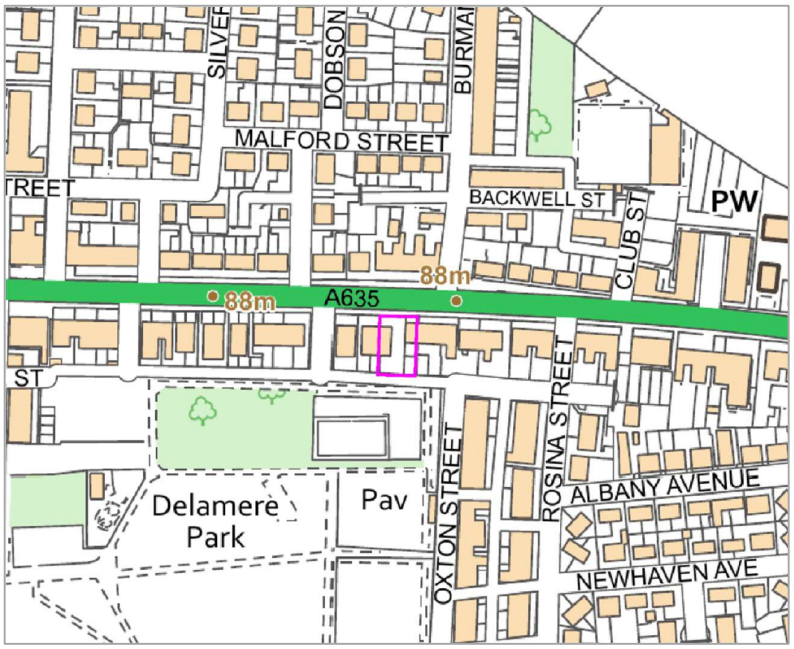
Carley Daines and Partners Limited
Consulting Civil and Structural Engineers

11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE
Tel: 0161 799 2720 Fax: 0161 790 3474
Email: mail@carleydaines.co.uk Web: www.carleydaines.co.uk

1468 ASHTON OLD ROAD

OPENSHAW

MANCHESTER M11 1HH



VALIDATION REPORT

UNDERTAKEN FOR

JAMIESON CONTRACTING

Ref:26-B-13881/Ashton Old Road **May 2026**

Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
Company Number: **11006567**
Address **11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE**
VAT Number: **285 0439 91**

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5	-	GAS MEMBRANE VALIDATION REPORT

Report Title:	**1468 Ashton Old Road, Openshaw, M11 1HH**
Report Reference:	**23-B-13881**
Revision:	**-**
Client:	**MSV Housing**
Original Issue Date:	**May 2026**
Authorised By:	**D.J. Middleton**

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Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
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VAT Number: **285 0439 91**

1.0 INTRODUCTION & OBJECTIVES

This report has been prepared at Manchester Council's request following the undertaking of the Phase 1 and 2 Site Investigations as well as a Remediation Statement.

The site is located on the south side of Ashton Old Road, Openshaw, M11 1HH approximately 6km east of Manchester City Centre. The NGR is 389790, 397320. The site has had no previous development and is very small, sitting between two existing houses dating from the 19th century.

The purpose of this Validation Report is to provide a summary of investigation works undertaken on the site, to summarise the agreed Remediation Strategy, and to present relevant documentation to demonstrate that the works have been completed in accordance with the agreed methodology.

2.0 SITE DEVELOPMENT

Planning Approval gave permission for a proposed new single property between two existing buildings.

3.0 RELEVANT PARTIES

The relevant parties to the development are as follows:

- Planning Authority – Manchester Council
- Client – MSV Housing
- Contractor – Jamieson Contracting
- Architect – BTP
- Engineering Consultant – Carley Daines & Partners
- Site Investigation Consultant – Carley Daines & Partners
- Specialist Sub-Contractors – Various
- Building Regulations Authority – Manchester Council
- Highway Authority – Manchester Council
- Drainage Authority – United Utilities

4.0 SITE APPRAISAL & KEY REFERENCE DOCUMENTS

In order to fulfil the requirements of the Planning Condition, the following procedure has been adopted and the following documents reviewed:

Combined Phase 1 Preliminary Risk Assessment and Phase 2 Geo-Environmental Investigation and Assessment – Carley Daines and Partners – dated 16th October 2023.

The Phase 1 assessment considers the site in its correct environmental and historical setting and makes recommendations for further investigations.

The Phase 2 section of the report is a detailed assessment of on-site contamination and its implications. Testing was carried out for a variety of contaminants, specifically metals and heavy metals, PAH (USEPA 16), asbestos, TPH, Phenols, BTEX and MTBE.

The report concluded that contamination testing indicated that the identified levels of soil contamination do not pose a threat to future health. No remediation in the form of capping was therefore proposed though a nominal thickness of clean inert material to a depth of 300mm was recommended as prudent. The build up was to be 150mm organic subsoil and 150mm organic topsoil both suitable as an growing medium. Any imported material was to be screened and tested for compliance.

Ground gas monitoring was undertaken with findings published in a Supplementary Report summarised in Section 5.0 of the remediation strategy. The Report identified elevated levels of carbon dioxide and recommended sub-structure gas protection to an "Amber 1" level as assessed against NHBC criteria.

5.0 REMEDIATION STATEMENT

The Remediation Statement is included in full in Appendix 4. This collates all previous reports and recommends that the required provision is as follows:

1. The construction of a capping layer 300mm thick to soft landscaped areas, comprising the following.

    - An upper layer of 150mm of clean organic inert topsoil
    - A lower layer of 150mm of clean organic inert subsoil

2. Installation of a gas membrane to mitigate against Carbon Dioxide to CS2/Amber 1 level. This was to be a Protech GM Super Gas Barrier system.

6.0 VARIATIONS TO THE REMEDIATION STATEMENT

There have been no significant variations to the Remediation Strategy during the works.

As a general comment, site conditions were found to be as had been anticipated and were generally in line with the comments above in the various site investigation reports, and the Remediation Strategy.

7.0 SITE VALIDATION

7.1 Topsoil Placement/Capping Layer

The areas of site remediated with a clean capping layer are indicated as the soft landscaping areas on the drawing in Appendix 2. In relation to the overall site, these amount to approximately 30% of the site. In these areas, a 300mm clean capping layer has been placed, and depth validation photographs are included in Appendix 3.

Soil test sample results have been taken for all imported material, which can be confirmed as clean, chemically uncontaminated and fit for purpose. Testing has been carried out for metals, PAH, TPH, asbestos, toluene, benzene, ethylbenzene and xylenes. Results are presented in Appendix 3.

Elsewhere, any pathway between contamination and potential future human receptors is broken by hard cover. The hard cover comprises the footprints of the buildings and paths.

7.2 Gas Membrane installation

A validation for the installation of the gas membrane is included in Appendix 5.

8.0 VALIDATION STATEMENT

Based upon site inspections and documentary evidence from Jamieson Contracting, together with on-site testing and appraisal, it is our opinion that the works undertaken have been carried out satisfactorily and the remediation targets have been achieved.

Given this we are of the opinion that health risks from the ground should be minimal in the future.

APPENDIX 1

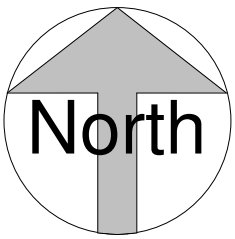
SITE LOCATION PLAN

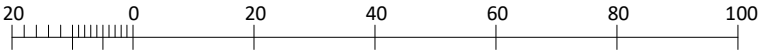
Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
Company Number: **11006567**
Address **11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE**
VAT Number: **285 0439 91**

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS MUST BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION

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Site boundary edged red

Property owned by the applicant edged blue

Rev	Date	Int	Description

btp ARCHITECTS — RIBA Chartered Practice

CLIENT:	JOB NO:	SCALE@
Jamieson Contracting Ltd	3764	1 : 1250

PROJECT: 1468 Ashton Old Road, Openshaw

DESCRIPTION:	DRAWN BY:	CHECKED	DATE:	STATUS	DRAWING NO:	Rev:
Location Plan	AJ	VS	19/11/24	S3	300	

PURPOSE OF ISSUE:	FILE IDENTIFIER:
Building Regulations	AR-BTP-00-LP-DR-A-3764_300

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A P P E N D I X 2

REMEDIATED AREAS

Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
Company Number: **11006567**
Address **11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE**
VAT Number: **285 0439 91**



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Condition No 10: Surface Water Drainage

EXTERNAL SURFACE TREATMENTS

Permeable asphalt to mitigate the increase in impermeable surfaces associated with the development.

New lawn / retained permeable landscaping.

Non-permeable concrete flags to small patio.

1 0 1 2 3 4 5
SCALE m
1: 100

Rev	Date	Int	Description

btp ARCHITECTS
RIBA Chartered Practice

CLIENT:
Jamieson Contracting Ltd

PROJECT:
1468 Ashton Old Road, Openshaw

DESCRIPTION:
Site as Proposed (GA)

DRAFT 28/11/24

PURPOSE OF ISSUE:
Building Regulations

DRAWN BY:	CHECKED	DATE:	SCALE @ A2:
AJ	VS	19/11/24	1 : 100

JOB NO:	STATUS CODE:	DRAWING NO:	REV
3764	S3	302	

FILE IDENTIFIER:
AR-BTP-00-SP-DR-A-3764_302

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APPENDIX 3

COVER SYSTEM VALIDATION REPORT

Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
Company Number: **11006567**
Address **11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE**
VAT Number: **285 0439 91**



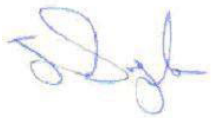
GROUNDTECH
CONSULTING

ASHTON OLD ROAD, OPENSHAW

COVER SYSTEM VALIDATION REPORT

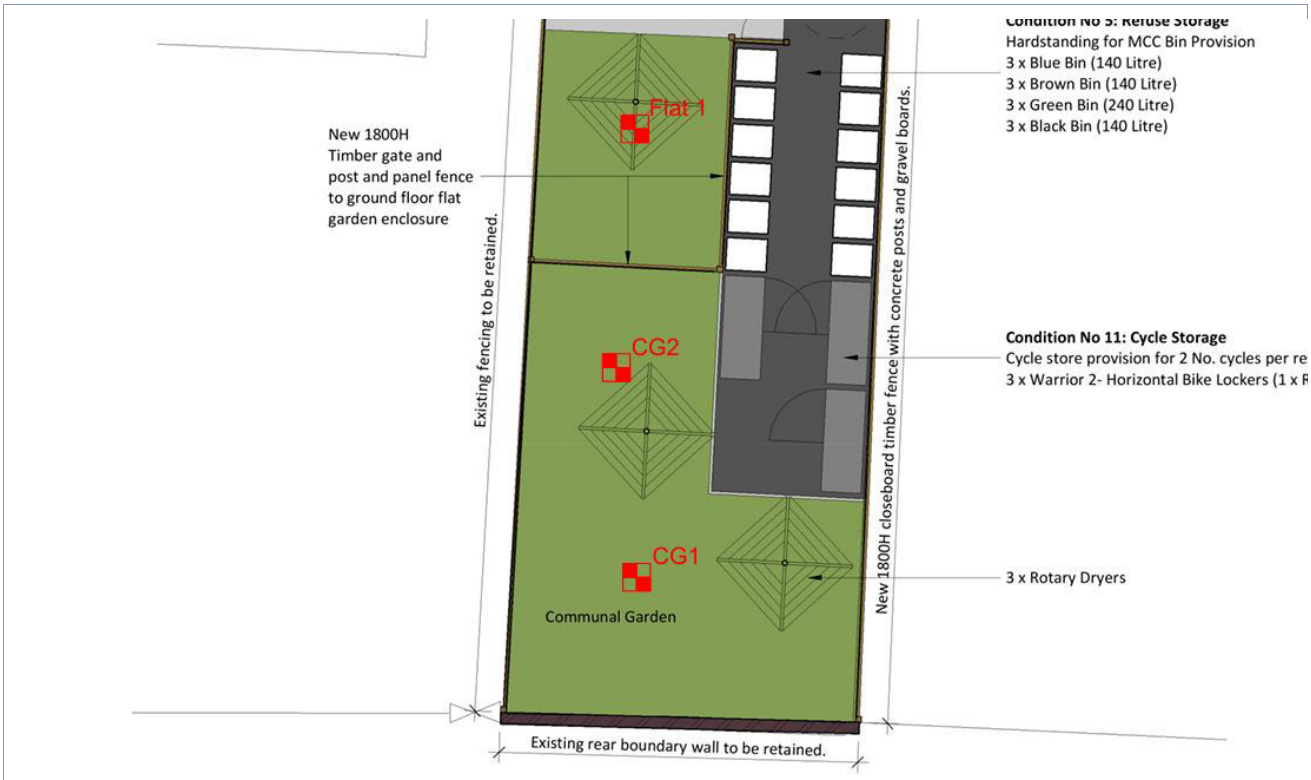
JAMIESON CONTRACTING

MAY 2026

Document Control Form	
PROJECT	*ASHTON OLD ROAD, OPENSHAW*
REPORT NAME	*COVER SYSTEM VALIDATION REPORT*
REPORT REFERENCE	*GRO-26112-6566*
STATUS	*FINAL*
ISSUE DATE	*05 MAY 2026*
REVISION	
CLIENT	*JAMIESON CONTRACTING*
CLIENT CONTACT	*MARTIN BANNERMAN*
For and Behalf of Groundtech Consulting	
SIGNATURE	
AUTHOR	Dan McMahon BSc (Hons) FGS
SIGNATURE	
CHECKED	Rebecca Rowlinson BSc (Hons) FGS
SIGNATURE	
REVIEWED	James Doyle BSc (Hons) CGeol FGS

Introduction

Groundtech Consulting visited the housing development at Ashton Olad Road in Openshaw to validate the depth of the cover system placed in the rear garden areas of the development as outlined in the Carley Daines and Partners Limited Phase 3 Remediation Statement referenced 23-B-13881/1468, dated May 2025. An extract showing the validation is presented below.



Plot Validation Plan

Please find below the Cover System Validation Report in accordance with the agreed scope of works.

Site Works

Groundtech Consulting carried out the following site visit:

- *01st April 2026 – to validate the depth suitability of the cover system in rear garden areas.*
- *22nd April 2026 – to obtain samples of cover system materials placed in soft landscaping areas.*

Cover System Chemical Suitability

The Topsoil and Subsoil material used within the cover system was clean imported material from a supplier. The criteria to confirm the suitability of imported material for use in the cover system is outlined in the Carley Daines and Partners Limited Remediation Statement. It was required for a minimum of three samples be taken from each source of material and tested for a range of Contaminants of Concern (CoC) including heavy metals, PAHs, TPHs, asbestos screening, pH and sulphate.

Three samples of Topsoil and three samples of Subsoil were tested and screened against Residential with Plant Uptake screening values in accordance with the Remediation Statement and no elevated CoC were recorded. The laboratory testing results are appended to this report.

Cover System Depth Validation

The depth of cover required within the proposed gardens is presented within Carley Daines and Partners Limited Remediation Statement. Areas of soft landscaping should have a nominal thickness of 300mm of clean inert material comprising a minimum of 150mm of topsoil and 150mm of subsoil.

As outlined in the Remedial Specification the depth of the cover should be verified by photographs. The depth validation tests were undertaken in the soft landscaping area which included the rear communal and private garden of the development.

An inspection pit was excavated by hand to confirm the placement of the cover system in the soft landscaping area. Photographs are appended to this report which verify the presence of at least 300mm of cover system comprising a minimum of 150mm of topsoil and 150mm of subsoil.

The cover system materials comprised slightly gravelly slightly clayey sand with minor constituents of chert. No anthropogenic materials were encountered in the topsoil or subsoil.

Conclusions

The material used for the cover system is deemed suitable for use by laboratory testing adhering to the Remediation Statement produced by Carley Daines and Partners Limited. The depth validation excavations in garden area confirm the presence of at least 300mm cover in accordance with the remedial requirements.

Based on the recent site visit and laboratory testing, the cover system installed is suitable for the proposed residential end use.

Plans



GROUNDTECH CONSULTING

CLIENT	JAMIESON CONTRACTING
PROJECT TITLE	ASHTON OLD ROAD
PLAN TITLE	COVER SYSTEM VALIDATION PLAN
DATE	MARCH 2026
SCALE	NTS
PLAN NUMBER	GRO-26112-P01

Rev.	Details	Date

Status	
Preliminary	
Draft	
Issued	●
For Comment	
Approved	

Notes

Laboratory Testing Results

Element Materials Technology
Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

P: +44 (0) 1244 833780
F: +44 (0) 1244 833781
W: www.element.com

Groundtech Consulting Limited
PO Box 499
Manchester
United Kingdom
M28 8EE

Attention :	Rebecca Rowlinson
Date :	1st May, 2026
Your reference :	GRO-26112
Our reference :	Test Report 26/6325 Batch 1
Location :	Ashton Old Road
Date samples received :	24th April, 2026
Status :	Final Report
Issue :	202605011504

Six samples were received for analysis on 24th April, 2026 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 18.969 kg of CO2

Scope 1&2&3 emissions - 44.828 kg of CO2

Authorised By:

Bruce Leslie
Project Manager

Please include all sections of this report if it is reproduced

Client Name: Groundtech Consulting Limited
Reference: GRO-26112
Location: Ashton Old Road
Contact: Rebecca Rowlinson
EMT Job No: 26/6325

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-11	12-14	15-18					LOD/LOR	Units	Method No.
Sample ID	TS01	SS01	TS02	SS02	TS03	SS03							
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V T	V J T	V J T							
Sample Date	22/04/2026	22/04/2026	22/04/2026	22/04/2026	22/04/2026	22/04/2026							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	24/04/2026	24/04/2026	24/04/2026	24/04/2026	24/04/2026	24/04/2026							
Arsenic #	13.8	17.6	13.2	11.9	13.1	12.2					<0.5	mg/kg	TM30/PM15
Cadmium #	0.4	0.7	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM30/PM15
Chromium #	43.1	42.9	48.9	47.9	39.5	37.7					<0.5	mg/kg	TM30/PM15
Copper #	56	70	52	44	57	43					<1	mg/kg	TM30/PM15
Lead #	170	181	119	87	113	90					<5	mg/kg	TM30/PM15
Mercury #	0.4	0.6	0.3	0.2	0.4	0.3					<0.1	mg/kg	TM30/PM15
Nickel #	18.2	20.6	16.1	36.1	16.2	21.8					<0.7	mg/kg	TM30/PM15
Selenium #	1	<1	<1	1	<1	<1					<1	mg/kg	TM30/PM15
Zinc #	126	222	112	94	105	96					<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	<0.04	<0.04	0.10	<0.04	0.17	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.07	0.05	0.12	<0.03	0.22	<0.03					<0.03	mg/kg	TM4/PM8
Acenaphthene #	0.11	<0.05	0.16	0.22	0.12	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene #	0.07	<0.04	0.10	0.15	0.16	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene #	1.11	0.49	0.97	1.64	1.66	0.34					<0.03	mg/kg	TM4/PM8
Anthracene #	0.30	0.13	0.30	0.38	0.42	0.09					<0.04	mg/kg	TM4/PM8
Fluoranthene #	2.24	1.07	2.44	2.54	2.82	0.60					<0.03	mg/kg	TM4/PM8
Pyrene #	1.95	0.99	2.20	2.26	2.73	0.57					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.07	0.59	1.29	1.07	1.47	0.30					<0.06	mg/kg	TM4/PM8
Chrysene #	1.14	0.64	1.38	1.19	1.59	0.35					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	1.75	0.92	2.19	1.57	2.50	0.41					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.17	0.63	1.50	1.07	1.74	0.29					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.71	0.37	0.86	0.55	1.03	0.15					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.12	0.08	0.16	0.11	0.21	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.63	0.35	0.74	0.55	0.96	0.16					<0.04	mg/kg	TM4/PM8
PAH 16 Total	12.4	6.3	14.5	13.3	17.8	3.3					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.26	0.66	1.58	1.13	1.80	0.30					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.49	0.26	0.61	0.44	0.70	0.11					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	105	102	106	117	108	119					<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	0.8	<0.1	<0.1	0.5	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	<4	<4	<4	<4	<4	<4					<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	<7	<7	<7	<7	<7	<7					<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	31	<7	22	<7	121	<7					<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-35 (EH_CU+HS_1D_AL)	31	<19	22	<19	122	<19					<19	mg/kg	TM5/TM36/PM8/PM12/PM16

Client Name: Groundtech Consulting Limited
Reference: GRO-26112
Location: Ashton Old Road
Contact: Rebecca Rowlinson
EMT Job No: 26/6325

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

EMT Sample No.	1-3	4-6	7-9	10-11	12-14	15-18					LOD/LOR	Units	Method No.
Sample ID	TS01	SS01	TS02	SS02	TS03	SS03							
Depth													
COC No / misc													
Containers	V J T	V J T	V J T	V T	V J T	V J T							
Sample Date	22/04/2026	22/04/2026	22/04/2026	22/04/2026	22/04/2026	22/04/2026							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	24/04/2026	24/04/2026	24/04/2026	24/04/2026	24/04/2026	24/04/2026							
TPH CWG													
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	<4	<4	<4	5	14	7					<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	52	28	21	22	87	42					<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	215	144	129	75	279	113					<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-35 (EH_CU+HS_1D_AR) #	267	172	150	102	380	162					<19	mg/kg	TM5/TM36/PM8/PM12/PM16
Total aliphatics and aromatics(C5-35) (EH_CU+HS_1D_Total)	298	172	172	102	502	162					<38	mg/kg	TM5/TM36/PM8/PM12/PM16
MTBE #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM36/PM12
Benzene #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM36/PM12
Toluene #	7	<5	<5	<5	7	<5					<5	ug/kg	TM36/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM36/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM36/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM36/PM12
Natural Moisture Content	24.4	28.4	23.0	22.6	20.6	24.1					<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #	0.0712	0.0651	0.0564	0.0343	0.0786	0.0364					<0.0015	g/l	TM38/PM20
Organic Matter	6.8	8.5	11.5	4.8	5.9	9.1					<0.2	%	TM21/PM24
pH #	7.67	7.67	7.72	8.25	7.68	8.25					<0.01	pH units	TM73/PM11

Client Name: Groundtech Consulting Limited

Reference: GRO-26112

Location: Ashton Old Road

Contact: Rebecca Rowlinson

Matrix : Solid

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	EPH Interpretation
26/6325	1	TS01		1-3	PAHs, Possible tarmac/bitumen & Naturally occurring compounds
26/6325	1	SS01		4-6	PAHs & Naturally occurring compounds
26/6325	1	TS02		7-9	PAHs, Possible tarmac/bitumen & Naturally occurring compounds
26/6325	1	SS02		10-11	PAHs & Naturally occurring compounds
26/6325	1	TS03		12-14	PAHs, Lubricating oil & Naturally occurring compounds
26/6325	1	SS03		15-18	PAHs & Naturally occurring compounds

Client Name: Groundtech Consulting Limited
Reference: GRO-26112
Location: Ashton Old Road
Contact: Rebecca Rowlinson

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
26/6325	1	TS01		3	Simon Postlewhite	25/04/2026	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	25/04/2026	**Asbestos Fibres**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Fibres (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type (2)**	NAD
26/6325	1	SS01		6	Simon Postlewhite	25/04/2026	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	25/04/2026	**Asbestos Fibres**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Fibres (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type (2)**	NAD
26/6325	1	TS02		9	Simon Postlewhite	25/04/2026	**General Description (Bulk Analysis)**	Brown soil/stones
					Simon Postlewhite	25/04/2026	**Asbestos Fibres**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Fibres (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos ACM (2)**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type**	NAD
					Simon Postlewhite	25/04/2026	**Asbestos Type (2)**	NAD
26/6325	1	SS02		11	Emily Smith	27/04/2026	**General Description (Bulk Analysis)**	Brown soil with stones
					Emily Smith	27/04/2026	**Asbestos Fibres**	NAD
					Emily Smith	27/04/2026	**Asbestos ACM**	NAD
					Emily Smith	27/04/2026	**Asbestos Type**	NAD
26/6325	1	TS03		14	Mathew Day	27/04/2026	**General Description (Bulk Analysis)**	Brown soil, stones
					Mathew Day	27/04/2026	**Asbestos Fibres**	NAD
					Mathew Day	27/04/2026	**Asbestos Fibres (2)**	NAD
					Mathew Day	27/04/2026	**Asbestos ACM**	NAD
					Mathew Day	27/04/2026	**Asbestos ACM (2)**	NAD
					Mathew Day	27/04/2026	**Asbestos Type**	NAD
					Mathew Day	27/04/2026	**Asbestos Type (2)**	NAD
26/6325	1	SS03		18	Mathew Day	24/04/2026	**General Description (Bulk Analysis)**	Brown soil, stones
					Mathew Day	24/04/2026	**Asbestos Fibres**	NAD

Client Name: Groundtech Consulting Limited
Reference: GRO-26112
Location: Ashton Old Road
Contact: Rebecca Rowlinson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
26/6325	1	SS03		18	Mathew Day	24/04/2026	**Asbestos Fibres (2)**	NAD
					Mathew Day	24/04/2026	**Asbestos ACM**	NAD
					Mathew Day	24/04/2026	**Asbestos ACM (2)**	NAD
					Mathew Day	24/04/2026	**Asbestos Type**	NAD
					Mathew Day	24/04/2026	**Asbestos Type (2)**	NAD

Client Name: Groundtech Consulting Limited
Reference: GRO-26112
Location: Ashton Old Road
Contact: Rebecca Rowlinson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analysis	Reason
No deviating sample report results for job 26/6325						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.
It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 26/6325

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 35°C ±5°C.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overesitimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.
Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).
Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

Tentatively Identified Compounds (TICs)

Where Tentatively Identified Compounds (TICs) are reported, up to 10 Tentatively Identified Compounds will be listed where there is found to be a greater than 80% match with the NIST library. The reported concentration is determined semi-quantitively, with a matrix specific limit of detection. Note, other compounds may be present but are not reported.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

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

EMT Job No: 26/6325

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35 degrees Celsius or 105 degrees Celsius. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM5/TM36	please refer to TM5 and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma-Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 degrees Celsius. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GCFID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes

EMT Job No: 26/6325

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) - All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) - All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No

Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 23-25218
Chemtest Sample ID.: 1679653
Client Sample Ref.:
Sample Location:
Client Sample ID.: 1
Top Depth (m):
Bottom Depth (m):
Date Sampled: 25/08/2025
Time Sampled:

Parameter	Units	Multipurpose Range	Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture					Acid	Low F	Calc.
Clay content (Sub Contracted)	%		7.7				
Silt content (Sub Contracted)	%		26				
Sand content (Sub Contracted)	%		66				
Soil texture class		See Attached Chart	Sandy Loam	YES			
Mass Loss on Ignition							
Clay 5-20%		3.0-20	4.9	YES	YES	YES	YES
Clay 20-35%		5.0-20					
Stone Content	% m/m						
>2mm (Sub Contracted)		0-30	13	YES			
>20mm (Sub Contracted)		0-10	0.20	YES			
>50mm (Sub Contracted)		0	< 0.10	YES			
Soil pH value		5.5-8.5	[A] 8.0	YES	NO	YES	YES
Carbonate (Calcareous only)	%		1.8				YES
Electrical Conductivity	µS/cm	If >3300 do ESP	[A] 2500	YES			
Available Nutrient Content							
Nitrogen %		>0.15	0.25	YES	YES		YES
Extractable phosphorus	mg/l	16-140	16	YES	YES	YES	YES
Extractable potassium	mg/l	121-1500	140	YES	YES		YES
Extractable magnesium	mg/l	51-600	73	YES	YES		YES
Carbon : Nitrogen Ratio		<20:1	11.3/1	YES	YES	YES	YES
Exchangeable sodium	%	<15	4.0				
Available Calcium	mg/l		390				
Available Sodium	mg/l		100				
Phytotoxic Contaminants (by soil pH)		< 6.0 | 6.0-7.0 | > 7.0					
Zinc (Nitric Acid extract)	mg/kg	<200 | <200 | <300	77	YES			
Copper (Nitric Acid extract)	mg/kg	<100 | <135 | <200	30	YES			
Nickel (Nitric Acid extract)	mg/kg	<60 | <75 | <110	12	YES			
Visible Contaminants	% mm						
>2mm		<0.5	0.000	YES			
..... of which plastics		<0.25	0.000	YES			
..... man-made sharps		zero in 1kg	0.000	YES			

Remedial Target Values

Generic Assessment Criteria (GAC)								
Proposed End Use	**Unit**	**Residential with Plant Uptake**			**Commercial**			**Source**
SOM	%	1	2.5	6	1	2.5	6	
Arsenic	*mg/kg*	*37*	*37*	*37*	*640*	*640*	*640*	*LQM S4ULs*
Beryllium	*mg/kg*	*1.7*	*1.7*	*1.7*	*12*	*12*	*12*	*LQM S4ULs*
Boron (water soluble)	*mg/kg*	*290*	*290*	*290*	*240000*	*240000*	*240000*	*LQM S4ULs*
Cadmium	*mg/kg*	*11*	*11*	*11*	*190*	*190*	*190*	*LQM S4ULs*
Chromium (Total)	*mg/kg*	*910*	*910*	*910*	*8600*	*8600*	*8600*	*LQM S4ULs*
Chromium (VI)	*mg/kg*	*6*	*6*	*6*	*33*	*33*	*33*	*LQM S4ULs*
Copper	*mg/kg*	*2400*	*2400*	*2400*	*68000*	*68000*	*68000*	*LQM S4ULs*
Lead	*mg/kg*	*200*	*200*	*200*	*2300*	*2300*	*2300*	*DEFRA C4SLs*
Organic Mercury	*mg/kg*	*1.2*	*1.2*	*1.2*	*26*	*26*	*26*	*LQM S4ULs*
Nickel	*mg/kg*	*130*	*130*	*130*	*980*	*980*	*980*	*LQM S4ULs*
Selenium	*mg/kg*	*250*	*250*	*250*	*12000*	*12000*	*12000*	*LQM S4ULs*
Vanadium	*mg/kg*	*410*	*410*	*410*	*9000*	*9000*	*9000*	*LQM S4ULs*
Zinc	*mg/kg*	*3700*	*3700*	*3700*	*730000*	*730000*	*730000*	*LQM S4ULs*
Aliphatic EC 5 - 6	*mg/kg*	*42*	*78*	*160*	*3200 (304) sol*	*5900 (558) sol*	*12000 (1150) sol*	*LQM S4ULs*
Aliphatic EC 6 - 8	*mg/kg*	*100*	*230*	*530*	*7800 (144) sol*	*17000 (322) sol*	*40000 (736) sol*	*LQM S4ULs*
Aliphatic EC 8 - 10	*mg/kg*	*27*	*65*	*150*	*2000 (78) sol*	*4800 (190) sol*	*11000 (451) vap*	*LQM S4ULs*
Aliphatic EC 10 - 12	*mg/kg*	*130 (48) vap*	*330 (118) vap*	*760 (283) vap*	*9700 (48) sol*	*23000 (118) vap*	*47000 (283) vap*	*LQM S4ULs*
Aliphatic EC 12 - 16	*mg/kg*	*1100 (24) sol*	*2400 (59) sol*	*4300 (142) sol*	*59000 (24) sol*	*82000 (59) sol*	*90000 (142) sol*	*LQM S4ULs*
Aliphatic EC 16 - 35	*mg/kg*	*65000 (8.48) f,sol*	*92000 (21) f,sol*	*110000 f*	*1600000 f*	*1700000 f*	*1800000 f*	*LQM S4ULs*
Aliphatic EC 35 - 44	*mg/kg*	*65000 (8.48) f,sol*	*92000 (21) f,sol*	*110000 f*	*1600000 f*	*1700000 f*	*1800000 f*	*LQM S4ULs*
Aromatic EC 5 - 7	*mg/kg*	*70*	*140*	*300*	*26000 (1220) sol*	*46000 (2260) sol*	*86000 (4710) sol*	*LQM S4ULs*
Aromatic EC 7 - 8	*mg/kg*	*130*	*290*	*660*	*56000 (869) vap*	*110000 (1920) sol*	*180000 (4360) vap*	*LQM S4ULs*
Aromatic EC 8 - 10	*mg/kg*	*34*	*83*	*190*	*3500 (613) vap*	*8100 (1500) vap*	*17000 (3580) vap*	*LQM S4ULs*
Aromatic EC 10 - 12	*mg/kg*	*74*	*180*	*380*	*16000 (364) sol*	*28000 (899) sol*	*34000 (2150) sol*	*LQM S4ULs*
Aromatic EC 12 -16	*mg/kg*	*140*	*330*	*660*	*36000 (169) sol*	*37000*	*38000*	*LQM S4ULs*
Aromatic EC 16 - 21	*mg/kg*	*260 f*	*540 f*	*930 f*	*28000 f*	*28000 f*	*28000 f*	*LQM S4ULs*
Aromatic EC 21 - 35	*mg/kg*	*1100 f*	*1500 f*	*1700 f*	*28000 f*	*28000 f*	*28000 f*	*LQM S4ULs*
Aromatic EC 35 - 44	*mg/kg*	*1100 f*	*1500 f*	*1700 f*	*28000 f*	*28000 f*	*28000 f*	*LQM S4ULs*
Benzene	*mg/kg*	*0.087*	*0.17*	*0.37*	*27*	*47*	*90*	*LQM S4ULs*
Toluene	*mg/kg*	*130*	*130*	*130*	*56000 (869)*	*110000 (1920)*	*180000 (4360)*	*LQM S4ULs*
Ethyl Benzene	*mg/kg*	*47*	*110*	*260*	*5700*	*13000*	*27000*	*LQM S4ULs*
Xylene - o	*mg/kg*	*60*	*140*	*330*	*6600*	*15000*	*33000*	*LQM S4ULs*
Xylene - m	*mg/kg*	*59*	*140*	*320*	*6200*	*14000*	*31000*	*LQM S4ULs*
Xylene - p	*mg/kg*	*56*	*130*	*310*	*5900*	*14000*	*30000*	*LQM S4ULs*
MTBE (methyl tert-butyl ether)	*mg/kg*	*49*	*84*	*160*	*7900*	*13000*	*24000*	*CL:AIRE 2010*
Acenaphthene	*mg/kg*	*210*	*510*	*1100*	*84000 (57) sol*	*97000 (141) sol*	*100000*	*LQM SAULs*
Acenaphthylene	*mg/kg*	*170*	*420*	*920*	*83000 (86.1) sol*	*97000 (212) sol*	*100000*	*LQM SAULs*
Anthracene	*mg/kg*	*2400*	*5400*	*11000*	*520000*	*540000*	*540000*	*LQM S4ULs*
Benzo(a)anthracene	*mg/kg*	*7.2*	*11*	*13*	*170*	*170*	*180*	*LQM S4ULs*
Benzo(a)pyrene	*mg/kg*	*2.2*	*2.7*	*3*	*35*	*35*	*36*	*LQM S4ULs*
Benzo(b)fluoranthene	*mg/kg*	*2.6*	*3.3*	*3.7*	*44*	*44*	*45*	*LQM S4ULs*
Benzo(ghi)perylene	*mg/kg*	*320*	*340*	*350*	*3900*	*4000*	*4000*	*LQM S4ULs*
Benzo(k)fluoranthene	*mg/kg*	*77*	*93*	*100*	*1200*	*1200*	*1200*	*LQM S4ULs*
Chrysene	*mg/kg*	*15*	*22*	*27*	*350*	*350*	*350*	*LQM S4ULs*
Dibenzo(ah)anthracene	*mg/kg*	*0.24*	*0.28*	*0.3*	*3.5*	*3.6*	*3.6*	*LQM S4ULs*
Fluoranthene	*mg/kg*	*280*	*560*	*890*	*23000*	*23000*	*23000*	*LQM S4ULs*
Fluorene	*mg/kg*	*170*	*400*	*860*	*63000 (30.9) sol*	*68000*	*71000*	*LQM S4ULs*
Indeno(123-cd)pyrene	*mg/kg*	*27*	*36*	*41*	*500*	*510*	*510*	*LQM S4ULs*
Naphthalene	*mg/kg*	*15 f*	*36 f*	*85 f*	*1600 f*	*3700 f*	*8400 f*	*LQM S4ULs*
Phenanthrene	*mg/kg*	*95*	*220*	*440*	*22000*	*22000*	*23000*	*LQM S4ULs*
Pyrene	*mg/kg*	*620*	*1200*	*2000*	*54000*	*54000*	*54000*	*LQM S4ULs*

Generic Assessment Criteria (GAC)

Proposed End Use	Unit	Residential with Plant Uptake			Commercial			Source
SOM	%	1	2.5	6	1	2.5	6	
Phenol	*mg/kg*	*120*	*200*	*380*	*440*	*690*	*1300*	*LQM S4ULs*
Chlorophenols	*mg/kg*	*0.87* [g]	*2*	*4.5*	*3500*	*4000*	*4300*	*LQM S4ULs*
Pentachlorophenol	*mg/kg*	*0.22*	*0.52*	*1.2*	*400*	*400*	*400*	*LQM S4ULs*
Carbon disulphide	*mg/kg*	*0.14*	*0.29*	*0.62*	*11*	*22*	*47*	*LQM S4ULs*
Hexachlorobutadiene	*mg/kg*	*0.29*	*0.7*	*1.6*	*31*	*66*	*120*	*LQM S4ULs*
1,1,1,2 Tetrachloroethane	*mg/kg*	*1.6*	*3.4*	*7.5*	*270*	*550*	*1100*	*LQM S4ULs*
1,1,1 Trichloroethane	*mg/kg*	*8.8*	*18*	*39*	*660*	*1300*	*3000*	*LQM S4ULs*
Trichloroethene	*mg/kg*	*0.016*	*0.034*	*0.075*	*1.2*	*2.6*	*5.7*	*LQM S4ULs*
Tetrachoromethane (Carbon Tetrachloride)	*mg/kg*	*0.026*	*0.056*	*0.13*	*2.9*	*6.3*	*14*	*LQM S4ULs*
1,2-Dichloroethane	*mg/kg*	*0.0071*	*0.011*	*0.019*	*0.67*	*0.97*	*1.7*	*LQM S4ULs*
Chloroethene (Vinyl chloride)	*mg/kg*	*0.00064*	*0.00087*	*0.0014*	*0.059*	*0.077*	*0.12*	*LQM S4ULs*
Trichloromethane (Chloroform)	*mg/kg*	*0.91*	*1.7*	*3.4*	*99*	*170*	*350*	*LQM S4ULs*
Tetrachloroethene	*mg/kg*	*0.18*	*0.39*	*0.9*	*19*	*42*	*95*	*LQM S4ULs*
Hexachlorobenzene	*mg/kg*	*1.8 (0.2)* [vap]	*3.3 (0.5)* [vap]	*4.9*	*110 (0.2)* [vap]	*120*	*120*	*LQM S4ULs*
Pentachlorobenzene	*mg/kg*	*5.8*	*12*	*22*	*640 (43)* [sol]	*770 (107)* [sol]	*830*	*LQM S4ULs*
1,2,4,5-Tetrachlorobenzene	*mg/kg*	*0.33*	*0.77*	*1.6*	*42 (19.7)* [sol]	*72 (49.1)* [sol]	*96*	*LQM S4ULs*
1,2,3,5-Tetrachlorobenzene	*mg/kg*	*0.66*	*1.69*	*3.7*	*49 (39.4)* [vap]	*120 (98.1)* [vap]	*240 (235)* [vap]	*LQM S4ULs*
1,2,3,4-Tetrachlorobenzene	*mg/kg*	*15*	*36*	*78*	*1700 (122)* [vap]	*3080 (304)* [vap]	*4400 (728)* [vap]	*LQM S4ULs*
1,3,5-Trichlorobenzene	*mg/kg*	*0.33*	*0.81*	*1.9*	*23*	*55*	*130*	*LQM S4ULs*
1,2,4-Trichlorobenzene	*mg/kg*	*2.6*	*6.4*	*15*	*220*	*530*	*1300*	*LQM S4ULs*
1,2,3-Trichlorobenzene	*mg/kg*	*1.5*	*3.6*	*8.6*	*102*	*250*	*590*	*LQM S4ULs*
1,4-dichlorobenzene	*mg/kg*	*61* [f]	*150* [f]	*350* [f]	*4400* [f] *(224)* [vap]	*10000 (540)* [vap]	*23000 (1280)* [vap]	*LQM S4ULs*
1,3-dichlorobenzene	*mg/kg*	*0.4*	*1*	*2.3*	*30*	*73*	*170*	*LQM S4ULs*
1,2-Dichlorobenzene	*mg/kg*	*23*	*55*	*130*	*2000 (571)* [sol]	*4800 (1370)* [sol]	*11000 (3240)* [sol]	*LQM S4ULs*
Chlorobenzene	*mg/kg*	*0.46*	*1*	*2.4*	*56*	*130*	*290*	*LQM S4ULs*
Gamma-Hexachlorocyclohexane	*mg/kg*	*0.06*	*0.14*	*0.33*	*67*	*69*	*70*	*LQM S4ULs*
Beta-Hexachlorocyclohexane	*mg/kg*	*0.085*	*0.2*	*0.46*	*65*	*65*	*65*	*LQM S4ULs*
Alpha -Hexachlorocyclohexane	*mg/kg*	*0.23*	*0.55*	*1.2*	*170*	*180*	*180*	*LQM S4ULs*
Beta -Endosulfan	*mg/kg*	*7*	*17*	*39*	*8500 (0.00007)* [vap]	*7800 (0.0002)* [vap]	*8700*	*LQM S4ULs*
Alpha-Endosulfan	*mg/kg*	*7.4*	*18*	*41*	*5600 (0.003)* [vap]	*7400 (0.007)* [vap]	*8400 (0.016)* [vap]	*LQM S4ULs*
Dichlorvos	*mg/kg*	*0.032*	*0.066*	*0.14*	*140*	*140*	*140*	*LQM S4ULs*
Atrazine	*mg/kg*	*3.3*	*7.6*	*17.4*	*9300*	*9400*	*9400*	*LQM S4ULs*
Dieldrin	*mg/kg*	*0.97*	*2*	*3.5*	*170*	*170*	*170*	*LQM S4ULs*
Aldrin	*mg/kg*	*5.7*	*6.6*	*7.1*	*170*	*170*	*170*	*LQM S4ULs*
HMX	*mg/kg*	*5.7*	*13*	*26*	*110000*	*110000*	*110000*	*LQM S4ULs*
2,4,6-Trinitrotoulene	*mg/kg*	*1.6*	*3.7*	*8.1*	*1000*	*1000*	*1000*	*LQM S4ULs*
RDX	*mg/kg*	*120*	*250*	*540*	*210000*	*210000*	*210000*	*LQM S4ULs*

[sol] S4UL exceeds the solubility saturation limit (which is presented in brackets)

[vap] S4ULS presented exceeds the vapour saturation limit, which is presented in brackets

[f] For naphthalene, the S4UL is based on a comparison of inhalation exposure with the TDI_{inhal} for localised affects

[f] S4UL based on comparison of inhalation exposure with inhalation TDI for localised effects

[dir] S4ULs based on a threshold protecive direct skin contact with phenol (guideline in brackets based on health effects following long term exposure provided for illustation only

Depth Validation Photographs



Photograph 1 – Communal Garden



Photograph 2 – Communal Garden



Photograph 3 – Communal Garden



Photograph 4 – Communal Garden



Photograph 5 – Communal Garden



Photograph 6 – Communal Garden



Photograph 7 – Flat Garden Area



Photograph 8 – Flat Garden Area



Photograph 9 – Flat Graden Area

Limitations

Limitations

This report (Report) forms part of the Services and if applicable Additional Services undertaken by Groundtech Consulting Ltd pursuant to a written contract (Agreement) which contains detailed provisions including express limitations of the liability of Groundtech Consulting Ltd.

This Report was prepared using reasonable skill and care as stated in the Agreement for the purpose including intended end use stated by the Client (Purpose) and the liability of Groundtech Consulting Ltd in respect of the form and content of this Report is no greater than its liability under the Agreement. All records, measurements notes, or any other data (Data) obtained by or for the benefit of the Consultant were obtained at a specific point in time and it may not be assumed by the Client or any person relying on this Report that the Data will remain unaffected by the passage of time, the seasons, weather conditions, changes in the water table or the carrying out and completion of works at the Site.

Unless otherwise agreed this Report has been prepared exclusively for the use and reliance of the Client and may not be relied upon, by any other party except as provided for in the Agreement. A third party who relies on this Report, does so at their own and sole risk and Groundtech Consulting Ltd has no liability to such parties.

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Since the Report was written, later changes in legislation, statutory requirements and industry best practices have not been considered and this should be allowed for. Ground conditions can also change (see below) and should be investigated if there is any significant delay in acting on the findings of this Report. The period of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the Report inaccurate or unreliable. The information and conclusions in this Report should not be relied upon in the future without written confirmation from Groundtech Consulting Ltd that it is safe to do so.

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Groundtech Consulting Ltd is not liable for the existence of any condition, the discovery of which would require additional investigation outside the agreed scope of works or core competency. The Report is based upon Groundtech Consulting Ltd's observations of existing physical conditions at the Site gained from site reconnaissance together with interpretation of information including documentation, obtained from third parties and from the Client on the history and usage of the Site. The findings and recommendations contained in this Report are based in part upon information provided by third parties, and Groundtech Consulting Ltd have relied upon such information assuming it to be correct.

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Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions may also vary due to the ground's heterogeneous properties and because investigation exploratory locations only allow examination of the ground at discrete

locations. The potential exists for ground conditions to be encountered which are different to those considered in this Report, particularly between exploratory holes. The extent of the limited area depends on the soil and groundwater conditions, together with other constraints such as the position of any existing structures and underground utilities. If so stipulated in the Agreement, geo-environmental testing was carried out for a limited number of parameters based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

Any groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The groundwater level often has not had time to reach equilibrium and a monitoring period is required. Furthermore, groundwater levels are subject to seasonal variation or changes in local drainage conditions and groundwater levels may occur at other times of the year which are higher than were recorded during this investigation.

Any site drawings provided in this Report are preliminary and used to present the general relative locations of features on, and surrounding, the Site.



APPENDIX 4

REMEDIATION STRATEGY

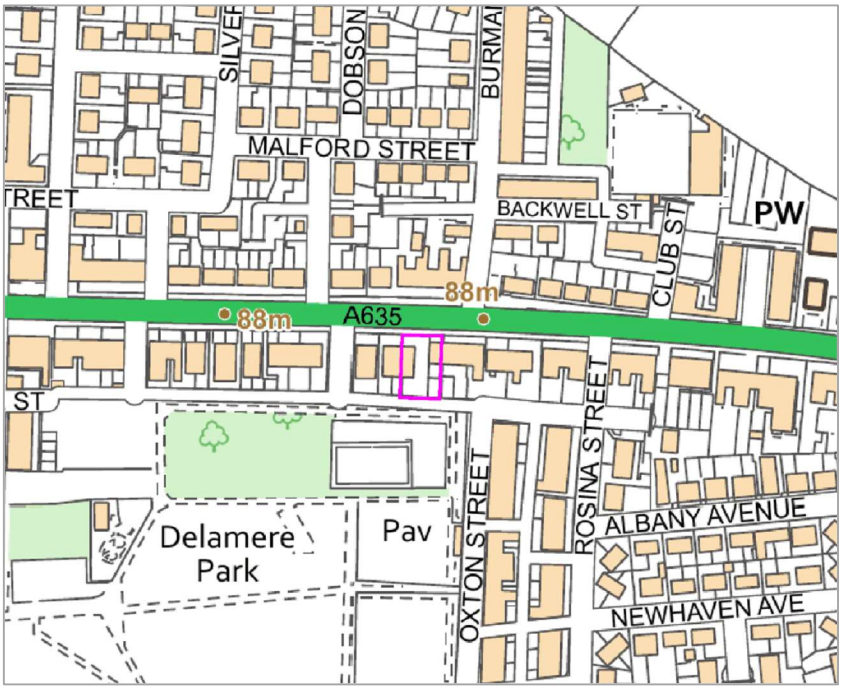
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1468 ASHTON OLD ROAD

OPENSHAW

MANCHESTER M11 1HH



PHASE 3 REMEDIATION STATEMENT

UNDERTAKEN FOR

MSV HOUSING

Ref:23-B-13881/1468 Ashton Old Road **Revision 'C'** **6th May 2025**

Principal: **D.J. Middleton BEng(Hons) CEng MIStructE**
Company Number: **11006567**
Address **11 Bridgewater Road, Walkden, Worsley, Manchester M28 3JE**
VAT Number: **285 0439 91**

Report Title:	**1468 Ashton Old Road, Openshaw, M11 1HH**
Report Reference:	**23-B-13881**
Revision:	**C – 6th May 2025**
Client:	**MSV Housing**
Original Issue Date:	**12th November 2024**
Authorised By:	**D.J. Middleton**

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1.0 INTRODUCTION

This report has been prepared at the Client's request following the Phase 1 & 2 Site Investigation.

The site is located on the south side of Ashton Old Road, Openshaw, M11 1HH approximately 6km east of Manchester City Centre. The NGR is 389790, 397320. The site has had no previous development and is very small, sitting between two existing houses dating from the 19th century.

2.0 PROPOSED DEVELOPMENT

Preliminary plans that have been made available indicate a future development of a single property between the existing buildings.

3.0 PHASE 1 / 2 SITE INVESTIGATIONS

A combined Phase 1 & Phase 2 investigation has been undertaken by Messrs Carley Daines and Partners Limited. The Report is dated 16th October 2023.

This indicates that the site has maximum dimensions of approximately 32m by 5.5m. The area is approximately 175m^2 (0.0175 ha).

The site is currently undeveloped and appears to have remained so over a very lengthy period.

The site is in an area of mainly residential development though with some mixed commercial & retail usage.

The Phase 2 Ground Investigation was based on 2 boreholes to a maximum depth of 4.5m and a single trial pit, yielding 3 soil samples for laboratory testing.

4.0 REVIEW OF CONTAMINATION RESULTS

Testing was carried out on soil samples selected from trial pits and window sample holes. Tests were undertaken for the following contaminants:

- Metals (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc).
- PAH (USEPA16)
- TPH (Aromatic & Aliphatic)
- Asbestos screening and identification
- pH and Sulphate concentration
- BTEX & MTBE

Contamination testing indicated no elevated concentrations of contaminants present on site that might pose a present or future risk to human health. Contamination levels were compared against trigger values within S4UL / C4SL – "Residential with Home Grown Produce – SOM 1%".

The report recommended that gas monitoring be undertaken.

5.0 REMEDIATION STRATEGY

Following a review of the Phase 2 Site Investigation, and comparison with published sources, it is our opinion that the identified levels of soil contamination do not pose a threat to future health.

However, it should be appreciated that this is a very small site with much of the area covered by either the new building footprint or hardstanding. No remediation in the form of capping is therefore proposed though a nominal thickness of clean inert material to a depth of 300mm would be prudent. Thew build up of this should be 150mm organic subsoil and 150mm organic topsoil both suitable as an growing medium. Any imported material should be screened and tested for compliance.

In addition, it is recommended that a "watching brief" is maintained during the groundworks. This is to identify and investigate any unexpected/unforeseen contamination that might arise or become visible.

The watching brief should be undertaken by this firm or other suitably qualified equivalent professional firm. If further contamination is identified or suspected, notification should be by the contractor's on-site personnel as soon as possible.

6.0 GROUND GASES

Ground gas monitoring has been completed and the results are contained in an Addendum Report dated 23rd February 2024. The procedure identified elevated levels of carbon dioxide and recommended that gas protection measures be installed to a minimum of "Amber 1" level.

The ground floor construction is as follows:-

- 75 max. sand/cement reinforced screed
- 500 Gauge separating layer – visqueen or similar approved
- 150mm Kooltherm K103 insulation
- Protech GM Super Gas Barrier
- 150mm beam and block floor (to specialist design)

7.0 VALIDATION

Validation will be required on completion. To ensure that all elements of this Remediation Statement are properly implemented, a final Validation Report will be prepared by Carley Daines & Partners Limited or other appropriately qualified consultant, confirming that the remedial works have been completed.

The validation report will confirm the following:

- Confirmation that any imported materials are suitable for the proposed end use. This will be undertaken by recovery of representative soil samples after importation for testing.

- A testing regime on imported material should be carried out, including testing one sample per 50m^3 of imposed material (from a brownfield source) and one sample per 200m^3 of imported material

- (from a greenfield source). A minimum of 3 such samples will be carried out for materials from differing types and from different sources.

- The imported material shall be tested for the following:-
    - Metals (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium and Zinc).
    - PAH (USEPA16)
    - TPH (Aromatic & Aliphatic)
    - Asbestos screening and identification
    - pH and Sulphate concentration
    - Monoaromatics & Oxygenates

- Depths of imported material will be verified by photographs.

- Certification and validation of the gas protection measures.

A summary of future actions is listed in the table hereunder:

Summary of Action	
Action	Responsible Party
Site Management procedures to protect site neighbours, environment and amenity during works, including a) Health & Safety plans and procedures b) Dust, noise & odour suppression/controls, including monitoring protocols c)Control of surface water runoff d)Site Waste Management Plan (SWMP)	Main Contractor
Assessment of ground conditions if unanticipated or obviously very high levels of contamination are uncovered, plus appropriate additional testing of such material.	Main Contractor CD&P Ltd NHBC Building Control
Method Statement indicating the procedure for removal of potentially contaminated material, and placement of clean cover throughout all areas of soft landscaping within the development	Main Contractor
Provide suitable protection to site utilities in accordance with the requirements of the service provider	Main Contractor
Witness/verify the placement of correct thickness of clean cover materials in accordance with this report	Consultant/Contractor
Laboratory testing to confirm the suitability of the clean cover materials post placement	Consultant/Contractor
Validation of the gas protection measures	Independent Specialist
Completion of post-site works Final Validation Report, including watching brief update/confirmation of no changes from the original remediation strategy/waste transfer notes/photographs/material test results/gas validation report	Consultant

APPENDIX 5

GAS PROTECTION VERIFICATION REPORT

GeoShield Verification Report 001

PROJECT REFERENCE:	GEO105507
PROJECT ADDRESS:	Ashton Old Road Manchester M11 1HH
SPECIFICATION:	Verified in accordance with CIRIA 735. Design in accordance with BS8485 2015 + 2019 for Methane and Carbon Dioxide. Substrate prepared in accordance with manufacturer's instructions.
MATERIAL SPECIFICATION:	Proctor Protech GM Super Proctor SAGM Proctor GM Primer

GeoShield Verification Report

NAME OF SURVEYOR:	Liam England
VERIFICATION COMPANY:	GeoShield Limited
COMPANY ADDRESS:	Icon Business Centre
	4100 Park Approach, Thorpe Park
	Leeds
	LS15 8GB
CONTACT NUMBER:	07551 259023
EMAIL ADDRESS:	lengland@geoshield.co.uk

GeoShield Verification Report

INSPECTION AREA(S)

1468 Ashton Old Road - Full Line Out

SITE CONDITIONS

WEATHER:	Sunny
TEMPERATURE:	23c
TIME:	11:45 - 13:15
DATE:	11.08.2025
REPORT NUMBER:	001
ACCOMPANIED BY:	Leon - JCW

GeoShield Verification Report

CLIENT DETAILS

CLIENT CONTACT:	Leo Piri
CONTACTS ROLE:	Director
MOBILE PHONE:	07551622839
EMAIL ADDRESS:	Leo@jcwgroup.co.uk

CLIENT CONTACT:	
CONTACTS ROLE:	
MOBILE PHONE:	
EMAIL ADDRESS:	
NOTES:	

GeoShield Verification Report

APPLICATOR'S DETAILS

APPLICATOR NAME:	Leon
COMPANY:	JCW Gas Mmebranes
APPLICATOR TEL:	07985 416545
APPLICATOR EMAIL:	

APPLICATOR NAME:	
COMPANY:	
APPLICATOR TEL:	
APPLICATOR EMAIL:	
NOTES:	

GeoShield Verification Report

VERIFICATION LAYOUT



The photograph above shows a plan layout of the site.

GeoShield Verification Report

VERIFICATION LAYOUT



The photograph above shows a plan layout of the site. The area highlighted in red shows where the verification inspection took place on site today.

GeoShield Verification Report

OVERVIEW



The photograph above displays an overview of the area where today's verification inspection took place on site.

GeoShield Verification Report

VERIFICATION ITEM ONE

AREA INSPECTED: 1468 Ashton Old Road - Full Line Out

INSPECTION DETAILS: Installation of Proctor Protech GM Super





NOTES:

A complete line out of Proctor Protech GM Super has been installed across the block and beam ventilated sub floor voids of the referenced plots. The Proctor Protech GM Super has been taken over the internal party walls and all external cavities to ensure continuity throughout.

NOTES:

All lap joints between the adjacent sheets of Proctor Protech GM Super have been overlapped a minimum of 100mm and heat welded using a hot air leister and silicone roller with adequate pressure applied to ensure a continuous weld is achieved. The install was in accordance with the manufacturer specifications.

GeoShield Verification Report

VERIFICATION ITEM ONE



All lap joints were subjected to thorough visual inspections, supported by mechanical point stress testing and non destructive air lance integrity testing throughout the installation where no faults or defects were identified at the time of the verification. Tested and passed in accordance with CIRIA 735.

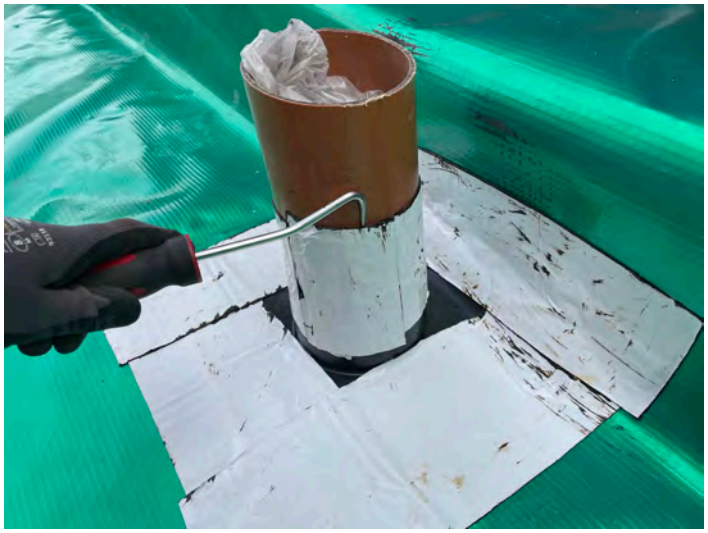
GeoShield Verification Report

VERIFICATION ITEM TWO

AREA INSPECTED: 1468 Ashton Old Road - Full Line Out

INSPECTION DETAILS: Sealing of Pipe Penetrations





NOTES:

Throughout the complete line out installation of the Proctor Protech GM Super to the referenced plots, there were a number of pipe penetrations that have been sealed in accordance with manufacturer's specifications and design guidelines. This has been achieved using Proctor SAGM, which is a gas resistant

NOTES:

self adhesive membrane. The installers have first cut the Proctor Protech GM Super tightly around the base of each pipe penetration to minimise voided areas. Next, patches of Proctor SAGM are placed intricately in a petal formation around the pipe penetration and onto the Proctor Protech GM Super, with a 300mm square

GeoShield Verification Report

VERIFICATION ITEM TWO



of Proctor SAGM placed over the top to form a top hat detail. Heat and rolled pressure are applied to activate the bitumen backing, creating a secure bond between the pipe penetration and gas barrier. All pipe penetrations throughout the referenced plots were subjected to thorough visual inspection, mechanical point stress testing and non destructive air lance integrity testing. No faults or defects were identified.

GeoShield Verification Report

VERIFICATION ITEM THREE

AREA INSPECTED: 1468 Ashton Old Road - Full Line Out

INSPECTION DETAILS: Sealing of Corners and Thresholds





NOTES:

A number of corners and thresholds throughout the referenced plots have also been sealed as per manufacturer's specifications and design guidelines. This has been achieved using Proctor SAGM. Where the Proctor Protech GM Super has been cut to minimise voided areas and gaps across the footprint of the plots, each

NOTES:

corner and threshold junction has been reinforced by heating strips of Proctor SAGM and placing into position around each corner and threshold, onto the Proctor Protech GM Super. Firm rolled pressure is applied with a silicone roller to aid in the adhesion, ensuring the Proctor SAGM has fully bonded.

GeoShield Verification Report

VERIFICATION ITEM THREE



As with the pipe penetrations, a probe and air lance were run along all edges of the Proctor SAGM within the corner & threshold detailing to validate that a continuous gas resistant seal had been achieved throughout. No faults or defects were identified with the corners and thresholds during the testing procedures.
Tested and verified in accordance with CIRIA 735.

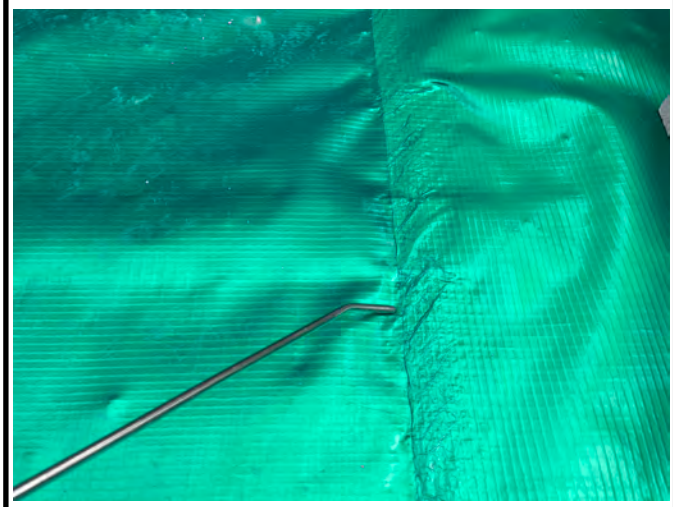
GeoShield Verification Report

AIR LANCE INTEGRITY TESTING

Air Lance Integrity Testing - ASTM D4437-08:2013. This inspects all seams for unbonded areas using a 4.8mm air nozzle held a minimum of 51mm away. 50 PSI is the minimum requirement. The air nozzle is directed on the upper edge seam, ripples indicate an unbonded seam. Each fault identified is highlighted for remediation to take place.



Air lance gauge showing 50psi



Air lance integrity test on a lap joint.



Air lance integrity test on a lap joint.



Air lance integrity test on a lap joint.

GeoShield Verification Report

REMEDIATION LOG

Date	No.	Remediation Description	Y/N
11/08/2025	001	No faults or defects were identified during today's visit.	✔

GeoShield Verification Report

GAS MEMBRANE TESTING

VISUAL /PICK & PROBE:	✔	DIELECTRIC:	
AIR LANCING:	✔	OTHER (PLEASE SPECIFY):	
DESTRUCTIVE:			
INERT GAS TEST:			
SMOKE TEST:			

Report No.	AREA INSPECTED	Y/N
001	1468 Ashton Old Road - Full Line Out	✔

GeoShield Verification Report

VERIFICATION SUMMARY

This was the first visit to the site where verification was required for the complete line out installation of Proctor Protech GM Super Gas Barrier to Plot 1468Ashton Old Road which was carried out by JCW Gas Membranes Ltd the verification process is summarised below.

All overlaps between the adjacent sheets of Proctor Protech GM Super Gas Barrier have been successfully heat welded using a hot air tool and silicone roller creating continuous seals throughout the installation.
The majority of overlapping joints were installed in accordance with the manufacturers specifications (100mm minimum overlap).
All detailing throughout the installation, such as internal/external corners, thresholds, pipe penetrations and thresholds have been successfully sealed using Proctor Protech SAGM WHITE.
Thorough visual inspections, supported by mechanical point stress testing and air lance integrity testing was carried out throughout the verification process where no faults were identified during the verification process. Sub floor ventilation depth of the referenced plots could not be measured due to limited access, the property had a total of 9 periscope vents and Air Bricks around the perimeter of the building.

Is the project ready for handover?	Yes

This was passed and verified in accordance with CIRIA 735 and installed to BS8485:2015+A1 2019.

GEOSHIELD SIGNATURE

L.England

DATE: 11-Aug-2025