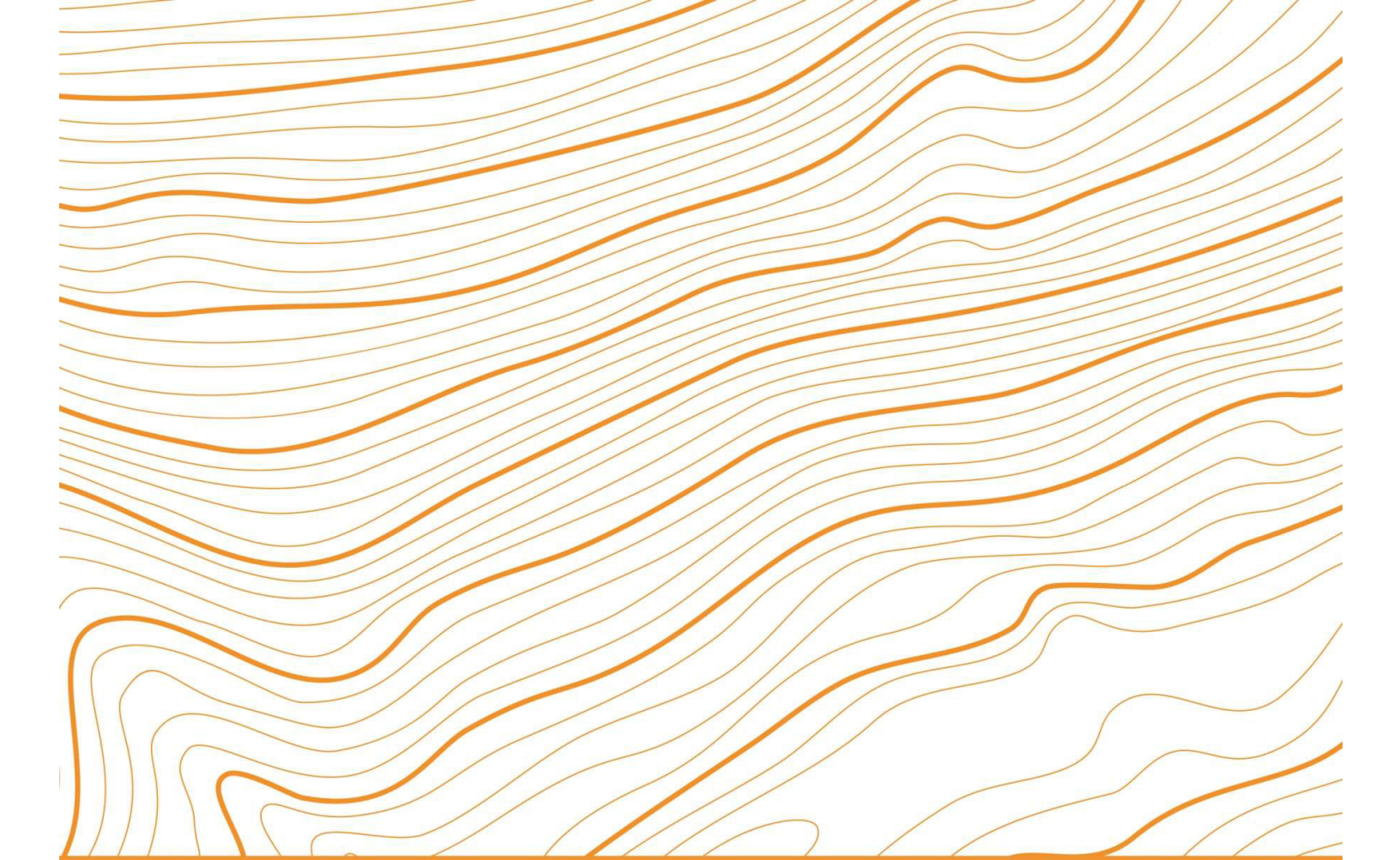
Good Practice For Risk Assessment For Coal Mine Gas Emissions, October 2021.

Environmental Agency

Land Contamination Risk Management (LCRM) Guidance, 2020

Geo² Remediation Ltd

Phase I Preliminary Risk Assessment report, ref. 1433.1.1, Oct 2023



Appendix A – Figures

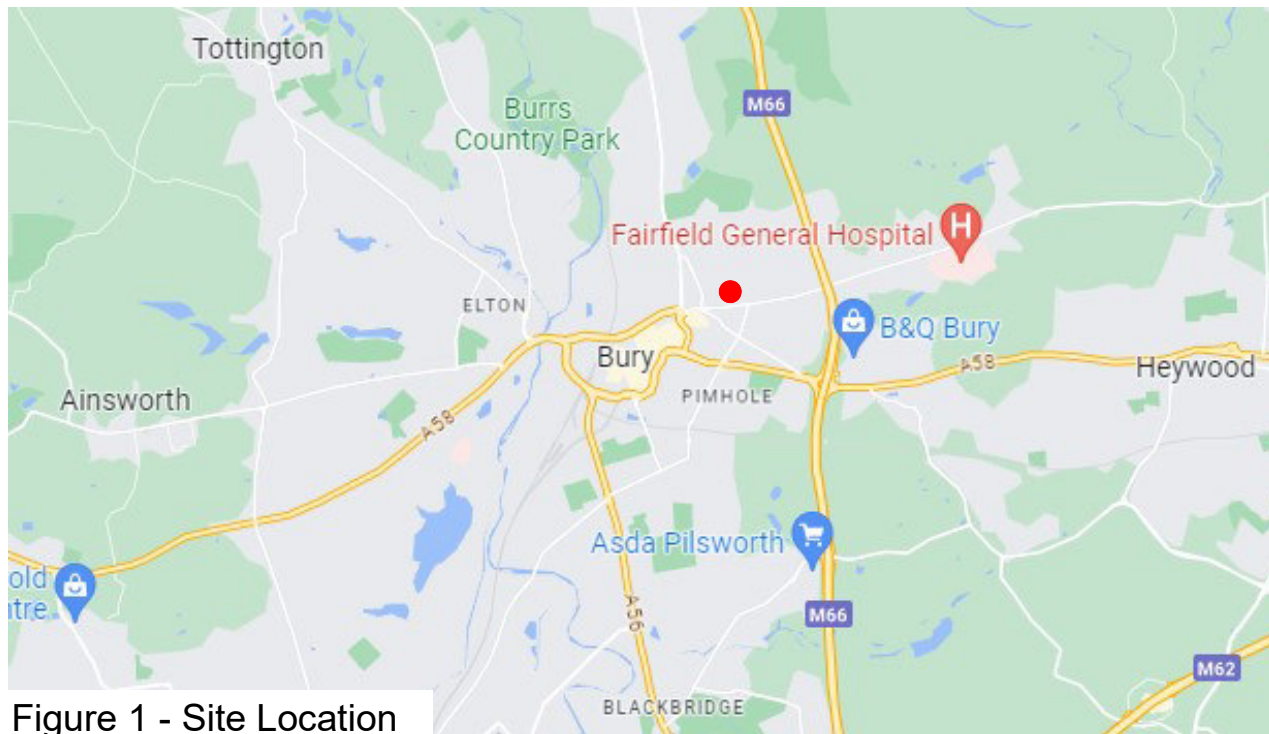


Figure 1 - Site Location

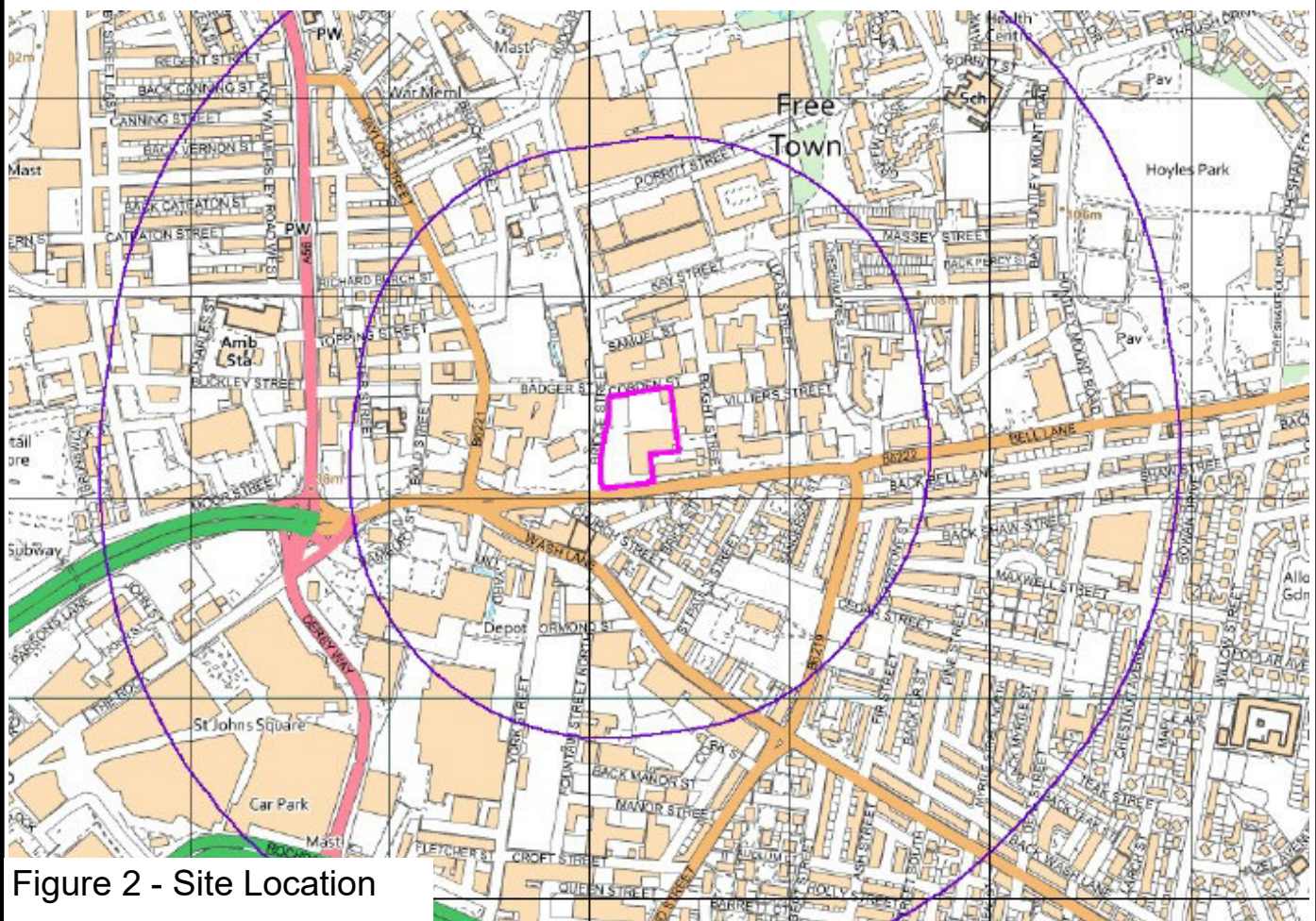


Figure 2 - Site Location



Figures 1 & 2 - Site Location

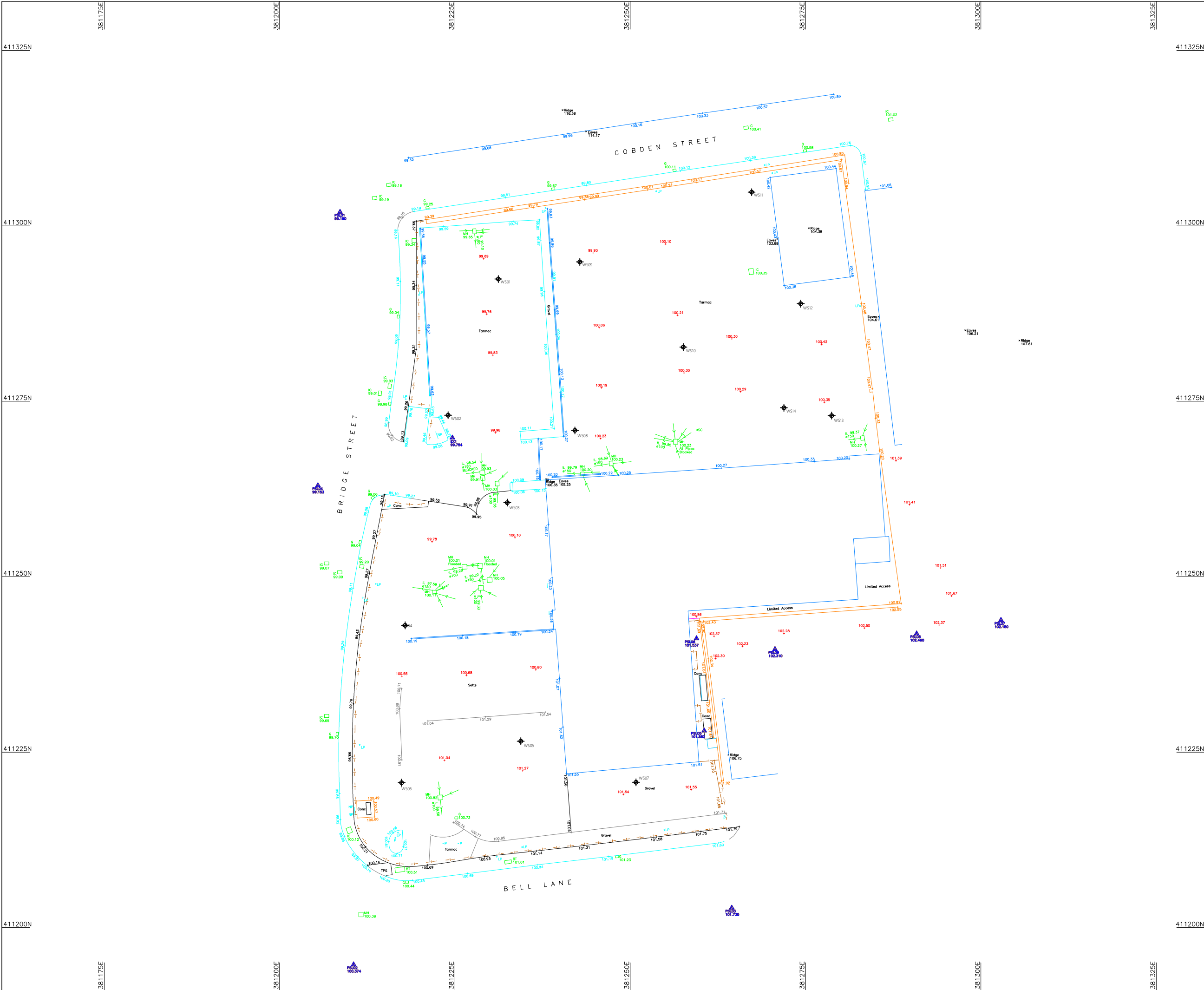
NOT TO SCALE

Site off Bell Lane, Bury, BL9 6XX

Geo² Remediation Limited, The Coniston, Louisa Street, Idle, West Yorkshire, BD10 8NE

Tel: (0113) 2575397

www.geo2.co.uk



ABBREVIATIONS		
AB Automatic Barrier	GV Gas Valve	Sap Sapping
AC Air Conditioning	HR Hand Rail	SC Sling Cock
App Approximate	H Height	Sec Security fence
B Bollard	HE Height	SH Speed Hump
BB Bellhole Beacon	B Illuminated Bollard	SH Stair
Bd Backdrop Level	IC Inspection Cover	Sn Sign
Bh Borehole	ICH Inspection Chamber	SOL Soffit Level
BL Bed / Beam / Base Level	IL Invert Level	SOS Emergency telephone
BP Brick Paving	Im Intercom	Sp Stamp
BR Bollard Removable	IRF Iron Rail Fence	SPC Speed Camera
BRW Brick Retaining Wall	KO Kero Outlet	SPP Street Pedestrian Fence
BS Bus Stop/Shelter	KT Kero Top	SPS Stone Paving Slabs
BT British Telecom	L Light	SPP Street Paving Slabs
BW Brick Wall	LH Lamp Hole	SRW Stone Retaining Wall
BWF Barb Wire Fence	LP Lamp Post	SV Stop Valve
C Column	m Metres	SW Surface Water
CB Call Box	Max Maximum	Ta Tarmac surface
CBE Chase Board Fence	MC Motorway Corridor	Temp Temporary
CCTV Closed Circuit TV	MH Manhole	TH Trail Hole
CF Compulsated Iron Fence	MHB Manhole Blotout	TL Threshold Level
CLF Chain Link Fence	Mk Marker	Tn Trench
Cone Concrete surface	MG Multiple Girth tree	TM Ticket Machine
CPF Concrete Panel Fence	Min Minimum	TP Telephone Pole
CPS Concrete Paving Slabs	MP Marker Post	TPS Tactile Paving Slabs
CTV Cable Television	MRF Metal Railing Fence	TS Traffic Signal
CW Combined Water	MW Monitoring Well	TV Cable TV
D Diameter	NP Name Plate	UB Utility Box
DE Difference in Easing	NPV No Pipe Visible	US Underside
DN Difference in Northing	OHL Overhead Line	UTS Unable To Survey
Dp Downpipe	OHP Overhead Power	VC Vitrified Clay
DPC Damp course level	OP Ornamental Planting	W Waste
DRF Diamond Rail Fence	P Post	WB Water Box
EB Electricity Box	PB Post Box	WHF Wooden Hoarding Fence
EL Electricity cover	PC Pedestrian Crossing	WL Water Level
EP Electricity Pole	PCF Post & Chain Fence	WM Water Meter
FD Full Depth	PM Parking Meter	WMF Wrought Mesh Fence
FH Fire Hydrant	PPF Post & Panel Fence	WPF Wooden Panel Fence
FL Floor Level	PP Post & Rail Fence	Wu Washout
FP Flag Pole	PWF Post & Wire Fence	X2 Multiple instances
FW Foul Water	RE Road End	Ø Diameter in mm
G Gully	RS Road Sign	→ Direction of flow
Ga Gravel surface	RSL Road Sign Illuminated	
GP Gate Post		

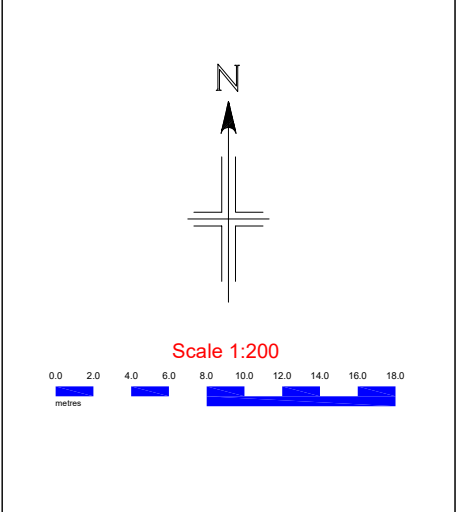
NOTES

PLAN GRID IS LOCAL BASED UPON O.S. NATIONAL GRID
SITE CENTRED ON SURVEY STATION PSL01. SCALE FACTOR=1

ALL LEVELS RELATE TO ORDNANCE DATUM. (OSGM15)
ESTABLISHED USING THE O.S. NATIONAL ACTIVE GPS NETWORK

Geo2_A	Details	SH	SH	30/05/2024
00	Original issue	CD	SA	26/04/2023
Issue	Details	By	Chk'd	Date

SHEET LAYOUT			
SURVEY CONTROL STATIONS			
Number	Easting	Northing	Height
EX1	381224.637	411269.807	99.754
PSL01	381208.623	411301.974	99.190
PSL02	381210.556	411194.731	100.374
PSL03	381264.478	411202.815	101.735
PSL04	381205.467	411263.005	99.153
PSL05	381260.549	411228.054	101.582
PSL06	381259.448	411241.202	101.537
PSL07	381302.865	411243.807	102.150
PSL08	381290.844	411241.898	102.460
PSL09	381270.640	411239.661	102.310



SURVEYED BY CD/WA		DRAWN BY CD	SCALE 1:200
DATE OF ISSUE APRIL 2023		@ A1	
TITLE BELL LANE BURY BL9 6BB TOPOGRAPHICAL SURVEY			
DRAWING No. PS-2337-TS		ISSUE 00	
SHEET 1 OF 1			
PARAGON SURVEYS Chartered Surveyors GEOMATICS: Land & Engineering Surveyors 8 Carr House Lane Wrightington Wigan Greater Manchester WN6 9SH T: (01257) 453200 E: post@ParagonSurveys.co.uk  RICS CIOB Northern Office: Gosforth Lodge, Gosforth, Seascale, Cumbria. CA20 1AS			



NOTE: DO NOT SCALE FROM THIS DRAWING. ALL ERRORS AND OMISSIONS TO BE REPORTED TO WALKER DESIGN. ALL INFORMATION TO BE CHECKED ON SITE PRIOR TO WORKS COMMENCING AND READ IN CONJUNCTION WITH ALL RELEVANT CONSULTANTS AND HEALTH AND SAFETY DRAWINGS AND INFORMATION

AREA SCHEDULE

Site Area		1.44a
Gross Internal Area	PFS	371sqm / 4000sqft
Gross Internal Area	Retail Unit	214sqm / 2303sqft
Gross Internal Area	Retail Unit	25sqm / 270sqft

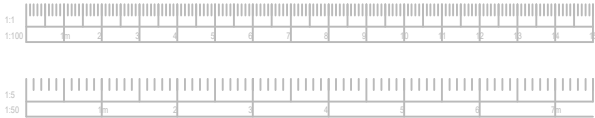
PARKING SCHEDULE

Parking Spaces	44
Staff Spaces	06
Accessible	07
EV	07

The Site
Bell Lane
Bury
BL9 6BB

Legend

	Brushed Concrete Finish
	Tarmac pavement
	Tarmac
	Whiteline
	Existing Levels to be retained
	Existing Levels
	Proposed Levels - Refer to Engineer's Drawings
Proposed Levels to be confirmed by Drainage Engineer	
	Existing Boundary Wall to be retained
	Proposed Boundary Fence
	Proposed Internal Fence
	Proposed Lamp Post
	Proposed Canopy Lights - TBC by the client
	Visibility Splays



PEARL FORECOURTS LTD
CLIENT

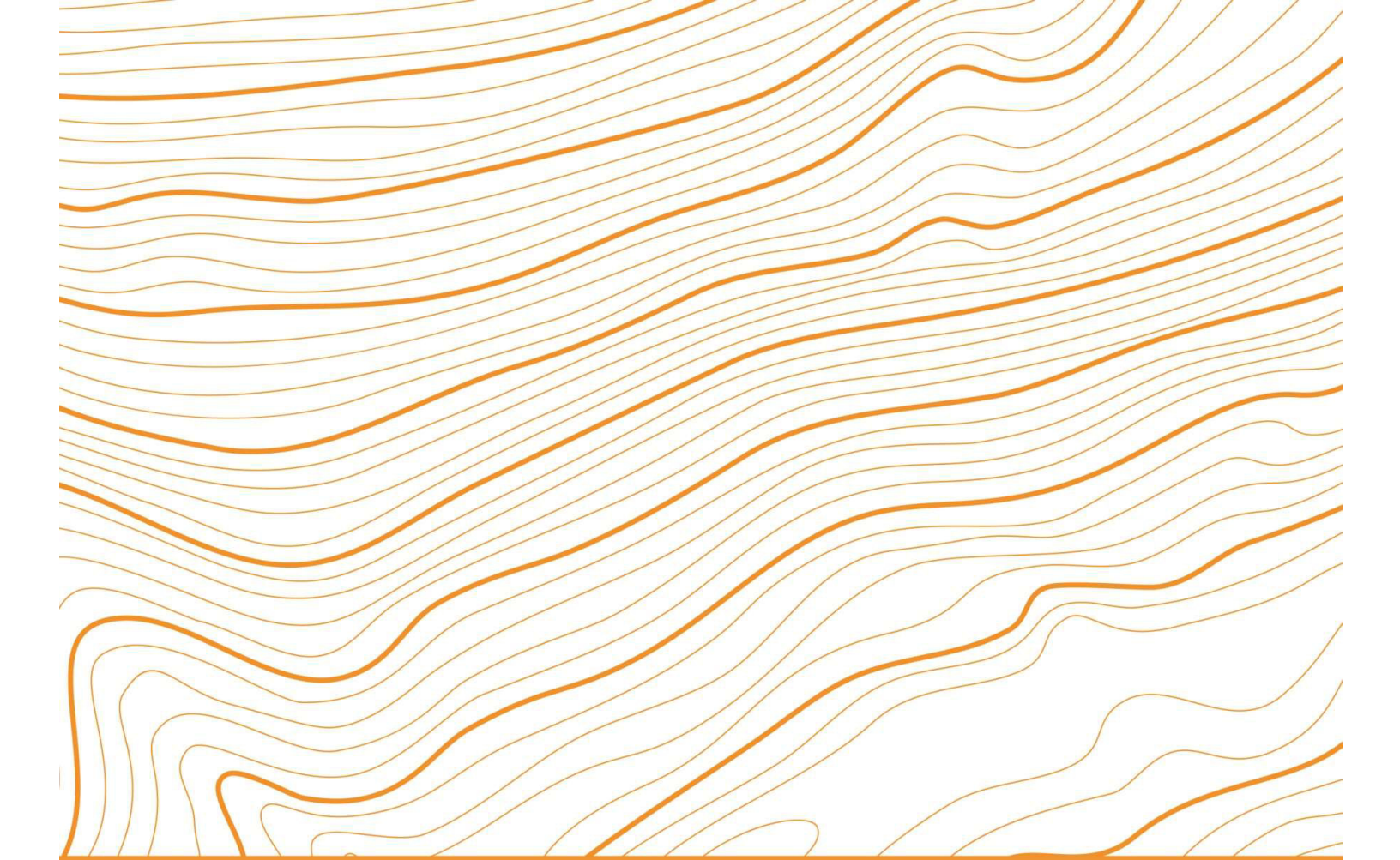
BELL LANE, BURY
PROJECT

PROPOSED SITE PLAN
TITLE

2489.F.104.C
DRAWING NO.

1:250
SCALE@A1
SW/ ADs
DRAWN





Appendix B – Exploratory Hole Logs



Borehole Log

WS01

Sheet 1 of 1

Hole Type	Easting	Northing	Ground Level (m)	Scale
BH	381231.19	411292.42	99.78	1:25
Project Name	Project No.		Start Date	End Date
Site off Bell Lane, Bury	1433		2024-05-23	2024-05-23

Client

Contractor

Consultant

Pearl Forecourts

Cape Site Services

GEO2 - Paolo De Marchi

Inst/ Backfill	Water Levels	Samples and Tests			Level	Depth (thickness)	Strata		
		Depth (m)	Type/ Ref	Results	(m)	(m)	Legend	Description	
		0.65	ES		99.68	(0.10) 0.10		MADE GROUND: Asphalt.	
						(0.23)		MADE GROUND: Concrete.	
					99.45	0.33 (0.32)		MADE GROUND: Soft brown to dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and concrete.	
					99.13	0.65 (0.20)		MADE GROUND: Black sandy GRAVEL of angular fine to coarse brick, mudstone and concrete. Oily sheen observed on the gravel.	
					98.93	0.85 (0.10)		MADE GROUND: Soft brown to dark brown slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and concrete.	
					98.83	0.95 (0.15)		MADE GROUND: Brown slightly clayey sandy GRAVEL of angular fine to coarse brick. Sand is fine to coarse.	
					98.68	1.10 (0.20)		MADE GROUND: Soft dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick, mudstone and concrete.	
					98.48	1.30		Soft greyish brown sandy slightly gravelly CLAY. sand is fine to coarse. Gravel is subrounded fine of quartzite and sandstone.	
		1.70	ES					Becoming firm (2.00 - 2.10m)	
					95.38	4.40 (0.20)		Yellowish grey slightly sandy CLAY. Sand is fine to coarse	
					95.18	4.60 (0.10)		Yellowish grey slightly clayey fine to coarse SAND.	
					95.08	4.70 (0.30)		Yellowish grey slightly sandy CLAY. Sand is fine to coarse	
					94.78	5.00		End of Borehole at 5.00m	

Geo2™ Geod, Conlston House, Louisa Street, Idle, BD10 8NE 0113 257 5397, info@geo2.co.uk, www.geo2.co.uk Borehole Log WS02 Sheet 1 of 1		Hole Type		Easting		Northing		Ground Level (m)		Scale	
		BH		381224.03		411273.02		99.69		1:25	
		Project Name		Project No.		Start Date		End Date			
Site off Bell Lane, Bury		1433		2024-05-23		2024-05-23					
Client				Contractor				Consultant			
Pearl Forecourts				Cape Site Services				GEO2 - Paolo De Marchi			
Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (thickness) (m)	Strata				
		Depth (m)	Type/ Ref	Results			Legend	Description			
		0.60	ES		99.59	(0.10)		MADE GROUND: Asphalt.			
					99.54	(0.05)		MADE GROUND: Grey fine to coarse SAND.			
						(0.35)		MADE GROUND: Soft brown to grey slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is angular to subangular fine to coarse brick.			
					99.19	0.50		Grey to reddish brown slightly clayey sandy GRAVEL of angular fine to coarse brick, mudstone and concrete. Sand is fine to coarse.			
						(0.50)					
					98.69	1.00		End of Borehole at 1.00m			
									0.5		
									1.0		
									1.5		
									2.0		
									2.5		
									3.0		
									3.5		
									4.0		
									4.5		
									5.0		
Remarks								Method, Plant, Stability, Dimensions		Logger	
Terminated at 1.0m bgl due to refusal within Made Ground.								0.00 - 1.00m BH		A Tabb	
Checked By: S Hyde Approved By: S Hyde Status: FINAL											



WS04

Sheet 1 of 1

Client Pearl Forecourts	Contractor Cape Site Services	Consultant GEO2 - Paolo De Marchi
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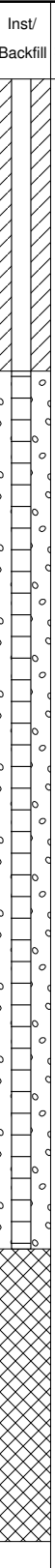
Remarks	Method, Plant, Stability, Dimensions	Logger
Terminated at 1.0m bgl due to refusal within Made Ground.	0.00 - 1.00m BH	A Tabb

Created using Pebble Geo



WS05

Hole Type	Easting	Northing	Ground Level (m)	Scale
BH	381234.39	411226.56	101.37	1:25
Project Name		Project No.	Start Date	End Date
Site off Bell Lane, Bury		1433	2024-05-14	2024-05-14

Inst/ Backfill	Water Levels	Samples and Tests		Level	Depth	Strata		
		Depth (m)	Type/ Ref	Results	(m)	(thickness) (m)	Legend	Description
		0.30	PID	0.20	101.32	(0.05) 0.05		MADE GROUND: Brick pavement.
								MADE GROUND: Greyish sandy gravel with brick fragments. Gravels are fine to coarse subangular and subrounded.
		1.00 1.00	PID ES	0.30	100.87	0.50		MADE GROUND: Brick gravel and cobbles, fine to coarse subangular and angular.
					100.47	0.90		MADE GROUND: Brown sandy silty gravel, with numerous brick fragments.
						(0.20)		
		1.50	PID	0.10	100.27	1.10		Light brown gravelly silty sandy soft CLAY. Occasional small coal fragments. Gravels are fine to medium subrounded and subagular.
					(1.30)			
		2.60	PID	0.10	98.97	2.40		Brown mottled grey gravelly silty soft CLAY. Gravels are fine to medium subangular and subrounded.
					(0.70)			
		3.50	PID	0.10	98.27	3.10		Dark grey slightly sandy silty gravelly firm to stiff CLAY, dry. Gravels are fine to coarse subrounded.
(1.90)								
4.80 4.80	PID ES	0.10						
			96.37	5.00		End of Borehole at 5.00m		

Checked By: S Hyde **Approved By:** S Hyde **Status:** FINAL



WS06

Sheet 1 of 1

Contractor Cape Site Services	Consultant GEO2 - Paolo De Marchi
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Remarks	Method, Plant, Stability, Dimensions	Logger
Terminated at 5.0m bgl at desired depth.	0.00 - 5.00m BH	A Tabba

Checked By: S Hyde **Approved By:** S Hyde **Status:** FINAL



Geo2, Conlston House, Louisa Street, Idle, BD10 8NE
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Borehole Log

WS07
Sheet 1 of 1

Hole Type BH	Easting 381250.82	Northing 411220.70	Ground Level (m) 101.62	Scale 1:25
Project Name Site off Bell Lane, Bury	Project No. 1433	Start Date 2024-05-23	End Date 2024-05-23	

Client Pearl Forecourts	Contractor Cape Site Services	Consultant GEO2 - Paolo De Marchi
----------------------------	----------------------------------	--------------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (thickness) (m)	Strata					
		Depth (m)	Type/ Ref	Results			Legend	Description				
		0.60	ES		101.37	(0.25)		TOPSOIL	0.5			
						0.25				MADE GROUND: Brown slightly clayey sandy GRAVEL of angular to subangular fine to coarse brick, mudstone and quartzite. Sand is fine to coarse.		
						101.17				0.45 (0.08)	MADE GROUND: Brick cobble.	
						101.09				0.53	MADE GROUND: Soft dark brown to black slightly sandy slightly gravelly CLAY with occasional organic material. Sand is fine to coarse. Gravel is angular to subangular fine to medium brick and mudstone. Slight organic odour.	
						100.72				0.90		Very soft light brown to grey CLAY
						99.92			1.70		Firm light to dark brown slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is rounded to subrounded fine quartzite. Occasional relict roots.	2.0



WS08
Sheet 1 of 1

Client	Contractor	Consultant
Pearl Forecourts	Cape Site Services	GEO2 - Paolo De Marchi

Remarks	Method, Plant, Stability, Dimensions	Logger
Terminated at 0.75m bgl due to refusal on concrete.	0.00 - 0.75m BH	A Tabb

Created using Pebble Geo



WS09
Sheet 1 of 1

Client	Contractor	Consultant
Pearl Forecourts	Cape Site Services	GEO2 - Paolo De Marchi

Remarks Terminated at 4m on clay.	Method, Plant, Stability, Dimensions 0.00 - 4.00m BH	Logger P De Marchi
	Checked By: S Hyde Approved By: S Hyde Status: FINAL	



Borehole Log

WS10

Sheet 1 of 2

Hole Type BH	Easting 381257.57	Northing 411282.72	Ground Level (m) 100.28	Scale 1:25
Project Name Site off Bell Lane, Bury	Project No. 1433	Start Date 2024-05-14	End Date 2024-05-14	

Client Pearl Forecourts	Contractor Cape Site Services	Consultant GEO2 - Paolo De Marchi
----------------------------	----------------------------------	--------------------------------------

Inst/ Backfill	Water Levels	Samples and Tests			Level (m)	Depth (m) (thickness)	Strata	
		Depth (m)	Type/ Ref	Results			Legend	Description
		0.30	PID	1.80	100.18	0.10		TARMAC
						0.10		MADE GROUND: Black sandy gravel, fine to coarse subangular. Numerous brik fragments and cobbles.
					99.88	0.40		MADE GROUND: Grey loose gravel of fill with numerous brick fragments and cobbles.
		0.90	PID ES	1.00	99.48	0.80		MADE GROUND: Light brown gravelly cobbly clay. Brick fragments and cobbles. Gravels are fine to coarse subangular.
					99.08	1.20		No Recovery
					98.78	1.50		Brown slightly gravelly silty stiff CLAY. Gravels are fine to medium subrounded.
		1.80	PID	0.50		(1.20)		
		2.90	PID	0.40	97.58	2.70		Grey SAND band.
					97.48	2.80		Grey sandy gravelly cobbly CLAY. Gravels are fine to coarse subrounded.
		3.50	PID	0.30		(1.40)		
		4.50	PID	0.60	96.08	4.20		Grey slightly gravelly SAND. Gravels are fine to coarse subrounded. Occasional siltstone cobble at 4.7m bgl.
						(1.30)		

Remarks Terminated at 5.5m on clayey sand.	Method, Plant, Stability, Dimensions 0.00 - 5.50m BH	Logger P De Marchi
	Checked By: S Hyde Approved By: S Hyde Status: FINAL	



WS10

Hole Type	Easting	Northing	Ground Level (m)	Scale
BH	381257.57	411282.72	100.28	1:25
Project Name	Project No.		Start Date	End Date
Site off Bell Lane, Bury	1433		2024-05-14	2024-05-14

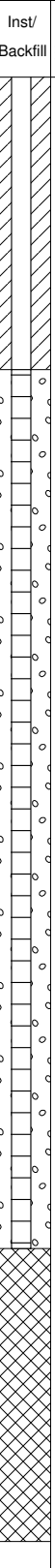
[illegible]

Checked By: S Hyde **Approved By:** S Hyde **Status:** FINAL



WS12

Hole Type	Easting	Northing	Ground Level (m)	Scale
BH	381274.31	411288.90	100.41	1:25
Project Name	Project No.		Start Date	End Date
Site off Bell Lane, Bury	1433		2024-05-14	2024-05-14

Inst/ Backfill	Water Levels	Samples and Tests			Level	Depth	Strata	
		Depth (m)	Type/ Ref	Results	(m)	(m) (thickness)	Legend	Description
					100.36	(0.05) 0.05 (0.15)		TARMAC
					100.21	0.20		MADE GROUND: Concrete with rebar. Plastic membrane at bottom.
	0.30	PID	1.50					MADE GROUND: Grey gravelly sandy silty clay with occasional sandstone cobbles. Numerous brick fragments. Gravels are fine to coarse subangular. Hydrocarbon odour.
						(0.80)		
	0.80 0.80	PID ES	47.40		99.41	1.00		Grey gravelly sandy silty cobbly CLAY. Gravels are fine to coarse, subangular and subrounded. Occasional fine to coarse coal gravels. Becoming less gravelly and stiffer with depth.
	1.30	PID	15.10					
	1.80	PID	2.80					
	2.50	PID	2.00			(3.00)		
	3.50	PID	1.60		96.41	4.00		Grey and brownish gravelly sandy silty CLAY. Gravels are fine to medium subangular and subrounded.
						(1.00)		
4.90 4.90	PID ES	1.30		95.41	5.00		End of Borehole at 5.00m	

Checked By: S Hyde **Approved By:** S Hyde **Status:** FINAL



WS13

Hole Type	Easting	Northing	Ground Level (m)	Scale
BH	381278.72	411272.96	100.34	1:25
Project Name	Project No.		Start Date	End Date
Site off Bell Lane, Bury	1433		2024-05-14	2024-05-14

Inst/ Backfill	Water Levels	Samples and Tests		Level	Depth	Strata			
		Depth (m)	Type/ Ref	Results	(m)	(thickness) (m)	Legend	Description	
					100.24	(0.10)		TARMAC	
						0.10		MADE GROUND: Concrete	
						(0.50)			
						99.74			0.60
						(0.20)			MADE GROUND: Occasional bricks and brick fragments. Concrete floor at 0.8m.
99.54	0.80		End of Borehole at 0.80m						

Checked By: S Hyde **Approved By:** S Hyde **Status:** FINAL

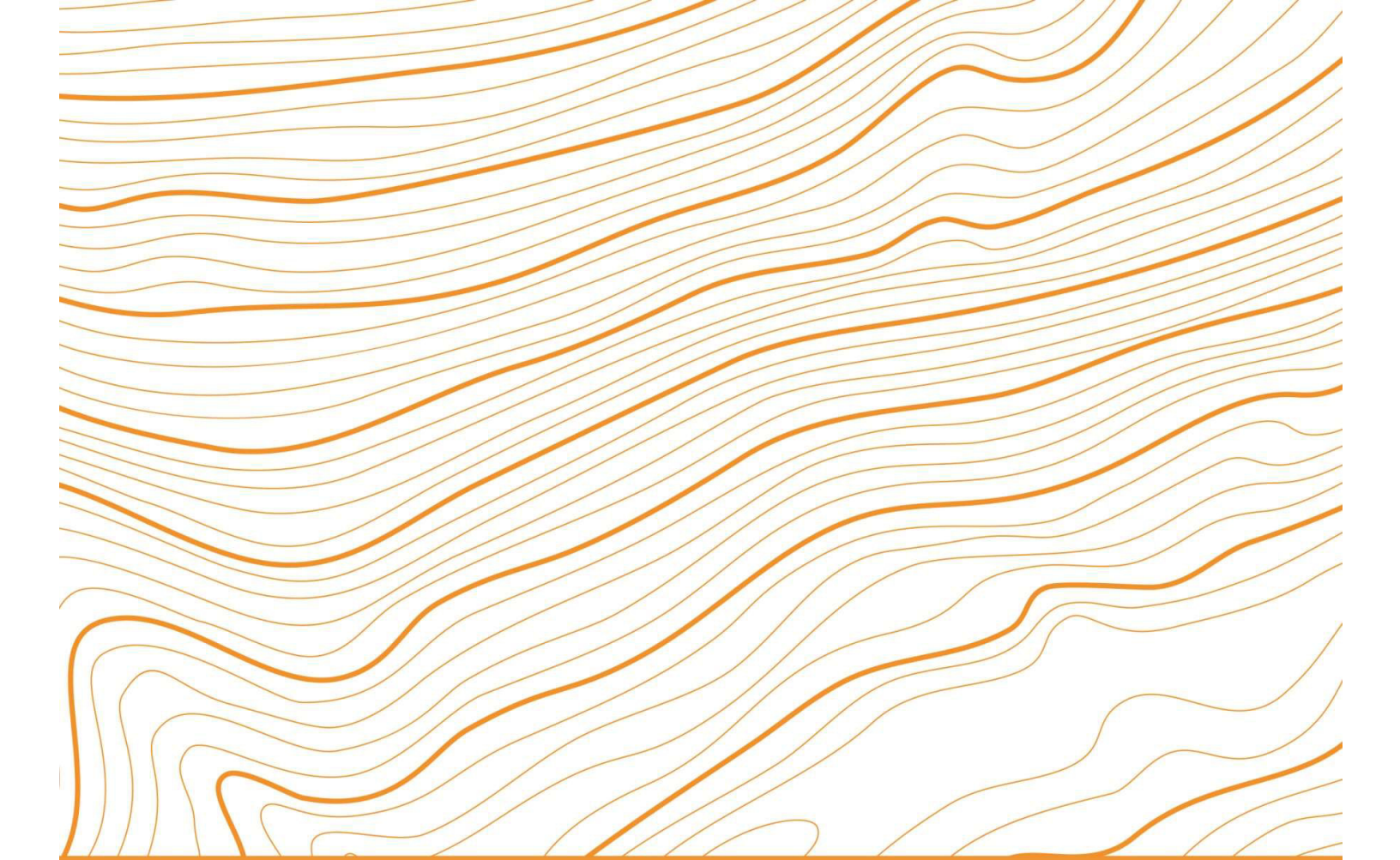


WS14

Sheet 1 of 1

Client	Contractor	Consultant
Pearl Forecourts	Cape Site Services	GEO2 - Paolo De Marchi

Remarks Terminated at 5m on concrete.	Method, Plant, Stability, Dimensions 0.00 - 5.00m BH	Logger P De Marchi
	Checked By: S Hyde Approved By: S Hyde Status: FINAL	



Appendix C – Environmental Laboratory Testing

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/04856
Issue Number: 1

Date: 23 May, 2024

Client: Geo2 Remediation Ltd
Coniston House,
Louisa Street
Bradford
BD10 8NE

Project Manager: Paolo de Marchi/Siobhán Hyde
Project Name: Bell Lane
Project Ref: 1433
Order No: 1433PDM
Date Samples Received: 15/05/24
Date Instructions Received: 16/05/24
Date Analysis Completed: 23/05/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
% Stones >10mm _A	<0.1	5.3	<0.1	<0.1	1.0	5.3	3.8	% w/w	0.1	A-T-044
pH _D ^{M#}	7.50	8.59	8.36	8.54	8.47	8.07	7.45	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.01	0.04	0.04	0.04	0.09	<0.01	0.09	g/l	0.01	A-T-026s
Arsenic _D ^{M#}	8	7	28	3	3	25	22	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	<0.5	<0.5	1.0	<0.5	<0.5	1.0	0.6	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	23	16	30	23	24	117	89	mg/kg	1	A-T-024s
Chromium _D ^{M#}	18	14	20	26	25	13	23	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	18	14	20	26	25	13	23	mg/kg	1	Calc
Lead _D ^{M#}	22	8	79	11	11	182	76	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17	0.19	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	23	20	34	33	33	29	24	mg/kg	1	A-T-024s
Zinc _D ^{M#}	42	44	153	58	55	170	55	mg/kg	5	A-T-024s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
PAH-16MS										
Acenaphthene _A ^{M#}	0.32	<0.01	<0.01	<0.01	<0.01	0.02	0.03	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.17	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.09	<0.02	<0.02	<0.02	<0.02	0.07	0.06	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.48	<0.04	0.15	<0.04	<0.04	0.28	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.78	<0.04	0.16	<0.04	<0.04	0.30	0.25	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.79	<0.05	0.21	<0.05	<0.05	0.49	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.51	<0.05	0.10	<0.05	<0.05	0.17	0.15	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.35	<0.07	0.09	<0.07	<0.07	0.16	0.11	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.49	<0.06	0.16	<0.06	<0.06	0.34	0.24	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A	0.17	<0.04	<0.04	<0.04	<0.04	0.06	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.39	<0.08	0.13	<0.08	<0.08	0.33	0.36	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.29	<0.01	<0.01	<0.01	0.01	0.02	0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.53	<0.03	0.10	<0.03	<0.03	0.17	0.17	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	1.27	<0.03	<0.03	<0.03	<0.03	0.15	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.37	<0.03	0.04	0.07	0.08	0.40	0.22	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.39	<0.07	0.16	<0.07	<0.07	0.33	0.35	mg/kg	0.07	A-T-019s
Total PAH-16MS _A	7.39	<0.08	1.30	<0.08	0.09	3.32	2.51	mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Diethyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Dimethyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Dibenzofuran _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Carbazole _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<5000	-	-	-	-	-	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
4-Nitrophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
3+4-Methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Nitrophenol _A	1760	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Chlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Methylnaphthalene _A	1830	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Phenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Pentachlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
n-Diethylphthalate _A	<5000	-	-	-	-	-	-	µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Nitrobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Isophorone _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachloroethane _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobutadiene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Perylene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
VOC										
Dichlorodifluoromethane _A	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Chloromethane _A	<250	-	-	-	-	-	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromomethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Chloroethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dichloromethane _A	<125	-	-	-	-	-	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<125	-	-	-	-	-	-	µg/kg	5	A-T-006s
Chloroform _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<50	-	-	-	-	-	-	µg/kg	2	A-T-006s
Benzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Trichloroethene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dibromomethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<250	-	-	-	-	-	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Toluene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<75	-	-	-	-	-	-	µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
Chlorobenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
m & p Xylene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
o-Xylene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Styrene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromoform _A [#]	<75	-	-	-	-	-	-	µg/kg	3	A-T-006s
Isopropylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromobenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<50	-	-	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	103	-	-	-	-	-	-	µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<50	-	-	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<75	-	-	-	-	-	-	µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<25	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<75	-	-	-	-	-	-	µg/kg	3	A-T-006s
TPH UKCWG GCxGC + GC Trace										
Alii >C5-C6 _A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Alii >C6-C8 _A	0.61	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Alii >C8-C10 _A	194	<1	<1	<1	<1	6	<1	mg/kg	1	A-T-055s
Alii >C10-C12 _A ^{M#}	392	<1	<1	<1	<1	5	<1	mg/kg	1	A-T-055s
Alii >C12-C16 _A ^{M#}	396	<1	<1	2	<1	9	<1	mg/kg	1	A-T-055s

Envirolab Job Number: 24/04856

Client Project Name: Bell Lane

Client Project Ref: 1433

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS12	WS12	WS10	WS09	WS05	WS09	WS05			
Depth to Top	0.80	4.90	0.90	2.60	4.80	0.50	1.00			
Depth To Bottom										
Date Sampled	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24	14-May-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	6AE	6AE	6ABE	3A	3A	4ABE	4ABE			
Ali >C16-C21 _A ^{M#}	20	<1	<1	2	1	12	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	62	4	12	11	2	28	10	mg/kg	1	A-T-055s
Ali >C35-C44 _A	<10	<1	1	<1	<1	1	1	mg/kg	1	A-T-055s
Total Aliphatics _A	1070	4	13	16	4	61	11	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	103	<1	<1	<1	<1	3	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	389	<1	<1	<1	<1	5	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	464	<1	<1	2	1	19	4	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	28	2	1	4	4	32	18	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	56	2	7	5	6	49	44	mg/kg	1	A-T-055s
Aro >C35-C44 _A	<10	<1	<1	<1	<1	1	1	mg/kg	1	A-T-055s
Total Aromatics _A	1040	4	9	11	11	109	68	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44) _A	2100	9	22	26	14	170	79	mg/kg	1	Calc-As Recd
EPH CWG GCxGC FID Chromatogram _A	Appended	Appended	Appended	Appended	Appended	Appended	Appended			A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Report Notes

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
 The results reported herein relate only to the material supplied to the laboratory.
 The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
 Analytical results reflect the quality of the sample at the time of analysis only.
 Opinions and Interpretations expressed are outside our scope of accreditation.
 The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
 A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "A"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).
 For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
 For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
 All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
 Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.
 Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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

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

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Geo2 Remediation Ltd, Coniston House,, Louisa Street, Bradford, BD10 8NE

Project No: 24/04856

Project: Bell Lane

Date Received: 16/05/2024 (am)

Clients Project No: 1433

Cool Box Temperatures (°C): 15.5

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/04856/1	24/04856/2	24/04856/3	24/04856/4	24/04856/5	24/04856/6	24/04856/7
Client Sample No							
Client Sample ID/Depth	WS12 0.80m	WS12 4.90m	WS10 0.90m	WS09 2.60m	WS05 4.80m	WS09 0.50m	WS05 1.00m
Date Sampled	14/05/24	14/05/24	14/05/24	14/05/24	14/05/24	14/05/24	14/05/24
A-T-006s	21/05/2024						
A-T-019s	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-022s	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
A-T-024s	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-026s	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-031s	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-040s	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-044	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
A-T-045	19/05/2024	19/05/2024	19/05/2024	19/05/2024	19/05/2024	20/05/2024	20/05/2024
A-T-052s	23/05/2024						
A-T-055s	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024
Calc	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024	22/05/2024
Calc-As Recd	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024	21/05/2024

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

End of Report

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/05145
Issue Number: 1

Date: 06 June, 2024

Client: Geo2 Remediation Ltd
Coniston House,
Louisa Street
Bradford
BD10 8NE

Project Manager: Siobhán Hyde
Project Name: Bell Lane, Bury
Project Ref: 1433
Order No: 2757
Date Samples Received: 24/05/24
Date Instructions Received: 24/05/24
Date Analysis Completed: 06/06/24

Approved by:



Amy Riding
Administration Assistant

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
% Stones >10mm _A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.16 ^U	8.31	9.61 ^U	8.40	6.19	5.80	6.21	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.04 ^U	0.02	0.03 ^U	0.03	<0.01	<0.01	0.09	g/l	0.01	A-T-026s
Arsenic _D ^{M#}	19 ^U	4	5 ^U	33	6	4	20	mg/kg	1	A-T-024s
Cadmium _D ^{M#}	0.8 ^U	<0.5	0.9 ^U	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	110 ^U	23	22 ^U	51	38	23	73	mg/kg	1	A-T-024s
Chromium _D ^{M#}	15 ^U	28	7 ^U	14	20	22	18	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Chromium (trivalent)	15	28	7	14	20	22	18	mg/kg	1	Calc
Lead _D ^{M#}	47 ^U	11	292 ^U	164	21	14	86	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	0.30	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	52 ^U	32	7 ^U	19	12	16	22	mg/kg	1	A-T-024s
Zinc _D ^{M#}	137 ^U	56	118 ^U	111	24	38	59	mg/kg	5	A-T-024s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D [#]	NAD ^U	NAD	Chrysotile ^U	Amosite	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	Loose Fibres	Loose Fibres	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045
Asbestos in Soil Quantification % (Hand Picking & Weighing)										
Asbestos in soil % composition (hand picking and weighing) _D	-	-	<0.001	0.002	-	-	-	% w/w	0.001	A-T-054

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.10 ^U	<0.01	<0.10 ^U	0.04	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.10 ^U	<0.01	<0.10 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.58 ^U	<0.02	<0.20 ^U	0.06	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.66 ^U	<0.04	<0.40 ^U	0.24	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	5.75 ^U	<0.04	<0.40 ^U	0.28	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	13.4 ^U	<0.05	<0.50 ^U	0.30	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	9.74 ^U	<0.05	<0.50 ^U	0.17	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	4.36 ^U	<0.07	<0.70 ^U	0.12	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	5.46 ^U	<0.06	<0.60 ^U	0.28	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	2.39 ^U	<0.04	<0.40 ^U	0.05	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	9.31 ^U	<0.08	<0.80 ^U	0.39	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.10 ^U	<0.01	<0.10 ^U	0.02	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	7.45 ^U	<0.03	<0.30 ^U	0.19	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.30 ^U	<0.03	<0.30 ^U	0.05	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	1.37 ^U	<0.03	<0.30 ^U	0.29	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	8.23 ^U	<0.07	<0.70 ^U	0.37	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	70.7 ^U	<0.08	<0.80 ^U	2.85	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Diethyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Dimethyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Dibenzofuran _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Carbazole _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	<5000	-	-	-	-	-	-	µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
4-Nitrophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
3+4-Methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Nitrophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Methylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Chlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,4-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,3-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
1,2-Dichlorobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Chloronaphthalene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
2-Methylnaphthalene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Phenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Pentachlorophenol _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
n-Diethylphthalate _A	<5000	-	-	-	-	-	-	µg/kg	500	A-T-052s
n-Dibutylphthalate _A	<3000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Nitrobenzene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Isophorone _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachloroethane _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Hexachlorobutadiene _A	<1000	-	-	-	-	-	-	µg/kg	100	A-T-052s
Perylene _A	2690	-	-	-	-	-	-	µg/kg	100	A-T-052s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
VOC										
Dichlorodifluoromethane _A	<10	-	-	-	-	-	-	µg/kg	1	A-T-006s
Chloromethane _A	<100	-	-	-	-	-	-	µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromomethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Chloroethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dichloromethane _A	<50	-	-	-	-	-	-	µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromochloromethane _A [#]	<50 ^U	-	-	-	-	-	-	µg/kg	5	A-T-006s
Chloroform _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	<20 ^U	-	-	-	-	-	-	µg/kg	2	A-T-006s
Benzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Trichloroethene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dibromomethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	<100 ^U	-	-	-	-	-	-	µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Toluene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	<30 ^U	-	-	-	-	-	-	µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
Chlorobenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	<10	-	-	-	-	-	-	µg/kg	1	A-T-006s
Ethylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
m & p Xylene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
o-Xylene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Styrene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromoform _A [#]	<30 ^U	-	-	-	-	-	-	µg/kg	3	A-T-006s
Isopropylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	<10	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
Bromobenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	<20 ^U	-	-	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	<10	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	<20	-	-	-	-	-	-	µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	<30	-	-	-	-	-	-	µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	<10 ^U	-	-	-	-	-	-	µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	<30	-	-	-	-	-	-	µg/kg	3	A-T-006s
TPH UKCWG GCxGC + GC Trace										
Alii >C5-C6 _A	<0.05	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Alii >C6-C8 _A	<0.05	0.04	<0.05	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Alii >C8-C10 _A	<10	<1	<10	<1	<1	<1	<1	mg/kg	1	A-T-055s
Alii >C10-C12 _A ^{M#}	<10 ^U	<1	<10 ^U	<1	<1	<1	<1	mg/kg	1	A-T-055s
Alii >C12-C16 _A ^{M#}	<10 ^U	1	<10 ^U	1	<1	<1	<1	mg/kg	1	A-T-055s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS01	WS01	WS02	WS04	WS06	WS06	WS07			
Depth to Top	0.65	1.70	0.60	0.30	0.50	1.10	0.60			
Depth To Bottom	0.85	1.90	0.80	0.50	0.70	1.30	0.80			
Date Sampled	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24	22-May-24			
Sample Type	SOLID	SOIL - ES	SOLID	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES			
Sample Matrix Code	7	3A	7	6AB	6A	3A	6A			
Ali >C16-C21 _A ^{M#}	<10 ^U	<1	11 ^U	2	3	<1	1	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	16 ^U	2	146 ^U	8	22	<1	15	mg/kg	1	A-T-055s
Ali >C35-C44 _A	<10	<1	19	2	5	<1	3	mg/kg	1	A-T-055s
Total Aliphatics _A	16	4	176	14	30	<1	19	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	14	<1	12	2	2	<1	1	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<10	<1	<10	1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<10	2	<10	4	3	<1	3	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	25 ^U	2	<10 ^U	6	3	<1	3	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	236 ^U	4	20 ^U	28	8	<1	4	mg/kg	1	A-T-055s
Aro >C35-C44 _A	<10	<1	<10	2	8	<1	3	mg/kg	1	A-T-055s
Total Aromatics _A	274	8	32	43	24	<1	15	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44) _A	291	12	208	57	54	<1	34	mg/kg	1	Calc-As Recd
EPH CWG GCxGC FID Chromatogram _A	Appended	Appended	Appended	Appended	Appended	N/A	Appended			A-T-055s
BTEX - Benzene _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.05 ^U	<0.01	<0.05 ^U	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
% Stones >10mm _A	<0.1	17.4						% w/w	0.1	A-T-044
pH _D ^{M#}	6.35	9.34						pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.05	0.11						g/l	0.01	A-T-026s
Arsenic _D ^{M#}	5	11						mg/kg	1	A-T-024s
Cadmium _D ^{M#}	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper _D ^{M#}	18	45						mg/kg	1	A-T-024s
Chromium _D ^{M#}	23	11						mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1						mg/kg	1	A-T-040s
Chromium (trivalent)	23	11						mg/kg	1	Calc
Lead _D ^{M#}	16	123						mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	13	14						mg/kg	1	A-T-024s
Zinc _D ^{M#}	35	60						mg/kg	5	A-T-024s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
Asbestos in Soil (inc. matrix)										
Asbestos in soil _D [#]	NAD	NAD								A-T-045
Asbestos Matrix (visual) _D	-	-								A-T-045
Asbestos Matrix (microscope) _D	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A								A-T-045

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	0.05						mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	0.09						mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	0.28						mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04	0.99						mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04	1.13						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05	1.29						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	0.85						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	0.48						mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	<0.06	1.17						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	0.21						mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	<0.08	2.01						mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	0.09						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	0.91						mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	0.05						mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	<0.03	0.93						mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	<0.07	1.96						mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08	12.5						mg/kg	0.01	A-T-019s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9								
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
SVOC excluding PAH-16										
4-Bromophenyl phenyl ether _A	-	<100						µg/kg	100	A-T-052s
Hexachlorobenzene _A	-	<100						µg/kg	100	A-T-052s
Diethyl phthalate _A	-	<100						µg/kg	100	A-T-052s
Dimethyl phthalate _A	-	<100						µg/kg	100	A-T-052s
Dibenzofuran _A	-	137						µg/kg	100	A-T-052s
Carbazole _A	-	267						µg/kg	100	A-T-052s
Butylbenzyl phthalate _A	-	<100						µg/kg	100	A-T-052s
Bis(2-ethylhexyl)phthalate _A	-	<500						µg/kg	500	A-T-052s
Bis(2-chloroethoxy)methane _A	-	<100						µg/kg	100	A-T-052s
Bis(2-chloroethyl)ether _A	-	<100						µg/kg	100	A-T-052s
4-Nitrophenol _A	-	<100						µg/kg	100	A-T-052s
3+4-Methylphenol _A	-	<100						µg/kg	100	A-T-052s
4-Chloro-3-methylphenol _A	-	<100						µg/kg	100	A-T-052s
2-Nitrophenol _A	-	<100						µg/kg	100	A-T-052s
2-Methylphenol _A	-	<100						µg/kg	100	A-T-052s
1,2,4-Trichlorobenzene _A	-	<100						µg/kg	100	A-T-052s
2-Chlorophenol _A	-	<100						µg/kg	100	A-T-052s
2,6-Dinitrotoluene _A	-	<100						µg/kg	100	A-T-052s
2,4-Dinitrotoluene _A	-	<100						µg/kg	100	A-T-052s
2,4-Dimethylphenol _A	-	<100						µg/kg	100	A-T-052s
2,4-Dichlorophenol _A	-	<100						µg/kg	100	A-T-052s
2,4,6-Trichlorophenol _A	-	<100						µg/kg	100	A-T-052s
2,4,5-Trichlorophenol _A	-	<100						µg/kg	100	A-T-052s
1,4-Dichlorobenzene _A	-	<100						µg/kg	100	A-T-052s
1,3-Dichlorobenzene _A	-	<100						µg/kg	100	A-T-052s
1,2-Dichlorobenzene _A	-	<100						µg/kg	100	A-T-052s
2-Chloronaphthalene _A	-	<100						µg/kg	100	A-T-052s
2-Methylnaphthalene _A	-	123						µg/kg	100	A-T-052s
Bis(2-chloroisopropyl)ether _A	-	<100						µg/kg	100	A-T-052s
Phenol _A	-	<100						µg/kg	100	A-T-052s
Pentachlorophenol _A	-	<100						µg/kg	100	A-T-052s
n-Nitroso-n-dipropylamine _A	-	<100						µg/kg	100	A-T-052s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
n-Diethylphthalate _A	-	<500						µg/kg	500	A-T-052s
n-Dibutylphthalate _A	-	228						µg/kg	100	A-T-052s
Nitrobenzene _A	-	<100						µg/kg	100	A-T-052s
Isophorone _A	-	<100						µg/kg	100	A-T-052s
Hexachloroethane _A	-	<100						µg/kg	100	A-T-052s
Hexachlorobutadiene _A	-	<100						µg/kg	100	A-T-052s
Perylene _A	-	606						µg/kg	100	A-T-052s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9								
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
VOC										
Dichlorodifluoromethane _A	-	<1						µg/kg	1	A-T-006s
Chloromethane _A	-	<10						µg/kg	10	A-T-006s
Vinyl Chloride (Chloroethene) _A [#]	-	<1						µg/kg	1	A-T-006s
Bromomethane _A [#]	-	<1						µg/kg	1	A-T-006s
Chloroethane _A [#]	-	<1						µg/kg	1	A-T-006s
Trichlorofluoromethane _A [#]	-	<1						µg/kg	1	A-T-006s
1,1-Dichloroethene _A [#]	-	<1						µg/kg	1	A-T-006s
Carbon Disulphide _A [#]	-	<1						µg/kg	1	A-T-006s
Dichloromethane _A	-	<5						µg/kg	5	A-T-006s
trans 1,2-Dichloroethene _A [#]	-	<1						µg/kg	1	A-T-006s
1,1-Dichloroethane _A [#]	-	<1						µg/kg	1	A-T-006s
cis 1,2-Dichloroethene _A [#]	-	<1						µg/kg	1	A-T-006s
2,2-Dichloropropane _A [#]	-	<1						µg/kg	1	A-T-006s
Bromochloromethane _A [#]	-	<5						µg/kg	5	A-T-006s
Chloroform _A [#]	-	<1						µg/kg	1	A-T-006s
1,1,1-Trichloroethane _A [#]	-	<1						µg/kg	1	A-T-006s
1,1-Dichloropropene _A [#]	-	<1						µg/kg	1	A-T-006s
Carbon Tetrachloride _A [#]	-	<1						µg/kg	1	A-T-006s
1,2-Dichloroethane _A [#]	-	<2						µg/kg	2	A-T-006s
Benzene _A [#]	-	<1						µg/kg	1	A-T-006s
Trichloroethene _A [#]	-	<1						µg/kg	1	A-T-006s
1,2-Dichloropropane _A [#]	-	<1						µg/kg	1	A-T-006s
Dibromomethane _A [#]	-	<1						µg/kg	1	A-T-006s
Bromodichloromethane _A [#]	-	<10						µg/kg	10	A-T-006s
cis 1,3-Dichloropropene _A [#]	-	<1						µg/kg	1	A-T-006s
Toluene _A [#]	-	<1						µg/kg	1	A-T-006s
trans 1,3-Dichloropropene _A [#]	-	<1						µg/kg	1	A-T-006s
1,1,2-Trichloroethane _A [#]	-	<1						µg/kg	1	A-T-006s
1,3-Dichloropropane _A [#]	-	<1						µg/kg	1	A-T-006s
Tetrachloroethene _A [#]	-	<1						µg/kg	1	A-T-006s
Dibromochloromethane _A [#]	-	<3						µg/kg	3	A-T-006s
1,2-Dibromoethane _A [#]	-	<1						µg/kg	1	A-T-006s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
Chlorobenzene _A [#]	-	<1						µg/kg	1	A-T-006s
1,1,1,2-Tetrachloroethane _A	-	<1						µg/kg	1	A-T-006s
Ethylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
m & p Xylene _A [#]	-	<1						µg/kg	1	A-T-006s
o-Xylene _A [#]	-	<1						µg/kg	1	A-T-006s
Styrene _A [#]	-	<1						µg/kg	1	A-T-006s
Bromoform _A [#]	-	<3						µg/kg	3	A-T-006s
Isopropylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
1,1,2,2-Tetrachloroethane _A	-	<1						µg/kg	1	A-T-006s
1,2,3-Trichloropropane _A [#]	-	<1						µg/kg	1	A-T-006s
Bromobenzene _A [#]	-	<1						µg/kg	1	A-T-006s
n-Propylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
2-Chlorotoluene _A [#]	-	<1						µg/kg	1	A-T-006s
1,3,5-Trimethylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
4-Chlorotoluene _A [#]	-	<1						µg/kg	1	A-T-006s
tert-Butylbenzene _A [#]	-	<2						µg/kg	2	A-T-006s
1,2,4-Trimethylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
sec-Butylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
4-Isopropyltoluene _A [#]	-	<1						µg/kg	1	A-T-006s
1,3-Dichlorobenzene _A	-	<1						µg/kg	1	A-T-006s
1,4-Dichlorobenzene _A [#]	-	<1						µg/kg	1	A-T-006s
n-Butylbenzene _A [#]	-	<1						µg/kg	1	A-T-006s
1,2-Dichlorobenzene _A [#]	-	<1						µg/kg	1	A-T-006s
1,2-Dibromo-3-chloropropane (DCBP) _A	-	<2						µg/kg	2	A-T-006s
1,2,4-Trichlorobenzene _A	-	<3						µg/kg	3	A-T-006s
Hexachlorobutadiene _A [#]	-	<1						µg/kg	1	A-T-006s
1,2,3-Trichlorobenzene _A	-	<3						µg/kg	3	A-T-006s
TPH UKCWG GCxGC + GC Trace										
Alii >C5-C6 _A	<0.01	<0.01						mg/kg	0.01	A-T-022s
Alii >C6-C8 _A	<0.01	<0.01						mg/kg	0.01	A-T-022s
Alii >C8-C10 _A	<1	<1						mg/kg	1	A-T-055s
Alii >C10-C12 _A ^{M#}	<1	<1						mg/kg	1	A-T-055s
Alii >C12-C16 _A ^{M#}	<1	4						mg/kg	1	A-T-055s

Envirolab Job Number: 24/05145

Client Project Name: Bell Lane, Bury

Client Project Ref: 1433

Lab Sample ID	24/05145/8	24/05145/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS07	WS08								
Depth to Top	1.00	0.60								
Depth To Bottom	1.30	0.75								
Date Sampled	22-May-24	22-May-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3A	4AB								
Ali >C16-C21 _A ^{M#}	<1	13						mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	<1	94						mg/kg	1	A-T-055s
Ali >C35-C44 _A	<1	59						mg/kg	1	A-T-055s
Total Aliphatics _A	<1	170						mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	2						mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	2						mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	24						mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	96						mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	<1	218						mg/kg	1	A-T-055s
Aro >C35-C44 _A	<1	16						mg/kg	1	A-T-055s
Total Aromatics _A	<1	358						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C44) _A	<1	528						mg/kg	1	Calc-As Recd
EPH CWG GCxGC FID Chromatogram _A	N/A	Appended								A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
 The results reported herein relate only to the material supplied to the laboratory.
 The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
 Analytical results reflect the quality of the sample at the time of analysis only.
 Opinions and Interpretations expressed are outside our scope of accreditation.
 The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client.
 A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Key

Superscript "#"	Accredited to ISO 17025
Superscript "M"	Accredited to MCertS
Superscript "U"	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript "A"	Analysis performed on as-received Sample
Subscript "D"	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript "A"	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).
 For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.
 For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts
 All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
 Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.
 Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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

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

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Geo2 Remediation Ltd, Coniston House,, Louisa Street, Bradford, BD10 8NE

Project No: 24/05145

Project: Bell Lane, Bury

Date Received: 24/05/2024 (am)

Clients Project No: 1433

Cool Box Temperatures (°C): 10.6 & 10.9

NO DEVIATIONS IDENTIFIED

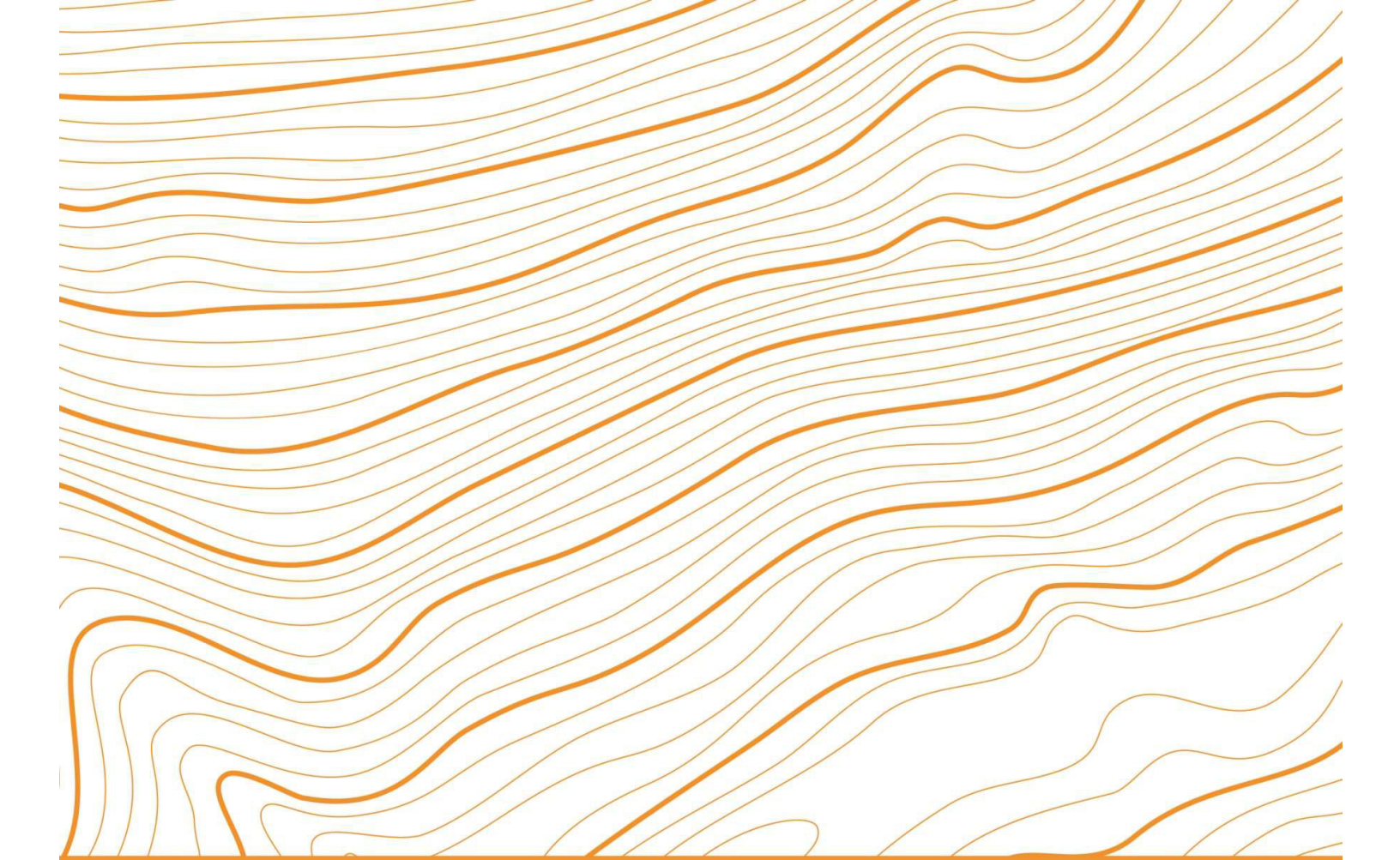
If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	24/05145/1	24/05145/2	24/05145/3	24/05145/4	24/05145/5	24/05145/6	24/05145/7	24/05145/8	24/05145/9
Client Sample No									
Client Sample ID/Depth	WS01 0.65-0.85m	WS01 1.70-1.90m	WS02 0.60-0.80m	WS04 0.30-0.50m	WS06 0.50-0.70m	WS06 1.10-1.30m	WS07 0.60-0.80m	WS07 1.00-1.30m	WS08 0.60-0.75m
Date Sampled	22/05/24	22/05/24	22/05/24	22/05/24	22/05/24	22/05/24	22/05/24	22/05/24	22/05/24
A-T-006s	30/05/2024								30/05/2024
A-T-019s	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024
A-T-022s	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024
A-T-024s	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024
A-T-026s	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	06/06/2024
A-T-031s	01/06/2024	01/06/2024	01/06/2024	01/06/2024	01/06/2024	01/06/2024	01/06/2024	01/06/2024	01/06/2024
A-T-040s	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	06/06/2024
A-T-044	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024
A-T-045	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024	30/05/2024
A-T-052s	30/05/2024								30/05/2024
A-T-054			04/06/2024	04/06/2024					
A-T-055s	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024
Calc	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	03/06/2024	06/06/2024
Calc-As Recd	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024	31/05/2024

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

End of Report



Appendix D – Risk Assessment Terminology

Definitions and Classifications of Risk Assessment Terminology.

Probability

Probability can be defined as the chance of a particular event occurring in a given period of time.

Descriptions of each of the four qualitative terms to be used in this report to describe the perceived probability of any identified pollutant linkage becoming realised are shown below in Table W.

Term	Description
High Likelihood	There is pollutant 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.
Likely	There is pollutant linkage and all the elements are present and in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low Likelihood	There is pollutant 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.
Unlikely	There is pollutant linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

Table W. Description of Probability Classifications

Severity

Severity (consequence) can be defined as the adverse effects (or harm) arising from a defined hazard, which impairs the quality of human health or the environment in the short or longer term.

Descriptions of each of the four qualitative terms to be use in this report to describe the perceived potential severity of any identified pollutant linkage becoming realised are shown below in Table X.

Term	Description
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. 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.
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.
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.
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.

Table X. Description of Severity Classifications

Once the severity and probability of a pollutant linkage has been determined the risk can be assessed using the risk matrix shown overleaf on Table Y.

Risk Matrix

By cross referencing the derived severity and probability in Table Y, below the perceived potential risk can be determined.

		Severity			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High Risk	High Risk	Moderate Risk	Moderate / 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

Table Y. Risk Assessment Matrix

The risk categories detailed above are defined below in the following Table Z.

Term	Description
Very High Risk	There is a high probability that significant harm could arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
High Risk	Significant harm is likely to arise to a designated receptor from an identified hazard at the site without appropriate remedial action.
Moderate Risk	It is possible that without appropriate remedial action, harm could arise to a designated receptor but it is relatively unlikely that any such harm would be severe and if any harm were to occur, it is likely that such harm would be relatively mild.
Low Risk	It is possible that significant harm could arise to a designated receptor from an identified hazard but it is likely that at worst this harm if realised would normally be mild.
Very Low Risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised, it is not likely to be severe.

Table Z. Definition of Risk