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Document name: 20066-EDGE-XX-XX-RP-G-0001_VERI [P01]

CONSTRUCTION PHASE VERIFICATION REPORT FOR 20066 – NIXON STREET, ROCHDALE

05 February 2025

Prepared for:
Seddon Construction Limited
Plodder Lane
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Geo-environmental

Revision	Date	Description	Status	Prepared by	Approved by
P01	05/01/25	Verification Report	Draft for Comment	JC	AJB

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DRAWINGS

MCK Associates Ltd Drawing No 18-109 0001 Rev R	Proposed Site Plan
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MCK Associates Drawing No SD-F-GM-2024	House Type Standard Details

APPENDICES

Appendix A	Drawings
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Appendix E	Gas Barrier Membrane Datasheet

1.0 INTRODUCTION

1.1. Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to produce a construction phase verification report for a site located off Nixon Street, Rochdale, OL11 3AG.

Planning permission (20/01429/FUL) has been granted by Rochdale Borough Council to redevelop the Phase 1 area with 102 residential properties with associated gardens, access roads and landscaped areas. A proposed site development plan is presented as MCK Associates Limited Drawing No 18-0001 Rev R in Appendix A.

EDGE has previously produced a detailed remediation strategy in the following report, which was approved by the Local Planning Authority:

- EDGE Consulting Engineers Report Ref:20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05], 'Detailed Remediation Strategy, Nixon Street, Rochdale', July 2022.

Seddon Construction Ltd appointed Redstart Northwest Ltd to undertake the enabling phase of remediation at the site which was undertaken between August 2022 and February 2023 as detailed in the following report:

- Redstart Northwest Ltd Report Ref: 348.08.01, 'Land at Nixon Street, Rochdale – Remediation and Enabling Works Validation Report', March 2023.

EDGE understands that the above validation report has been submitted to, and approved by, the LPA.

Following successful completion of the enabling works, the construction phase of remediation has been undertaken by Seddon Construction Ltd on behalf of Hive Homes (Greater Manchester) LLP under part time supervision of EDGE.

In order to characterise the gas regime at the site, following the completion of the enabling phase works, EDGE undertook a programme of gas monitoring with the results presented in the following report:

- EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0003_GRA [P01], 'Gas Risk Assessment Letter Report', Nixon Street, Rochdale', July 2022.

The gas risk assessment recommended that 'Amber 1 / CS2' gas protection measures were required to be installed in Plots 48 and 65 to 73, with the remainder of the site classified as 'Green' under the NHBC Traffic Light System.

The construction phase remediation works required comprised the installation and verification of clean soil cover in gardens and landscaped areas as well as gas protection measures in the affected plots.

Planning condition 22 requires the submission of a final Verification Report to the LPA, prior to final occupation of the development.

This Verification Report presents a summary of the construction phase verification works undertaken in order to satisfy planning condition 22 and to fully discharge planning conditions which relate to contaminated land.

1.2. Objectives

This document provides a summary of the remediation works undertaken to protect environmental and human receptors from potential contamination sources and to render the site suitable for the proposed development.

This verification report will be required to be submitted to the regulatory authorities to assist in discharging planning conditions relating to contaminated land.

1.3. Limitations

EDGE CE accept no liability for the accuracy or content within the supplied third-party reports or information and cannot be held liable for any changes to third party information made after the date of this report.

This report has been prepared by EDGE for the sole benefit of Seddon Construction Ltd. The conclusions in this report are professional opinions, based on information provided by the client.

This document has been prepared for the residential development site known as 'Nixon Street' located off Nixon Street, Rochdale, OL11 3AG and should not be relied upon or used for any other project.

Future changes to regulations, legislation, codes of practice and the use of the site may necessitate a partial or full reassessment of the conclusions and recommendations made in this report.

2.0 SITE SETTING

2.1. Site Details

The site comprises approximately 5.8 hectares of waste ground which was formerly occupied by a car sales garage (Carcraft) at land located off Nixon Street, Rochdale, OL11 3AG and is centred at National Grid Reference 387760 410980.

Prior to redevelopment, the site was vacant and comprised of large areas of hardstanding (asphalt, tarmac, gravel and concrete). Until2015 , the site was occupied by Carcraft, a car sales company.

A former car wash and a petrol filling station (pumps and tanks apparently removed) were formerly located in the east of the site.

A large concrete slab(s) where the former car showroom was located occupied the majority of the Phase 2 area.

The site is located in a mainly residential area with housing located to the north, east and south with agricultural land to the west.

During the early 20th century, the north and east of the site were occupied by two cotton mills with three associated reservoirs located in the central-southern and south-eastern parts of the Phase 1 area. Sub-stations, above ground storage tanks (ASTs) and chimneys were also located across these areas, again associated with the historical mills.

An allotment was located to the south-west of the mills from the 1950s until the 1970s when a garage was located in the central-west of the Phase 1 area. By 1975, the southerly most mill had been demolished and a supermarket was built at the site in around 1984 with a warehouse built in the north. The remaining mill had been demolished by 2006 with 'Calder Court' shown in its place. The Carcraft showroom and external show courts later occupied the site, closing in 2015.

The surrounding area has historically been developed with mills to the north (later redeveloped into residential use) with housing gradually developed in the surrounding area over time.

3.0 ENABLING PHASE REMEDIATION WORKS

3.1. Introduction

As previously stated, Seddon Construction Ltd appointed Redstart Northwest Ltd to undertake the enabling phase of remediation at the site which was undertaken as detailed in the following report:

- Redstart Northwest Ltd Report Ref: 348.08.01, 'Land at Nixon Street, Rochdale – Remediation and Enabling Works Validation Report', March 2023.

This section summarises the works undertaken by Redstart Northwest Ltd.

3.2. Summary of Enabling Phase Remediation Works

The remediation, enabling works and ground preparatory measures were undertaken by Redstart Northwest Ltd from August 2022 to February 2023, in accordance with the approved remediation strategy.

The works undertaken comprised the following:

- Removal of selected trees, vegetation and scrubs;
- Excavation, delineation and validation of removal of Japanese Knotweed impacted soils;
- Removal of Asbestos impacted soils identified during archaeological investigation works;
- Site clearance operations including removal of vegetation and fly tipped wastes;
- Excavation and 'turn-over' of Made Ground soils;
- Excavation and removal of underlying peat soils from site to the Phase 2 POS area;
- Excavation, removal and processing of below ground constraints (structures, USTs etc) to construction;
- Excavation of trenches to expose existing services on the site;
- Protection of existing underground services;
- Processing, placement, compaction and testing of suitable recycled aggregates to form pile mat for Plots requiring vibro ground improvement;
- Processing, placement, compaction and testing of suitable recycled aggregates to form road formation levels and haul roads;
- Management of environmental issues and nuisance control including background asbestos air monitoring;
- Final trimming and shaping to remediated finished levels;
- Excavation and placement of temporary drainage;
- Surveying of finished levels and geotechnical testing locations; and
- Production of As-Built, constraints and testing location plans.

As-Built levels are shown on Redstart Northwest Ltd Drawing No MN230212-01 Rev 00 presented in Appendix A.

Reference should be made to the Redstart Northwest Ltd enabling works verification report for full details.

4.0 POST ENABLING PHASE GAS RISK ASSESSMENT

4.1. Introduction

As discussed in Section 1.1, EDGE undertook a gas risk assessment following completion of the enabling phase remediation works.

Prior to the completion of the enabling phase, the site was characterised as requiring 'Amber 2' gas protection measures. Approximately 11,971 m^3 of natural peat soils were removed during the enabling phase and placed in the POS area within Phase 2. In addition, the full depth of made ground was excavated and removed with the resultant void backfilled with processed made ground and soils imported under the CL:AIRE Definition of Waste Code of practice. Full details of this are presented in the Redstart Northwest enabling phase verification report.

The removal of the principal sources of hazardous ground gas significantly changed the conceptual site model with regards to the risks to human health and infrastructure from hazardous ground gas. Therefore, a post enabling remediation phase gas risk assessment was required to further assess the site. This was undertaken by EDGE and the results are presented in the following report;

- EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0003_GRA [P01], 'Gas Risk Assessment Letter Report', Nixon Street, Rochdale', July 2022.

The findings of the post enabling gas risk assessment are summarised in the following sections. Reference should be made to the report for full details.

4.2. Scope of Works

EDGE attended site in March 2023 to supervise the drilling of fifteen window sample boreholes (EWS01 to EWS15) to depths ranging from 2.0 to 5.0 m below ground level (bgl). The boreholes were positioned to achieve a general spread across the site including boreholes on the western and northern perimeters to monitor potential concentrations of gas from off-site in-situ peat deposits. Due to access constraints, Borehole EWS06 was moved just beyond the Phase 1 boundary into Phase 2 to the south.

All fifteen boreholes were installed with gas/groundwater monitoring wells set within the made ground and underlying natural soils.

The majority of the boreholes were installed with response zones spanning the re-worked made ground (now considered the principal on-site source of gas) and natural soils with the response zone in Borehole EWS05 solely in the made ground.

Monitoring wells in EWS02 and EWS12 also spanned thin bands (0.1 m) of peat which were left in-situ. EWS06 is located within the Phase 2 area with the response zone spanning the made ground and 1.6 m thick band of peat.

Given the removal of the peat and made ground across the site and placement of site won and imported general fill, the post-enabling remediation works conceptual site model classified the risks from ground gas as 'Very Low'. As such, a programme of six monitoring visits over a three month period was undertaken in accordance with CIRIA C665.

4.3. Monitoring Results

Monitoring was undertaken on six occasions between 9th March and 25th May 2023. Three visits were undertaken under falling atmospheric pressure conditions with two under rising pressure and one under fluctuating pressure. Two of the visits were undertaken during high atmospheric pressure conditions (ie >1000 mb).

The results are summarised in the table below:

Borehole	Max Methane (% v/v)	Max Carbon Dioxide (% v/v)	Flow Rate (l/hr)	Gas Screening Value (l/hr)	NHBC Traffic Light Classification
EWS01	0.0	0.0	0.1*	0.0000	Green
EWS02	0.0	4.5	0.1*	0.0045	Green
EWS03	2.4	0.6	0.1*	0.0024	Amber 1
EWS04	0.0	0.2	0.1*	0.0002	Green
EWS05	0.1	0.4	0.1*	0.0004	Green
EWS06	0.0	0.6	0.1*	0.0006	Green
EWS07	0.0	0.0	0.1*	0.0000	Green
EWS08	0.1	0.9	0.1*	0.0009	Green
EWS09	0.0	4.0	0.1*	0.0040	Green
EWS10	0.0	1.7	0.1*	0.0017	Green
EWS11	0.0	0.8	0.1*	0.0008	Green
EWS12	0.0	2.8	0.1*	0.0028	Green
EWS13	0.0	1.6	0.1*	0.0016	Green
EWS14	0.0	4.4	0.1	0.0044	Green
EWS15	0.0	1.7	0.1*	0.0017	Green

Table 1: Summary of gas monitoring Results

Notes:

* – no positive flow rates have been recorded, CIRIA C665 states that when this occurs the limit of detection of the instrument should be used (ie 0.1 l/hr)

Groundwater levels during the monitoring programme were recorded at depths ranging from 0.4 to 3.4 m bgl.

4.4. Assessment of Results

EDGE assessed the results against the thresholds and criteria set out in CIRIA Report C665 and British Standard 8485 Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings.

A Tier 1 or worst case borehole hazardous gas flow rate (BS 8485 Qhg) assessment utilises the maximum methane and carbon dioxide concentrations and flow rates measured regardless of which borehole or date. BS 8485 refers to this as a worst case check and this results in the following:

Max CH4	2.4 %	(Borehole EWS03)
Max CO2	4.5 %	(Borehole EWS02)
Max Flow	0.1 l/hr	(Borehole EWS14)

Using the maximum carbon dioxide concentration of 4.5 % recorded in Borehole EWS02 and maximum flow rate of 0.1 l/hr, the Tier 1 GSV (CIRIA) or worst case Qhg for carbon dioxide at the site was 0.0045 l/hr. The maximum concentration of methane was recorded in Borehole EWS03 with a recorded concentration of 2.4 % v/v resulting in a worst case Qhg for methane of 0.0024 l/hr.

This Qhg for carbon dioxide and methane would be consistent with a 'Green' classification using the NHBC Traffic Light System as specified in CIRIA C665 and, based on this, mitigation measures will not be required.

Notwithstanding the above, both CIRIA and BS 8485 recommend that designers should consider all of the data which includes the gas concentrations.

CIRIA refers to 'typical maximum' gas concentrations. The maximum methane gas concentration measured in the boreholes (2.4 %) exceeded the 'typical maximum' concentrations specified for 'Green' sites (1.0 % for methane). However, this was only recorded in one location (EWS03). The maximum carbon dioxide concentration recorded (4.5 %) was within concentrations consistent with 'Green' sites.

Given the above, gas mitigation measures were required locally (ie in a 30 m radius of Borehole EWS03) in line with 'Amber 1' / 'Characteristic Situation 2 (CS2)'. The remainder of the site was classified as 'Green' with no protection measures required.

4.5. Gas Mitigation Measures

The post-remediation gas risk assessment showed that the main gas source (peat) had been removed from the site as a source. In addition, the made ground was removed, processed and shown to be chemically and geotechnically suitable for re-use as fill. Due to a shortfall, this was been supplemented by the import of clean, geotechnically suitable soils for use as fill using the CL:AIRE Definition of Waste Code of Practice.

Given the results of the post-enabling remediation phase results, the site was downgraded from 'Amber 2' to 'Green' with localised 'Amber 1' conditions.

Using the NHBC Traffic Light System as specified in CIRIA C665, 'Amber 1/CS2' gas protection measures were required within a 30 m radius of Borehole EWS03 (ie Plots 48 and 65 to 73). The remainder of the plots at the site did not require any mitigation measures.

BS8485 (2015) Code of Practice for the Design of Protective Measures for Methane and Carbon Dioxide Ground Gases for New Buildings uses a points based system for the installation of gas protection measures. For Type A private residential buildings with CS2 protection a score of 3.5 is required.

The following measures will achieve the required score of 3.5:

For Plots 48 and 65 to 73:

(a) Good performance sub-floor ventilation ie block and beam floor (1.5 points);

(b) A gas resistant membrane with validation in accordance with CIRIA C735 (2 points);

A schematic cross section showing the required sub-structure and gas protection measures for the standard house type is presented as MCK Associates Drawing No SD-F-GM-2024.

The installation of the gas protection measures were to be independently validated by a suitably qualified consultant, as detailed in Section 6.3 of this report.

5.0 REQUIRED CONSTRUCTION PHASE REMEDIATION MEASURES

5.1. Introduction

Remediation measures were required at the site to protect end users from localised elevated concentrations of contamination in the made ground. In addition, gas mitigation measures were required to be installed in selected plots.

The remediation measures required were agreed with the local planning authority and are detailed below.

5.2. Protection of End Users from Remnant Contamination in Soils

Although the enabling phase excavated the full depth of made ground beneath the site, removed the USTs in the former area of the fuel station and asbestos impacted soils in the area of the archaeological pre-dig, site processed made ground and imported soils were placed in voids as general fill.

The soils placed at the site were tested in accordance with the remediation strategy and found to be compliant. Nevertheless, in order to protect site end users (residents) from any remnant elevated concentrations of organic and inorganic compounds and / or asbestos fibres beneath the site, clean soil cover is required to be placed to a depth of 600 mm in gardens areas, reduced to 300 mm in landscaped areas. Clean cover soils were required to be placed on a geotextile marker layer.

5.3. Installation of Gas Protection Measures

As detailed in Section 4.5, Plots 48 and 65 to 73 were required to be installed with gas mitigation measures in line with 'Amber 1 / CS2' with no mitigation measures required in the remaining plots.

5.4. Summary of Required Construction Phase Remediation Works

The construction phase remediation works required to be undertaken by the contractor are summarised below:

- Provision of up to 600 mm clean cover layer in garden areas and 300 mm clean cover in landscaped areas with geotextile marker layer;
- Chemical testing of site won / imported soil to assess suitability for use in clean cover layer;
- Installation of Amber 1 gas protection measures in affected plots. Supervision and validation of installation of gas mitigation measures by suitably qualified consultant.

6.0 CONSTRUCTION PHASE REMEDIATION WORKS & VALIDATION

6.1. EDGE Supervision

EDGE attended the site when requested by Seddon Construction Ltd to inspect and verify clean soil cover and gas protection measures, as detailed in the following sections.

6.2. Verification of Clean Cover Layer Installation

6.2.1. Imported Topsoil

Approximately 4,819 m^3 of topsoil was imported to the site by PP O'Connor, sourced from a greenfield site at Byrchall School playing fields under Duty of Care regulations.

6.2.2. Chemical Testing of Imported Soils

In accordance with Section 5.8.2 of the approved remediation strategy, any soils imported for use in gardens or landscaped areas should be sampled and analysed at a rate of 1 sample per 200 m^3 (from a greenfield source) with a minimum of three samples per individual source.

Twenty-seven samples of the topsoil were tested for a general suite of analysis including pH, metals, sulphates, cyanide, soil organic matter, phenols and speciated PAH.

The topsoil results were assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1 % SOM for a residential end-use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024 (sample reference L4 and L6).

Elevated concentrations of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they were below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result was not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considered that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils were considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil were tested for BS3882 (Specification for topsoil) which showed that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with homegrown produce. Copies of the topsoil test results are presented in the plot validation reports which are collated in Appendix B.

6.2.3. Cover Depth Validation

Inspection pits were excavated in all gardens across site with EDGE attending site on multiple occasions between the 12th January 2024 and the 4th December 2024 to verify soil cover depth.

All plots have been installed with the minimum cover of 600 mm clean imported topsoil placed on a geotextile marker layer.

Records of the plot cover depths are presented in the plot validation reports which are collated in Appendix B.

6.3. Gas Mitigation Validation

As detailed in Section 4.5, Plots 48 and 65 to 73 were required to be installed with gas mitigation measures in line with 'Amber 1 / CS2' with no mitigation measures required in the remaining plots.

CIRIA C735 allows the adoption of a risk based approach to validation with Amber 1 characterised sites / plots classified as a 'Low' risk gas regime.

The risk based approach allows the independent inspection and validation of 25% of plots (including the first plots) with the remaining plots verified by contractor CQA.

A copy of the gas membrane specification utilised is presented in Appendix E with the required sub-structure and gas protection measures for the standard house type presented as MCK Associates Drawing No SD-F-GM-2024 in Appendix A.

In order to avoid delays to the construction programme, Seddon Construction Ltd commenced the building of Plots 86 to 89, 93, 94 and 99 to 101 prior to the completion of the post-enabling works gas risk assessment. As such, as a precaution, these plots were installed with gas mitigation measures and were the first plots inspected and validated by EDGE.

The gas membranes were installed by SPS Substructure Protection Ltd and EDGE were satisfied with the quality of the installation in Plots 86 to 93, 84 and 99 to 101.

EDGE also attended site to verify Plots 48 and 69 to 73 (which required Amber 1 protection measures). However, due to poor quality membrane installation including localised punctures and poor sealing of service entries, EDGE requested remedial works. All of these plots required a second inspection with Plots 48, 70 and 73 requiring third inspections as defects were still not remedied. However, the remedial works were eventually completed and Plots 48 and 69 to 73 were passed by EDGE.

The groundworker constructed the block and beam floor ensuring adequate underfloor ventilation and installing telescopic vents on all external walls in accordance with the specification

EDGE's gas protection validation record sheets and validation certificates are presented in Appendix C.

The gas membranes in Plots 65 to 68 were not inspected by EDGE as these were validated by SpS Substructure Protection Ltd whose certificates of installation are presented in Appendix D. EDGE accept no liability for the accuracy or content within the supplied third-party reports.

7.0 CONCLUSIONS

EDGE can confirm that the clean soil cover in all of the plots meets the specification required in the approved remediation strategy.

Following the completion of the post-enabling phase of remediation, a supplementary gas risk assessment was undertaken which reclassified the majority of the site as not requiring gas mitigation measures in the new structures with the exception of Plots 48 and 65 to 73 where gas mitigation measures in line with 'Amber 1 / CS2' were required.

EDGE attended site to validate the installation of gas protection measures in Plot 48 and 69 to 73 in accordance with the remediation strategy and can confirm that the required mitigation measures were installed.

The gas membranes in Plots 65 to 68 were validated by SpS Substructure Protection Ltd. EDGE accept no liability for the accuracy or content within the supplied third-party reports.

EDGE considers that both the enabling and construction phases of the remediation works have been successfully completed in accordance with the approved remediation strategy and planning condition 22 can be fully discharged.

A copy of this report should be submitted to the regulatory authorities.

APPENDIX A

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
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0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes area of grasscrete

Rev.	Date	By	Description
R	12.09.24	CT	Amendments to main road adding additional length in Grasscrete
Q	15.08.24	ELC	Amendments to paving areas following clients comments.
P	29.01.24	W.L	Plots 84 - 86 & 93 - 95 & 99 increased to 500mm short of terrmac as instructed in email received 29.01.24
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TICKED UP
M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T	UPDATED SCHEDULE
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY 4/5 PER COMMENTS
J	22.12.21	W.L	PLOTS 63 - 73 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 34 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 31.
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 26, 40, 41, 43, 45, 47 & 48.
F	28.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL LAND
D	19.10.20	C.T	AMENDED PLOTS 76 - 91 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED PLOTS 1 - 4 TO TAKE ACCOUNT OF TREES
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY KEPT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. 4 & 8 ADDED TO ROAD ENDS

Client
HIVE HOMES

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Project
NIXON STREET
ROCHDALE

Drawing Title
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:		Drawing No:	Rev:
18-109		0001	R

A0

PLANNING



Notes

1. Drawing units are in meter UNO.
2. Coordinate system is set to OSGB36 / OSTN15.

X 100.00 – As-Built Elevation

Document History

Revision	Description	Date	Des	Chck

Contractor

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Client

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Bolton
BL4 0NN

Paper Size	Scale	Designer	Checker
A1	1:500@A1	MN	N/A

Project

Nixon Street, Rochdale

Drawing Title

Nixon Street - As-built elevations

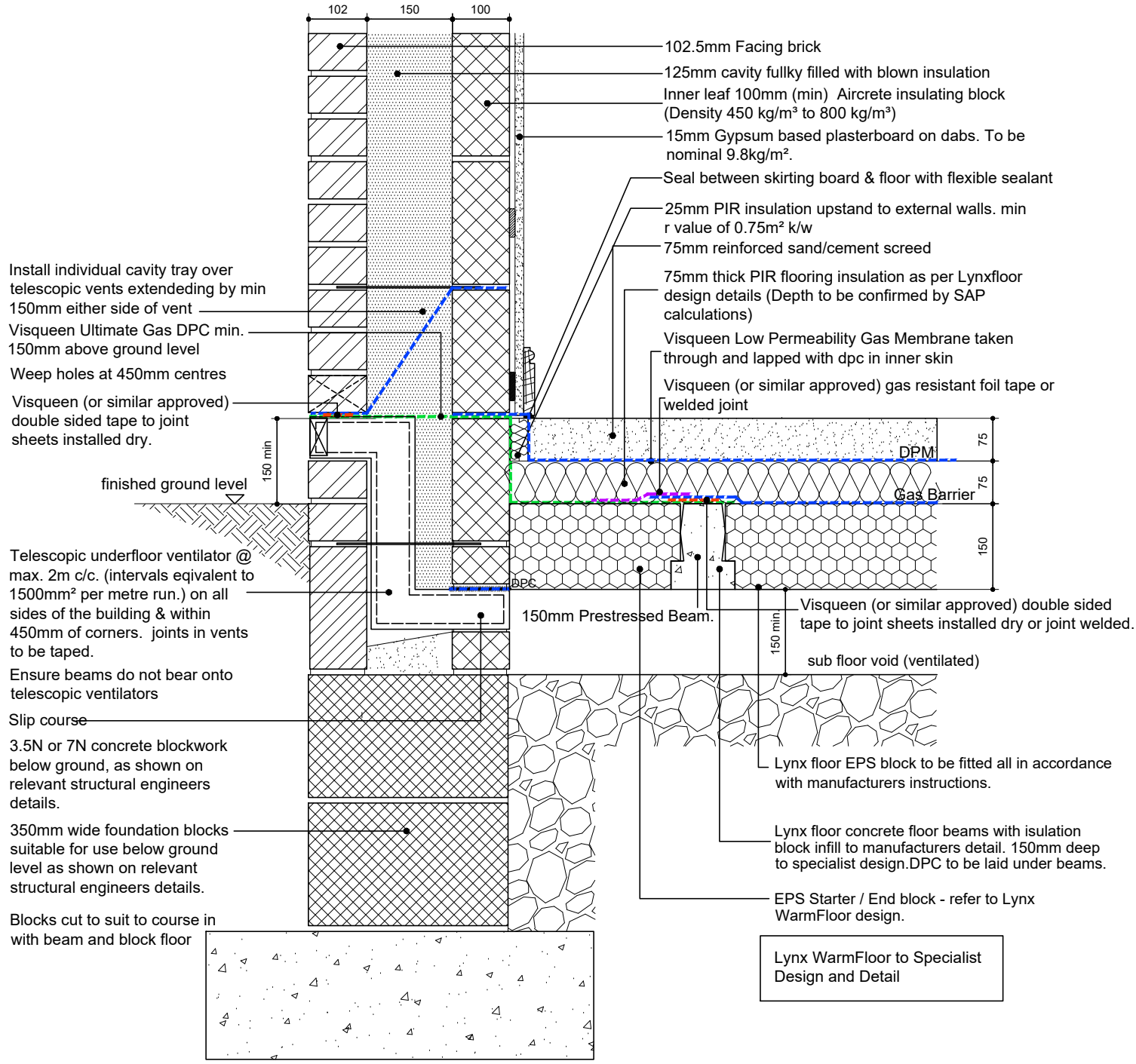
12.02.2023

Status

As-Built

Client Drawing Number	Revision
N/A	

Drawing Number	Revision
MN230212-01	00



Hive HOMES	Drawing Title: LYNX WARMFLOOR (WITH VENT) 352mm EXTERNAL CAVITY WALL - EcoBead FULL FILL CAVITY INSULATION WITH GAS MEMBRANE	Rev.	Date	By	Description
mck associates limited architecture | building surveying | urban design burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk	Project: HOUSE TYPE STANDARD DETAILS	Drawn: SK	Checked:	Scale: 1:10	Date: OCT 2024
		Job No:		Drawing No: SD-F-GM-2024	Rev:

A4

APPENDIX B

Cover Depth Verification Reports

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_PLOTS 90-97 & 99-101 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 90 TO 97 & 99 TO 101 FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	11/12/2023	Plots 90 to 97 & 99 to 101 Garden Validation Report	TM	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in gardens areas reduced to 300 mm in any landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 200 m^3 of topsoil has been imported to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), a sample of the topsoil was tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of organic or inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 13th November 2023 to excavate inspection pits by hand in Plots 90 to 97, 100 and 101.

EDGE can confirm that the required cover depth was in place with a total of between 600 and 650 mm clean topsoil cover in all of the plots placed on a geomembrane marker layer.

In Plot 99, paving has been laid instead of soil which severs the link between the contamination source (made ground) and end users (residents). However, a small area of landscaping is present at Plot 99 and this was proven to have the requisite 300 mm deep clean topsoil layer.

A selection of photographs is presented in Annex III.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 90 to 97, 100 and 101 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer. Plot 99 has mainly been installed with block paving which will act as a barrier and isolate any contaminants from end users. A small landscaped area is present at Plot 99 and this has been installed with the required 300 mm deep clean cover layer. The homeowner of Plot 99 should be made aware that should the paving and landscaping be removed and replaced with a garden area, a 600 mm clean cover layer will be required to be placed on a geotextile marker layer as per the remediation strategy.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

11/12/2023

Date

Annex I Drawings
Annex II Topsoil Results
Annex III Photographs

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
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Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

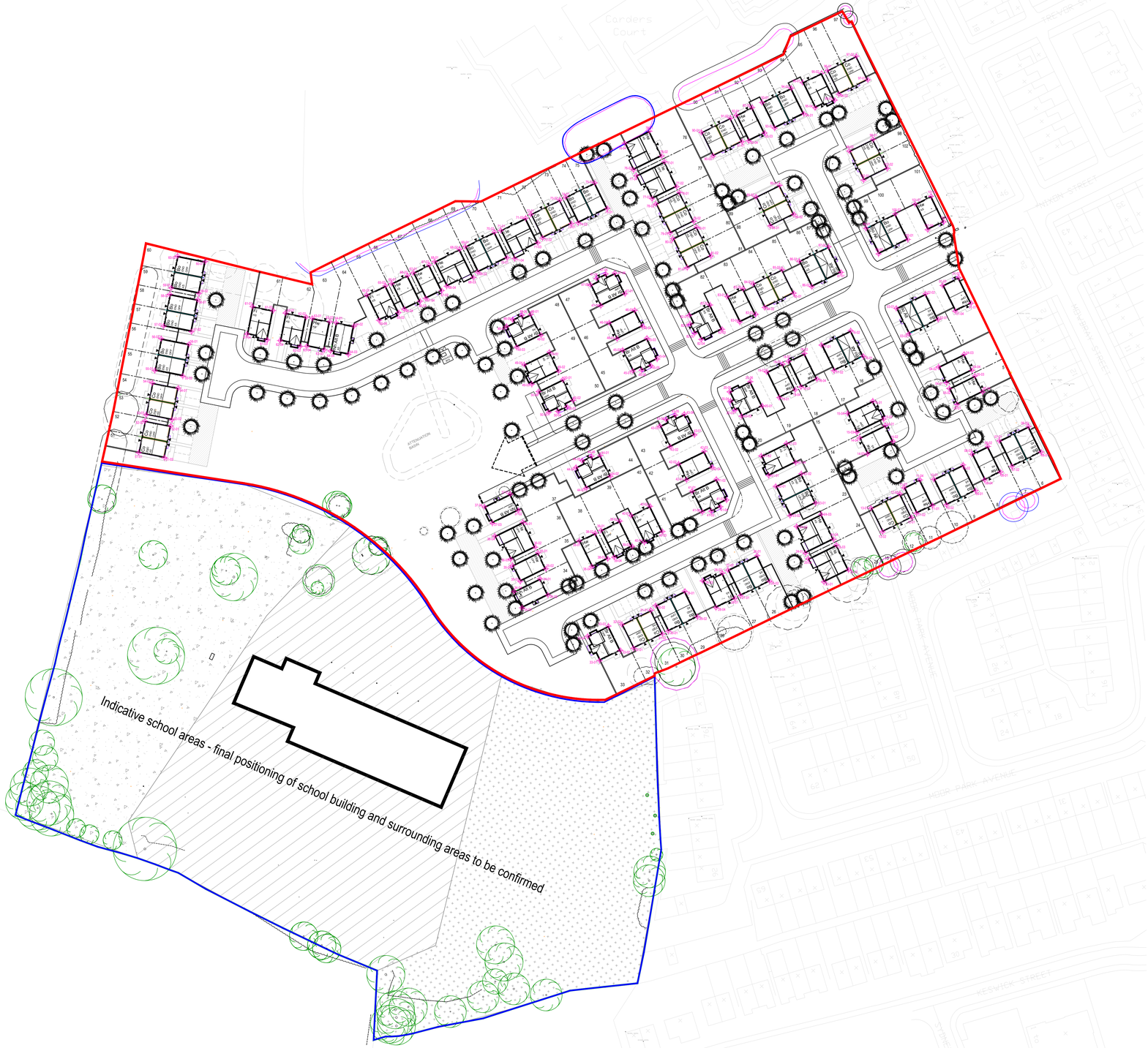
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

general notes:
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Firswood	Fi	Detached	4	1112	10	11120
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Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

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- Land Ownership
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- Existing trees to be removed
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- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
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M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
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K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
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G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
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E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Seddon Construction Limited

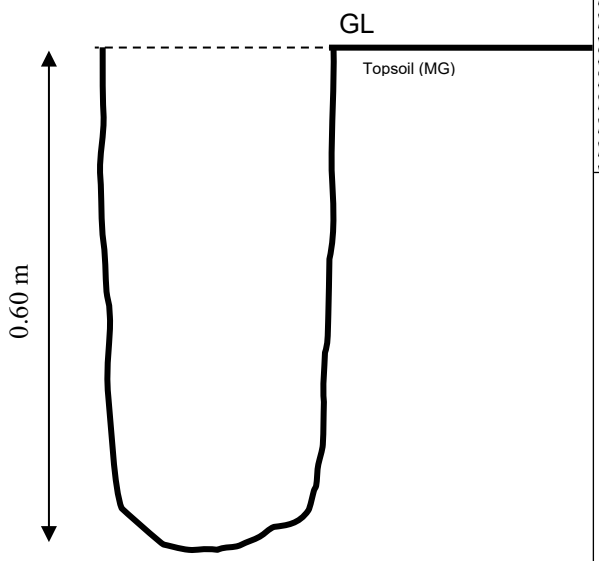
Plot Number: Plot 90

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 90: Overview of excavation



Plot 90: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Seddon Construction Limited

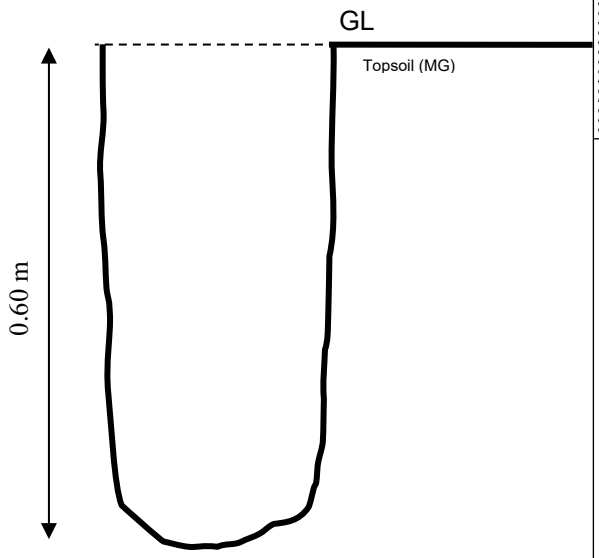
Plot Number: Plot 91

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at the base of the hand dug pit.

Pictures:



Plot 91: Overview of excavation



Plot 91: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Seddon Construction Ltd

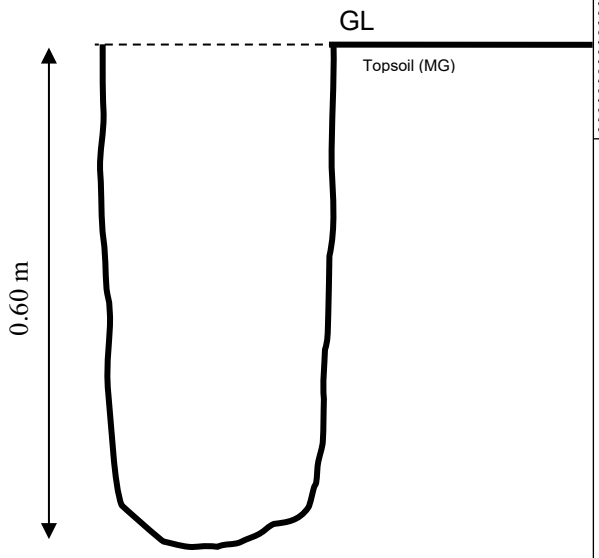
Plot Number: Plot 92

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 92: Overview of excavation



Plot 92: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

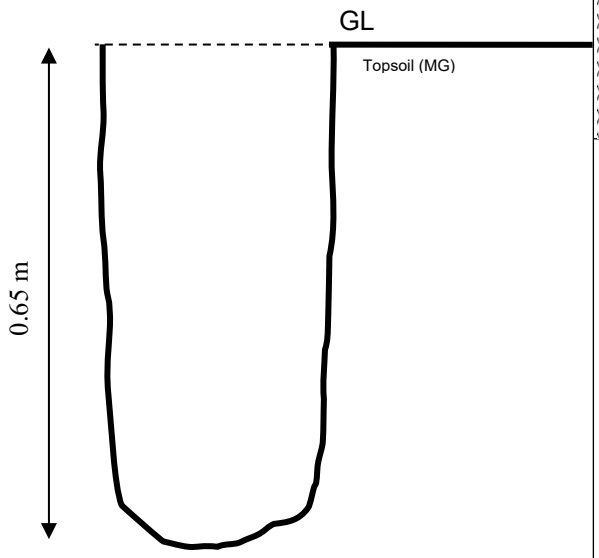
Plot Number: Plot 93

Logged By: T Mackechnie

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 93: Overview of excavation

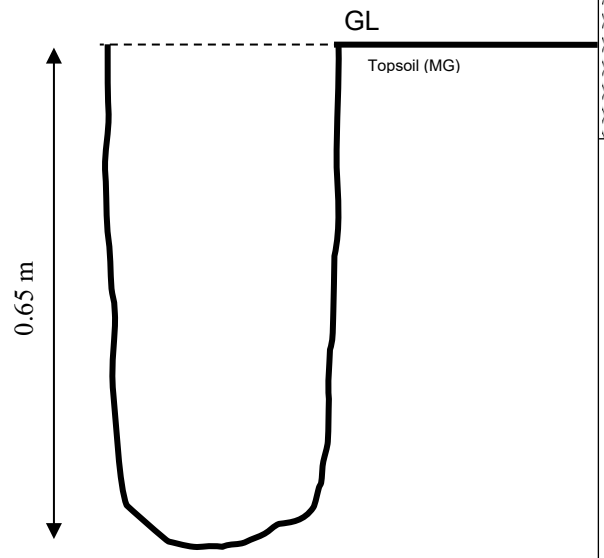


Plot 93: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 94
Date: 13/11/23	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.65 m
Client: Hive Homes	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 94: Overview of excavation



Plot 94: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

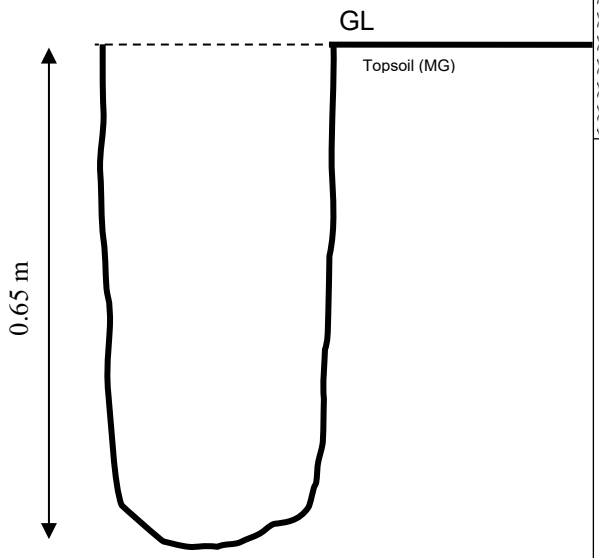
Plot Number: Plot 95

Logged By: T Mackechnie

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 95: Overview of excavation



Plot 95: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

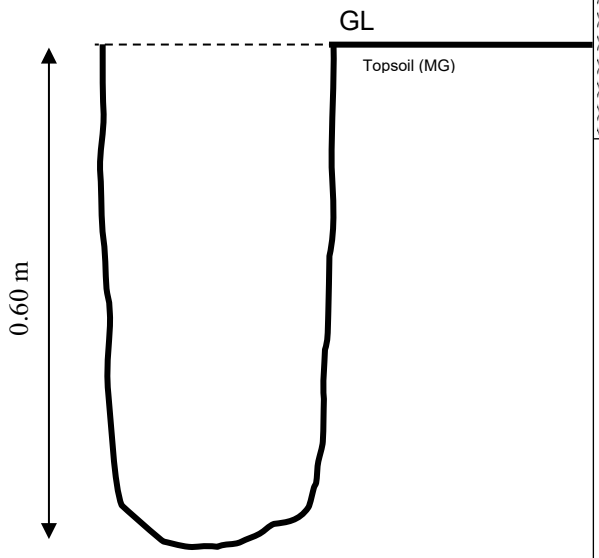
Plot Number: Plot 96

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 96: Overview of excavation



Plot 96: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

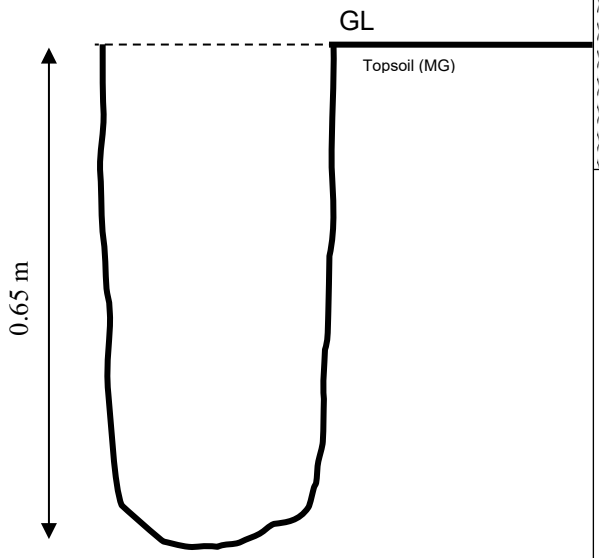
Plot Number: Plot 97

Logged By: T Mackechnie

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. With cobbles of red-brick (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 97: Overview of excavation



Plot 97: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

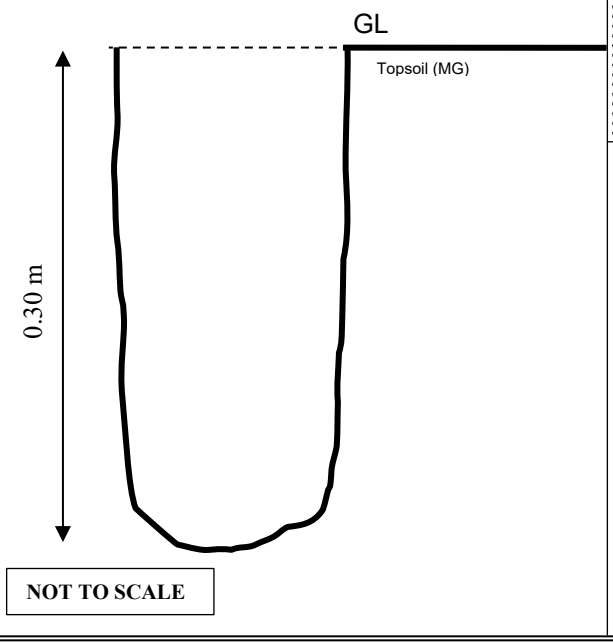
Plot Number: Plot 99

Logged By: T Mackechnie

Total Depth: 0.30 m

Remarks: Wet ground conditions

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.30	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.30 m.

Additional Information:
Hand dug pit terminated at 0.30 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 99: Overview of excavation in front landscaped area



Plot 99: Block paving located at the rear of Plot 99

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

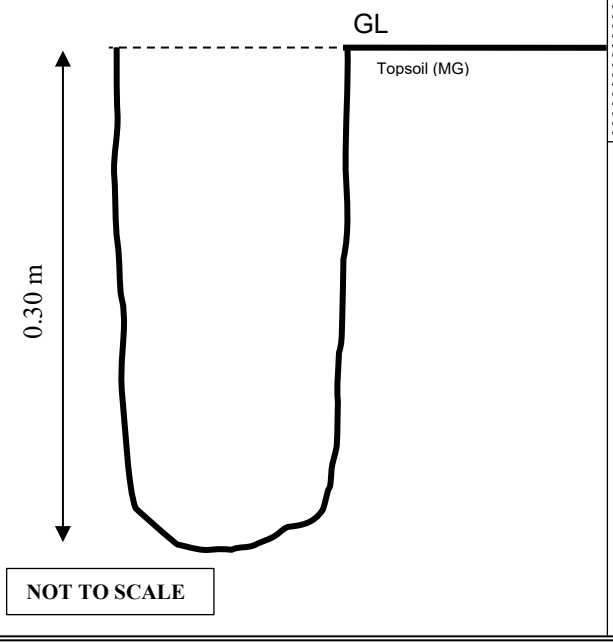
Plot Number: Plot 100 Front

Logged By: T Mackechnie

Total Depth: 0.30 m

Remarks: Wet ground conditions

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.30	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.30 m.

Additional Information:
Hand dug pit terminated at 0.30 m due to encountering the membrane.
No groundwater emergence.

Pictures:

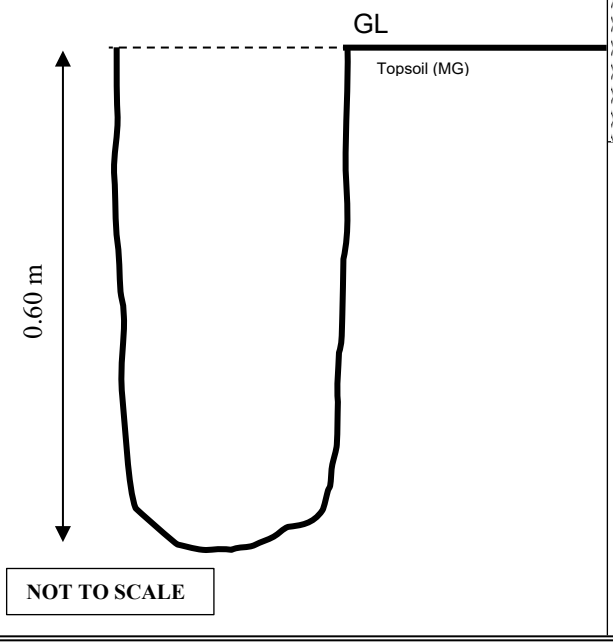


Plot 100 Front: Overview of excavation in front landscaped area.

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 100 Rear
Date: 13/11/23	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Hive Homes	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Rainwater infiltration into pit during excavation.
No groundwater emergence.

Pictures:



Plot 100 Rear: Overview of excavation

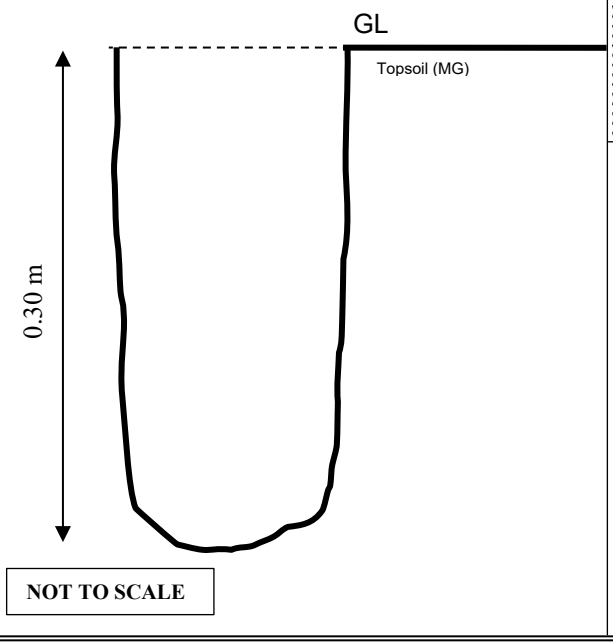


Plot 100 Rear: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 101 Front
Date: 13/11/23	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.30 m
Client: Hive Homes	**Remarks:** Wet ground conditions

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.30	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.30 m.

Additional Information:
Hand dug pit terminated at 0.30 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 101 Front: Overview of excavation in front landscaped area.

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 13/11/23

Project No.: 20066

Client: Hive Homes

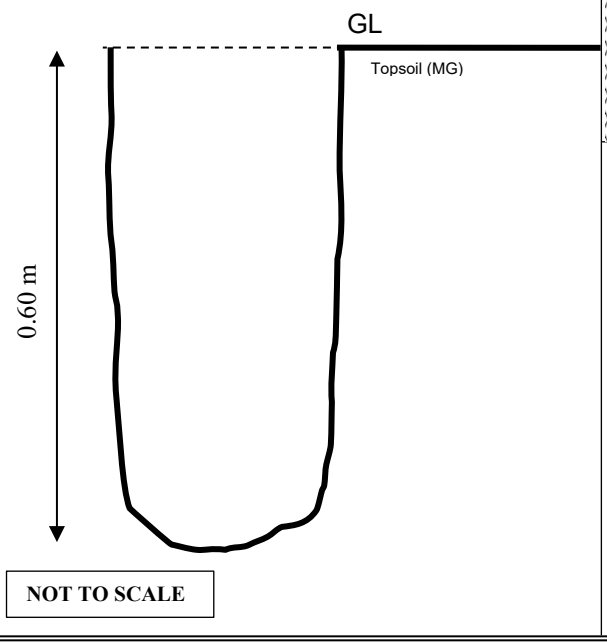
Plot Number: Plot 101 Rear

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Rainwater infiltration into pit during excavation.
No groundwater emergence.

Pictures:



Plot 101 Rear: Overview of excavation



Plot 101 Rear: Internal View of excavation

Membrane Installation Photosheet

Project Name:	Nixon Street, Rochdale		
Date:	13/11/23	**Logged By:**	T Mackechnie
Project No.:	20066	**Total Depth:**	N/A
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Pictures:



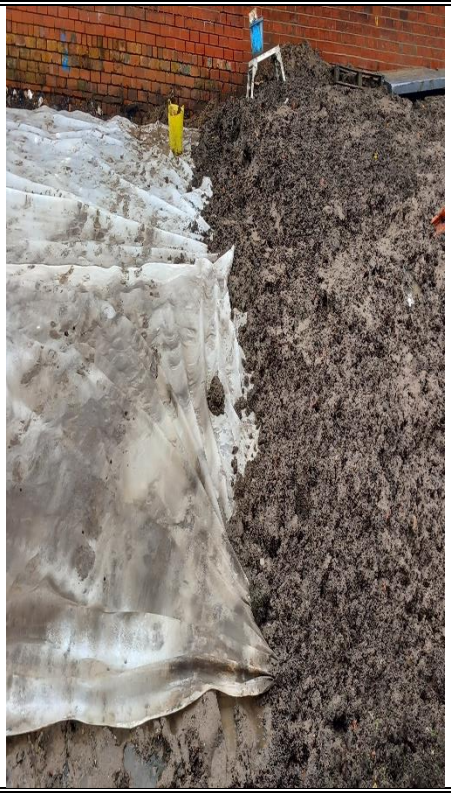
Overview of membrane layer installation in Plot 93



Internal View of membrane layer in Plot 96



Overview of membrane layer in Plot 97



Overview of membrane layer prior to clean cover in Plot 96

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 90** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 91** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 92** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 93** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 94** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 95** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 96** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 97** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 99** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the rear garden has been capped with hardstanding and the landscaped areas with the minimum of 300 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 100** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 101** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

08/01/2024

Date

CONDITIONS OF ISSUE

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0002_PLOTS 98 & 102 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 98 & 102 FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	02/02/2024	Plots 98 & 102 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in gardens areas reduced to 300 mm in any landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 200 m^3 of topsoil has been imported to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), a sample of the topsoil was tested for a general suite of analysis. An additional 2 samples of topsoil were taken by EDGE from Plots 98 and 102 and tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of organic or inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 12th January 2024 to excavate inspection pits by hand in Plots 98 and 102.

EDGE can confirm that the required cover depth was in place with a total of 600 mm clean topsoil cover in all of the plots placed on a geomembrane marker layer.

A selection of photographs is presented in Annex III.

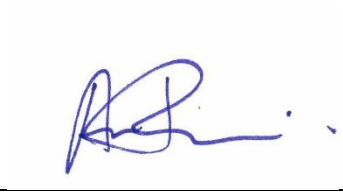
CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 98 and 102 at the new Hive Homes development located at Nixon Street, Rochdale.

Both of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex IV.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

02/02/2024

Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	Photographs and Hand Dug Pit Logs
Annex IV	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

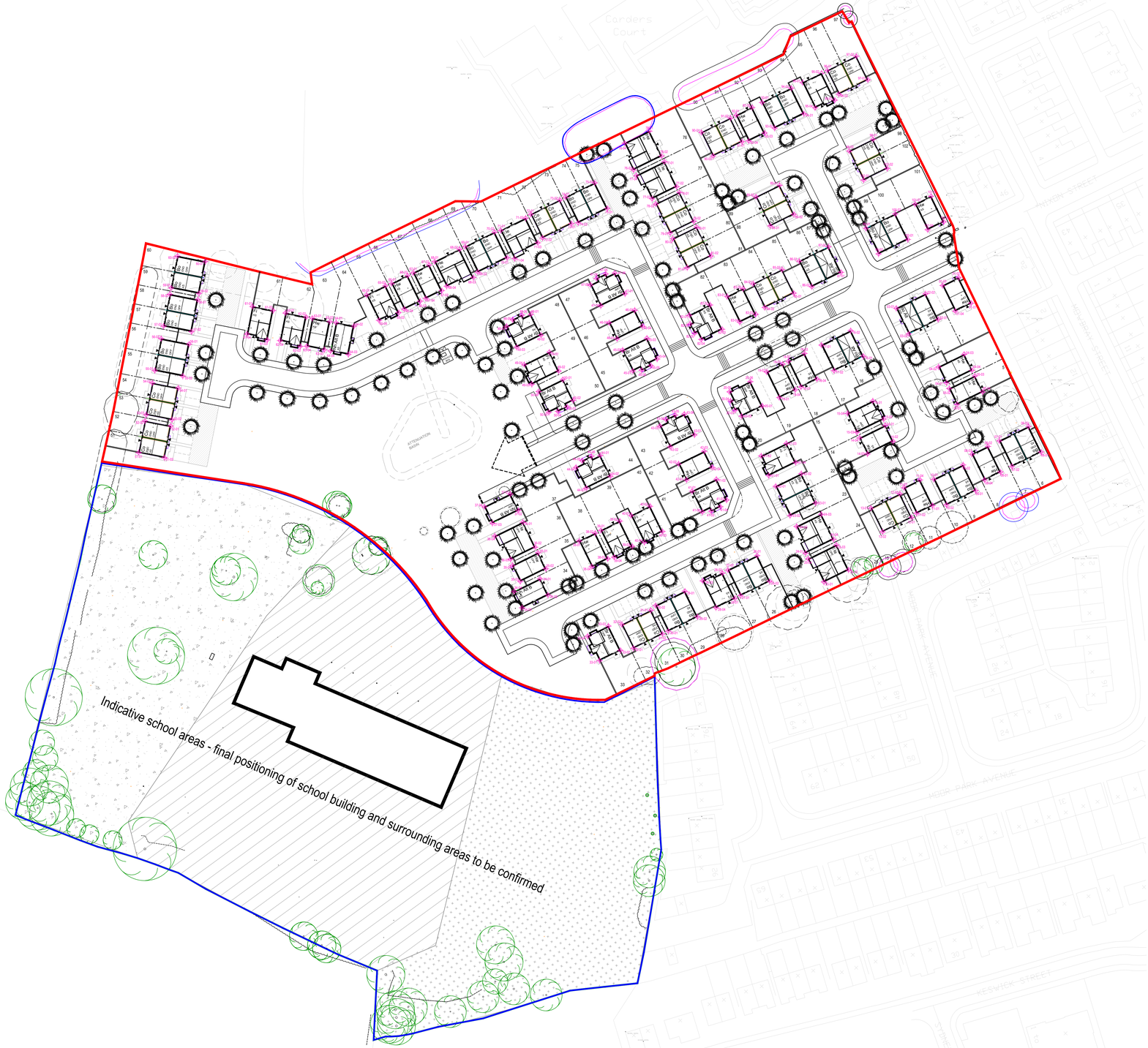
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

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- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
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M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
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K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
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A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

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HIVE HOMES

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Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

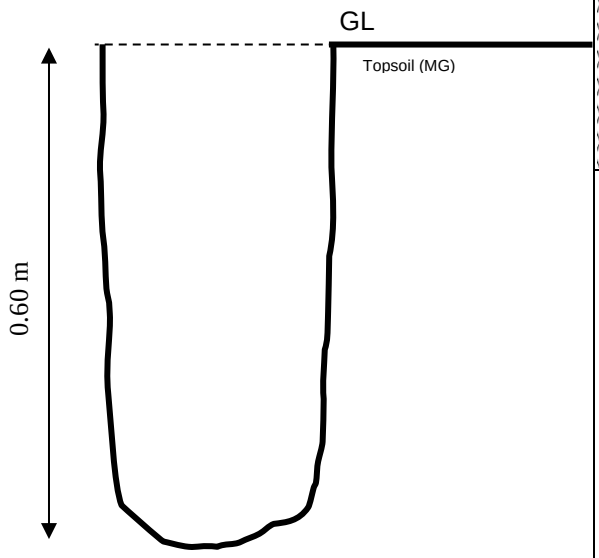
ANNEX III

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 98
Date: 12/01/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Hive Homes	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown very clayey slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red-brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 98: Overview of excavation



Plot 98: Internal View of excavation and membrane

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/01/24

Project No.: 20066

Client: Hive Homes

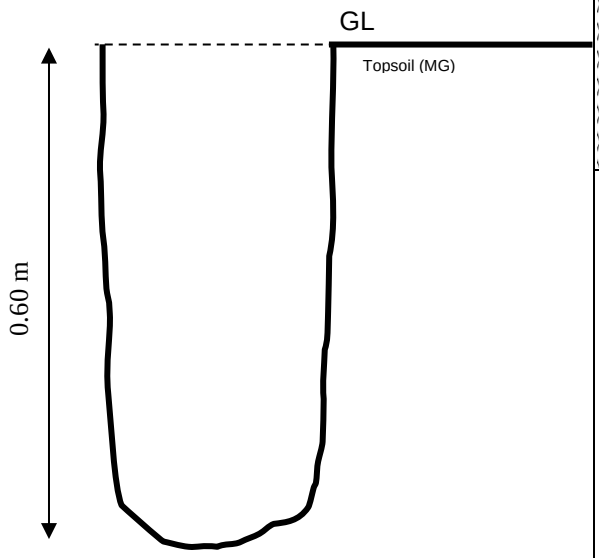
Plot Number: Plot 102

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown very clayey slightly gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red-brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater emergence.

Pictures:



Plot 102: Overview of excavation



Plot 102: Internal View of excavation and membrane

ANNEX IV

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 98** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

02/02/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 102** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

02/02/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0003_PLOTS 1-5 & 86-89 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 1-5 & 86-89 FOR 20066 - NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	28/02/2024	Plots 1-5 & 86-89 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 200 m^3 of topsoil has been imported to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), a sample of the topsoil was tested for a general suite of analysis. An additional 2 samples of topsoil were taken by EDGE from Plots 98 and 102 and tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of organic or inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 26th February 2024 to excavate inspection pits by hand in Plots 1 to 5 and 86 to 89.

EDGE can confirm that the required cover depth was in place with a total of between 600 and 650 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex III.

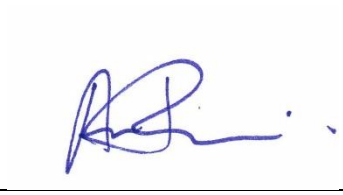
CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 1 to 5 and 86 to 89 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex IV.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

28/02/2024
Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	Photographs and Hand Dug Pit Logs
Annex IV	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

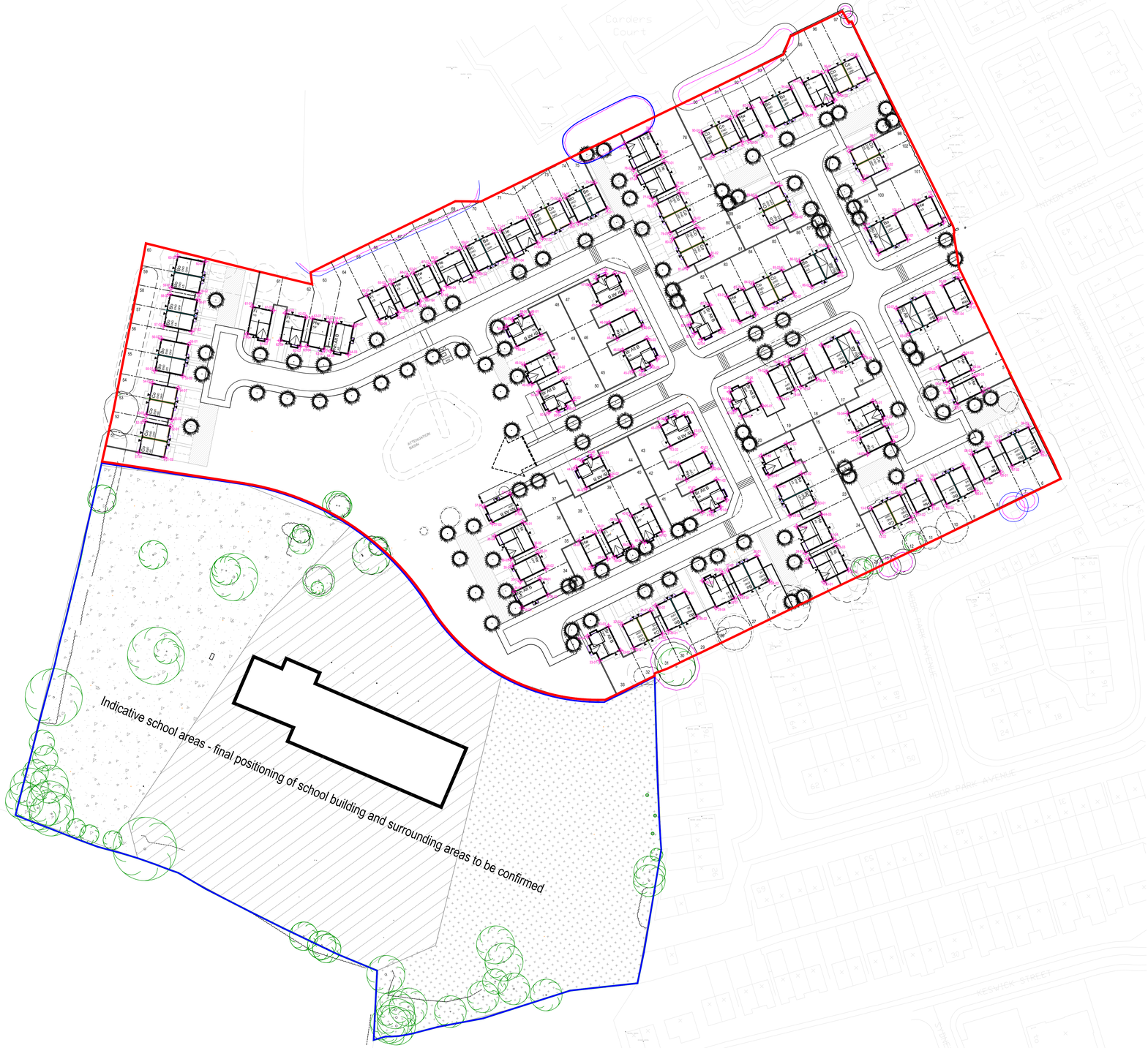
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

A0

PLANNING

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
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Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
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Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
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Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
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- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T	UPDATED SCHEDULE
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
F	28.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

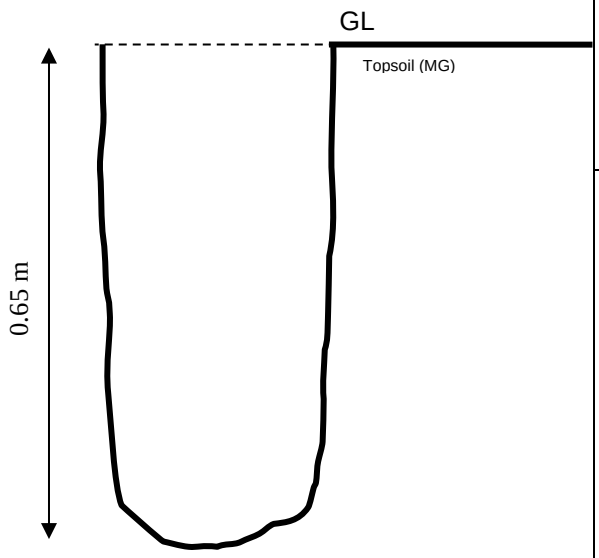
Plot Number: Plot 1

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 1: Overview of excavation



Plot 1: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

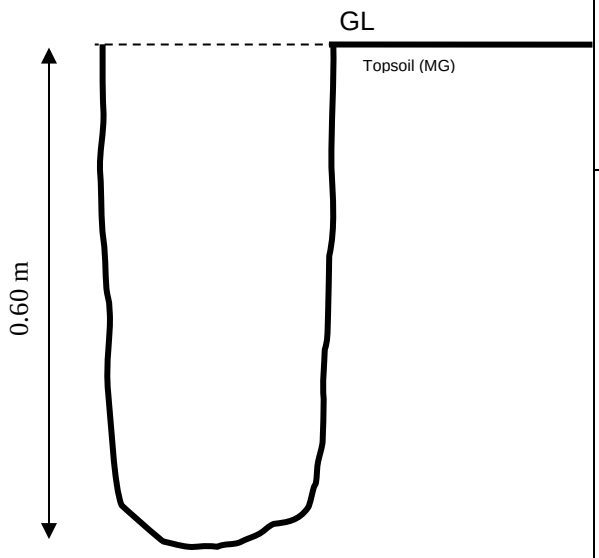
Plot Number: Plot 2

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 2: Overview of excavation



Plot 2: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

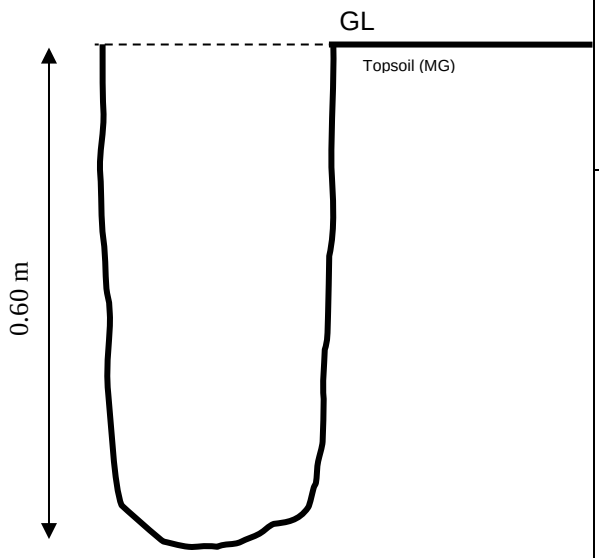
Plot Number: Plot 3

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 3: Overview of excavation

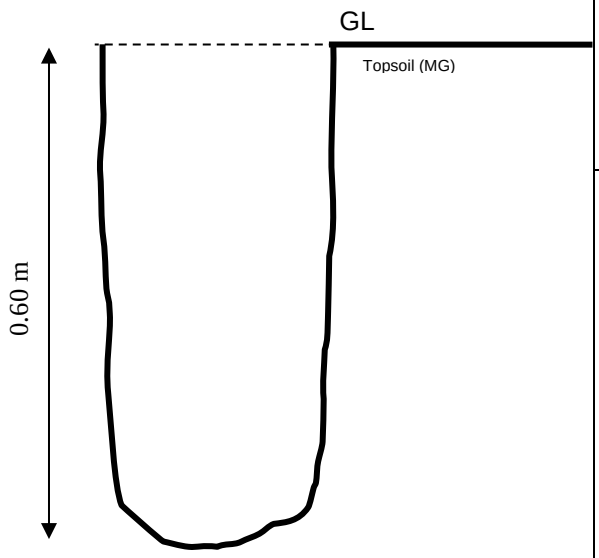


Plot 3: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 4
Date:	26/02/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 4: Overview of excavation



Plot 4: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

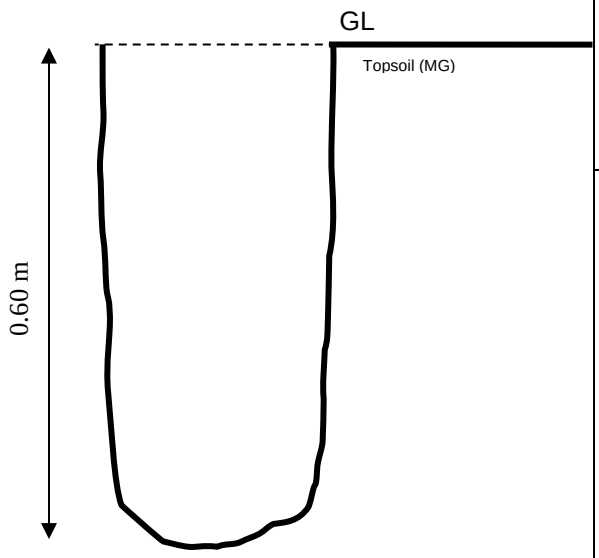
Plot Number: Plot 5

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 5: Overview of excavation

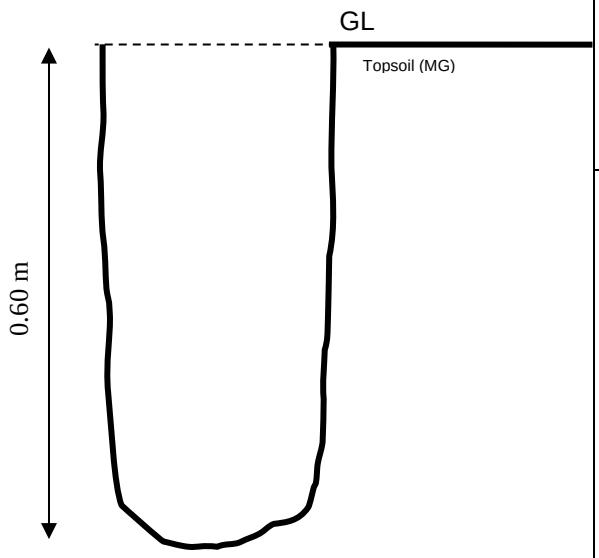


Plot 5: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 86
Date:	26/02/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 86: Overview of excavation

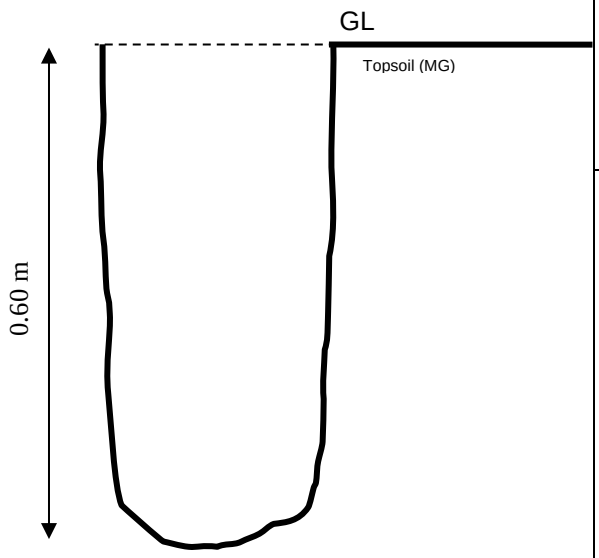


Plot 86: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 87
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 87: Overview of excavation

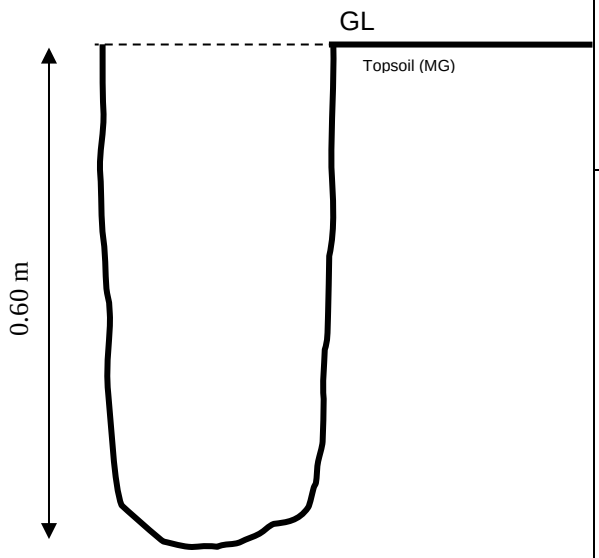


Plot 87: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 88
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 88: Overview of excavation

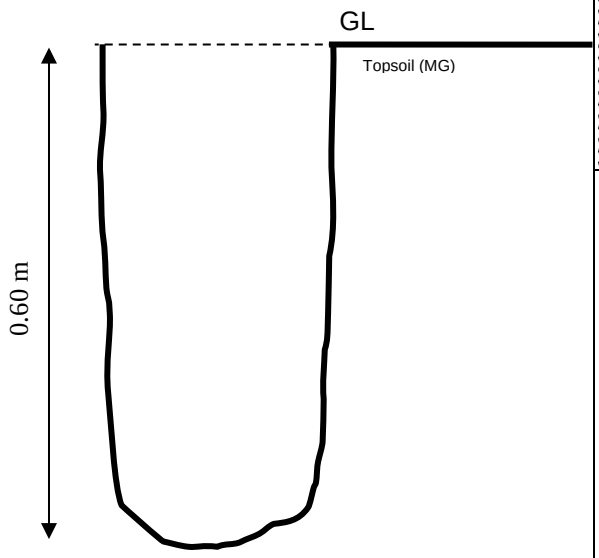


Plot 88: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 89
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 89: Overview of excavation



Plot 89: Internal View of excavation

ANNEX IV

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 88** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

28/02/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 89** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

28/02/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 1** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 2** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

Date

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 3** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

Date

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 4** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

28/02/2024

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 5** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

Date

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 86** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 87** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



28/02/2024

On behalf of EDGE Consulting Engineers

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0004_PLOTS 5-26 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 5 – 26 FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	01/05/2024	Plots 6-25 Garden Validation Report	TM	JC	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 2400 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 12 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of organic or inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 26th February 2024 to excavate inspection pits by hand in Plots 6 to 25.

EDGE can confirm that the required cover depth was in place with a total of between 600 and 700 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex III.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 6 to 25 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex IV.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

01/05/2024
Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	Photographs and Hand Dug Pit Logs
Annex IV	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

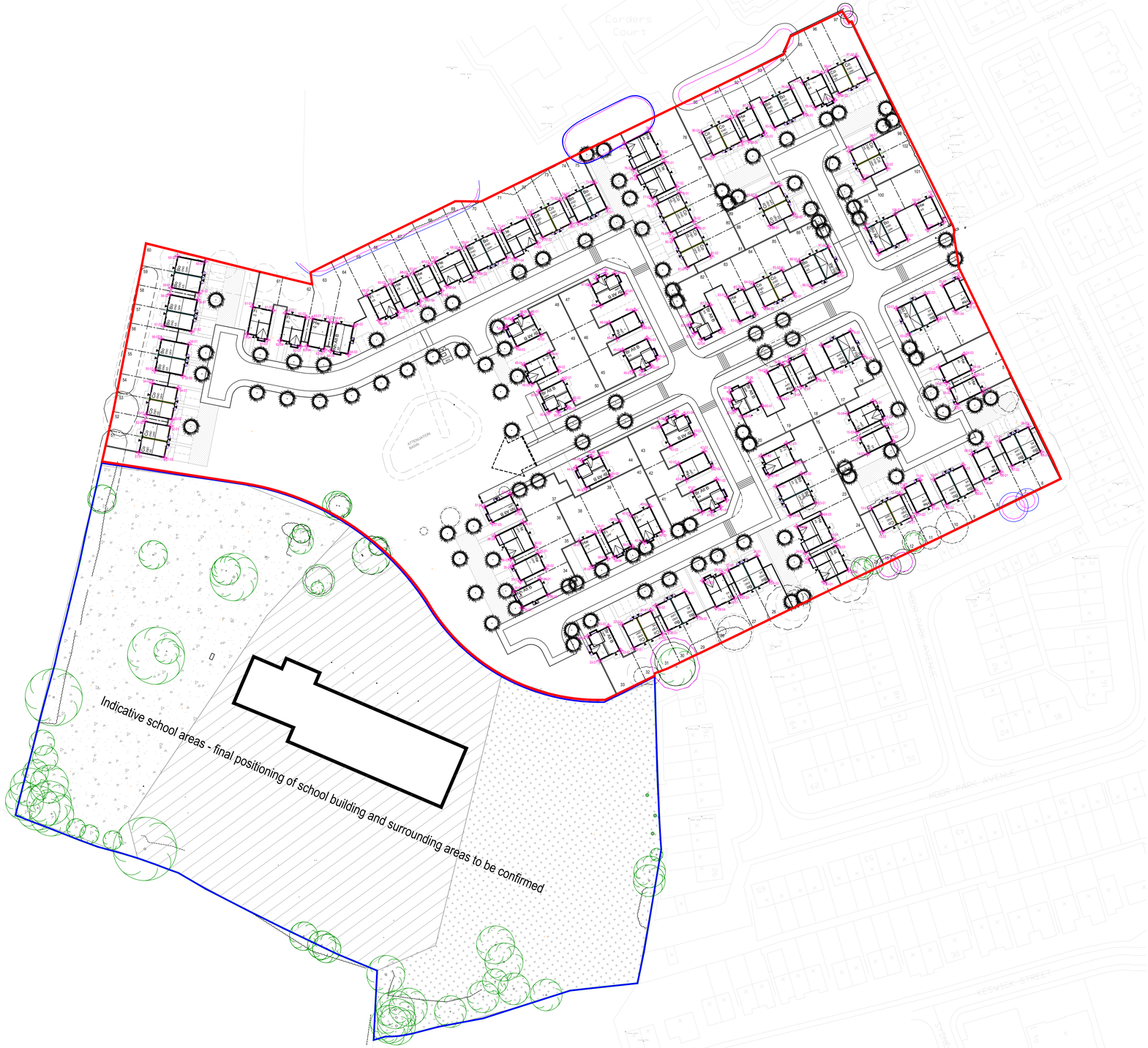
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

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this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.



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- Denotes potential build area

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1 : 500

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D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

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Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

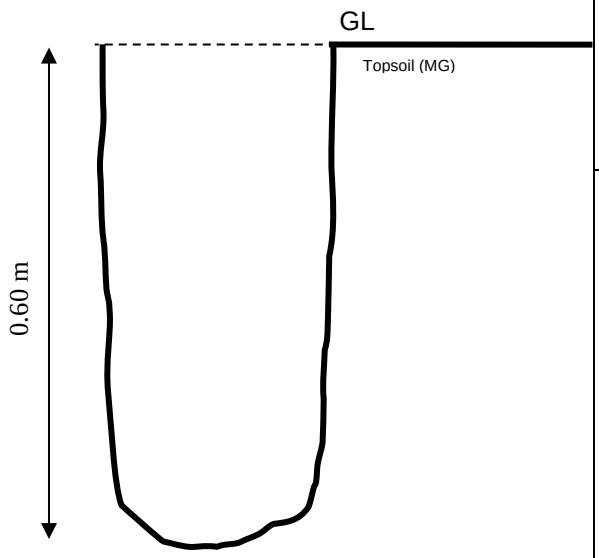
Plot Number: Plot 6

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 6: Overview of excavation



Plot 6: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

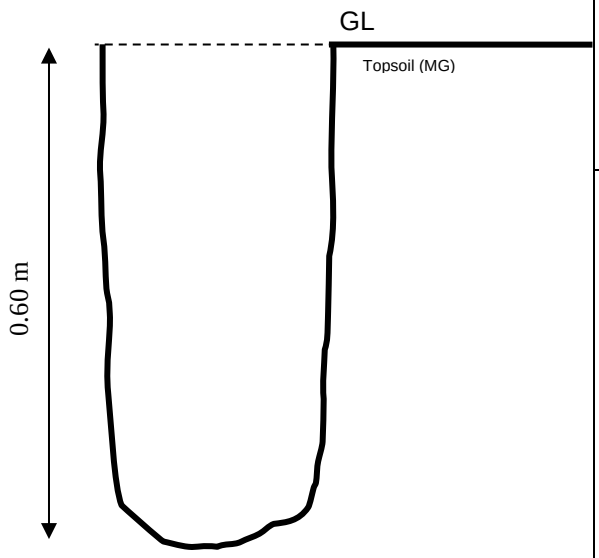
Plot Number: Plot 7

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 7: Overview of excavation

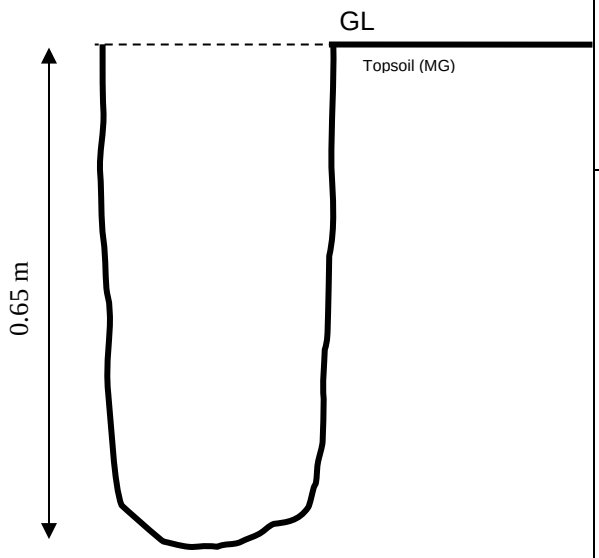


Plot 7: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 8
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.65 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 8: Overview of excavation



Plot 8: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

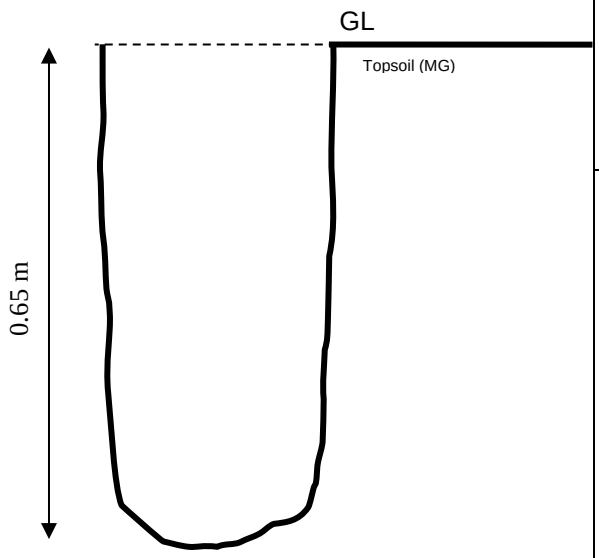
Plot Number: Plot 9

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 9: Overview of excavation



Plot 9: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

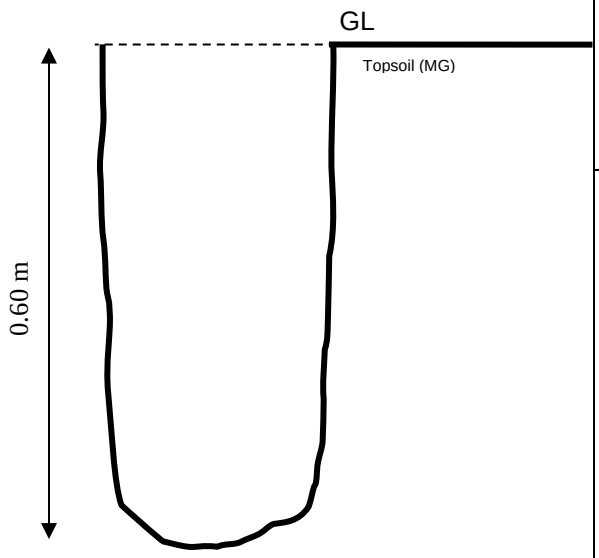
Plot Number: Plot 10

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 10: Overview of excavation

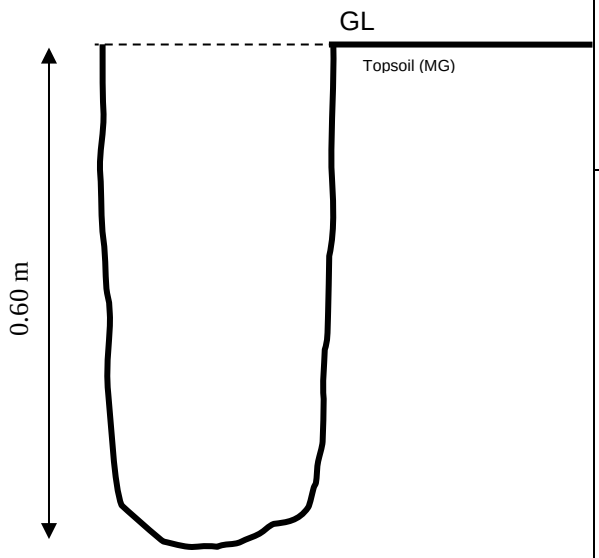


Plot 10: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 11
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 11: Overview of excavation



Plot 11: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

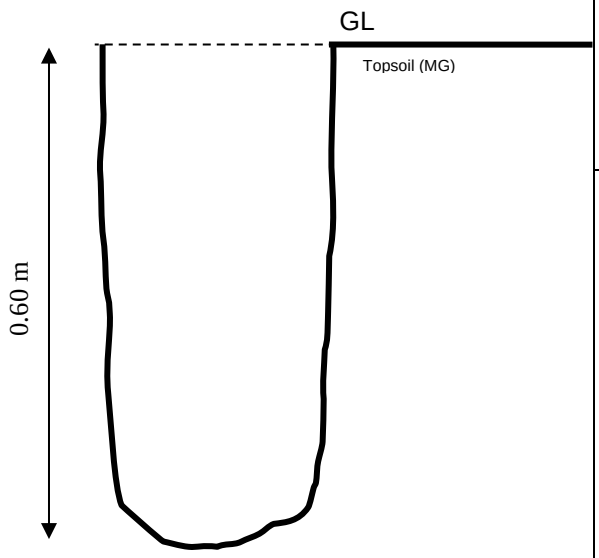
Plot Number: Plot 12

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 12: Overview of excavation



Plot 12: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

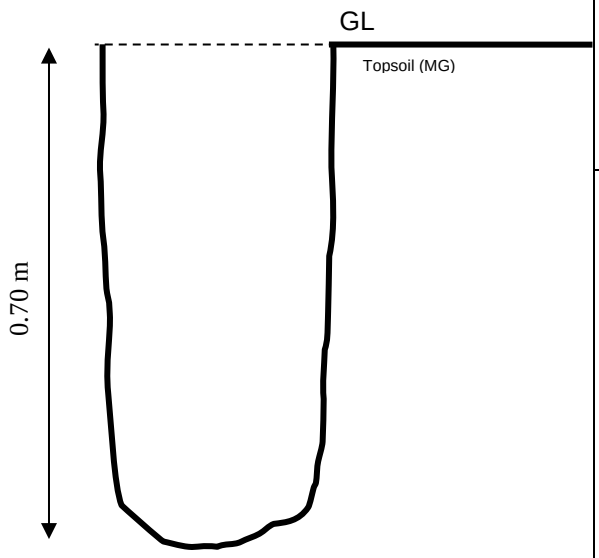
Plot Number: Plot 13

Logged By: J Cummins

Total Depth: 0.70 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 13: Overview of excavation

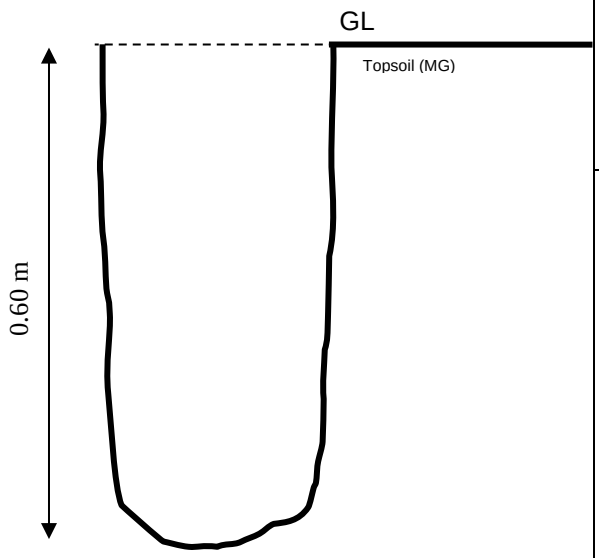


Plot 13: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 14
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 14: Overview of excavation

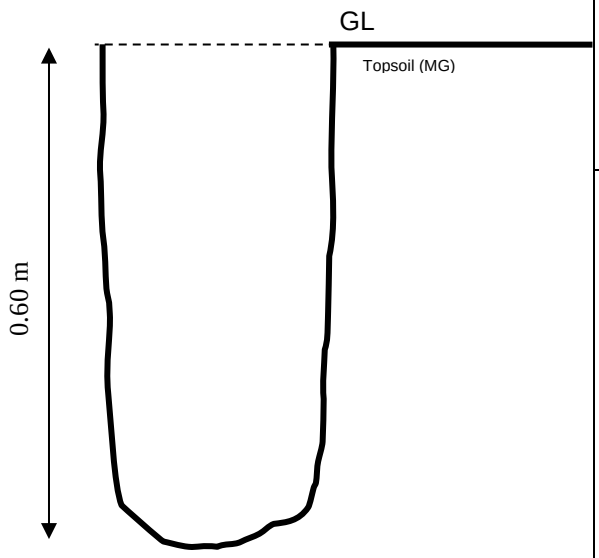


Plot 14: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 15
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 15: Overview of excavation



Plot 15: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

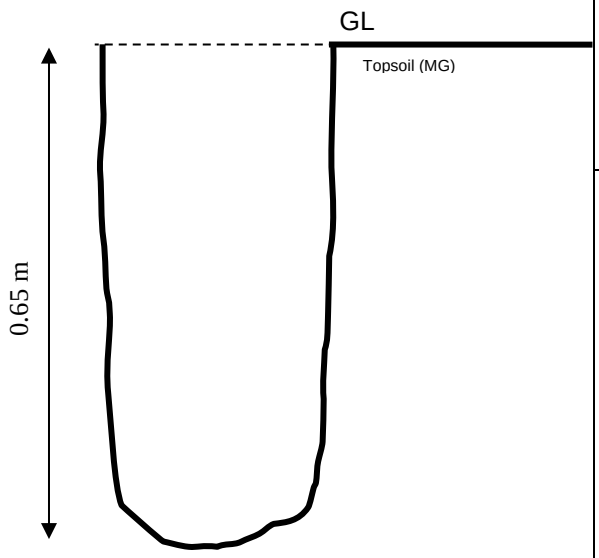
Plot Number: Plot 16

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 16: Overview of excavation



Plot 16: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

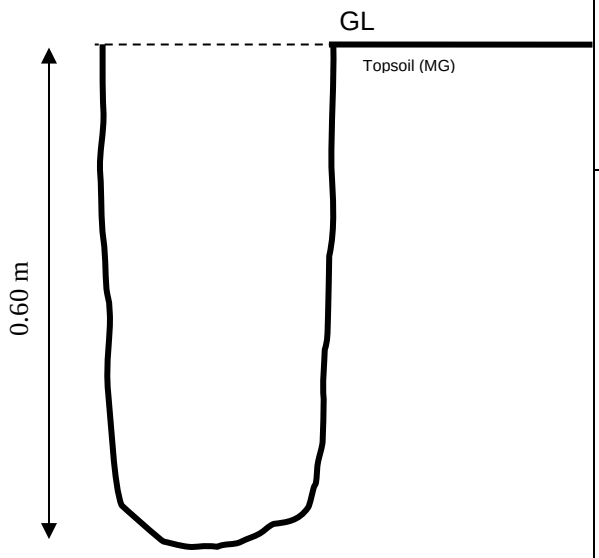
Plot Number: Plot 17

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 17: Overview of excavation

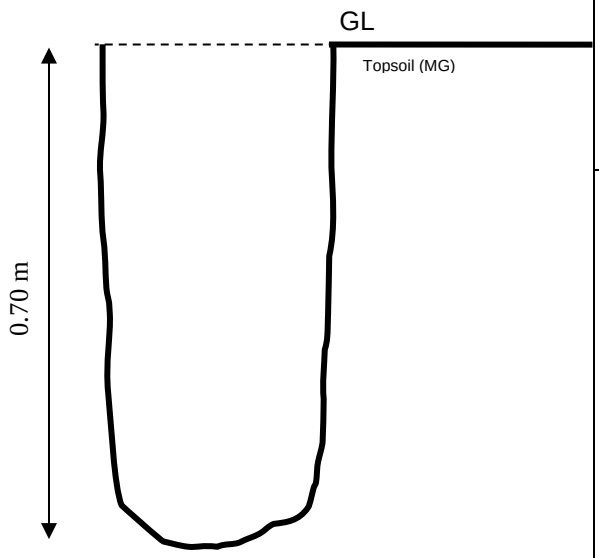


Plot 17: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 18
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.70 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 18: Overview of excavation

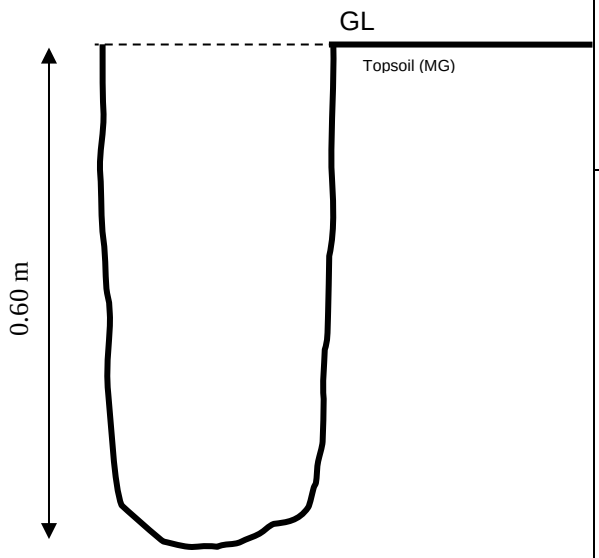


Plot 18: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 19
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 19: Overview of excavation



Plot 19: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

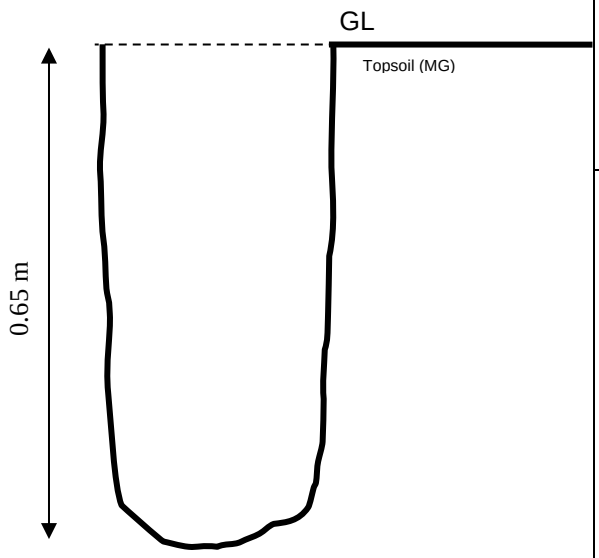
Plot Number: Plot 20

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
No groundwater encountered.

Pictures:



Plot 20: Overview of excavation



Plot 20: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

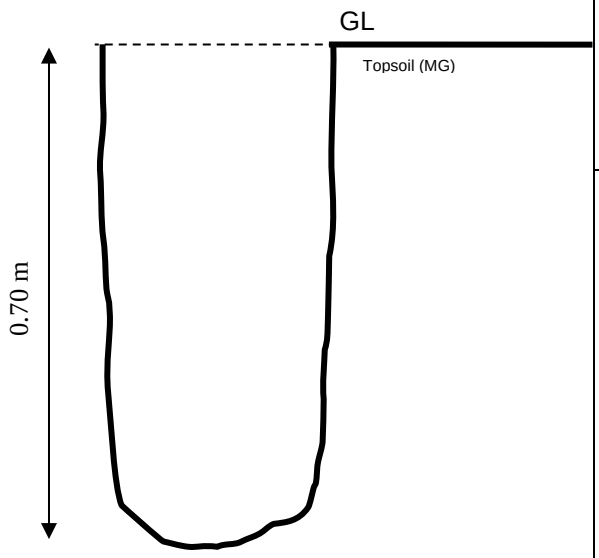
Plot Number: Plot 21

Logged By: J Cummins

Total Depth: 0.70 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 21: Overview of excavation



Plot 21: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

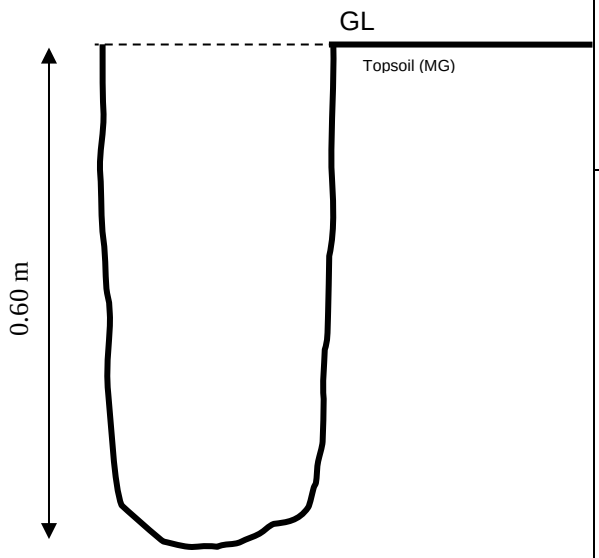
Plot Number: Plot 22

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 22: Overview of excavation

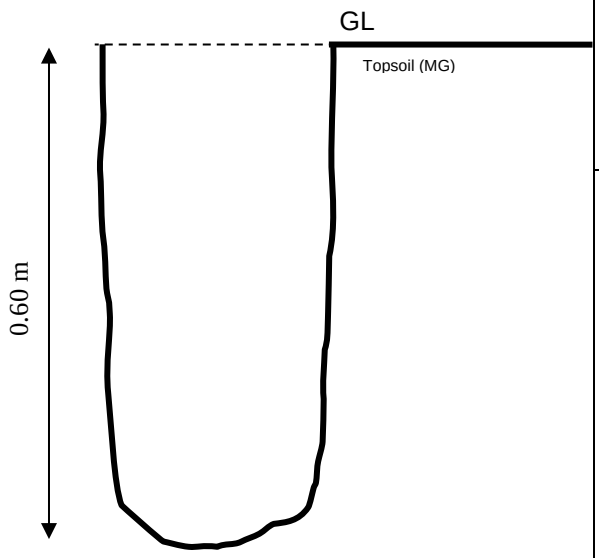


Plot 22: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 23
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 23: Overview of excavation



Plot 23: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 26/02/24

Project No.: 20066

Client: Seddon Construction Limited

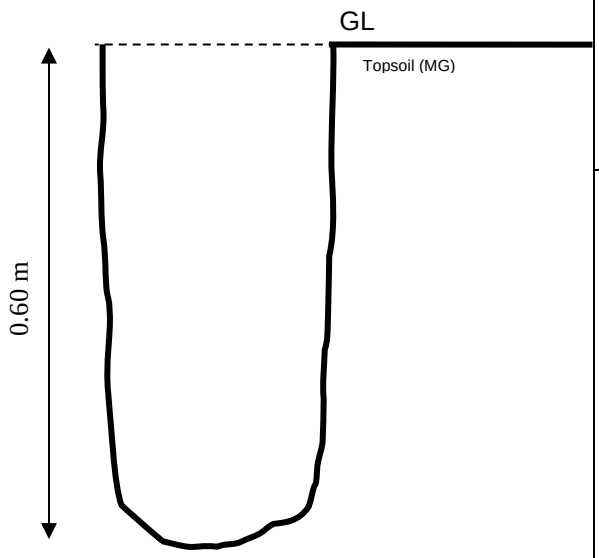
Plot Number: Plot 24

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 24: Overview of excavation

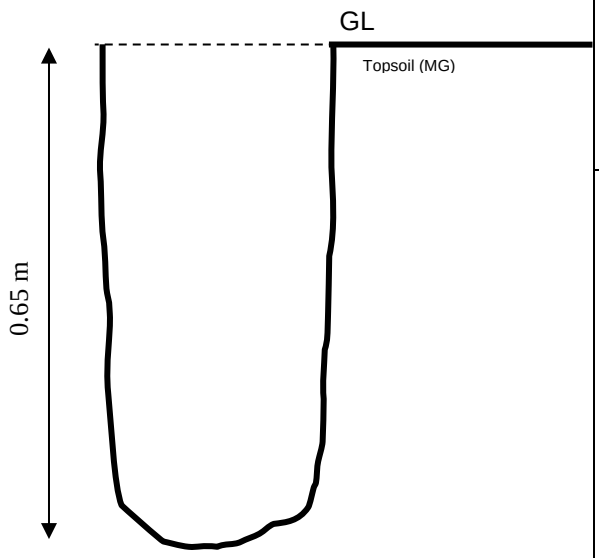


Plot 24: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 25
Date: 26/02/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.65 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
Groundwater encountered at base of the hand dug pit.

Pictures:



Plot 25: Overview of excavation



Plot 25: Internal View of excavation

ANNEX IV

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 6** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

01/05/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 7** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

01/05/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 8** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 9** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

01/05/2024

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 10** at Nixon Street, Rochdale, OL11 3AG.

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01/05/2024

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 11** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

01/05/2024

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 12** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

01/05/2024

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 13** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 14** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 15** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 16** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 17** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 18** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 19** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 20** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

01/05/2024

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 21** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 22** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 24** at Nixon Street, Rochdale, OL11 3AG.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 25** at Nixon Street, Rochdale, OL11 3AG.

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Document name: 20066-EDGE-XX-XX-RP-G-0005_PLOTS 82-85 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 82 - 85 FOR 20066 - NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	31/05/2024	Plots 82-85 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 2400 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 12 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of organic or inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 21st May 2024 to excavate inspection pits by hand in Plots 82 to 85.

EDGE can confirm that the required cover depth was in place with a total of between 600 and 700 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex III.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 82 to 85 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex IV.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

21/05/2024

Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	Photographs and Hand Dug Pit Logs
Annex IV	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

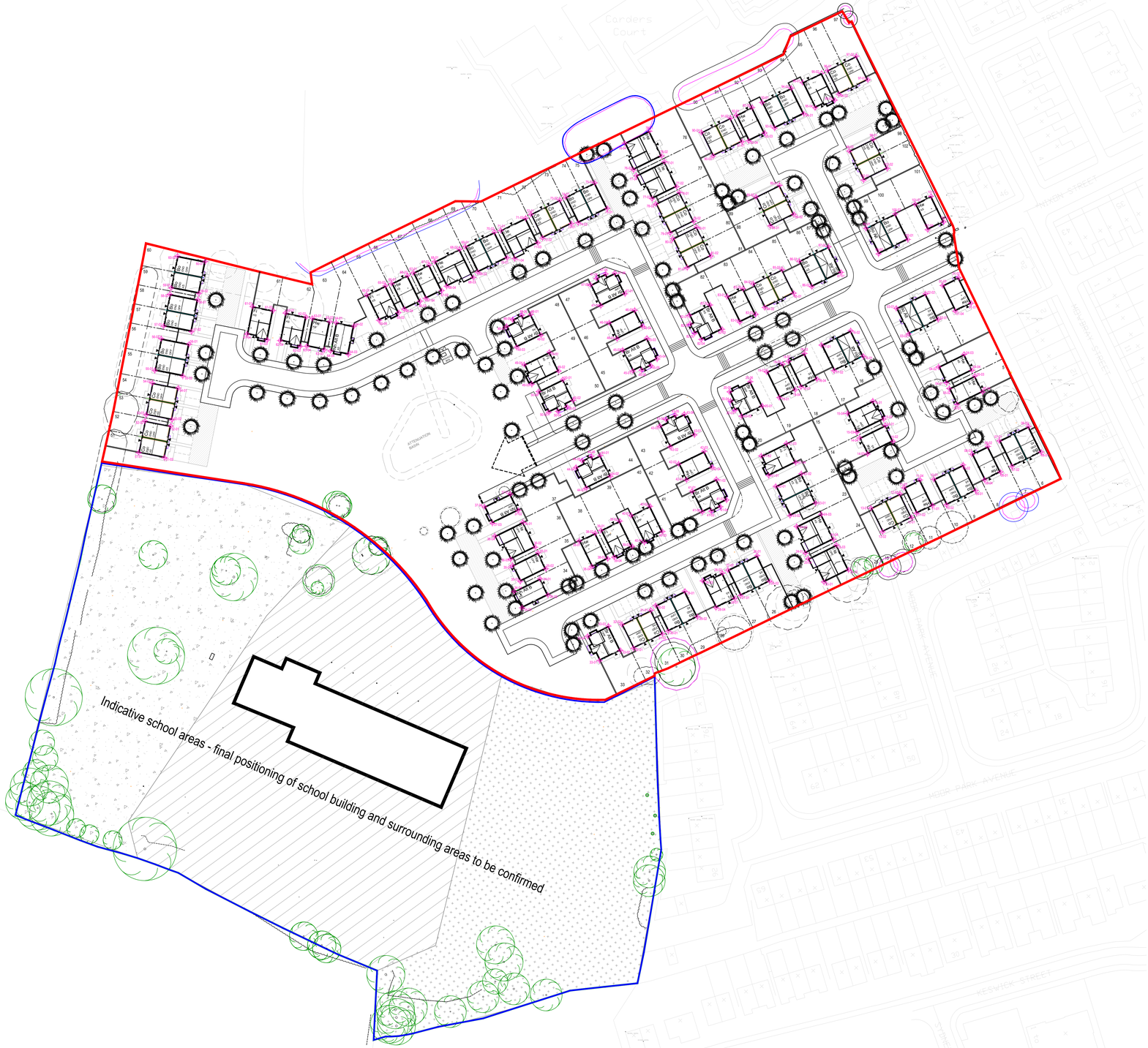
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

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- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

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D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

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architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

A0

PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

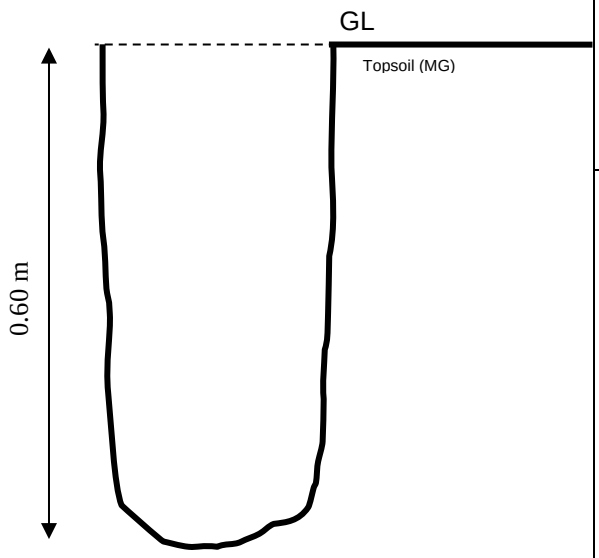
Plot Number: Plot 82

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 82: Overview of excavation



Plot 82: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

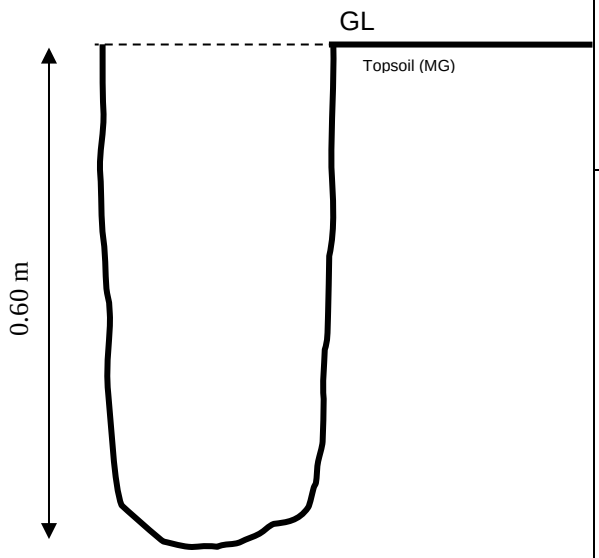
Plot Number: Plot 83

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 83: Overview of excavation

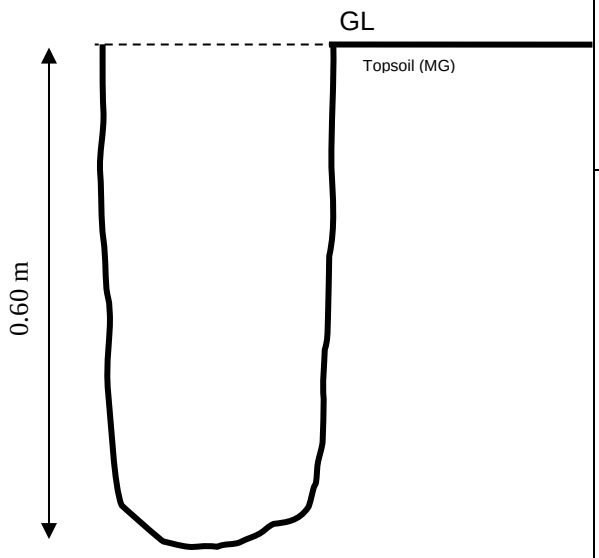


Plot 83: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 84
Date: 21/05/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 84: Overview of excavation



Plot 84: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

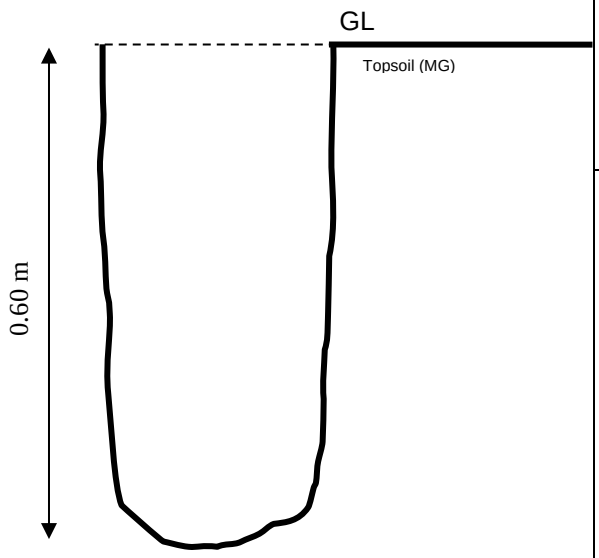
Plot Number: Plot 85

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 85: Overview of excavation



Plot 85: Internal View of excavation

ANNEX IV

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 82** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

21/05/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 83** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

21/05/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 84** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 85** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0006_PLOTS 26-30 and 36-44 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 26 – 30 AND 36 – 44 FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	15/07/2024	Plots 26-30 and 36-44 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 3,177 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 18 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024, sample reference L4 and L6.

Elevated concentration of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they are below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result is not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024, as presented in Annex III. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considers that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils can be considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 21st May 2024 to excavate inspection pits by hand in plots 36 to 44 and the 25th June 2024 to excavate inspection pits by hand in Plots 26 to 30.

EDGE can confirm that the required cover depth was in place with a total of between 600 mm and 650 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex IV.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 26 to 30 and 36 to 44 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex V.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.

On behalf of EDGE Consulting Engineers	15/07/2024 Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	PAH Profiling
Annex IV	Photographs and Hand Dug Pit Logs
Annex V	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

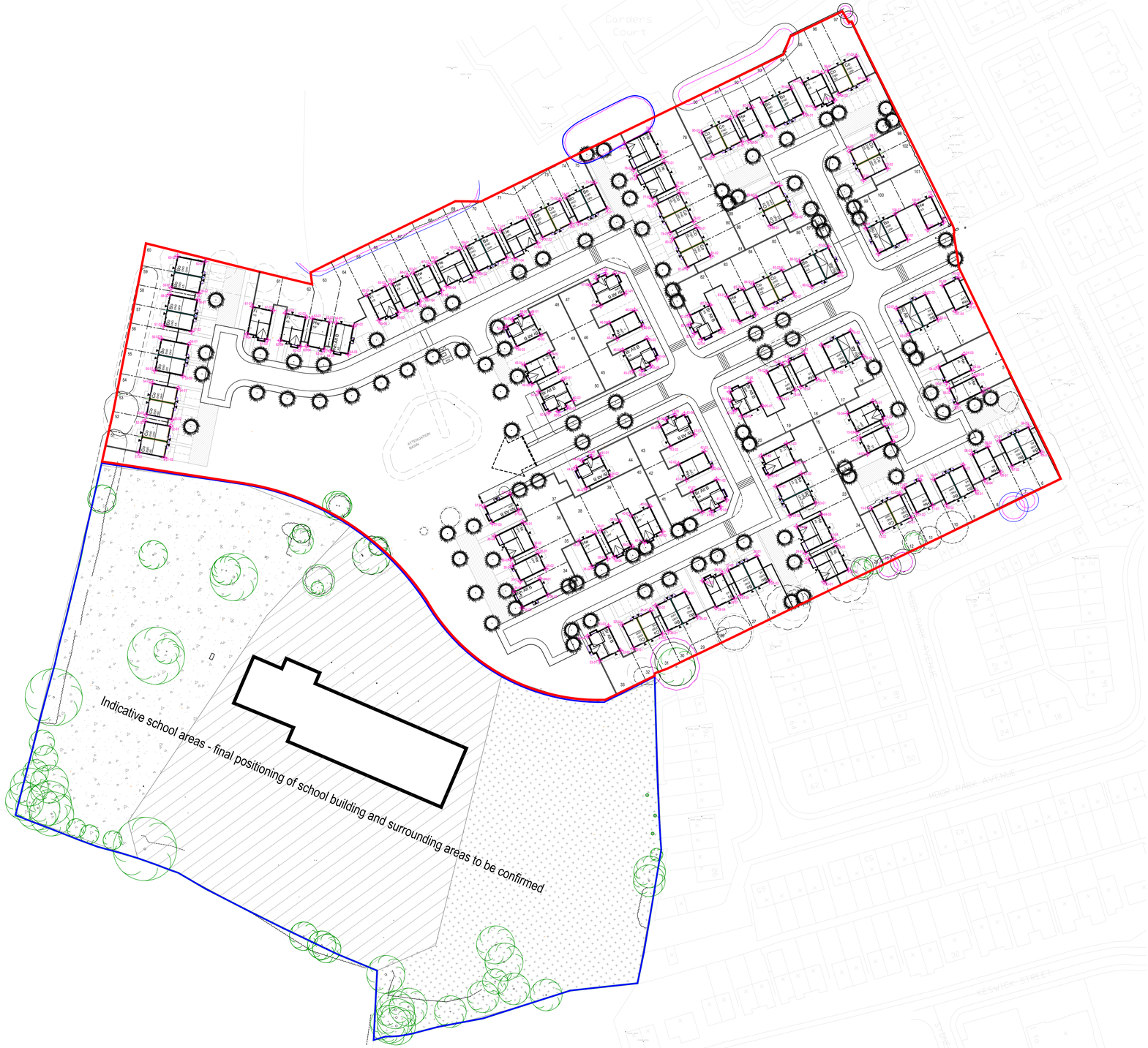
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.



Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T	UPDATED SCHEDULE
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
F	28.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06131
Issue Number: 1 **Date:** 04 July, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon Street
Project Ref: N/A
Order No: M-00023/000648
Date Samples Received: 20/06/24
Date Instructions Received: 21/06/24
Date Analysis Completed: 04/07/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
% Stones >10mm$_A$	3.5	<0.1	<0.1	6.2	1.9	3.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.17	7.05	6.85	8.94	8.84	8.87		pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	530	470	5300	3800	3400		mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	6	6	8	7	8		mg/kg	1	A-T-024s
Beryllium$_D$	1.0	0.7	0.6	1.1	1.1	1.0		mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	0.7	0.7	1.1		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	33	26	20	39	47	63		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	14	12	85	93	129		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	84	59	52	80	92	90		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	15	11	9	17	19	17		mg/kg	1	A-T-024s
Phosphorus$_D$	660	478	400	932	1010	1280		mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1	2	3	2		mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	48	21	18	80	100	109		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	51	38	134	155	210		mg/kg	5	A-T-024s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.19	0.04	0.02	0.65	0.28	0.87		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.04	<0.01	<0.01	0.13	0.09	0.10		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.62	0.08	0.06	1.72	0.68	1.95		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.42	0.33	0.31	2.91	1.83	3.67		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.30	0.36	0.32	2.35	1.54	2.92		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.60	0.47	0.40	2.86	1.83	3.54		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.74	0.25	0.21	1.21	0.77	1.47		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.58	0.16	0.14	0.99	0.67	1.27		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.43	0.39	0.36	2.62	1.70	3.41		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.19	0.05	<0.04	0.31	0.20	0.38		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	3.21	0.68	0.59	6.79	4.02	8.55		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.23	0.04	0.02	0.63	0.22	0.66		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.76	0.24	0.21	1.36	0.86	1.61		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.09	<0.03	<0.03	0.36	0.22	1.44		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.12	0.33	0.25	5.47	2.27	6.74		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.66	0.65	0.54	5.27	3.22	6.78		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	17.2	4.07	3.43	35.6	20.4	45.4		mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5		mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	71	15	21	104	177	239		mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	114	67	96	222	343	384		mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	185	82	117	326	520	623		mg/kg	5	A-T-007s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<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	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	1	<1	<1	2	3	3		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	3	<1	1	5	9	7		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	39	11	14	44	102	59		mg/kg	1	A-T-055s
Total Aliphatics$_A$	43	11	15	51	114	69		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	1	1	1		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	<1	<1	4	2	3		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	7	2	1	29	11	16		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	28	9	5	93	48	69		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	74	26	19	189	118	160		mg/kg	1	A-T-055s
Total Aromatics$_A$	111	38	25	316	180	250		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	154	48	40	368	294	319		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s

Report Notes

General

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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
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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
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NDP	No Determination Possible
NAD	No Asbestos Detected
N/A	Not applicable

Asbestos

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

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2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
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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'.
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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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/06131

Date Received: 21/06/2024 (am)

Project: Nixon Street

Cool Box Temperatures (°C): 20.2

Clients Project No: N/A

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6
Client Sample No	L1	L2	L3	L4	L5	L6
Client Sample ID/Depth						
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-007s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-019s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-028s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-031s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-050s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-072s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

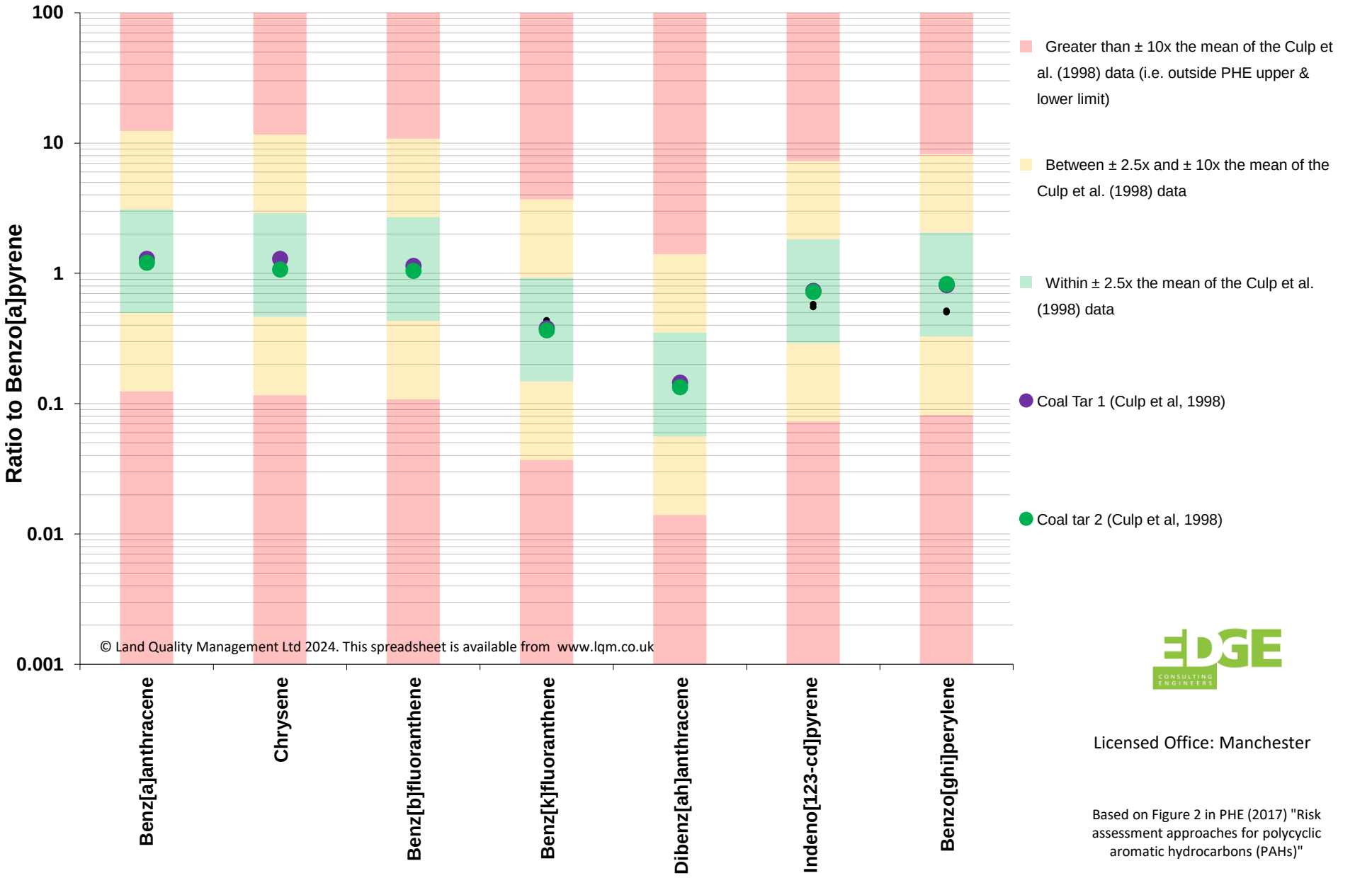
Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

PAH Profiling

J:\20066 - Nixon Street, Rochdale\Technical\Geo-environmental\Laboratory\PAH profiling charts v1_TS



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Licensed Office: Manchester

Based on Figure 2 in PHE (2017) "Risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)"

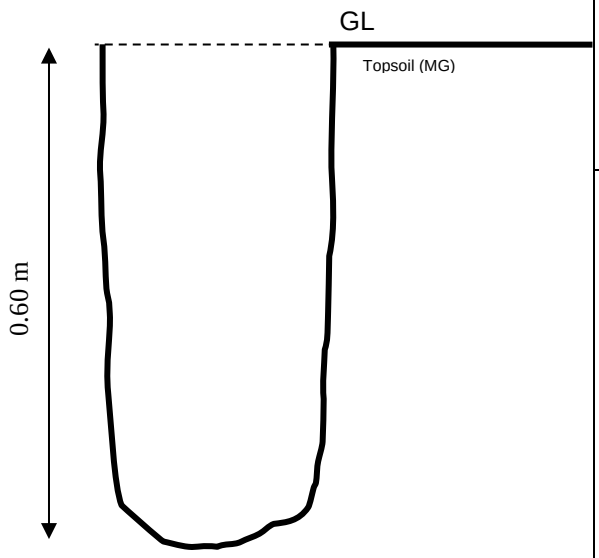
ANNEX IV

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 26
Date: 25/06/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 26: Overview of excavation

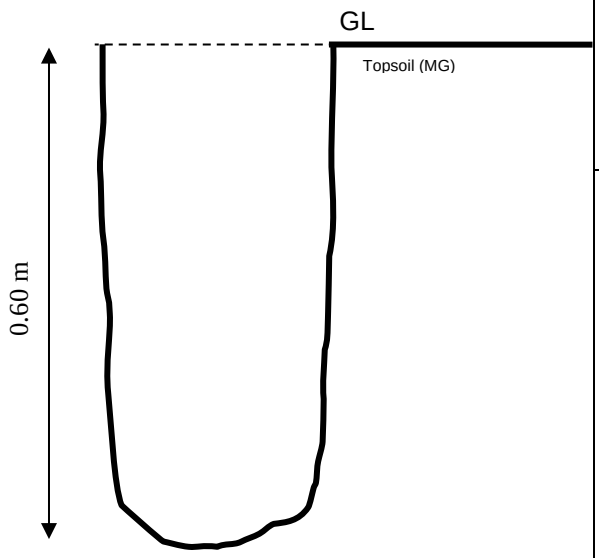


Plot 26: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 27
Date: 25/06/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 27: Overview of excavation



Plot 27: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 25/06/24

Project No.: 20066

Client: Seddon Construction Limited

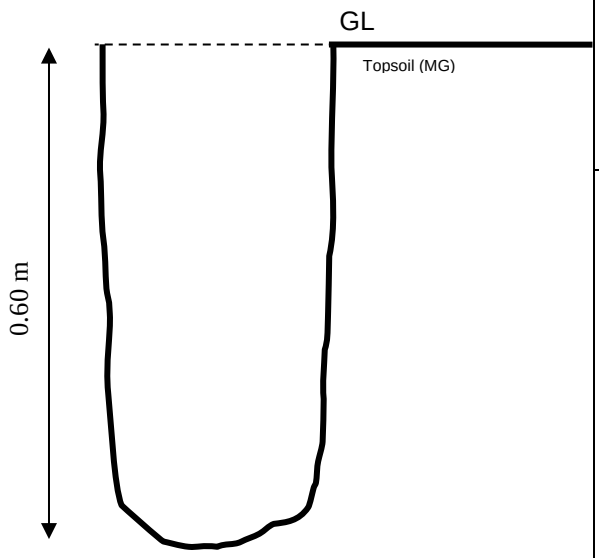
Plot Number: Plot 28

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 28: Overview of excavation

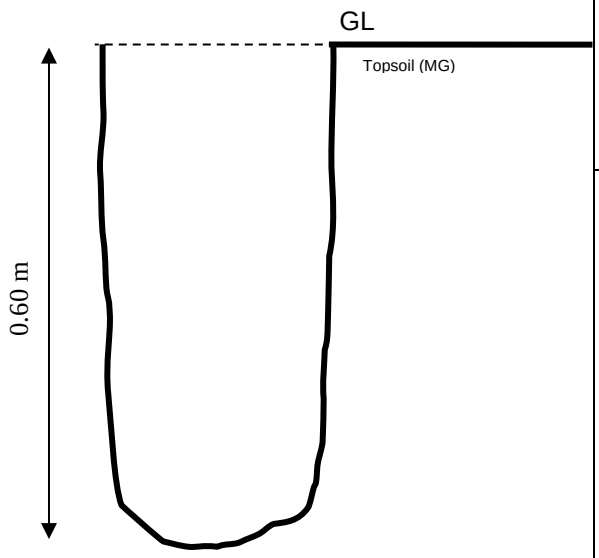


Plot 28: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 29
Date: 25/06/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 29: Overview of excavation

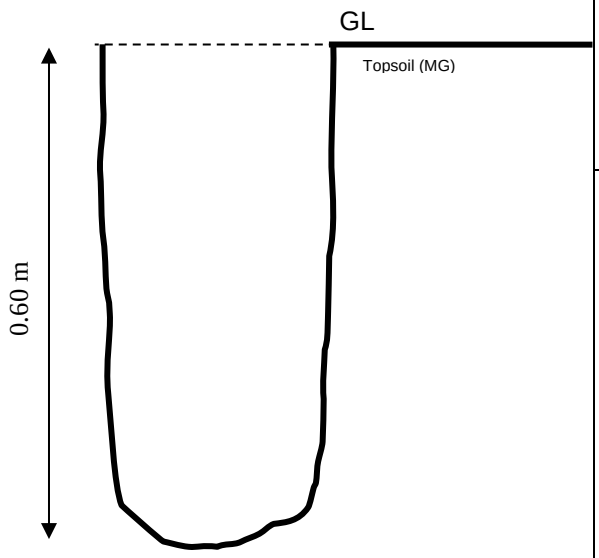


Plot 29: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 30
Date: 25/06/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 30: Overview of excavation



Plot 30: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

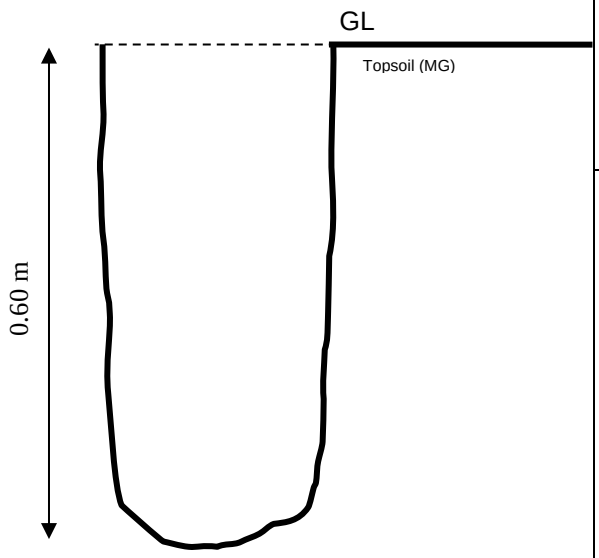
Plot Number: Plot 36

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 36: Overview of excavation



Plot 36: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

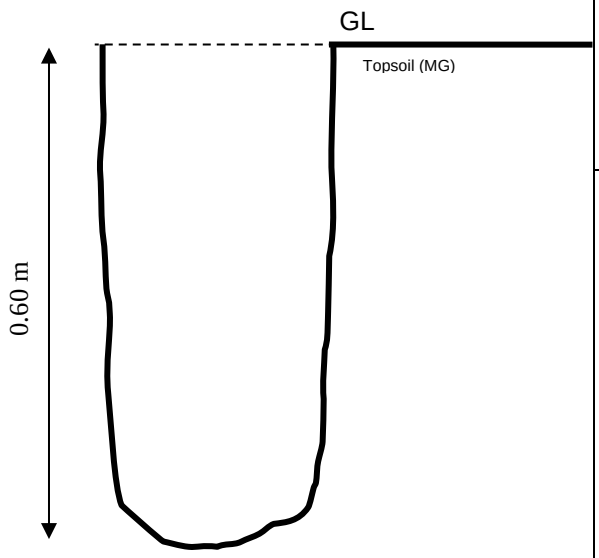
Plot Number: Plot 37

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 37: Overview of excavation



Plot 37: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

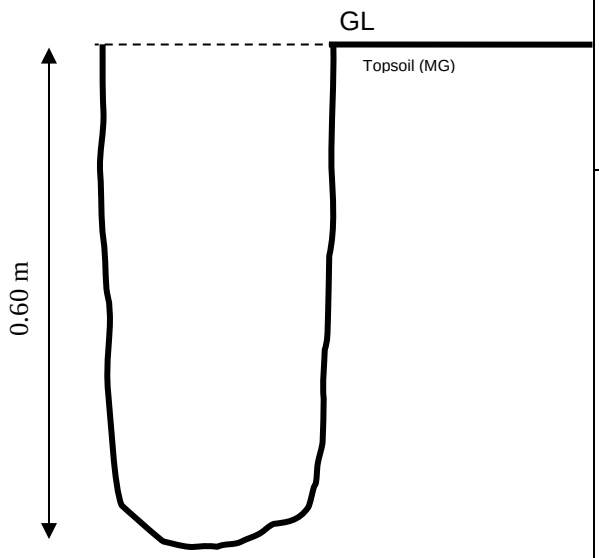
Plot Number: Plot 38

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 38: Overview of excavation



Plot 38: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

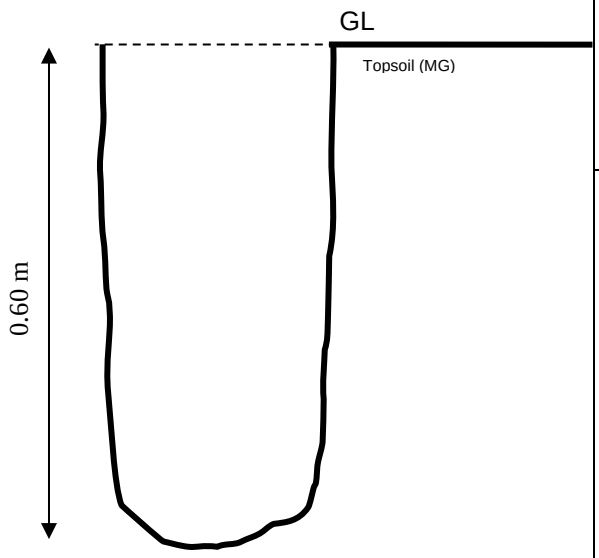
Plot Number: Plot 39

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 39: Overview of excavation

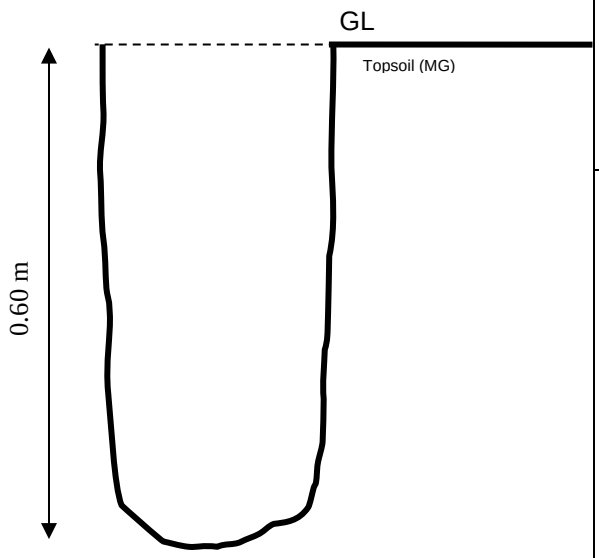


Plot 39: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 40
Date: 21/05/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 40: Overview of excavation

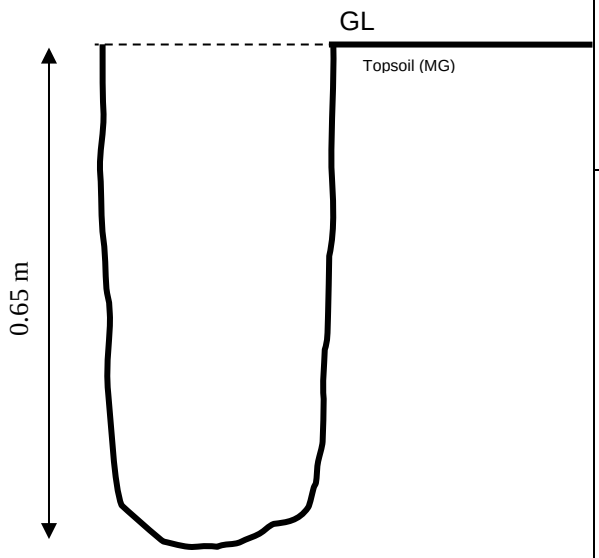


Plot 40: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 41
Date: 21/05/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.65 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 41: Overview of excavation



Plot 41: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

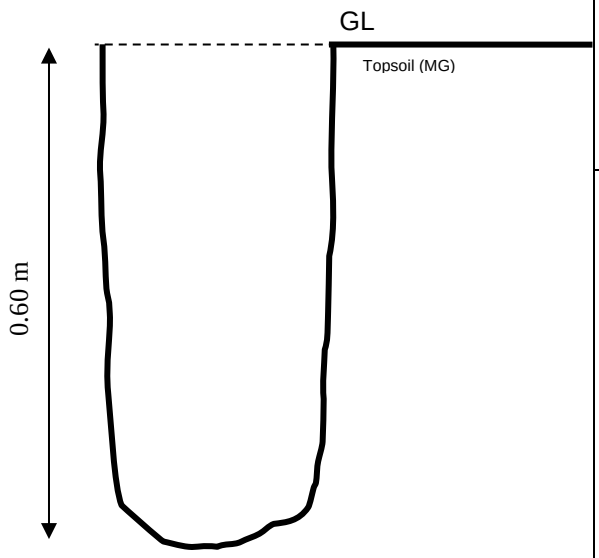
Plot Number: Plot 42

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 42: Overview of excavation



Plot 42: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 21/05/24

Project No.: 20066

Client: Seddon Construction Limited

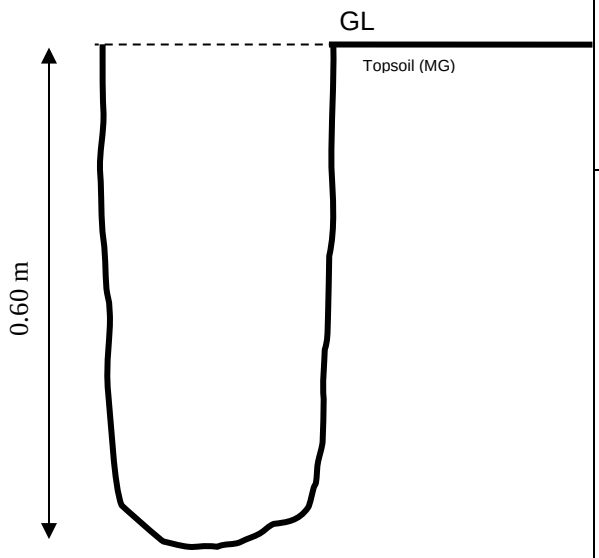
Plot Number: Plot 43

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 43: Overview of excavation

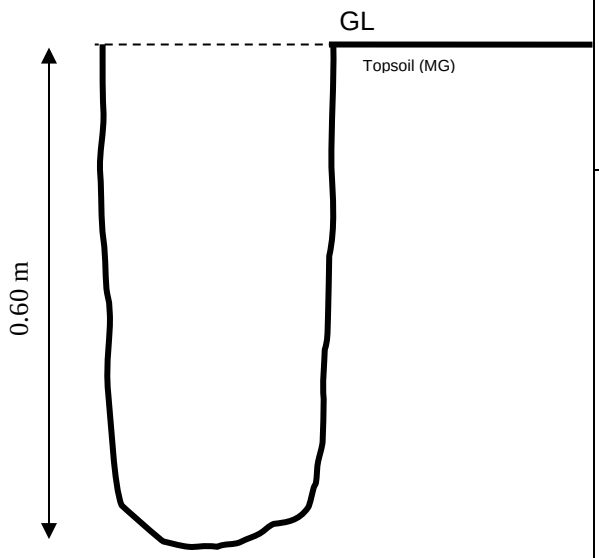


Plot 43: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 44
Date: 21/05/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 44: Overview of excavation



Plot 44: Internal View of excavation

ANNEX V

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 26** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

25/06/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 27** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

25/06/2024

Date

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 28** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

25/06/2024

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 29** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

25/06/2024

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 30** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

25/06/2024

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 36** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 37** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 38** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 39** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 40** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 41** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 42** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 43** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



21/05/2024

On behalf of EDGE Consulting Engineers

Date

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 44** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

21/05/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0007_PLOTS 31-35 and 76-81 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 31 – 35 AND 76 – 81 FOR 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	20/08/2024	Plots 31-35 and 76-81 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 3,177 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 18 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024, sample reference L4 and L6.

Elevated concentration of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they are below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result is not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024, as presented in Annex III. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considers that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils can be considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 12th August 2024 to excavate inspection pits by hand in plots 31 to 35 and 76 to 81.

EDGE can confirm that the required cover depth was in place with a total of between 600 mm and 800 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex IV.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 31 to 35 and 76 to 81 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex V.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.

On behalf of EDGE Consulting Engineers	20/08/2024 Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	PAH Profiling
Annex IV	Photographs and Hand Dug Pit Logs
Annex V	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

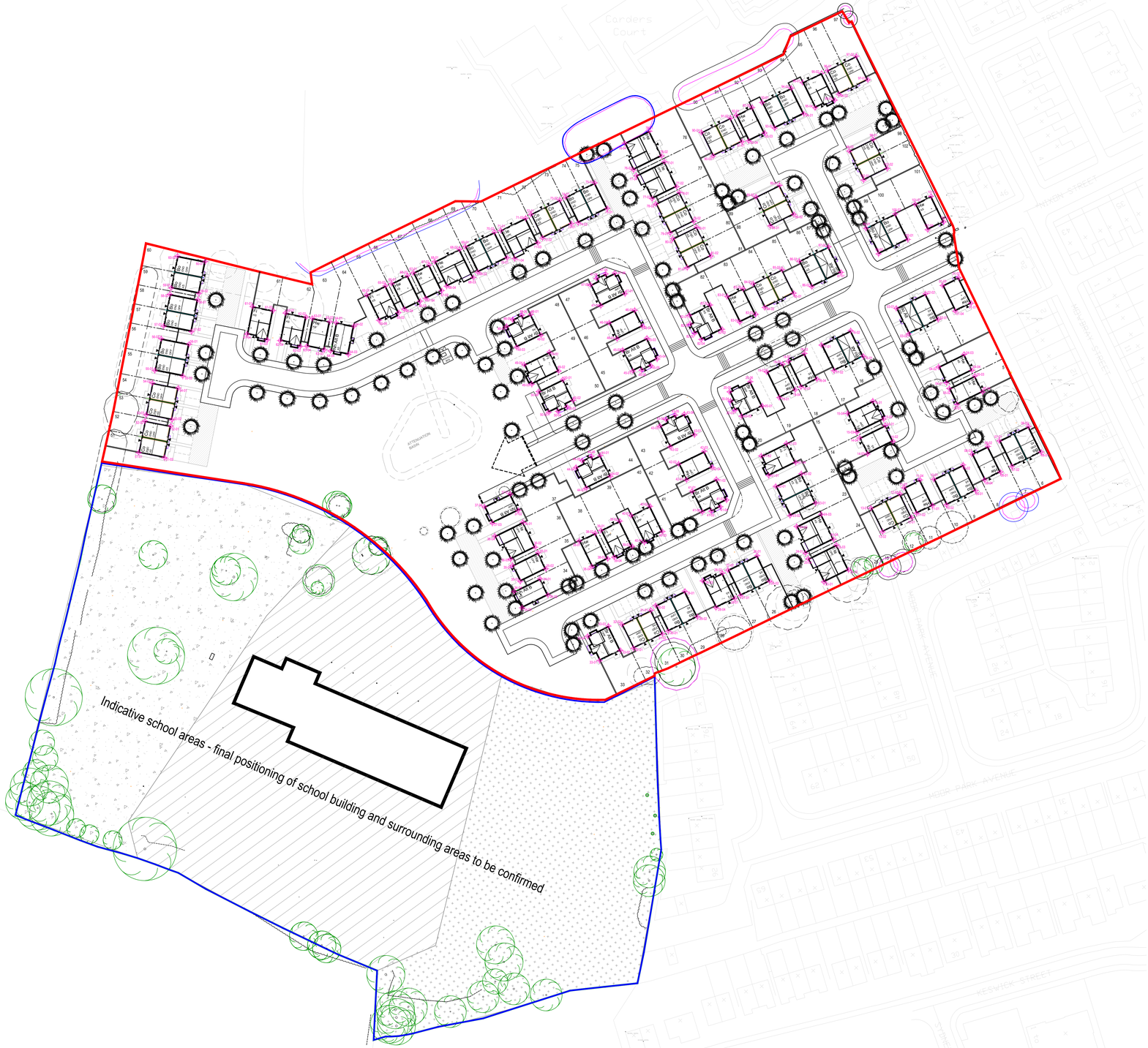
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

general notes:
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Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
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M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
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K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
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G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
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E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
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C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06131
Issue Number: 1 **Date:** 04 July, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon Street
Project Ref: N/A
Order No: M-00023/000648
Date Samples Received: 20/06/24
Date Instructions Received: 21/06/24
Date Analysis Completed: 04/07/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
% Stones >10mm$_A$	3.5	<0.1	<0.1	6.2	1.9	3.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.17	7.05	6.85	8.94	8.84	8.87		pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	530	470	5300	3800	3400		mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	6	6	8	7	8		mg/kg	1	A-T-024s
Beryllium$_D$	1.0	0.7	0.6	1.1	1.1	1.0		mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	0.7	0.7	1.1		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	33	26	20	39	47	63		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	14	12	85	93	129		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	84	59	52	80	92	90		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	15	11	9	17	19	17		mg/kg	1	A-T-024s
Phosphorus$_D$	660	478	400	932	1010	1280		mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1	2	3	2		mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	48	21	18	80	100	109		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	51	38	134	155	210		mg/kg	5	A-T-024s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.19	0.04	0.02	0.65	0.28	0.87		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.04	<0.01	<0.01	0.13	0.09	0.10		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.62	0.08	0.06	1.72	0.68	1.95		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.42	0.33	0.31	2.91	1.83	3.67		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.30	0.36	0.32	2.35	1.54	2.92		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.60	0.47	0.40	2.86	1.83	3.54		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.74	0.25	0.21	1.21	0.77	1.47		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.58	0.16	0.14	0.99	0.67	1.27		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.43	0.39	0.36	2.62	1.70	3.41		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.19	0.05	<0.04	0.31	0.20	0.38		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	3.21	0.68	0.59	6.79	4.02	8.55		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.23	0.04	0.02	0.63	0.22	0.66		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.76	0.24	0.21	1.36	0.86	1.61		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.09	<0.03	<0.03	0.36	0.22	1.44		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.12	0.33	0.25	5.47	2.27	6.74		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.66	0.65	0.54	5.27	3.22	6.78		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	17.2	4.07	3.43	35.6	20.4	45.4		mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5		mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	71	15	21	104	177	239		mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	114	67	96	222	343	384		mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	185	82	117	326	520	623		mg/kg	5	A-T-007s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<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	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	1	<1	<1	2	3	3		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	3	<1	1	5	9	7		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	39	11	14	44	102	59		mg/kg	1	A-T-055s
Total Aliphatics$_A$	43	11	15	51	114	69		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	1	1	1		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	<1	<1	4	2	3		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	7	2	1	29	11	16		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	28	9	5	93	48	69		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	74	26	19	189	118	160		mg/kg	1	A-T-055s
Total Aromatics$_A$	111	38	25	316	180	250		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	154	48	40	368	294	319		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		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
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

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

TPH by method A-T-007:

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

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

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

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

Results greater than 12900µS/cm @ 25^0C / 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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/06131

Date Received: 21/06/2024 (am)

Project: Nixon Street

Cool Box Temperatures (°C): 20.2

Clients Project No: N/A

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6
Client Sample No	L1	L2	L3	L4	L5	L6
Client Sample ID/Depth						
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-007s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-019s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-028s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-031s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-050s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-072s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

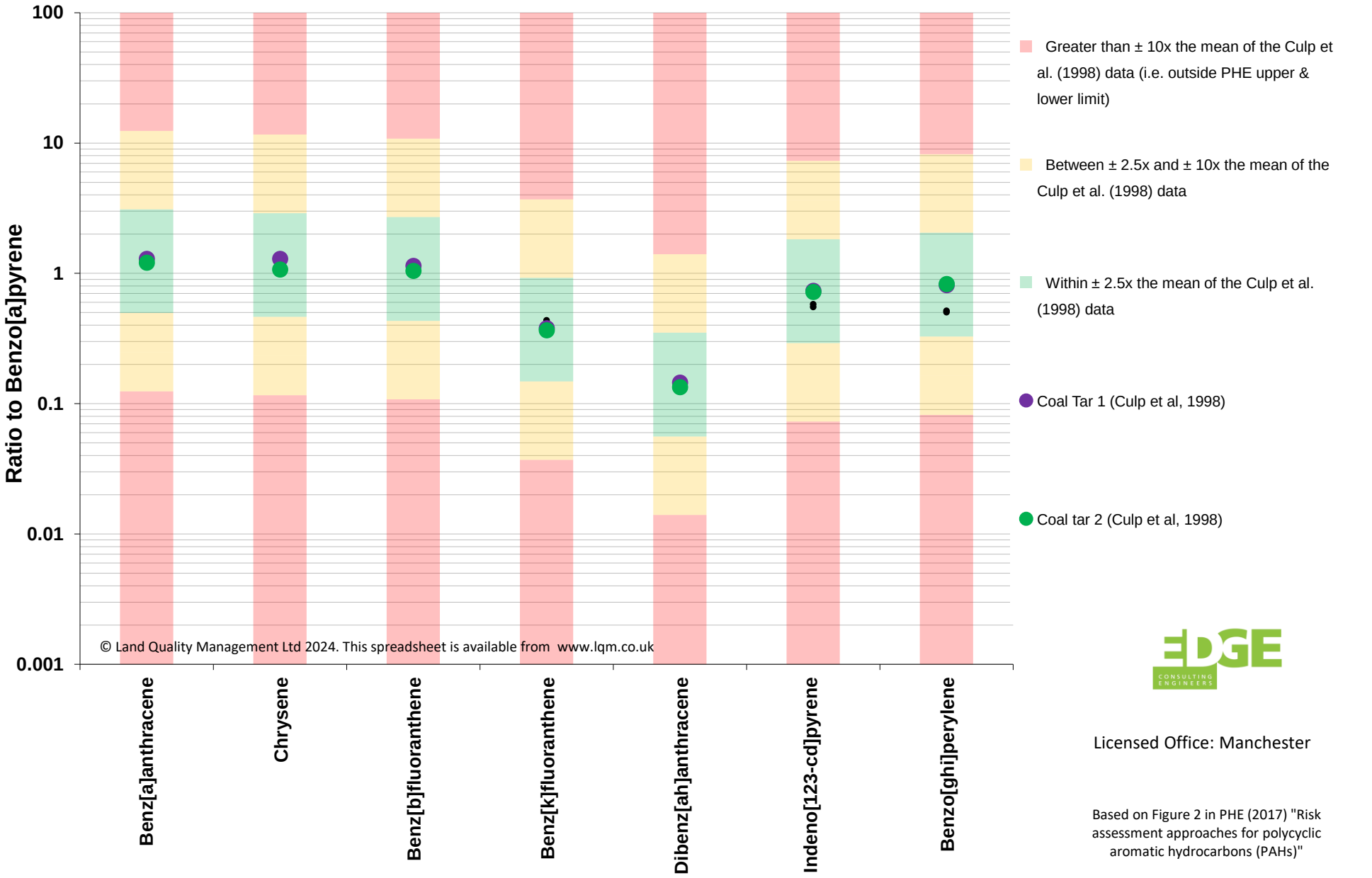
Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANNEX III

PAH Profiling

J:\20066 - Nixon Street, Rochdale\Technical\Geo-environmental\Laboratory\PAH profiling charts v1_TS



© Land Quality Management Ltd 2024. This spreadsheet is available from www.lqm.co.uk

Licensed Office: Manchester

Based on Figure 2 in PHE (2017) "Risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)"

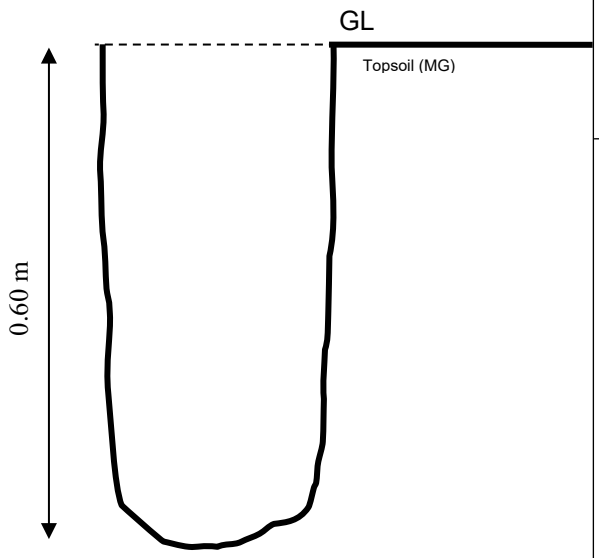
ANNEX IV

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 31
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 31: Overview of excavation

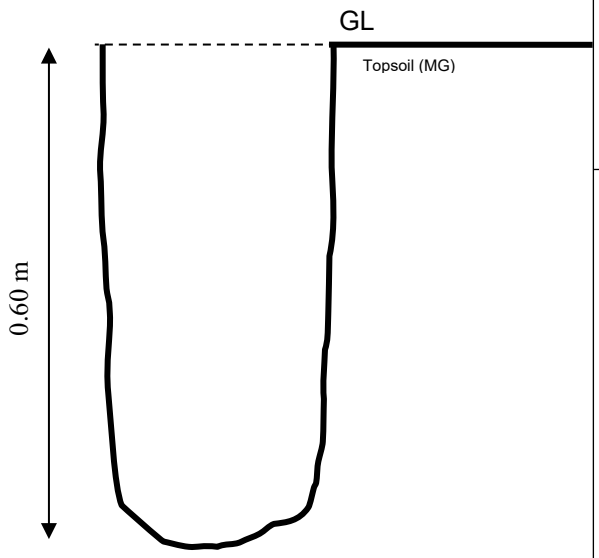


Plot 31: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 32
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional fragments of plastic and metal. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 32: Overview of excavation



Plot 32: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

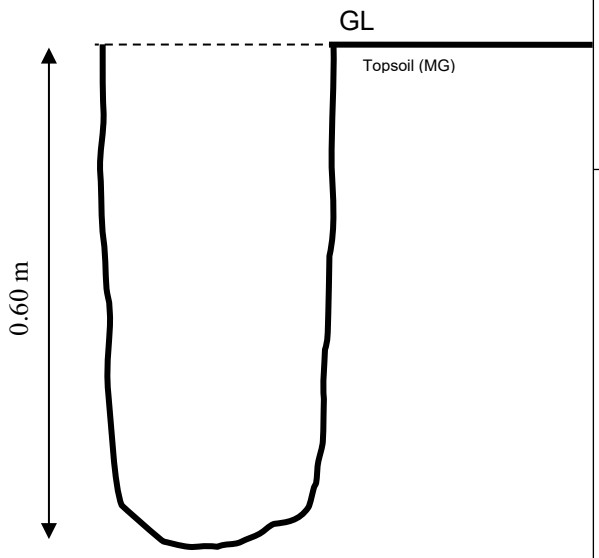
Plot Number: Plot 33

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional fragments of plastic, glass and metal. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 33: Overview of excavation

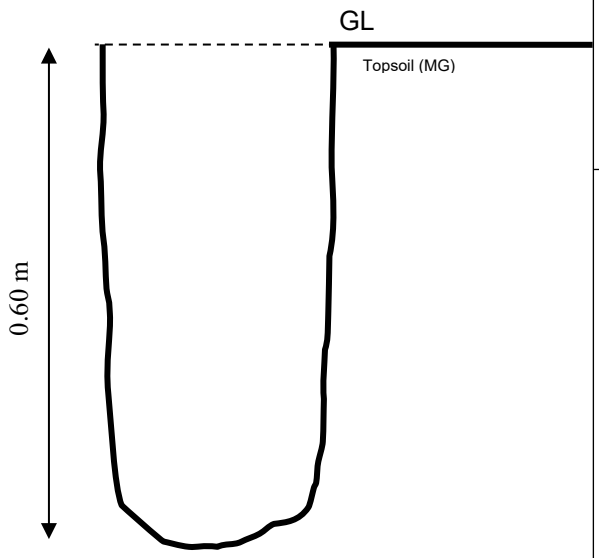


Plot 33: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 34
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional fragments of plastic. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 34: Overview of excavation



Plot 34: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

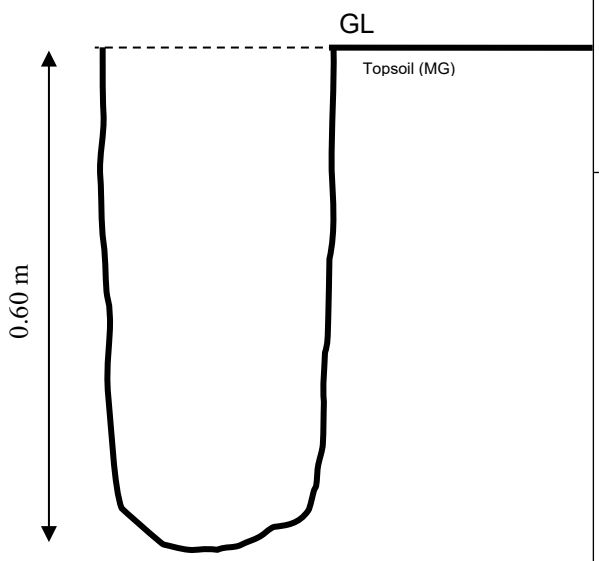
Plot Number: Plot 35

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional fragments of plastic and metal. Occasional rootlets (TOPSOIL).

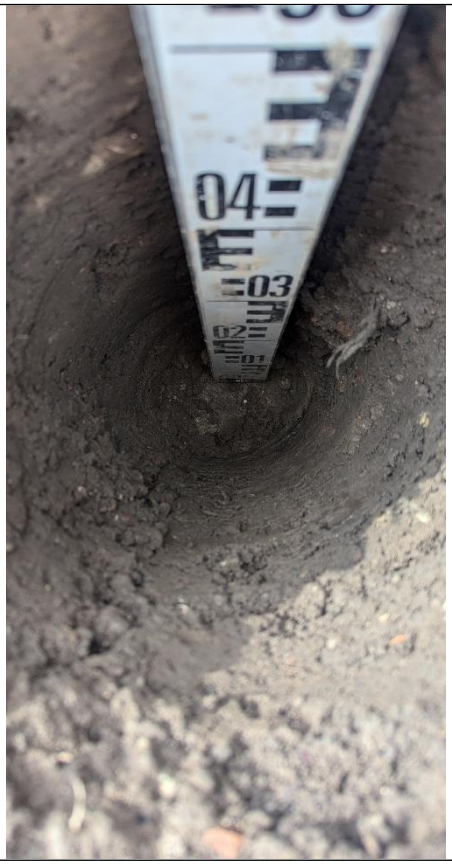
Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Groundwater encountered at 0.50 m.

Pictures:



Plot 35: Overview of excavation

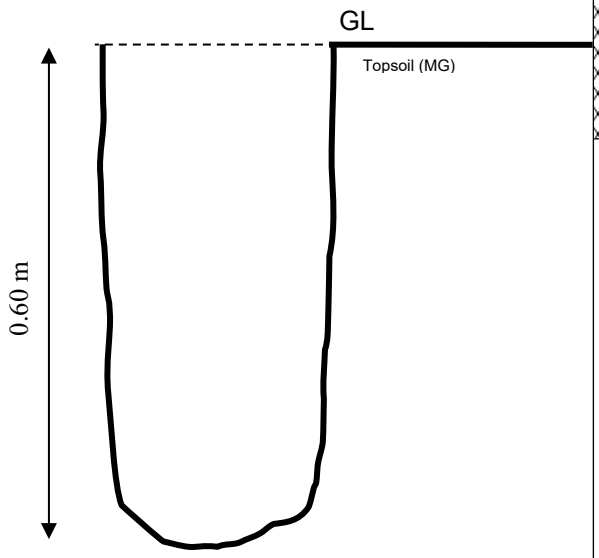


Plot 35: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 76
Date:	12/08/24	**Logged By:**	T Mackechnie
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 76: Overview of excavation

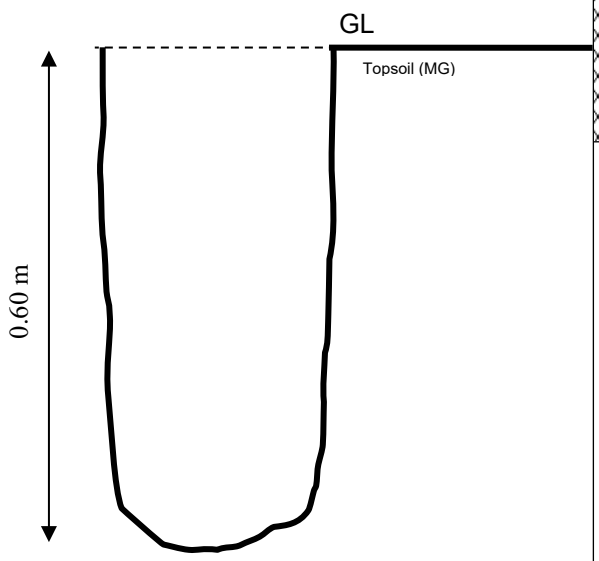


Plot 76: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 77
Date:	12/08/24	**Logged By:**	T Mackechnie
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 77: Overview of excavation

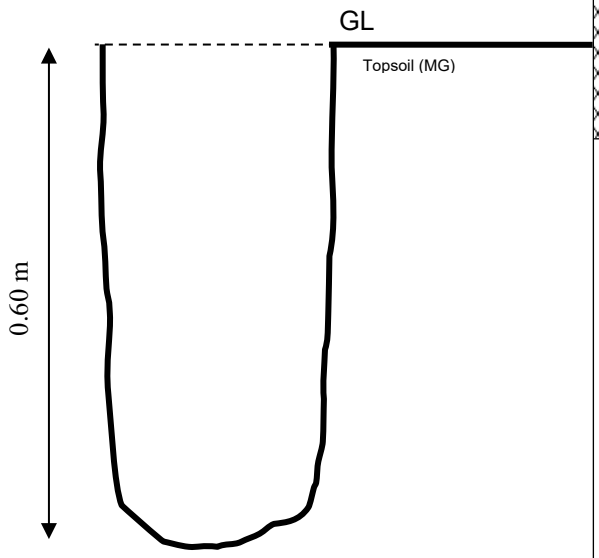


Plot 77: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 78
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 78: Overview of excavation



Plot 78: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

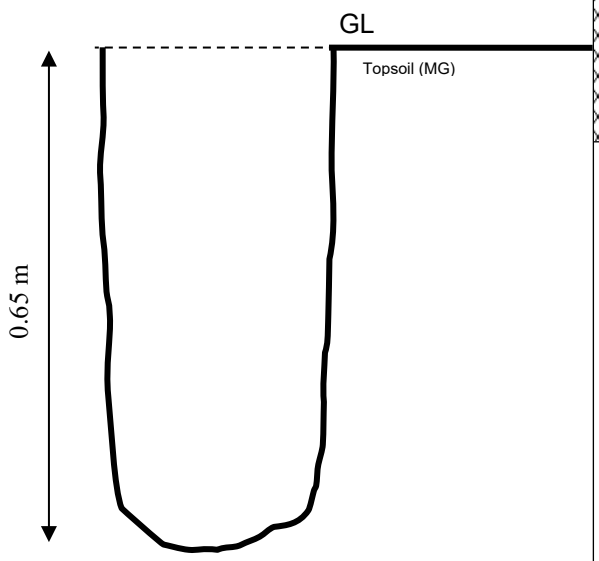
Plot Number: Plot 79

Logged By: T Mackechnie

Total Depth: 0.65 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 79: Overview of excavation

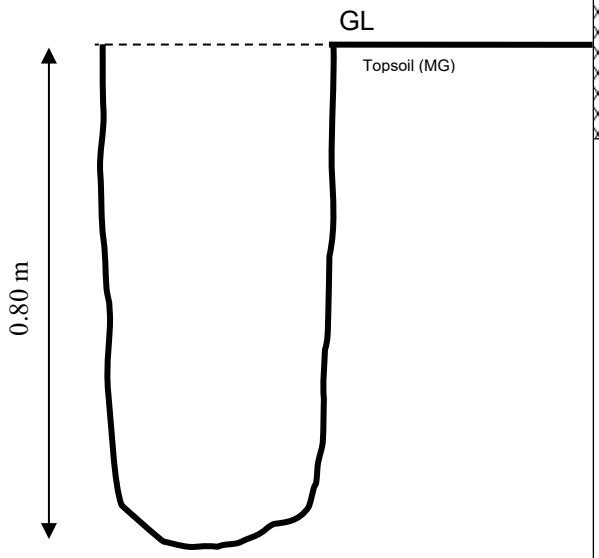


Plot 79: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 80
Date:	12/08/24	**Logged By:**	T Mackechnie
Project No.:	20066	**Total Depth:**	0.80 m
Client:	Seddon Construction Limited	**Remarks:**	Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.80	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.80 m.

Additional Information:
Hand dug pit terminated at 0.80 m due to encountering the membrane.

Pictures:



Plot 80: Overview of excavation

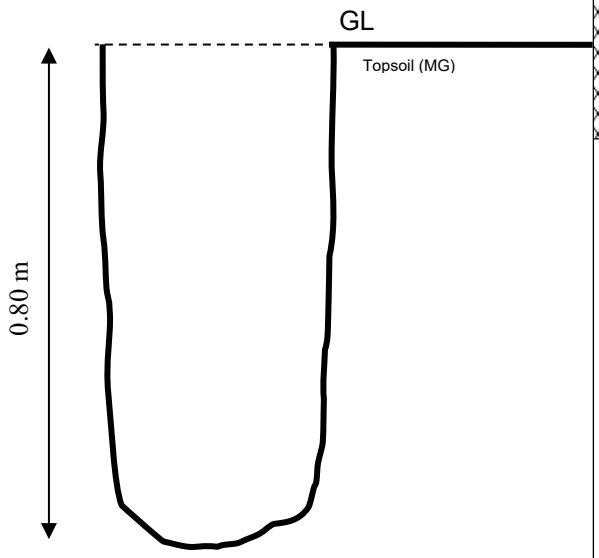


Plot 80: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 81
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.80 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.80 m.

Additional Information:
Hand dug pit terminated at 0.80 m due to encountering the membrane.

Pictures:



Plot 81: Overview of excavation



Plot 81: Internal View of excavation

ANNEX V

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 31** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 32** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

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Manchester M3 5BQ, United Kingdom

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On behalf of EDGE Consulting Engineers

12/08/2024

Date

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 34** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 35** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 76** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 77** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 78** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

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+44 (0) 161 834 1938

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 79** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 80** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 81** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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+44 (0) 161 834 1938

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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0008_PLOTS 45-50 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 45-50 FOR 20066 - NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	16/09/2024	Plots 45-50 Garden Validation Report	JC	AJB	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 3,681 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 21 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024, sample reference L4 and L6.

Elevated concentration of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they are below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result is not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024, as presented in Annex III. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considers that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils can be considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 12th August 2024 to excavate inspection pits by hand in plots 45 to 50.

EDGE can confirm that the required cover depth was in place with a total of between 600 mm and 700 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex IV.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 45 to 50 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex V.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.

On behalf of EDGE Consulting Engineers	16/09/2024 Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	PAH Profiling
Annex IV	Photographs and Hand Dug Pit Logs
Annex V	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

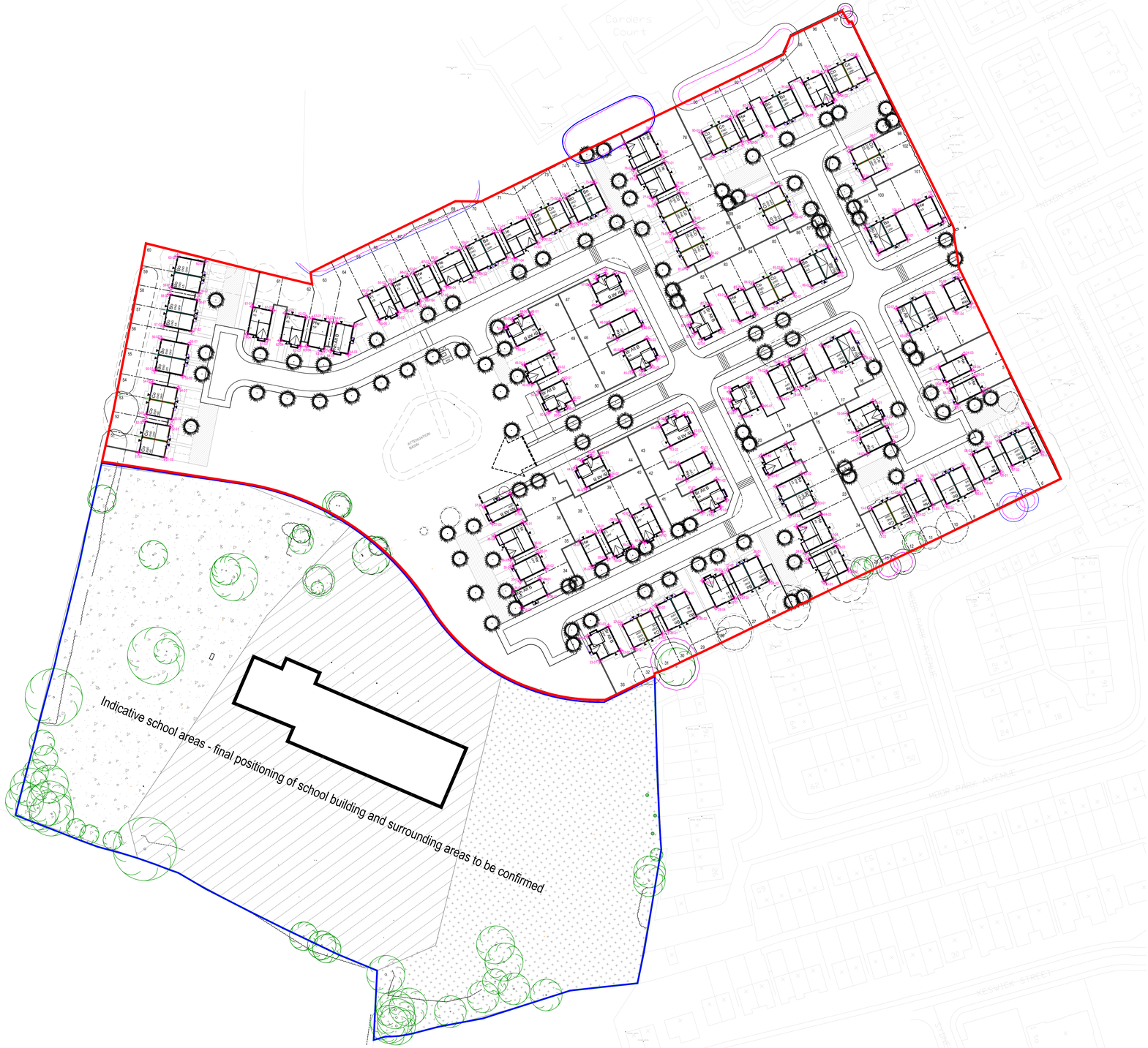
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
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Heaton	He	Detached	4	1232	7	8624
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KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
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- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T	UPDATED SCHEDULE
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
F	28.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06131
Issue Number: 1 **Date:** 04 July, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon Street
Project Ref: N/A
Order No: M-00023/000648
Date Samples Received: 20/06/24
Date Instructions Received: 21/06/24
Date Analysis Completed: 04/07/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
% Stones >10mm$_A$	3.5	<0.1	<0.1	6.2	1.9	3.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.17	7.05	6.85	8.94	8.84	8.87		pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	530	470	5300	3800	3400		mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	6	6	8	7	8		mg/kg	1	A-T-024s
Beryllium$_D$	1.0	0.7	0.6	1.1	1.1	1.0		mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	0.7	0.7	1.1		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	33	26	20	39	47	63		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	14	12	85	93	129		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	84	59	52	80	92	90		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	15	11	9	17	19	17		mg/kg	1	A-T-024s
Phosphorus$_D$	660	478	400	932	1010	1280		mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1	2	3	2		mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	48	21	18	80	100	109		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	51	38	134	155	210		mg/kg	5	A-T-024s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.19	0.04	0.02	0.65	0.28	0.87		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.04	<0.01	<0.01	0.13	0.09	0.10		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.62	0.08	0.06	1.72	0.68	1.95		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.42	0.33	0.31	2.91	1.83	3.67		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.30	0.36	0.32	2.35	1.54	2.92		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.60	0.47	0.40	2.86	1.83	3.54		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.74	0.25	0.21	1.21	0.77	1.47		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.58	0.16	0.14	0.99	0.67	1.27		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.43	0.39	0.36	2.62	1.70	3.41		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.19	0.05	<0.04	0.31	0.20	0.38		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	3.21	0.68	0.59	6.79	4.02	8.55		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.23	0.04	0.02	0.63	0.22	0.66		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.76	0.24	0.21	1.36	0.86	1.61		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.09	<0.03	<0.03	0.36	0.22	1.44		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.12	0.33	0.25	5.47	2.27	6.74		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.66	0.65	0.54	5.27	3.22	6.78		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	17.2	4.07	3.43	35.6	20.4	45.4		mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5		mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	71	15	21	104	177	239		mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	114	67	96	222	343	384		mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	185	82	117	326	520	623		mg/kg	5	A-T-007s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<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	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	1	<1	<1	2	3	3		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	3	<1	1	5	9	7		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	39	11	14	44	102	59		mg/kg	1	A-T-055s
Total Aliphatics$_A$	43	11	15	51	114	69		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	1	1	1		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	<1	<1	4	2	3		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	7	2	1	29	11	16		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	28	9	5	93	48	69		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	74	26	19	189	118	160		mg/kg	1	A-T-055s
Total Aromatics$_A$	111	38	25	316	180	250		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	154	48	40	368	294	319		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		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
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

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

TPH by method A-T-007:

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

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

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

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

Results greater than 12900µS/cm @ 25^0C / 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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/06131

Date Received: 21/06/2024 (am)

Project: Nixon Street

Cool Box Temperatures (°C): 20.2

Clients Project No: N/A

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6
Client Sample No	L1	L2	L3	L4	L5	L6
Client Sample ID/Depth						
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-007s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-019s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-028s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-031s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-050s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-072s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANALYTICAL TEST REPORT

Contract no:	**136022**
Contract name:	**Nixon Street Topsoil**
Client reference:	**AJB FBQ 210621**
Clients name:	**PP O'Connor**
Clients address:	**61 Mosley Road** **Trafford Park** **Manchester** **M17 1GJ**
Samples received:	**13 August 2024**
Analysis started:	**13 August 2024**
Analysis completed:	**21 August 2024**
Report issued:	**21 August 2024**

Key		
	U	**UKAS accredited test**
	M	**MCERTS & UKAS accredited test**
	$	**Test carried out by an approved subcontractor**
	I/S	**Insufficient sample to carry out test**
	N/S	**Sample not suitable for testing**
	NAD	**No Asbestos Detected**

Approved by: ANeasham-Bourn

Abbie Neasham-Bourn
Senior Reporting Administrator

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
Arsenic (total)	CE264	mg/kg As	3.6	3.9	3.3
Cadmium (total)	CE264	mg/kg Cd	<1.6	<1.6	<1.6
Chromium (total)	CE264	mg/kg Cr	67.1	98.2	88.1
Chromium (VI)	CE263	mg/kg CrVI	<0.04	<0.04	<0.04
Copper (total)	CE264	mg/kg Cu	16.2	20.2	20.9
Lead (total)	CE264	mg/kg Pb	29.3	28.9	23.1
Mercury (total)	CE264	mg/kg Hg	<0.7	<0.7	<0.7
Nickel (total)	CE264	mg/kg Ni	29.9	35.0	38.4
Selenium (total)	CE264	mg/kg Se	<3	<3	<3
Zinc (total)	CE264	mg/kg Zn	79.0	87.5	90.9
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	12.2	11.4	9.3
PAH					
Naphthalene	CE087	mg/kg	0.07	0.08	0.09
Acenaphthylene	CE087	mg/kg	<0.02	<0.02	<0.02
Acenaphthene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluorene	CE087	mg/kg	0.05	0.05	0.06
Phenanthrene	CE087	mg/kg	0.14	0.14	0.16
Anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Pyrene	CE087	mg/kg	0.02	0.03	0.02
Benzo(a)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Chrysene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(b)fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(a)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Indeno(123cd)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Dibenz(ah)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087	mg/kg	<0.02	<0.02	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	<0.34	<0.34	<0.34
TPH					
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	1.16	0.73	<0.6
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	3.11	1.97	1.36
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	2.05	<1.5	<1.5
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	26.63	9.18	5.80
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	13.35	2.75	<2
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<1	<1	<1
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<0.5	<0.5	<0.5
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<3	<3	<3
EPH Aliphatic (>C35-C44)	CE250	mg/kg	1	<0.5	<0.5
Subcontracted Analysis					
Asbestos (qualitative)	$	-	NAD	NAD	NAD

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOLIDS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE264	Arsenic (total)	Aqua Regia Extraction, ICPOES	Dry		1.8	mg/kg As
CE264	Cadmium (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cd
CE264	Chromium (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cr
CE263	Chromium (VI)	Discrete Analyser	Dry		0.04	mg/kg CrVI
CE264	Copper (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cu
CE264	Lead (total)	Aqua Regia Extraction, ICPOES	Dry		2.3	mg/kg Pb
CE264	Mercury (total)	Aqua Regia Extraction, ICPOES	Dry		0.7	mg/kg Hg
CE264	Nickel (total)	Aqua Regia Extraction, ICPOES	Dry		2.1	mg/kg Ni
CE264	Selenium (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Se
CE264	Zinc (total)	Aqua Regia Extraction, ICPOES	Dry		4	mg/kg Zn
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE087	Naphthalene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received		0.015	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received		0.014	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received		0.012	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received		0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received		0.025	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		0.6	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1.5	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		4.5	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		2	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		3	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Soil/Solid samples will be disposed of 4 weeks from initial receipt unless otherwise agreed.

Waters and leachate samples will be disposed of 2 weeks from report issue unless otherwise agreed.

DEFRA Licence for the introduction and movement within England of prohibited soil for chemical and physical analysis Licence No: 132693/469907-0

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

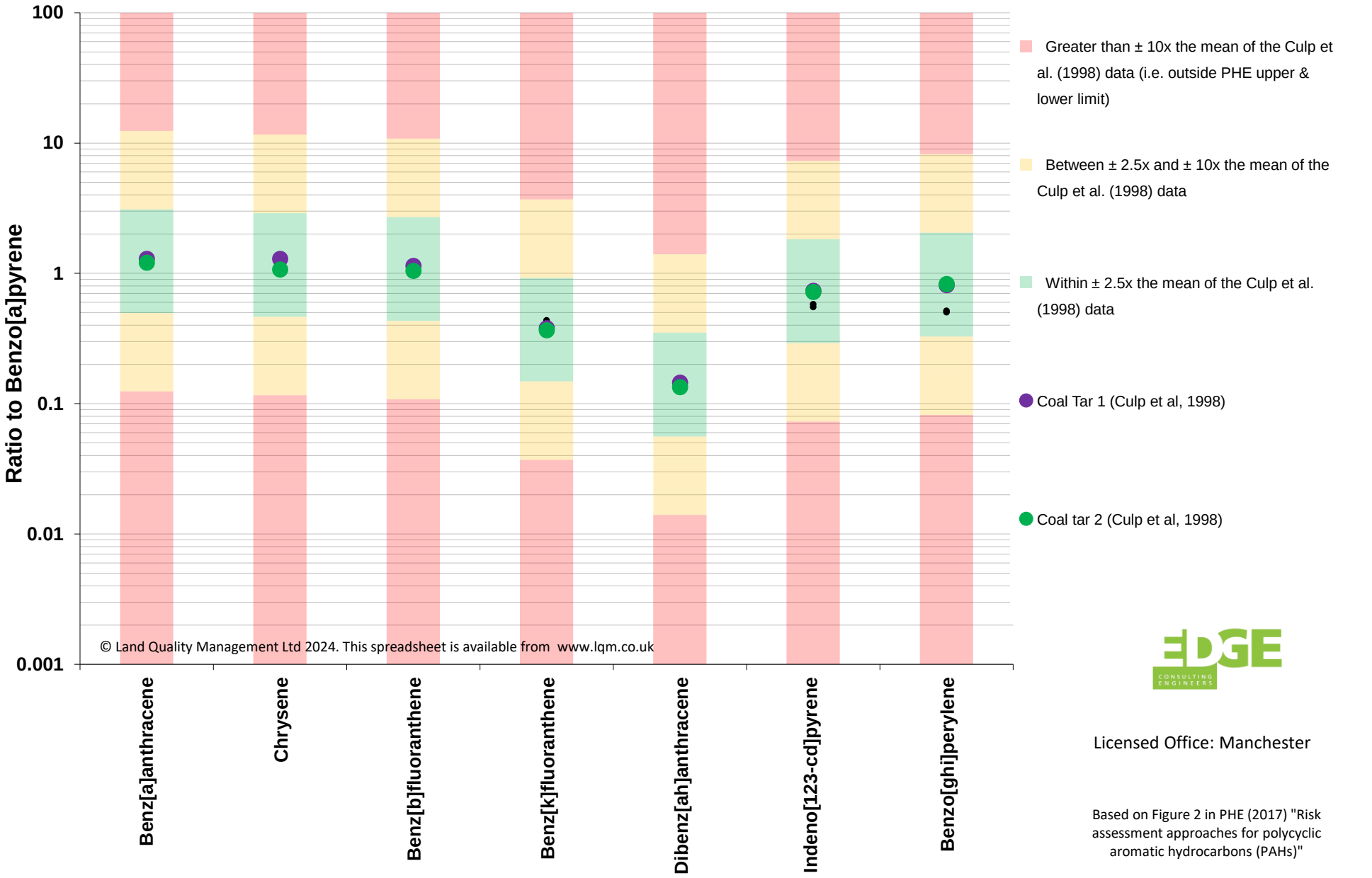
For soils and solids, analytical results are inclusive of stones, where applicable.

Moisture Content Calculated on a Wet Weight basis

ANNEX III

PAH Profiling

J:\20066 - Nixon Street, Rochdale\Technical\Geo-environmental\Laboratory\PAH profiling charts v1_TS



© Land Quality Management Ltd 2024. This spreadsheet is available from www.lqm.co.uk

Licensed Office: Manchester

Based on Figure 2 in PHE (2017) "Risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)"

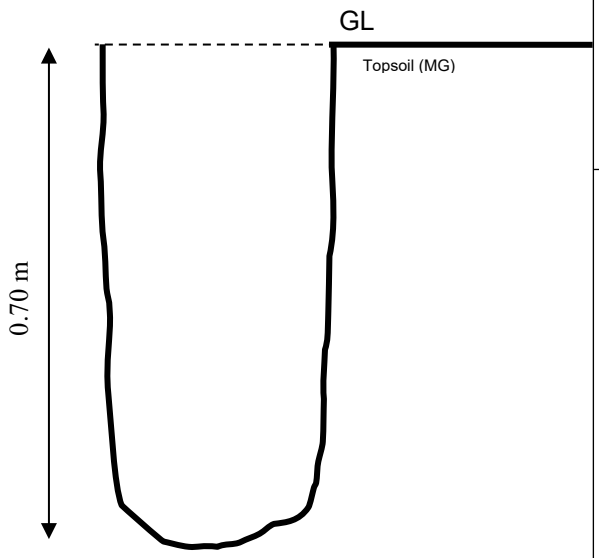
ANNEX IV

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 45
Date:	12/08/24	**Logged By:**	T Mackechnie
Project No.:	20066	**Total Depth:**	0.70 m
Client:	Seddon Construction Limited	**Remarks:**	Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.

Pictures:



Plot 45: Overview of excavation



Plot 45: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

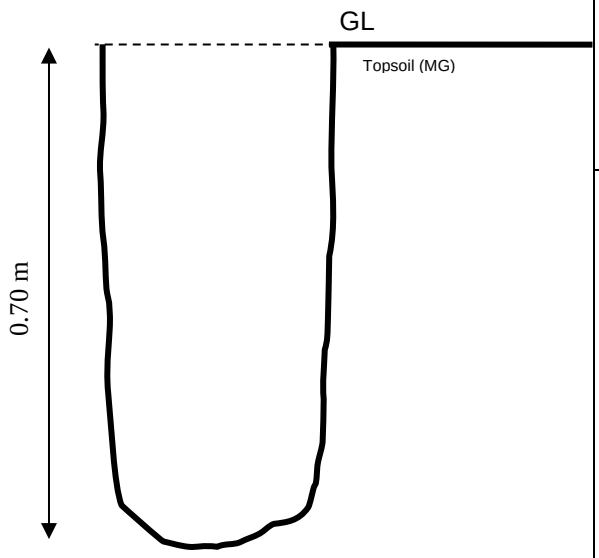
Plot Number: Plot 46

Logged By: T Mackechnie

Total Depth: 0.70 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly silty gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.

Pictures:



Plot 46: Overview of excavation



Plot 46: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

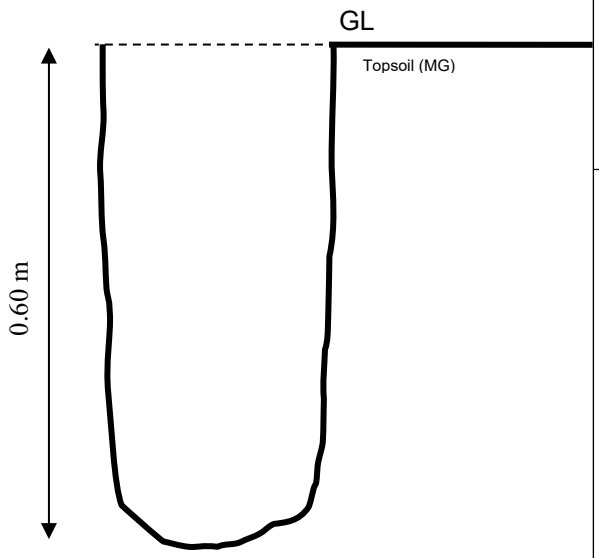
Plot Number: Plot 47

Logged By: T Mackechnie

Total Depth: 0.60 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 47: Overview of excavation

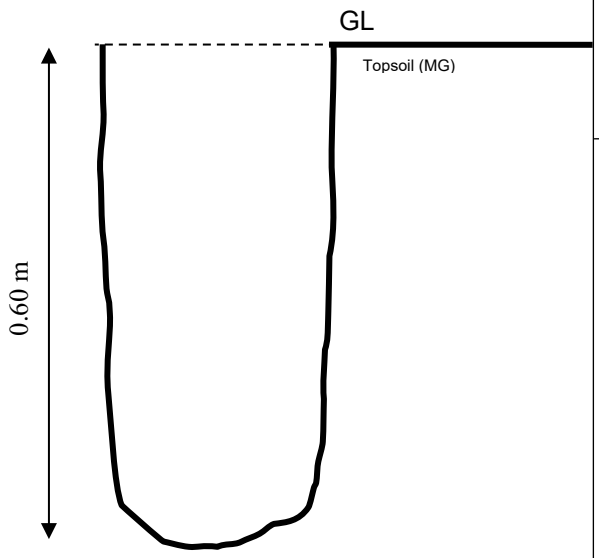


Plot 47: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 48
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 48: Overview of excavation

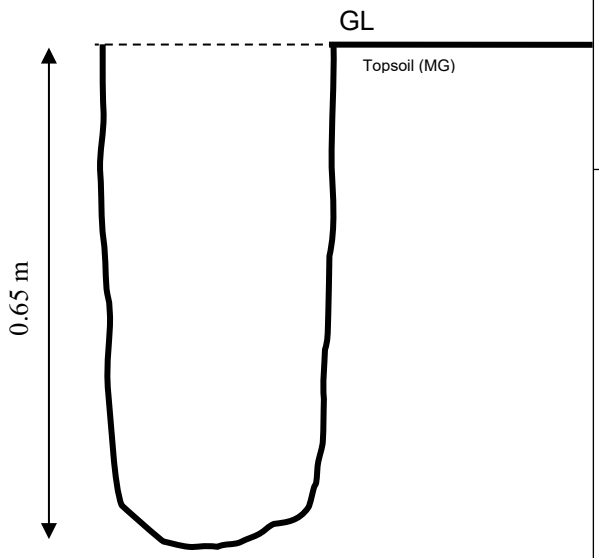


Plot 48: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 49
Date: 12/08/24	**Logged By:** T Mackechnie
Project No.: 20066	**Total Depth:** 0.65 m
Client: Seddon Construction Limited	**Remarks:** Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 49: Overview of excavation



Plot 49: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 12/08/24

Project No.: 20066

Client: Seddon Construction Limited

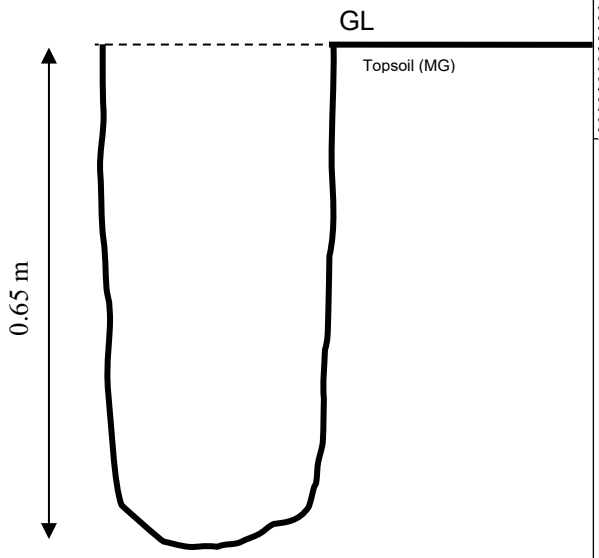
Plot Number: Plot 50

Logged By: T Mackechnie

Total Depth: 0.65 m

Remarks: Dry ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly silty slightly clayey gravelly fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 50: Overview of excavation



Plot 50: Internal View of excavation

ANNEX V

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 45** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 46** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 47** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



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12/08/2024

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 48** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 49** at Nixon Street, Rochdale, OL11 3AG.

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On behalf of EDGE Consulting Engineers

12/08/2024

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 50** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

12/08/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0009_PLOTS 61-75 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 61-75 FOR 20066 - NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	28/10/2024	Plots 61-75 Garden Validation Report	JC	AJB	JC

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 4,323 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 24 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1% SOM for a residential end use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024, sample reference L4 and L6.

Elevated concentration of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they are below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result is not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024, as presented in Annex III. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considers that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils can be considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with home grown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited site on the 18th October 2024 to excavate inspection pits by hand in plots 61 to 75.

EDGE can confirm that the required cover depth was in place with a total of between 600 mm and 800 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex IV.

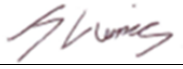
CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 61 to 75 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex V.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.



On behalf of EDGE Consulting Engineers

28/10/2024

Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	PAH Profiling
Annex IV	Photographs and Hand Dug Pit Logs
Annex V	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

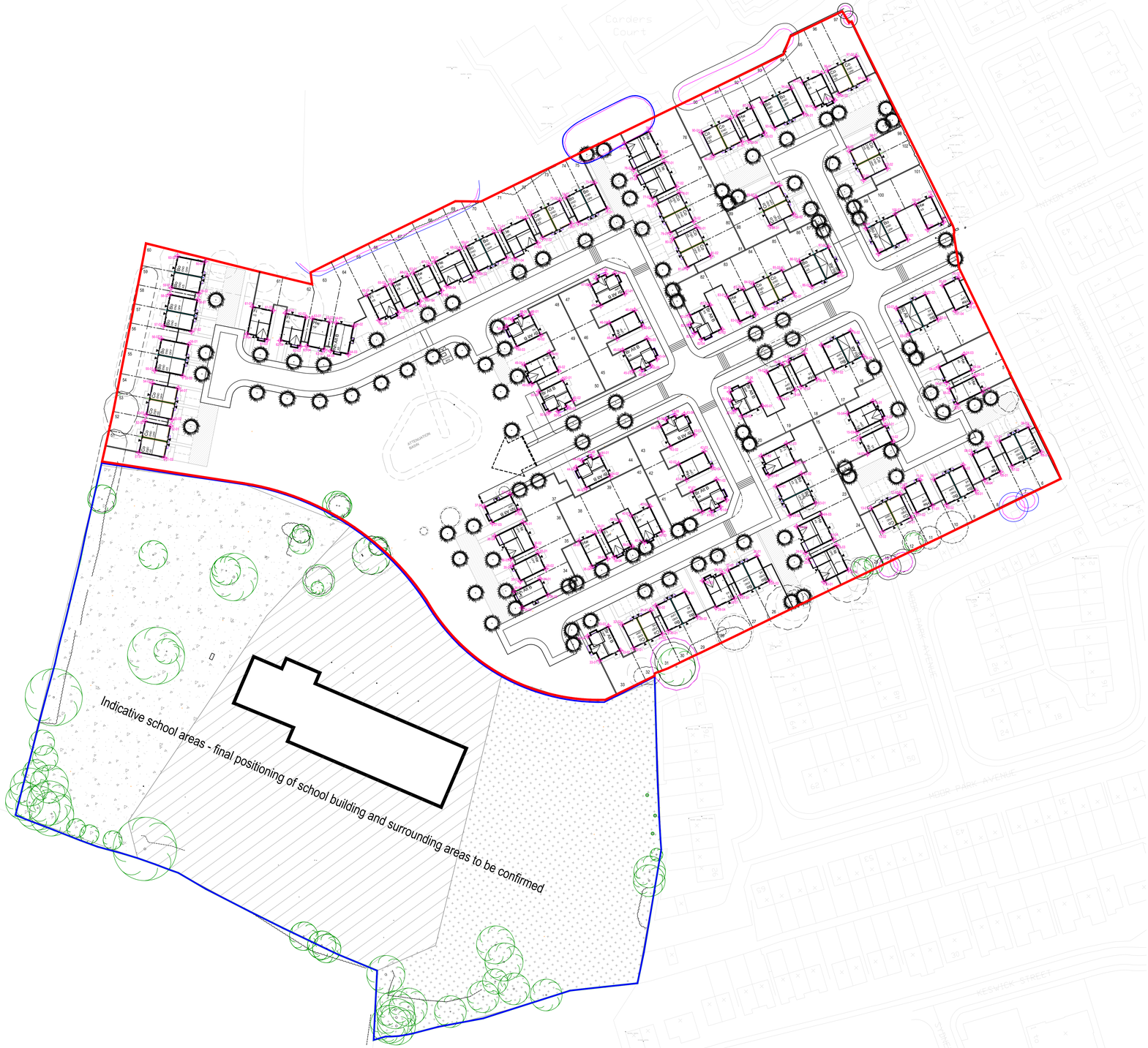
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

A0

PLANNING

general notes:
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Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	18.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T	UPDATED SCHEDULE
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48
F	28.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE ADJACENT PLOT
D	19.10.20	C.T	AMENDED PLOTS 76, 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH BAY SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW CRIB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 48 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

A0

PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06131
Issue Number: 1 **Date:** 04 July, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon Street
Project Ref: N/A
Order No: M-00023/000648
Date Samples Received: 20/06/24
Date Instructions Received: 21/06/24
Date Analysis Completed: 04/07/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
% Stones >10mm$_A$	3.5	<0.1	<0.1	6.2	1.9	3.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.17	7.05	6.85	8.94	8.84	8.87		pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	530	470	5300	3800	3400		mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	6	6	8	7	8		mg/kg	1	A-T-024s
Beryllium$_D$	1.0	0.7	0.6	1.1	1.1	1.0		mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	0.7	0.7	1.1		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	33	26	20	39	47	63		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	14	12	85	93	129		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	84	59	52	80	92	90		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	15	11	9	17	19	17		mg/kg	1	A-T-024s
Phosphorus$_D$	660	478	400	932	1010	1280		mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1	2	3	2		mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	48	21	18	80	100	109		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	51	38	134	155	210		mg/kg	5	A-T-024s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.19	0.04	0.02	0.65	0.28	0.87		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.04	<0.01	<0.01	0.13	0.09	0.10		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.62	0.08	0.06	1.72	0.68	1.95		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.42	0.33	0.31	2.91	1.83	3.67		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.30	0.36	0.32	2.35	1.54	2.92		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.60	0.47	0.40	2.86	1.83	3.54		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.74	0.25	0.21	1.21	0.77	1.47		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.58	0.16	0.14	0.99	0.67	1.27		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.43	0.39	0.36	2.62	1.70	3.41		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.19	0.05	<0.04	0.31	0.20	0.38		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	3.21	0.68	0.59	6.79	4.02	8.55		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.23	0.04	0.02	0.63	0.22	0.66		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.76	0.24	0.21	1.36	0.86	1.61		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.09	<0.03	<0.03	0.36	0.22	1.44		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.12	0.33	0.25	5.47	2.27	6.74		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.66	0.65	0.54	5.27	3.22	6.78		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	17.2	4.07	3.43	35.6	20.4	45.4		mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5		mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	71	15	21	104	177	239		mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	114	67	96	222	343	384		mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	185	82	117	326	520	623		mg/kg	5	A-T-007s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<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	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	1	<1	<1	2	3	3		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	3	<1	1	5	9	7		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	39	11	14	44	102	59		mg/kg	1	A-T-055s
Total Aliphatics$_A$	43	11	15	51	114	69		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	1	1	1		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	<1	<1	4	2	3		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	7	2	1	29	11	16		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	28	9	5	93	48	69		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	74	26	19	189	118	160		mg/kg	1	A-T-055s
Total Aromatics$_A$	111	38	25	316	180	250		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	154	48	40	368	294	319		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		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
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

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

TPH by method A-T-007:

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

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

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

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

Results greater than 12900µS/cm @ 25^0C / 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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/06131

Date Received: 21/06/2024 (am)

Project: Nixon Street

Cool Box Temperatures (°C): 20.2

Clients Project No: N/A

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6
Client Sample No	L1	L2	L3	L4	L5	L6
Client Sample ID/Depth						
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-007s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-019s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-028s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-031s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-050s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-072s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANALYTICAL TEST REPORT

Contract no:	**136022**
Contract name:	**Nixon Street Topsoil**
Client reference:	**AJB FBQ 210621**
Clients name:	**PP O'Connor**
Clients address:	**61 Mosley Road** **Trafford Park** **Manchester** **M17 1GJ**
Samples received:	**13 August 2024**
Analysis started:	**13 August 2024**
Analysis completed:	**21 August 2024**
Report issued:	**21 August 2024**

Key		
	U	**UKAS accredited test**
	M	**MCERTS & UKAS accredited test**
	$	**Test carried out by an approved subcontractor**
	I/S	**Insufficient sample to carry out test**
	N/S	**Sample not suitable for testing**
	NAD	**No Asbestos Detected**

Approved by: ANeasham-Bourn

Abbie Neasham-Bourn
Senior Reporting Administrator

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
Arsenic (total)	CE264	mg/kg As	3.6	3.9	3.3
Cadmium (total)	CE264	mg/kg Cd	<1.6	<1.6	<1.6
Chromium (total)	CE264	mg/kg Cr	67.1	98.2	88.1
Chromium (VI)	CE263	mg/kg CrVI	<0.04	<0.04	<0.04
Copper (total)	CE264	mg/kg Cu	16.2	20.2	20.9
Lead (total)	CE264	mg/kg Pb	29.3	28.9	23.1
Mercury (total)	CE264	mg/kg Hg	<0.7	<0.7	<0.7
Nickel (total)	CE264	mg/kg Ni	29.9	35.0	38.4
Selenium (total)	CE264	mg/kg Se	<3	<3	<3
Zinc (total)	CE264	mg/kg Zn	79.0	87.5	90.9
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	12.2	11.4	9.3
PAH					
Naphthalene	CE087	mg/kg	0.07	0.08	0.09
Acenaphthylene	CE087	mg/kg	<0.02	<0.02	<0.02
Acenaphthene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluorene	CE087	mg/kg	0.05	0.05	0.06
Phenanthrene	CE087	mg/kg	0.14	0.14	0.16
Anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Pyrene	CE087	mg/kg	0.02	0.03	0.02
Benzo(a)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Chrysene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(b)fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(a)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Indeno(123cd)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Dibenz(ah)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087	mg/kg	<0.02	<0.02	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	<0.34	<0.34	<0.34
TPH					
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	1.16	0.73	<0.6
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	3.11	1.97	1.36
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	2.05	<1.5	<1.5
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	26.63	9.18	5.80
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	13.35	2.75	<2
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<1	<1	<1
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<0.5	<0.5	<0.5
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<3	<3	<3
EPH Aliphatic (>C35-C44)	CE250	mg/kg	1	<0.5	<0.5
Subcontracted Analysis					
Asbestos (qualitative)	$	-	NAD	NAD	NAD

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOLIDS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE264	Arsenic (total)	Aqua Regia Extraction, ICPOES	Dry		1.8	mg/kg As
CE264	Cadmium (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cd
CE264	Chromium (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cr
CE263	Chromium (VI)	Discrete Analyser	Dry		0.04	mg/kg CrVI
CE264	Copper (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cu
CE264	Lead (total)	Aqua Regia Extraction, ICPOES	Dry		2.3	mg/kg Pb
CE264	Mercury (total)	Aqua Regia Extraction, ICPOES	Dry		0.7	mg/kg Hg
CE264	Nickel (total)	Aqua Regia Extraction, ICPOES	Dry		2.1	mg/kg Ni
CE264	Selenium (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Se
CE264	Zinc (total)	Aqua Regia Extraction, ICPOES	Dry		4	mg/kg Zn
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE087	Naphthalene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received		0.015	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received		0.014	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received		0.012	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received		0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received		0.025	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		0.6	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1.5	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		4.5	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		2	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		3	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Soil/Solid samples will be disposed of 4 weeks from initial receipt unless otherwise agreed.

Waters and leachate samples will be disposed of 2 weeks from report issue unless otherwise agreed.

DEFRA Licence for the introduction and movement within England of prohibited soil for chemical and physical analysis Licence No: 132693/469907-0

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

Moisture Content Calculated on a Wet Weight basis

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/09316
Issue Number: 1 **Date:** 03 October, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: M-00023/000815
Date Samples Received: 26/09/24
Date Instructions Received: 26/09/24
Date Analysis Completed: 03/10/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
% Stones >10mm$_A$	2.7	3.0	0.3					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.02	8.07	7.97					pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	600	650	770					mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	8	8	8					mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5	<0.5					mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	39	20	11					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	16	17	14					mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	64	71	62					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	14	14	11					mg/kg	1	A-T-024s
Phosphorus$_D$	434	474	484					mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	19	21	18					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	79	122	138					mg/kg	5	A-T-024s

Envirolab Job Number: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
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: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.11	0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.23	0.04	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.71	0.10	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.71	0.11	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.83	0.13	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.37	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.32	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.79	0.10	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.08	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	1.61	0.23	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.07	0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.37	0.06	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.89	0.15	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	1.53	0.21	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	8.66	1.15	<0.08					mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5					mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	34	22	<5					mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	92	92	24					mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	126	114	24					mg/kg	5	A-T-007s

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.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/09316

Date Received: 26/09/2024 (am)

Project: Nixon St

Cool Box Temperatures (°C): 16.4

Clients Project No:

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3
Client Sample No			
Client Sample ID/Depth	S1	S2	S3
Date Sampled	26/09/24	26/09/24	26/09/24
A-T-007s	30/09/2024	30/09/2024	30/09/2024
A-T-019s	30/09/2024	30/09/2024	30/09/2024
A-T-024s	02/10/2024	02/10/2024	02/10/2024
A-T-028s	01/10/2024	01/10/2024	01/10/2024
A-T-031s	03/10/2024	03/10/2024	03/10/2024
A-T-044	01/10/2024	01/10/2024	01/10/2024
A-T-045	30/09/2024	30/09/2024	30/09/2024
A-T-050s	02/10/2024	02/10/2024	02/10/2024
A-T-072s	02/10/2024	02/10/2024	02/10/2024

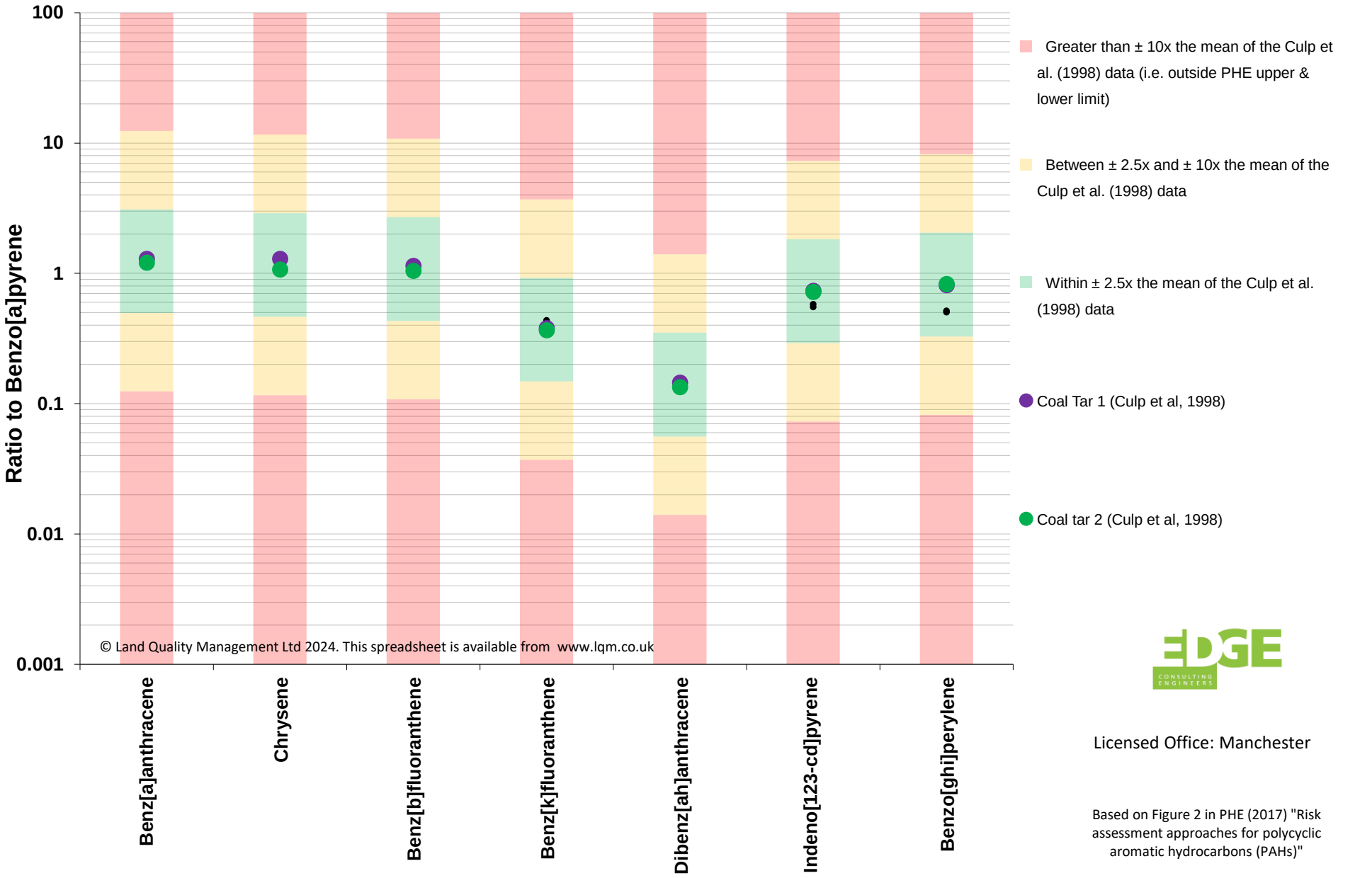
The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

ANNEX III

PAH Profiling

J:\20066 - Nixon Street, Rochdale\Technical\Geo-environmental\Laboratory\PAH profiling charts v1_TS



© Land Quality Management Ltd 2024. This spreadsheet is available from www.lqm.co.uk

Licensed Office: Manchester

Based on Figure 2 in PHE (2017) "Risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)"

ANNEX IV

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

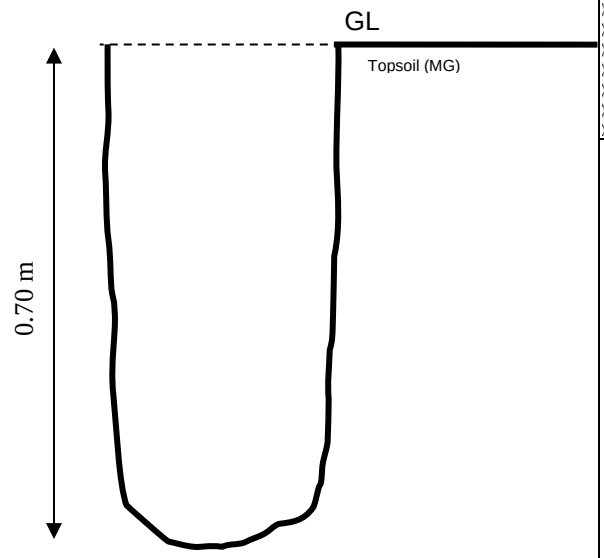
Plot Number: Plot 61

Logged By: J Cummins

Total Depth: 0.70 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.
Perched water encountered at base.

Pictures:



Plot 61: Overview of excavation



Plot 61: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

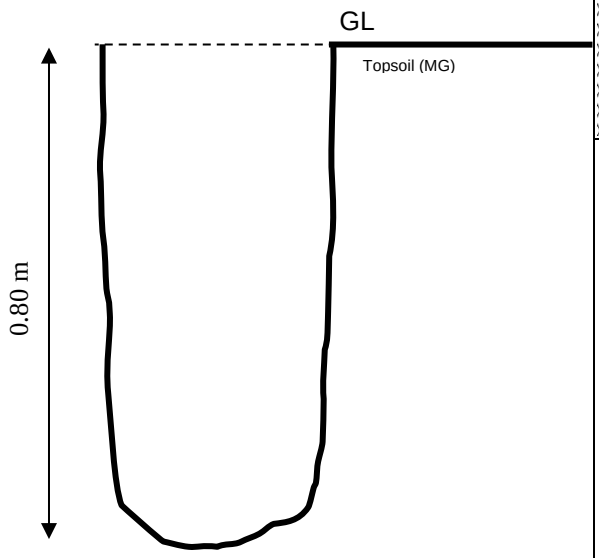
Plot Number: Plot 62

Logged By: J Cummins

Total Depth: 0.80 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.80	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.80 m.

Additional Information:
Hand dug pit terminated at 0.80 m due to encountering the membrane.
Perched water encountered at base.

Pictures:



Plot 62: Overview of excavation



Plot 62: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

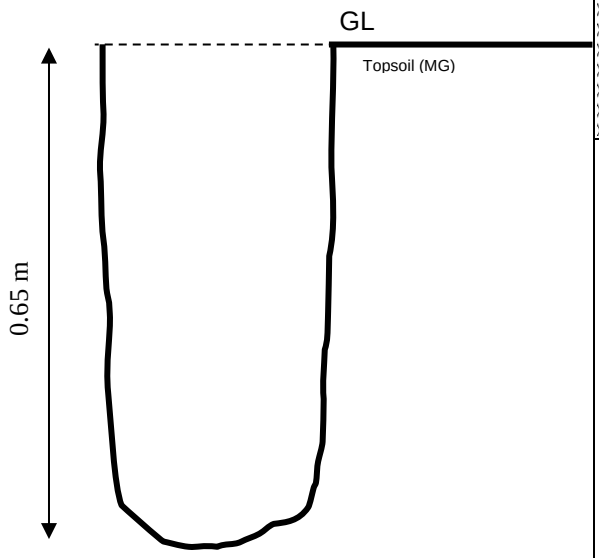
Plot Number: Plot 63

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.
Perched water encountered at base.

Pictures:



Plot 63: Overview of excavation



Plot 63: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

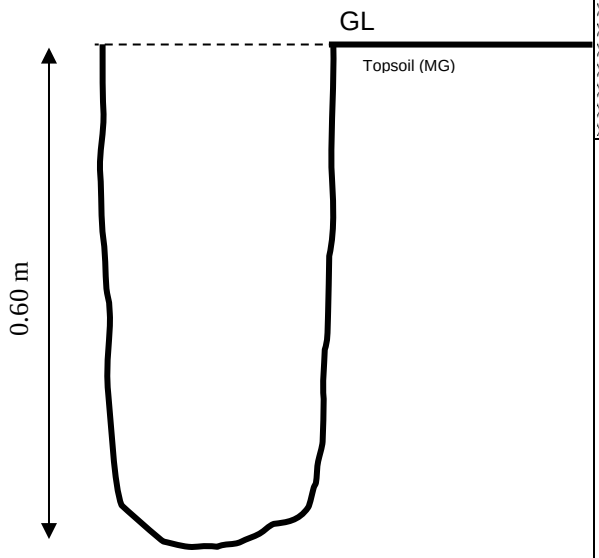
Plot Number: Plot 64

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Perched water encountered at base.

Pictures:



Plot 64: Overview of excavation



Plot 64: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

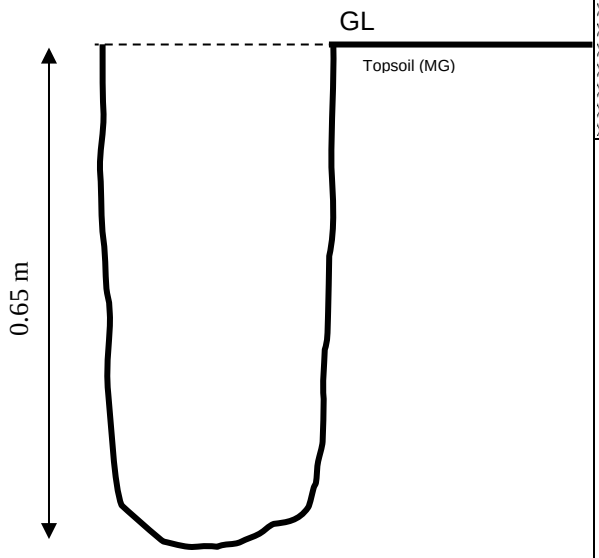
Plot Number: Plot 65

Logged By: J Cummins

Total Depth: 0.65 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 65: Overview of excavation

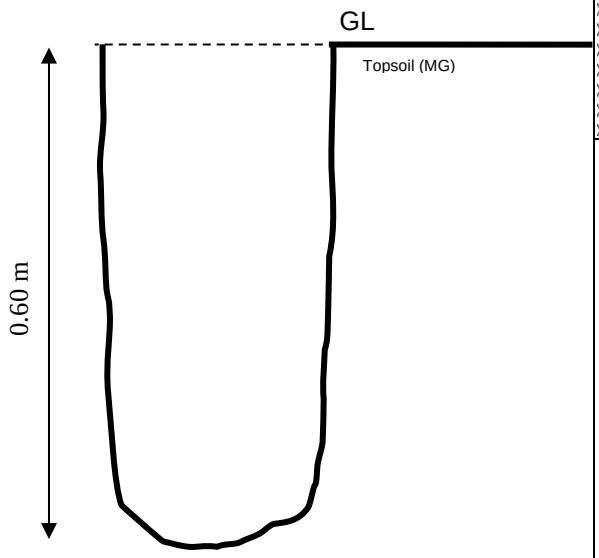


Plot 65: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 66
Date:	18/10/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 66: Overview of excavation



Plot 66: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

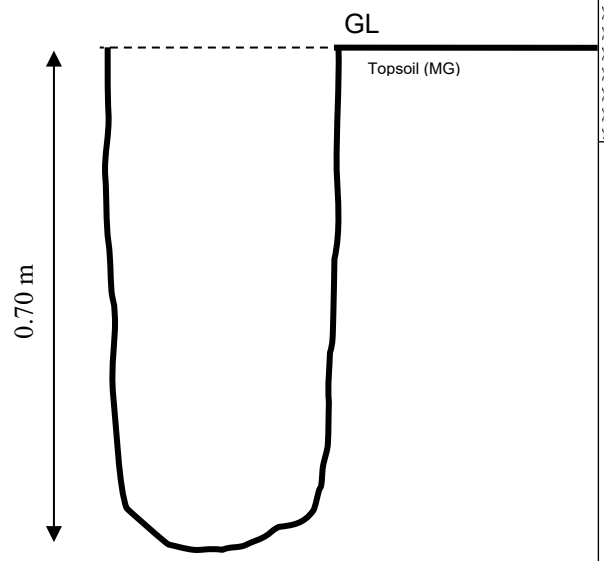
Plot Number: Plot 67

Logged By: J Cummins

Total Depth: 0.70 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.

Pictures:



Plot 67: Overview of excavation



Plot 67: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

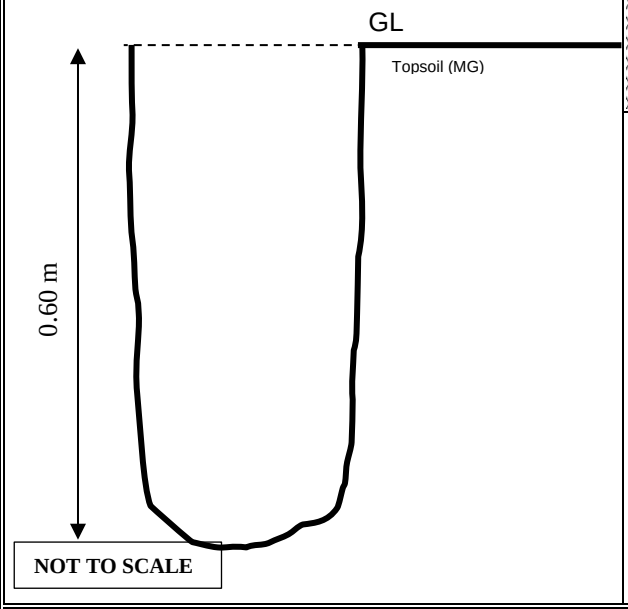
Plot Number: Plot 68

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick, wood and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 68: Overview of excavation



Plot 68: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

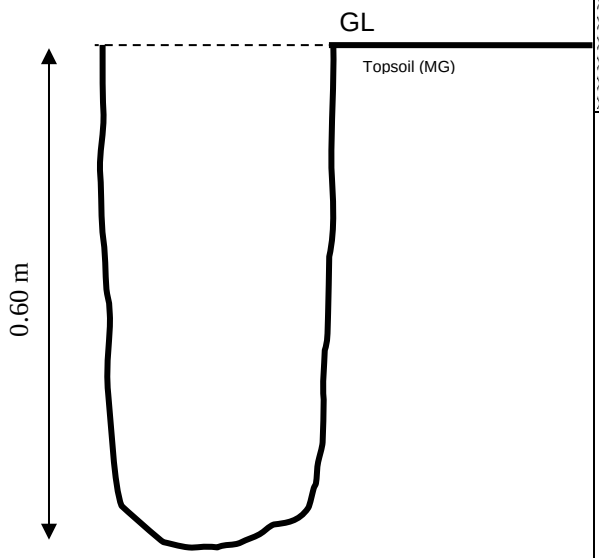
Plot Number: Plot 69

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.
Perched water encountered at base.

Pictures:



Plot 69: Overview of excavation

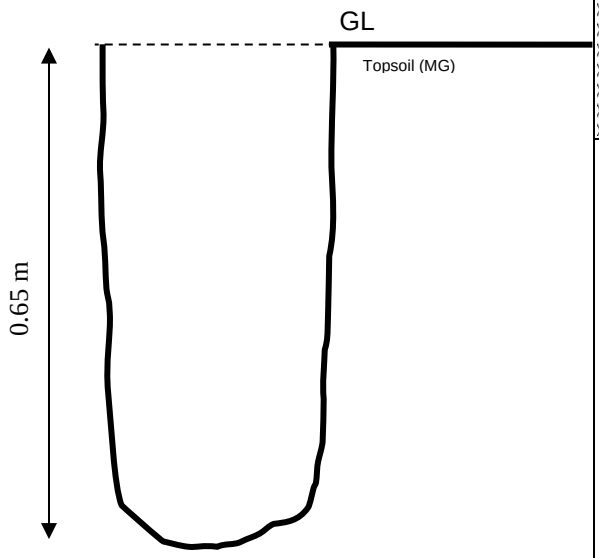


Plot 69: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 70
Date:	18/10/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.65 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.65	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.65 m.

Additional Information:
Hand dug pit terminated at 0.65 m due to encountering the membrane.

Pictures:



Plot 70: Overview of excavation

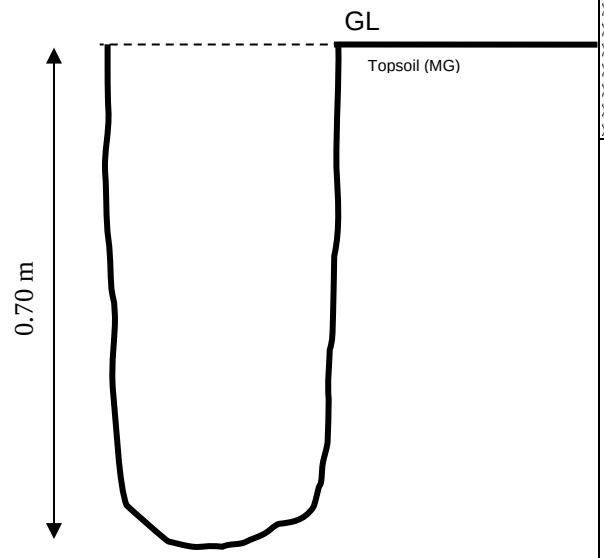


Plot 70: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 71
Date:	18/10/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.70 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.

Pictures:



Plot 71: Overview of excavation



Plot 71: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

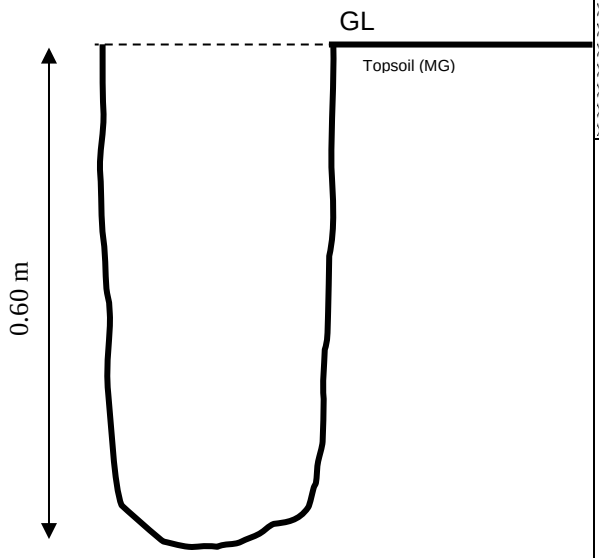
Plot Number: Plot 72

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 72: Overview of excavation

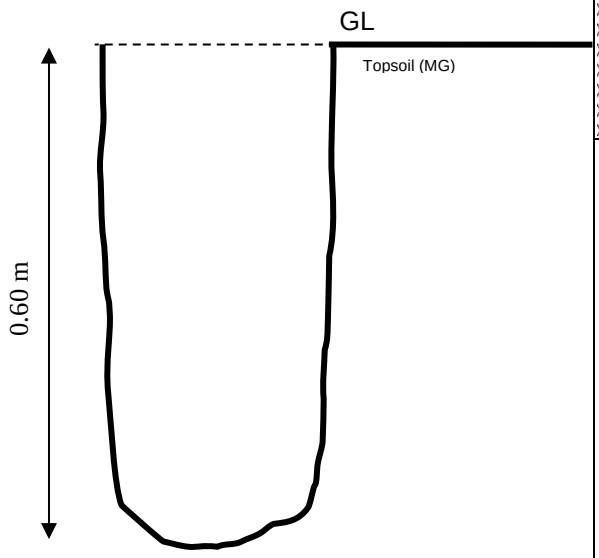


Plot 72: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 73
Date:	18/10/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 73: Overview of excavation



Plot 73: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 18/10/24

Project No.: 20066

Client: Seddon Construction Limited

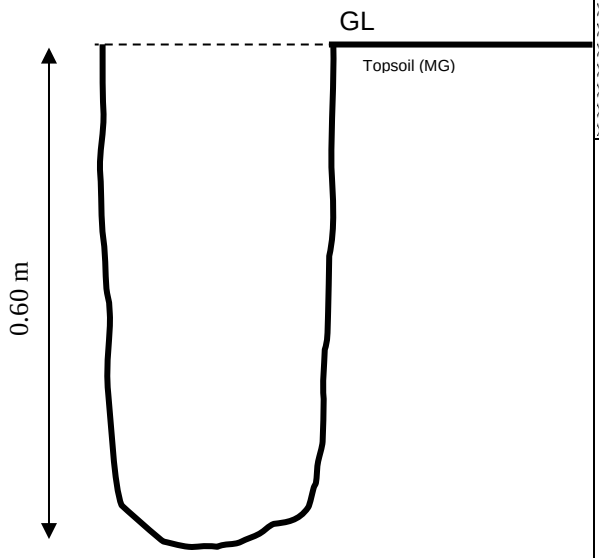
Plot Number: Plot 74

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 74: Overview of excavation

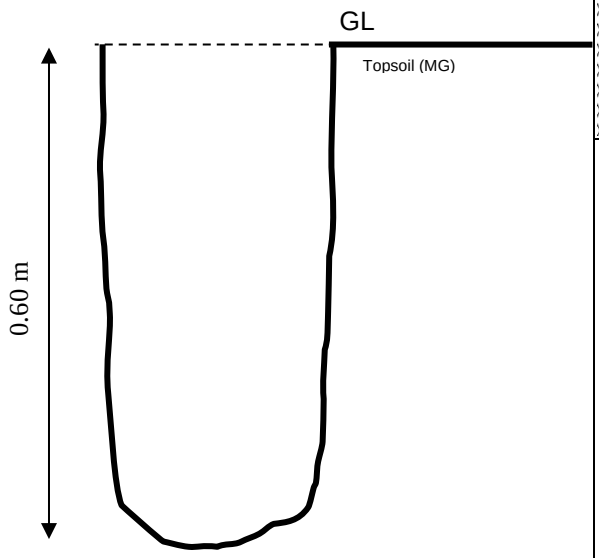


Plot 74: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 75
Date:	18/10/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 75: Overview of excavation



Plot 75: Internal View of excavation

ANNEX V

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 61** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 62** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 63** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 64** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 65** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 66** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 67** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 68** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 69** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 70** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 71** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 72** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 73** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 74** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 75** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

18/10/2024

Date

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3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0010_PLOTS 51-60 VERI [P01]

VERIFICATION REPORT FOR GARDENS AT PLOTS 51-60 FOR 20066 - NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Ltd.
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
01	10/01/2025	Plots 51-60 Garden Validation Report	TM	JC	AJB

INTRODUCTION

Background

Alliance Design UK Ltd t/a EDGE Consulting Engineers ("EDGE") has been appointed by Seddon Construction Ltd to validate the remediation works for gardens at a new residential development located at Nixon Street, Rochdale.

Seddon Construction Ltd are currently redeveloping the site on behalf of Hive Homes. Planning permission (Ref: 20/01429/FUL) has been granted to redevelop the site with 102 No. residential units with associated gardens, access roads and landscaped areas as shown on MCK Associates Limited Drawing No 18-109 0001 Rev O in Annex I.

Redstart Northwest Ltd have undertaken the enabling phase of remediation works at the site as detailed in their validation report (Redstart Remediation & Enabling Works Validation Report March 2023 Report Ref 348.08.01).

The construction phase of the remediation works are currently being undertaken by Seddon Construction Ltd including the installation of clean soil cover in gardens as described in the approved EDGE Consulting Engineers Report Ref: 20066-EDGE-XX-XX-RP-G-0001_DET REM STRAT[P05], 'Detailed Remediation Strategy Report for 20066 – Nixon Street, Rochdale' dated April 2022.

EDGE has been appointed by Seddon Construction Ltd to act as the third-party geo-environmental consultant overseeing the enabling and construction phases of the remediation works.

Clean soil cover is required in gardens and landscaping areas at the site, as the various phases of site investigation undertaken have identified localised elevated concentrations of heavy metals, PAH and TPH associated with the made ground beneath the site. Therefore, it was proposed to place clean soil cover in all landscaping and garden areas to protect human health.

Clean cover layers should comprise a minimum thickness of 600 mm in garden areas, reduced to 300 mm in landscaped areas. Clean cover systems should be placed on a geotextile marker layer.

Planning condition 22 requires the site to be redeveloped in accordance with the Detailed Remediation Strategy and the submission of a Verification Report detailing the works undertaken. This plot-specific report can be submitted to validate the clean soil cover in said plots as part of construction phase verification documentation.

IMPORTED TOPSOIL AND LABORATORY TESTING

Topsoil

Approximately 4,819 m^3 of topsoil has been imported to date to the site by PP O'Connor sourced from a greenfield site at Byrchall School playing fields. As per Section 5.8.2 of the remediation strategy (requiring 1 sample to be tested per 200 m^3 from a greenfield source), 27 samples of the topsoil have been tested for a general suite of analysis.

At a Tier 1 stage the long-term human health toxicity of the soil has been assessed with reference to the LQM/CIEH S4ULs for Human Health Risk Assessment, 2015 for a residential with gardens end use. Where S4ULs are absent (i.e., for lead) C4SLs published by CL:AIRE have been utilised.

The results recorded no elevated concentrations of inorganic contamination when compared against the most conservative assessment criteria (1 % SOM for a residential end-use with plant uptake).

However, exceedances of three PAH compounds were recorded in the samples taken on the 20th June 2024, sample reference L4 and L6.

Elevated concentrations of benzo(a)pyrene were recorded with values of 2.35 and 2.92 mg/kg compared to the S4UL value of 2.20 mg/kg. However, they are below the C4SL value for benzo(a)pyrene which is 5.00 mg/kg and therefore this result is not considered significant.

In addition to the above, elevated concentrations of benzo(b)fluoranthene (2.86 and 3.54 mg/kg) and dibenzo(ah)anthracene (0.31 and 0.38 mg/kg) were recorded against their respective S4ULs of 2.60 mg/kg and 0.24 mg/kg.

Using benzo(a)pyrene as a surrogate marker for carcinogenic PAHs as per Health Protection Agency and CL:AIRE guidelines, EDGE has undertaken an assessment of the data from the six samples taken on the 20th June 2024, as presented in Annex III. All the data points that could be used to calculate ratios fell within the upper or lower limits. Based on this distribution of data, EDGE considers that benzo(a)pyrene can be used as a surrogate marker for carcinogenic PAHs (including benzo(a)anthracene, benzo(b)fluoranthene and dibenzo(ah)anthracene, and the C4SL criteria is suitable for this dataset.

Given that the concentrations of benzo(a)pyrene in both samples (L4 and L6) are below the C4SL value, the soils can be considered suitable for use within the capping layer in the gardens at the development.

In addition, two samples of the topsoil have been tested for BS3882 (Specification for topsoil) which shows that the topsoil is compliant for use as multi-purpose topsoil.

Based on the above analyses, the topsoil is considered suitable for use in residential gardens with homegrown produce. Copies of the topsoil test results are presented in Annex II.

SITE VISIT

EDGE visited the site on the 4th of December 2024 to excavate inspection pits by hand in plots 51 to 60.

EDGE can confirm that the required cover depth was in place with a total of between 600 mm and 700 mm clean topsoil cover in all of the plots placed on a geotextile marker layer.

A selection of photographs is presented in Annex IV.

CONCLUSIONS

In accordance with the requirements set out in the remediation strategy, EDGE has undertaken the inspection and validation of the clean soil cover at Plots 51 to 60 at the new Hive Homes development located at Nixon Street, Rochdale.

All of the plots have been installed with the minimum cover of 600 mm clean imported topsoil which has been proven to be chemically suitable for use and placed on a geotextile marker layer.

The individual plot validation certificates are presented in Annex V.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.

On behalf of EDGE Consulting Engineers	10/01/2025 Date

Annex I	Drawings
Annex II	Laboratory Chemical Test Results (Topsoil)
Annex III	PAH Profiling
Annex IV	Photographs and Hand-Dug Pit Logs
Annex V	Plot Validation Certificates

ANNEX I

Drawings

general notes:
do not scale the drawing.
all dimensions to be checked on site prior to commencement of work and any discrepancy shall be immediately reported and resolved prior to work commencing.
this drawing is to be read in conjunction with all relevant drawings and specifications relating to the job whether or not indicated on the drawing.
copyright reserved to mck associates ltd. and this drawing may not be used or reproduced without prior written consent.

Schedule of Accommodation

Name	Codes	Typology	Beds	sqft	Total	Total Sqft
Cornbrook End	Co End	Semi	3	762	24	18288
Bowker End	Bo End	Semi	3	837	26	21762
Bowker Alternative	Bo Alt	Semi	3	837	4	3348
Hollinwood	Hw	Detached	3	890	18	16020
Newhey Alternative Bay	Nh Alt B	Detached	3	939	3	2817
Firswood	Fi	Detached	4	1112	10	11120
Brooklands Alternative Bay	Br Alt B	Detached	4	1201	10	12010
Heaton	He	Detached	4	1232	7	8624
				Total	**102**	**93989**

KEY

- Land Ownership
- Indicative planting
- Existing trees to be removed
- Denotes shared drives
- Denotes raised tables
- Category 'B' Tree/Group
- **Root Protection Areas - RPAs**

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

- Denotes Soft play
- Denotes Hard play
- Denotes potential build area
- Denotes future development

ATTENUATION BASIN

Indicative school areas - final positioning of school building and surrounding areas to be confirmed

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
O	24.10.23	W.L	Red edge updated to legal boundary at north side
N	18.10.22	W.L	PLOT 5 SUB-STATION REMOVED & TREES TIDIED UP
M	16.10.22	W.L	SUB-STATION & ATTENUATION BASIN ADDED
L	30.03.22	A.T.	UPDATED SCHEDULE.
K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
I	22.12.21	W.L	PLOTS 26 - 30 RE-ARRANGED
H	21.04.21	C.T	REMOVED GARAGE FOR PLOT 73
G	16.12.20	W.L	REMOVED GARAGE FOR PLOTS 28, 40, 41, 43, 45, 47 & 48.
F	26.10.20	C.T	UPDATED LOCATION OF INDICATIVE SCHOOL AREA
E	27.10.20	C.T	AMENDED PLOT 50 AMENDED THE RED EDGE BOUNDARY CONNECTION WITH THE SCHOOL PLOT
D	19.10.20	C.T	AMENDED PLOTS 74 - 81 TO TAKE ACCOUNT OF TREES ALL OTHER MARKED FOR REMOVAL AMENDED FOLLOWING PRE APP COMMENTS FROM PLANNER
C	07.10.20	W.L	NEW SCHEDULE TYPE. SCHEDULE UPDATED WITH MH SQFT
B	29.9.20	W.L	LAYOUT UPDATED WITH NEW ORB NAMES. SCHEDULE UPDATED
A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
burnaby villa ■ 46 watling street road ■ fulwood ■ preston ■ pr2 8bp
tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

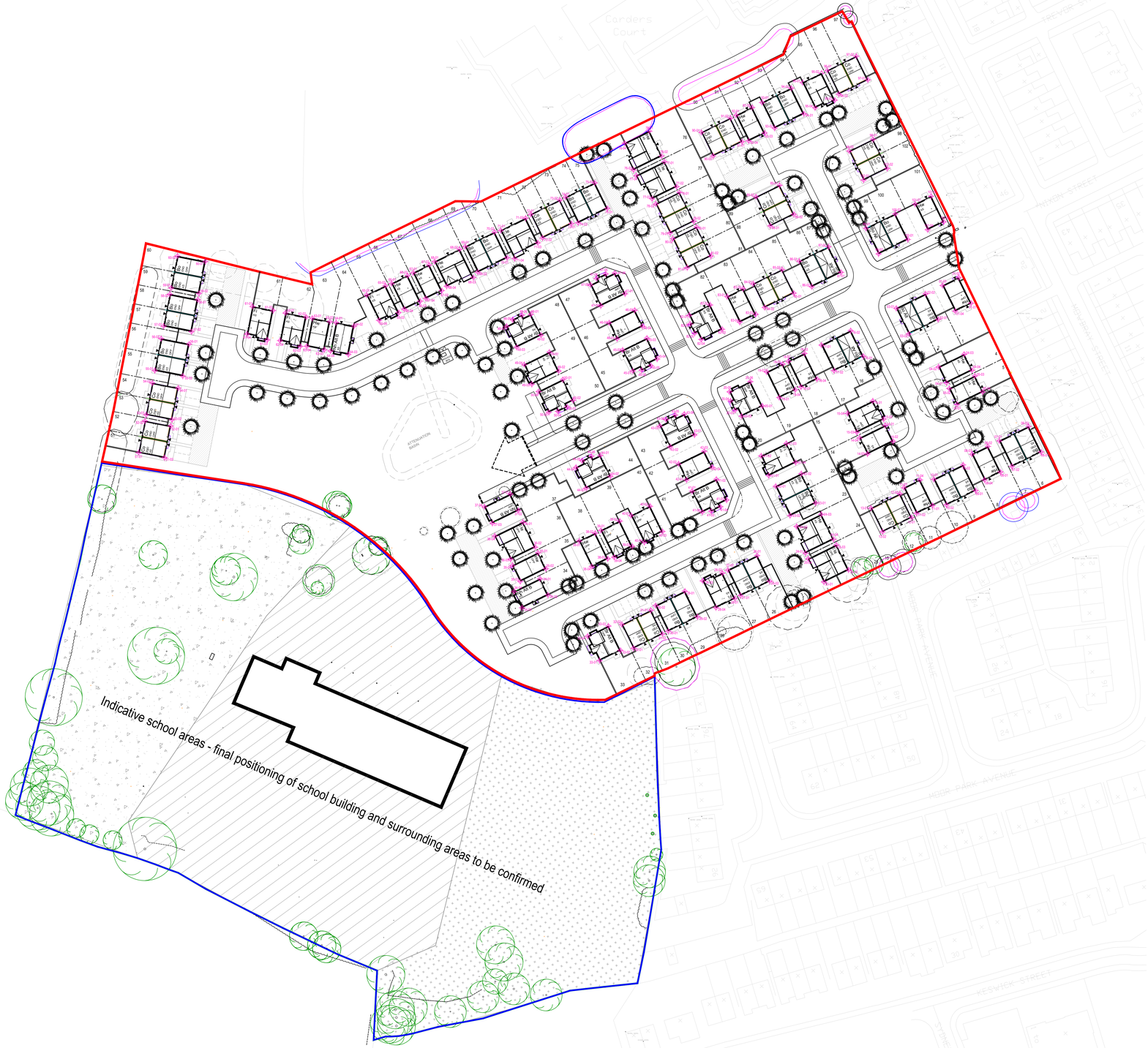
Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	O	

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PLANNING

general notes:
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- Denotes Hard play
- Denotes potential build area

0m 10m 20m 30m 40m 50m 60m 70m 80m
1 : 500

Rev.	Date	By	Description
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K	04.01.22	M.H.R	TREES AMENDED TO ALLOW FOR VISIBILITY AS PER COMMENTS
J	22.12.21	W.L	PLOTS 65 - 70 RE-ARRANGED
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A	10.3.20	W.L	AMENDED RED AND BLUE EDGE. A & B ADDED TO ROAD ENDS

Client:
HIVE HOMES

mck associates limited
architecture ▮ building surveying ▮ urban design
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tel: 01772 774510 fax: 01772 774511 email mck@mckassociates.co.uk

Project:
NIXON STREET
ROCHDALE

Drawing Title:
PROPOSED SITE LAYOUT

Drawn:	Checked:	Scale:	Date:
ELC	PGM	1:500	18/12/2019
Job No:	Drawing No:	Rev:	
18-109	0001	N	

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PLANNING

ANNEX II

Laboratory Chemical Test Results
(Topsoil)

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT
SUPPLEMENT TO TEST REPORT 23/03733/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 23/03733
Issue Number: 2 **Date:** 09 May, 2023

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Byrchall School
Project Ref: Not specified
Order No: M-C0531/000006
Date Samples Received: 19/04/23
Date Instructions Received: 20/04/23
Date Analysis Completed: 09/05/23

Approved by:



Sophie France
Client Service Manager

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Arsenic$_{D}^{M\#}$	12							mg/kg	1	A-T-024s
Cadmium$_{D}^{M\#}$	0.6							mg/kg	0.5	A-T-024s
Copper$_{D}^{M\#}$	37							mg/kg	1	A-T-024s
Chromium$_{D}^{M\#}$	19							mg/kg	1	A-T-024s
Lead$_{D}^{M\#}$	51							mg/kg	1	A-T-024s
Mercury$_{D}$	<0.17							mg/kg	0.17	A-T-024s
Nickel$_{D}^{M\#}$	16							mg/kg	1	A-T-024s
Selenium$_{D}^{M\#}$	<1							mg/kg	1	A-T-024s
Zinc$_{D}^{M\#}$	58							mg/kg	5	A-T-024s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.02							mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.12							mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.16							mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.19							mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.10							mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07							mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.18							mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	<0.04							mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.25							mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01							mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.11							mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03							mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.10							mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24							mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	1.47							mg/kg	0.01	A-T-019s

Envirolab Job Number: 23/03733

Client Project Name: Byrchall School

Client Project Ref: Not specified

Lab Sample ID	23/03733/1							Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Soil Sample									
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil									
Sample Matrix Code	6AE									
TPH CWG with Clean Up										
Ali >C5-C6$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C6-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	<1							mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	1							mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	12							mg/kg	1	A-T-055s
Total Aliphatics$_A$	13							mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1							mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1							mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1							mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	5							mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	7							mg/kg	1	A-T-055s
Total Aromatics$_A$	13							mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	26							mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01							mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.
The results reported herein relate only to the material supplied to the laboratory.
The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after 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 the scope of our accreditation.
If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.
A deviating samples 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.
The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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 analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

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

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

Asbestos:

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

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample, 9 = INCINERATOR ASH.
Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,
E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.
US indicates Unsuitable Sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Superscript "M" indicates method accredited to MCERTS.
Subscript "A" indicates analysis performed on the sample as received.
Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve
Subscript "^" indicates analysis has dependant options against results. Testing dependant on results appear in the comments area of your sample receipt.
EPH CWG results have humics mathematically subtracted through instrument calculation
TPH results "with Cleanup" indicates results cleaned up with Silica during extraction

EPH CWG GCxGC ID from TPH CWG

Where we have identified humic substances in any ID's from TPH CWG with Clean Up please note that the concentration of these humic substances is not included in the quantified results and are included in the ID for information.

Please contact us if you need any further information.

v2

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Byrchall School

Clients Project No:

Project No: 23/03733

Date Received: 20/04/2023 (am)

Cool Box Temperatures (°C): 13.7

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
Deviation Code	
B1 (no VPH)	✓
D (no glass)	✓
E (no date)	✓

Key

B1 (no VPH)	*Separate container not supplied for VPH/BTEX analysis*
D (no glass)	*Glass container not provided for extractable organics analysis*
E (no date)	*No sampling date provided (all results affected if not provided)*

Note: 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 (for water samples 5 ± 3°C), ISO 18400-105:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	23/03733/1
Client Sample No	
Client Sample ID/Depth	Soil Sample
Date Sampled	
A-T-019s	04/05/2023
A-T-022s	03/05/2023
A-T-024s	03/05/2023
A-T-030s	02/05/2023
A-T-031s	03/05/2023
A-T-037s	04/05/2023
A-T-044	02/05/2023
A-T-055s	09/05/2023
A-T-063	03/05/2023
A-T-EXTMETS	03/05/2023
A-T-EXTMETS PO4	02/05/2023
Calc	02/05/2023
Calc-As Recd	09/05/2023
Calc-no stones	02/05/2023
Gravimetry	03/05/2023

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: 24/00486
Issue Number: 1 **Date:** 29 January, 2024

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins/Thomas Mackechnie
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-0696
Date Samples Received: 18/01/24
Date Instructions Received: 18/01/24
Date Analysis Completed: 29/01/24

Approved by:



Sophie France
Client Manager

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
% Stones >10mm$_A$	14.7	2.3						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	7.49	7.24						pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$$^{M\#}$	0.08	0.05						g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$$^{M\#}$	520	550						mg/kg	200	A-T-028s
Cyanide (total)$_A$$^{M\#}$	<1	<1						mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Total Organic Carbon$_D$$^{M\#}$	2.41	1.03						% w/w	0.03	A-T-032s
Arsenic$_D$$^{M\#}$	9	11						mg/kg	1	A-T-024s
Boron (water soluble)$_D$$^{M\#}$	<1.0	<1.0						mg/kg	1	A-T-027s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	43	43						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	20	21						mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1						mg/kg	1	A-T-040s
Lead$_D$$^{M\#}$	61	78						mg/kg	1	A-T-024s
Mercury$_D$	0.27	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	17	18						mg/kg	1	A-T-024s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	68	79						mg/kg	5	A-T-024s

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
Asbestos in Soil (inc. matrix)										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/00486

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	24/00486/1	24/00486/2						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	Plot 98	Plot 102								
Depth to Top	0.30	0.20								
Depth To Bottom										
Date Sampled	12-Jan-24	12-Jan-24								
Sample Type	SOIL - ES	SOIL - ES								
Sample Matrix Code	3	3								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.02	0.01						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.03	0.03						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.11	0.10						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.08	0.08						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.10						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	<0.05	<0.05						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.12	0.10						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.26	0.25						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.01	<0.01						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.05	<0.03						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.16	0.15						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.24	0.23						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	1.18	1.05						mg/kg	0.01	A-T-019s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 24/00486

Date Received: 18/01/2024 (pm)

Cool Box Temperatures (°C): 4.4

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	24/00486/1	24/00486/2
Client Sample No		
Client Sample ID/Depth	Plot 98 0.30m	Plot 102 0.20m
Date Sampled	12/01/24	12/01/24
A-T-019s	24/01/2024	24/01/2024
A-T-024s	25/01/2024	25/01/2024
A-T-026s	25/01/2024	25/01/2024
A-T-027s	24/01/2024	24/01/2024
A-T-028s	24/01/2024	24/01/2024
A-T-031s	26/01/2024	26/01/2024
A-T-032s	25/01/2024	25/01/2024
A-T-040s	25/01/2024	25/01/2024
A-T-042sTCN	24/01/2024	24/01/2024
A-T-044	23/01/2024	23/01/2024
A-T-045	19/01/2024	19/01/2024
A-T-050s	29/01/2024	29/01/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/03104
Issue Number: 1 **Date:** 25 April, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: PO M-00023/000489
Date Samples Received: 26/03/24
Date Instructions Received: 26/03/24
Date Analysis Completed: 25/04/24

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
% Stones >10mm$_A$	8.3	1.8	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	0.1	A-T-044
pH$_D$[M#]	8.11	7.12	6.92	6.84	6.93	6.47	6.74	pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$[M#]	260	820	710	800	860	910	940	mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Arsenic$_D$[M#]	3	6	6	6	6	7	8	mg/kg	1	A-T-024s
Beryllium$_D$	<0.5	0.7	0.7	0.7	0.7	0.7	0.8	mg/kg	0.5	A-T-024s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper$_D$[M#]	11	24	23	22	23	26	28	mg/kg	1	A-T-024s
Chromium$_D$[M#]	11	15	16	16	15	15	16	mg/kg	1	A-T-024s
Lead$_D$[M#]	15	38	37	37	38	44	47	mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	8	14	13	13	13	14	15	mg/kg	1	A-T-024s
Phosphorus$_D$	289	568	575	548	519	544	603	mg/kg	5	A-T-072s
Selenium$_D$[M#]	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Vanadium$_D$[M#]	13	18	18	19	17	17	19	mg/kg	1	A-T-024s
Zinc$_D$[M#]	28	60	52	55	50	65	70	mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
PAH-16MS										
Acenaphthene$_A^{M\#}$	<0.01	0.03	0.03	0.04	0.07	0.04	0.02	mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	<0.02	0.03	0.04	0.09	0.14	0.09	0.05	mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.09	0.15	0.19	0.32	0.43	0.34	0.24	mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.09	0.15	0.17	0.29	0.37	0.31	0.23	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.10	0.21	0.23	0.41	0.47	0.41	0.32	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.06^U	0.10^U	0.13^U	0.20^U	0.27^U	0.21^U	0.18^U	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07	<0.07	0.13	0.16	0.13	0.12	mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.10	0.19	0.22	0.36	0.46	0.38	0.27	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.14	0.31	0.35	0.62	0.83	0.69	0.44	mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.01	<0.01	0.03	0.07	0.03	0.02	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.06	0.10	0.14	0.20	0.27	0.22	0.18	mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.05	0.21	0.22	0.41	0.69	0.41	0.23	mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.14	0.29	0.33	0.58	0.78	0.63	0.41	mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	0.83	1.78	2.05	3.68	5.01	3.89	2.71	mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5	<5	mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	8	34	27	32	26	37	35	mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	24	200	176	235	213	250	227	mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	32	234	203	267	239	287	262	mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM1	SM2	SM3	SM4	SM5	SM6	SM7			
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24	26-Mar-24			
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL			
Sample Matrix Code	5AE	6AE	6A	6AE	6A	6AE	6AE			
TPH CWG with Clean Up										
Ali >C5-C6$_A$	-	<0.01	<0.01	<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	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21$_A$	-	1	3	3	3	3	3	mg/kg	1	A-T-055s
Ali >C21-C35$_A$	-	32	36	46	40	46	41	mg/kg	1	A-T-055s
Total Aliphatics$_A$	-	34	39	49	43	48	44	mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	-	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12$_A$	-	<1	<1	7	<1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16$_A$	-	<1	1	29	1	1	3	mg/kg	1	A-T-055s
Aro >C16-C21$_A$	-	6	12	64	9	9	11	mg/kg	1	A-T-055s
Aro >C21-C35$_A$	-	19	29	89	27	29	29	mg/kg	1	A-T-055s
Total Aromatics$_A$	-	25	42	189	37	40	42	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	-	59	81	238	80	88	86	mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE$_A$	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
% Stones >10mm$_A$	0.4	0.5						% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	6.55	6.84						pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	710	610						mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2						mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	5						mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5						mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5						mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	25	19						mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	13	12						mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	44	34						mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17						mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	13	11						mg/kg	1	A-T-024s
Phosphorus$_D$	565	454						mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1						mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	15	14						mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	56	45						mg/kg	5	A-T-024s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD								A-T-045
Asbestos Matrix (visual)$_{D}$	-	-								A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-								A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A								A-T-045

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.01	0.08						mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	<0.01	<0.01						mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.04	0.12						mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.19	0.19						mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.19	0.14						mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.26	0.18						mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.16^U	0.08^U						mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	<0.07	<0.07						mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.24	0.19						mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A$	<0.04	<0.04						mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	0.35	0.51						mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	<0.01	0.06						mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.16	0.10						mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	<0.03	<0.03						mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.21	0.54						mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	0.35	0.44						mg/kg	0.07	A-T-019s
Total PAH-16MS$_A$	2.16	2.63						mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5						mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	38	30						mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	257	191						mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	295	221						mg/kg	5	A-T-007s

Envirolab Job Number: 24/03104

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/03104/8	24/03104/9						Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	SM8	SM9								
Depth to Top										
Depth To Bottom										
Date Sampled	26-Mar-24	26-Mar-24								
Sample Type	SOIL	SOIL								
Sample Matrix Code	6AE	6AE								
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C6-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C12-C16$_A$	<1	<1						mg/kg	1	A-T-055s
Ali >C16-C21$_A$	3	3						mg/kg	1	A-T-055s
Ali >C21-C35$_A$	44	39						mg/kg	1	A-T-055s
Total Aliphatics$_A$	47	42						mg/kg	1	Calc-As Recd
Aro >C5-C7$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C7-C8$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C10-C12$_A$	<1	<1						mg/kg	1	A-T-055s
Aro >C12-C16$_A$	1	1						mg/kg	1	A-T-055s
Aro >C16-C21$_A$	12	10						mg/kg	1	A-T-055s
Aro >C21-C35$_A$	29	24						mg/kg	1	A-T-055s
Total Aromatics$_A$	43	35						mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	90	76						mg/kg	1	Calc-As Recd
BTEX - Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Toluene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s
MTBE$_A$	<0.01	<0.01						mg/kg	0.01	A-T-022s

Report Notes

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

Key

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

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

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

TPH by method A-T-007:
For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only.
Results "with Clean up" indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:
EPH CWG results have humics mathematically subtracted through instrument calculation.
Where these humic substances have been identified in any IDs from "TPH CWG with clean up" please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:
Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the accreditation range and as such are unaccredited.

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

Envirolab Deviating Samples Report

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

Client: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project: Nixon St

Clients Project No:

Project No: 24/03104

Date Received: 26/03/2024 (am)

Cool Box Temperatures (°C): 12.0, 14.7

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key
F *Maximum holding time exceeded between sampling date and analysis for analytes listed below*

HOLDING TIME EXCEEDANCES

Lab Sample ID	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No								
Client Sample ID/Depth	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
VPHCWG	✓	✓	✓	✓	✓	✓	✓	✓

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

Envirolab Analysis Dates

Lab Sample ID	24/03104/1	24/03104/2	24/03104/3	24/03104/4	24/03104/5	24/03104/6	24/03104/7	24/03104/8	24/03104/9
Client Sample No									
Client Sample ID/Depth	SM1	SM2	SM3	SM4	SM5	SM6	SM7	SM8	SM9
Date Sampled	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24	26/03/24
A-T-007s	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024	16/04/2024
A-T-019s	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024	04/04/2024
A-T-022s		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024
A-T-024s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-028s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-031s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-044	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
A-T-045	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024	05/04/2024
A-T-050s	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024	09/04/2024
A-T-055s		24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024	24/04/2024
A-T-072s	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/04/2024
Calc-As Recd		25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024	25/04/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/06131
Issue Number: 1 **Date:** 04 July, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon Street
Project Ref: N/A
Order No: M-00023/000648
Date Samples Received: 20/06/24
Date Instructions Received: 21/06/24
Date Analysis Completed: 04/07/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
% Stones >10mm$_A$	3.5	<0.1	<0.1	6.2	1.9	3.1		% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.17	7.05	6.85	8.94	8.84	8.87		pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	1600	530	470	5300	3800	3400		mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	7	6	6	8	7	8		mg/kg	1	A-T-024s
Beryllium$_D$	1.0	0.7	0.6	1.1	1.1	1.0		mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5	0.7	0.7	1.1		mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	33	26	20	39	47	63		mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	41	14	12	85	93	129		mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	84	59	52	80	92	90		mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17	<0.17	<0.17	0.17		mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	15	11	9	17	19	17		mg/kg	1	A-T-024s
Phosphorus$_D$	660	478	400	932	1010	1280		mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1	2	3	2		mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	48	21	18	80	100	109		mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	111	51	38	134	155	210		mg/kg	5	A-T-024s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil$_{D}^{\#}$	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos Matrix (visual)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos Matrix (microscope)$_{D}$	-	-	-	-	-	-				A-T-045
Asbestos ACM - Suitable for Water Absorption Test?$_{D}$	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

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Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.19	0.04	0.02	0.65	0.28	0.87		mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.04	<0.01	<0.01	0.13	0.09	0.10		mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.62	0.08	0.06	1.72	0.68	1.95		mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	1.42	0.33	0.31	2.91	1.83	3.67		mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	1.30	0.36	0.32	2.35	1.54	2.92		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	1.60	0.47	0.40	2.86	1.83	3.54		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.74	0.25	0.21	1.21	0.77	1.47		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.58	0.16	0.14	0.99	0.67	1.27		mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	1.43	0.39	0.36	2.62	1.70	3.41		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.19	0.05	<0.04	0.31	0.20	0.38		mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	3.21	0.68	0.59	6.79	4.02	8.55		mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.23	0.04	0.02	0.63	0.22	0.66		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.76	0.24	0.21	1.36	0.86	1.61		mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.09	<0.03	<0.03	0.36	0.22	1.44		mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	2.12	0.33	0.25	5.47	2.27	6.74		mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	2.66	0.65	0.54	5.27	3.22	6.78		mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	17.2	4.07	3.43	35.6	20.4	45.4		mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5	<5	<5	<5		mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	71	15	21	104	177	239		mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	114	67	96	222	343	384		mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	185	82	117	326	520	623		mg/kg	5	A-T-007s

Envirolab Job Number: 24/06131

Client Project Name: Nixon Street

Client Project Ref: N/A

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6		Units	Limit of Detection	Method ref
Client Sample No	L1	L2	L3	L4	L5	L6				
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24	20-Jun-24				
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
Sample Matrix Code	6AE	6AE	6AE	4ABE	4ABE	4ABE				
TPH CWG with Clean Up										
Ali >C5-C6$_A$	<0.01	<0.01	<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	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10$_A$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12$_A^{M\#}$	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16$_A^{M\#}$	1	<1	<1	2	3	3		mg/kg	1	A-T-055s
Ali >C16-C21$_A^{M\#}$	3	<1	1	5	9	7		mg/kg	1	A-T-055s
Ali >C21-C35$_A^{M\#}$	39	11	14	44	102	59		mg/kg	1	A-T-055s
Total Aliphatics$_A$	43	11	15	51	114	69		mg/kg	1	Calc-As Recd
Aro >C5-C7$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10$_A$	1	<1	<1	1	1	1		mg/kg	1	A-T-055s
Aro >C10-C12$_A$	2	<1	<1	4	2	3		mg/kg	1	A-T-055s
Aro >C12-C16$_A$	7	2	1	29	11	16		mg/kg	1	A-T-055s
Aro >C16-C21$_A^{M\#}$	28	9	5	93	48	69		mg/kg	1	A-T-055s
Aro >C21-C35$_A^{M\#}$	74	26	19	189	118	160		mg/kg	1	A-T-055s
Total Aromatics$_A$	111	38	25	316	180	250		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35)$_A$	154	48	40	368	294	319		mg/kg	1	Calc-As Recd
BTEX - Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE$_A^{\#}$	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		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
N/A	Not applicable

Asbestos

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

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs
Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.					

Soil Chemical Analysis:

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

TPH by method A-T-007:

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

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

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

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

Results greater than 12900µS/cm @ 25^0C / 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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/06131

Date Received: 21/06/2024 (am)

Project: Nixon Street

Cool Box Temperatures (°C): 20.2

Clients Project No: N/A

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/06131/1	24/06131/2	24/06131/3	24/06131/4	24/06131/5	24/06131/6
Client Sample No	L1	L2	L3	L4	L5	L6
Client Sample ID/Depth						
Date Sampled	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24	20/06/24
A-T-007s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-019s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-022s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-024s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-028s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-031s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
A-T-044	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024	01/07/2024
A-T-045	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024	26/06/2024
A-T-050s	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024	04/07/2024
A-T-055s	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024
A-T-072s	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024	03/07/2024
Calc-As Recd	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024	02/07/2024

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

End of Report

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-1	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	18	Y	Y	Y	Y	Y	Y
Silt content	% w/w	48	Y	Y	Y	Y	Y	Y
Sand content	% w/w	34	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.3	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.7	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	0.7			N			N
Nitrogen (total)	% w/w N	0.18	Y	Y	Y			
Carbon:Nitrogen ratio	-	9.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	22	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	340	Y	Y	Y			
Electrical conductivity	µS/cm	95	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	50	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	22	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	134	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

DECLARATION OF COMPLIANCE (BS3882:2015)

CHEMTECH environmental

Lab ref	99708-2	Date received	20 April 2023
Contract name	Bychall School	Analysis started	20 April 2023
Sample ID	PH 01	Analysis completed	27 April 2023
OS Grid reference	Not supplied	Report issued	27 April 2023
Date sampled	21 April 2023		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	19	Y	Y	Y	Y	Y	Y
Silt content	% w/w	49	Y	Y	Y	Y	Y	Y
Sand content	% w/w	32	Y	Y	Y	Y	Y	Y
Soil texture	class	SANDY SILT LOAM						
Stone content								
>2mm	% w/w	2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y
Mass loss on ignition								
Clay 5-20%	% w/w	3.7	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	7.8	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	1.0			Y			Y
Nitrogen (total)	% w/w N	0.19	Y	Y	Y			
Carbon:Nitrogen ratio	-	10.5	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	19	Y	Y	Y	Y	Y	Y
Potassium (extractable)	mg/l K	193	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	326	Y	Y	Y			
Electrical conductivity	µS/cm	97	Y					
Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	27	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	24	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	125	Y	Y	Y	Y	Y	Y
VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name J. Campbell

Position John Campbell

Director

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

ANALYTICAL TEST REPORT

Contract no:	**136022**
Contract name:	**Nixon Street Topsoil**
Client reference:	**AJB FBQ 210621**
Clients name:	**PP O'Connor**
Clients address:	**61 Mosley Road** **Trafford Park** **Manchester** **M17 1GJ**
Samples received:	**13 August 2024**
Analysis started:	**13 August 2024**
Analysis completed:	**21 August 2024**
Report issued:	**21 August 2024**

Key		
	U	**UKAS accredited test**
	M	**MCERTS & UKAS accredited test**
	$	**Test carried out by an approved subcontractor**
	I/S	**Insufficient sample to carry out test**
	N/S	**Sample not suitable for testing**
	NAD	**No Asbestos Detected**

Approved by: ANeasham-Bourn

Abbie Neasham-Bourn
Senior Reporting Administrator

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
Tel 01207 528578 Email customerservices@chemtech-env.co.uk
Vat Reg No. 772 5703 18 Registered in England number 4284013

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
Arsenic (total)	CE264	mg/kg As	3.6	3.9	3.3
Cadmium (total)	CE264	mg/kg Cd	<1.6	<1.6	<1.6
Chromium (total)	CE264	mg/kg Cr	67.1	98.2	88.1
Chromium (VI)	CE263	mg/kg CrVI	<0.04	<0.04	<0.04
Copper (total)	CE264	mg/kg Cu	16.2	20.2	20.9
Lead (total)	CE264	mg/kg Pb	29.3	28.9	23.1
Mercury (total)	CE264	mg/kg Hg	<0.7	<0.7	<0.7
Nickel (total)	CE264	mg/kg Ni	29.9	35.0	38.4
Selenium (total)	CE264	mg/kg Se	<3	<3	<3
Zinc (total)	CE264	mg/kg Zn	79.0	87.5	90.9
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	12.2	11.4	9.3
PAH					
Naphthalene	CE087	mg/kg	0.07	0.08	0.09
Acenaphthylene	CE087	mg/kg	<0.02	<0.02	<0.02
Acenaphthene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluorene	CE087	mg/kg	0.05	0.05	0.06
Phenanthrene	CE087	mg/kg	0.14	0.14	0.16
Anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Pyrene	CE087	mg/kg	0.02	0.03	0.02
Benzo(a)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Chrysene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(b)fluoranthene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	CE087	mg/kg	<0.03	<0.03	<0.03
Benzo(a)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Indeno(123cd)pyrene	CE087	mg/kg	<0.02	<0.02	<0.02
Dibenz(ah)anthracene	CE087	mg/kg	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087	mg/kg	<0.02	<0.02	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	<0.34	<0.34	<0.34
TPH					
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	1.16	0.73	<0.6
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	3.11	1.97	1.36
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	2.05	<1.5	<1.5
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	26.63	9.18	5.80
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	13.35	2.75	<2
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1

Chemtech Environmental Limited

SOLIDS

Lab number			136022-1	136022-2	136022-3
Sample id			JM1	JM2	JM3
Depth (m)			-	-	-
Date sampled			12/08/2024	12/08/2024	12/08/2024
Test	Method	Units			
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<1	<1	<1
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<0.5	<0.5	<0.5
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<3	<3	<3
EPH Aliphatic (>C35-C44)	CE250	mg/kg	1	<0.5	<0.5
Subcontracted Analysis					
Asbestos (qualitative)	$	-	NAD	NAD	NAD

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOLIDS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE264	Arsenic (total)	Aqua Regia Extraction, ICPOES	Dry		1.8	mg/kg As
CE264	Cadmium (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cd
CE264	Chromium (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cr
CE263	Chromium (VI)	Discrete Analyser	Dry		0.04	mg/kg CrVI
CE264	Copper (total)	Aqua Regia Extraction, ICPOES	Dry		1.6	mg/kg Cu
CE264	Lead (total)	Aqua Regia Extraction, ICPOES	Dry		2.3	mg/kg Pb
CE264	Mercury (total)	Aqua Regia Extraction, ICPOES	Dry		0.7	mg/kg Hg
CE264	Nickel (total)	Aqua Regia Extraction, ICPOES	Dry		2.1	mg/kg Ni
CE264	Selenium (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Se
CE264	Zinc (total)	Aqua Regia Extraction, ICPOES	Dry		4	mg/kg Zn
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE087	Naphthalene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received		0.015	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received		0.013	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received		0.014	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received		0.016	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received		0.012	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received		0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received		0.025	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received		0.017	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received		0.019	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		0.6	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1.5	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		4.5	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		2	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		3	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Soil/Solid samples will be disposed of 4 weeks from initial receipt unless otherwise agreed.

Waters and leachate samples will be disposed of 2 weeks from report issue unless otherwise agreed.

DEFRA Licence for the introduction and movement within England of prohibited soil for chemical and physical analysis Licence No: 132693/469907-0

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

Moisture Content Calculated on a Wet Weight basis

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 24/09316
Issue Number: 1 **Date:** 03 October, 2024

Client:
PP O'Connor Ltd
61 Mosley Road
Trafford Park
Manchester
M17 1GJ

Project Manager: Tony Barry
Project Name: Nixon St
Project Ref: Not specified
Order No: M-00023/000815
Date Samples Received: 26/09/24
Date Instructions Received: 26/09/24
Date Analysis Completed: 03/10/24

Approved by:



Gemma Berrisford
Deputy Client Services Supervisor

Envirolab Job Number: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
% Stones >10mm$_A$	2.7	3.0	0.3					% w/w	0.1	A-T-044
pH$_D$$^{M\#}$	8.02	8.07	7.97					pH	0.01	A-T-031s
Sulphate (acid soluble)$_D$$^{M\#}$	600	650	770					mg/kg	200	A-T-028s
Phenols - Total by HPLC$_A$	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Arsenic$_D$$^{M\#}$	8	8	8					mg/kg	1	A-T-024s
Beryllium$_D$	0.6	<0.5	<0.5					mg/kg	0.5	A-T-024s
Cadmium$_D$$^{M\#}$	<0.5	<0.5	<0.5					mg/kg	0.5	A-T-024s
Copper$_D$$^{M\#}$	39	20	11					mg/kg	1	A-T-024s
Chromium$_D$$^{M\#}$	16	17	14					mg/kg	1	A-T-024s
Lead$_D$$^{M\#}$	64	71	62					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	<0.17	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$$^{M\#}$	14	14	11					mg/kg	1	A-T-024s
Phosphorus$_D$	434	474	484					mg/kg	5	A-T-072s
Selenium$_D$$^{M\#}$	<1	<1	<1					mg/kg	1	A-T-024s
Vanadium$_D$$^{M\#}$	19	21	18					mg/kg	1	A-T-024s
Zinc$_D$$^{M\#}$	79	122	138					mg/kg	5	A-T-024s

Envirolab Job Number: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
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: 24/09316

Client Project Name: Nixon St

Client Project Ref: Not specified

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	S1	S2	S3							
Depth to Top										
Depth To Bottom										
Date Sampled	26-Sep-24	26-Sep-24	26-Sep-24							
Sample Type	SOIL	SOIL	SOIL							
Sample Matrix Code	4AE	4AE	4AE							
PAH-16MS										
Acenaphthene$_A^{M\#}$	0.11	0.01	<0.01					mg/kg	0.01	A-T-019s
Acenaphthylene$_A^{M\#}$	0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Anthracene$_A^{M\#}$	0.23	0.04	<0.02					mg/kg	0.02	A-T-019s
Benzo(a)anthracene$_A^{M\#}$	0.71	0.10	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_A^{M\#}$	0.71	0.11	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_A^{M\#}$	0.83	0.13	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_A^{M\#}$	0.37	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene$_A^{M\#}$	0.32	<0.07	<0.07					mg/kg	0.07	A-T-019s
Chrysene$_A^{M\#}$	0.79	0.10	<0.06					mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene$_A^{M\#}$	0.08	<0.04	<0.04					mg/kg	0.04	A-T-019s
Fluoranthene$_A^{M\#}$	1.61	0.23	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_A^{M\#}$	0.07	0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_A^{M\#}$	0.37	0.06	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_A^{M\#}$	0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_A^{M\#}$	0.89	0.15	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_A^{M\#}$	1.53	0.21	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_A^{M\#}$	8.66	1.15	<0.08					mg/kg	0.01	A-T-019s
TPH Banded 2										
>C6-C10$_A^{M\#}$	<5	<5	<5					mg/kg	5	A-T-007s
>C10-C25$_A^{M\#}$	34	22	<5					mg/kg	5	A-T-007s
>C25-C40$_A^{M\#}$	92	92	24					mg/kg	5	A-T-007s
Total TPH Banded 2$_A^{M\#}$	126	114	24					mg/kg	5	A-T-007s

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.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

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: PP O'Connor Ltd, 61 Mosley Road, Trafford Park, Manchester, M17 1GJ

Project No: 24/09316

Date Received: 26/09/2024 (am)

Project: Nixon St

Cool Box Temperatures (°C): 16.4

Clients Project No:

NO DEVIATIONS IDENTIFIED

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

Envirolab Analysis Dates

Lab Sample ID	24/09316/1	24/09316/2	24/09316/3
Client Sample No			
Client Sample ID/Depth	S1	S2	S3
Date Sampled	26/09/24	26/09/24	26/09/24
A-T-007s	30/09/2024	30/09/2024	30/09/2024
A-T-019s	30/09/2024	30/09/2024	30/09/2024
A-T-024s	02/10/2024	02/10/2024	02/10/2024
A-T-028s	01/10/2024	01/10/2024	01/10/2024
A-T-031s	03/10/2024	03/10/2024	03/10/2024
A-T-044	01/10/2024	01/10/2024	01/10/2024
A-T-045	30/09/2024	30/09/2024	30/09/2024
A-T-050s	02/10/2024	02/10/2024	02/10/2024
A-T-072s	02/10/2024	02/10/2024	02/10/2024

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

End of Report

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

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 25/00064
Issue Number: 1 **Date:** 09 January, 2025

Client:
Edge Consulting Engineers
3rd Floor
Conavon Court
12 Blackfriars Street
Manchester
M3 5BQ

Project Manager: Andrew Bain; Jonathan Cummins
Project Name: Nixon Street, Rochdale
Project Ref: 20066
Order No: PO-846
Date Samples Received: 07/01/25
Date Instructions Received: 07/01/25
Date Analysis Completed: 09/01/25

Approved by:



Richard Wong
Client Manager

Envirolab Job Number: 25/00064

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	25/00064/1	25/00064/2	25/00064/3					Units	Limit of Detection	Method ref
Client Sample No	TS1	TS2	TS3							
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	07-Jan-25	07-Jan-25	07-Jan-25							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5AE	5A	5AE							
% Stones >10mm$_A$	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH$_D$[M#]	7.81	8.27	8.19					pH	0.01	A-T-031s
Sulphate (water sol 2:1)$_D$[M#]	0.03	0.03	0.07					g/l	0.01	A-T-026s
Sulphate (acid soluble)$_D$[M#]	460	450	480					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
Total Organic Carbon$_D$[M#]	3.13	2.77	1.83					% w/w	0.08	A-T-032s
Arsenic$_D$[M#]	3	7	4					mg/kg	1	A-T-024s
Boron (water soluble)$_D$[M#]	<1.0	<1.0	<1.0					mg/kg	1	A-T-027s
Cadmium$_D$[M#]	<0.5	<0.5	<0.5					mg/kg	0.5	A-T-024s
Copper$_D$[M#]	23	31	19					mg/kg	1	A-T-024s
Chromium$_D$[M#]	24	21	18					mg/kg	1	A-T-024s
Chromium (hexavalent)$_D$	<1	<1	<1					mg/kg	1	A-T-040s
Lead$_D$[M#]	28	62	37					mg/kg	1	A-T-024s
Mercury$_D$	<0.17	0.27	<0.17					mg/kg	0.17	A-T-024s
Nickel$_D$[M#]	15	15	13					mg/kg	1	A-T-024s
Selenium$_D$[M#]	<1	<1	<1					mg/kg	1	A-T-024s
Zinc$_D$[M#]	52	81	51					mg/kg	5	A-T-024s

Envirolab Job Number: 25/00064

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	25/00064/1	25/00064/2	25/00064/3					Units	Limit of Detection	Method ref
Client Sample No	TS1	TS2	TS3							
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	07-Jan-25	07-Jan-25	07-Jan-25							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5AE	5A	5AE							
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: 25/00064

Client Project Name: Nixon Street, Rochdale

Client Project Ref: 20066

Lab Sample ID	25/00064/1	25/00064/2	25/00064/3					Units	Limit of Detection	Method ref
Client Sample No	TS1	TS2	TS3							
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled	07-Jan-25	07-Jan-25	07-Jan-25							
Sample Type	SOIL - ES	SOIL - ES	SOIL - ES							
Sample Matrix Code	5AE	5A	5AE							
PAH-16MS										
Acenaphthene$_{A}^{M\#}$	<0.01	<0.01	<0.01					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$_{A}^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(a)pyrene$_{A}^{M\#}$	<0.04	<0.04	<0.04					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene$_{A}^{M\#}$	<0.05	<0.05	<0.05					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene$_{A}^{M\#}$	<0.05	<0.05	<0.05					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$_{A}^{M\#}$	<0.06	<0.06	<0.06					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$_{A}^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.08	A-T-019s
Fluorene$_{A}^{M\#}$	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene$_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Naphthalene $_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Phenanthrene$_{A}^{M\#}$	<0.03	<0.03	<0.03					mg/kg	0.03	A-T-019s
Pyrene$_{A}^{M\#}$	<0.07	<0.07	<0.07					mg/kg	0.07	A-T-019s
Total PAH-16MS$_{A}^{M\#}$	<0.08	<0.08	<0.08					mg/kg	0.01	A-T-019s

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.
Quantification: Generally a 2 stage process including visual identification, hand picking and weighing, and fibre counting. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres). "TRACE" will be reported as a quantification result.
PLEASE INFORM THE LABORATORY IF YOU WOULD LIKE THE STAGE 3 SEDIMENTATION PROCESS CARRIED OUT. Note this will be subcontracted.

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: Edge Consulting Engineers , 3rd Floor, Conavon Court, 12 Blackfriars Street, Manchester, M3 5BQ

Project: Nixon Street, Rochdale

Clients Project No: 20066

Project No: 25/00064

Date Received: 07/01/2025 (am)

Cool Box Temperatures (°C): 6.2

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	25/00064/1	25/00064/2	25/00064/3
Client Sample No	TS1	TS2	TS3
Client Sample ID/Depth			
Date Sampled	07/01/25	07/01/25	07/01/25
A-T-019s	09/01/2025	09/01/2025	09/01/2025
A-T-024s	09/01/2025	09/01/2025	09/01/2025
A-T-026s	09/01/2025	09/01/2025	09/01/2025
A-T-027s	09/01/2025	09/01/2025	09/01/2025
A-T-028s	09/01/2025	09/01/2025	09/01/2025
A-T-031s	09/01/2025	09/01/2025	09/01/2025
A-T-032s	09/01/2025	09/01/2025	09/01/2025
A-T-040s	09/01/2025	09/01/2025	09/01/2025
A-T-042sTCN	09/01/2025	09/01/2025	09/01/2025
A-T-044	09/01/2025	09/01/2025	09/01/2025
A-T-045	08/01/2025	08/01/2025	08/01/2025
A-T-050s	09/01/2025	09/01/2025	09/01/2025

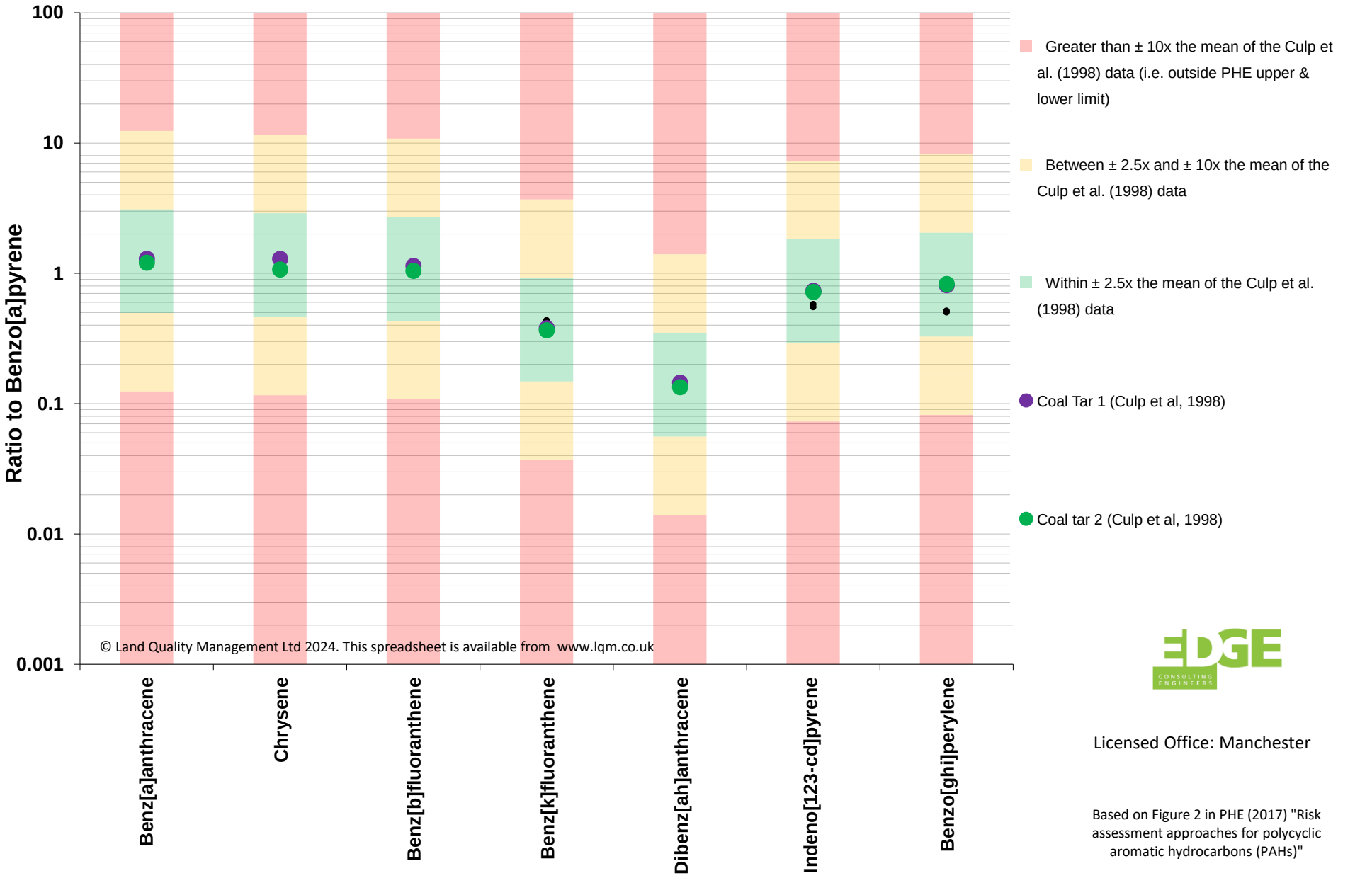
The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

ANNEX III

PAH Profiling

J:\20066 - Nixon Street, Rochdale\Technical\Geo-environmental\Laboratory\PAH profiling charts v1_TS



© Land Quality Management Ltd 2024. This spreadsheet is available from www.lqm.co.uk

Licensed Office: Manchester

Based on Figure 2 in PHE (2017) "Risk assessment approaches for polycyclic aromatic hydrocarbons (PAHs)"

ANNEX IV

Photographs and Hand Dug Pit Logs

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 04/12/24

Project No.: 20066

Client: Seddon Construction Limited

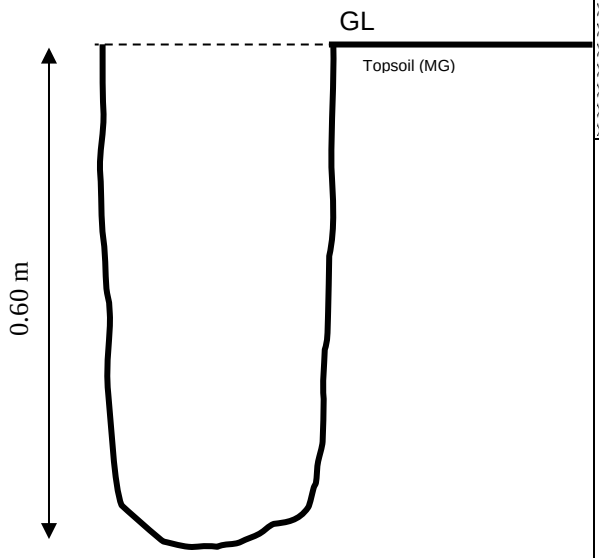
Plot Number: Plot 51

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 51: Overview of excavation

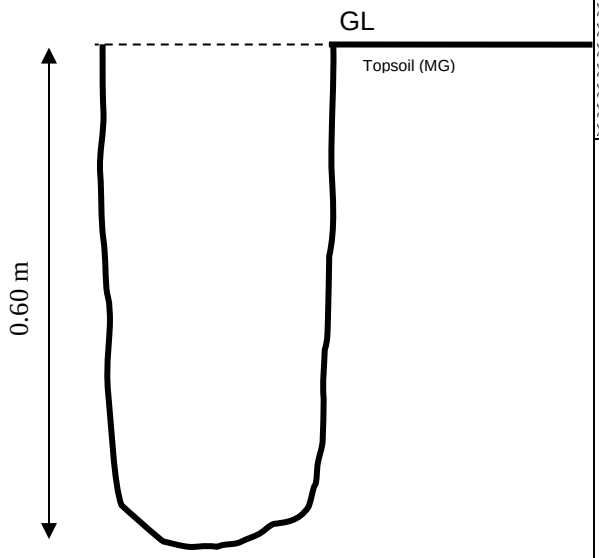


Plot 51: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 52
Date: 04/12/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 52: Overview of excavation

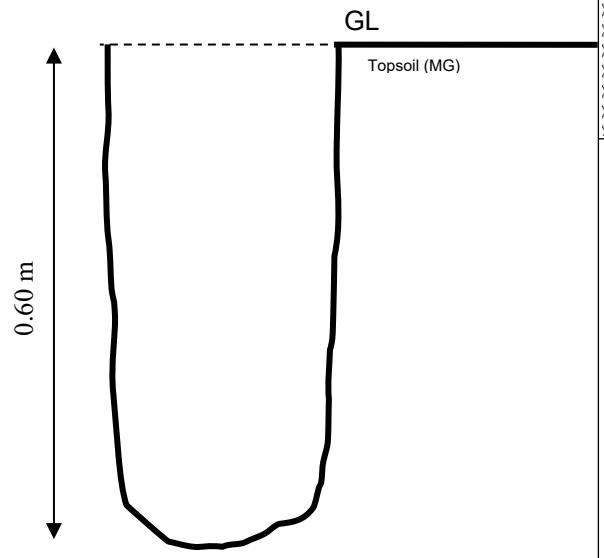


Plot 52: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 53
Date: 04/12/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 53: Overview of excavation



Plot 53: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 04/12/24

Project No.: 20066

Client: Seddon Construction Limited

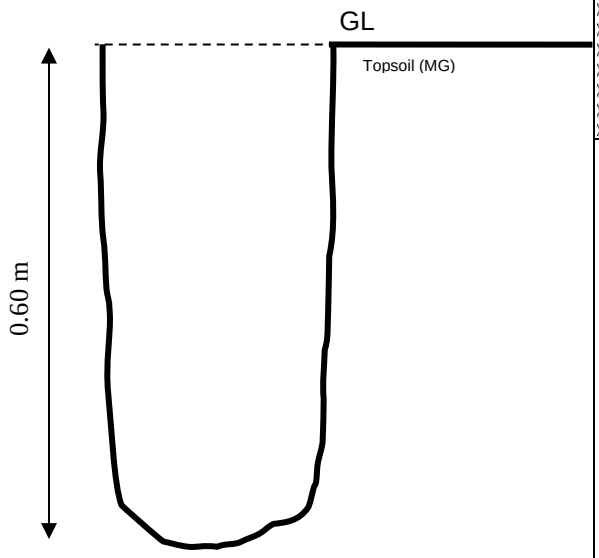
Plot Number: Plot 54

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 54: Overview of excavation



Plot 54: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 04/12/24

Project No.: 20066

Client: Seddon Construction Limited

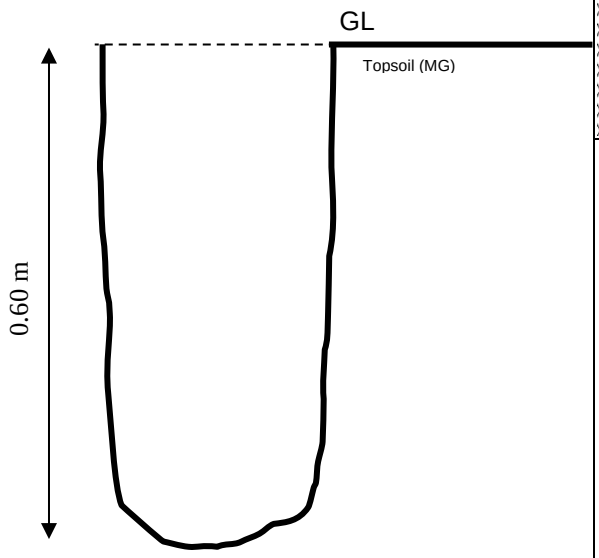
Plot Number: Plot 55

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 55: Overview of excavation

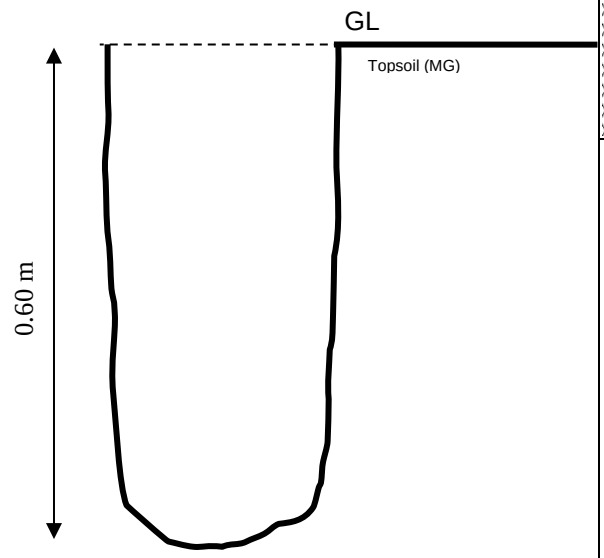


Plot 55: Internal View of excavation

HAND DUG PIT LOG

Project Name:	Nixon Street, Rochdale	**Plot Number:**	Plot 56
Date:	04/12/24	**Logged By:**	J Cummins
Project No.:	20066	**Total Depth:**	0.60 m
Client:	Seddon Construction Limited	**Remarks:**	Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 56: Overview of excavation



Plot 56: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 04/12/24

Project No.: 20066

Client: Seddon Construction Limited

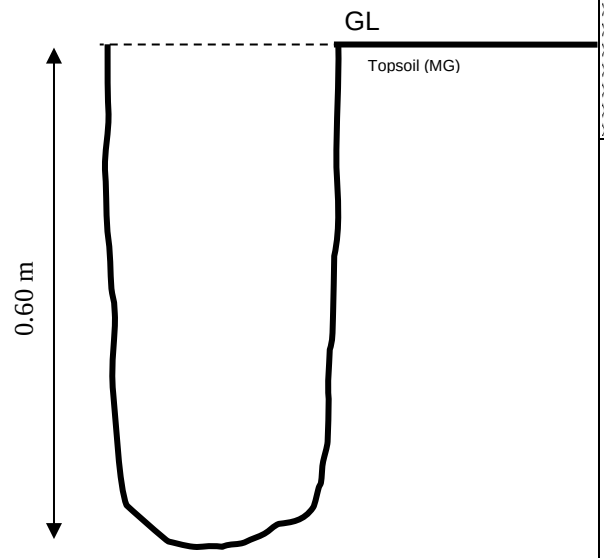
Plot Number: Plot 57

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 57: Overview of excavation

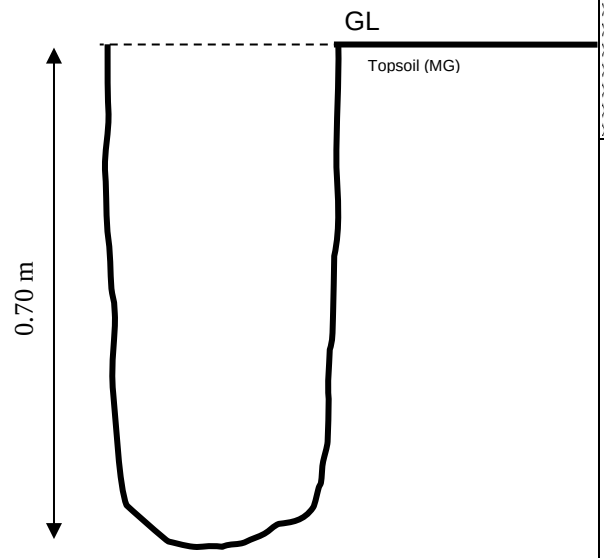


Plot 57: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 58
Date: 04/12/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.70 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.70	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.70 m.

Additional Information:
Hand dug pit terminated at 0.70 m due to encountering the membrane.

Pictures:



Plot 58: Overview of excavation



Plot 58: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale

Date: 04/12/24

Project No.: 20066

Client: Seddon Construction Limited

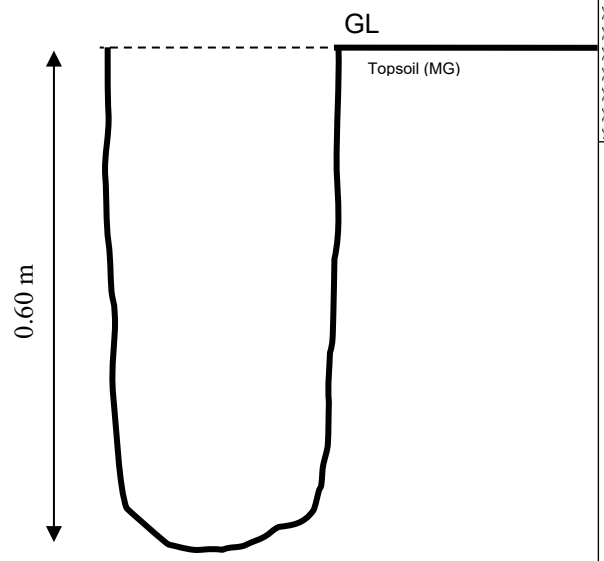
Plot Number: Plot 59

Logged By: J Cummins

Total Depth: 0.60 m

Remarks: Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 59: Overview of excavation

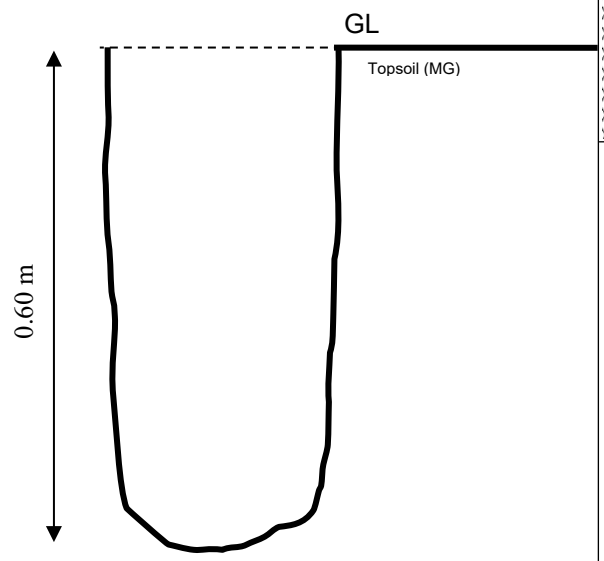


Plot 59: Internal View of excavation

HAND DUG PIT LOG

Project Name: Nixon Street, Rochdale	**Plot Number:** Plot 60
Date: 04/12/24	**Logged By:** J Cummins
Project No.: 20066	**Total Depth:** 0.60 m
Client: Seddon Construction Limited	**Remarks:** Wet ground conditions

Schematic Profile:



NOT TO SCALE

Legend	Depth (m)	Description
	0.00-0.60	MADE GROUND: Dark brown slightly gravelly very clayey fine to coarse SAND. Gravel is subangular to subrounded fine to coarse of concrete, red brick and mudstone. Occasional cobbles of red brick. Occasional rootlets (TOPSOIL).

Hand Dug Pit terminated at 0.60 m.

Additional Information:
Hand dug pit terminated at 0.60 m due to encountering the membrane.

Pictures:



Plot 60: Overview of excavation



Plot 60: Internal View of excavation

ANNEX V

Plot Validation Certificates

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 51** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

+44 (0) 161 834 1938

www.edgece.com

3rd Floor, Conavon Court, 12 Blackfriars Street
Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 52** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 53** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 54** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of clean soil cover.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 55** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 56** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 57** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 58** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 59** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 60** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the garden has been capped with a minimum of 600 mm of clean, uncontaminated topsoil on geotextile marker layer as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

04/12/2024

Date

CONDITIONS OF ISSUE

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3. This certificate is limited to the verification of the installation of clean soil cover.

APPENDIX C

EDGE Gas Protection Validation Record Sheets and Validation Certificates

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3rd Floor, Conavon Court, 12 Blackfriars Street
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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 93 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 93 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	13/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	93
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	AB	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	AB	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

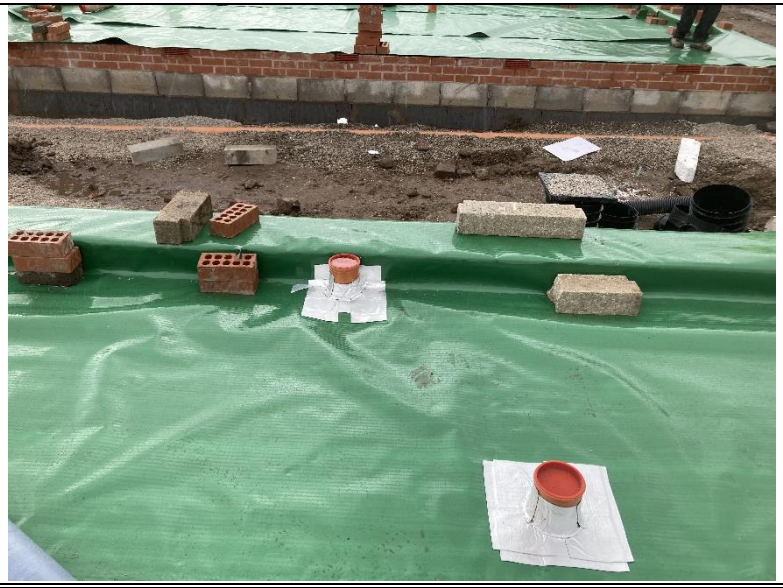
(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 93** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



13/04/2023

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 94 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 94 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	13/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	94
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	AB	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	AB	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 94** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



13/04/2023

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 86 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 86 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	86
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

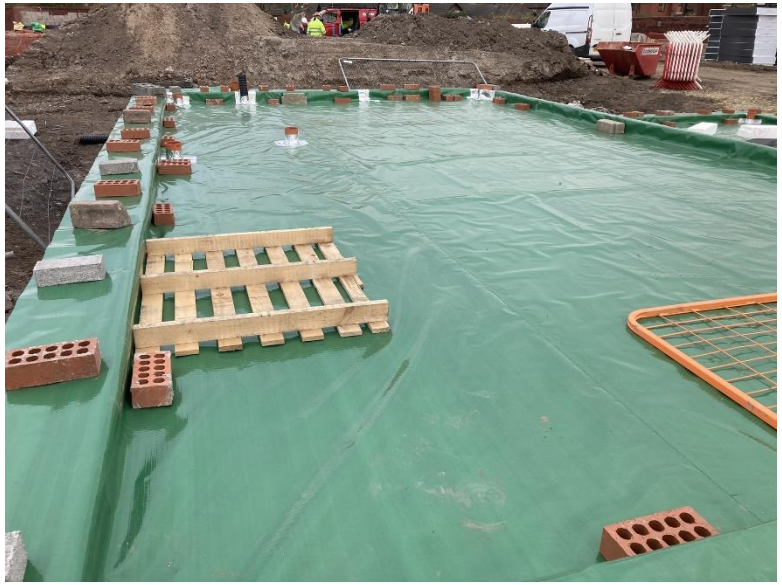
14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 86** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



26/04/2023

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 87 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 87 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	87
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

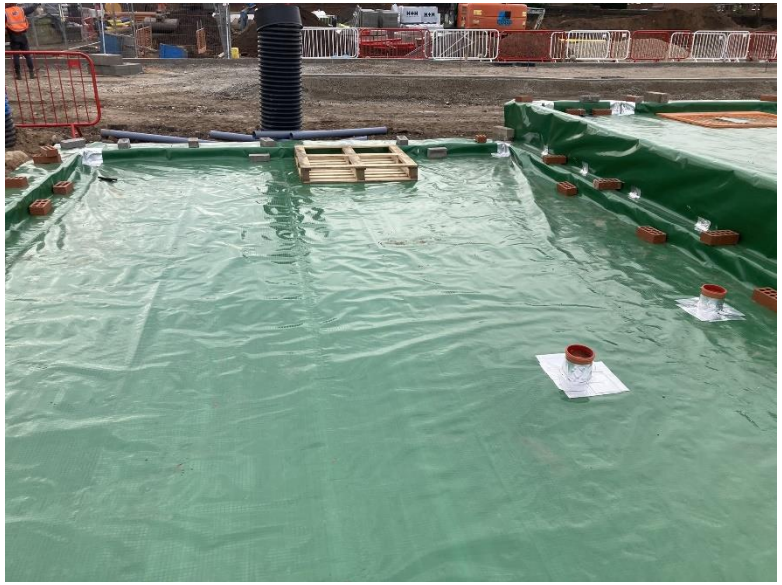
14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

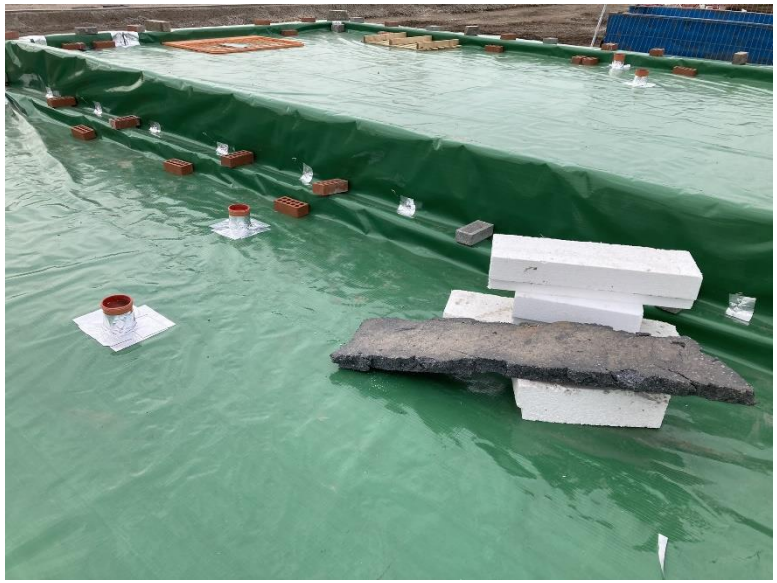
This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 87** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



26/04/2023

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 88 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 88 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	88
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 88** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



26/04/2023

On behalf of EDGE Consulting Engineers

Date

CONDITIONS OF ISSUE

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 89 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 89 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	89
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 89** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

26/04/2023

Date

CONDITIONS OF ISSUE

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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 99 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 99 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	99
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
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11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

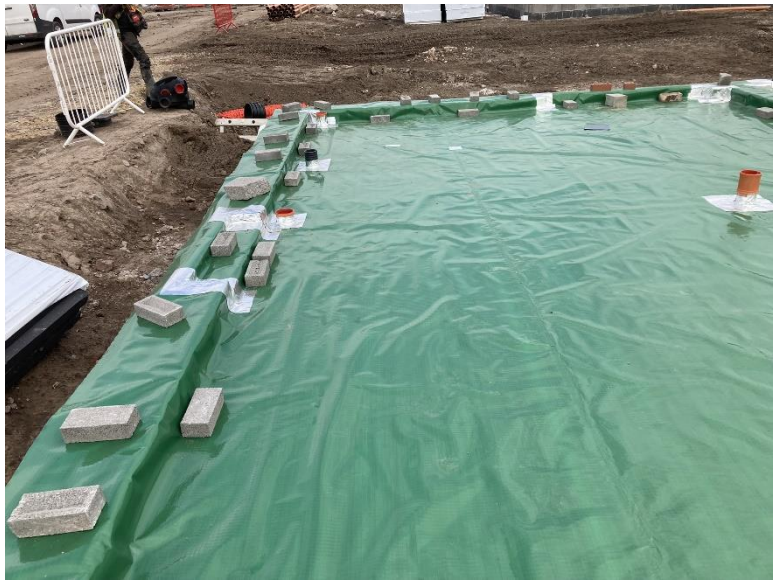
This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.


Seddon







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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 99** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

26/04/2023

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 100 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 100 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	100
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 100** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

26/04/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 101 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 101 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	26/04/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	101
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	13th April 2023	**Inspected by**	JC	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 101** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

26/04/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 48 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 48 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	48
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached and semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures or repairs required
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 69 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 69 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	69
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover was incomplete across the plot, with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures, but repairs are to be undertaken on welds
Laps and joints	Y/N	12. Most joints lapped correctly however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

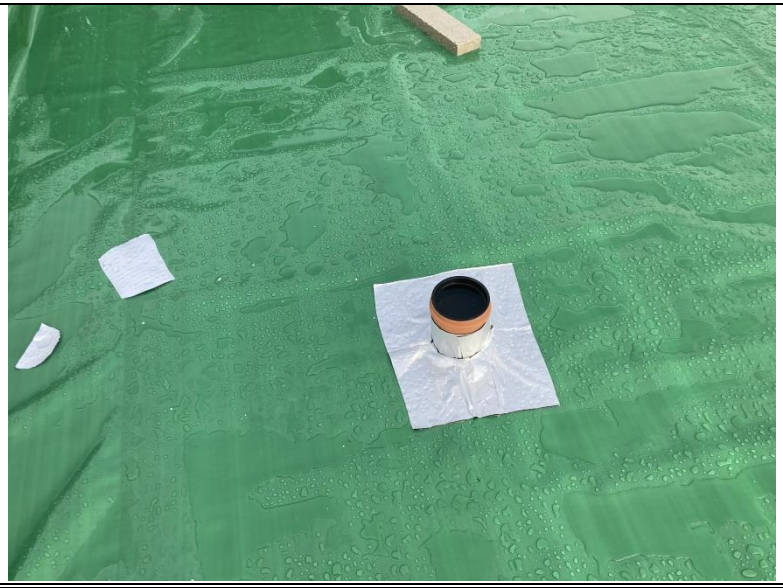
(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

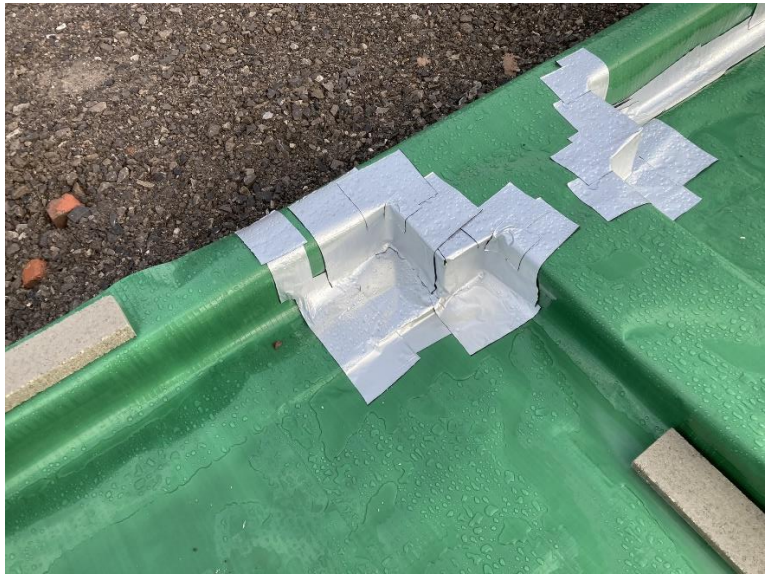
An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 70 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 70 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	70
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover incomplete with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures, but repairs are to be undertaken
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok, some seals require correcting
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 71 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 71 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	71
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover was incomplete, with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures, but repairs are to be undertaken
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 72 VISIT 1 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 72 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	72
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover was incomplete, with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures, but repairs are to be undertaken
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 73 VISIT 1[P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 73 VISIT 1, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	27/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	73
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	27th October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover was incomplete, with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. No punctures, but repairs are to be undertaken. Void in centre of the plot.
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 48 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 48 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	48
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, some welds to be completed
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Punctures in membrane, debris including construction materials present on membrane surface
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

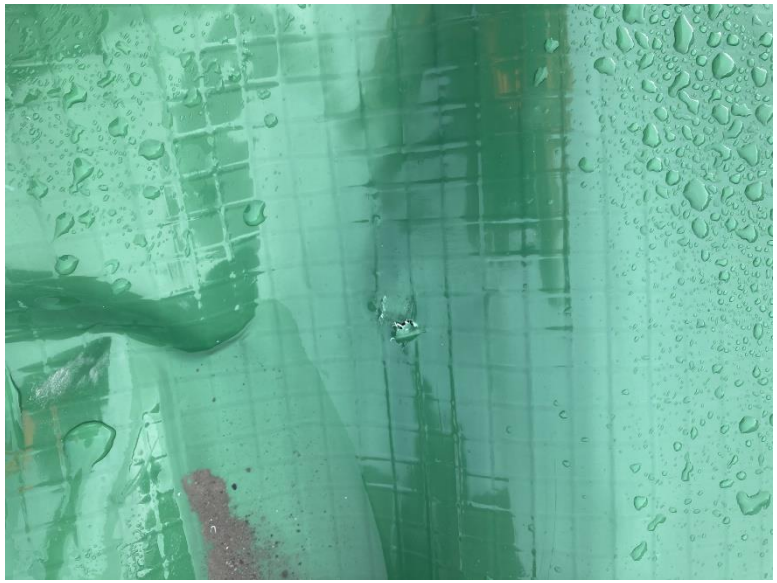
This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

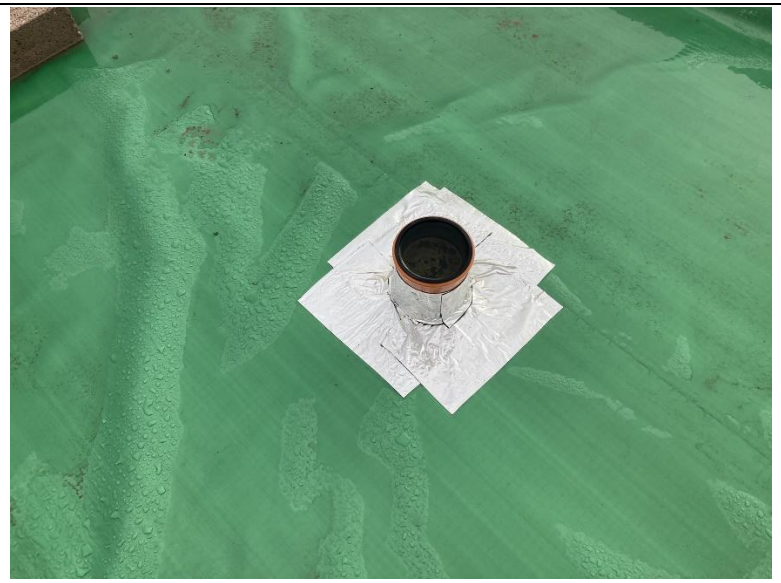
An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.


CIRCLE







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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 69 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 69 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	69
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Debris including construction materials present on the membrane surface
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Manchester M3 5BQ, United Kingdom

VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 69** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 70 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 70 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	70
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, membrane cover was incomplete with missing welds on the overlap of membrane layers
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Punctures in membrane, debris including construction materials present on the membrane surface
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

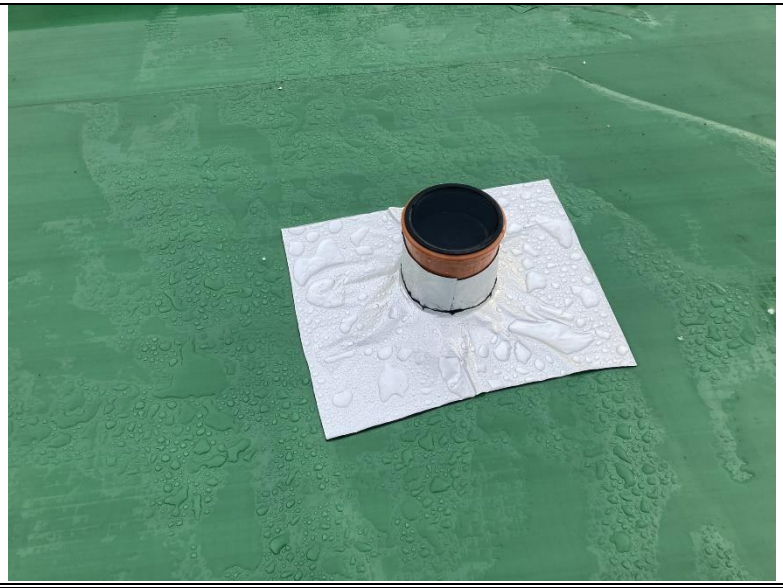
(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 71 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 71 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	71
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, some welds to be completed
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Debris including construction materials present on the membrane surface
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 71** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 72 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 72 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	72
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Debris including construction materials present on the membrane surface
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 72** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

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2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 73 VISIT 2 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 73 VISIT 2, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	31/10/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	73
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	31st October 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor, some welds to be completed
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Debris including construction materials present on the membrane surface
Laps and joints	Y/N	12. Most joints lapped correctly, however, welds are to be completed across plot
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has FAILED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 48 VISIT 3 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 48 VISIT 3, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	01/11/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	48
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Joints lapped correctly
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

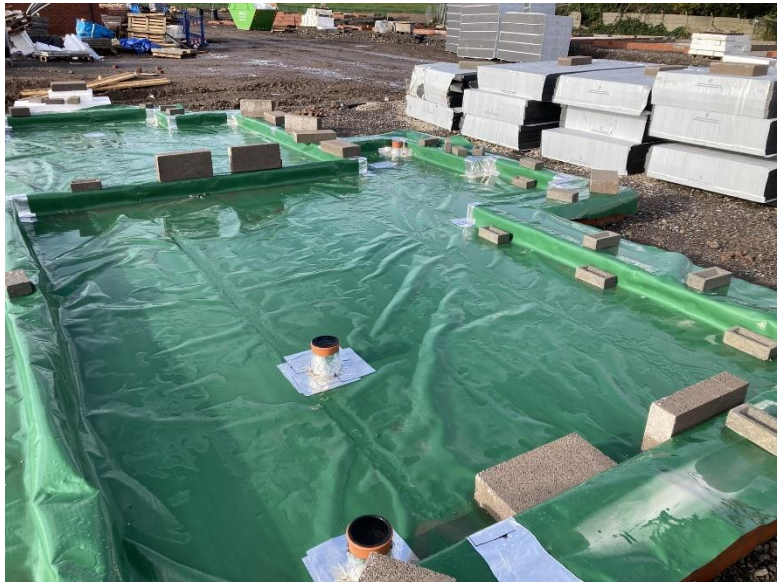
14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

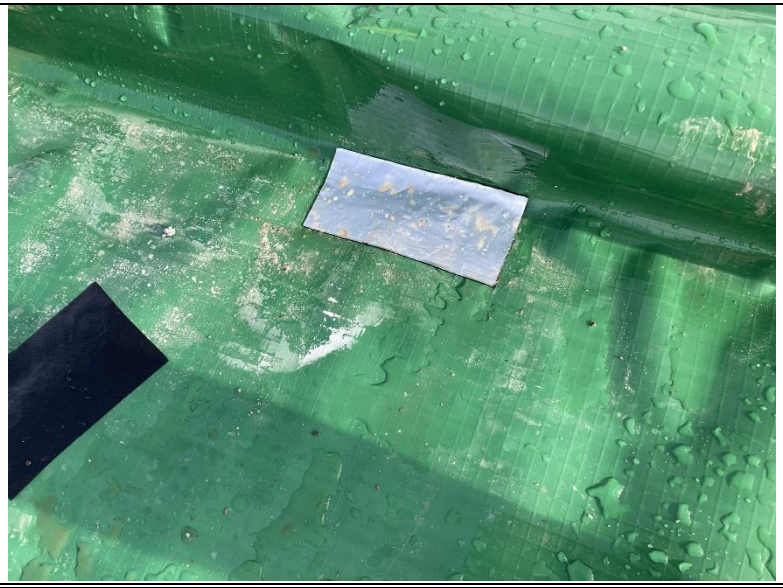
(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 48** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Manchester M3 5BQ, United Kingdom

Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 70 VISIT 3 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 70 VISIT 3, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	01/11/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	70
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition
Laps and joints	Y/N	12. Patch repairs to previously identified areas
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 70** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

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Document name: 20066-EDGE-XX-XX-RP-G-0001_GAS PROTECTION VALIDATION RECORD_PLOT 73 VISIT 3 [P01]

GAS PROTECTION VALIDATION RECORD FOR PLOT 73 VISIT 3, 20066 – NIXON STREET, ROCHDALE

Prepared for:
Seddon Construction Limited
Plodder Lane
Bolton
BL4 0NN

Revision	Date	Description	Prepared by	Checked by	Approved by
RO1	01/11/2023	Gas Protection Validation	TM	JC	AJB

One record sheet to be completed for each plot inspected by a suitably qualified independent consultant/engineer

Job No	20066
Site Name	Nixon Street, Rochdale
Plot No	73
Compiled By	TM / JC

Design/specification ref	20066-EDGE-XX-XX-RP-G-0001_DET_REM_STRAT[P05]		
Building use	Residential		
Building description	Semi-detached		
Gas protection type	Passive	**Foundation type**	Suspended floor, beam and block

Ventilated sub floor (if present)	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Void former type	Y/N	1. Ok, as per design.
Height of void space	Y/N	2. > 150 mm as per design.
Gravel type	Y/N	3. N/A
Pipe size and spacing	Y/N	4. Ok
External wall air bricks	Y/N	5. Air bricks as per design, clear and free of any blockages.
Internal sleeper walls	Y/N	6. Ok
External vent trenches/ducts	Y/N	7. N/A

Gas barrier	**Inspection date/type:**	1st November 2023	**Inspected by**	JC / TM	**Photographed** Yes

		Notes/comments (see guide notes below)
Membrane type	Y/N	8. POWERBASE MULTIGAS MEMBRANE MG 500
Extent of coverage	Y/N	9. Complete ground floor
Underside of membrane	Y/N	10. Good condition
Slab/membrane condition	Y/N	11. Good condition, free from debris
Laps and joints	Y/N	12. patch repairs to previously identified areas
Damp-proof membrane	Y/N	13. Ok
Service entries and seals	Y/N	14. Ok
Cavity inspection	Y/N	15. Unable to see cavity although membrane clearly spans cavity and jointed to main membrane.

Guide notes

1.	Void former height	Proprietary type – manufacturer and specification, in accordance with design? Installed property without damage
2.	Height of void space	Height of proprietary former of constructed ventilated space below suspended floor – note any debris on void/obstructions to air flow, note formation surface soil type (e.g. crushed concrete/brick), evidence of flooding
3.	Gravel type	Gravel type if used (limestone/granite etc) and any specification (e.g. 6F2), typical particle dimensions (mm), apparent fines content (low/high), compaction (loose/dense), waterlogging/contamination by clay, organic matter, other debris. Take photographs of stockpile or check details on delivery notes. Check depth of stone conforms to at least 300 mm if visible
4.	Pipe size and spacing	Diameter in mm; material type (e.g. PVC); slotted or perforated; positioning and spacing/separation and jointing as on design drawing – if not sketch arrangement – do pipes connect with external (telescopic/swan neck) vents? Take photographs of vents on external walls for each plot.
5.	External wall airbricks	Check numbers, size, and positions as design drawing – check for blockage e.g. mortar, soil, paving's etc
6.	Internal wall airbricks	Check ventilation holes e.g. honeycomb brickwork or pipe crossings – note size, spacing and location
7.	External vent trenches/ducts	Check whether located and constructed in accordance with design drawings; if open-topped gravel, note gravel type and presence of fines/contamination; if pipe or other vents – check positions and construction for functionality and absence of blockages – vents may be built over
8.	Membrane type	Note manufacturer and product specification, including batch/roll numbers if present – in accordance with specification? Check stock storage arrangements – protected from dirt and damage
9.	Extent of coverage	If membrane cover is incomplete, then further inspection will be required – note areas completed/incomplete – is membrane fully visible or have internal walls been constructed over membrane/screed placed?
10.	Underside of membrane	Where necessary, for example, when using a granular blanket as a ventilation layer, check the underside of the membrane has adequate protection e.g. minimum 50 mm no fines concrete blinding layer or appropriate geo-textile
11.	Slab/membrane condition	Record presence of ducts/rough surfaces, in particular sharp projections, below or above membrane; record locations of all punctures or repairs, note arrangements to protect membrane surface from traffic/tools and equipment/materials and temporary weighting down of membrane e.g. use of boards. Take photographs of each plot inspected.
12.	Laps and joints	Check that all joints are lapped and sealed in accordance with manufacturer's requirements/specification, particular where creases/folds are present (usually minimum 150 mm laps with double-sided tape between sheets and single sided tape on top surface; note size of sheets and frequency of edge seals). Take photographs of jointing for each plot
13.	Damp-proof course	Record DPC manufacturer and product code – usually integrated with the membrane; measure the DPC projection from external wall in mm; check laps and seals between membrane and DPC – note any potential stress points and tension between the two; check for damage to DPC

14.	Service entries and seals	Check top hat seal arrangement in accordance with design/specification (laps and seals between top hat and floor membrane, pipe upstand is usually a minimum 150 mm) check. Take photographs for all plots inspected
15.	Cavity inspection	Check gas membrane or gas resistant DPC is taken across cavity. Check for rips across cavity. Check for jointing detail of gas resistant DPC or membrane across cavity to main membrane. Take photographs for all plots inspected

This plot has PASSED inspection.

(any proposed remedial works should be noted in the 'Notes/comments' column of this form)

An additional inspection IS NOT required for this plot.

A selection of photographs are presented overleaf, the full set can be provided upon request.









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VALIDATION CERTIFICATE

is hereby granted to **Seddon Construction Ltd** for **Plot No. 73** at Nixon Street, Rochdale, OL11 3AG.

Alliance Design UK Ltd t/a EDGE Consulting Engineers certifies that the approved gas mitigation measures have been completed as required by the Local Planning Authority.



On behalf of EDGE Consulting Engineers

14/11/2023

Date

CONDITIONS OF ISSUE

1. Certificate to be issued alongside the validation record/verification report.
2. This certificate is issued by EDGE Consulting Engineers for the exclusive use of the certificate holder and its agents. No warranties or guarantees should be assumed by any third parties.
3. This certificate is limited to the verification of the installation of the gas membrane only. No professional liability is extended to any aspect of the design of the gas protection measures.
4. This certificate confirms the membrane lining system was defect free immediately following completion of the inspection(s). EDGE Consulting Engineers take no responsibility for the integrity of the lining system following any subsequent work.

APPENDIX D

Third Party Validation Record Sheets

SpS Substructure Protection Limited
Unit 2, Warth Mill, Huddersfield Road, Diggle, Oldham, OL3 5PJ
Phone 01457 87 8200 ~ Email admin@spsltd.co.uk
www.spsltd.co.uk

Certificate of Installation

Project: Nixon St, Rochdale

Client: Seddon Construction

Date of Installation: 6/11/23

Area Completed

Plot: 65

Membrane Installed: MG500

Installed to Manufacturer's Specifications: Yes

Number of Pipes on Installation: 4

Pipes Sealed with: Powerbond Detail Tape (Silver)

Photos Taken: Yes

Notes:

I confirm that I have inspected the works carried out and are satisfied that the condition and scope of works ordered has been executed in accordance with our sub-contract order and specification

SpS Installer: Barry Ridgway

SpS Substructure Protection Limited
Unit 2, Warth Mill, Huddersfield Road, Diggle, Oldham, OL3 5PJ
Phone 01457 87 8200 ~ Email admin@spsltd.co.uk
www.spsltd.co.uk

Certificate of Installation

Project: Nixon St, Rochdale

Client: Seddon Construction

Date of Installation: 6/11/23

Area Completed

Plot: 66

Membrane Installed: MG500

Installed to Manufacturer's Specifications: Yes

Number of Pipes on Installation: 4

Pipes Sealed with: Powerbond Detail Tape (Silver)

Photos Taken: Yes

Notes:

I confirm that I have inspected the works carried out and are satisfied that the condition and scope of works ordered has been executed in accordance with our sub-contract order and specification

SpS Installer: Barry Ridgway

SpS Substructure Protection Limited
Unit 2, Warth Mill, Huddersfield Road, Diggle, Oldham, OL3 5PJ
Phone 01457 87 8200 ~ Email admin@spsltd.co.uk
www.spsltd.co.uk

Certificate of Installation

Project: Nixon St, Rochdale

Client: Seddon Construction

Date of Installation: 6/11/23

Area Completed

Plot: 67

Membrane Installed: MG500

Installed to Manufacturer's Specifications: Yes

Number of Pipes on Installation: 4

Pipes Sealed with: Powerbond Detail Tape (Silver)

Photos Taken: Yes

Notes:

I confirm that I have inspected the works carried out and are satisfied that the condition and scope of works ordered has been executed in accordance with our sub-contract order and specification

SpS Installer: Barry Ridgway

SpS Substructure Protection Limited
Unit 2, Warth Mill, Huddersfield Road, Diggle, Oldham, OL3 5PJ
Phone 01457 87 8200 ~ Email admin@spsltd.co.uk
www.spsltd.co.uk

Certificate of Installation

Project: Nixon St, Rochdale

Client: Seddon Construction

Date of Installation: 6/11/23

Area Completed

Plot: 68

Membrane Installed: MG500

Installed to Manufacturer's Specifications: Yes

Number of Pipes on Installation: 4

Pipes Sealed with: Powerbond Detail Tape (Silver)

Photos Taken: Yes

Notes:

I confirm that I have inspected the works carried out and are satisfied that the condition and scope of works ordered has been executed in accordance with our sub-contract order and specification

SpS Installer: Barry Ridgway

APPENDIX E

Gas Barrier Membrane Datasheet

POWERBASE® MULTIGAS 500 GAS BARRIER MEMBRANE

PRODUCT DATA | Revision 5.2 | itpltd.com

Powerbase® Multigas Barrier is premium multilayer reinforced LDPE gas barrier membranes for radon, methane and CO_2. It incorporates an aluminium layer that is protected by a separate coating.

PRODUCT	Colour	Weight / Thickness EN 1849-2	Tensile strength EN 12311-1/2	Nail tear resistance EN 12310-1 Newtons	Elongation EN 12311-2 %	Compliance	NHBC gas proction measures	Gas permeability	Temperature range °C	Water vapour resistance	Sizes metres	Roll weight kg	Pallet quantity rolls
GAS BARRIER MEMBRANE													
Powerbase MULTIGAS 500	Silver/Green	370 gsm 0.5mm	MD 370 N/mm XD 347 N/mm	MD 295 XD 341	MD 22 XD 16	BS8485:2015+ A1:2019 CS2 compliant	Green Amber 1 & 2	Methane: 0.041 ml/day/m²/ATM CO_2:0.195 ml/day/m²/ATM EN ISO 15105-1 & ASTM D1434	-40 to +70	0.01gsm/day EN 1931 EN 12572(c)	2.0 x 50	38	33

Installation:
Join on site with hot-air or hot-wedge welding, or with Powerbond Butyl Tape. See separate installation instructions for full details.

Other Powerbase products:
Damp Proof Membranes • Hydrocarbon and Chemical Resistant Barriers

Powerbase® is a registered trademark of Industrial Textiles & Plastics Ltd. E&OE.

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ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026
Certificate Number 2318
itpltd.com

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Subject to the limitations, disclaimers and statements as set forth below, Industrial Textiles & Plastics Ltd represents to the Buyer that the product or products delivered to the Buyer conform(s) to the manufacturer's description and specifications attached to or delivered with the product.

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Agrément Certificate
21/5895
Product Sheet 1

INDUSTRIAL TEXTILES AND PLASTICS MEMBRANES

POWERBASE MULTIGAS MEMBRANE MG 500

This Agrément Certificate Product Sheet(1) relates to Powerbase Multigas Membrane MG 500, for use as a low-density polyethylene (LDPE) gas barrier and damp-proof membrane in concrete ground floors, above and below the slab not subject to hydrostatic pressure, to protect the building against moisture, radon, methane and carbon dioxide from the ground.

(1) Hereinafter referred to as 'Certificate'.



CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Resistance to water and water vapour — the membrane provides an effective barrier to the passage of liquid water and water vapour from the ground (see section 6).

Resistance to underground gases — the membrane is capable of restricting the ingress of radon, methane and carbon dioxide into the building (see section 7).

Resistance to puncture — the membrane has a high resistance to puncture and on a smooth or blinded surface will not be damaged by foot or site traffic (see section 8).

Durability — under normal service conditions, the membrane will remain effective against the ingress of water and water vapour, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the flooring construction in which it is installed (see section 12).

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrement

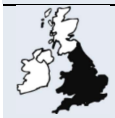
Date of First issue: 30 April 2021

Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body – Number 113.
The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk
Readers MUST check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

Regulations

In the opinion of the BBA, Powerbase Multigas Membrane MG 500, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	**C1(2)**	**Site preparation and resistance to contaminants**
Comment:		When properly installed in a correctly designed structure, the membrane forms an effective barrier to radon, methane and carbon dioxide, enabling compliance with this Requirement. See section 7.1 of this Certificate.
Requirement:	**C2(a)**	**Resistance to moisture**
Comment:		When properly installed in a correctly designed structure, the membrane forms an effective barrier to the movement of water within the ground floor slab, enabling compliance with this Requirement. See sections 6.1 and 6.2 of this Certificate.
Regulation:	**7(1)**	**Materials and workmanship**
Comment:		The membrane is an acceptable material. See section 12.1 and the *Installation* part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	**8(1)**	**Durability, workmanship and fitness of materials**
Comment:		The membrane can contribute to a construction satisfying this Regulation. See section 12.1 and the *Installation* part of this Certificate.
Regulation:	**9**	**Building standards applicable to construction**
Standard:	3.1	Site preparation – harmful and dangerous substances
Standard:	3.2	Site preparation – protection from radon gas
Comment:		The membrane will enable a floor to satisfy the requirements of these Standards, with reference to clauses 3.1.2(1)(2), 3.1.6(1)(2), 3.1.7(1)(2), 3.1.8(1)(2), 3.2.1(2) and 3.2.2(1)(2). See section 7.1 of this Certificate.
Standard:	3.4	Moisture from the ground
Comment:		When properly installed in a correctly designed structure, the membrane forms an effective barrier to the movement of water within the ground floor slab, enabling compliance with this Standard, with reference to clauses 3.4.2(1)(2), 3.4.4(1)(2) and 3.4.6(1)(2). See sections 6.1 and 6.2 of this Certificate.
Standard:	7.1(a)	Statement of sustainability
Comment:		The membrane can contribute to meeting the relevant requirements of Regulation 9, Standards 1 to 6 and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	**12**	**Building standards applicable to conversions**
Comment:		Comments in relation to the product under Regulation 9, Standards 1 to 6 also apply to this Regulation, with reference to clause 0.12.1(1)(2) and Schedule 6(1)(2).

(1) Technical Handbook (Domestic).
(2) Technical Handbook (Non-Domestic).

The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	**23(a)(i)**	**Fitness of materials and workmanship**
Comment:	**(iii)(b)(i)**	The membrane is acceptable. See section 12.1 and the *Installation* part of this Certificate.
Regulation:	**26**	**Site preparation and resistance to contaminants**
Comment:		When properly installed in a correctly designed structure, the membrane forms an effective barrier to radon, methane and carbon dioxide enabling compliance with this Regulation. See section 7.1 of this Certificate.
Regulation:	**28**	**Resistance to moisture and weather**
Comment:		When properly installed in a correctly designed structure, the membrane forms an effective barrier to the movement of water within the ground floor slab, enabling compliance with this Regulation. See sections 6.1 and 6.2 of this Certificate.

Construction (Design and Management) Regulations 2015
Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

See sections: 1 *Description* (1.2) and 3 *Delivery and site handling* (3.1) of this Certificate.

Additional Information

NHBC Standards 2021

In the opinion of the BBA, Powerbase Multigas Membrane MG 500, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Chapters 4.1 *Land quality – managing ground conditions* and 5.1 *Substructure and ground bearing floors.*

CE marking

The Certificate holder has taken the responsibility of CE marking the product, in accordance with harmonised European Standard BS EN 13967 : 2012.

Technical Specification

1 Description

1.1 Powerbase Multigas Membrane MG 500 is a multilayer, LDPE membrane, reinforced with a polypropylene reinforcing grid with an integral aluminium foil.

1.2 The membrane has the following nominal characteristics:

Thickness (mm)	0.6 (including reinforcement scrim)
Effective thickness (mm)	0.4 (measured between the reinforcement scrim)
Roll length (m)	50(1)
Roll width (m)	2(1)
Mass per unit area ($g \cdot m^{-2}$)	370
Tensile strength ($N \cdot 50\ mm^{-1}$)	
Machine direction	≥ 300
Cross direction	≥ 300

Elongation (%)	
Machine direction	≥ 20
Cross direction	≥ 20
Nail tear resistance (N)	
Machine direction	≥ 250
Cross direction	≥ 250
Watertightness (2 kPa)	pass
Colour[2]	
upper surface	Green
lower surface	Silver.

(1) Other sizes available on special order.
(2) Other colours available on special order.

1.3 Ancillary products for use with the membrane include:

- Powerbond double-sided jointing tape — a 30 mm wide butyl tape used to seal overlap joints and penetrations
- Powerbond Foil Tape — a 75 mm wide single-sided tape used in conjunction with Powerbond double-sided jointing tape to secure overlaps
- Powerbond Foil Detailing Tape – a 300 mm wide single-sided foil tape used in conjunction with Powerbond double-sided jointing tape at terminations around penetrations, at corners and other detailing.

1.4 Ancillary products for use with the membrane, but outside the scope of this Certificate, include:

- Top hats — to seal around penetrations through the membrane
- Prefabricated Internal/external corners
- Drainage/gas venting membranes
- Protection membranes/geotextiles
- Gas resistant damp-proof course (dpc).

2 Manufacture

2.1 The membrane is manufactured by an extrusion/coating process.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management system of the manufacturer has been assessed and registered as meeting the requirements of EN ISO 9001 : 2015 by BM Trada (Certificate 9325).

3 Delivery and site handling

3.1 Rolls are wrapped in polythene film. Each roll bears a label with the product name and the BBA Logo incorporating the number of this certificate. Rolls are supplied shrink-wrapped on pallets with a maximum of 33 rolls per pallet. Each roll has a nominal weight of 38 kg.

3.2 The rolls should be stored on the original pallet under cover and protected from sunlight and mechanical damage.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Powerbase Multigas Membrane MG 500.

Design Considerations

4 Use

4.1 Powerbase Multigas Membrane MG 500 is satisfactory for use as a gas-resistant barrier to restrict the ingress of radon, methane and carbon dioxide into buildings from landfill and naturally occurring sources.

4.2 Buildings in areas of risk should be constructed in accordance with the recommendations of BRE Report BR 211 : 2015 and following the guidance set out in BS 8485 : 2015.

4.3 The membrane is also satisfactory for use as a damp-proof membrane in accordance with CP 102 : 1973 Section 3, BS 8000-0 : 2014 and BS 8000-4 : 1989.

5 Practicability of installation

The membrane is designed to be installed by a competent general builder, or a contractor, experienced with this type of product.

6 Resistance to water and water vapour



6.1 The membrane, including joints, provides an effective barrier to the passage of liquid moisture from the ground.

6.2 The membrane will comply with the minimum sheet thickness for damp proof membranes detailed in the documents supporting the national Building Regulations.

6.3 The membrane is impervious to water and provides a waterproof layer capable of accepting minor structural movements without damage.

7 Resistance to underground gases



7.1 The membrane will restrict the ingress of radon, methane and carbon dioxide into buildings from landfill and naturally occurring sources and satisfy the performance criteria for a gas-resistant membrane as defined in BS 8485 : 2015.

7.2 Measured gas permeability/diffusion values on unjointed membrane are given in Table 1.

Table 1 Gas permeability of Powerbase Multigas Membrane MG 500

Gas	Method	Result
Methane(1)	BS ISO 15105-1	
- unjointed		≤ 0.04 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$
- welded joint		91 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$
- taped joint		190 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$
Carbon dioxide	BS ISO 15105-1	
- unjointed		≤ 0.1 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$
- welded joint		227 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$
- taped joint		761 $ml \cdot m^2 day^{-1} \cdot atm^{-1}$

(1) BS 8485 : 2015 requires that the methane transmission measured in accordance with BS ISO 15105-1 : 2007 for a gas-resistant membrane is <40 $ml \cdot m^{-2} d^{-1} \cdot atm^{-1}$.

7.3 In the opinion of the BBA, the membrane satisfies the criteria for a radon gas resistant membrane of BRE Report BR 211 : 2015.

8 Resistance to puncture

8.1 The membrane can be punctured by sharp objects and care should be taken when handling building materials over the exposed surface.

8.2 Provided there are no sharp objects present on the membrane's surface prior to and during installation of the protective layer, the membrane will not be damaged by normal foot traffic.

9 Compatibility with other materials

The membrane contains an aluminium foil interlayer which may be subject to corrosion by alkaline conditions if damage to the membrane and exposure occurs. However, under normal circumstances, the polyethylene faces of the membrane are compatible with other materials and products typically used in the same areas, with the exception of those containing pitch.

10 Underfloor heating

There will be no adverse effect on the membrane from the underfloor heating under normal service conditions. In other circumstances, the Certificate holder's advice should be sought.

11 Maintenance

As the membrane is confined under concrete and has suitable durability (see section 12), maintenance is not required. However, any damage occurring before enclosure must be repaired (see section 15).

12 Durability



12.1 The membrane will, in normal circumstances, remain effective against the ingress of water and water vapour, and will restrict the ingress of radon, methane and carbon dioxide during the lifetime of the building.

12.2 Long periods of exposure to ultraviolet light will reduce the effectiveness of the membrane.

Installation

13 General

13.1 Powerbase Multigas Membrane MG 500 must be installed and fixed in accordance with this Certificate, the Certificate holder's instructions, the relevant clauses of BRE Report BR 211 : 2015 and the guidance given in BS 8485 : 2015.

13.2 The membrane can be installed in all normal site conditions, provided that the air temperature is not below 5°C to reduce the risk of surface condensation.

14 Procedure

14.1 The membrane must only be applied to surfaces that have a smooth finish, ie they should be free from voids, projections and mortar deposits. Surfaces should be dry and free from dust and frost.

14.2 Concrete surfaces should be dense. Vertical surfaces of brickwork and blockwork must be dry and rendered to provide an even surface. Brickwork or blockwork not rendered must be flush pointed to give a smooth surface without sudden changes in level.

14.3 The membrane is rolled out with the green side uppermost, ensuring that it is properly aligned. All side and end overlaps should be a minimum of 150 mm where taped and prepared in accordance with the Certificate holder's instructions.

14.4 When the membrane is laid below the concrete slab, it should be loose-laid to accommodate any small movements.

14.5 All surfaces must be dried thoroughly prior to joining. Roll edges can be welded or taped by applying a strip of the Powerbond double-sided jointing tape over the membrane with its nearest edge 50 mm from the membrane edge. The protective paper is removed from the tape prior to rolling an adjacent run of the membrane, which must be carefully unrolled over the jointing tape, ensuring a 100 mm overlap. The overlap edge is then secured and protected using Powerbond Foil Tape. Jointed areas should be supported.

14.6 All service penetrations and direction changes should be properly detailed in accordance with the Certificate holder's instructions. Service ducts should be vented to prevent the possibility of gas accumulating in confined spaces.

14.7 The continuity of the gas protection must extend over the footprint of the building, and the membrane must be sealed to a gas-resistant dpc where required.

14.8 The membrane should be covered by a screed or other protective layer as soon as possible after installation.

14.9 The membrane installation should be subject to third-party independent validation, in accordance with BS 8485 : 2015.

15 Repair

Any damage to the membrane must be repaired using a patch of the membrane, and laps welded or sealed with Powerbond double sided tape and edges secured with Powerbond foil tape. All patched areas must extend a minimum of 100 mm from the damaged area. If required by the local authority, repair work should be confirmed by an independent validation report, as all gas membrane installations should be subject to third-party validation in accordance with BS 8485 : 2015.

Technical Investigations

16 Tests

16.1 Tests were carried out to determine:

- tensile strength and elongation
- foldability at low temperature
- width, flatness and straightness
- thickness and mass per unit area
- resistance to impact
- dimensional stability
- water vapour transmission
- watertightness (2 kPa)
- shear strength of welded joints
- resistance to static loading
- visible defects.

to assess:

- membrane characteristics
- durability of the membrane and joints.

16.2 An assessment was made of independent test data to BS EN 13967 : 2012 in relation to:

- watertightness
- resistance to impact (hard and soft supports)
- resistance to static loading
- resistance to tearing (nail shank)
- watertightness after ageing and exposure to chemicals (calcium hydroxide)
- water vapour transmission.

17 Investigations

17.1 An evaluation was made of the results of the test data regarding permeability of methane and carbon dioxide.

17.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

Bibliography

BRE Report BR 211 : 2015 *Radon : Guidance on protective measures for new buildings*

BS 8000-0 : 2014 *Workmanship on construction sites — Introduction and general principles*
BS 8000-4 : 1989 *Workmanship on building sites — Code of practice for waterproofing*

BS 8485 : 2015 + A1 : 2019 *Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings*

BS EN 13967 : 2012 + A1 : 2017 *Flexible sheets for waterproofing — Plastic and rubber damp proof sheets including plastic and rubber basement tanking sheet — Definitions and characteristics*

EN ISO 9001 : 2015 *Quality management systems — Requirements*

BS ISO 15105-1 : 2007 *Plastics. Film and sheeting — Determination of gas-transmission rate — Differential-pressure methods*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

18 Conditions

18.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page – no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document – it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

18.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

18.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

18.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

18.5 In issuing this Certificate the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

18.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.

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