

LAND AT 330-336 STOCKPORT ROAD, LONGSIGHT, MANCHESTER

Remediation Validation Report



Prepared for:



Report Ref: BEK-18469-4

November 2022

Project Quality Assurance Information Sheet

Site	Land at 328 to 336 Stockport Road, Longsight, Manchester
Report Title	Remediation Validation Report
Report Status	Final
Report No	BEK-18469-4
Date	November 2022
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LAND AT 330-336 STOCKPORT ROAD, LONGSIGHT, MANCHESTER

Remediation Validation Report

PROJECT NO: 18469
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DATE: November 2022

REVISION STATUS / HISTORY

Rev	Date	Issue / Comment	Prepared	Checked

GENERAL REPORT LIMITATIONS

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

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

Unless explicitly agreed otherwise, in writing, this report has been prepared under BEK's limited standard Terms and Conditions as included within our proposal to the Client.

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1. INTRODUCTION

1.1 Background

1.1.1 BEK Enviro Limited (BEK) has been commissioned by Rowlinson Constructions Limited to validate the remediation works required at a parcel of land located at 330-336 Stockport Road, Longsight, Manchester (hereafter referred to as 'the site').

1.1.2 The site is located at 330-336 Stockport Road on the intersection with Plymouth Grove West, Longsight. Until its recent re-development, the site was occupied by a derelict three storey building.

1.1.3 Planning permission has been granted for the construction of a 6 storey apartment block. The proposed layout of the site is shown on Leach Rhodes Walker Drawing No L(90)02 entitled 'Site Plan' (dated 1 February 2021), a copy of which is presented in Appendix E.

1.1.4 The site has been subjected to previous site investigation and contamination assessment by BEK, the details of which are provided within the following reports:

- BEK - Preliminary Risk Assessment for Land at 328 to 336 Stockport Road, Longsight. Report Ref: BEK-18469-1 (Rev B) February 2019
- BEK – Site Investigation & Ground Assessment report for Land at 328 to 336 Stockport Road, Longsight. Report Ref: BEK-18469-2 (Rev B) August 2019
- BEK – Remediation Method Statement for Land at 330 to 336 Stockport Road, Longsight. Report Ref: BEK-18469-3 (Rev C), March 2020

1.1.5 The specific remediation measures recommended in the BEK Remediation Method Statement have been implemented. The RMS should be read in conjunction with this report.

1.2 Limitations

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

1.2.2 This document has been prepared for the residential development located at the land at 330-336 Stockport Road, Longsight, Manchester and should not be relied upon or used for any other project. BEK accepts no responsibility or liability for the consequences of this document being used for a purpose other than that purpose for which it was commissioned.

2. REMEDIATION STRATEGY

2.0.1 The approved remediation works are detailed in the BEK Remediation Method Statement (Report Ref: BEK-18469-3 (Rev C), dated March 2020).

2.1 General

2.1.1 Although contaminants of concern have been identified these are only potential risks if they are to be located in garden/soft landscaping areas.

2.1.2 However, as the majority of the site will either be capped with a buildings or hard standing roads/car parking surfacing surrounding the building, potential risks are considered to be negligible and no specific remediation measures are required in these areas. However, there are some small areas of private gardens and soft landscaping and remediation works be required in these areas.

2.1.3 The garden/soft landscaped areas are shown on TPM Landscape Drawing No 102 (Rev B) entitled Planting Plan, a copy of which is presented in Appendix E and an extract is presented as Figure 1.

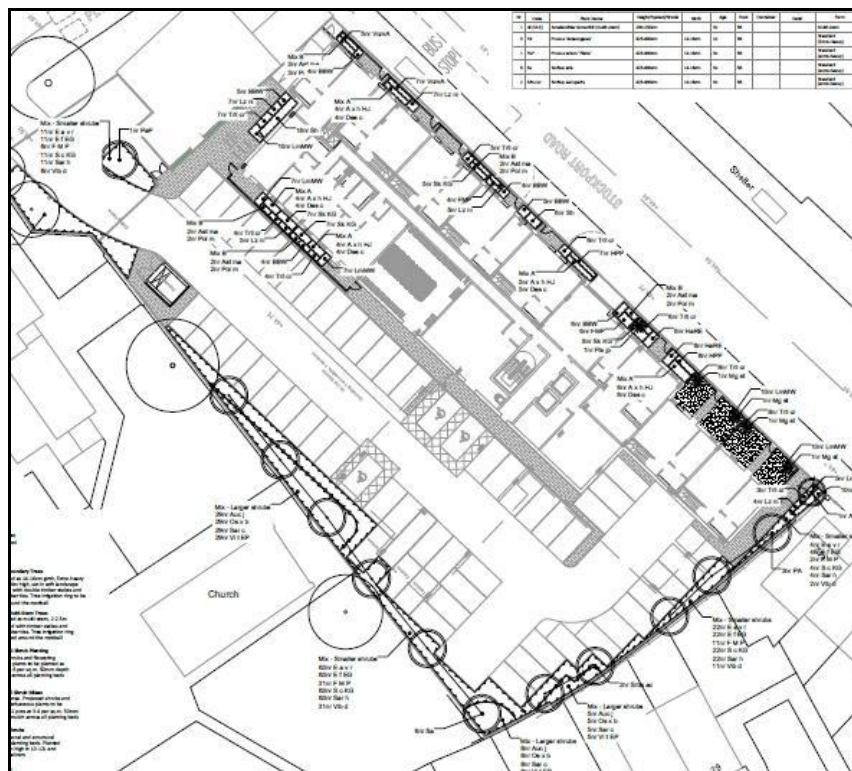


Figure 1: Extract of Planting Plan showing garden/soft landscaping areas around the periphery of the site

2.1.4 There are also some general remediation requirements that will need to be adhered to as detailed in this Section.

2.2 Garden/Landscape Remediation

2.2.1 To remove the potential risks to human health, all garden and soft landscaped areas will either require all the made ground to be removed or the made ground will need to be capped off with a minimum of 600 mm of clean capping soils. The capping soils will need to be placed on a geotextile membrane or a stone capillary break layer. Removal of any made ground should be validated along with the suitability of the sub/topsoil for use in the gardens.

2.2.2 There will be a requirement to import suitable topsoil/subsoil for use in the landscape/garden areas of the development. The suitability of the sub/topsoil and any other material imported to the site should be independently validated.

2.2.3 The details pertaining to the independent validation of material to be imported to the site are outlined within Section 4 of this report.

2.3 Construction Workers

2.3.1 It is recommended that construction personnel involved with direct contact with the soils at the site use appropriate PPE equipment (i.e. boots, gloves and overalls) together with hygiene facilities in accordance with general health and safety guidelines. The successful remediation/site works contractor should undertake a suitable risk assessment to confirm the appropriate level of PPE.

2.3.2 Groundworkers will remain vigilant during ground excavations for the presence (or suspected presence) of contamination. If visual or olfactory evidence of contamination is encountered then works should cease and specialist advice sought.

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

2.4 Concrete Mix Design

2.4.1 Risks to concrete are considered to be low and concrete classification of DS-1 and the ACEC Class as AC-1s.

2.5 Utilities

2.5.1 The UK WIR Risk Assessment has been completed by BEK. The assessment confirms that standard PE pipes will be suitable for the site.

2.6 Unexpected Areas of Ground Contamination

2.6.1 Previous site investigation provides information for the indicative ground conditions across the site.

2.6.2 However, if any area of suspect material is encountered during the development of the site (ie that do not conform to the anticipated ground conditions), appropriate action will be taken. This will initially include the cessation of work in the area of concern and information BEK, who will attend site and carry out further assessment.

2.6.3 As a minimum BEK will notify the local authority and prevent any additional work in the area pending further assessment which may include sampling, testing and risk assessment.

2.7 Waste Soils

2.7.1 Excavated soils can be re-used on site subject to compliance with the Materials Management Plan or the Permit Exemptions that will need to be put in place to manage soils movement/re-use.

2.7.2 Any material recovered from the site and designated for off-site disposal should be disposed of in accordance with appropriate legislation and regulations, including the Duty of Care Regulations.

2.7.3 Waste transfer notes should be kept on site and made available on request.

3. VERIFICATION OF WORKS

3.1 Supervision of Works

3.1.1 An Engineer from BEK attended the site as requested by Rowlinson Constructions Limited during the remediation works which were undertaken progressively.

3.2 Capping System

3.2.1 A capping layer comprising topsoil has been installed in the residential gardens and shared landscaped areas to a depth of 600 mm. The capping was placed on a geotextile marker layer.

Imported Topsoil

3.2.2 Rowlinson Constructions Limited imported approximately 150 tonne of topsoil which was bought as a product from Travis Perkins for use within the capping layer at the site. The topsoil was been subject to testing and assessment by BEK to confirm suitability prior to importation. The source test results are presented in Appendix A. A review of this data confirms that it is suitable for use.

3.2.3 The topsoil was also subjected to validation testing and assessment on site in accordance with the RMS. To comply with the recommendations presented in the RMS it was necessary to recover validation samples at a rate of '1 composite sample per 50 m³' of emplaced soils (unknown source – visually appearing to be manufactured topsoil devoid of anthropogenic influence). BEK recovered 6 samples for chemical testing (TS-A to TS-F).

3.2.4 The topsoil is generally described as 'dark brown very clayey organic sand with occasional roots and rare gravels'. The samples were tested for the contaminants of concern listed in Table 1 of the RMS. The assessment confirmed that the soils are suitable for use in private gardens and shared landscaped areas of the site. Copies of these test results are presented in Appendix B.

Thickness

3.2.5 Capping layer thickness was checked by BEK within the garden areas/shared landscaped areas to ensure the required thickness had been achieved. The validation of the private gardens was done on a plot by plot basis. The shared landscaped areas were validated in three locations shown in Figure 2.

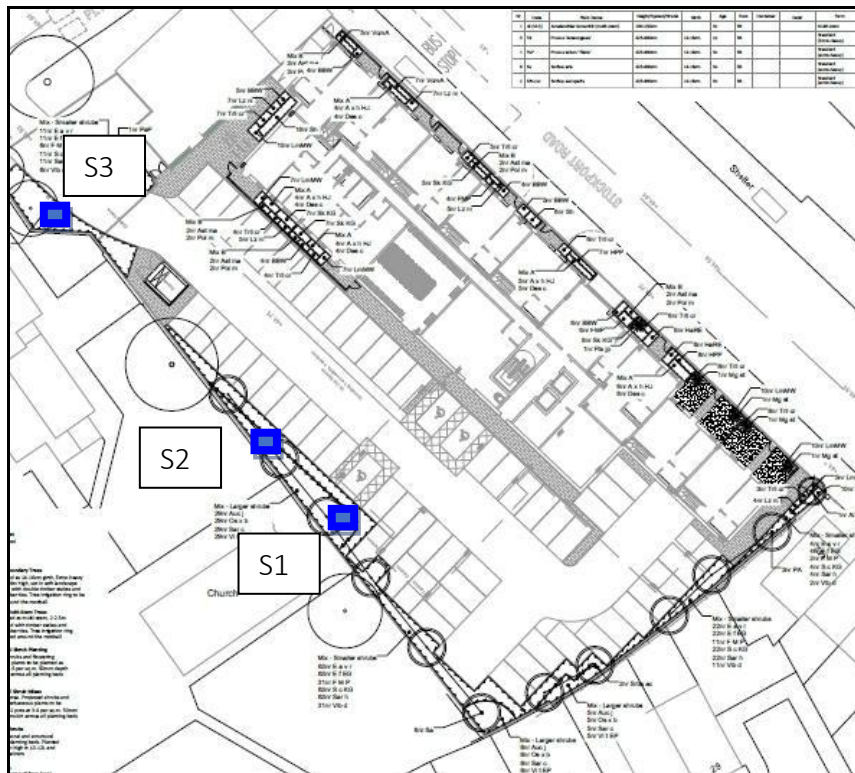


Figure 2: Validation Locations for Shared Landscaped Areas

3.2.6 This was undertaken by dipping of a pre-placed measuring pipe or the excavation of hand dug trial holes to ensure the correct construction of the capping system (including presence of the geotextile membrane) and confirm capping thickness.

3.2.7 It is noted that there was a slight shortfall in capping thickness in Plot 334 where a thickness of approximately 450 mm was recorded. This was due to the concrete footing of the adjacent wall preventing the placement of the full 600 mm. In this case BEK considers this acceptable given that hardstanding is effectively below the capping layer of suitably clean validated soils. This will effectively prevent deeper excavation in this location.

3.2.8 A selection of validation photographs can be seen in Appendix D.

3.3 Services

3.3.1 BEK completed the UK WIR Risk Assessment for the site in July 2020 to determine the specification for the water pipes. The assessment confirmed that standard PE pipes will be suitable for use at the site.

3.4 Waste Soils

3.4.1 All waste soils generated from the site were subject to WAC testing before being exported to a licensed landfill site.

- 3.4.2 Copies of the WAC test results are presented in Appendix C.
- 3.4.3 Copies of the waste transfer tickets can be made available on request.
- 3.5 Unrecorded Contamination & Associated Issues
 - 3.5.1 The groundworkers did not report any visual or olfactory evidence of contamination impacted soils during any excavations.

4. CONCLUSIONS

- 4.1 BEK has supervised the implementation of the remediation works at land at 330-336 Stockport Road, Longsight, Manchester.
- 4.2 The works have been carried out by Rowlinson Constructions Limited and their appointed contractors, in accordance with the approved recommendations.
- 4.3 Based on the information herein, the remediation works have been completed in accordance with the approved Remediation Method Statement.

APPENDIX A

Source Test Results

FINAL ANALYTICAL TEST REPORT

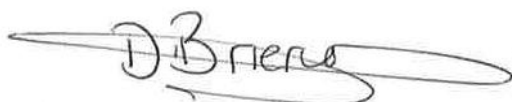
Envirolab Job Number: 22/10430
Issue Number: 1

Date: 01 November, 2022

Client: BEK Enviro Ltd
Suite One
No 3 Mitton Road Business Park
Mitton Road
Whalley
Lancashire
BB7 9YE

Project Manager: Mick Buckley/James Mashiter/Please always use cont
Project Name: Travis Perkins
Project Ref: Not specified
Order No: 7604-18469-A
Date Samples Received: 24/10/22
Date Instructions Received: 24/10/22
Date Analysis Completed: 01/11/22

Approved by:



Danielle Brierley
Deputy Client Services Supervisor

Envirolab Job Number: 22/10430

Client Project Name: Travis Perkins

Client Project Ref: Not specified

Lab Sample ID	22/10430/1	22/10430/2	22/10430/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS1	TS2	TS3							
Depth to Top										
Depth To Bottom										
Date Sampled	20-Oct-22	20-Oct-22	20-Oct-22							
Sample Type	Soil	Soil	Soil							
Sample Matrix Code	4A	4A	4AE							
% Stones >10mm _A	<0.1	<0.1	<0.1					% w/w	0.1	A-T-044
pH _D ^{M#}	8.62	8.77	8.82					pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.15	0.16	0.16					g/l	0.01	A-T-026s
Sulphate (acid soluble) _D ^{M#}	930	1000	920					mg/kg	200	A-T-028s
Cyanide (total) _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2					mg/kg	0.2	A-T-050s
Organic Matter _D ^{M#}	7.0	5.9	6.0					% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	6	9	6					mg/kg	1	A-T-024s
Boron (water soluble) _D	2.6	3.1	2.7					mg/kg	1	A-T-027s
Cadmium _D ^{M#}	0.6	0.6	0.6					mg/kg	0.5	A-T-024s
Copper _D ^{M#}	43	39	40					mg/kg	1	A-T-024s
Chromium _D ^{M#}	13	13	12					mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1					mg/kg	1	A-T-040s
Lead _D ^{M#}	74	69	66					mg/kg	1	A-T-024s
Mercury _D	0.50	0.24	0.22					mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	14	14	14					mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	1	1					mg/kg	1	A-T-024s
Zinc _D ^{M#}	97	88	89					mg/kg	5	A-T-024s

Envirolab Job Number: 22/10430

Client Project Name: Travis Perkins

Client Project Ref: Not specified

Lab Sample ID	22/10430/1	22/10430/2	22/10430/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS1	TS2	TS3							
Depth to Top										
Depth To Bottom										
Date Sampled	20-Oct-22	20-Oct-22	20-Oct-22							
Sample Type	Soil	Soil	Soil							
Sample Matrix Code	4A	4A	4AE							
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	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: 22/10430

Client Project Name: Travis Perkins

Client Project Ref: Not specified

Lab Sample ID	22/10430/1	22/10430/2	22/10430/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS1	TS2	TS3							
Depth to Top										
Depth To Bottom										
Date Sampled	20-Oct-22	20-Oct-22	20-Oct-22							
Sample Type	Soil	Soil	Soil							
Sample Matrix Code	4A	4A	4AE							
PAH-16MS										
Acenaphthene _A ^{M#}	0.07	0.08	0.11					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#}	0.11	0.14	0.15					mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.33	0.37	0.40					mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.33	0.37	0.40					mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.43	0.45	0.47					mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.18	0.19	0.21					mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.13	0.15	0.16					mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.47	0.52	0.54					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#}	0.78	0.85	0.94					mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.04	0.05	0.07					mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.22	0.25	0.25					mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	0.09					mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.43	0.53	0.64					mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.71	0.76	0.85					mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	4.23	4.71	5.28					mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/10430

Client Project Name: Travis Perkins

Client Project Ref: Not specified

Lab Sample ID	22/10430/1	22/10430/2	22/10430/3					Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS1	TS2	TS3							
Depth to Top										
Depth To Bottom										
Date Sampled	20-Oct-22	20-Oct-22	20-Oct-22							
Sample Type	Soil	Soil	Soil							
Sample Matrix Code	4A	4A	4AE							
TPH CWG with Clean Up										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1					mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	3	3	4					mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	26	26	30					mg/kg	1	A-T-055s
Total Aliphatics _A	29	28	34					mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<3	<3	<3					mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	1	1					mg/kg	1	A-T-055s
Aro >C12-C16 _A	4	5	5					mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	14	15	17					mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	34	41	40					mg/kg	1	A-T-055s
Total Aromatics _A	53	63	64					mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	82	92	97					mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01					mg/kg	0.01	A-T-022s

REPORT NOTES

General

This report shall not be reproduced, except in full, without written approval from Envirolab.

The 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 "A" 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.

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:	BEK Enviro Ltd, Suite One , No 3 Mitton Road Business Park , Mitton Road , Whalley , Lancashire , BB7 9YE	Project No:	22/10430
Project:	Travis Perkins	Date Received:	24/10/2022 (am)
Clients Project No:		Cool Box Temperatures (°C):	14.0

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	22/10430/1	22/10430/2	22/10430/3
Client Sample No			
Client Sample ID/Depth	TS1	TS2	TS3
Date Sampled	20/10/22	20/10/22	20/10/22
A-T-019s	28/10/2022	28/10/2022	28/10/2022
A-T-022s	27/10/2022	27/10/2022	27/10/2022
A-T-024s	31/10/2022	31/10/2022	31/10/2022
A-T-026s	28/10/2022	28/10/2022	28/10/2022
A-T-027s	28/10/2022	31/10/2022	31/10/2022
A-T-028s	01/11/2022	01/11/2022	01/11/2022
A-T-031s	31/10/2022	31/10/2022	31/10/2022
A-T-032 OM	01/11/2022	01/11/2022	01/11/2022
A-T-040s	28/10/2022	28/10/2022	28/10/2022
A-T-042sTCN	26/10/2022	26/10/2022	26/10/2022
A-T-044	31/10/2022	31/10/2022	31/10/2022
A-T-045	26/10/2022	26/10/2022	26/10/2022
A-T-050s	27/10/2022	27/10/2022	27/10/2022
A-T-055s	27/10/2022	27/10/2022	27/10/2022
Calc-As Recd	27/10/2022	27/10/2022	27/10/2022

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

End of Report

APPENDIX B

BEK Validation Samples Test Results – Site Testing

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 22/11550
Issue Number: 1

Date: 30 November, 2022

Client: BEK Enviro Ltd
Suite One
No 3 Mitton Road Business Park
Mitton Road
Whalley
Lancashire
BB7 9YE

Project Manager: Mick Buckley
Project Name: Stockport Road, Longsight
Project Ref: Not specified
Order No: 7637-18469-J
Date Samples Received: 23/11/22
Date Instructions Received: 24/11/22
Date Analysis Completed: 30/11/22

Approved by:



Gemma Berrisford
Client Manager

Envirolab Job Number: 22/11550

Client Project Name: Stockport Road, Longsight

Client Project Ref: Not specified

Lab Sample ID	22/11550/1	22/11550/2	22/11550/3	22/11550/4	22/11550/5	22/11550/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-A	TS-B	TS-C	TS-D	TS-E	TS-F				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AE	4AE	4AE	4AE	4AE	4AE				
% Stones >10mm _A	<0.1	14.9	8.4	<0.1	<0.1	<0.1		% w/w	0.1	A-T-044
pH _D ^{M#}	7.77	7.58	7.68	8.22	7.89	8.11		pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.03	0.03	0.05	<0.01	<0.01	<0.01		g/l	0.01	A-T-026s
Sulphate (acid soluble) _D ^{M#}	590	440	640	430	440	450		mg/kg	200	A-T-028s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Organic Matter _D ^{M#}	8.1	6.6	5.5	7.0	7.9	6.9		% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	3	3	4	3	8	3		mg/kg	1	A-T-024s
Boron (water soluble) _D	2.0	1.1	1.7	1.6	2.0	1.2		mg/kg	1	A-T-027s
Cadmium _D ^{M#}	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		mg/kg	0.5	A-T-024s
Copper _D ^{M#}	26	21	22	22	23	26		mg/kg	1	A-T-024s
Chromium _D ^{M#}	13	13	13	13	13	14		mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-040s
Lead _D ^{M#}	40	36	38	36	39	39		mg/kg	1	A-T-024s
Mercury _D	<0.17	0.20	<0.17	0.40	<0.17	<0.17		mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	10	9	9	10	11	11		mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-024s
Zinc _D ^{M#}	70	64	63	65	64	76		mg/kg	5	A-T-024s

Envirolab Job Number: 22/11550

Client Project Name: Stockport Road, Longsight

Client Project Ref: Not specified

Lab Sample ID	22/11550/1	22/11550/2	22/11550/3	22/11550/4	22/11550/5	22/11550/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-A	TS-B	TS-C	TS-D	TS-E	TS-F				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AE	4AE	4AE	4AE	4AE	4AE				
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: 22/11550

Client Project Name: Stockport Road, Longsight

Client Project Ref: Not specified

Lab Sample ID	22/11550/1	22/11550/2	22/11550/3	22/11550/4	22/11550/5	22/11550/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-A	TS-B	TS-C	TS-D	TS-E	TS-F				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AE	4AE	4AE	4AE	4AE	4AE				
PAH-16MS										
Acenaphthene _A ^{M#}	0.02	0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.04	<0.02	<0.02	<0.02	<0.02	<0.02		mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.08	<0.04	<0.04	<0.04	<0.04	0.11		mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.06	<0.04	<0.04	<0.04	<0.04	0.08		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.07	<0.05	<0.05	<0.05	<0.05	0.09		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07		mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.10	<0.06	<0.06	<0.06	<0.06	0.11		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04		mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.28	0.15	0.13	0.19	0.14	0.29		mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.01	<0.01	<0.01	<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	<0.03	<0.03	<0.03		mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.17	0.07	0.06	0.08	0.06	0.12		mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.25	0.12	0.10	0.15	0.11	0.25		mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	1.08	0.35	0.29	0.42	0.31	1.05		mg/kg	0.01	A-T-019s

Envirolab Job Number: 22/11550

Client Project Name: Stockport Road, Longsight

Client Project Ref: Not specified

Lab Sample ID	22/11550/1	22/11550/2	22/11550/3	22/11550/4	22/11550/5	22/11550/6		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TS-A	TS-B	TS-C	TS-D	TS-E	TS-F				
Depth to Top										
Depth To Bottom										
Date Sampled	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22	22-Nov-22				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AE	4AE	4AE	4AE	4AE	4AE				
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	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	6	3	5	6	8	11		mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	51	32	47	53	60	95		mg/kg	1	A-T-055s
Total Aliphatics _A	57	36	52	59	68	106		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	<2	<2	<2	<2	<2	3		mg/kg	1	A-T-055s
Aro >C10-C12 _A	1	<1	1	<1	1	2		mg/kg	1	A-T-055s
Aro >C12-C16 _A	6	4	6	6	8	9		mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	29	16	22	24	29	43		mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	61	32	50	42	50	85		mg/kg	1	A-T-055s
Total Aromatics _A	98	52	79	73	88	142		mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	154	88	131	132	156	248		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 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 "A" 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.

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:	BEK Enviro Ltd, Suite One , No 3 Mitton Road Business Park , Mitton Road , Whalley , Lancashire , BB7 9YE	Project No:	22/11550
Project:	Stockport Road, Longsight	Date Received:	24/11/2022 (am)
Clients Project No:		Cool Box Temperatures (°C):	11.9

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	22/11550/1	22/11550/2	22/11550/3	22/11550/4	22/11550/5	22/11550/6
Client Sample No						
Client Sample ID/Depth	TS-A	TS-B	TS-C	TS-D	TS-E	TS-F
Date Sampled	22/11/22	22/11/22	22/11/22	22/11/22	22/11/22	22/11/22
A-T-019s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-022s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-024s	29/11/2022	29/11/2022	29/11/2022	29/11/2022	29/11/2022	29/11/2022
A-T-026s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-027s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-028s	29/11/2022	29/11/2022	29/11/2022	29/11/2022	29/11/2022	29/11/2022
A-T-031s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-032 OM	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-040s	28/11/2022	29/11/2022	29/11/2022	29/11/2022	28/11/2022	28/11/2022
A-T-042sTCN	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-044	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
A-T-045	25/11/2022	25/11/2022	25/11/2022	25/11/2022	25/11/2022	25/11/2022
A-T-050s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	30/11/2022
A-T-055s	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022
Calc-As Recd	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022	28/11/2022

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

End of Report

APPENDIX C

WAC Test Results

Final Test Report

Envirolab Job Number: 19/06988
Issue Number: 1

Date: 31-Jul-19

Client: BEK Enviro Ltd
Suite One
No 3 Mitton Road Business Park
Mitton Road
Whalley
Lancashire, BB7 9YE

Project Manager: Mick Buckley
Project Name: Stockport Rd, Longsight
Project Ref: Not specified
Order No: 3556-18469

Date Samples Received: 23-Jul-19
Date Instructions Received: 23-Jul-19
Date Analysis Completed: 31-Jul-19

Notes - Soil analysis

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

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be 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

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

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

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

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.

Please contact us if you need any further information.

Prepared by:



Melanie Marshall
Laboratory Coordinator

Approved by:



Richard Wong
Client Manager

Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	19/06988/1				
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				CP1				
Depth to Top				0.2				
Depth to Bottom								
Date Sampled				19/07/2019				
Sample Type				Soil				
Sample Matrix Code				4ABE				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N		-	>6	-	
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N		-	to be evaluated	to be evaluated	
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N		-	to be evaluated	to be evaluated	
Loss on Ignition (%) _D	A-T-030	N	N		-	-	10	
Total Organic Carbon (%) _D	A-T-032	N	N	1.62	3	5	6	
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	32.7	100	-	-	
Mineral Oil (mg/kg) _A	A-T-007	N	N	324	500	-	-	
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007	1	-	-	
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01	6	-	-	
Eluate Analysis				10:1 mg/l	10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.002	0.020	0.5	2	25
Barium	A-T-025	N	N	0.157	1.570	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	0.043	0.430	0.5	10	70
Copper	A-T-025	N	N	0.128	1.280	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.018	0.180	0.5	10	30
Nickel	A-T-025	N	N	0.013	0.130	0.4	10	40
Lead	A-T-025	N	N	0.007	0.070	0.5	10	50
Antimony	A-T-025	N	N	0.002	0.020	0.06	0.7	5
Selenium	A-T-025	N	N	0.001	0.010	0.1	0.5	7
Zinc	A-T-025	N	N	0.004	0.040	4	50	200
Chloride	A-T-026	N	N	5	48	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	<1	10	150	500
Sulphate as SO ₄	A-T-026	N	N	11	115	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	748	7480	4000	60000	100000
Phenol Index	A-T-050	N	N	0.16	1.60	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	24.40	244	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	12.5				
Conductivity (µS/cm)	A-T-037	N	N	1496				
Mass Sample (kg)				0.207				
Dry Matter (%)	A-T-044	N	N	84.7				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	19/06988/2				
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				TP1				
Depth to Top				0.6				
Depth to Bottom								
Date Sampled				19/07/2019				
Sample Type				Soil				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N			-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N			-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N			-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N			-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	2.19		3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	28.1		100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	177		500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007		1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01		6	-	-
Eluate Analysis				10:1	10:1	Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
				mg/l	mg/kg			
Arsenic	A-T-025	N	N	0.001	0.010	0.5	2	25
Barium	A-T-025	N	N	0.185	1.850	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	0.038	0.380	0.5	10	70
Copper	A-T-025	N	N	0.129	1.290	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.015	0.150	0.5	10	30
Nickel	A-T-025	N	N	0.012	0.120	0.4	10	40
Lead	A-T-025	N	N	0.008	0.080	0.5	10	50
Antimony	A-T-025	N	N	0.001	0.010	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.006	0.060	4	50	200
Chloride	A-T-026	N	N	5	52	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	<1	10	150	500
Sulphate as SO ₄	A-T-026	N	N	10	100	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	914	9140	4000	60000	100000
Phenol Index	A-T-050	N	N	0.14	1.40	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	20.70	207	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	12.6				
Conductivity (µS/cm)	A-T-037			1828				
Mass Sample (kg)				0.206				
Dry Matter (%)	A-T-044	N	N	85.1				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

Sample Details					Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	19/06988/3				
Client Sample Number					Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				WS3				
Depth to Top				0.3				
Depth to Bottom								
Date Sampled				19/07/2019				
Sample Type				Soil				
Sample Matrix Code				4AB				
Solid Waste Analysis								
pH (pH Units) _D	A-T-031	N	N			-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N			-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N			-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N			-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	2.1		3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	20.9		100	-	-
Mineral Oil (mg/kg) _A	A-T-007	N	N	183		500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007		1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01		6	-	-
Eluate Analysis				10:1	10:1	Limit values for compliance leaching test using		
				mg/l	mg/kg	BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.002	0.020	0.5	2	25
Barium	A-T-025	N	N	0.133	1.330	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.01	0.04	1	5
Chromium	A-T-025	N	N	0.037	0.370	0.5	10	70
Copper	A-T-025	N	N	0.155	1.550	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.016	0.160	0.5	10	30
Nickel	A-T-025	N	N	0.011	0.110	0.4	10	40
Lead	A-T-025	N	N	0.007	0.070	0.5	10	50
Antimony	A-T-025	N	N	0.002	0.020	0.06	0.7	5
Selenium	A-T-025	N	N	0.002	0.020	0.1	0.5	7
Zinc	A-T-025	N	N	0.003	0.030	4	50	200
Chloride	A-T-026	N	N	5	53	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	<1	10	150	500
Sulphate as SO ₄	A-T-026	N	N	13	127	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	770	7700	4000	60000	100000
Phenol Index	A-T-050	N	N	0.14	1.40	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	21.40	214	500	800	1000
Leach Test Information								
pH (pH Units)	A-T-031	N	N	12.6				
Conductivity (µS/cm)	A-T-037	N	N	1539				
Mass Sample (kg)				0.206				
Dry Matter (%)	A-T-044	N	N	84.8				
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation								

APPENDIX D

Photographs



P1: Plot 328 (incorrect nomenclature on board)



P2: Plot 328 (incorrect nomenclature on board)



P3: Plot 328A (incorrect nomenclature on board)



P4: Plot 328A (incorrect nomenclature on board)



P5: Plot 330



P6: Plot 330



Photographs 1 to 6

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Site: Land at 330-336 Stockport Road, Longsight, Manchester
Title: Appendix D - Photographs

Project No: 21959

Created By:
JM

Date:
November 2022

Client: Rowlinson Constructions Limited



P7: Plot 332

P8: Plot 332



P9: Plot 334



P10: Plot 334



P11: Plot 336



P12: Plot 336A



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Site: Land at 330-336 Stockport Road, Longsight, Manchester
Title: Appendix D - Photographs

Photographs 7 to 12

Project No: 21959

Created By:
JM

Date:
November 2022

Client: Rowlinson Constructions Limited



P13: Plot 336A



P14: Plot 338



P15: Plot 340



P16: Plot 340



P17: Shared Landscaping – Validation Location 1



P18: Shared Landscaping – Validation Location 1



Photographs 13 to 18

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Site: Land at 330-336 Stockport Road, Longsight, Manchester
Title: Appendix D - Photographs

Project No: 21959

Created By:
JM

Date:
November 2022

Client: Rowlinson Constructions Limited



P19: Shared Landscaping – Validation Location 2



P20: Shared Landscaping – Validation Location 2



P21: Shared Landscaping – Validation Location 3



P22: Shared Landscaping – Validation Location 3



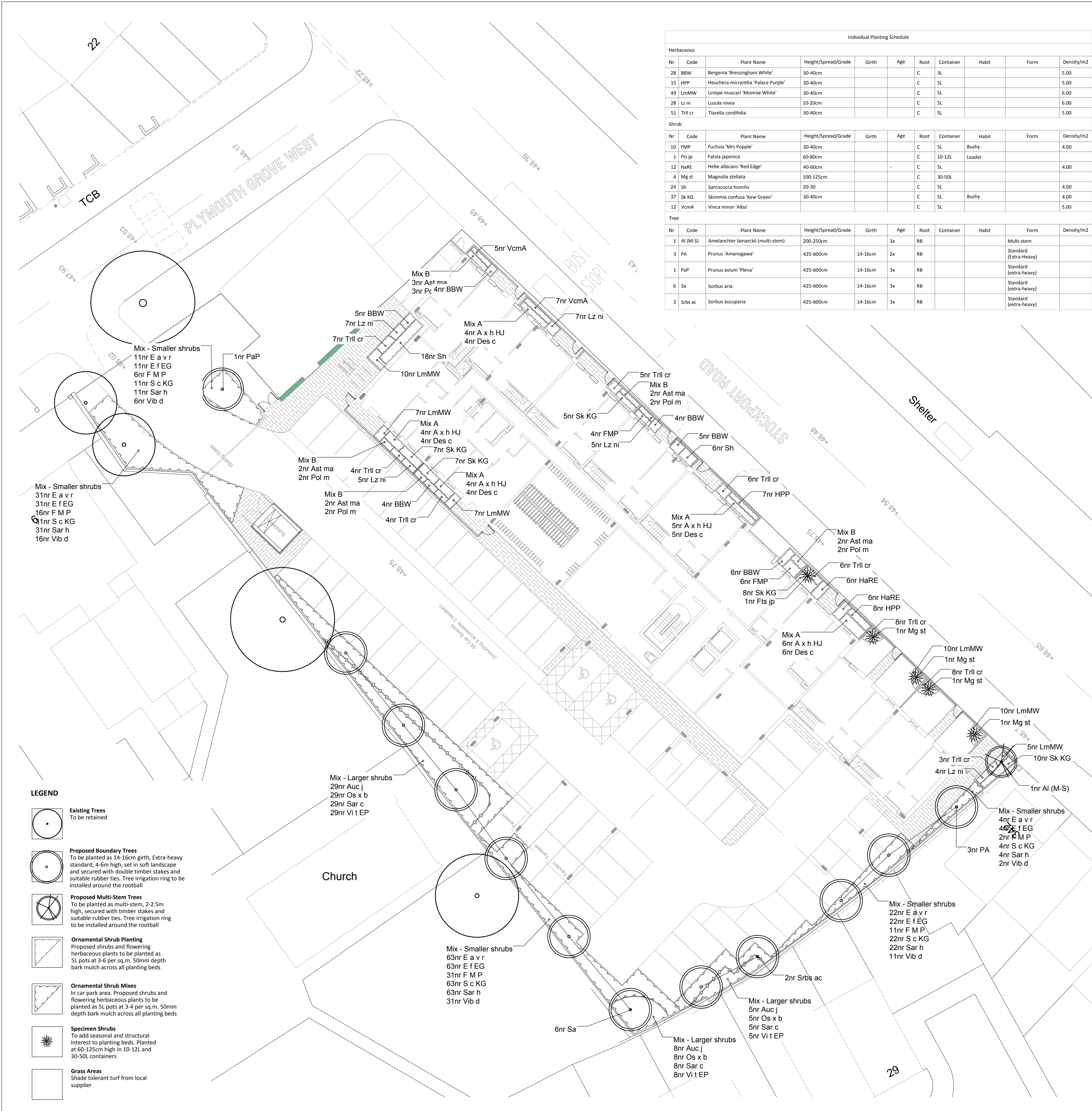
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Site: Land at 330-336 Stockport Road, Longsight, Manchester
Title: Appendix D - Photographs

Photographs 19 to 22		
Project No: 21959	Created By: JM	Date: November 2022
Client: ?????????		

APPENDIX E

Drawings



Individual Planting Schedule										
Herbaceous										
Nr	Code	Plant Name	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
28	BBW	Bergenia 'Bressingham White'	30-40cm			C	3L			5.00
15	HPP	Heuchera micrantha 'Palace Purple'	30-40cm			C	5L			5.00
49	LmMW	Liriope muscari 'Monroe White'	30-40cm			C	5L			6.00
28	Lz ni	Luzula nivea	10-20cm			C	5L			6.00
51	Tril cr	Tiarrella cordifolia	30-40cm			C	5L			5.00
Shrub										
Nr	Code	Plant Name	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
10	FMP	Fuchsia 'Mrs Poppie'	30-40cm			C	5L	Bushy		4.00
1	Fts jp	Fatsia japonica	60-80cm			C	10-12L	Leader		
12	HaRE	Hebe albicans 'Red Edge'	40-60cm			C	5L			4.00
4	Mg st	Magnolia stellata	100-125cm			C	30-50L			
24	Sh	Sarcococca humilis	20-30			C	5L			4.00
37	Sk KG	Skimmia confusa 'Kew Green'	30-40cm			C	5L	Bushy		4.00
12	VcmA	Vinca minor 'Alba'				C	5L			5.00
Tree										
Nr	Code	Plant Name	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
1	Al (M-S)	Amelanchier lamarckii (multi-stem)	200-250cm		3x	RB		Multi-stem		
3	PA	Prunus 'Amanogawa'	425-600cm	14-16cm	2x	RB		Standard (Extra-Heavy)		
1	PaP	Prunus avium 'Plena'	425-600cm	14-16cm	3x	RB		Standard (extra-heavy)		
6	Sa	Sorbus aria	425-600cm	14-16cm	3x	RB		Standard (extra-heavy)		
2	Srbs ac	Sorbus aucuparia	425-600cm	14-16cm	3x	RB		Standard (extra-heavy)		

Planting Schedule - Mixes											
Mix - Larger shrubs (To be planted in species groups of 2-3)											
Nr	Code	Plant Name	Mix%	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
42	Auc j	Acuba japonica	25.00 %	40-60cm			C	5L	Branched		3.00
42	Os x b	Osmanthus x burkwoodii	25.00 %	40-60cm			C	5L	Leader(s)		3.00
42	Sar c	Sarcococca confusa	25.00 %	40-60cm			C	5L	Branched		3.00
42	Vi t EP	Viburnum tinus 'Eve Price'	25.00 %	40-60cm			C	5L	Bushy		3.00
Mix - Smaller shrubs (To be planted in species groups of 2-3)											
Nr	Code	Plant Name	Mix%	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
131	E a v r	Euphorbia amygdaloides var. robbiae	20.00 %	30-40cm			C	5L			4.00
131	E f EG	Euonymus fortunei 'Emerald Gaiety'	20.00 %	30-40cm			C	5L			4.00
66	F M P	Fuchsia 'Mrs Poppie'	10.00 %	30-40cm			C	5L	Leader with laterals		4.00
131	S c KG	Skimmia x confusa 'Kew Green'	20.00 %	30-40cm			C	5L	Branched		4.00
131	Sar h	Sarcococca humilis	20.00 %	30-40cm			C	5L			4.00
66	Vib d	Viburnum davidii	10.00 %	30-40cm			C	5L			4.00
Mix A (Species to be planted randomly)											
Nr	Code	Plant Name	Mix%	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
23	A x h HJ	Anemone x hybrida 'Honorable Jobert'	50.00 %	30-40cm			C	5L			5.00
23	Des c	Deschampsia cespitosa	50.00 %	30-40cm			C	5L			5.00
Mix B (Species to be planted randomly)											
Nr	Code	Plant Name	Mix%	Height/Spread/Grade	Girth	Age	Root	Container	Habit	Form	Density/m2
11	Ast ma	Astrantia major	50.00 %	30-40cm			C	5L			5.00
11	Pol m	Polystichum munitum	50.00 %	30-40cm			C	5L			5.00

- NOTES ON PLANTING**
- 1 Topsoil shall be spread accordance with BS3882:2015 to min 450mm depth over planting beds and 150mm depth over turf areas and graded to fall.
- 2 Herbicide and Cultivation: Topsoil to be treated with an application of herbicide prior to planting, where necessary, strictly in accordance with the Control of Pesticides Regulations 1986 (or otherwise updated/ superceded legislation), and following manufacturer's instructions by qualified staff. The topsoil shall then be cultivated to 150mm depth.
- 3 Container Grown Shrubs, Transplants and Whips: Shrubs and transplants shall comply with the National Plant Specification and shall be planted in pits 300 x 300 x 200mm depth, and the backfill shall include 3 litres Peat Free Tree and Shrub Compost. Specimen plants to be planted in a pit 400 x 400 x 250mm depth with 5 litres Tree and Shrub Compost.
- 4 Herbicide: Spot treat with herbicide throughout the maintenance period in accordance with the manufacturer's instructions.
- 5 Bark Mulch: On completion of all planting works all shrub areas are to be spread with 50mm depth of 10-35mm grade ornamental maritime bark mulch.
- 6 Position of Plants: Final position of trees and shrubs subject to confirmation of service location and approval of statutory undertakers.
- 7 TREES - MULTI-STEM: Tree pits to be 600x600x600mm backfilled with good quality topsoil. Stake to be 1 no. 65mm diameter treated softwood driven firmly into the ground, 650mm above ground level and 300mm below the bottom of the pit. Stakes to be fixed to tree with suitable rubber tree tie. Tree stake to be placed on the windward side of the tree to prevent rubbing. Stake to be pointed at one end. Spacing of stakes to avoid rootball. Pit backfilled with 1 parts topsoil, 2 parts tree planting compost to depth of 500mm and with a 100mm depth of clean stone to the base.
- 8 TREES - EXTRA HEAVY STANDARD: Tree pit 1000x1000x900mm depth with a 150mm depth of clean stone to the base, back filled with 300mm of sub soil and 450mm depth good quality topsoil. Stakes to be 2 no. 100mm diameter with cross bar, treated softwood driven firmly into the ground, 650mm above ground level and 300mm below the bottom of the pit. Stakes to be fixed to tree with suitable rubber tree tie. Tree stake to be placed on the windward side of the tree to prevent rubbing. Stake to be pointed at one end. Spacing of stakes to avoid rootball. Pit backfilled with 1 parts topsoil, 2 parts tree planting compost to depth of 750mm.
- All the trees to be planted with irrigation ring (e.g. RootRain Metro as supplied by Green Blue Urban) wrapped around the root-ball, the end of the pipe to be secured to the tree stake.
- 9 Watering: Plant only into moist soil and water thoroughly to the full depth of soil immediately after planting. Water regularly through the establishment period (minimum 3 months) to prevent dehydration. Tree should be watered in when planted, and at the point of bud burst in the spring and should be continued throughout the spring and summer until the leaves have fallen in autumn. Water should be applied to the base of the tree, evenly distributed over the entirety of the root-ball to encourage even root development. Watering is advised for the first 2 summers after planting, further to this the tree should be able to access water from the surrounding soil. During the height of summer, water should be applied at a rate of 2 domestic bucket fulls (or 20 liters of water) every other day. This figure is the aim to reach during the height of summer and can be gradually increased to this in the spring and decreased before ceasing watering in the autumn.

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REVISION NOTES			
Rev	By	Description	Date
B	EG	Labels amended	06.06.19
A	EG	Amended to new architectural layout	29.05.19

Client CS Derby Ltd			
Project Stockport Road, Longsight			
Description Planting Plan			
Status For Approval			
Scale @ A1 1:200	Drawn EG	Checked KH	Date 23.05.19
Job number 3306	Drawing number 102		Revision B

