



SUPPLEMENTARY GROUND INVESTIGATION & CONTROLLED WATERS RISK ASSESSMENT

AT

FORMER TEXACO FILLING STATION, BURY OLD ROAD, PRESTWICH

1ST APRIL 2024

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CONTENTS

1.0	INTRODUCTION.....	4
1.1.	Background.....	4
1.2.	Proposed Development.....	4
1.3.	Objectives and Scope.....	4
1.4.	Confidentiality	5
1.5.	Limitations	5
2.0	SITE SETTING.....	6
2.1	Site Location and History.....	6
2.2	History of Investigations	7
2.3	Geology and Ground Conditions.....	9
3.0	HAZARD ASSESSMENT & PRELIMINARY CONCEPTUAL SITE MODEL	10
3.1	Hazards Identified with the Proposed Development	10
3.2	Potential Sources of Contamination	10
3.3	Potential Receptors of Contamination	10
3.4	Identification of Pathways	11
3.5	Conceptual Site Model	11
4.0	SITE INVESTIGATION	13
4.1	Site Investigation Rationale	13
4.2	Fieldwork	14
4.3	Laboratory Analysis	15
5.0	GROUND CONDITIONS.....	16
5.1	Anthropogenic Material	16
5.2	Natural Superficial Material.....	16
5.3	Bedrock.....	16
5.4	Groundwater	16
5.5	Contamination	17
5.6	Geological Cross Section.....	17
6.0	CONTROLLED WATERS RISK ASSESSMENT.....	19
6.1	Concentrations in Soils	19
6.2	Controlled Waters Assessment Methodology	19
6.3	Groundwater Test Results	20
6.4	Discussion of Controlled Waters	22
7.0	CONCLUSION	23
	APPENDIX I – LIMITATIONS.....	24
	APPENDIX II – SITE PHOTOGRAPHS.....	26
	APPENDIX III – EXPLORATORY HOLE LOGS AND INSITU TESTING	27
	APPENDIX IV – GEOENVIRONMENTAL LABORATORY TESTING.....	28

1.0 INTRODUCTION

1.1. Background

Eccles Associates Limited (EAL) has been commissioned by Unimore Ltd, hereafter referred to as “the Client”, to undertake a supplementary ground investigation at a former fuel filling station located on Bury Old Road, Prestwich. The additional investigation is required by the Environment Agency as part of a planning approval process for a proposed two-story steel framed retail building with a basement.

1.2. Proposed Development

The proposed two-story steel framed retail building will be set into the sloping ground so that the basement floor level will nearly be at ground level at the southwest end of the site.

Figure 1 shows the proposed development.

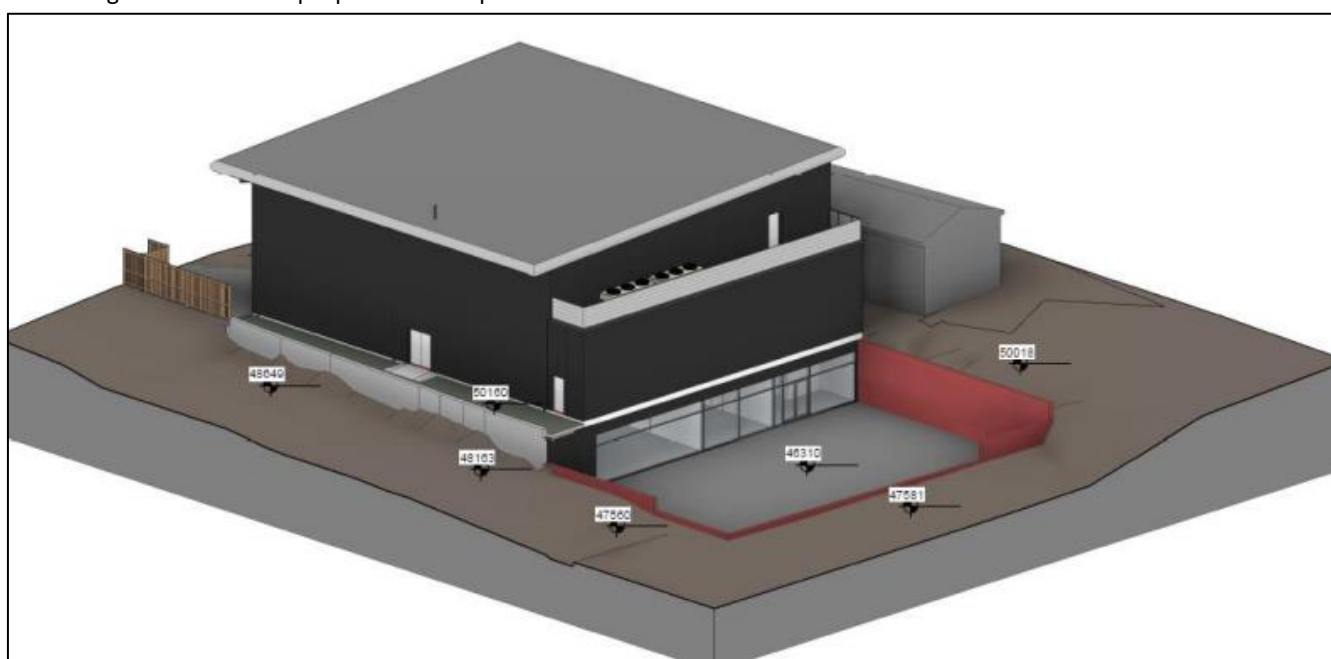


Figure 1: Proposed Development

1.3. Objectives and Scope

Previous investigation has been undertaken at the site.

- GeoAssist Ltd: Phase II Contaminated Land Risk Assessment - Texaco Fuel Station Bury Old Road, Prestwich. Date: January 2014. Report Ref: 5594/FSPCLRA v1.00. Note that this summarises the findings of an earlier Phase 1 Desk Study.
- GeoAssist Ltd: Ground Investigation - Geotechnical - Texaco Fuel Station, Bury Old Road, Prestwich. Date Jan 2014. Report Ref: 5594/FSP-G.
- Redstart Northwest Ltd: Phase 3 Site Investigation – Bury Old Road. Date August 2021. Report Ref 649.00.01.
- Redstart Northwest Ltd: Geotechnical Investigation Factual Report Former Texaco Fuel Station, Bury Old Road, Prestwich, M25 0EY. Date 3rd March 2022 Report Ref 649.00.02.
- Geotechnical Assessment Report for the former Texaco Filling Station, Bury Old Road, Prestwich by Mr. C. Eccles - Brownfield Land Consultant (now trading as EAL) dated April 2022.
- EAL: Former Petrol Filling Station, Bury Old Road – Supplementary Risk Assessment. Letter Report Dated 2nd February 2024.

The site is seeking planning permission (Planning Application 63054) and as part of the consultation process, The Environment Agency has reviewed the reports and it is their assessment that:

“The supporting documents to date do not demonstrate that the risk posed by this proposal are acceptable and do not demonstrate that the risks of pollution have been understood or provide adequate mitigation for these risks. The previous use of the proposed development site as a petrol filling station presents a high risk of contamination that could be mobilised during construction to pollute controlled waters.”

Subsequent to the submission of the EAL letter report of 2nd February 2024, it was advised that this report was insufficient to discharge the concerns of Environment Agency (EA) regarding the assessment of risk to controlled waters. A Teams meeting was held on 11th March 2024 with personnel present from the Client, EAL, EA and Bury Council. At this meeting EA stated that they required further investigation works to assess the risk to controlled waters in more detail.

The purpose of this report is to present the findings of the supplementary ground investigation to address the concerns of the EA by providing an updated controlled waters risk assessment to discharge planning conditions.

This report has been devised to generally comply with the relevant principles and requirements of a range of guidance including but not limited to:

- National Planning Policy Framework (HCA, December 2023).
- BS5930:2015+A1 2020: Code of practice for site investigations.
- BS10175: 2011+A2:2017: Investigation of potentially contaminated sites. Code of practice.
- The Building Regulations 2010. Part C (HM Government 2013).

1.4. Confidentiality

Eccles Associates Ltd has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Eccles Associates Ltd. A charge may be levied against such approval.

1.5. Limitations

The full limitations of this report are presented in Appendix I.

The findings and conclusions of this report have been set out and recommendations given for the proposed construction. If there is a subsequent change in the proposed use, the assessments and conclusions should be reviewed to determine whether they are still applicable for the revised end use.

2.0 SITE SETTING

2.1 Site Location and History

The site is a former Texaco Fuel Filling station, located on Bury Old Road in Prestwich. There were formerly four underground fuel storage tanks: a diesel tank under the forecourt and three petrol tanks towards the rear of the site. The tanks were monitored electronically during the site’s operational phase and no leaks were detected.

All of the tanks were decommissioned and foam filled in 2016 and the three petrol tanks were removed in 2021.

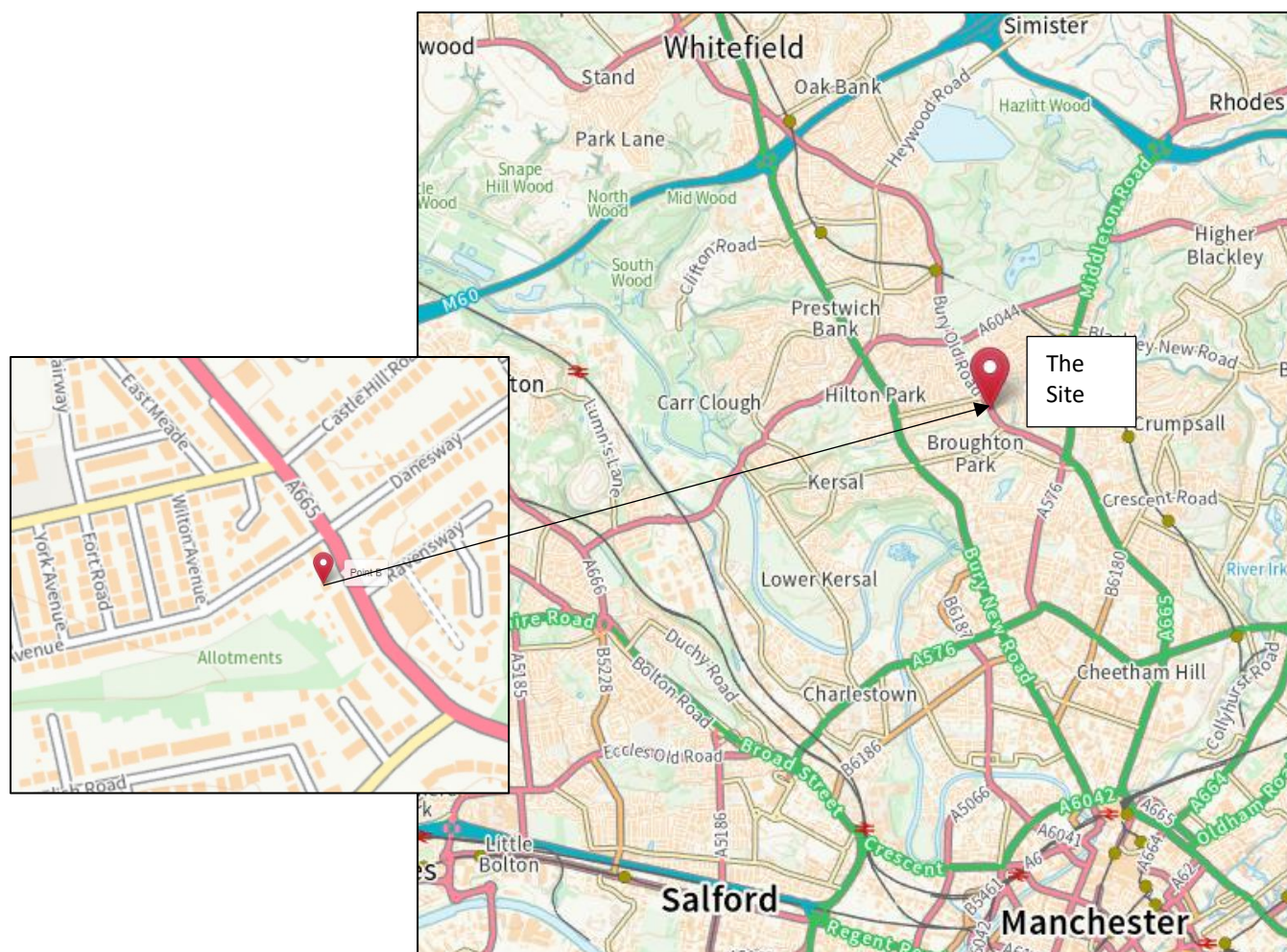


Figure 2 Site Location

Table 1: Site Summary	
Site Address	Western side of Bury Old Road, Prestwich.
Nearest Postcode	M25 0EY
National Grid Reference	Centred at approximate National Grid Reference 382875, 402531
Site Area	Approximately 1,300 m ² (0.13 ha).

At the time of the investigation, the excavation for the basement had been completed and pad foundations constructed. The area of the site adjacent to Bury Old Road was covered by concrete hardstanding. Photographs of the site are presented in Appendix II. There was no evidence of any soil or groundwater contamination from hydrocarbons. The base of the excavation appeared clean. Pooled water, where present, had no sheens or odours. Stockpiled soils from excavations appeared free of staining and odours.

2.2 History of Investigations

The first two reports listed in Section 1.3 by GeoAssist (2014) principally looked at the shallow ground conditions relating to contamination and shallow geotechnical conditions with the investigations going down to a depth of up to 6 m below road level/main site ground level. The deepest hole penetrated to about 1 m below the proposed basement floor level).

Note that as far back as the GeoAssist investigation in 2016 there was no evidence of hydrocarbons being present at the site. They carried out:

- Site condition assessment including noting that:
 - Nearly all the site was covered by concrete with limited areas of vegetation around the perimeter of the site in the western end;
 - The concrete hardstanding had an associated positive drainage network flowing into interceptor separators; and
 - The concrete hardstanding was noted to be in a reasonable condition at the time of the fieldwork and that the drainage was free from detritus and free flowing.
- Eight window sample holes (WS1 to WS8) were put down around the site. Five went to the proposed depth (WS1 to WS3, WS5 & WS8) with three being terminated (WS4, WS6 & WS7) on services or obstructions. SPT tests were carried out and samples taken.
- WS1, WS3 and WS5 had gas/groundwater monitoring standpipes installed.
- A PID was used on site to assess the potential for hydrocarbons to be present, but no hydrocarbons were found.
- Five soil samples were tested for a range of potential contaminants including heavy metals, PAHs, petroleum hydrocarbons and PCBs.
- Monitoring of the standpipe installations in the boreholes confirmed that the depth to groundwater has varied between 4.20 m and 4.50 m across the site.
- Ground Gas: An interim gas risk assessment has been produced for the site and is based on the results of three monitoring rounds based upon the data obtained indicate that the proposed area for the new construction is defined as a CIRIA C665 Characteristic Situation 1 (CS1) very low risk so no special precautions are required for the development.
- No contaminants were identified at levels exceeding the GeoAssist Limited GACs or SGVs for a commercial end use from the investigation and were low and generally suitable for the stricter residential end use.
- The assessment did not identify any potential risks to end users of the site from elevated levels of anthropogenic contamination within the ground.
- Underground Fuel Tanks: The investigation identified three underground fuel storage tanks known to be fitted with the latest highly accurate electronic measuring gauges which are monitored from the kiosk. A printout of the fuel tank net balances were provided. This system enables the operator to immediately detect losses from the tanks via leakage thereby saving the operator both environmental damage costs and fuel loss costs. No fuel losses had been recorded.
- GeoAssist's Geoenvironmental Report Conclusions:
 - *"The subsoils on this site present a low risk to future site users when assessed in compliance with the current UK methodology.*
 - *The controlled waters (groundwater) beneath the site are unlikely to become impacted by the passage of water through the soils on the site.*
 - *The site is defined as a Characteristic Situation 1 in accordance with CIRIA C665 and significant quantities of ground gases and or flows have not been identified during the monitoring period.*
 - *Photo Ionisation Detection has not identified any high levels of Volatile Organic Compounds from the ground across the site.*
 - *The site is highly unlikely to be defined as contaminated land within the context of Part IIA.*
 - *The site is fit for the proposed commercial use.*
 - *The site, in its present condition, does not represent a significant risk to the environment and is unlikely to become an environmental liability in the future provided that the fuel tanks and associated infrastructure are certified safe and removed from site."*

The August 2021 Redstart report for the site was to document the removal of three petrol tanks and determine whether any further remediation was required following this removal. No remediation of contamination was required

after the tanks had been removed. Bury Council's Environmental Protection Officer visited the site during the tank removal process (see their letter of Date 24th April 2023 Reference: CL693.240423) and they also agreed that there was no visual or olfactory evidence of any hydrocarbons in the ground around the tank excavations and no areas of potential hydrocarbon spillages were observed. This provides independent verification that no hydrocarbons were found.

In late 2021, there was removal of a significant volume of soil from the area of the proposed building as part of initial enabling works for this development. The majority of the basement excavation had been carried out.

At the end of January and in early February 2022 Redstart carried out further geotechnical site investigation to present factual information from deeper boreholes drilled for geotechnical design of the new building and basement. This report was issued in early March 2022.

The Eccles Brownfield report of April 2022 was primarily for geotechnical design.

At this site, the previous investigations have demonstrated:

- There is no history of pollution incidents at the site.
- The three petrol tanks have been removed.
- No significantly hydrocarbon impacted ground was encountered around the removed tanks, this work was carried out in the summer during a period of relatively warm weather and there was an absence of hydrocarbon odours which is unusual for works of this nature.
- Site investigations have found no evidence of contamination in the Made Ground from the diesel tank in the area between the new basement and the road. Note that this tank was foam filled almost 8 years ago in 2016.
- Only one sample from the tank removal had VOC results greater than the detection limits but these were very low concentrations of three BTEXs in a single sample, at these concentrations this would not pose a risk to controlled waters, but note that the tested soil has been removed from the site as part of the basement excavation:
 - Toluene – TP4 1.80mbgl -0.0371mg/kg
 - M+P-xylene – TP4 1.80mbgl - 0.0218 mg/kg
 - O-xylene – TP4 1.80mbgl - 0.0144mg/kg
- The Developer undertook the majority of the basement excavation in in 2021 removing most of the Made Ground from the basement area.
- In late January/early February 2022 two deep boreholes were carried out within the basement excavation, extending to depths of more than 13.0 m below the base of the basement. During these works:
 - There was no evidence of hydrocarbons in the excavated side slopes.
 - The boreholes found no evidence of contamination in the underlying natural soils.
 - At the time of carrying out these boreholes there was some standing water in the base of the excavation, there was no hydrocarbon sheen on the water.
 - Also in BH2, there was also no hydrocarbon sheen in the water in the borehole after the borehole was left standing open overnight (as witnessed by Mr Eccles)
 - In late 2023 the developer employed contractors to commence basement excavation and construction. The majority of the basement is constructed with many of the column footings for the building also constructed. This can be seen in Appendix B. There was again no evidence of hydrocarbon contamination in the excavated soils or in the natural soils at basement formation level.
- Note that over the majority of the site (and where the Made Ground was deepest, and in the hydrogeologically down gradient part of the site) all the Made Ground has been removed for the basement excavation. Natural ground was present in the base of the basement excavation over the whole footprint, see Figure 1 for the area of basement excavation.

In terms of the removal of Made Ground from the site, all the Made Ground has been removed from below the site within the area in yellow as shown in Figure 3. Note that at this site the natural ground level falls to the west/left of the image below and where the Made Ground remains on the right of the image below, there is thinner Made Ground.

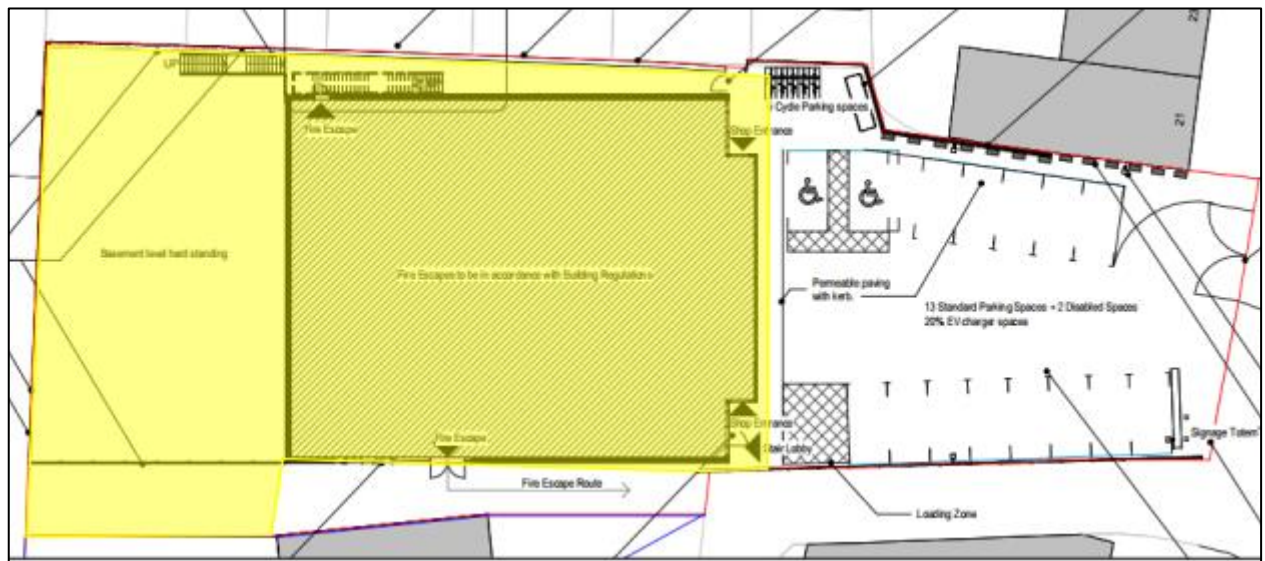


Figure 3: Area Where All the Made Ground Has Been Removed in Yellow (Base plan Debtal Drawing DA14079.2.401.4, on Bury Planning Portal)

In the EAL letter report of 2nd of February 2024 it was reiterated that through the various works it was assessed that the site posed a low risk to controlled waters due to multiple lines of evidence indicating that there was no hydrocarbon source at the site including:

- No investigations at the site had found any concentrations of contaminants at levels of concern and overall concentrations were very low.
- The majority of the Made Ground at the site had been removed to form the basement including all Made Ground in the area of the former tank farm.
- The later geotechnical boreholes also had no evidence of hydrocarbons:
 - No hydrocarbon odours or visual evidence of hydrocarbons either in samples or as sheen on the water in the boreholes (not even after standing over night).
 - Due to the lack of evidence of hydrocarbons in the previously removed Made Ground and the lack of evidence of hydrocarbons in these deep boreholes, no chemical testing was undertaken as it was deemed unnecessary. These two holes were located:
 - BH1 to 13.50 m depth (about 17.50 m below former hard standing level) was located at the hydrogeological down gradient location of the former tank farm.
 - BH2 to 16.88 m depth (about 20.88 m below former hard standing level) was located on the edge of the former tank farm.

It should also be noted that no piling was to be carried out as part of the works because the building would have shallow pad foundations (already constructed)..

2.3 Geology and Ground Conditions

The published geology of the site indicates deep drift deposits of glacial sand and gravel, which may overlie Glacial Till (sandy gravelly clay) at depth. Bedrock is indicated to comprise Permo-Triassic strata of the Collyhurst Sandstone Formation which overlies the Upper Carboniferous Coal Measures. Boreholes and maps available from the British Geological Survey online database indicates the site is within a deep glacial channel, with rockhead some 70 m deep.

The 2014 investigation encountered shallow Made Ground to depths ranging from 0.90 m to 2.80 m, overlying sand with silt/clay. Bedrock was not encountered. Monitoring of the standpipe installations in the boreholes confirmed that the depth to groundwater has varied between 4.20 m and 4.50 m across the site (about 46.50 m OD).

The three underground petrol storage tanks were removed in early August 2021. Soon after this, trial pitting across this area encountered Made Ground to between 1.20 m and 2.00 m depth (these pits were carried out from a lower depth than the original ground surface as there had been soils removed from this area. The Made Ground was described as demolition materials including asphalt, clinker, slag, concrete, brick, metal and wood, and ashy sand. Natural ground comprised brown silty fine glaciofluvial sand. No groundwater was encountered.

The deeper boreholes drilled in 2022 were undertaken after the excavations for the basement and are therefore at around 4.00 m below the previous ground levels. The downward succession from the level of the reduced level excavation for the basement was:

- Made Ground (imported 6F5 capping) was found to 0.50 m and 0.80 m depth.
- This was underlain by predominantly granular glacial deposits although interlaminated/interbedded firm brown silty slightly fine sandy Clay & brown silty fine Sand was present. There were also beds of sandy very clayey Silt present.
- Glacial Till present at depth of 14.00 m in borehole BH2 (BH1 did not go deep enough having been terminated at 13.50 m).
- Possible weathered bedrock was identified in one hole at 16.70 m depth, although this may represent a boulder.
- Groundwater was at a depth of about 0.50 m below the top of the capping in the excavated area at about 45.35 to 45.50 m OD.

3.0 HAZARD ASSESSMENT & PRELIMINARY CONCEPTUAL SITE MODEL

3.1 Hazards Identified with the Proposed Development

The hazard identification is based on the assumptions presented below:

- The site will be a commercial/industrial development and has a basement.
- Limited soft landscaping is proposed.
- Drinking water will be from mains supply.

3.2 Potential Sources of Contamination

The multiple phases of investigation and removal of the former tanks and the basement excavation have all encountered clean natural soils or negligible contaminant concentrations. The ground below and around the former tanks has all been removed. The former interceptors were clean and in a good state. There is the possibility that there were leakages of fuel between the tanks and the pumps but there are no records of this or significant spillages at the pumps themselves.

3.3 Potential Receptors of Contamination

Based on the data previously discussed, the following potential receptors to contamination have been identified:

Table 3: Identified Potential Sensitive Receptors	
A	Humans – Pre-development completion, i.e. working on site during demolition and construction.
B	Humans working on the site post construction.
C	Off-site Human Health receptors: Adjacent residential properties
D	Surface Waters: Tributary of the River Irwell located 1.8 km to the west (just to the west of Kersal Road M25 9SW). Note that there is a lake in Broughton Park but this 700 m to the south and is not a viable receptor.
E	Groundwater –Groundwater within drift deposits and bedrock (Secondary Aquifers)
F	Local flora and fauna during and post demolition and construction.
G	Building structure and services.

3.4 Identification of Pathways

Pathways to Human Health

There are various routes by which a potential contaminant may reach a receptor. For example, in areas where contaminated material is exposed, dermal contact with the material, inhalation or ingestion of dust may occur.

Given the previous investigation data and the current status of the construction works and that the site will be mainly covered by hardstanding and commercial/industrial buildings, with a no perimeter landscaping. Pathways such as long-term direct contact and dust inhalation/ingestion, and contaminant uptake by home grown vegetables therefore do not apply.

Ground Gas

Previous investigations have not found any elevated gas concentrations, and these were before tank removal. The most likely location for any hydrocarbons to be present will be below the proposed car park in the east of the site where these will disperse to the open air. Note that the basement will be fully tanked/waterproofed and this provides significant protection against vapour entry.

Pathways to Controlled Waters

Leaching of contaminants could occur through the granular glacial deposits to groundwater in the Secondary A aquifer drift and then into the bedrock. However, there are low permeability layers in the granular glacial deposits which will impede vertical migration and lateral migration to the west where the ground is much lower due to the presences of a dry valley and this is anticipated to be the main groundwater flow direction at shallow depth.

It should also be noted that there is also a bed of sandy glacial clay above the bedrock so there is a very low risk of migration of hydrocarbons to the bedrock which is at a depth of over 20 m below the level of Bury Old Road and more than 16.5 m below the level of the basement floor. There is considerable potential for attenuation of hydrocarbons preventing migration to depth and into the bedrock.

There are not any viable overland migration pathways for surface run off to reach any controlled waters receptors.

Other Pathways

Based on the current knowledge of the site, other potential pathways, such as phytotoxic effects on sensitive plants and chemical attack on foundations and services, do not need to be taken into account. Permeation of contaminants through water pipes needs to be considered.

3.5 Conceptual Site Model

In accordance with BS 10175, a schematic section has been developed for the site based on the previously presented data and contaminant linkage assessment. The ground model and proposed commercial end use described above should be considered broadly representative of residential end use as defined in SR3 “Updated Technical Model to the CLEA Model” (SC050021/SR3, 2011) for the purpose of this report.

The model shows the predicted geology and topography, the limited potential for the presence of contamination sources with the main receptor being considered as part of this investigation being the groundwater Secondary A Aquifer. In particular it should be noted that there has been no evidence of significant hydrocarbon concentrations at this site through three phases of investigation over the last eight years.

The model is presented in Figure 4. Overall, the contamination risk is very low:

- Absence of significant hydrocarbon contamination present at the site.
- Potential for limited and localised TPH concentrations below and down gradient of the former dispensing pumps and fuel lines.
- Almost 100% coverage of the site pf impermeable surfacing and buildings preventing ingress of water.
- Ground gas monitoring indicated Characteristic Situation CS1 conditions.

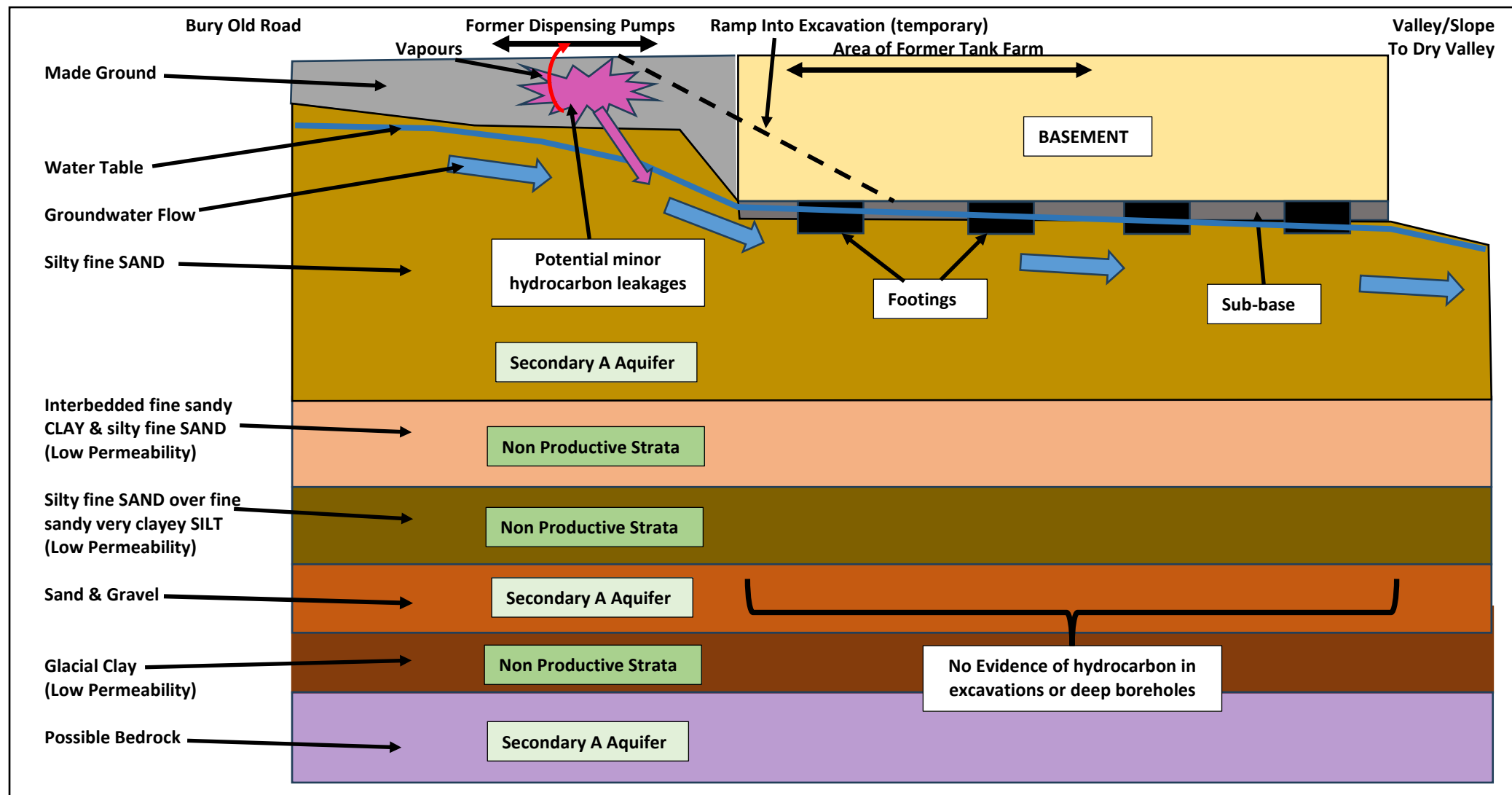


Figure 4: Conceptual Ground Model (not to scale)

4.0 SITE INVESTIGATION

4.1 Site Investigation Rationale

The location of the exploratory holes was decided based on the conceptual ground model and the previous investigations having difficulty penetrating the ground in the eastern end of the site. It should be noted that in 2022 four boreholes (BH3 & BH3A to BH3C) were attempted below the former forecourt of the site. A whole day was spent with a coring team and a cable percussive boring rig and crew. However, the deepest hole was less than 1 m due to multiple layers of concrete/obstructions. Note that no hydrocarbon odours or visual evidence of hydrocarbons were encountered in any of these holes.

The proposed wells were located as follows:

- MW1 to MW3 located in the basement down hydraulic gradient of the former tanks.
- MW4 located in the basement below the former tanks.
- MW5 located to the east of the basement but to the west of the former pumps to be down hydraulic gradient of any minor spillages. First attempt (MW105A) hit an obstruction at 0.70 m). Repositioned to MW105.

The as dug hole locations are shown in Figure 5, together with the holes from previous investigations.

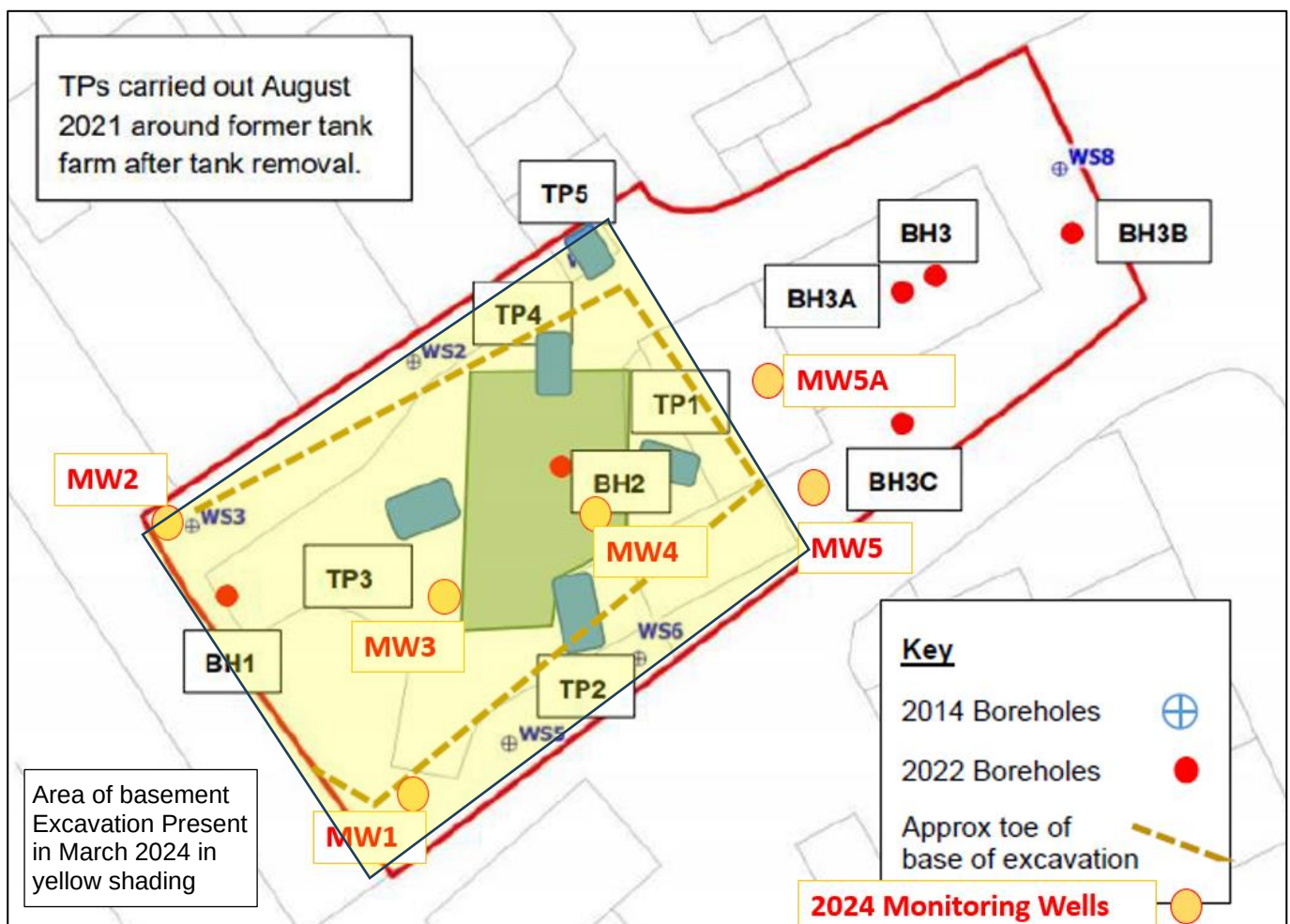


Figure 5: Exploratory Hole Locations

4.2 Fieldwork

Boreholes

The boreholes were conducted on the 14th March 2024. A Chartered Geologist with 25 years experience supervised the works, described the ground encountered, carried out in situ testing and collected the samples for testing.

Fieldwork procedures were undertaken in accordance with the relevant sections of: BS5930:2015 + A1:2020 Code of Practice for Site Investigations and BS10175: 2011+A2:2017: Investigation of potentially contaminated sites.

The investigation comprised holes drilled using a DART window sample rig. 51 mm internal diameter HDPE monitoring wells were installed as deep as possible. Difficulty in sinking the holes was found due to high groundwater conditions. Blowing sands were encountered which infilled the casing, hence the holes could not be cased off.

The hole locations were surveyed using a survey grade GPS system.

The depths of exploratory holes, descriptions of strata encountered and comments on groundwater conditions are given on the records in Appendix III with a list of all of the holes in Table 4 below:

Table 4: Summary of Exploratory Holes					
Exploratory hole ID:	Type:	Date:	Maximum Depth (m bgl) (m OD):	Termination Reason	Monitoring Well Slotted Section, mbgl
MW1	Window Sample	14/03/2024	3.00 (70.04)	Water ingress prevented further progress	1.5 m to 2.0 m*
MW2	Window Sample	14/03/2024	2.00 (70.82)	Water ingress prevented further progress	1.0 m to 2.0 m
MW3	Window Sample	14/03/2024	3.00 (69.97)	Water ingress prevented further progress	1.0 m to 2.0 m*
MW4	Window Sample	14/03/2024	4.00 (69.25)	Water ingress prevented further progress	0.5 m to 1.5 m*
MW5A	Window Sample	14/03/2024	0.70 (76.72)	Obstruction (brickwork)	-
MW5	Window Sample	14/03/2024	6.00 (71.44)	Target depth	1.5 m to 2.5 m *

*Well could not be installed deeper due to collapsing ground

Sampling and Chemical Analysis of Soils

On-site testing was carried out using a PID to test for volatile hydrocarbons (VOCs). The procedures used were in accordance with the CIRIA “VOCs Handbook. Investigating, assessing and managing risks from inhalation of VOCs at land affected by contamination (C682, 2009)” using the headspace method with soils in sealed separate plastic bags. These were separate to the samples taken for laboratory chemical analysis. The results of the PID tests are presented on the logs with all test results being less than the instrument detection limit of 1 ppm.

Disturbed samples of material from beneath the site were collected for laboratory analysis. Samples were taken at regular depths, changes in strata and any discrete horizons. Samples were obtained using a fresh pair of nitrile gloves.

Samples scheduled for analysis of organic contaminants were placed in amber glass jars with a minimum of headspace. The glass jars were immediately sealed with polytetrafluoroethylene (PTFE) lined caps and labelled. The small disturbed samples were placed in polypropylene tubs with a minimum of headspace, sealed with airtight polypropylene 'snap-on' lids and labelled. The labels detailed individual sample number, location, depth and sampler identity.

Collected samples were stored away from sunlight in temperature controlled conditions and transported by courier to the laboratory. Chain of custody forms were completed for all samples sent to the laboratory. The forms detailed individual bottle identification number and sample location..

Sampling and Chemical Analysis of Groundwater

On the 18th March 2024, the wells were developed and purged with three well volumes of water removed from MW1, 3, 4 and 5. Only one well volume was removed from MW2 as it was purged dry and was very slow to recover.

Ground Gas Monitoring

Two rounds of ground gas monitoring were carried out on 20th and 27th March 2024. On 20th March this monitoring was prior to sampling the wells. The monitoring was to determine whether there was any evidence of hydrocarbons in the wells through the presence of methane and PID measurements. The results of this ground gas monitoring is summarised below:

- All methane concentrations were less than the instrument detection limit of 0.1 %.
- All PID measurements were less than the instrument detection limit of 1 ppm.
- Carbon dioxide concentrations varied from 0.1 to 0.5 % in MW1 to MW4 with 0.8% in MW5.
- Oxygen concentrations varied from 13.5 to 18.7 % w/w.
- All H₂S and CO concentrations were less than the instrument detection limit of 1 ppm.
- The atmospheric conditions on 20th March 2024 varied from 997 to 998 mbar but was higher than 1,000 mbar on 27th March 2024.
- Note that in MW1 to MW4 the filter sections were completely flooded so gas monitoring was just from de-gassing of groundwater with only MW105 having a water level lower than the top of the filter section.

The groundwater levels were recorded after the monitoring as presented in Section 5.4.

Sampling of Groundwater

Following the initial round of ground gas monitoring on 20th March 2024 the wells were sampled. The groundwater samples were collected using procedures that ensured the collection and preservation of sample quality. All water samples were taken using separate disposable bailers, to avoid cross contamination, with a bottom pour tap, to minimise the loss of more volatile components. A fresh pair of nitrile gloves were used for sampling each well.

Samples were placed in laboratory prepared amber bottles with a minimum of headspace. The bottles were immediately sealed with polytetrafluoroethylene (PTFE) lined caps and labelled. The labels detailed individual sample number, location, depth and sampler identity. Each sample comprised two amber glass bottles and two amber glass vials.

The dispatched to the laboratory on the same day as they were taken in a cool box with frozen freezer packs and appropriate chain of custody records.

There was no evidence of floating free hydrocarbon product (LNAPL) at the site.

4.3 Laboratory Analysis

The soil samples were sent to The Environmental Laboratory (ELAB) in Hastings for the analysis which comprised just PAH, TPH CWG and VOC analysis. The water samples were sent to i2Analytical Ltd and were tested for pH, heavy metals, sulphate, phenol, PAH, TPH CWG and VOC analysis. The results of the testing are presented in Appendix IV.

5.0 GROUND CONDITIONS

5.1 Anthropogenic Material

A thin layer of capping/6F5 and sub-base materials were encountered in the holes located in the basement level holes (MW1 to MW4) above a geotextile fabric (excavation base). This material was mainly virgin limestone aggregate with limited quantities of a recycled aggregate present (mainly brick).

MW5A found demolition materials and a brick obstruction at 0.70 m bgl.

In MW5 there was 3.00 m (to 74.44 m OD) of fill encountered comprising demolition materials, ash and natural gravels. The bottom 0.25 m of fill was clay with glass, ash, mortar, quartz and a piece of rubber.

5.2 Natural Superficial Material

Glaciofluvial sheet deposits comprising mainly silty sands with varying amounts of silt were encountered in holes MW1 to MW4.

5.3 Bedrock

Bedrock was not encountered in this phase of investigation.

5.4 Groundwater

Groundwater was encountered in all holes except MW5A during drilling and installation. Blowing sands were encountered.

The groundwater level monitoring is presented below:

Table 5: Groundwater Depths and Levels							
Hole ID	Depth to Base of Well (m)	Depth to Groundwater (m bgl)			Reduced Level of Groundwater (m OD)		
		18/03/24	20/03/24	27/03/24	18/03/24	20/03/24	27/03/24
MW1	2.10	0.38	0.37	0.37	72.66	72.67	72.67
MW2	1.80	0.25	0.29	0.30	72.57	72.53	72.52
MW3	1.77	0.30	0.25	0.26	72.67	72.72	72.73
MW4	1.35	0.50	0.48	0.49	72.75	72.77	72.76
MW5	4.00	3.02	2.94	2.95	74.42	74.50	74.49

The groundwater levels on 20th March 2024 are presented in Figure 6. The direction of groundwater flow is towards the southwest.

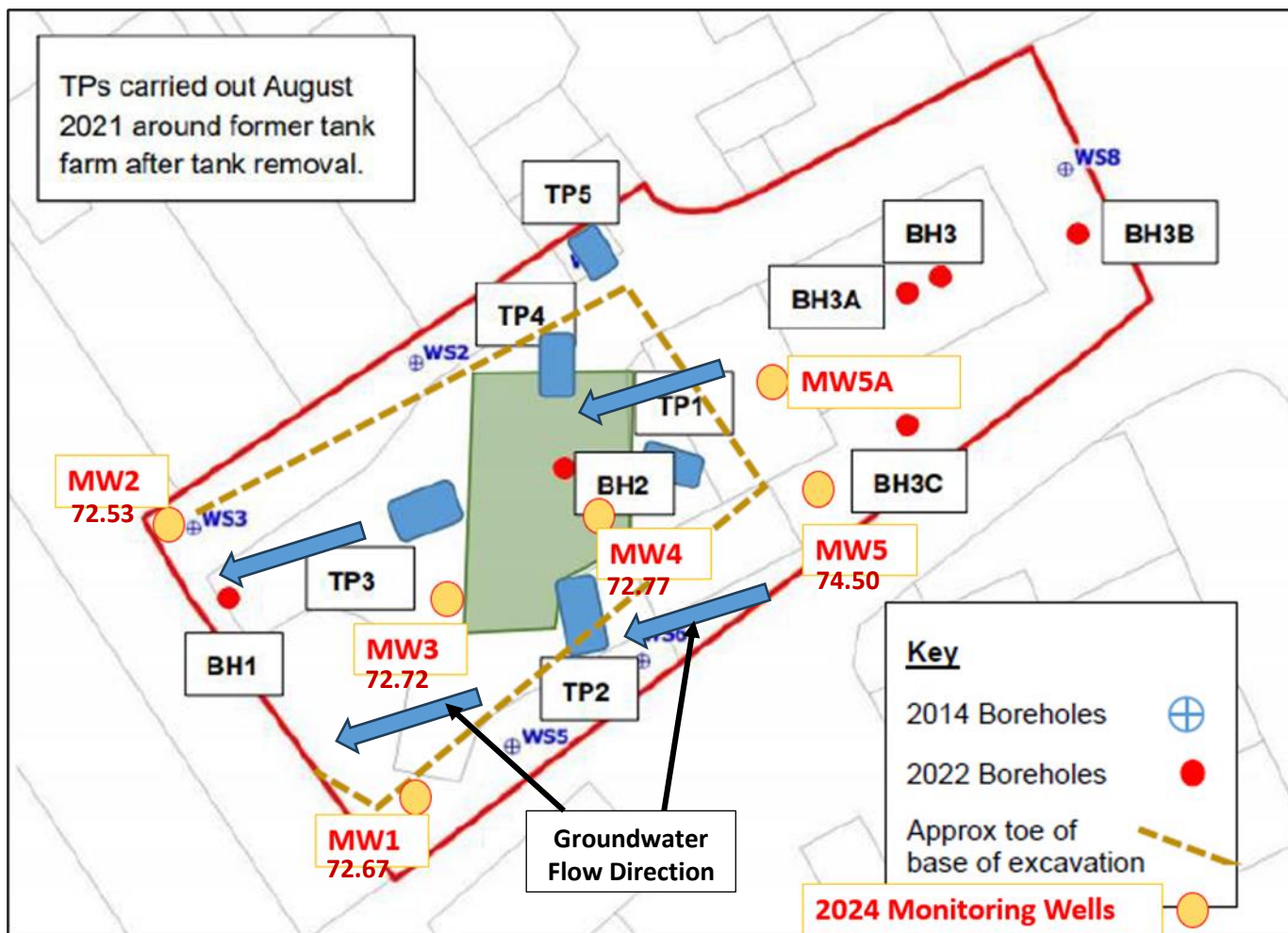


Figure 6: Reduced Level of Groundwater on 20th March 2024 (m OD)

5.5 Contamination

There was no visual or olfactory evidence of contamination noted during the fieldwork other than some ash in MW5 (a potential source of contaminants, particularly PAHs).

All site PID readings were less than the instrument's detection limit.

5.6 Geological Cross Section

A cross section is shown in Figure 7.

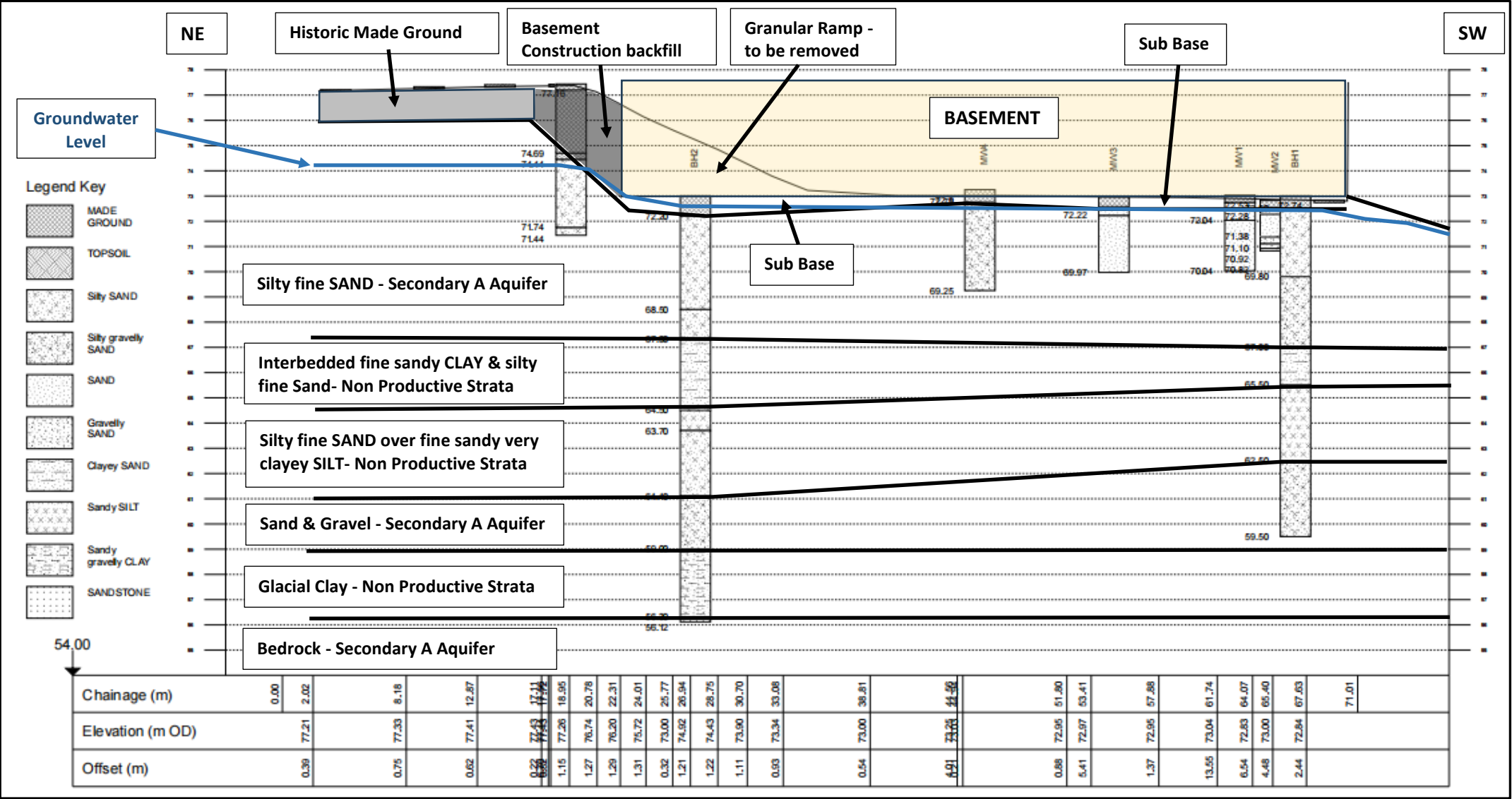


Figure 7: Geological Cross Section – View Towards Southeast (Levels in mOD)

6.0 CONTROLLED WATERS RISK ASSESSMENT

6.1 Concentrations in Soils

Testing of the soils was carried out to determine whether there was a source of TPH present in the soil or whether migrating TPH in the groundwater had adhered to the soils.

All site PID readings were less than the instrument detection limit of 1 ppm.

Ten soil samples tested, two per borehole (not including MW105A) for TOC, Speciated PAHS, TPH CWG and BTEX. The samples were at depths from 0.90 m to 6.00 m. Except for the Made Ground in MW5 at 0.30 m, none of the Made Ground/sub-base was sampled and tested as this had been imported as part of the recent construction works. Nine samples of the natural soils were tested to determine whether there had been migration of hydrocarbons from tanks or spillages into the underlying Secondary A drift aquifer. All of the test results on these samples of the natural glacial soils were less than the detection limit.

The Made Ground in MW5 at 0.30 m depth was sampled and this material was described as being ashy. The results are summarised below:

- The TOC was 2.0%.
- PAHs were present, these are summarised below:

Naphthalene	0.09 mg/kg	Residential gardens criteria for human health 2.3 mg/kg
Benzo(a)pyrene	1.28 mg/kg	Residential gardens criteria for human health 2.2 mg/kg
Dibenzo(a,h)anthracene	0.16 mg/kg	Residential gardens criteria for human health 0.24 mg/kg
Total PAH(16)	21.4 mg/kg	Residential gardens criteria for human health – None
- TPH:

The Aliphatic TPHs were all less than the detection limits.

The Aromatic C5 to C10 fractions were all less than the detection Limit:

Aromatic >C ₁₀ - C ₁₂	9.0 mg/kg	Residential gardens criteria for human health 74 mg/kg
Aromatic >C ₁₂ - C ₁₆	30 mg/kg	Residential gardens criteria for human health 160 mg/kg
Aromatic >C ₁₆ - C ₂₁	60 mg/kg	Residential gardens criteria for human health 260 mg/kg
Aromatic >C ₂₁ - C ₃₅	42 mg/kg	Residential gardens criteria for human health 110 mg/kg
Aromatic C ₅ - C ₃₅	140 mg/kg	Residential gardens criteria for human health – None
Total TPH >C ₅ - C ₃₅	140 mg/kg	Residential gardens criteria for human health – None

Note that:

 1. The Human Health Criteria above assume that the soils are exposed at the surface and vegetable are grown in these soils.
 2. The commercial land use criteria are considerably higher than the above criteria.
 3. The site will be covered by the building or hard standing so there is no pathway to human health for these higher molecular weight contaminants.

The TPH concentrations indicate that the source is the PAHs and by using double ratio PAH plots this indicates that the PAHs are likely to be present due to coal derived ash rather than a petroleum hydrocarbon origin.

Overall, the field and laboratory testing of the soils indicates an absence of petroleum hydrocarbon contamination in the soils below the site.

6.2 Controlled Waters Assessment Methodology

The assessment of contamination has been carried out in accordance with the overall guidance presented in Environment Agency (2023) “Land Contamination Risk Management (LCRM) procedures.” The risks to controlled waters (groundwater and surface waters) from contaminants on-site have also been assessed in accordance with the EA documents “The Environment Agency’s Approach to Groundwater Protection” (2017) and Remedial Targets Methodology (RTM, 2006). Pollutant inputs from contaminated land sites are considered as passive inputs under the European Water Framework Directive (2000/60/EC) (WFD) and its daughter Directives, and as such are regulated under the Agency’s ‘limit’ pollution

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

It should be noted that in terms of risk to controlled waters:

- The risk to surface waters is negligible given the 1.8 km distance to the nearest surface water body down gradient of the site.
- The risk to the bedrock Secondary A aquifer is negligible due to the absence of a viable pathway because there are two non-aquifer strata above the bedrock which are low permeability, one being the laminated clays and sands within the glacial drift deposits and also the basal clay deposits located above the bedrock. Also note that no piling is to be carried out at the site so the construction will not create new pathways.
- There is a risk that there could be hydrocarbons in the shallow strata of the glacial drift deposits.

6.3 Groundwater Test Results

PAHs

All the PAHs in MW1, MW3 and MW4 were lower than the detection limits. In MW2 four PAHs were detected above the detection limit but these were all less than the assessment limits. However, in MW5, there were elevated PAHs in this well with the response zone principally in the ashly Made Ground:

Table 6: Summary of Water Analysis for PAHs

Contaminant	Units	Drinking Water Standard	EQS Freshwater		Other	Groundwater Test Results				
			Annual Average	Maximum Admissible Concentration		MW1	MW2	MW3	MW4	MW5
Naphthalene	ug/l	10 ^[2]	2.0	130	10	<0.01	<0.01	<0.01	<0.01	0.43
Acenaphthylene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthene	ug/l	-	-	-	-	<0.01	0.13	<0.01	<0.01	1.10
Fluorene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	0.58
Phenanthrene	ug/l	-	-	-	-	<0.01	0.17	<0.01	<0.01	6.40
Anthracene	ug/l	-	0.10	0.10	-	<0.01	<0.01	<0.01	<0.01	2.10
Fluoranthene	ug/l	-	0.01	0.12	0.10	<0.01	0.33	<0.01	<0.01	18.00
Pyrene	ug/l	-	-	-	-	<0.01	0.32	<0.01	<0.01	17.00
Benzo[a]anthracene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	9.90
Chrysene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	9.70
Benzo[b]fluoranthene	ug/l	-	1.70	0.017	-	<0.01	<0.01	<0.01	<0.01	13.00
Benzo[k]fluoranthene	ug/l	-	1.70	0.017	-	<0.01	<0.01	<0.01	<0.01	4.30
Benzo[a]pyrene	ug/l	0.01	1.70	0.27	0.70	<0.01	<0.01	<0.01	<0.01	11.00
Indeno[1,2,3-cd]pyrene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	5.50
dibenzo[a,h]anthracene	ug/l	-	-	-	-	<0.01	<0.01	<0.01	<0.01	1.60
Benzo[ghi]perylene	ug/l	-	1.70	8.2	-	<0.01	<0.01	<0.01	<0.01	6.40
Total EPA-16 PAHs	ug/l	-	-	-	-	<0.16	0.95	<0.16	<0.16	107.00
PAH Total 4 DWS [#]	ug/l	0.1	-	-	0.1	<0.04	<0.04	<0.04	<0.04	29.20

Note:

Pink shading indicates above UKEQS.

Total of 4 Drinking Water Standard PAHs: Benzo[b]fluoranthene, Benzo[k]fluoranthene, Indeno[1,2,3-cd]pyrene, Benzo[ghi]perylene

TPH <C₁₀, VOCs including BTEX

All volatile hydrocarbons (i.e. TPH <C₁₀, VOCs including BTEX) are all less than the detection limits.

TPH >C₁₀

All TPH fractions for MW1 to MW4 were less than the detection limits. For MW5 (the well in the Made Ground in the elevated eastern part of the site where ash was present) there were no aliphatic PAHs or aromatic less than the C₁₂ range but there were slightly elevated aromatic TPH fragments greater than C₁₂:

TPH - Aromatic >C ₁₂ - C ₁₆	25 µg/l
TPH - Aromatic >C ₁₆ - C ₂₁	160 µg/l
TPH - Aromatic >C ₂₁ - C ₃₅	180 µg/l
TPH - Aromatic >C ₅ - C ₃₅	360 µg/l

Overall, the TPH concentrations indicate that the source in MW5 is the PAHs as per the soil sample of Made Ground in this location.

It should be noted that there are no UK set Environmental Quality Standards for TPH. The UK Drinking water standard for TPH (total) is 10 µg/l.

pH, sulphate

pH was in the range 7.2 to 8.5 which is relatively normal for a site like this, particularly given the site history and the recent construction works.

Sulphate concentrations range from 64.3 to 101 mg/l with an average of 82.1 mg/l and are relatively low and much less than the freshwater EQS.

Metals

The metal concentrations in the groundwater are summarised below:

Contaminant	Units	Drinking Water Standard	EQS Freshwater		Other	Groundwater Test Results					Summary of Groundwater Test Results		
			Annual Average	Maximum Admissible Concentration		MW1	MW2	MW3	MW4	MW5	Minimum	Average	Maximum
Arsenic	ug/l	10	50	-	50	0.42	1.51	1.71	0.69	1.49	0.42	1.16	1.71
Cadmium	ug/l	5	0.15	0.45	5	0.04	0.05	< 0.02	< 0.02	< 0.02	< 0.02	0.03	0.05
Chromium (total)	ug/l	-	-	-	-	1.30	3.7	6.4	2.2	14.2	1.3	5.6	14.2
Chromium (III)	ug/l	-	4.7	-	-								
Chromium (VI)	ug/l	-	3.4	-	-								
Copper	ug/l	2000	1*	-	28	1.0	7.5	14	1.6	2.4	1.0	5.3	14
Lead	ug/l	25	1.2	14	-	< 0.2	0.3	< 0.2	0.2	0.5	< 0.2	0.3	0.5
Mercury	ug/l	1	-	0.07	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	ug/l	20	4*	34	200	1.5	4.8	1.4	0.8	1.0	0.8	1.9	4.8
Selenium	ug/l	10	-	-	10	1.8	6	0.8	1.0	8.6	0.8	3.64	8.6
Zinc	ug/l	5000	10.9*	-	500	18	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.0	18

Note: Pink shading indicates above UK EQS.

The results of the metals analysis indicate that there is:

- Locally elevated chromium concentrations
- Widespread slightly elevated copper concentrations
- Locally elevated zinc concentrations at MW1.

It is assessed that the copper concentrations are probably due to the general background concentrations at the site as this is widespread and unlikely to be related to previous land use. The elevated chromium and zinc concentrations are localised and do not warrant further assessment.

6.4 Summary of Controlled Waters Assessment

In terms of petroleum hydrocarbons in soil samples there was no trace encountered in the natural strata below the site in any of the nine samples tested as part of this investigation and all of the 32 PID tests on soil samples were less than detection limit of 1 ppm. Additionally, the five new wells were also monitored for ground gases on two occasions and all readings were less than the detection limit for methane and PID readings were again less than 1 ppm.

There was a limited amount to PAHs in the Made Ground in MW5 (located in the upper level) but this is due to the presence of ash rather than petroleum hydrocarbons. Aromatic TPHs were present in this sample commensurate with the presence of the PAHs.

Overall, there is no evidence of significant concentrations of petroleum hydrocarbons present in the soils at this site as assessed in this investigation or at the earlier investigations.

The groundwater sampling and testing found similar results to the soil samples. Again, there was no TPH or BTEX/VOCs in the down gradient holes (MW1 to MW3) or MW4 located below the main tank farm. There were elevated PAHs and corresponding aromatic TPH fractions in the well in MW5 but this is again assessed as being due to PAHs. It is assessed that this does not pose a significant risk that requires further assessment or mitigation because there is no evidence of contamination in the four wells located within the basement area and all of these are down-gradient of thus upper area. Also, with the completed development having almost 100% impermeable cover (the building and hard standing) there will be negligible rainwater penetrating into the site and this will reduce potential contaminant leaching and groundwater flows.

It is recognised that there were no samples taken directly below the former fuel pumps, but this was due to known obstructions and difficulty in direct investigation of this area. However, if there had been any significant spillages in this area, the hydrocarbons would migrate to the southwest of the site and would be encountered and measured in the four down-gradient wells located within the footprint of the basement. This was not encountered so if there is any residual hydrocarbons present they are not mobile and do not pose a risk to controlled waters.

There are slightly elevated concentrations of some metals in the groundwater at this site but this is assessed to be due to general background conditions in the area and not due to the former site use.

It is acknowledged that only the groundwater in the upper strata of the granular glacial deposits has been sampled and tested but if there had been significant leakage of fuel, there would be evidence in this upper stratum. The presence of the lower permeability strata at a depth of about 6.0 m below the basement would also mean that higher concentrations of petroleum hydrocarbons would be encountered at shallow depth rather than depth.

Given the concentrations in the shallow drift and that there is a layer of low permeability sandy clay immediately above the bedrock, the risk to the Secondary A bedrock aquifer is assessed as being negligible.

Note that all of the soil samples had concentrations of volatile hydrocarbons (the lighter TPH fractions and BTEX) less than the detection limit. There were also no volatile TPH or BTEX/VOC compounds present in the groundwater samples across the site. If there had been significant spillages of petrol (which was the majority of the fuel sold at this site) then it is anticipated that there would be at least some of these compounds still present.

7.0 CONCLUSION

Previous phases of investigation have found no evidence of significant concentrations of hydrocarbons present at this site that warranted further investigation or remediation.

This supplementary investigation also demonstrated that there is no evidence of significant concentrations of petroleum hydrocarbons present in the soils at this site as assessed in this investigation and there were no significant concentrations of hydrocarbons in the four wells installed below the basement which is down hydraulic gradient of the upper area of the former fuel dispensing pumps and the proposed car park.

There were no volatile hydrocarbons present at the site in the TPH CWG and BTEX testing of the soil. There was also no volatile TPH or BTEX/VOC compounds present in the groundwater samples across the site. If there had been significant spillages of petrol (which was the majority of the fuel sold at this site) then it is anticipated that there would be at least some of these compounds present.

Based on the negligible measured concentrations of total contaminant concentrations at the site in the soils in both this investigation and in the earlier investigations and the recent groundwater sampling and testing there is a negligible risk to controlled waters with no further action required.

END OF REPORT



APPENDIX I – LIMITATIONS

APPENDIX I - LIMITATIONS

LIMITATIONS

1. This report and its findings should be considered in relation to the terms of reference and objectives agreed between Eccles Associates Ltd and the Client as indicated in Section 1.0.
2. For the work, reliance has been placed on publicly available data obtained from the sources identified. The information is not necessarily exhaustive and further information relevant to the site may be available from other sources. When using the information, it has been assumed it is correct. No attempt has been made to verify the information.
3. This report has been produced in accordance with current UK policy and legislative requirements for land and groundwater contamination which are enforced by the local authority and the Environment Agency/Natural Resources Wales. Liabilities associated with land contamination are complex and requires advice from legal professionals.
4. During the site walkover reasonable effort has been made to obtain an overview of the site conditions. However, during the site walkover no attempt has been made to enter areas of the site that are unsafe or present a risk to health and safety, are locked, barricaded, overgrown, or the location of the area has not be made known or accessible.
5. Access considerations, the presence of services and the activities being carried out on the site limited the locations where sampling locations could be installed and the techniques that could be used.
6. In addition to the above Eccles Associates Ltd note that when investigating, or developing, potentially contaminated land it is important to recognise that sub-surface conditions may vary spatially and also with time. The absence of certain ground, ground gas, and contamination or groundwater conditions at the positions tested is not a guarantee that such conditions do not exist anywhere across the site. Due to the presence of existing buildings and structures access could not be obtained to all areas. Additional contamination may be identified following the removal of the buildings or hard standing.
7. Site sensitivity assessments have been made based on available information at the time of writing and are ultimately for the decision of the regulatory authorities.
8. Where mention has been made to the identification of Japanese Knotweed and other invasive plant species and asbestos or asbestos-containing materials this is for indicative purposes only and do not constitute or replace full and proper surveys.
9. The executive summary, conclusions and recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon without considering the context of the report in full.
10. This report presents an interpretation of the geotechnical information established by excavation, observation, and testing. Whilst every effort is made in interpretative reporting to assess the soil conditions over the Site it should be noted that natural strata vary from point to point and that man-made deposits are subject to an even greater diversity. Groundwater conditions are dependent on seasonal and other factors. Consequently, there may be conditions present not revealed by this investigation.
11. Eccles Associates Ltd cannot be held responsible for any use of the report or its contents for any purpose other than that for which it was prepared. The copyright in this report and other plans and documents prepared by Eccles Associates Ltd is owned by them and no such plans or documents may be reproduced, published, or adapted without written consent. Complete copies of this may, however, be made and distributed by the client as is expected in dealing with matters related to its commission. Should the client pass copies of the report to other parties for information, the whole report should be copied, but no professional liability or warranties shall be extended to other parties by Eccles Associates Ltd in this connection without their explicit written agreement there to by Eccles Associates Ltd.
12. Rather, this investigation has been undertaken to provide a preliminary characterisation of the existing sub-surface geotechnical characteristics and make up and the findings of this study are our best interpretation of the data collected, within the scope of work and agreed budget. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.
13. This investigation has been undertaken to reasonably characterise existing sub-surface conditions and the findings of this study are our best interpretation of the data collected, within the scope of work and agreed budget. New information, revised practices or changes in legislation may necessitate the re-interpretation of the report, in whole or in part.

APPENDIX II – SITE PHOTOGRAPHS



Photograph Location Plan



1



2



3



4



5 Substation



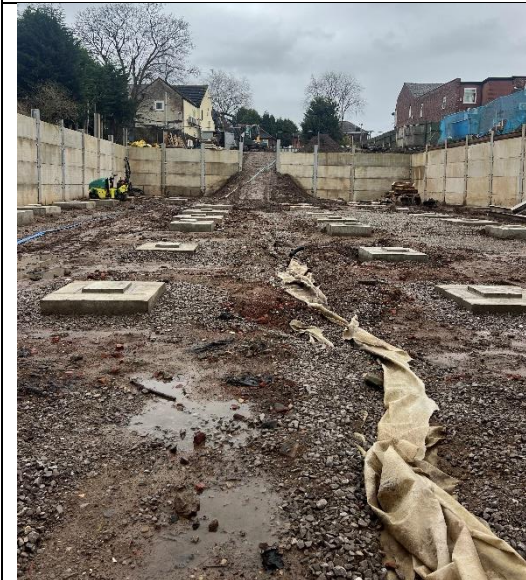
6



7 Adjacent Land



8



9



10



11



12: MW3 in progress

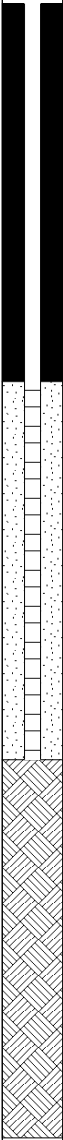


APPENDIX III – EXPLORATORY HOLE LOGS AND INSITU TESTING

APPENDIX III EXPLORATORY HOLE LOGS

EAL Dynamic Sample Log										Exploratory position reference: MW1 Sheet 1 of 1					
Borehole formation details:										Location details:					
Type: WLS	From: 0.00	To: 3.00	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:		mE: 382852.42				
												mN: 402502.27			
												mOD: 73.04			
												Grid: OSGB			
Backfill/Instaln	Water-strike	Legend	Level	Depth (thickness)	Stratum Description	Samples & In Situ Testing									
						Water	Casing	Depth	Type & No	Results					
			72.74	0.30	Brown slightly gravelly fine to coarse SAND. Gravel is angular brick, concrete and tile. Fabric at base. (MADE GROUND)			0.50 0.50	PID ES1	<1.0 ppmv					
				(0.30)											
				(0.70)											
				0.50 0.50											
				0.70											
			72.04	1.00	Light brown silty fine to coarse SAND. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)			1.70	PID	<1.0 ppmv					
				(2.00)											
			70.04	3.00	Dynamic sample ends at 3.00 m (Refusal)			3.00 3.00	PID ES2	<1.0 ppmv					
Inst (Ø)						Water	Casing	Depth	Type & No	Results					
Groundwater entries:			Casing:			Depth related remarks:			Run details:						
Struck: Rose to: Casing: Sealed:			Cased to: Diameter (mm):			From to: Remarks 0.00 3.00 Wet			From: to: Ø Duration: Recovery: 0.00 1.00 90 100 1.00 2.00 90 100 2.00 3.00 90 100						
Log issue: DRAFT			Project: Former Petrol Filling Station, Bury Old Road			Notes: For explanation of symbols and abbreviations see Key Sheet. All depths and reduced levels are in metres.									
Scale: 1:20			Project No: 24-011												
Checked/approved by: DD/CSE			Client: Unimore Ltd												
Printed: 21/03/2024 16:12															

EAL Dynamic Sample Log										Exploratory position reference: MW2 Sheet 1 of 1																			
Borehole formation details:										Location details:																			
Type: WLS	From: 0.00	To: 2.00	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:		mE: 382840.51																		
												mN: 402518.61																	
												mOD: 72.82																	
												Grid: OSGB																	
Backfill/Instal'n	Water-strike	Legend	Level	Depth (thickness)	Stratum Description	Samples & In Situ Testing																							
						Water	Casing	Depth	Type & No	Results																			
				(0.30)	Dark brown very clayey slightly gravelly fine to coarse SAND. Gravel is angular brick with occasional coal. Occasional roots. (MADE GROUND)																								
					72.53 0.30									Light brown slightly clayey slightly gravelly fine to coarse SAND. Gravel is rounded quartz (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)	0.50	PID	<1.0 ppmv												
					72.28 0.55									Light brown silty fine to coarse SAND with rare roots. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)															
					(0.90)										0.90	PID	<1.0 ppmv												
															0.90	ES1	<1.0 ppmv												
															1.00	PID	<1.0 ppmv												
					71.38 1.45									Light brown slightly gravelly silty fine SAND with occasional dark grey laminations of fine gravel of carbonaceous mudstone. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)	1.72 1.72 - 1.90	PID ES2	<1.0 ppmv												
					71.10 1.72									Reddish brown clayey sandy SILT with dark grey laminations of fine gravel of carbonaceous mudstone. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)															
					70.92 1.90																								
					70.82 2.00									Light brown silty fine to coarse SAND. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)	2.00	PID	<1.0 ppmv												
					Dynamic sample ends at 2.00 m (Refusal)																								
Inst (Ø)					Water					Casing					Depth					Type & No					Results				
Groundwater entries:					Casing:					Depth related remarks:					Run details:														
Struck: Rose to: Casing: Sealed:					Cased to: Diameter (mm):					From to: Remarks 0.00 2.00 Wet					From: to: Ø Duration: Recovery: 0.00 1.00 90 100 1.00 2.00 90 100														
Log issue: DRAFT					Project: Former Petrol Filling Station, Bury Old Road					Notes: For explanation of symbols and abbreviations see Key Sheet.																			
Scale: 1:20					Project No: 24-011					All depths and reduced levels are in metres.																			
Checked/approved by: DD/CSE					Client: Unimore Ltd																								
Printed: 21/03/2024 16:12																													

EAL Dynamic Sample Log										Exploratory position reference: MW3 Sheet 1 of 1																			
Borehole formation details:															Location details:														
Type: WLS	From: 0.00	To: 3.00	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:						mE: 382855.67														
										mN: 402513.45																			
										mOD: 72.97																			
										Grid: OSGB																			
Backfill/Instal'n	Water-strike	Legend	Level	Depth (thickness)	Stratum Description					Samples & In Situ Testing																			
										Water	Casing	Depth	Type & No	Results															
					Brown and grey slightly clayey sandy fine to coarse angular limestone GRAVEL with occasional brick (HARDCORE). Fabric at base. (MADE GROUND) (0.40) 72.57 0.40 Light brown silty fine to coarse SAND. Occasional laminations of fine dark grey carbonaceous mudstone sand and gravel. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL) (0.35) 72.22 0.75 Light brown silty fine to coarse SAND. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL) (2.25) 69.97 3.00 Dynamic sample ends at 3.00 m (Refusal)																								
Inst (Ø)					Water					Casing					Depth					Type & No					Results				
Groundwater entries:					Casing:					Depth related remarks:					Run details:														
Struck: Rose to: Casing: Sealed:					Cased to: Diameter (mm):					From to: Remarks 0.00 3.00 Wet					From: to: Ø Duration: Recovery: 0.00 1.00 90 100 1.00 2.00 70 100														
Log issue: DRAFT					Project: Former Petrol Filling Station, Bury Old Road					Notes: For explanation of symbols and abbreviations see Key Sheet.																			
Scale: 1:20					Project No: 24-011					All depths and reduced levels are in metres.																			
Checked/approved by: DD/CSE					Client: Unimore Ltd																								
Printed: 21/03/2024 16:12																													

EAL Dynamic Sample Log										Exploratory position reference: MW4 Sheet 1 of 1							
Borehole formation details:										Location details:							
Type: WLS	From: 0.00	To: 4.00	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:	mE: 382862.68	mN: 402519.02	mOD: 73.25	Grid: OSGB				
Backfill/Instaln	Water-strike	Legend	Level	Depth (thickness)	Stratum Description	Samples & In Situ Testing											
						Water	Casing	Depth	Type & No	Results							
				(0.50)	Brown and grey fine to coarse angular GRAVEL of limestone, carbonaceous mudstone, brick, tile and concrete. (HARDCORE). Fabric at base. (MADE GROUND)			0.30	PID	<1.0 ppmv							
							0.80	PID	<1.0 ppmv								
			72.75	0.50	Light brown silty slightly gravelly fine to coarse SAND. Gravel is rounded quartz. Occasional fine dark grey carbonaceous mudstone gravel. (GLACIALFLUVIO SHEET DEPOSITS - DEVANSIAN - SAND AND GRAVEL)			1.50	PID	<1.0 ppmv							
			(3.50)		0.50 m: Fabric			3.00	PID	<1.0 ppmv							
							3.20	PID	<1.0 ppmv								
							3.20	ES1	<1.0 ppmv								
							3.50	PID	<1.0 ppmv								
							4.00	PID	<1.0 ppmv								
			69.25	4.00	Dynamic sample ends at 4.00 m (Target depth)			4.00	PID	<1.0 ppmv							
Groundwater entries:										Casing:		Depth related remarks:			Run details:		
Struck: Rose to: Casing: Sealed:										Cased to: Diameter (mm):		From to: Remarks 0.00 4.00 Wet			From: to: Ø Duration: Recovery: 0.00 1.00 90 100 1.00 2.00 90 100 2.00 3.00 90 100 3.00 4.00 60 100		
Log issue: DRAFT					Project: Former Petrol Filling Station, Bury Old Road					Notes: For explanation of symbols and abbreviations see Key Sheet. All depths and reduced levels are in metres.							
Scale: 1:20					Project No: 24-011												
Checked/approved by: DD/CSE					Client: Unimore Ltd												
Printed: 21/03/2024 16:12																	

Location details:

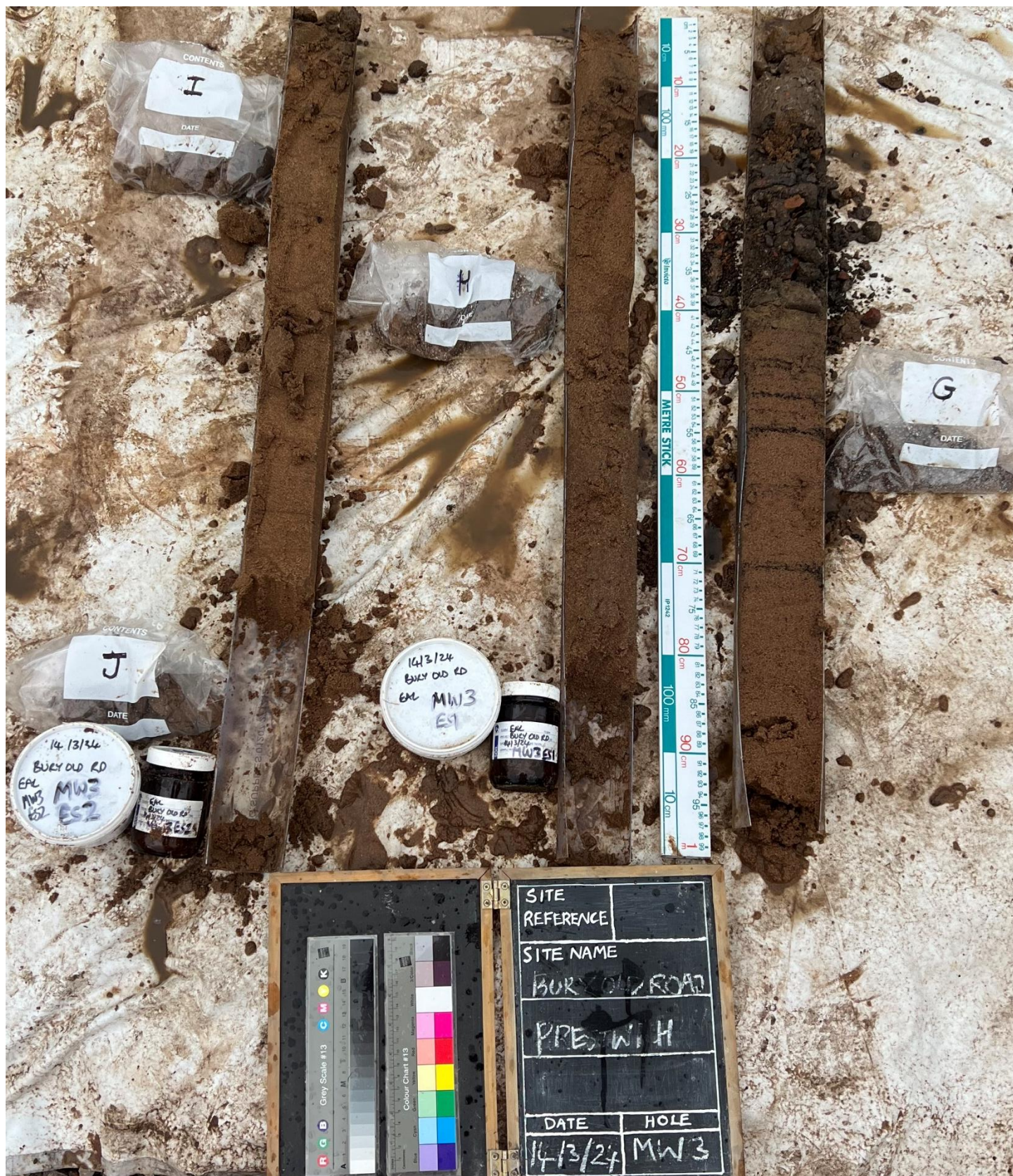
Groundwater entries:		Casing:	Depth related remarks:		Run details:			
Struck: Rose to: Casing: Sealed:	Cased to: Diameter (mm):	From: 4.00 to: 6.00	Remarks: Wet		From: 0.00 to: 1.00	Ø: 90	Duration: 80	Recovery: 80
					1.00 to: 2.00	90		50
					2.00 to: 3.00	90		70
					3.00 to: 4.00	70		100
Log issue: DRAFT	Project: Former Petrol Filling Station, Bury Old Road	Notes: For explanation of symbols and abbreviations see Key Sheet.						
Scale: 1:20	Project No: 24-011	All depths and reduced levels are in metres.						
Checked/approved by: DD/CSE	Client: Unimore Ltd							
Printed: 21/03/2024 16:12								

EAL Dynamic Sample Log										Exploratory position reference: MW5 Sheet 2 of 2									
Borehole formation details:															Location details:				
Type: WLS	From: 0.00	To: 6.00	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:						mE: 382887.52				
										mN: 402529.95									
										mOD: 77.44									
										Grid: OSGB									
Backfill/Instal'n	Water-strike	Legend	Level	Depth (thickness)	Stratum Description	Samples & In Situ Testing													
						Water	Casing	Depth	Type & No	Results									
				(2.70)	Light brown silty slightly gravelly fine to coarse SAND. Occasional carbonaceous mudstone. Rare gravel of rounded quartz. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)			4.50	PID	<1.0 ppmv									
								5.00	PID	<1.0 ppmv									
								6.00 6.00	PID ES3	<1.0 ppmv									
			71.74	5.70	Light brown and greyish brown banded silty fine to coarse SAND. Very faint oily odour, no sheen. (GLACIALFLUVIO SHEET DEPOSITS - DEVENSIAN - SAND AND GRAVEL)														
			(0.30)																
			71.44	6.00	Dynamic sample ends at 6.00 m (Target depth)														
Inst (Ø)						Water	Casing	Depth	Type & No	Results									
Groundwater entries:			Casing:			Depth related remarks:			Run details:										
Struck: Rose to: Casing: Sealed:			Cased to: Diameter (mm):			From to: Remarks			From: to: Ø Duration: Recovery:										
									4.00 5.00 60 100										
									5.00 6.00 50 65										
Log issue: DRAFT			Project: Former Petrol Filling Station, Bury Old Road						Notes: For explanation of symbols and abbreviations see Key Sheet. All depths and reduced levels are in metres.										
Scale: 1:20			Project No: 24-011																
Checked/approved by: DD/CSE			Client: Unimore Ltd																
Printed: 21/03/2024 16:12																			

EAL Dynamic Sample Log										Exploratory position reference: MW5A Sheet 1 of 1				
Borehole formation details:										Location details:				
Type: WLS	From: 0.00	To: 0.70	Start date: 14-03-24	End date: 14-03-24	Crew:	Plant: DART	Logger: CK	Logged: 14-03-24	Remarks:	mE: 382884.50	mN: 402534.99	mOD: 77.42	Grid: OSGB	
Backfill/Instal'n	Water-strike	Legend	Level	Depth (thickness)	Stratum Description	Samples & In Situ Testing								
						Water	Casing	Depth	Type & No	Results				
			77.22	0.20	Grey fine to coarse angular limestone GRAVEL (HARDCORE) (MADE GROUND)			0.50	PID	<1.0 ppmv				
			(0.30)	Brown very gravelly silty fine to coarse SAND. Gravel is of rounded quartz, occasional brick. (MADE GROUND)										
			76.92	0.50	Whole bricks and pieces of wood. (MADE GROUND)									
			76.72	0.70	Dynamic sample ends at 0.70 m (Refusal)									
Inst (Ø)						Water	Casing	Depth	Type & No	Results				
Groundwater entries:			Casing:			Depth related remarks:			Run details:					
Struck: Rose to: Casing: Sealed:			Cased to: Diameter (mm):			From to: Remarks			From: to: Ø Duration: Recovery: 0.00 0.70 90 100					
Log issue: DRAFT Scale: 1:20 Checked/approved by: DD/CSE Printed: 21/03/2024 16:12			Project: Former Petrol Filling Station, Bury Old Road Project No: 24-011 Client: Unimore Ltd			Notes: For explanation of symbols and abbreviations see Key Sheet. All depths and reduced levels are in metres.								













APPENDIX IV – GEOENVIRONMENTAL LABORATORY TESTING



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

Certificate of Analysis

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 24-52859

Issue: 1

Date of Issue: 26/03/2024

Contact: Chris Eccles

Customer Details: Eccles Associates Ltd
55 St Catherine Drive
Hartford
Cheshire CW8 2FE

Quotation No: Q24-04594

Order No: Not Supplied

Customer Reference: Not Supplied

Date Received: 18/03/2024

Date Approved: 26/03/2024

Details: Bury Old Road, Prestwich

Approved by:

Ben Rees, Customer Services Assistant



Sample Summary

Report No.: 24-52859, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
355653	MW1 ES1 0.50	14/03/2024	18/03/2024		
355654	MW1 ES2 3.00	14/03/2024	18/03/2024	Sand	
355655	MW2 ES1 0.90	14/03/2024	18/03/2024	Sand	
355656	MW2 ES2 1.72	14/03/2024	18/03/2024	Loamy sand	
355657	MW3 ES1 2.00	14/03/2024	18/03/2024	Sand	
355658	MW3 ES2 3.00	14/03/2024	18/03/2024	Sand	
355659	MW4 ES1 3.20	14/03/2024	18/03/2024	Sand	
355660	MW4 ES2 4.00	14/03/2024	18/03/2024	Sand	
355661	MW5 ES1 3.00	14/03/2024	18/03/2024	Sandy loam	
355662	MW5 ES2 4.00	14/03/2024	18/03/2024	Sand	
355663	MW5 ES3 6.00	14/03/2024	18/03/2024	Sand	



Results Summary

2683

Report No.: 24-52859, issue number 1

ELAB Reference	355654	355655	355656	355657	355658	355659	355660	355661	355662	355663
Customer Reference	ES2	ES1	ES2	ES1	ES2	ES1	ES2	ES1	ES2	ES3
Sample ID										
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	MW1	MW2	MW2	MW3	MW3	MW4	MW4	MW5	MW5	MW5
Sample Depth (m)	3.00	0.90	1.72	2.00	3.00	3.20	4.00	3.00	4.00	6.00
Sampling Date	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024	14/03/2024

Determinand	Codes	Units	LOD										
Soil sample preparation parameters													
Moisture Content	N	%	0.1	16.4	12.7	23.0	16.9	15.1	14.9	16.0	17.0	4.9	13.0
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None	None	None	None	None	None	None	None
Miscellaneous													
Total Organic Carbon	N	%	0.01	0.18	0.11	6.7	0.09	0.14	0.11	0.16	2.0	0.15	0.10
Polyaromatic hydrocarbons													
Naphthalene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.09	< 0.02	< 0.02
Acenaphthylene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.04	< 0.02	< 0.02
Acenaphthene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.25	< 0.02	< 0.02
Fluorene	S	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.23	< 0.02	< 0.02
Phenanthrene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	3.85	< 0.02	< 0.02
Anthracene	S	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.62	< 0.02	< 0.02
Fluoranthene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	4.08	< 0.02	< 0.02
Pyrene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	3.85	< 0.02	< 0.02
Benzo(a)anthracene	S	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.60	< 0.02	< 0.02
Chrysene	SM	mg/kg	0.02	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	1.94	< 0.03	< 0.03
Benzo(b)fluoranthene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.41	< 0.02	< 0.02
Benzo(k)fluoranthene	SM	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.54	< 0.03	< 0.03
Benzo(a)pyrene	S	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	1.28	< 0.02	< 0.02
Indeno(1,2,3-cd)pyrene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.72	< 0.02	< 0.02
Dibenzo(a,h)anthracene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.16	< 0.02	< 0.02
Benzo[g,h,i]perylene	SM	mg/kg	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.77	< 0.02	< 0.02
Total PAH(16)	NS	mg/kg	0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	21.4	< 0.34	< 0.34



Method Summary

Report No.: 24-52859, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Total organic carbon/Total sulphur	N	Air dried sample	20/03/2024	210	IR

Tests marked N are not UKAS accredited

Report Information

Report No.: 24-52859, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

- | | |
|---|--|
| a | No date of sampling supplied |
| b | No time of sampling supplied (Waters Only) |
| c | Sample not received in appropriate containers |
| d | Sample not received in cooled condition |
| e | The container has been incorrectly filled |
| f | Sample age exceeds stability time (sampling to receipt) |
| g | Sample age exceeds stability time (sampling to analysis) |

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

End of Report



Elab Customer Services
The Environmental Laboratory Ltd
Unit 42, Windmill Road
Ponswood Industrial Estate
St Leonards-on-Sea
East Sussex
TN38 9BY

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 24-02940

Site Reference: 24-52859
Project / Job Ref: TPHCWG Analysis
Order No: PO-12382
Sample Receipt Date: 20/03/2024
Sample Scheduled Date: 20/03/2024
Report Issue Number: 1
Reporting Date: 25/03/2024

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



Normec DETS Limited
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-02940	~Date Sampled	14/03/24	14/03/24	14/03/24	14/03/24	14/03/24
The Environmental Laboratory Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: 24-52859	~TP / BH No	355654	355655	355656	355657	355658
~Project / Job Ref: TPHCWG Analysis	~Additional Refs	MW1	MW2	MW2	MW3	MW3
~Order No: PO-12382	~Depth (m)	3.00	0.90	1.72	2.00	3.00
Reporting Date: 25/03/2024	DETS Sample No	705349	705350	705351	705352	705353

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-02940	~Date Sampled	14/03/24	14/03/24	14/03/24	14/03/24	14/03/24
The Environmental Laboratory Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: 24-52859	~TP / BH No	355659	355660	355661	355662	355663
~Project / Job Ref: TPHCWG Analysis	~Additional Refs	MW4	MW4	MW5	MW5	MW5
~Order No: PO-12382	~Depth (m)	3.20	4.00	3.00	4.00	6.00
Reporting Date: 25/03/2024	DETS Sample No	705354	705355	705356	705357	705358

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	9	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	30	< 2	< 2
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	60	< 3	< 3
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	42	< 10	< 10
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	140	< 21	< 21
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	140	< 42	< 42

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-02940	~Date Sampled	14/03/24	14/03/24	14/03/24	14/03/24	14/03/24
The Environmental Laboratory Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: 24-52859	~TP / BH No	355654	355655	355656	355657	355658
~Project / Job Ref: TPHCWG Analysis	~Additional Refs	MW1	MW2	MW2	MW3	MW3
~Order No: PO-12382	~Depth (m)	3.00	0.90	1.72	2.00	3.00
Reporting Date: 25/03/2024	DETS Sample No	705349	705350	705351	705352	705353

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-02940	~Date Sampled	14/03/24	14/03/24	14/03/24	14/03/24	14/03/24
The Environmental Laboratory Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: 24-52859	~TP / BH No	355659	355660	355661	355662	355663
~Project / Job Ref: TPHCWG Analysis	~Additional Refs	MW4	MW4	MW5	MW5	MW5
~Order No: PO-12382	~Depth (m)	3.20	4.00	3.00	4.00	6.00
Reporting Date: 25/03/2024	DETS Sample No	705354	705355	705356	705357	705358

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	5
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	3
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 24-02940	
The Environmental Laboratory Ltd	
~Site Reference: 24-52859	
~Project / Job Ref: TPHCWG Analysis	
~Order No: PO-12382	
Reporting Date: 25/03/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
705349	355654	MW1	3.00	17.3	Light brown sand
705350	355655	MW2	0.90	13.5	Light brown sand
705351	355656	MW2	1.72	19.7	Light brown sandy clay
705352	355657	MW3	2.00	16.9	Light brown sand
705353	355658	MW3	3.00	15	Light brown sand
705354	355659	MW3	3.20	15.1	Light brown sand
705355	355660	MW4	4.00	16.8	Light brown sand
705356	355661	MW5	3.00	16.7	Brown sandy clay with stones
705357	355662	MW5	4.00	4.5	Light brown sand
705358	355663	MW5	6.00	13.4	Light brown sand

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{I/S}

Unsuitable Sample ^{U/S}

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-02940

The Environmental Laboratory Ltd

~Site Reference: 24-52859

~Project / Job Ref: TPHCWG Analysis

~Order No: PO-12382

Reporting Date: 25/03/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried

AR As Received

~ Sample details provided by the customer



Eccles Associates Ltd
55 St Catherine Drive
Hartford
Northwich
Cheshire
CW8 2FE

t: 07784 669127
e: chris@ecclesassociates.co.uk

i2 Analytical Ltd.
7 Woodshots Meadow,
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WD18 8YS

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e: reception@i2analytical.com

Analytical Report Number : 24-010084

Project / Site name: Bury Old Road

Samples received on: 20/03/2024

Your job number:

**Samples instructed on/
Analysis started on:** 20/03/2024

Your order number: PO 0042

Analysis completed by: 26/03/2024

Report Issue Number: 1

Report issued on: 28/03/2024

Samples Analysed: 5 water samples

Signed: _____

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 24-010084
Project / Site name: Bury Old Road

Your Order No: PO 0042

Lab Sample Number				150246	150247	150248	150249	150250
Sample Reference				MW1	MW2	MW3	MW4	MW5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/03/2024	20/03/2024	20/03/2024	20/03/2024	20/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH (L099)	pH Units	N/A	ISO 17025	7.2	8.5	7.8	7.5	8
Sulphate as SO ₄	mg/l	0.045	ISO 17025	79.2	101	88.8	64.3	77.2

Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	0.43
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01	0.13	< 0.01	< 0.01	1.1
Fluorene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	0.58
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01	0.17	< 0.01	< 0.01	6.4
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	2.1
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	0.33	< 0.01	< 0.01	18 \$
Pyrene	µg/l	0.01	ISO 17025	< 0.01	0.32	< 0.01	< 0.01	17 \$
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	9.9
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	9.7
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	13
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	4.3
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	11
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	5.5
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	1.6
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01	< 0.01	< 0.01	6.4

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16	0.95	< 0.16	< 0.16	107
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	0.15	ISO 17025	0.42	1.51	1.71	0.69	1.49
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.04	0.05	< 0.02	< 0.02	< 0.02
Chromium (total)	µg/l	0.2	ISO 17025	1.3	3.7	6.4	2.2	14.2
Copper (dissolved)	µg/l	0.5	ISO 17025	1	7.5	14	1.6	2.4
Lead (dissolved)	µg/l	0.2	ISO 17025	< 0.2	0.3	< 0.2	0.2	0.5
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	1.5	4.8	1.4	0.8	1
Selenium (dissolved)	µg/l	0.6	ISO 17025	1.8	6	0.8	1	8.6
Zinc (dissolved)	µg/l	0.5	ISO 17025	18	< 0.5	< 0.5	< 0.5	< 0.5



4041



Environmental Science

Analytical Report Number: 24-010084
Project / Site name: Bury Old Road

Your Order No: PO 0042

Lab Sample Number				150246	150247	150248	150249	150250
Sample Reference				MW1	MW2	MW3	MW4	MW5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/03/2024	20/03/2024	20/03/2024	20/03/2024	20/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

Petroleum Hydrocarbons

TPH - Aliphatic >C5 - C6 _{HS_1D_AL}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C6 - C8 _{HS_1D_AL}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C8 - C10 _{HS_1D_AL}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aliphatic >C10 - C12 _{EH_1D_AL_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic >C12 - C16 _{EH_1D_AL_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic >C16 - C21 _{EH_1D_AL_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic >C21 - C35 _{EH_1D_AL_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH - Aliphatic >C5 - C35 _{HS+EH_1D_AL_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH - Aromatic >EC5 - EC7 _{HS_1D_AR}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC7 - EC8 _{HS_1D_AR}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC8 - EC10 _{HS_1D_AR}	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH - Aromatic >EC10 - EC12 _{EH_1D_AR_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH - Aromatic >EC12 - EC16 _{EH_1D_AR_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	25
TPH - Aromatic >EC16 - EC21 _{EH_1D_AR_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	160
TPH - Aromatic >EC21 - EC35 _{EH_1D_AR_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	180
TPH - Aromatic >EC5 - EC35 _{HS+EH_1D_AR_MS}	µg/l	10	NONE	< 10	< 10	< 10	< 10	360

VOCs

Chloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Vinyl Chloride	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichlorofluoromethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans 1,2-dichloroethylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2,2-Dichloropropane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chloroform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1-Dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,2-dichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Carbontetrachloride	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trichloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromomethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromodichloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Cis-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Trans-1,3-dichloropropene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2-Trichloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dibromochloromethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Tetrachloroethene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromoethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Chlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,1,2-Tetrachloroethane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Styrene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromoform	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0



Analytical Report Number: 24-010084
Project / Site name: Bury Old Road

Your Order No: PO 0042

Lab Sample Number				150246	150247	150248	150249	150250
Sample Reference				MW1	MW2	MW3	MW4	MW5
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				20/03/2024	20/03/2024	20/03/2024	20/03/2024	20/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Isopropylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,1,2,2-Tetrachloroethane	µg/l	3	NONE	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Bromobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
n-Propylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
2-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
4-Chlorotoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3,5-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
tert-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trimethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
sec-Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,3-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p-Isopropyltoluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,4-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Butylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dibromo-3-chloropropane	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,4-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Hexachlorobutadiene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2,3-Trichlorobenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

Monoaromatics & Oxygenates

Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	3	ISO 17025	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0

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

Analytical Report Number : 24-010084
Project / Site name: Bury Old Road

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	ISO 17025
Metals in water by ICP-MS (total)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW	In-house method based on USEPA Method 6020 & 200.8 for the determination of trace elements in water by ICP-MS	L012B	W	ISO 17025
Total petroleum hydrocarbons with carbon banding by GC-MS in water	Determination of total petroleum hydrocarbons in water by GC-MS/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L070B	W	NONE
BTEX and/or Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA 8260	L073B	W	ISO 17025
Total petroleum hydrocarbons by GC-MS HS in water	Determination of total petroleum hydrocarbons in water by GC-MS HS	In-house method	L088	W	ISO 17025
pH at 20°C in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In-house method	L099	W	ISO 17025
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds (including PAH) in leachate by extraction in dichloromethane followed by GC-MS	In-house method based on USEPA 8270	L102B	W	ISO 17025
Sulphate in water	Determination of sulphate in water after filtration by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L039B	W	ISO 17025

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

- Data reported unaccredited due to quality control parameter failure associated with this result; other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised

END OF REPORT

Eccles Associates Limited

Brownfield Consultants: Contaminated Land Assessments, Options Appraisals, Remediation Strategy & Verification,
Coal Mining Risk Assessments, Geotechnical Design, Earthworks & Materials Reuse, Waste Assessments & Classification
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