GEO-ENVIRONMENTAL CONSULTING

LAND AT GREENBROW SOCIAL CLUB, WYTHENSHAWE, MANCHESTER

Remediation Validation Report



Report Ref: BEK-24100-2

Date: November 2025

GEO-ENVIRONMENTAL CONSULTING

Project Quality Assurance Information Sheet

Site	Land at Greenbrow Social Club, Wythenshawe, Manchester
Report Title	Remediation Validation Report
Report Status	Final
Report No	BEK-24100-3
Date	November 2025
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Remediation Validation Report

PROJECT NO: 24100

REPORT REF: BEK-24100-3

DATE: November 2025

REVISION STATUS / HISTORY

Rev	Date	Issue / Comment	Prepared	Checked

GENERAL REPORT LIMITATIONS

BEK Enviro Limited (BEK) has prepared this report for the sole use of the client, showing reasonable skill and care, for the intended purposes as stated in the agreement under which this work was completed. The report may not be relied upon by any other party without the express agreement of the client and BEK. No other warranty, expressed or implied, is made as to the professional advice included in this report.

Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by BEK for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

No part of this report may be copied or duplicated without the express permission of BEK and the party for whom it was prepared. Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

Unless explicitly agreed otherwise, in writing, this report has been prepared under BEK's limited standard Terms and Conditions as included within our proposal to the Client. The report needs to be considered in the light of the BEK proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

TABLE OF CONTENTS

1.	INTRODUCTION
1.1	Background
1.2	Limitations
2.	SITE REMEDIATION & ENABLING WORKS
2.1	Contamination
2.2	Imported Material
2.3	Construction Workers
2.4	Unforeseen Circumstances
2.5	Utilities
2.6	Concrete Mix Design
2.7	Off-Site Disposal
3.	VERIFICATION OF WORKS
3.1	Supervision of Works
3.2	Capping System
3.3	Ground Gas Mitigation Measures
3.4	Unrecorded Contamination & Associated Issues
4.	CONCLUSIONS

APPENDICES	
Appendix A	Source Test Data
Appendix B	Chemical Test Results
Appendix C	Garden Capping Validation Certificates
Appendix D	POS Capping Validation Certificate
Appendix E	Garden Capping Validation Photographs
Appendix F	MEC Environmental Ltd Gas Validation Report
Appendix G	Drawings

1. INTRODUCTION

1.1 Background

1.1.1 BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to prepare a Validation Report for the post construction garden and public open space remediation works required for the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site').

1.1.2 The site occupies an irregularly shaped plot of land of some 0.3 hectares which contains a disused former social club which is present in the centre of the site. Hardstanding car parking areas and a courtyard are present to the exterior of the social club building. Historical mapping shows a road was present on site between 1876 and 1960, whilst the social club was constructed circa 1992.

1.1.3 Manchester City Council has granted planning permission (subject to conditions) for the *'Erection of a three storey building to form fifteen flats (10 x 1 bed, 5 x 2 bed) and eight two storey dwellinghouses (2 x 2 bed, 4 x 3 bed, 2 x 4 bed) with associated landscaping and parking, following demolition of existing social club'* at the site located to the west of Greenbrow Road, Wythenshawe, Manchester, M23 2TU (Approval Ref: 137485/FO/2023).

Land contamination issues for the development are to be dealt with through planning conditions 6 and 14 which state the following:

6) *'Before the development hereby approved commences, a report (the Preliminary Risk Assessment) to identify and evaluate all potential sources and impacts of any ground contamination, groundwater contamination and/or ground gas relevant to the site shall be submitted to and approved in writing by the City Council as local planning authority. The Preliminary Risk Assessment shall conform to the City Council's current guidance document (Planning Guidance in Relation to Ground Contamination).*

'In the event of the Preliminary Risk Assessment identifying further risks which in the written opinion of the Local Planning Authority require further investigation, the development shall not commence until a scheme for the investigation of the site and the identification of remediation measures (the Site Investigation Proposal) has been submitted to and approved in writing by the City Council as local planning authority.'

'The measures for investigating the site identified in the Site Investigation Proposal shall be carried out before development commences and a report prepared outlining what measures, if any, are required to remediate the land (the Site Investigation Report and/or Remediation Strategy) which shall be submitted to and approved in writing by the City Council as local planning authority.'

14) *'When the development commences, the development shall be carried out in accordance with the previously agreed Remediation Strategy and prior to occupation a Completion/Verification Report shall be submitted to and approved in writing by the City Council as local planning authority.'*

'In the event that ground contamination, groundwater contamination and/or ground gas, not previously identified, are found to be present on the site at any time before the development in each phase is occupied, then development shall cease and/or the development shall not be occupied until, a report outlining what measures, if any, are required to remediate the land (the Revised Remediation Strategy) is submitted to and approved in writing by the City Council as local planning authority and the development shall be carried out in accordance with the Revised Remediation Strategy, which shall take precedence over any Remediation Strategy or earlier Revised Remediation Strategy.'

1.1.4 The development layout plans are presented on BTP Architects Drawing Ref: GR-BTP-00-SP-DR-A-3953_203 entitled 'Proposed Site Plan', a copy of which is presented in Appendix G and an extract of which is presented below.



Figure 1: *Extract from BTP Architects 'Proposed Site Plan'*

1.1.5 The site has been subjected to previous site investigation, assessments and reporting, the details of which are provided within the following reports:

- Dice Environmental – Phase 1 Geo-Environmental Report, Ref: 100855, dated 19/12/2022

- E3P – Phase II Geoenvironmental Site Assessment, Ref: 17-305-R1-2, dated July 2024

- BEK – Remediation & Enabling Works Strategy – Land at Greenbrow Social Club, Wythenshawe, Manchester' (Report Ref: BEK-24100-1, Rev A, dated October 2024).

- BEK – Gas Verification Plan – Land at Greenbrow Social Club, Wythenshawe, Manchester' (Report Ref: BEK-24100-2, Rev B, dated July 2024)

- BEK - Greenbrow Social Club, Wythenshawe, Manchester – UKWIR Risk Assessment, dated October 2024.

1.1.6 The above reports have been submitted to and approved by Manchester City Council as required. The remediation works required in the gardens and POS are detailed in the BEK Remediation & Enabling Works Strategy (REWS) have been implemented. The verification of the gas mitigation measures has been completed by others and is therefore outside the remit of this report.

1.1.7 For the avoidance of any doubt, the reports detailed above should be read as a precursor and in conjunction with the specification documented within this report.

1.2 Limitations

1.2.1 This report has been prepared by BEK for the sole benefit of TCG. The conclusions in this report are professional opinions of BEK based on the information available.

1.2.2 This document has been prepared for the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU, and should not be relied upon or used for any other project. BEK accepts no responsibility or liability for the consequences of this document being used for a purpose other than that purpose for which it was commissioned.

2. SITE REMEDIATION

2.0.1 In order to remove potential risks associated with contamination, specific remediation works have been recommended.

2.0.2 The remediation works required are detailed in the REWS (Report Ref: BEK-24100-1, Rev A, dated October 2024) and summarised below.

2.1 Contamination

2.1.1 To mitigate the potential risks to human health associated with widespread variable lead and PAH contamination within the made ground across the site, the following works will need to be undertaken:

All soft landscaped ***private garden areas*** *will be capped with a minimum of 600 mm of clean suitable soil (150 mm topsoil and 450 mm subsoil). The capping soils should be underlain by a 100 mm granular no-dig layer or a geotextile membrane to prevent mixing.*

All soft landscaped ***public open space (POS) areas*** *will be capped with a minimum of 300 mm of clean suitable soil (150 mm topsoil and 150 mm subsoil). The capping soils should be underlain by a 100 mm granular no-dig layer or a geotextile membrane to prevent mixing.*

2.2 Imported Material

2.2.1 It is likely that the soils to be used in the clean capping will be imported. The suitability of the sub/topsoil should be independently validated to ensure a suitability for use.

2.3 Construction Workers

2.3.1 It is recommended that construction personnel involved with direct contact with the soils at the site use appropriate PPE equipment (i.e. boots, gloves and overalls).

2.3.2 In addition, hygiene facilities should be made available in accordance with general health and safety guidelines. The successful remediation/site works contractor should undertake a suitable Risk Assessment to confirm the appropriate level of PPE.

2.3.3 A copy of all reports relating to the site should be included in the site Health & Safety File and site workers should be made fully aware of the sites setting.

2.4 Unforeseen Circumstances

2.4.1 Any areas of previously unidentified potentially contaminated soils encountered during site construction works must be brought to the attention of BEK, to ensure that the recommendations herein apply. Any potentially contaminated soils should be left in-situ and subjected to further assessment, to potentially include further chemical testing and risk assessment.

2.5 Utilities

2.5.1 BEK have completed a UK WIR Risk Assessment for the site (Dated October 2024) which confirmed PE barrier pipe was required for the site.

2.5.2 The Casey Group have confirmed that PE Barrier Pipe has been used at the site.

2.6 Concrete Mix Design

2.6.1 E3P recommends that as a minimum the design sulphate class for the site should be designed for DS-1 conditions and ACEC class AC-1s.

2.6.2 Confirmation that the correct concrete mix has been used on site is outside the BEK validation remit.

2.7 Off-Site Disposal

2.7.1 The chemical testing regime for off-site disposal may be different to the chemical testing required to assess the suitability of the soils for retention on site and the risks to human health. Therefore, additional assessment may be required to classify the soils for off-site disposal with testing criteria to assess whether the soil is hazardous, non-hazardous or inert waste. However, existing laboratory test certificates will help inform the process. Any additional testing (principally for asbestos) should also be used in the classification of the waste soils for off-site disposal.

2.7.2 The receiving landfill may require additional specialist laboratory testing to further characterise the material proposed for disposal against Waste Acceptance Criteria (WAC). We would recommend early consultation between the Contractor and the receiving landfill to determine any specific laboratory testing requirements.

2.7.3 Individuals/companies removing soils from the site are bound by a duty of care and as such this should only be undertaken by an authorised person. All waste movements should be accompanied by a waste transfer note.

3. VERIFICATION OF WORKS

3.1 Supervision of Works

3.1.1 An Engineer from BEK attended the site as requested by TCG during the remediation works which were undertaken progressively. Regular liaison with TCG during the works ensured a presence during key activities.

3.2 Capping System

3.2.1 Following the recommendations within the REWS, a capping system comprising clean, imported topsoil and subsoil has been installed to a depth of 600 mm (150 mm topsoil, 450 mm subsoil) within the soft landscaped/garden areas and 300 mm (150 mm topsoil, 150 mm subsoil) within soft landscaped POS areas. The capping system was placed on a geotextile marker layer to prevent mixing.

Imported Soil

3.2.2 As part of the remediation works, TCG imported approximately 130 m^3 of greenfield topsoil from Marchinton Stone Ltd sourced from a greenfield parcel of land located off Redrow Homes, Derby Road, Widnes.

3.2.3 Approximately 185 m^3 of greenfield 'quarried' subsoil was imported from Marchington Stone Ltd from a site in Shirehill Quarry.

3.2.4 The imported soils were subject to testing and assessment by BEK to confirm suitability prior to importation. Information regarding the source of imported soils used at the site can be seen in Table 1 below. The source test results are presented in Appendix A. A review of this data confirms the soil is suitable for use.

Source	Volume	Description	Validation Testing Sample Names
Marchington Stone Ltd (Redrow Homes, Derby Road, Widne)	130 m^3	Topsoil – Dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material	TS-1 to TS-3
Marchington Stone Ltd (Shirehill Quarry)	185 m^3	Subsoil – Brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments.	SS-1 to SS-3

Table 1: *Imported Topsoil & Subsoil Information*

3.2.5 The imported soils were also subjected to validation testing and assessment on site in accordance with the REWS. To comply with the recommendations presented in the REWS, BEK recovered a total of 3 topsoil samples and 3 subsoil samples for chemical testing.

3.2.6 The samples were tested for the contaminants of concern listed in the REWS. Following a review of the chemical test results, no elevations against human health thresholds were identified and the soils are confirmed to be suitable for use in the private and shared landscaped areas of the site. Copies of these test results are presented in Appendix B.

Thickness

3.2.7 Capping layer thickness was checked by BEK within the soft landscaped areas to ensure the required thickness had been achieved. This was undertaken by excavating a series of trial holes to ensure the correct construction of the capping system and to confirm the presence of a geotextile membrane at the base.

3.2.8 On completion of the verification for the capping system in each plot, BEK prepared a Certificate of Completion for that plot.

3.2.9 Certificates of Completion are available for each plot. A selection of certificates presented in Appendix C for information. All certificates can be made available upon request.

3.2.10 Certificate of verification for the capping system for all Public Open Spaces (POS) is presented in Appendix D.

3.2.11 A selection of validation photographs showing the capping system can be seen in Appendix E.

3.3 Ground Gas Mitigation Measures

3.3.1 The independent validation of the ground gas mitigation measures was undertaken by MEC Environmental Ltd.

3.3.2 The details of the validation of the gas measures have been included within Appendix F. It should be noted that only the apartment block (Plots 1 to 9) required gas mitigation measures.

3.4 Unrecorded Contamination & Associated Issues

3.4.1 The groundworkers did not report any visual or olfactory evidence of contamination impacted soils during any excavations.

4. CONCLUSIONS

4.1 BEK has supervised the implementation of the garden/POS remediation works for the development at land at Greenbrown Social Club, Wythenshawe, Manchester.

4.2 The works have been carried out by The Casey Group and their appointed contractors, in accordance with the approved recommendations.

4.3 Based on the information herein, the garden/POS remediation works have been completed in accordance with the approved Remediation & Enabling Works Strategy.

APPENDIX A

Source Test Data

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
Cheshire
SK6 8DX

e: jeff@marchington.net

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

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-039278

Replaces Analytical Report Number: 24-039278, issue no. 1
Result correction by laboratory.
Results Corrected For LOI By Laboratory

Project / Site name:	Shire Hill Quarry	**Samples received on:**	29/08/2024
Your job number:	MSSHQ SUB SOIL	**Samples instructed on/ Analysis started on:**	29/08/2024
Your order number:	MSSHQ	**Analysis completed by:**	12/09/2024
Report Issue Number:	2	**Report issued on:**	13/09/2024
Samples Analysed:	1 soil sample		

Signed:

Caterina Bentley
Customer Service Advisor
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

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

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.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

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

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

Certificate of Analysis

BS 8601:2013 Specification For Subsoil

Report No:		**24-039278**	Marchington Stone Ltd	
Location		Shire Hill Quarry		
Lab Reference (Sample Number)		301747	105 Buxton Road High Lane Stockport Cheshire SK6 8DX	
Sampling Date		23/08/2024		
Sample ID		MSSHQ		
Depth (m)		**0.00**		
		unit	**Result**	**Compliant with range (Y/N)**
Texture	Clay	%w/w	9.00	
	Silt	%w/w	21.00	**Multipurpose subsoil** / **Specific purpose subsoil**
	Sand	%w/w	70.00	**Acidic** / **Calcareous**
	Texture Class		SANDY LOAM	Y / Y / Y
Mass Loss on Ignition		%	1.86	Y / Y / Y
Coarse fragment content	>2mm	%w/w	21.40	Y / Y / Y
	>20mm	%w/w	0.00	Y / Y / Y
	>75mm	%w/w	0.00	Y / Y / Y
Soil pH		pH	7.40	Y / N / N
Carbonate		%	1.20	- / - / Y
Exchangable Sodium Percentage		%	1.70	Y / Y / Y
Phytotoxic contaminants	Total Zinc	mg/kg	67.00	Y / Y / Y
	Total Copper	mg/kg	17.00	Y / Y / Y
	Total Nickel	mg/kg	23.00	Y / Y / Y
Visible contaminants	>2mm	%w/w	0.00	Y / Y / Y
	Plastics	%w/w	0.00	Y / Y / Y
	Sharps	%w/w	0.00	Y / Y / Y
Available plant nutrients	Phosphorus	mg/l	14.00	
	Potassium	mg/l	60.00	
	Magnesium	mg/l	400.00	
Additional analysis	Available Sodium	mg/l	33.00	
	Available Calcium	mg/l	930.00	
	Conductivity	µS/cm	2300.00	
	Conductivity CaSO4 Adj.	µS/cm	350.00	
Compliancy				Pass / Fail / Fail

Pass BS 8601

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and i2 cannot be held responsible for any discrepencies with current legislation

*= UKAS accredited
** = MCERTS accrediited

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number : 24-039278
Project / Site name: Shire Hill Quarry

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
301747	MSSHQ	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation

Analytical Report Number : 24-039278
Project / Site name: Shire Hill Quarry

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
Coarse Fragment and Contaminant Analysis	Determination of >2mm contaminants	BS3882:2007 & BS8601:2013 & PAS 100:2005	L019B	D	NONE
Density of available extract	Gravimetric determination of density of dried sample up to 2 mm	In-house method	L019B	D	NONE
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
75 mm Coarse Fraction - BS8601 Subsoil	Determination of > 75 mm fraction by gravimetry.	BS8601:2013	L019B	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Conductivity (BS 3882/BS 8601)	Determination of the conductivity of soil in accordance with BS 3882:2007 methodology	BS 3882:2007 & BS 8601:2013	L031B	D	NONE
Conductivity CaSO4 adj - BS8601 Subsoil	Determination of Electical Conductivity on CaSO4 extract, adjusted	Method based on BS 8601:2013	L031B	D	NONE
Carbonate - BS 8601 Subsoil	Determination of soil carbonate content	BS 8601:2013	L034-PL	D	NONE
Extractable/Available Metals (BS 3882/BS 8601)	Determination of the extractable metals in soil, in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L038B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Loss on Ignition - BS8601	Determination of Loss on Ignition as defined in BS 8601	Method based on BS 8601:2013	L047-PL	D	NONE
Phosphorus as PO4 (BS 3882/BS 8601)	Determination of the extractable phosphorus in soil, in accordance with BS 3882:2007 methodology	Method based on BS 3882:2015 & BS 8601:2013	L048B	D	NONE
pH (BS 3882/BS 8601)	Determination of the pH of soil in accordance with BS 3882:2007 methodology	BS 3882:2007 & BS 8601:2013	L099-PL	D	NONE
Subsoil (BS 8601:2013)	Specification for subsoil	BS 8601:2013	PL		NONE
Textural Classification Diagram (BS 8601:2013)	BS 8601:2013	BS 8601:2013	PL		NONE
Geotechnical Testing	See attached geotechnical report	See attached geotechnical report	PL		NONE
Subsoil Prep		In-house method	L019B	D	NONE

Analytical Report Number : 24-039278
Project / Site name: Shire Hill Quarry

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

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

Quality control parameter failure associated with individual result applies to calculated sum of individuals.
The result for sum should be interpreted with caution

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

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ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

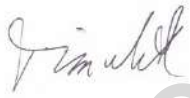
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

APPENDIX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

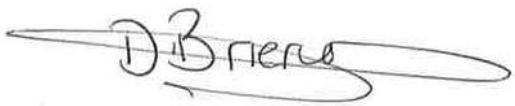
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

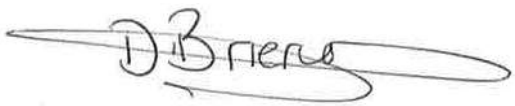
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

Garden Capping Validation Certificates

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 1

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 1 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
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T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

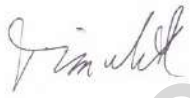
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



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Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

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Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

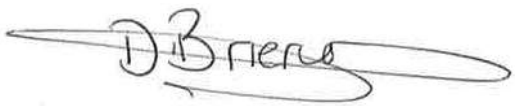
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

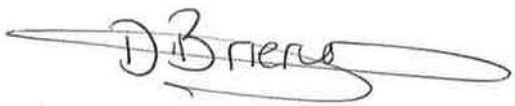
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

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ANNEX C

Validation Photographs

BEK Geo-Environmental Consulting
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Photograph 1: Validation of Plot 1



Photograph 2: Validation of Plot 1

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Photograph 3: Validation of Plot 1

BEK Geo-Environmental Consulting
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Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 2

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 2 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
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Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

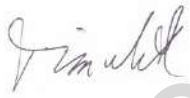
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
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Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

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ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

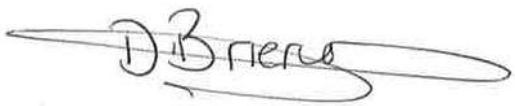
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

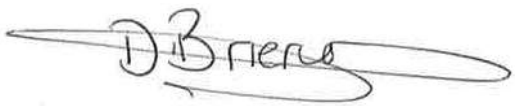
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

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ANNEX C

Validation Photographs

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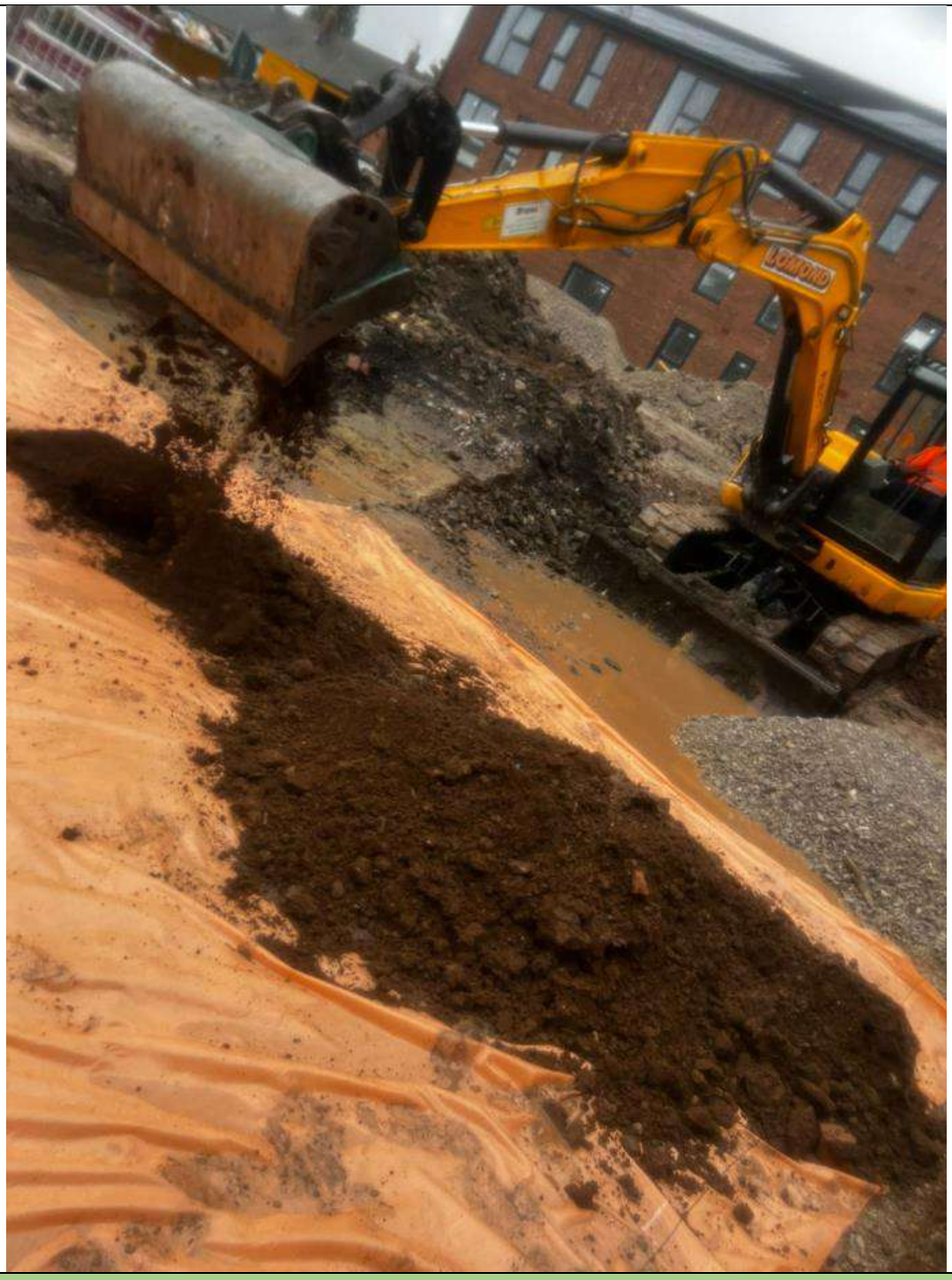
Photograph 1: Validation of Plot 2



Photograph 2: Validation of Plot 2

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Photograph 3: Validation of Plot 2

BEK Geo-Environmental Consulting
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Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 3

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 3 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

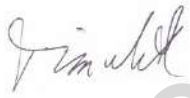
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
Company No: 06537088
VAT No: 369 2662 60
Tel: 0800 433 2906
oakshireenvironmental.co.uk

Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

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ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

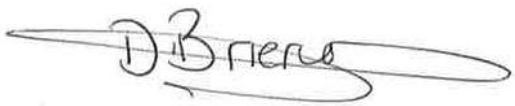
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

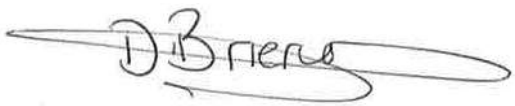
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s

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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.
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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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

BEK Geo-Environmental Consulting
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Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
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01254 377622

ANNEX C

Validation Photographs

BEK Geo-Environmental Consulting
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bekenviro.co.uk
01254 377622



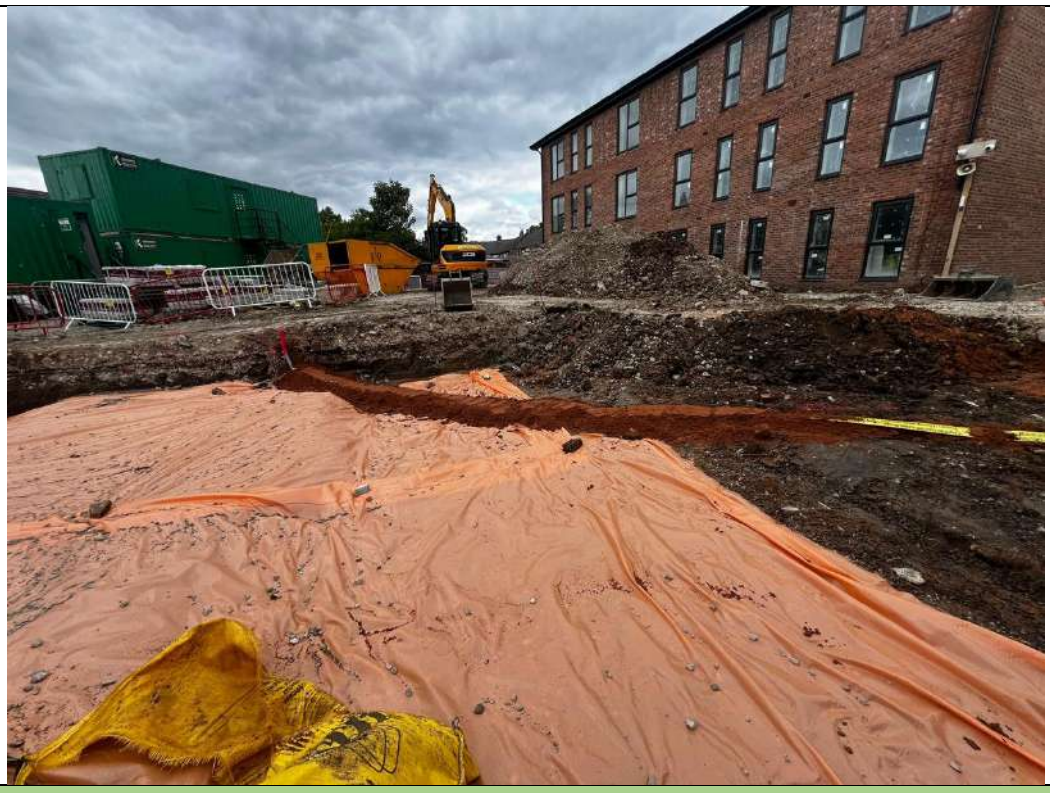
Photograph 1: Validation of Plot 3



Photograph 2: Validation of Plot 3

BEK Geo-Environmental Consulting
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Photograph 3: Validation of Plot 3

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
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Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 4

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 4 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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No.2 Landwick Court, Metcalf Drive, Altham Business Park,
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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

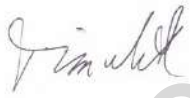
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
Company No: 06537088
VAT No: 369 2662 60
Tel: 0800 433 2906
oakshireenvironmental.co.uk

Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

BEK Geo-Environmental Consulting
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ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

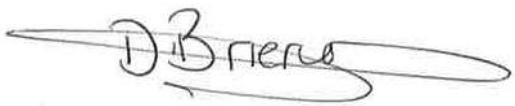
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

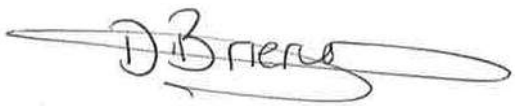
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

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Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s

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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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

ANNEX C

Validation Photographs

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622



Photograph 1: Validation of Plot 4



Photograph 2: Validation of Plot 4

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park, Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622



Photograph 3: Validation of Plot 4

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 5

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 5 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

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ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

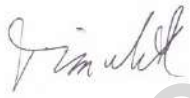
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
Company No: 06537088
VAT No: 369 2662 60
Tel: 0800 433 2906
oakshireenvironmental.co.uk

Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

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USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

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01254 377622

ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

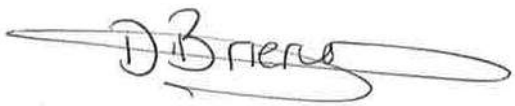
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

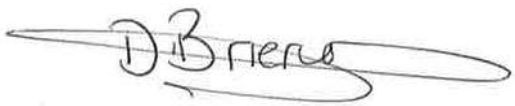
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

BEK Geo-Environmental Consulting
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01254 377622

ANNEX C

Validation Photographs

BEK Geo-Environmental Consulting
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Lancashire BB5 5TU

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Photograph 1: Validation of Plot 5



Photograph 2: Validation of Plot 5

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
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Photograph 3: Validation of Plot 5

BEK Geo-Environmental Consulting
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Our Ref: BEK/24100/251020/TCG/P1

20th October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 6

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 6 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe Road, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
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ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

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Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

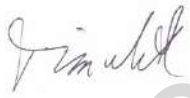
Further details on soil handling are provided in Annex A of *BS3882:2015.*

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We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

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Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

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USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
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01254 377622

ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

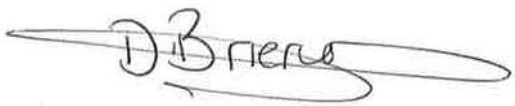
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

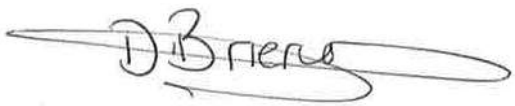
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
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01254 377622

ANNEX C

Validation Photographs

BEK Geo-Environmental Consulting
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Photograph 1: Validation of Plot 6

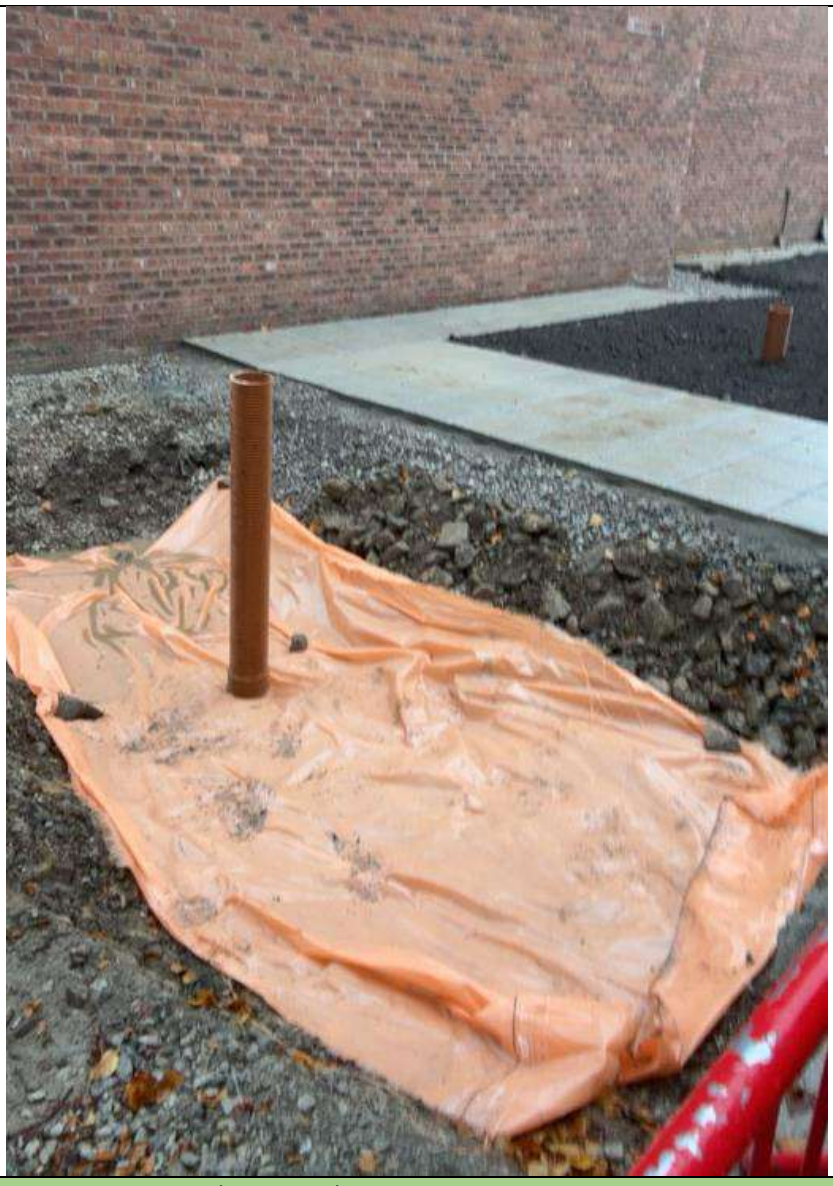


Photograph 2: Validation of Plot 6

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
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Photograph 3: Validation of Plot 6

BEK Geo-Environmental Consulting
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Our Ref: BEK/24100/251020/TCG/P1

20 October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 7

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 7 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
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www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

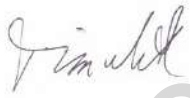
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

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Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

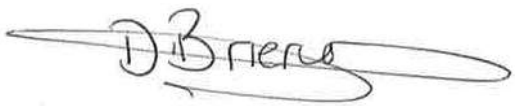
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

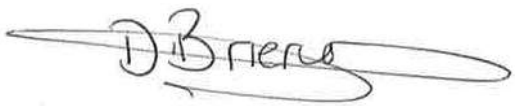
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

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ANNEX C

Validation Photographs

GEO-ENVIRONMENTAL CONSULTING

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Photograph 1: Validation of Plot 7



Photograph 2: Validation of Plot 7

GEO-ENVIRONMENTAL CONSULTING

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Photograph 3: Validation of Plot 7

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Our Ref: BEK/24100/251020/TCG/P1

20 October 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe - Plot 8

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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330 m^3 of greenfield subsoil was imported by Marchington Stone from a site in Congleton. Source test data has been provided to confirm suitability (Annex A). In accordance with YALPAG frequencies, BEK recovered four validation samples of the topsoil following import to site (SS-1 to SS-4). The subsoil is described as 'brown slightly clayey silty SAND with occasional fine to coarse gravel, rare broken brick fragments'.

All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 600 mm depth. See validation photographs in Annex C. TCG have also provided BEK with photographs of the geotextile within the gardens prior to/during placement of the clean soils.

BEK can confirm that the remediation works required for Plot 8 at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
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www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

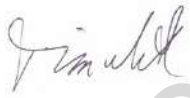
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

OAKSHIRE
ENVIRONMENTAL

Quantum Intelligent Trading Ltd
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Soil Quality & Contamination Test

27 August 2024

Marchington Stone Ltd

Report by Mr Louis Turner BSc (Hons)
Supervised by Mr Joseph Turner

CONTENTS

1. Introduction

1.1 Project Overview
1.2 Purpose of Investigation
1.3 Scope of Work
1.4 Limitations

2. Site

2.1 Site Description and Location
2.2 Proposed Project

3. Methodology

3.1 Sampling Methodology
3.2 Health & Safety
3.3 Testing Methodology

4. Evaluation of Results

4.1 Screening Values
4.2 Summary of Results (Contamination)
4.3 Summary of Results (BS8601)
4.4 Conclusions

5. References

1. Introduction

The following document provides details of a Soil Contamination & Quality Test carried out by Oakshire Environmental, and includes a description of the site, proposed project, sampling methodology, testing methodology and an evaluation laboratory testing.

1.1 Project Overview

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use. Oakshire Environmental will carry out Soil Quality & Contamination Testing, including delivery and collection of a soil test kit, as described below.

1.2 Purpose of Investigation

The objectives of the Soil Quality & Contamination Testing will be to:

- Identify chemical and physical properties of sampled soil.
- Assess the risk to human health and the environment.
- Determine the suitability of sampled soil for use as a growing medium.
- Classify sampled soil according to British Standard Institute specification for subsoil (BS 8601).
- Assess the requirement for further investigations or treatment.

1.3 Scope of Work

- Brief introductory information will be noted to provide context to the report and will include an Introduction, Project Overview, Scope of Work and Limitations.
- In order to identify chemical and physical properties of sampled soil, 1 x sample will be taken by the client from soil at the site and analysed for Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative) in a UKAS accredited laboratory.
- Results of laboratory testing will be assessed with reference to suitable screening values, including British Standard Institute specification for subsoil (BS 8601:2013) and Generic Assessment Criteria (GAC), to determine the suitability of sampled soil for use as a growing medium and classify sampled soil according to British Standard Institute specifications.
- This information will be used to provide a clear, easy to understand and actionable summary of results, and determine the requirement for further investigations or remediation.
- Report to be carried out, by professional Environmental Consultants with BSc (Hons) in Environmental Science or above, in accordance with appropriate technical guidelines, which may include Environment Agency Land Contamination: Risk Management (LCRM) guidelines, WM3 Technical Guidance, British Standards Institute and Oakshire Environmental reporting guidelines.

1.4 Limitations

Quantum Intelligent Trading Ltd is previously and hereafter referred to as “Oakshire Environmental” or “the company”. Oakshire Environmental has exercised such professional skill, care and diligence as may reasonably be expected of a properly qualified and competent consultant when undertaking works of this nature. This report is only valid when used in its entirety and any information or advice contained within the report should not be relied upon until considered in the context of the whole report. Oakshire Environmental disclaims any responsibility to the client, as named on the front of this report (“the client”), and others in respect of any matters outside the scope of this work. Any comments made on the basis of information obtained from the client or other third parties are given in good faith on the assumption that the information is accurate. This report has been prepared solely for the benefit of the client and any other party using or placing reliance upon any information contained in this report does so at their own risk. Oakshire Environmental accepts no responsibility or liability for the contents of this report being used for any purpose or project for which it was not commissioned. Oakshire Environmental accepts no liability whatsoever for any loss or damage arising from the interpretation or use of this report and in no event shall the company be liable for any punitive, exemplary or other special damages, or for any indirect, incidental or consequential damages, including with respect to the performance or non-performance of any services, whether arising under breach of contract, tort or any other legal theory, and regardless of whether the company has been advised of, knew of, or should have known of the possibility of such damages. Furthermore, Oakshire Environmental does not accept any liability for the consequences of any legislative changes or the release of subsequent guidance documentation and following delivery of the report has no obligation to advise the client or any other party of such changes or their repercussions.

This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section describes the site and outlines the details of proposed project.

2.1 Site Description and Location

The site is located in Congleton.

2.2 Proposed Project

Soil testing has been requested by the client, to identify the quality and contamination of sampled soil from the site and assess the suitability for re-use, in addition to, classifying soil according to British Standard Institute specifications.

3. Methodology

3.1 Sampling Methodology

One sample was taken by the client, on 9th August 2024, from stockpiled subsoil at the site and placed into sample containers. Sample containers used for analysis of volatile contaminants were filled as much as possible without air spaces as volatile compounds can be lost into these spaces.

3.2 Health & Safety

When collecting potentially contaminated soil samples it must be assumed that the soil is contaminated in order to protect the health of the assessor, Personal Protective Equipment (PPE) was used during the sampling process to mitigate this risk. Sample containers were packed with biodegradable fill for protection and placed in a sealed container for transportation to the laboratory.

3.3 Testing Methodology

UKAS accredited laboratory testing included a comprehensive suite of contaminants, including Soil Texture, Stone Content, Loss On Ignition, pH, Carbonate, Nitrogen, Phosphorus, Potassium, Magnesium, Carbon:Nitrogen ratio, Electrical Conductivity, Exchangeable Sodium, Visual contaminants, Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH and Asbestos (Qualitative).

4. Evaluation of Results

4.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening values used for risk assessments. These are specific to the proposed land use and depend on the pathways present at a particular site. Exposure pathways considered include direct soil and indoor dust ingestion, skin contact with soils and dust, inhalation of vapours in indoor airspace, ingestion of homegrown produce, permeation into and/or corrosion of water pipes and leaching of contaminants through soil. It should be noted that not all of these pathways will be relevant at the site and the most appropriate screening values available have been used to assess the results. Screening values take a conservative approach to assessing potential risk and concentrations below these values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk based on the land use.

In addition, results of laboratory testing of soil samples were analysed by comparing them to threshold values set out in the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil) guidance. These values provide maximum threshold limits and ideal ranges for soil parameters to determine its suitability for general purpose landscaping or specific purposes.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a ‘significant possibility of significant harm’ or the need for remediation. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

4.2 Summary of Results (Contamination)

- Heavy metal concentrations were low
- pH was alkaline
- Phenols (total) concentrations were below the laboratory limit of detection
- Total Organic Carbon value was very low
    - Soils with low organic matter content will allow hydrocarbons to leach through the soil more easily as these organic contaminants would usually adsorb to organic matter particles
- Polycyclic Aromatic Hydrocarbons (PAHs) concentrations were below the laboratory limit of detection
    - PAHs are often present in made ground deposits and coal related products such as coal tar used for the construction of roads and are also the by-products of exhaust emissions from vehicles and can, therefore, build up to high concentrations near roads
- BTEX & MTBE concentrations were below the laboratory limit of detection
- Total Petroleum Hydrocarbons (TPHs) concentrations were low
    - These substances are used in various oil and fuel products such as petrol, diesel and lubricant oils, in addition, these contaminants often impact soils near industrial sites where fuel and oils are stored such as garages and farms
- No Asbestos was detected in sampled soil

4.3 Summary of Results (BS8601)

- Sampled soil has a clay loam texture, which should not present issues with permeability, structural degradation or compaction and is, therefore, considered to be suitable for use as multipurpose subsoil
- Sampled soil had a low stone content, which should not restrict the soil's suitability for use as multipurpose subsoil
- Organic matter content was low
- pH was alkaline and within a typical range
- Electrical conductivity value was low and should not present issues with deficiencies in available plant nutrients
- Carbonate content was low and is considered to be non-calcareous
- None of the potentially phytotoxic contaminants tested were above the threshold values
- No visible contaminants, plastics or sharps were identified in sampled soil

4.4 Conclusions

Based on the results of laboratory testing, sampled soil is considered to be uncontaminated, suggesting a low risk to human health and the environment, in addition, sampled soil is considered to be compliant with the British Standard for Subsoil (BS8601:2013 - Specification for Subsoil).

It should be noted that the potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on a receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

5. References

Environment Agency *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

DEFRA. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*.

Nathanail, C.P.; McCaffrey,C.; Gillett, A.G.; Ogden, R.C. & Nathanail, J.F. *The LQM/CIEH S4ULs for Human Health Risk Assessment*.

USEPA. *Regional Screening Levels (RSLs).* [online] Available at: <epa.gov/risk/regional-screening-levels-rsls>.

BSI (2013) *BS 8601:2013 - Specification for subsoil*.

Oakshire Environmental Available at: <oakshireenvironmental.co.uk>

Sample Type	SOIL
Sample Location	S01
Sample Depth (m)	0.50
Sampling Date	09/08/2024

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Moisture Content	N	%	0.1	9.3
Material removed	N	%	0.1	6.4
Description of Inert material removed	N		0	Stones
Metals				
Arsenic	M	mg/kg	0.5	4.8
Beryllium	M	mg/kg	0.5	< 0.5
Cadmium	M	mg/kg	0.2	0.2
Chromium	M	mg/kg	1	12.1
Chromium (III)	N	mg/kg	5	12.1
Copper	M	mg/kg	4	15.5
Lead	M	mg/kg	1	13.2
Mercury	M	mg/kg	0.1	< 0.1
Nickel	M	mg/kg	1	11.5
Selenium	M	mg/kg	1	< 1.0
Vanadium	M	mg/kg	0.5	14.0
Zinc	M	mg/kg	4.5	31.2
Inorganics				
Carbonate	N	%	0.1	0.5
Hexavalent Chromium	N	mg/kg	0.8	< 0.8
Miscellaneous				
Electrical Conductivity (CaSO4 extract)	N	uS/cm	50	1830
Carbon Nitrogen Ratio	N	ratio	0.1	15.0130
Loss on Ignition	M	%	0.01	1.99
pH	M	pH units	0.1	7.7
Density	N	g/cm3	0	1.33
Total Carbon	N	%	0.01	1.2
Total Organic Carbon	N	%	0.01	0.41
Total Nitrogen	N	%	0.01	0.08
Extractable Potassium	N	mg/l	20	91
Extractable Magnesium	N	mg/l	20	110
Extractable Phosphate	N	mg/l	1	24
Sand content	NS	%	1	36
Silt content	NS	%	1	41
Clay content	NS	%	1	23
Stones > 2mm	NS	%	1	3
Stones > 20mm	NS	%	1	< 1
Stones > 50mm	NS	%	1	< 1
Total Visible Contaminants	N	%	0.01	< 0.01
Plastics	N	%	0.01	< 0.01
Sharps	N	n/kg	0	0
Phenols				
Phenol	M	mg/kg	1	< 1
M,P-Cresol	N	mg/kg	1	< 1
O-Cresol	N	mg/kg	1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5
Polyaromatic hydrocarbons				
Naphthalene	N	mg/kg	0.5	< 0.5
Acenaphthylene	N	mg/kg	0.5	< 0.5
Acenaphthene	N	mg/kg	0.5	< 0.5
Fluorene	N	mg/kg	0.5	< 0.5
Phenanthrene	N	mg/kg	0.5	< 0.5
Anthracene	N	mg/kg	0.5	< 0.5
Fluoranthene	N	mg/kg	0.5	< 0.5
Pyrene	N	mg/kg	0.5	< 0.5
Benzo(a)anthracene	N	mg/kg	0.5	< 0.5
Chrysene	N	mg/kg	0.5	< 0.5
Benzo(b)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(k)fluoranthene	N	mg/kg	0.5	< 0.5
Benzo(a)pyrene	N	mg/kg	0.5	< 0.5
Indeno(1,2,3-cd)pyrene	N	mg/kg	0.5	< 0.5
Dibenzo(a,h)anthracene	N	mg/kg	0.5	< 0.5
Benzo[g,h,i]perylene	N	mg/kg	0.5	< 0.5
Total PAH(16)	N	mg/kg	2	< 2.0
BTEX				
Benzene	M	ug/kg	10	< 10.0

Toluene	M	ug/kg	10	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0
Xylenes	M	ug/kg	10	< 10.0
MTBE	N	ug/kg	10	< 10.0
TPH CWG				
>C5-C6 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS_AL)	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	18.3
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	mg/kg	1	10.3
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	mg/kg	1	28.5
>C5-C7 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS_AR)	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	< 1.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	7.8
>C35-C40 Aromatic (EH_CU_1D_AR)	N	mg/kg	1	5.6
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	mg/kg	1	13.4
Total (>C5-C40) Ali/Aro (HS_1D_MS+EH_CU_1D_Total)	N	mg/kg	1	41.9
Asbestos				
Asbestos (Qualitative)	N	mg/kg	0.01	< 0.01

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid neutralisation capacity	N	Air dried sample	15/08/2024		
Extractable cations - BS3882	N	Air dried sample	16/08/2024		ICPMS
Visible Contaminants	N		14/08/2024		
Hexavalent chromium	N	As submitted sample	14/08/2024	110	Colorimetry
pH	M	Air dried sample	15/08/2024	113	Electromeric
Electrical conductivity of soil	N	Air dried sample.	16/08/2024	114	Electromeric
Phenols in solids	M	As submitted sample	13/08/2024	121	HPLC
Loss on ignition at 450 deg C	M	Air dried sample	16/08/2024	129	Gravimetry
PAH (GC-FID)	N	As submitted sample	16/08/2024	133	GC-FID
Extr. Phos	N	Air dried sample	16/08/2024	140	ICPMS
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/08/2024	181	GC-MS
BTEX in solids	M	As submitted sample	14/08/2024	181A	GC-MS
Total organic carbon/Total sulphur	N	Air dried sample	15/08/2024	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	13/08/2024	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	19/08/2024	214	GC-FID
Asbestos identification	U	Air dried sample	15/08/2024	281	Microscopy
Aqua regia extractable metals	M	Air dried sample	14/08/2024	300	ICPMS

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.

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

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ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

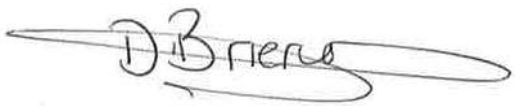
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

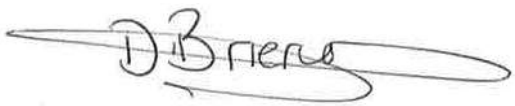
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09212
Issue Number: 1 **Date:** 01 September, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8756-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 01/09/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
% Stones >10mm$_A$	3.7	12.9	2.5	2.2				% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.20	8.30	8.21	8.27				pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.10	0.08	0.10				g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	250	420	200	230				mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2				mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	0.70	0.51	0.49	0.78				% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	2	3	2	2				mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0	<1.0				mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	9	8	9	10				mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	10	9	11	10				mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1	<1				mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	7	6	6	7				mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17				mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	10	9	11	12				mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	21	18	21	20				mg/kg	1	A-T-024s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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						A-T-045

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	<0.02	<0.02				mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.08	0.09	0.07	0.05				mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.06	0.05				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.08	0.07	<0.05				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.07	0.07	0.05	<0.05				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	<0.07				mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.12	0.10	0.07				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04	<0.04				mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.19	0.23	0.15	0.13				mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.09	0.07	0.05				mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03				mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.07	0.13	0.06	0.04				mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.19	0.20	0.15	0.11				mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.94	1.12	0.78	0.50				mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09212

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09212/1	25/09212/2	25/09212/3	25/09212/4				Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SS-1	SS-2	SS-3	SS-4						
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25	19-Aug-25						
Sample Type	SOIL	SOIL	SOIL	SOIL						
Sample Matrix Code	4A	5A	5A	4A						
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	2	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	8	6	4	4				mg/kg	1	A-T-055s
Total Aliphatics$_A$	11	6	4	4				mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C10-C12$_A$	1	<1	<1	<1				mg/kg	1	A-T-055s
Aro >C12-C16$_A$	3	2	<1	<1				mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	19	8	1	<1				mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	55	19	4	3				mg/kg	1	A-T-055s
Total Aromatics$_A$	79	29	5	3				mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	89	35	10	7				mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<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				mg/kg	0.01	A-T-022s

Report Notes

General

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•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.
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•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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09212

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09212/1	25/09212/2	25/09212/3	25/09212/4
Client Sample No				
Client Sample ID/Depth	SS-1	SS-2	SS-3	SS-4
Date Sampled	19/08/25	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-027s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	28/08/2025	28/08/2025	28/08/2025	28/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025	29/08/2025
A-T-045	22/08/2025	22/08/2025	22/08/2025	22/08/2025
A-T-050s	01/09/2025	01/09/2025	01/09/2025	01/09/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025	27/08/2025

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

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Lancashire BB5 5TU

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01254 377622

ANNEX C

Validation Photographs

GEO-ENVIRONMENTAL CONSULTING

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Photograph 3: Validation of Plot 8



Photograph 4: Validation of Plot 8

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Photograph 1: Validation of Plot 8



Photograph 2: Validation of Plot 8

APPENDIX D

POS Capping Validation Certificate

BEK Geo-Environmental Consulting
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Lancashire BB5 5TU

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Our Ref: BEK/24100/251120/TCG/POS

20th November 2025

FAO Jon Sharp
The Casey Group
Rydings Road
Rochdale
OL12 9PS

Garden Capping Validation Certificate - Land at Greenbrow Social Club, Wythenshawe – POS Area

BEK Enviro (BEK) has been commissioned by The Casey Group (TCG) to supervise and validate the installation of the clean cover system required at the former Greenbrow Social Club, Greenbrow Road, Wythenshawe, Manchester, M23 2TU (hereafter referred to as 'the site')

The approved remediation works are detailed in the BEK Remediation & Enabling Works Strategy (REWS), Report Ref: BEK-24100-1 (Rev A), dated October 2024. This letter relates to the validation of the clean cover system only.

To mitigate the potential risks to human health associated with ground contamination, the approved remediation requirements comprise the following:

> *A clean cover system should be installed within areas of soft landscaping at the site. Within private garden areas, the cover system will comprise a thickness of at least 600 mm of physically and chemically suitable imported topsoil and subsoil. Within soft-landscaped public open space areas, the cover system will comprise a thickness of at least 300 mm of physically and chemically suitable imported topsoil and subsoil.*
>
> *The topsoil component of the clean cover system should be a minimum of (but not restricted to) 150 mm in depth. The remainder of the clean cover (450 mm in private garden areas, 150 mm in POS areas) will be composed of subsoil.*
>
> *The clean cover system should be underlain by a 100 mm granular no-dig layer or a geotextile marker membrane in all areas of the site to prevent mixing.*

Remediation activities have been supervised by both BEK and TCG. BEK has confirmed that the soils are suitable for use (prior to placement) and carried out checks to confirm that the correct capping thickness has been achieved. BEK has relied on TCG and their appointed contractors to cap the gardens with the validated sub/topsoil.

115 m^3 of 'as-dug' greenfield topsoil has been imported by Marchington Stone Astley from a site at Derby Road, Widnes. Source test data has been provided to confirm suitability and is presented in Annex A. In accordance with YALPAG frequencies, BEK recovered three validation samples of the topsoil following import to site (TS-1 to TS-3). The topsoil is described as 'dark brown slightly clayey silty SAND with rare fine to gravel, rare organic material'.

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All validation samples were submitted to the UKAS accredited laboratories of Envirolab and chemically tested for potential contaminants of concern, in line with YALPAG recommendations. Copies of the chemical test results are presented in Annex B. All available chemical test results have been compared to approved assessment criteria and BEK can confirm that the topsoil and subsoil is suitable for use in a residential garden.

Following placement of the soils by TCG, an engineer from BEK attended site to confirm that the clean cover system has been installed in accordance with approved remediation recommendations. This was carried out using a validation hole to show the profile of the soils within the capping layer and expose the geotextile at the base. A measuring staff was used to confirm the 300 mm depth. See validation photographs in Annex C.

BEK can confirm that the remediation works required for share landscaped Public Open Space (POS) areas at the Residential Development located at the residential development at Greenbrow Social Club, Wythenshawe, Manchester has been completed in accordance with the approved methodology.

I trust the above is satisfactory. Should you require anything further please do not hesitate to contact the undersigned.

Yours sincerely

MICHAEL BUCKLEY
BSc (Hons) MSc MIEnvSci CEnv

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ANNEX A

Source Test Data

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Marchington Stone Ltd
105 Buxton Road
High Lane
Stockport
SK6 8DX

18th July 2025
Our Ref: TOHA/25/1904/SS/Rev.1
Your Ref: see below

Marchington Stone Ltd

Dear Sirs

Topsoil Analysis Report: Redrow Homes, Derby Road, Widnes

We have completed the analysis of the soil sample recently submitted, referenced *Redrow Homes Widnes Topsoil,* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes (trees, shrubs, amenity grass). In addition, the sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2), slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure*. The sample was virtually stone-free and no unusual odours or deleterious materials were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk

Registered in England No. OC324049 Registered Office: The Innovation Centre, Howbery Park, Wallingford, Oxfordshire OX10 8BA

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (sand, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX);
- asbestos screen.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy clay loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Such soils usually have good water and nutrient retention capacities, but they are also prone to structural degradation and compaction during handling, and especially when plastic in consistency. Any damage to the structural condition of this soil is likely to reduce its drainage and aeration properties.

The sample was virtually stone-free and as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was alkaline in reaction (pH 7.5). This pH value would be considered suitable for general landscape purposes provided species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was low, which indicates that soluble salts were not present at levels that would be harmful to plants.

The electrical conductivity value by $CaSO_4$ extract (*BS3882* requirement) fell below the maximum specified value (3300 µS/cm) given in *BS3882:2015 – Table 1*.

Organic Matter and Fertility Status

The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. These deficiencies can be remedied by a suitable compost application.

The C:N ratio of the sample was acceptable for general landscape purposes.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2015 – Table 1*.

Marchington Stone Ltd

Potential Contaminants

With reference to *BS3882:2015 - Table 1*: Notes 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with home-grown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels* (C4SLs) *for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined (including asbestos), none was found at levels that exceeded their guideline values.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil - Table 1, Multipurpose Topsoil).*

From the soil examination and subsequent laboratory analysis, the sample was described as a alkaline, non-saline, non-calcareous, virtually stone-free sandy clay loam with a well developed structure. The sample was adequately supplied with total nitrogen, extractable phosphorus and extractable magnesium but was deficient in organic matter and extractable potassium. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the topsoil represented by this sample would be considered suitable for general landscape purposes, provided the organic matter and nutrient deficiencies are remedied by a suitable compost application, the soil's physical condition is maintained. Species with a wide pH tolerance should be selected.

The sample was largely compliant with the requirements of the British Standard for Topsoil *(BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil),* with the exception of organic matter and nutrient deficiencies. On this occasion, the non-compliances are considered minor when reviewed in the context of all the other results and provided the deficiencies remedied by a suitable compost application.

RECOMMENDATIONS

Compost Application

To address the nutrient deficiencies, we recommend applying and incorporating suitable compost (e.g. PAS100:2018 /Landscape Institute/WRAP grade (10mm screened) green compost) at a rate of **15%** by volume, ensuring the soil is dry and friable.

For planting purposes, the compost should be incorporated to a depth of 200mm and for grass areas the compost should be worked into the upper 100mm.

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. stockpiling, respreading, cultivating, planting, seeding or turfing). As a consequence, soil handling operations should be carried out when soil is sufficiently dry to be non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery, and soil handling should be stopped during and after heavy rainfall and not continued until the soil is friable in consistency.

If the soil is structurally damaged and compacted at any stage during the course of soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

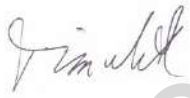
Further details on soil handling are provided in Annex A of *BS3882:2015.*

Marchington Stone Ltd

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully





Ebony Gheorghe
BSc MSc
Soil Scientist

Tim White
BSc MSc MISoilSci CSci
Senior Associate

For & on behalf of Tim O'Hare Associates LLP

Marchington Stone Ltd

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	**Marchington Stone Ltd**
Project:	**Redrow Homes, Derby Road, Widnes**
Job:	**Topsoil Analysis - BS3882:2015**
Date:	**18/07/2025**
Job Ref No:	**TOHA/25/1904/SS/Rev.1**

Sample Reference			**Redrow Homes Widnes Topsoil**
		Accreditation	
Clay (<0.002mm)	%	UKAS	21
Silt (0.002-0.063mm)	%	UKAS	22
Sand (0.063-2.0mm)	%	UKAS	57
Texture Class (UK Classification)	--	UKAS	SCL
Stones (2-20mm)	% DW	GLP	2
Stones (20-50mm)	% DW	GLP	0
Stones (>50mm)	% DW	GLP	0
pH Value (1:2.5 water extract)	units	UKAS	7.5
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS	148
Electrical Conductivity (1:2 $CaSO_4$ extract)	uS/cm	UKAS	2101
Exchangeable Sodium Percentage	%	UKAS	0.8
Organic Matter (LOI)	%	UKAS	3.3
Total Nitrogen (Dumas)	%	UKAS	0.17
C : N Ratio	ratio	UKAS	11
Extractable Phosphorus	mg/l	UKAS	20
Extractable Potassium	mg/l	UKAS	77
Extractable Magnesium	mg/l	UKAS	52
Total Arsenic (As)	mg/kg	MCERTS	14
Total Cadmium (Cd)	mg/kg	MCERTS	0.3
Total Chromium (Cr)	mg/kg	MCERTS	27
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS	< 1.8
Total Copper (Cu)	mg/kg	MCERTS	54
Total Lead (Pb)	mg/kg	MCERTS	65
Total Mercury (Hg)	mg/kg	MCERTS	< 0.3
Total Nickel (Ni)	mg/kg	MCERTS	19
Total Selenium (Se)	mg/kg	MCERTS	1
Total Zinc (Zn)	mg/kg	MCERTS	100
Water Soluble Boron (B)	mg/kg	MCERTS	0.5
Total Cyanide (CN)	mg/kg	MCERTS	< 1.0
Total (mono) Phenols	mg/kg	MCERTS	< 1.0
Naphthalene	mg/kg	MCERTS	< 0.05
Acenaphthylene	mg/kg	MCERTS	< 0.05
Acenaphthene	mg/kg	MCERTS	0.13
Fluorene	mg/kg	MCERTS	0.07
Phenanthrene	mg/kg	MCERTS	0.54
Anthracene	mg/kg	MCERTS	0.07
Fluoranthene	mg/kg	MCERTS	0.93
Pyrene	mg/kg	MCERTS	0.87
Benz(a)anthracene	mg/kg	MCERTS	0.40
Chrysene	mg/kg	MCERTS	0.49
Benzo(b)fluoranthene	mg/kg	MCERTS	0.53
Benzo(k)fluoranthene	mg/kg	MCERTS	0.29
Benzo(a)pyrene	mg/kg	MCERTS	0.43
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS	0.25
Dibenzo(a,h)anthracene	mg/kg	MCERTS	0.06
Benzo(g,h,i)perylene	mg/kg	MCERTS	0.32
Total PAHs (sum USEPA16)	mg/kg	MCERTS	5.4
Aliphatic TPH >C5 - C6	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C6 - C8	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C8 - C10	mg/kg	MCERTS	< 0.010
Aliphatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aliphatic TPH >C12 - C16	mg/kg	MCERTS	< 2.0
Aliphatic TPH >C16 - C21	mg/kg	MCERTS	< 8.0
Aliphatic TPH >C21 - C35	mg/kg	MCERTS	< 8.0
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS	< 10
Aromatic TPH >C5 - C7	mg/kg	MCERTS	< 0.010
Aromatic TPH >C7 - C8	mg/kg	MCERTS	< 0.010
Aromatic TPH >C8 - C10	mg/kg	MCERTS	< 0.020
Aromatic TPH >C10 - C12	mg/kg	MCERTS	< 1.0
Aromatic TPH >C12 - C16	mg/kg	MCERTS	3.4
Aromatic TPH >C16 - C21	mg/kg	MCERTS	< 10
Aromatic TPH >C21 - C35	mg/kg	MCERTS	17
Aromatic TPH (C5 - C35)	mg/kg	MCERTS	20
Benzene	mg/kg	MCERTS	< 0.005
Toluene	mg/kg	MCERTS	< 0.005
Ethylbenzene	mg/kg	MCERTS	< 0.005
p & m-xylene	mg/kg	MCERTS	< 0.008
o-xylene	mg/kg	MCERTS	< 0.005
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS	< 0.005
Asbestos Screen	ND/D	ISO 17025	Not-detected

SCL = SANDY CLAY LOAM

Visual Examination

The sample was described as a very greyish brown (Munsell Colour 10YR 3/2, slightly moist, friable, non-calcareous SANDY CLAY LOAM with a well-developed, fine to medium and occasional very coarse, granular structure. The sample was virtually stone-free. No unusual odours or deleterious materials were observed.



Ebony Gheorghe
BSc MSc
Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with

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Marchington Stone Ltd

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ANNEX B

Chemical Test Results

envirolab
Hattersley Science & Technology Park
Stockport Road, Hattersley, SK14 3QU

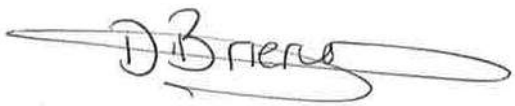
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/09216
Issue Number: 1 **Date:** 29 August, 2025

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

Project Manager: ** USE THIS Mick Buckley/James Mashiter
Project Name: Greenbrow Social Club, Wythenshaw
Project Ref: N/A
Order No: 8755-24100-MLM
Date Samples Received: 20/08/25
Date Instructions Received: 21/08/25
Date Analysis Completed: 29/08/25

Approved by:



Danielle Brierley
Client Services Supervisor

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
% Stones >10mm$_A$	0.1	0.9	5.6					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.72	7.66	7.59					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.09	0.09	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	540	550	520					mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter$_D$$^{M\#}$	4.09	3.05	3.01					% w/w	0.14	A-T-032s
Arsenic$_D$$^{M\#}$	11	15	11					mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$	<1.0	<1.0	<1.0					mg/kg	1	A-T-024s
Copper$_D$$^{M\#}$	45	51	45					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	21	21	19					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	53	62	55					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	16	16	15					mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	92	89					mg/kg	1	A-T-024s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	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							A-T-045

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.02	0.03					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	<0.02	0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.07	0.09	0.09					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.07	0.08	0.08					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.08	0.10	0.10					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06	0.07	0.08					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.11	0.14	0.14					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.16	0.21	0.21					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	0.02					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.07	0.08	0.09					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.09	0.13	0.15					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.17	0.21	0.21					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	0.89	1.14	1.22					mg/kg	0.01	A-T-019s

Envirolab Job Number: 25/09216

Client Project Name: Greenbrow Social Club, Wythenshaw

Client Project Ref: N/A

Lab Sample ID	25/09216/1	25/09216/2	25/09216/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-1	TS-2	TS-3							
Depth to Top										
Depth To Bottom										
Date Sampled	19-Aug-25	19-Aug-25	19-Aug-25							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	5A	6AE	6AE							
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	6	7	4					mg/kg	1	A-T-055s
Total Aliphatics$_A$	6	7	4					mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	1	1					mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1	<1					mg/kg	1	A-T-055s
Aro >C12-C16$_A$	2	2	1					mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	3	5	2					mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	14	16	8					mg/kg	1	A-T-055s
Total Aromatics$_A$	21	24	12					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26	31	16					mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<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 "^"	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 @ 25^0C / 11550µS/cm @ 20^0C 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: Greenbrow Social Club, Wythenshaw

Clients Project No: N/A

Project No: 25/09216

Date Received: 21/08/2025 (am)

Cool Box Temperatures (°C): 14.4

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	25/09216/1	25/09216/2	25/09216/3
Client Sample No			
Client Sample ID/Depth	TS-1	TS-2	TS-3
Date Sampled	19/08/25	19/08/25	19/08/25
A-T-019s	26/08/2025	26/08/2025	26/08/2025
A-T-022s	26/08/2025	26/08/2025	26/08/2025
A-T-024s	28/08/2025	28/08/2025	28/08/2025
A-T-026s	27/08/2025	27/08/2025	27/08/2025
A-T-027s	28/08/2025	28/08/2025	28/08/2025
A-T-028s	28/08/2025	28/08/2025	28/08/2025
A-T-031s	27/08/2025	27/08/2025	27/08/2025
A-T-032s	27/08/2025	27/08/2025	27/08/2025
A-T-040s	27/08/2025	27/08/2025	27/08/2025
A-T-042sTCN	26/08/2025	26/08/2025	26/08/2025
A-T-044	29/08/2025	29/08/2025	29/08/2025
A-T-045	26/08/2025	26/08/2025	26/08/2025
A-T-050s	29/08/2025	29/08/2025	29/08/2025
A-T-055s	27/08/2025	27/08/2025	27/08/2025
Calc-As Recd	27/08/2025	27/08/2025	27/08/2025

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

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622

ANNEX C

Validation Photographs

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622



Photograph 1: Validation of POS



Photograph 2: Validation of POS

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
Lancashire BB5 5TU

mbuckley@bekenviro.co.uk
bekenviro.co.uk
01254 377622



Photograph 3: Validation of POS



Photograph 4: Validation of POS

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
No.2 Landwick Court, Metcalf Drive, Altham Business Park,
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01254 377622



Photograph 5: Validation of POS



Photograph 6: Validation of POS

GEO-ENVIRONMENTAL CONSULTING

BEK Geo-Environmental Consulting
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01254 377622



Photograph 7: Validation of POS



Photograph 8: Validation of POS

APPENDIX E

Garden Capping Validation Photographs



P1: Plot 1



P2: Plot 1



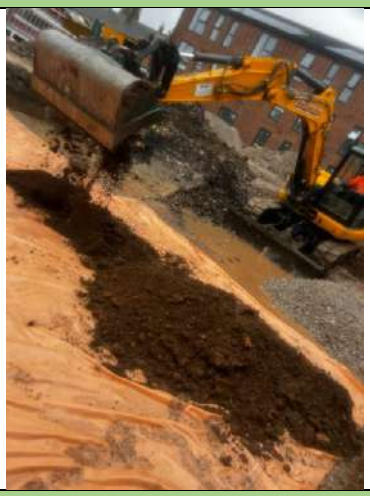
P3: Plot 1 (geotextile membrane)



P4: Plot 2



P5: Plot 2



P6: Plot 2 (geotextile membrane)

Photographs 1 to 6

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project details adjacent. BEK accepts no liability for the misinterpretation or use of this illustration by any other parties.	**Site:** Greenbrow Social Club	**Project No:** 24100	**Created By:** MLM	**Date:** November 2025
	Title: Appendix E – Garden Capping Validation Photos	**Client:** The Casey Group		



P7: Plot 3



P8: Plot 3



P9: Plot 3 (geotextile membrane)



P10: Plot 4



P11: Plot 4



P12: Plot 4 (geotextile membrane)

Photographs 7 to 12

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project details adjacent. BEK accepts no liability for the misinterpretation or use of this illustration by any other parties.

Site: Greenbrow Social Club	**Project No:** 24100	**Created By:** MLM / **Date:** November 2025
Title: Appendix E – Garden Capping Validation Photos	**Client:** The Casey Group	



P13: Plot 5



P14: Plot 5



P15: Plot 5 (geotextile membrane)



P16: Plot 6



P17: Plot 6



P18: Plot 6 (geotextile membrane)

Photographs 13 to 18

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project details adjacent. BEK accepts no liability for the misinterpretation or use of this illustration by any other parties.

Site: Greenbrow Social Club

Title: Appendix E – Garden Capping Validation Photos

Project No: 24100

Created By: MLM

Date: November 2025

Client: The Casey Group



P19: Plot 7



P20: Plot 7



P21: Plot 7 (geotextile membrane)



P22: Plot 8 (geotextile membrane)



P23: Plot 8



P24: Plot 8 (geotextile membrane)

Photographs 19 to 24

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project details adjacent. BEK accepts no liability for the misinterpretation or use of this illustration by any other parties.

Site: Greenbrow Social Club	**Project No:** 24100	**Created By:** MLM	**Date:** November 2025
Title: Appendix E – Garden Capping Validation Photos	**Client:** The Casey Group		



P25: POS Area



P26: POS Area



P27: POS Area (geotextile membrane)



P28: POS Area



P29: POS Area



P30: POS Area (geotextile membrane)

Photographs 25 to 30

This appendix is for illustrative purposes only and is for use only in conjunction with associated reports relating to the project details adjacent. BEK accepts no liability for the misinterpretation or use of this illustration by any other parties.	**Site:** Greenbrow Social Club	**Project No:** 24100	**Created By:** MLM	**Date:** November 2025
	Title: Appendix E – Garden Capping Validation Photos	**Client:** The Casey Group		

APPENDIX F

MEC Environmental Ltd Gas Validation Reports

MEC Environmental Ltd – Blackburn Technology Management Centre -
Challenge Way - Greenbank Technology Park – Blackburn – BB1 5QB

MEC ENVIRONMENTAL LTD

Gas Membrane Installation
Validation Report
Casey Construction
Former Greenbow Social Club
Greenbow Road
Wythenshawe
Manchester
M23 2TU

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1. INTRODUCTION

1.1 Purpose

JCW Group are installing a gas protection membrane to the aforementioned site. MEC Environmental Ltd (MEC) has been appointed by JCW Group to carry out independent validation of the installation of the membrane on the site as per our terms of engagement. The frequency of independent inspections has been determined by the client, comprehensive CQA should be forwarded by the installer to cover any data gaps for areas that have not been subjected to independent inspections.

The **SOLE** purpose of the works undertaken by MEC Environmental is to provide independent inspections and a factual report as and when requested to assist the client in gaining regulatory approval with regards to the gas membrane installation. This is as per the scope of work section within our term's engagement.

1.2 Limitations

This report is limited to providing lines of evidence to the regulatory authority for the areas components inspected by MEC only in support of the discharging of the relevant planning conditions only and cannot be used or relied upon for any other purpose. No professional liability shall be extended to any other parties by MEC, the report should explicitly not be relied on by any future vendor or tenant as proof that the gas protection measures are sufficient for the site and functioning at the time of purchase or start of any tenancy. Gas protection systems are not solely reliant on the gas membrane as points are scored under BS8485 for the floor slab, membrane and venting, these components work collaboratively to provide a gas protection system. This is as per the conditions within our term's engagement.

The report has been provided on the assumption that no damage or works that may have compromised the components and integrity of the gas membrane have been made after our inspections, failure to report any such occurrences will invalidate any liability and render the report and contents invalid. This is as per the conditions within our term's engagement.

This report has been prepared in accordance with the best available practice and the relevant guidance documents listed below of which the author of the report was a contributor and member of the steering committees:

Mallett H, Wilson S, Corban M (2014) "Good practice on the testing and verification of protection systems for buildings against hazardous ground gases". CIRIA Report C735

1.3 Compliance with Regulation 7 of Building Regulations

Regulation 7 of the building regulations requires that building work shall be carried out in a workmanlike manner. Approved document 7 suggests installation can comply with the regulation if workmanship is such that, where relevant, materials are adequately mixed or prepared and applied, used or fixed so as to perform adequately the functions for which they are intended.

A reasonable standard may be demonstrated by:

Compliance with a standard and independent certification - The relevant standard for gas protection measures is BS8485:2015 +A1:2019, Table 7 of the standard requires that gas membranes are verified as per CIRIA C735.

Past experience – The installers qualifications are checked by MEC Environmental to ensure that the installation supervisor holds the NVQ Level 2 in gas membrane installations.

Integrity Testing methods. – are carried out as prescribed in CIRIA C735, unless stated elsewhere Frequency of Visits – MEC have not been employed to prepare a validation plan for this project, the frequency of visits is as per the instructions of the client, in essence MEC inspected the available membrane that could be inspected each time an inspection visit was requested. The area inspected on each visit is noted on the survey sheets in appendix 1. This report should be read in conjunction with the installers CQA report.

1.4 Method of Inspection (Per Visit)

All seams and non-seam areas of the available gas membrane were inspected/tested by the Validation Surveyor for identification of defects, protruding and penetrating objects, lack of subgrade support, overheating, holes, blisters, undispersed raw materials, scratches and gouges, and any sign of contamination by foreign matter.

Any portion of the gas membrane exhibiting a flaw or failing a visual inspection/testing was repaired. Several procedures exist for the repair of these areas. The final decision as to the appropriate repair procedure was agreed upon between the Validation Consultant and the Installer at the time of the repair and is noted in the survey sheets.

Major repairs are visually inspected/tested, repairs passing the inspection/testing were considered acceptable. In some cases minor repairs maybe carried out under contractor CQA and photographic evidence supplied to the verifier for inclusion in the report.

1.5 MEC Staff Competency

All site inspections have been carried out by suitably qualified staff as defined in CIRIA C735, the qualification held by all MEC inspection surveyors is either the NVQ Level 4 in gas protection verification or the NVQ Level 2 in gas membrane installation

The author of this report is also a CL:AIRE accredited Specialist in Gas Protection Verification (SGPV) and holds both the NVQ Level 2 in gas membrane installation and the NVQ Level 4 in gas protection verification.

1.6 Conclusion

During our inspections to the areas denoted in Appendix 1 (Site Surveys Sheets) we witnessed the installer carrying out the installation in a workmanlike manner, the materials were adequately prepared and applied, used and fixed so as to perform adequately the functions for which they are intended as per Regulation 7 of the building regulations. In instances were 100% of the installation has not been independently inspected/tested then this report should be read in conjunction with the gas membrane installers CQA records.

The installers all hold the NVQ Level 2 “Gas membrane Installations” qualification and as such are classed as a qualified and experienced installer. MEC Environmental have checked the CSCS Trade Cards of the installers, which confirms the holder has attained the qualification.

Signed  Date: 16/01/2025

Michael Corban S.G.P.V.
Director
MEC Environmental Ltd

Appendix 1 – Site Survey Sheets

Housebuilder Name: Casey Construction - Former Greenbow Social Club			**Date: 16/01/2025**
Site Name: Greenbrow Road, Wythenshawe, Manchester			**Weather: 9 °C Dry**
			Installer: JCW Group
Postcode: M23 2TU	**Surveyor: Dan Squire (TGPV) (NVQ 4)**		
Plot Number	**Building Type**	**Extent of Inspection**	**Result**
Plots 9 to 13	Apartment block	Full Footprint	Pass

(Section 1, Materials and Method of Seal)
Gas Membrane Name: Juta GP1 gas barrier membrane, Pipe Top Hats & Juta GP SAM
Corner Seal Method: Corners have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Service Entry Seal Method: The external of the pipe/ducts have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735, The external of the pipes/ducts have been sealed using preformed tophats that have been hand welded into place, this is an approved and recognised method in CIRIA C735
Annulus to Water Pipe Duct: The annulus of pipe duct has not been sealed at the time of our inspection, this will require sealing to an approved method, this is outside the remit of the result of todays inspection
Door Threshold Seal Method: Door Thresholds have been sealed using strips of self-adhesive gas membrane, this is an approved and recognised method in CIRIA C735
Cavity Vent Seal Method: The cavity vents sit below the membrane that seals the cavity and do not require a specialist seal
Material Jointing Method: The membrane has been overlapped sufficiently to achieve a sound joint, the joint is clean and dry and has been joined by means of hand welding with a hot air gun and neoprene roller, the width of the welded joint is a minimum of 30mm.
Others Please List: N/A

(Section 2, Testing and Inspection Method)	
Leak/Hole Detection	MEC Environmental Ltd carried out a thorough Visual Inspection to the available area at the time of our inspection
Joint Testing	The surveyor carried out Probe testing as per the method prescribed in ASTM D4437 to all detailing work, detailing work is defined as any part of the installation that includes a joint in the membrane, this includes but is not limited to pipes/ducts, stanchions, wind posts, braces, field seams, masonry abutments, tanking, door thresholds and the like

Plot Number	(Section 3, Defects List)	Action Required
9 to 13 apartment block	No Defects recorded at the time of our inspection. The installers made patch repairs prior to our inspection under their own CQA using Juta GP SAM	N/A

Signed: **Dan Squire (TGPV) (NVQ 4)** Date: **16/01/2025**

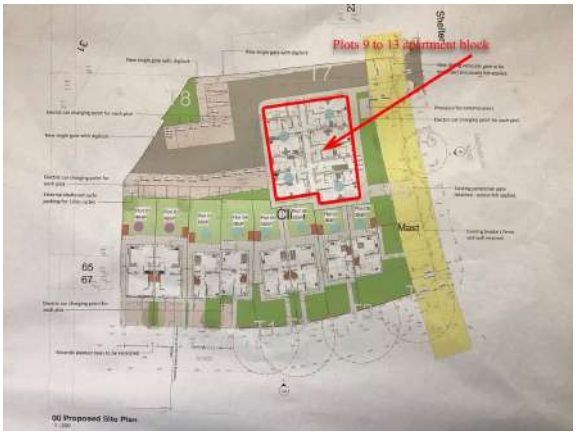
Plot Overview Photographs



Plots 9 to 13 apartment block overview



Plots 9 to 13 apartment block alternate overview



Detailing Sample Photographs



Detailed pipe penetrations



Testing pipe detailing



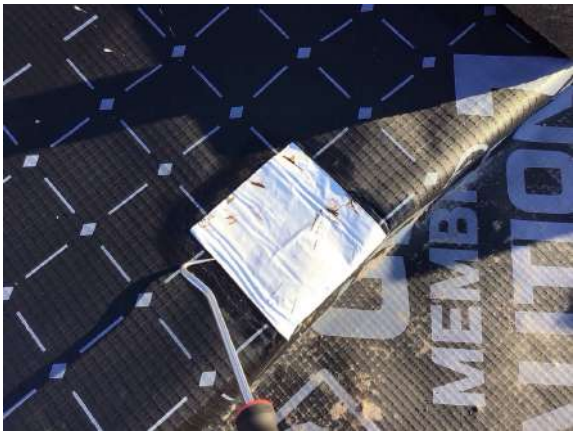
Detailed pipe penetration



Threshold detailing



Testing threshold detailing



Testing installers CQA patch repair



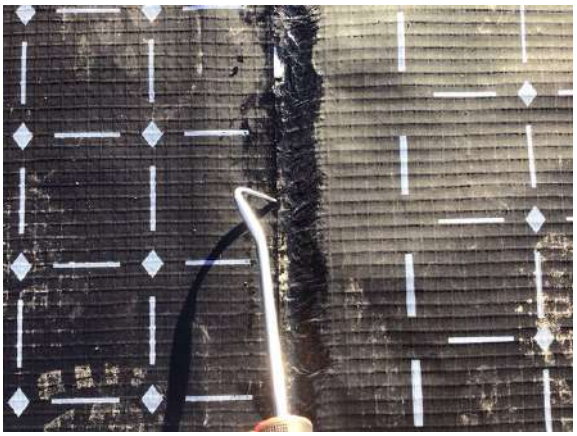
Corner detailing



Testing corner detailing



Hand welded membrane lap joint



Testing hand welded membrane lap joint

APPENDIX G

Drawings

Key

- 3000 x 6000mm parking space
- Pavement
- Block Paved Parking Space
- Private Garden
- Front Garden
- Access Road - Tarmac
- Shed (Cycle Storage)
- Easement

Schedule of Accommodation

Social Rent
10no 1B2P Flats @ 50m²
5no 2B3P Flats @ 61m²
2no 2B4P Houses Semi-Detached @ 83m²
4no 3B5P Houses Semi-Detached @ 96m²
2no 4B6P Houses Detached @ 108m²

23no Total

28 no parking spaces
Flats - 100% parking spaces
2B4P Houses - 100% parking spaces
3B5P Houses - 100% parking spaces
4B6P Houses - 200% parking spaces
1no - parking space for 27 Newell Road
1no - parking space for 29 Newell Road
1no - parking space for 33 Newell Road

Site Area: 3010m²

Caveats
- Overlooking distances subject to LPA Approval
- Density and parking mix subject to LPA Approval

2 0 2 4 6 8 10 m
SCALE 1: 200

N

Layout subject to confirmation of red line boundary, all statutory approvals including highways, planning and building regulations, relevant surveys and reports such as topographical, ecology, trees, ground investigation and flood risk.

Area Schedule		
Type	Description	Area
Car Parking	Salmon	330 m²
Front Garden	Dark Green	618 m²
Plot Hardstanding	Light Grey	525 m²
Private Garden	Light Green	343 m²
Tactile Paving	Brown	4 m²
Unadopted Drive	Red Fleck	400 m²
Total: 39		2221 m²

Fence Schedule		
Type	Fence Height	Length
440x440x1800mm		0.0
1800mm Wall & Railing	1.250	88.2
Fence - TSW 1100mm	1.100	56.3
Fence - TSW 1800mm Trellis	1.800	81.7
Fence - TSW 2100mm	2.100	149.5
Total: 53		375.7



00 Proposed Site Plan
1 : 200

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS MUST BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION

Rev	Date	Int	Description

btp ARCHITECTS — RIBA Chartered Practice

CLIENT:
WCHG

PROJECT:
Greenbrow Social Club

DESCRIPTION:
Proposed Site Plan

PURPOSE OF ISSUE:
Building Regulations

DRAWN BY:	CHECKED BY:	DATE:	SCALE @ A1:
ED	MA	22.03.24	1 : 200

JOB NO:	STATUS CODE:	DRAWING NO:	REV:
3953	S2	203	

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