

VICTORIA COURT, BURY

Site Investigation and Ground Assessment





GEO-ENVIRONMENTAL CONSULTING

Project Quality Assurance Information Sheet

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PROJECT NO: 25152

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REVISION STATUS / HISTORY

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1. INTRODUCTION

1.1 Appointment

1.1.1 BEK Enviro Limited (BEK) has been commissioned by JN Building Contactors Ltd to carry out a site investigation and ground assessment for the land located at Victoria Court, Tottington, Bury (hereafter referred to as 'the site'). The investigation will inform a quantitative risk assessment with respect to contamination and ground gas at the site considering the change of use to residential and to provide recommendations for foundation design.

1.2 Objective & Scope of Work

1.2.1 The site investigation was undertaken by BEK during October 2025 in accordance with the recommendations presented in the Phase 1 Desk Study completed for site (see Section 1.4 below) to assess potential risks from contamination.

1.2.2 This report provides a summary of the site details and ground conditions encountered and to support a quantitative contamination risk assessment, as well as a geotechnical assessment for foundation design.

1.2.3 The Phase 1 Desk Study should be read in conjunction with this report.

1.3 Proposed Development

1.3.1 It is proposed to construct a residential dwelling with private garden and driveway.

1.3.2 At present, no proposed site plan has been made available to BEK, however the following proposed plans are presented in the Phase 1 Desk Study:



Figure 1: Proposed Site Plan, Taken from the Phase 1 Desk Study



1.4 Previous Reports

- 1.4.1 The site has been subject to a 'Phase 1 Desk Study and Preliminary Contaminated Land Risk Assessment' completed by GeoAssist Limited (GAL), Ref: 6171/VVC V1.0 PCLRA, dated November 2024.
- 1.4.2 The Phase 1 Desk Study was carried out for the whole development area and includes a review of available site information to produce a conceptual ground model and provides recommendations and proposals for the ground investigation characterise ground conditions and support a contamination risk assessment.
- 1.4.3 Information within the Phase 1 Desk Study is presented in Section 2.

1.5 Limitations

- 1.5.1 The conclusions and recommendations presented in this report are the result of our professional interpretation of the information currently available. BEK reserve the right to amend the conclusions and recommendations if further information becomes available.
- 1.5.2 However, it should be noted that much of the information has been derived from reports written by others and BEK takes no responsibility for the accuracy of that information. Notwithstanding the above, the reports reviewed have all been written by professional environmental consultants with a duty of care to provide relevant and accurate information.
- 1.5.3 The comments given in this report and the opinions expressed are based on review of reports provided to BEK, ground conditions encountered during the site works and the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigations and therefore could not be taken into account.
- 1.5.4 The presence of invasive plant species (ie Japanese Knotweed) is outside the remit of this assessment.



2. BACKGROUND INFORMATION

2.0.1 This section provides an overview of the findings and recommendations presented in the Desk Study.

2.1 Site Location, Layout and History

2.1.1 The site is located in a residential area off Victoria Court, Tottington, approximately 3 km to the north-west of Bury town centre. The site forms an irregular shape and falls steeply to the south down to Black Brook.

2.1.2 At the time of the site visit the site appeared to have been recently cleared of trees and vegetation in the area of the proposed construction. The southern part of the site was noted as overgrown wooded scrubland. Items of scrap metal were noted in the centre of the site.

2.1.3 Historical maps show the site has remained undeveloped, however cuttings in the north of the site indicate potentially raised/infilled ground.

2.2 Environmental Setting

Geology

2.2.1 The Enviro+GeoInsight Report states that the superficial deposits below the site comprise Glaciofluvial Deposits, Devensian - Sand and Gravel.

2.2.2 The Enviro+GeoInsight Report states that the solid geology underlying the site comprises the Old Lawrence Rock – Sandstone.

Mining and Ground Stability

2.2.3 Information provided by the Coal Authority indicates that the property is in an area that may be affected by coal mining, however according to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have not been identified. Consequently, the risk to the proposed development on this site in respect of past, present or future coal workings is likely to be low.

Hydrogeology

2.2.4 The superficial and bedrock beneath the site are both classified by the EA as a 'Secondary A Aquifer' which are described as 'permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers'.



- 2.2.5 There is no evidence that the site in its present state or the proposed development will impact groundwater receptors and consequently the risk to groundwaters is classified as low.

Hydrology

- 2.2.6 The nearest surface water feature is Black Brook, which borders the site to the south. There is no evidence that the site in its present state, or any proposed development, will significantly impact surface water receptors and consequently the risk to surface waters is classified as low.
- 2.2.7 There is one active discharge consent located 5 m west of the site for a Public Sewage: Storm Sewage Overflow.
- 2.2.8 The EA flood data map indicates that southern end of the site is located within a High Risk Flood Zone from surface water. The north side of the site, where the proposed property is shown to be located is not indicated as being located within a Flood Risk Zone.

Contaminated Land & Landfill Activities

- 2.2.9 There are no landfill sites within close proximity to the site. Data from the County Series Surveys and the Ordnance Survey plans of the area confirms that there are likely to be areas of historically infilled land and made ground on the site and within 250 m of the site boundary not previously identified as landfill.
- 2.2.10 There are three recorded pollution incidents to controlled waters the closest recorded on the site boundary affecting the Black Brook, Oil pollutant in June 1996. All were noted as category 3 minor incidents.
- 2.2.11 There is one Substantiated Pollution Incident Register, located 214 m north-west of the site, dated July 2001 for Crude Sewage. Categorised as Category 2 – Significant Incident for water quality.

Radon

- 2.2.12 The Environmental data search report referenced 364093529_1_1, indicates that the site is in an intermediate probability radon area (less than 1 to 3% of homes are estimated to be at or above the Action Level). No radon protective measures are necessary in the construction of new dwellings or extensions.

2.3 GAL Conceptual Model

- 2.3.1 Based on background information, GAL produced a preliminary conceptual model:



Potential Source /Hazard	Nature of Hazard (Risk Level to site given a Residential end use)	Potential Contaminants Associated with Source	Potential Pathway	Potential Receptor
<i>Previous & Present ON SITE Land uses:</i>				
1. Open Land/Woodland	Ground contamination Low Risk	None	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low Risk	None	Vertical and Lateral Migration	Site Users Future Buildings & Services
2. Raised Ground Levels (Made Ground)	Ground contamination Low to Moderate Risk	Heavy Metals PAH ACM	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low to Moderate Risk	Carbon Dioxide, Methane	Vertical and Lateral Migration	Site Users Future Buildings & Services
<i>Previous OFF SITE land uses within 250m as indicated by Historical Plans Including:</i>				
3. Victoria Works	Ground contamination Low to Moderate Risk	See DoE Industry Profiles	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low Risk	None	Vertical and Lateral Migration	Site Users Future Buildings & Services
4. Infilled Sand Pit	Ground contamination Low Risk	See DoE Industry Profiles	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low Risk Given age and distance	Carbon Dioxide, Methane	Vertical and Lateral Migration	Site Users Future Buildings & Services
5. Garage	Ground contamination Low Risk	See DoE Industry Profiles	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low Risk	None	Vertical and Lateral Migration	Site Users Future Buildings & Services
6. Works, Depot, Electricity Sub-station	Ground contamination Low Risk	See DoE Industry Profiles	Dermal Contact Ingestion Inhalation	Site Users Construction workers Controlled Waters
	Gas from in-filled ground Low Risk	None	Vertical and Lateral Migration	Site Users Future Buildings & Services
7. Coal/Brine Workings & Mineral Extraction	Geotechnical Hazard Low Risk	None	Ground Collapse Subsidence	Humans (site users) Future Buildings & Services
	Ground contamination Low Risk	None	None	Site Users Services
	Mine Gas Low Risk	None	None	Humans (site users) Future Buildings & Services

Only sources that have not been present on site in the past or currently are considered within the off site category. Unless the information is deemed to be pertinent to the analysis.

Figure 1: Conceptual Model Taken from GAL Phase 1

2.4 GAL Conclusions & Recommendations

- 2.4.1 GAL recommended that site investigation is carried out to confirm the nature of materials underlying the site and should include sampling and testing of representative soil samples to enable a robust quantitative risk assessment.
- 2.4.3 The installation of a number of ground gas and groundwater monitoring points with associated monitoring over a period of time as defined by best practice guidance.



- 2.4.4 GAL also advised that the developer obtains geotechnical information in order to maximise the value of the Ground Investigation and establish geotechnical and groundwater parameters for foundation design.



3. SITE INVESTIGATION

3.1 General

- 3.1.1 This section provides a summary of the site investigation works undertaken by BEK in October 2025.
- 3.1.2 The site investigation has been designed to provide indicative information for the ground conditions across the site and to provide a quantitative assessment of potential risks associated with contamination and ground gas and to provide recommendations with respect to foundation design.
- 3.1.3 All exploratory locations were set out by the site engineer and the exploratory locations are illustrated on BEK Drawing No 25152-1, a copy of which is presented in Appendix C.

3.2 Window Sample Boreholes

- 3.2.1 Four window sample boreholes were drilled using a window sample borehole rig to depths of 5.45 m. Gas/groundwater monitoring probes were installed in three of the boreholes (Boreholes WS1, WS2 and WS3).
- 3.2.2 In-situ testing (SPTs) were carried out in each of the boreholes.
- 3.2.3 Representative samples were recovered for chemical testing in accordance with the requirements set out in the Phase 1 Desk Study.
- 3.2.4 The ground conditions were recorded by an engineer from BEK and copies of the borehole records are presented in Appendix A.

3.3 Hand Excavated Trial Pits

- 3.3.1 Two hand excavated trial pits were undertaken to a maximum depth of 1.2 m.
- 3.3.2 Representative samples were recovered for chemical testing in accordance with the requirements set out in the Desk Study.
- 3.3.3 The ground conditions were recorded by an engineer from BEK and copies of the trial pit records are presented in Appendix A

3.4 Laboratory Testing

Soil Chemical Testing

3.4.1 Chemical laboratory testing was undertaken by the UKAS accredited laboratory of Envirolab. All testing was undertaken to MCERTS standard (where available). Seven samples were submitted for the following chemical analysis:

- Arsenic (Total), Cadmium (Total), Copper (Total), Lead (Total), Nickel (Total), Zinc (Total), Chromium (Total), Selenium (Total), Mercury (Total), Boron (Soluble), Hexavalent Chromium, Cyanide (Total), pH, 16 EPA Poly-Aromatic Hydrocarbons (PAH), Speciated Total Petroleum Hydrocarbons (TPH-CWG), Total Phenols, Sulphate (acid soluble), Sulphate 2:1 extract, Soil Organic Matter and Asbestos ID testing.

3.4.2 Copies of the chemical test results are presented in Appendix B.

3.5 Ground Conditions

3.5.1 Made ground generally described as 'dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker' was identified at the surface of each exploratory location to a minimum depth of 4.0 m. The base of the made ground was not proven in four out of six locations.

3.5.2 The base of the made ground was proven in Boreholes WS1 at 4.2 m and WS4 at 4.0 m. Beneath the made ground in these locations is a layer of 'black organic slightly silty relic topsoil with rare coal'.

3.5.3 Underlying the relic topsoil in both locations is 'grey clayey silt with frequent organic content' to the base of both boreholes.

3.5.4 Groundwater was not encountered during the site investigation.

3.5.5 Visual/olfactory evidence of contamination was limited to the presence of ash and clinker within the made ground.

3.6 Environmental Monitoring

3.6.1 Gas and groundwater monitoring is on-going and the results will be assessed within an addendum report that will be completed when the gas monitoring programme has been completed.

3.6.2 However, a summary of the monitoring undertaken to date (2 monitoring visits) is provided below:

Groundwater

- 3.6.3 Groundwater levels have been monitored in the boreholes are summarised in the following table:

Borehole Location	Recorded Water Level (m bgl)
WS1	3.51 - 3.55
WS2	Dry
WS3	Dry

Table 1: Summary of Water Levels in Boreholes

- 3.6.4 Note that seasonal variations in water levels cannot be accounted for over the short monitoring period.

Gas Monitoring

- 3.6.5 The boreholes have been monitored for ground gas on 2 occasions to date and a summary of the gas monitoring results are presented in the following table:

Location	Concentrations (% v/v)			Steady Flow Rate (l/hr)
	Carbon Dioxide	Methane	Oxygen	
WS1	0.4 - 0.6	0	20 - 20.1	0
WS4	0.6 - 0.8	0	18.1 - 19.9	0
WS6	0.3 - 0.9	0	19.2 - 20	0

Table 2: Summary of Gas Monitoring Data

- 3.6.6 The Gas Risk Assessment will be prepared as a separate report.



4. QUANTITATIVE RISK ASSESSMENT

4.1 Potentially Significant Pollutant Linkages

4.1.1 Potentially significant pollutant linkages for the site are listed below:

- (i) Human Health - risks associated with contamination in the made ground and/or natural strata: via dermal contact, ingestion or inhalation for construction workers and future site users
- (i) Human Health - risks associated with indoor inhalation of ground gas for future site users
- (ii) Controlled Waters - risks associated with contamination in the made ground and/or natural strata affecting the quality of perched water and dissolution of contamination into perched water and migration to water receptors.
- (v) Property (including services and flora) - risks associated with contamination affecting concrete, service pipes and flora

4.2 Risk Assessment: Human Health Risks from Exposure to Contaminated Soil

4.2.1 The risks to human health have been assessed by inspection of shallow soils for the presence of elevated contaminants based on the expected contaminant findings detailed in the conceptual model and completion of a quantitative risk assessment.

4.2.2 The soil contamination concentrations have initially been compared to a range of generic assessment criteria. These include the use of the Land Quality Management and Chartered Institute of Environmental Health assessment criteria (S4ULs), Category 4 Screening Levels (C4SLs) and the Contaminated Land: Applications in Real Environments assessment criteria (CL:AIRE).

4.2.3 These assessment criteria have been derived using the CLEA model and fully justified input parameters. The derivation of the assessment criteria assumes a residential end use with plant uptake. The initial assessment assumes a soil organic matter (SOM) of 1 % as a conservative approach.

4.2.4 The following table summarises the chemical test results for the samples tested and lists the relevant assessment criteria and the samples with a concentration in excess of the assessment criteria. Note that only determinands with a concentration above the laboratory limit of detection are presented in the table below:



Determinands	Range of Concentrations (mg/kg)	Assessment Criteria (mg/kg)	Samples Fail
Arsenic	5 - 63	37 ¹	---
Copper	22 - 527	2400 ¹	---
Chromium	9 - 50	910 ¹	---
Lead	39 - 100	210 ¹	---
Nickel	11 - 63	180 ¹	---
Zinc	42 - 198	3700 ¹	---
Acenaphthene	0.03 - 2.99	210 ¹	---
Acenaphthylene	<0.01 - 0.4	170 ¹	---
Anthracene	0.49 - 13.4	2400 ¹	---
Benzo(a)anthracene	0.24 - 17.1	7.2 ¹	WS2 (1 m)
Benzo(a)pyrene	0.21 - 15.3	2.2 ²	WS2 (1 m)
Benzo(b)fluoranthene	0.23 - 17.6	2.6 ¹	WS2 (1 m)
Benzo(ghi)perylene	0.13 - 7.79	320 ¹	---
Benzo(k)fluoranthene	0.09 - 7.09	77 ¹	---
Chrysene	0.23 - 19.8	15 ¹	WS2 (1 m)
Dibenzo(ah)anthracene	<0.04 - 2.10	0.24 ¹	WS1 (0.3 m) WS2 (1 m) WS4 (0.8 m)
Fluoranthene	0.62 - 50.6	280 ¹	---
Fluorene	0.03 - 3.3	170 ¹	---
Indeno(123-cd)pyrene	0.14 - 8.65	27 ¹	---
Naphthalene	0.05 - 0.59	2.3 ¹	---
Phenanthrene	0.33 - 61.8	95 ¹	---
Pyrene	0.53 - 42	620 ¹	---
Aliphatic Hydrocarbons >C6-C8	<0.01 - 0.02	100 ¹	---
Aliphatic Hydrocarbons >C8-C10	<1 - <10	27 ¹	---
Aliphatic Hydrocarbons >C12-C16	<1 - <10	1100 ¹	---
Aliphatic Hydrocarbons >C16-C21	<1 - <10	65000 ^{*1}	---
Aliphatic Hydrocarbons >C21-C35	14 - 109	65000 ^{*1}	---
Aromatic Hydrocarbons >C8-C10	2 - <10	34 ^{*1}	---
Aromatic Hydrocarbons >C10-C12	2 - <10	74 ¹	---
Aromatic Hydrocarbons >C12-C16	4 - 12	140 ¹	---
Aromatic Hydrocarbons >C16-C21	11 - 122	260 ¹	---
Aromatic Hydrocarbons >C21-C35	37 - 280	1100 ¹	---
Asbestos ID	NAD		---

Table 1: Summary of Contamination Assessment

¹ CIEH/LQM Derived Assessment Criteria (S4ULs based on 1% SOM)

- 4.2.5 It can be seen from the above table that elevated concentrations of a number of PAH contaminants identified in the made ground in Borehole WS2 (1.0 m). In addition, Borehole WS4 (0.8 m) exceeded the assessment criteria for dibenzo(ah)anthracene.
- 4.2.6 It is noted that for the sample from Borehole WS1 (0.3 m) the limit of detection for PAH (and TPH CWG) was raised due to sample dilation. For dibenzo(ah)anthracene the limit of detection from this sample is above the assessment criteria.
- 4.2.7 No samples tested positive for the presence of asbestos.



Further Assessment - PAH

- 4.2.8 The sample taken from Borehole WS2 at 1.0 m exceeded the residential threshold for the presence of PAH contaminants Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Chrysene and Dibenzo(ah)anthracene. In addition, a sample taken from Borehole WS4 at 0.8 m exceeded the assessment criteria for dibenzo(ah)anthracene. Furthermore, for a sample taken from Borehole WS1 at 0.3 m, the limit of detection for dibenzo(ah)anthracene is above the assessment criteria.
- 4.2.9 Given the small size of the site, and the fact that the made ground across the site is generally uniform in nature, BEK cannot rule out that exceedances of PAH contamination may be present in other areas of the site.
- 4.2.10 The principal human exposure pathways for PAH (except naphthalene) is through dermal contact, ingestion of soil, and indoor dust or consumption of home grown produce. Therefore, specific localised mitigation measures will be required to address this contamination.
- 4.3 Risk Assessment: Ground Gas**
- 4.3.1 Gas monitoring is on-going and a separate Ground Gas Risk Assessment will be prepared upon completion of the current gas monitoring programme.
- 4.4 Risk Assessment: Controlled Waters**
- 4.4.1 Potential risks to the quality of groundwater have been identified in the ground conceptual model. Risks are associated with contamination in the made ground and/or natural strata affecting the quality of perched water and dissolution of contamination into perched water and migration to water receptors.
- 4.4.2 Receptors include secondary A Aquifers within the superficial and bedrock strata, and Black Brook, which borders the site to the south.
- 4.4.2 Groundwater was not encountered during the investigation. Water monitoring of the boreholes show Boreholes WS2 and WS3 were dry on both occasions and Borehole WS1 had a small amount of water at the base of the pipe (0.2 to 0.3 m – insufficient to sample).
- 4.4.3 The site investigation encountered made ground to a minimum depth of 4 m which was uniform across the site. The base of the made ground was not proven in four out of six locations. A contamination assessment has indicated that there is PAH contamination within the made ground which poses a risk to controlled waters.

- 4.4.5 Given the absence of superficial clay at the site and the presence of Black Brook immediately south of the site, the risks to controlled waters need to be further assessed.

4.5 Risk Assessment: Buildings

- 4.5.1 Risks to buildings include the assessment of the aggressive nature of the shallow ground with respect to concrete, the risks to the degradation of water pipes and flora due to contamination.

Risk to Concrete

- 4.5.2 To assess the potential risks to concrete, BEK has compared the site investigation data to assessment criteria presented in the BRE Special Digest 1: Concrete in Aggressive Ground.
- 4.5.3 The sulphate concentrations (water soluble 2:1) in the shallow ground are below the BRE 2:1 water/soil extract concentration of 500 mg/l for Class DS-1 concrete.
- 4.5.4 With consideration to the range of pH values (8.09 to 11.12) the ACEC class recommended for the site is AC-1. Therefore, the concrete classification suitable for the site would be DS-1 AC-1.

Risks to Services

- 4.5.5 Potable water supply pipes can be at risk from degradation if the shallow ground contains specific organic contamination. Guidance published by UKWIR includes a methodology for the site investigation and risk assessment to determine pipe specification.
- 4.5.6 On the basis of the ground conditions encountered, risks to water supply pipelines are considered to be medium.
- 4.5.7 Consultation should be undertaken with the water service supplier to confirm this.

Risks to Flora

- 4.5.8 Copper, nickel and zinc are toxic to plants; the effects are often regarded as additive. The assessment criteria used for copper, nickel and zinc, are 'pseudo total concentrations' and are derived from BS3882:2007 as follows:

Phytotoxic Contaminant	pH Range		
	<6.0	6.0 to 7.0	>7.0
Zinc (nitric acid extractable)	<200	<200	<300
Copper (nitric acid extractable)	<100	<135	<200
Nickel (nitric acid extractable)	<60	<75	<110

Table 3: Limits for Phytotoxic Contaminants (Units mg/kg)



4.5.9 By comparing the soil chemical test results (Appendix B) to the concentrations in the above table, it can be seen that there is an elevated phytotoxic concentration of copper in Borehole WS1 (0.3 m).

4.5.10 Given the small size of the site, and the fact that the made ground across the site is generally uniform in nature, BEK cannot rule out that elevated phytotoxic concentrations of copper may be present in other areas of the site.

4.6 Risk Assessment: Conclusions

4.6.1 Made ground was identified at the surface of each exploratory location to a minimum depth of 4 m. The base of the made ground was only proven in Boreholes WS1 at 4.2 m and WS4 at 4.0 m, where relic topsoil is encountered, over grey organic clayey silt to the base of both boreholes.

4.6.2 Samples recovered from site investigation have been tested for a wide range of contaminants in accordance with the recommendations outlined within the Phase 1 Desk Study and based on the observations made during the site investigation. The chemical test results have been compared to residential (with homegrown produce) assessment criteria to identify potential contaminants of concern.

4.6.3 Based on the contamination assessment herein and with respect to the redevelopment of the site for residential use with gardens, the made ground contains elevated PAH contamination which poses a risk to human health.

4.6.4 In addition, an elevated phytotoxic concentration of copper is noted in one location at the site which poses a risk to flora. BEK cannot rule out that there may be further phytotoxic elevations in other locations at the site.

4.6.5 Risks to controlled waters cannot be discounted and further assessment is needed.

4.6.6 Gas monitoring is on-going and a separate Ground Gas Risk Assessment will be prepared upon completion of the current gas monitoring programme.

4.6.7 Potential risk to water pipes are considered to be low to medium, however advice should be sought from the water supply provider.

4.6.8 Risks to concrete are considered to be low and concrete classification of DS-1 AC-1 will be suitable.



5. GEOTECHNICAL ASSESSMENT

- 5.1 It is understood that the proposed development consists of the construction of a single detached domestic dwelling house. It is presumed that the dwelling house will be of no more than two storeys in height and be of masonry construction. It is also presumed that the roof to the dwelling will be tiled with proprietary trussed rafter support, 1st floors formed in timber and ground floors formed in concrete. The guidance given herein will therefore need to be reviewed in terms of the actual building type to be adopted, by a suitably qualified and experienced engineer.
- 5.2 Site investigation has confirmed that the site is covered by made ground which extends down to various depths of between 4.0 m and over 5.5 m. The base of the made ground was proven in Boreholes WS1 at 4.2 m and WS4 at 4.0 m. Underlying the made ground in these locations is a layer of 'black organic slightly silty relic topsoil with rare coal' and underlying the relic topsoil in both locations is 'grey clayey silt with frequent organic content' to the base of both boreholes.
- 5.3 Groundwater was not encountered within any of the borehole locations, with all boreholes remained dry during the course of the investigation. Post site investigation borehole monitoring encountered dry conditions in Borehole WS2 and WS3 on both occasions and Borehole WS1 had a small amount of water at the base of the pipe (0.2 to 0.3 m).
- 5.4 Standard Penetration Tests (SPT) were conducted in the window sample boreholes, starting at a depth of 1.0 m and repeated at 1.0 m levels from 2.0 m onwards. The SPT results are summarised in Table 4 below:

Location	Depth of Test (m)				
	1 - 1.45	2 - 2.45	3 - 3.45	4 - 4.45	5 - 5.45
WS1	4*	9*	8*	12*	12
WS2	3*	3*	7*	10*	8*
WS3	4*	11*	9*	12*	10*
WS6	4*	9*	8*	12	12

Table 4: Borehole SPT Results (* - Indicates Readings Within Man-Made Fill)

Assessment & Conclusions

- 5.6 The underlying soils are of man-made materials, extending down to significant depth. The upper layers of the fill material have been found to be loosely compacted. Fill materials cannot be relied upon to provide support to building foundations, as the quality of compaction can vary, which would lead to unacceptable differential foundation movements within the property, leading to cracking occurring. Natural ground has only been encountered within two of the four boreholes, and the upper layer of soils is evidently the original topsoil and organic deposits. Beneath the organic layer are dry silty soils. The SPT values taken in the silts indicate that a bearing capacity at depth of 100 kN/m² is available.



- 5.7 The proposed dwelling has been presumed to be of two storey height and of masonry construction. The roof is presumed to be formed from proprietary timber trussed rafters with a tiled finish, and upper floors formed in timber. Ground floors have been presumed to be of concrete construction. Based upon these presumptions, it is likely that the foundation loads will be of a magnitude of 60 to 70 kN/m. From the investigation, suitable bearing material only exists at depth. The property should therefore be formed upon pile and ground beam foundations, with a suspended ground floor. Further investigation will be required to establish the ground conditions below 5.0 m depth to allow the pile designer to ascertain the design information required. At least one borehole to 15.0 m will be required.
- 5.8 Local trees are unlikely to have a bearing on the proposed building foundations. The foundation designer, however, should ensure that the substructure be designed to comply with LABC requirements and NHBC Ch.4.2 guidance.
- 5.9 All foundation designs must be reviewed and designed by a suitably qualified design engineer. The above advice is based upon the ground condition information obtained during the survey. The design engineer must satisfy themselves that the information meets with their design requirements.

6. RECOMMENDATIONS

- 6.1 This report provides an assessment of the ground conditions based on the assessment of available site investigation information. The assessment quantifies the potential risks associated with contamination and provides recommendations for foundation design considering the development proposals.

Further Investigation and Controlled Waters Assessment

- 6.2 It is likely that further site investigation works will be required to support pile design at the site, BEK recommends this includes leachable sampling to support a further controlled waters risk assessment. It may also be necessary to obtain water samples of the brook to the south.

Contamination Assessment

- 6.3 Based on the contamination assessment herein and with respect to the redevelopment of the site for a residential end use (with private garden), the made ground at the site contains contamination which poses potential risks to human health, controlled waters and flora. To mitigate the potential risks, the following works are recommended:
- (i) Made ground should be removed from private garden areas to allow the placement of 600 mm of clean soils (450 mm subsoil and 150 mm topsoil) over a geotextile membrane to prevent mixing. Made ground can remain beneath buildings/hardstanding.
 - (ii) Confirmation should be sought on the proposed end use of the land in the south of the site. Capping thickness could be reduced in this area, dependant on the end use.
 - (iii) All ground workers adopt suitable PPE when working on the site and consider the requirements of site specific risk assessments and working method statements.
- 6.4 The ground conditions should be as anticipated during all excavations. Advice should be sought if ground conditions are significantly different or if further visual/olfactory evidence of contamination is encountered.
- 6.5 The remediation works required should be detailed in a Remediation & Enabling Works Strategy along with the method a validation and reporting.
- 6.6 Risks associated with ground gas will be assessed as a separate report, following completion of the monitoring programme.

Geotechnical Assessment

- 6.7 The underlying soils are of man-made materials, extending down to significant depth. The upper layers of the fill material have been found to be loosely compacted. Fill materials cannot be relied upon to provide support to building foundations, as the quality of compaction can vary, which would lead to unacceptable differential foundation movements within the property, leading to cracking occurring. Natural ground has only been encountered within two of the four boreholes, and the upper layer of soils is evidently the original topsoil and organic deposits. Beneath the organic layer are dry silty soils. The SPT values taken in the silts indicate that a bearing capacity at depth of 100 kN/m² is available.
- 6.8 The proposed dwelling has been presumed to be of two storey height and of masonry construction. The roof is presumed to be formed from proprietary timber trussed rafters with a tiled finish, and upper floors formed in timber. Ground floors have been presumed to be of concrete construction. Based upon these presumptions, it is likely that the foundation loads will be of a magnitude of 60-70 kN/m. From the investigation, suitable bearing material only exists at depth. The property should therefore be formed upon pile and ground beam foundations, with a suspended ground floor. Further investigation will be required to establish the ground conditions below 5m depth to allow the pile designer to ascertain the design information required. At least one borehole to 15 m will be required.
- 6.9 Local trees are unlikely to have a bearing on the proposed building foundations. The foundation designer, however, should ensure that the substructure be designed to comply with LABC requirements and NHBC Ch.4.2 guidance.
- 6.10 All foundation designs must be reviewed and designed by a suitably qualified design engineer. The above advice is based upon the ground condition information obtained during the survey. The design engineer must satisfy themselves that the information meets with their design requirements.

Waste Soil Management

- 6.1 Careful management of soils during the excavation works will ensure optimum utilisation of soil resources. Excavated soils which require off-site disposal are anticipated to be classified in accordance with the following document: Guidance on the Disposal of "Contaminated Soils" Version 3 (April 2001); produced by the Environment Agency.
- 6.12 On the basis it is considered likely that soils from the majority of the site would classify as "Non-hazardous"/"Inert" for disposal; however this is subject to confirmation of the potential landfill use. In all cases where excess soils require off-site disposal, the materials needs to be managed under the appropriate legislation and consideration given to any remedial techniques that could be used to improve the soil.



- 6.13 If waste soils are to be re-used on site then a suitable permit exemption should be put in place (if appropriate) or a Material Management Plan should be prepared as part of compliance with the CL:AIRE Definition of Waste:Code of Practice.

Water Pipe Specification

- 6.14 Consideration should be given to the requirements of the water supply provider. They are likely to require the UKWIR risk assessment to be completed to determine the specification for the water pipes. It is recommended that the water supply provider is contacted and enquiries made.

APPENDIX A

Exploratory Logs



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contactors Ltd

DATE 8 October 2025

DRILLING METHOD Window Sample Borehole

BOREHOLE NO WS1

SHEET 1/4

COMPLETION

CASING

SCREEN

COMMENTS Borehole dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Well Instal.	Graphic Log	Material Description	Elevation (m)
0.5	0.3	D = 0.3 m					Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.5
1	1 - 1.45	SPT (C) N = 4	1,1/1,1,1,1					1
1.5								1.5
2	2 - 2.45	SPT (C) N = 9	2,2/2,2,2,3					2
2.5								2.5
3	3 - 3.45	SPT (C) N = 8	2,2/2,2,2,2					3
3.5								3.5
4	4 - 4.45	SPT (C) N = 12	2,3/3,3,3,3					4
4.5							Black organic slightly silty relic topsoil with rare coal	4.5
5	5 - 5.45	SPT (C) N = 12	2,3/3,3,3,3				Grey clayey silt with frequent organic content	5
5.5							Termination Depth at: 5.45 m	5.5



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contactors Ltd

DATE 8 October 2025

DRILLING METHOD Window Sample Borehole

BOREHOLE NO WS2

SHEET 2/4

COMPLETION

CASING

SCREEN

COMMENTS Borehole dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Well Instal.	Graphic Log	Material Description	Elevation (m)
0.5							Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.5
1	1 - 1.45	D = 1 m SPT (C) N = 3	-, -, 1, 1, 1					1
1.5								1.5
2	2 - 2.45	SPT (C) N = 3	-, -, 1, 1, 1					2
2.5								2.5
3	3 - 3.45	SPT (C) N = 7	-, 1/1, 2, 2, 2					3
3.5								3.5
4	4 - 4.45	SPT (C) N = 10	1, 2/2, 2, 3, 3					4
4.5								4.5
5	5 - 5.45	SPT (C) N = 8	2, 2/2, 2, 2, 2					5
5.5							Termination Depth at: 5.45 m	5.5



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contractors Ltd

DATE 8 October 2025

DRILLING METHOD Window Sample Borehole

BOREHOLE NO WS3

SHEET 3/4

COMPLETION

CASING

SCREEN

COMMENTS Borehole dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Well Instal.	Graphic Log	Material Description	Elevation (m)
0.5	0.5	D = 0.5 m					Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.5
1	1 - 1.45	SPT (C) N = 4	-, -, 1, 1, 1, 1					1
1.5								1.5
2	2 - 2.45	SPT (C) N = 11	2, 2/2, 3, 3, 3					2
2.5								2.5
3	3 - 3.45	SPT (C) N = 9	2, 2/2, 2, 2, 3					3
3.5								3.5
4	4 - 4.45	SPT (C) N = 12	2, 3/3, 3, 3, 3					4
4.5								4.5
5	5 - 5.45	SPT (C) N = 10	2, 2/2, 2, 3, 3					5
5.5							Termination Depth at: 5.45 m	5.5



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contactors Ltd

DATE 8 October 2025

DRILLING METHOD Window Sample Borehole

BOREHOLE NO WS4

SHEET 4/4

COMPLETION

CASING

SCREEN

COMMENTS Borehole dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Well Instal.	Graphic Log	Material Description	Elevation (m)
0.5							Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.5
	0.8	D = 0.8 m						
1	1 - 1.45	SPT (C) N = 4	1,1/1,1,1,1					1
1.5								1.5
2	2 - 2.45	SPT (C) N = 9	1,2/2,2,2,3					2
2.5								2.5
3	3 - 3.45	SPT (C) N = 8	2,2/2,2,2,2					3
3.5								3.5
4	4 - 4.45	SPT (C) N = 12	2,3/3,3,3,3				Black organic slightly silty relic topsoil with rare coal	4
4.5								4.5
5	5 - 5.45	SPT (C) N = 12	2,2/3,3,3,3				Grey clayey silt with frequent organic content	5
5.5							Termination Depth at: 5.45 m	5.5



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contactors Ltd

DATE 8 October 2025

TRIAL PIT Hand Excavated

BOREHOLE NO HP1

SHEET 1/2

COMPLETION

CASING

SCREEN

COMMENTS Trial pit dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Graphic Log	Material Description	Elevation (m)
0.1						Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.1
0.2							0.2
0.3							0.3
0.4							0.4
0.5	0.5	D = 0.5 m					0.5
0.6							0.6
0.7							0.7
0.8							0.8
0.9							0.9
1							1
1.1							1.1
1.2						Termination Depth at: 1.2 m	1.2
1.3							1.3
1.4							1.4



PROJECT NUMBER 25152

PROJECT NAME Victoria Court, Bury

CLIENT JN Building Contactors Ltd

DATE 8 October 2025

TRIAL PIT Hand Excavated

BOREHOLE NO HP2

SHEET 2/2

COMPLETION

CASING

SCREEN

COMMENTS Trial pit dry

Depth (m)	Depth (m)	Samples/ Test	Field Records	Water	Graphic Log	Material Description	Elevation (m)
0.1						Vegetation on to dark brown/grey occasionally clayey, occasionally silty gravelly sand with frequent angular (and rare rounded) cobbles of mixed lithologies (including concrete and brick), occasional ash, plastic and wood, rare clinker	0.1
0.2	0.2	D = 0.2 m					0.2
0.3							0.3
0.4							0.4
0.5							0.5
0.6							0.6
0.7							0.7
0.8							0.8
0.9							0.9
1							1
1.1							1.1
1.2						Termination Depth at: 1.2 m	1.2
1.3							1.3
1.4							1.4

APPENDIX B

Chemical Test Results

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/11395
Issue Number: 1

Date: 17 October, 2025

Client: BEK Enviro Ltd
2 Landwick Court
Metcalf Drive
Altham Business Park
Altham
Lancashire
BB5 5GY

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Victoria Court, Bury (VCB)
Project Ref: Not specified
Order No: 8784-25152-A
Date Samples Received: 08/10/25
Date Instructions Received: 09/10/25
Date Analysis Completed: 17/10/25

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 25/11395

Client Project Name: Victoria Court, Bury (VCB)

Client Project Ref: Not specified

Lab Sample ID	25/11395/1	25/11395/2	25/11395/3	25/11395/4	25/11395/5			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS4	HP1	HP2					
Depth to Top	0.30	1.00	0.80	0.50	0.20					
Depth To Bottom										
Date Sampled	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL					
Sample Matrix Code	5A	5ABE	5ABE	5AE	5ABE					
% Stones >10mm _A	20.5	30.9	27.9	17.3	24.4			% w/w	0.1	A-T-044
pH _D ^{M#}	9.30	8.52	8.87	8.09	11.12			pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.07	<0.01	0.04	0.02	0.05			g/l	0.01	A-T-026s
Sulphate (acid soluble) _D ^{M#}	1400	450	880	370	1800			mg/kg	200	A-T-028s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2			mg/kg	0.2	A-T-050s
Organic Matter _D ^{M#}	5.15	3.44	6.67	4.13	7.70			% w/w	0.14	A-T-032s
Arsenic _D ^{M#}	6	5	63	9	5			mg/kg	1	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	<1.0			mg/kg	1	A-T-027s
Cadmium _D	<1.0	<1.0	<1.0	<1.0	<1.0			mg/kg	1	A-T-024s
Copper _D ^{M#}	527	104	89	22	45			mg/kg	1	A-T-024s
Chromium _D ^{M#}	14	10	50	9	14			mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1			mg/kg	1	A-T-040s
Lead _D ^{M#}	100	75	40	39	58			mg/kg	1	A-T-024s
Mercury _D	0.26	<0.17	<0.17	<0.17	<0.17			mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	17	11	63	11	16			mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1			mg/kg	1	A-T-024s
Zinc _D ^{M#}	198	145	97	42	129			mg/kg	1	A-T-024s

Envirolab Job Number: 25/11395

Client Project Name: Victoria Court, Bury (VCB)

Client Project Ref: Not specified

Lab Sample ID	25/11395/1	25/11395/2	25/11395/3	25/11395/4	25/11395/5			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS4	HP1	HP2					
Depth to Top	0.30	1.00	0.80	0.50	0.20					
Depth To Bottom										
Date Sampled	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL					
Sample Matrix Code	5A	5ABE	5ABE	5AE	5ABE					
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil _D #	NAD	NAD	NAD	NAD	NAD					A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-					A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-					A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A					A-T-045

Envirolab Job Number: 25/11395

Client Project Name: Victoria Court, Bury (VCB)

Client Project Ref: Not specified

Lab Sample ID	25/11395/1	25/11395/2	25/11395/3	25/11395/4	25/11395/5			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS4	HP1	HP2					
Depth to Top	0.30	1.00	0.80	0.50	0.20					
Depth To Bottom										
Date Sampled	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL					
Sample Matrix Code	5A	5ABE	5ABE	5AE	5ABE					
PAH-16MS										
Acenaphthene _A ^{M#}	0.19	2.99	0.41	0.03	0.49			mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.10	0.40	0.02	<0.01	0.02			mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.25	13.4	0.67	0.09	0.49			mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.47	17.1	1.93	0.24	1.44			mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.65	15.3	1.79	0.21	1.26			mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.59	17.6	1.91	0.23	1.43			mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.50	7.79	0.95	0.13	0.65			mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.70	7.09	0.72	0.09	0.51			mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.69	19.8	1.82	0.23	1.46			mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.40	2.10	0.28	<0.04	0.18			mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.75	50.6	4.65	0.62	3.77			mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.12	3.30	0.26	0.03	0.29			mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.37	8.65	1.12	0.14	0.75			mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.59	<0.30	0.17	0.05	0.22			mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	1.25	61.8	2.45	0.33	2.54			mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	1.12	42	3.96	0.53	3.14			mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	8.04	270	23.1	2.95	18.6			mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/11395

Client Project Name: Victoria Court, Bury (VCB)

Client Project Ref: Not specified

Lab Sample ID	25/11395/1	25/11395/2	25/11395/3	25/11395/4	25/11395/5			Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	WS1	WS2	WS4	HP1	HP2					
Depth to Top	0.30	1.00	0.80	0.50	0.20					
Depth To Bottom										
Date Sampled	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25	06-Oct-25					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL					
Sample Matrix Code	5A	5ABE	5ABE	5AE	5ABE					
TPH CWG with Clean Up										
Ali >C5-C6 _A	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Ali >C6-C8 _A	0.02	<0.01	0.02	<0.01	0.02			mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<10	<10	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<10	<10	<1	<1	<1			mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<10	<10	2	<1	2			mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<10	<10	3	2	3			mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	109	29	14	14	20			mg/kg	1	A-T-055s
Total Aliphatics _A	119	29	19	16	26			mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<10	<10	2	2	2			mg/kg	1	A-T-055s
Aro >C10-C12 _A	<10	<10	2	2	2			mg/kg	1	A-T-055s
Aro >C12-C16 _A	11	12	8	4	7			mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	86	122	56	11	37			mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	280	272	221	37	128			mg/kg	1	A-T-055s
Total Aromatics _A	377	406	289	56	174			mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	496	435	307	71	200			mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01			mg/kg	0.01	A-T-022s

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- The results reported herein relate only to the material supplied to the laboratory.
- The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
- Analytical results reflect the quality of the sample at the time of analysis only.
- Opinions and Interpretations expressed are outside our scope of accreditation.
- A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

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

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

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

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

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as “% stones >10mm”.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any “D” subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.

Results “with Clean up” indicates samples cleaned up with Silica during extraction.

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

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

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

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

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

Envirolab Deviating Samples Report

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

Client: BEK Enviro Ltd, 2 Landwick Court, Metcalfe Drive, Altham Business Park,
Altham, Lancashire , BB5 5GY

Project: Victoria Court, Bury (VCB)

Clients Project No:

Project No: 25/11395

Date Received: 09/10/2025 (am)

Cool Box Temperatures (°C): 13.6

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

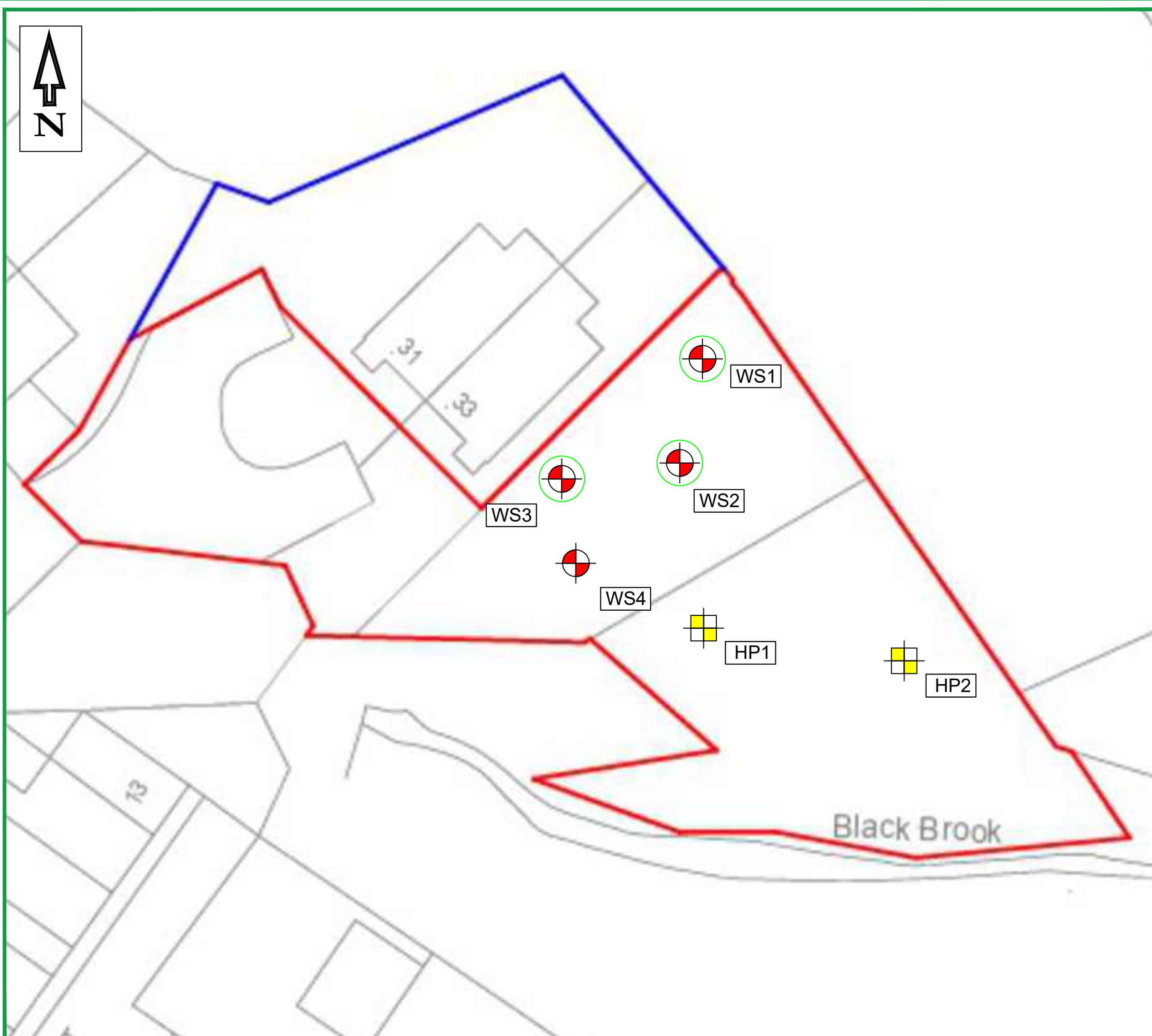
Lab Sample ID	25/11395/1	25/11395/2	25/11395/3	25/11395/4	25/11395/5
Client Sample No					
Client Sample ID/Depth	WS1 0.30m	WS2 1.00m	WS4 0.80m	HP1 0.50m	HP2 0.20m
Date Sampled	06/10/25	06/10/25	06/10/25	06/10/25	06/10/25
A-T-019s	16/10/2025	16/10/2025	14/10/2025	14/10/2025	14/10/2025
A-T-022s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-024s	17/10/2025	17/10/2025	17/10/2025	17/10/2025	17/10/2025
A-T-026s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-027s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-028s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-031s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-032s	16/10/2025	16/10/2025	16/10/2025	16/10/2025	16/10/2025
A-T-040s	15/10/2025	15/10/2025	15/10/2025	15/10/2025	15/10/2025
A-T-042sTCN	14/10/2025	14/10/2025	14/10/2025	14/10/2025	14/10/2025
A-T-044	13/10/2025	13/10/2025	13/10/2025	13/10/2025	13/10/2025
A-T-045	10/10/2025	10/10/2025	10/10/2025	10/10/2025	10/10/2025
A-T-050s	16/10/2025	16/10/2025	16/10/2025	16/10/2025	16/10/2025
A-T-055s	16/10/2025	16/10/2025	14/10/2025	14/10/2025	14/10/2025
Calc-As Recd	16/10/2025	16/10/2025	15/10/2025	15/10/2025	15/10/2025

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

End of Report

APPENDIX C

Drawings



LEGEND



WINDOW SAMPLE BOREHOLE



WINDOW SAMPLE BOREHOLE
(GAS & GROUNDWATER
MONITORING PROBE)



HAND EXCAVATED TRIAL PIT

REV	DESCRIPTION	DATE	BY



GEO-ENVIRONMENTAL CONSULTING

No 2 Landwick Court, Metcalf Drive, Altham Business
Park, Lancashire, BB5 5GY

Tel: 01254 377622 Mob: 07906753583

Email: mbuckley@bekenviro.co.uk

Web: www.bekenviro.co.uk

CLIENT.

JN BUILDING
CONTRACTORS LTD

JOB TITLE.

LAND AT VICTORIA COURT, BURY

DRAWING TITLE.

SITE INVESTIGATION PLAN

SCALE © A3.
N'TS

DRAWN BY.
D.E.

APPROVED BY.
M.B.

DATE.
15/10/25

DRAWING No.
25152-1

REV.
-