

Ref: 18-256-L1
Date: 30th September 2025

Barnfield Construction Limited
8 Kenyon Road
Brierfield
Nelson
Lancashire
BB9 5SP

BY Email

SUPPLEMENTARY REMEDIATION VALIDATION LETTER SMITHFIELD MARKET, MANCHESTER

INTRODUCTION

BACKGROUND

This report details the remediation and enabling works operations that were undertaken by Barnfield Construction under the supervision of E3P to facilitate the preparation of the commercial development at the former Smithfield Market in Openshaw, Manchester; herein referred to as the site.

Works were previously undertaken on behalf of Russell WHBO, working with PP O'Connor across the majority of the site; however, the southeast corner was not remediated due to the presence of site cabins. The commercial unit to the west was completed, after which the contract was passed over to Barnfield Construction to complete the remaining remediation works and construct the final commercial unit. The previous validation works are detailed within the E3P Validation Report (Ref: 12-757-R6-2).

E3P were appointed by Barnfield Construction Limited as independent Geoenvironmental Consultant for the site remediation, preparation/enabling and validation works, and the subsequent production of a suitably detailed report to ensure the satisfaction of the relevant planning conditions and geotechnical engineering requirements for Building Control, warranty providers, and the future adoption of infrastructure by the Highways Authority and statutory service providers.

SITE DETAILS

Site Address	New Smithfield Market, Whitworth Street East, Manchester, M11 2WJ
Grid Reference	E 388509, N 397175
Planning Reference	133759/FO/2022

A site location plan is included as an attachment as Drawing 18-256-001.



PREVIOUS REPORTS

The following reports have been prepared for the site and should be read in conjunction with this report.

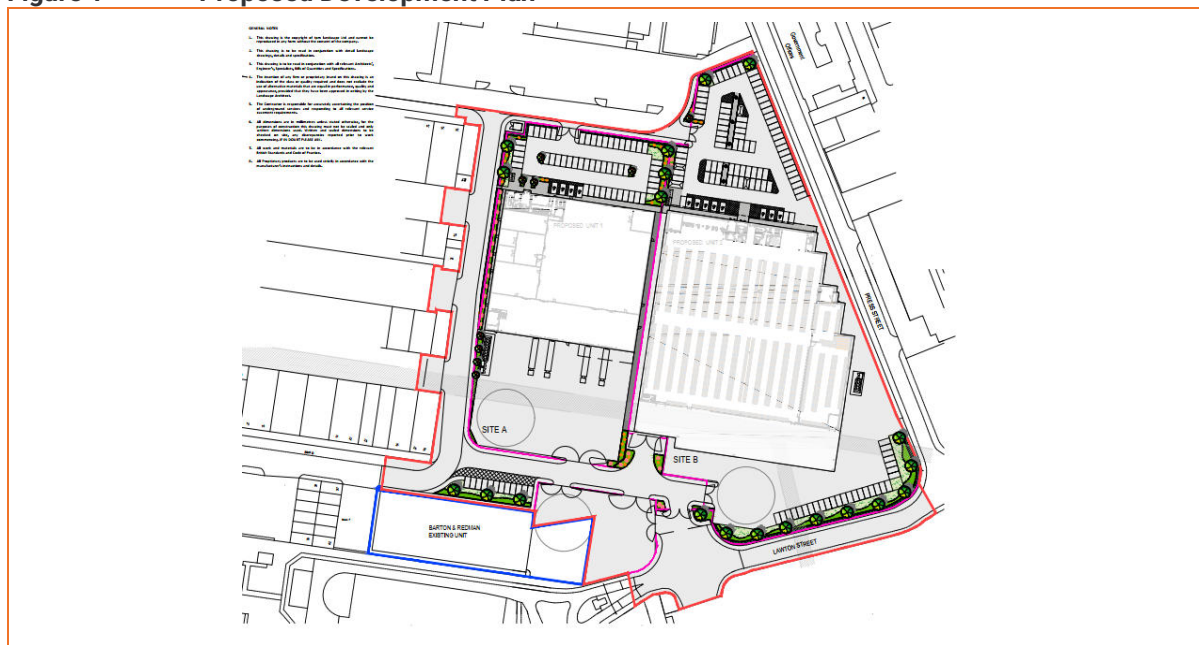
Table 1 Summary of Previous Reports

AUTHOR	REPORT TITLE	REPORT REFERENCE	DATE	REPORT PROVIDED FOR
E3P	Phase 1 GSA	12-757-R1	Aug 2018	Russells Construction
	Phase 2 GSA	12-757-R2-1	Nov 2018	
	Phase 1 GSA	12-757-R3	July 2020	Russell WBHO
	Phase 2 GSA	12-757-R2-2	July 2020	
	Supplementary Site Investigation	12-757-L4	Dec 2020	
	Supplementary Site Investigation	12-757-L5	March 2022	
	Remediation & Enabling Works Strategy	12-757-R8	Jan 2023	
	Validation Report	12-757-R6-2	July 2025	

PROPOSED DEVELOPMENT

The development comprises the construction of a commercial unit forming part of a wider development comprising two industrial steel frame units with ancillary office space with associated access, parking, service yard and landscaping, including the replacement of the access roadway to the existing adjacent unit. The unit in the west has been completed, and Barnfield are currently working on the east unit. A snapshot of the Proposed Development Layout is indicated in Figure 1 below and Drawing 12-757-002 (Appendix III)

Figure 1 Proposed Development Plan



SCOPE OF WORKS

Due to the presence of site cabins and associated access restrictions in the southeast portion of the site during the previous phase of remediation works, the hotspot delineation works could not be undertaken in this area, as defined in Figure 2.

The outstanding requirements for this section are summarised below and were subsequently completed prior to the commencement of the build phase. This report details the outstanding works that were completed between March 2025 and July 2025.

Figure 2 Area With Outstanding Remediation Items (Red Shading)



DELINEATION, EXCAVATION, TREATMENT, AND DISPOSAL OF VISUAL AND OLFACTORY HYDROCARBON-IMPACTED MATERIAL

Background

Leachate analysis undertaken at the site has identified elevated concentrations of TPH, PAH, and zinc in exceedance of relevant EQS thresholds. The underlying drift deposits are designated as a Secondary A Aquifer; however, the presence of significant cohesive deposits up to 76m thick, suggest that the drift sequence is likely to act as an impermeable barrier, thereby limiting the potential for both lateral and vertical migration. As a result, the pathway between the identified contamination and the underlying bedrock receptor is effectively broken. The sensitivity of the aquifer is further reduced by the absence of groundwater abstractions for potable use within a 1 km radius of the site.

The nearest surface water receptor is located approximately 136m to the south. Considering this distance, combined with the presence of low permeability clay drift deposits, it is highly unlikely that lateral migration will occur.

As part of the proposed remediation strategy, the exceedances identified within WS201 will be subject to further investigation and delineation to define the extent of the hotspot. Any soils confirmed to exceed remediation screening criteria will be either removed from site for appropriate disposal or, where suitable, re-used in areas of low sensitivity. Excavated areas will subsequently be backfilled with geotechnically and chemically appropriate materials.

The proposed development will utilise hardstanding across the majority of the subject site with an incorporated drainage system. This will limit the potential for rainwater to penetrate the underlying Made Ground and thus the potential for any leachate or mobilisation of any contaminants is significantly reduced.

Summary of Works

Date of Works Undertaken	May – June 2025
Photographs	Plate 1–2
Chemical Testing	Eurofins Analytical Report 25-16681-1 (TP101–TP103) Eurofins Analytical Report 25-20346-2 (HS101N, E, S W, HS101B and HS101A)
Further Investigation Works	A site visit was undertaken by E3P on 14th May 2025 with the specific objective of assessing the spatial extent of previously identified areas of potential impact within the southeastern portion of the site. This phase of works comprised targeted trial trenching within the vicinity of previously reported hotspots, in order to further delineate and determine the extent of contamination. A total of three mechanically excavated trial trenches were advanced during the works, to depths ranging between 1.00 and 2.20 m bgl. The target depths were selected to correspond with the horizons where visual and/or olfactory evidence of contamination had been previously identified during earlier phases of investigation. Soil samples were obtained from the base of each excavation for subsequent chemical analysis.

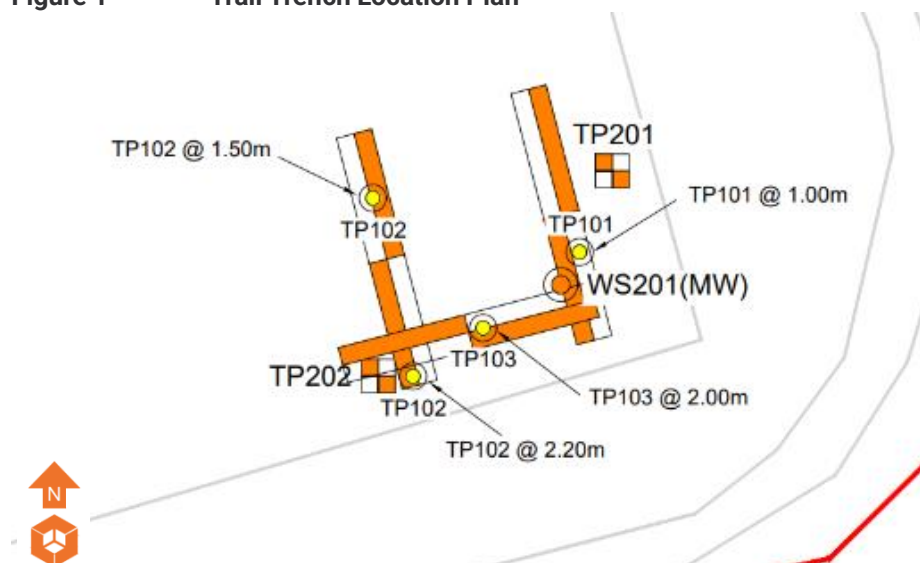


During the works, no visual or olfactory indicators of contamination (including discolouration, staining, odours, or free product) were observed within any of the trial pits. Laboratory analysis on samples (TP101-TP103) obtained from the trial pits confirmed that no concentrations of contaminants of concern were detected above the laboratory limits of detection (LOD) therefore are not deemed to present a risk to the proposed commercial end use.

The locations of the trial trenches and sampling is included in Figure 1 and included as an attachment.

Figure 1 Trail Trench Location Plan

Further
Investigation
Works Cont.



In addition to the chemical assessment, Waste Acceptance Criteria (WAC) testing was undertaken on the samples obtained from the trial pits to establish their suitability for potential off-site disposal at a licensed waste management facility. The WAC results classified the soils as stable, non-reactive hazardous waste in a non-hazardous landfill. This classification was determined on the basis of elevated pH values recorded across all samples, and elevated Total Organic Carbon (TOC) identified in one of the samples.

Delineation and
Removal

A subsequent remedial visit was undertaken on 17 June 2025 to address the previously identified hotspot in accordance with the agreed remedial strategy. Targeted trial trenching was undertaken to confirm the extent of any residual contamination. No visual, olfactory, or field screening evidence of contamination was identified during the investigation.

In line with best practice and to provide confidence in the remedial outcome, soils within a 3 m x 3 m area surrounding the original hotspot location were excavated down to natural strata between 1.00 and 2.00 m bgl. The arisings were stockpiled on visqueen and subsequently removed from site for appropriate off-site disposal at a suitably licensed facility. Waste transfer notes are available on request.

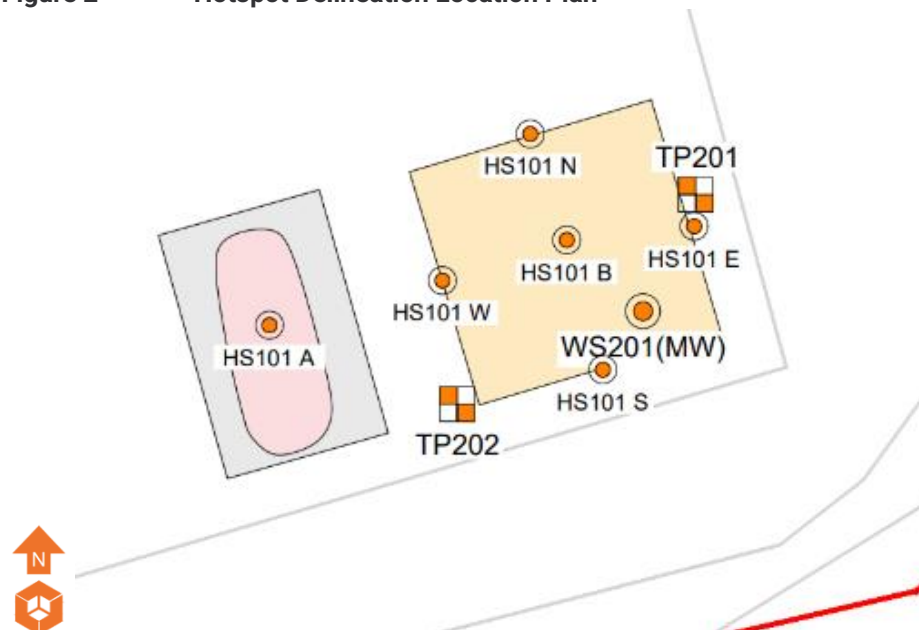


Verification sampling was undertaken from the sidewalls, base and arisings of the excavation and submitted for laboratory chemical analysis (HS101N, HS101E, HS101S, HS101W, HS101B and HS101A). Chemical analysis results confirmed that soils left in-situ did not contain concentrations exceeding the relevant assessment criteria for a commercial end use.

The location of the hotspot delineation and sampling is included in Figure 2 and included as an attachment.

Figure 2 Hotspot Delineation Location Plan

Delineation and
Removal Cont.



The hotspot area is scheduled for redevelopment under hardstanding. This proposed end use provides an additional engineering control, minimising infiltration and preventing the potential migration of any residual mobile-phase contaminants.



POST REMEDIATION BUILD PHASE REQUIREMENTS

This document details the construction works that are required to ensure full compliance with the remediation Strategy, Regulatory Authorities, Building Control & Warranty Providers;

The following should be implemented during the build phase of the development:

- ✳ Laboratory testing of the imported topsoil;
- ✳ Chemical validation of any subsoil imported for use within landscaping;
- ✳ Placement of the 450 mm cover system within landscaped areas;
- ✳ Installation of 1.00 m clean cover within proposed tree pits.

The validation protocols are presented within the E3P Remediation and Enabling Works Strategy and will be detailed within a separate build phase report.

CONCLUSION

The remediation elements identified within the approved Remediation and Enabling Works Strategy have been completed with validation testing completed to the required standard. Where further works are required, these will be detailed in the final validation report for the site.

I trust that the above information is sufficient and if you require anything further please do not hesitate to contact me.

Written By
Nicola Dawson
Senior Consultant

Reviewed By
Alex Smith
Associated Director

For and on behalf of E3P Ltd



New Smithfield Market, Manchester

Supplementary Validation Letter

September 2025

Attachments:



Drawings:

- 18-256-002 – Proposed Development Plan
- 18-256-031 – Trial Trench Location Plan
- 18-256-032 – Hotspot Delineation Plan



Chemical Laboratory Testing

- Eurofins Analytical Report 25-16681-1
- Eurofins Analytical Report 25-20346-2



Photographs

- Plate 1 – 6 (Trial Trenching)
- Plate 7 – 8 (Hotspot Delineation)

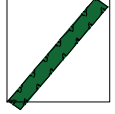
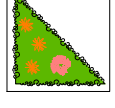
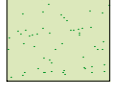
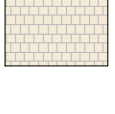
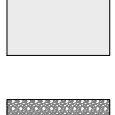
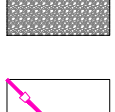
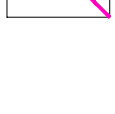


GENERAL NOTES

1. This drawing is the copyright of tpm landscape Ltd and cannot be reproduced in any form without the consent of the company.
2. This drawing is to be read in conjunction with detail landscape drawings, details and specification.
3. This drawing is to be read in conjunction with all relevant Architects', Engineer's, Specialists, Bills of Quantities and Specifications.
4. The insertion of any firm or proprietary brand on this drawing is an indication of the class or quality required and does not exclude the use of alternative materials that are equal in performance, quality and appearance, provided that they have been approved in writing by the Landscape Architect.
5. The Contractor is responsible for accurately ascertaining the position of underground services and responding to all relevant service easement requirements.
6. All dimensions are in millimetres unless stated otherwise, for the purposes of construction this drawing must not be scaled and only written dimensions used. Written and scaled dimensions to be checked on site, any discrepancies reported prior to work commencing, IF IN DOUBT PLEASE ASK.
7. All work and materials are to be in accordance with the relevant British Standards and Code of Practice.
8. All Proprietary products are to be used strictly in accordance with the manufacturer's instructions and details.



LEGEND

-  Proposed Feature Trees
Trees to be planted as 18-20cm girth, Extra-Heavy Standard, 4.5-5.5m high with 2m clear stem. Trees to be secured with underground guying system.
-  Proposed Small Ornamental Trees
Trees to be planted as 10-12cm girth or 50L containers, 2-3m high and secured with single stake and suitable rubber ties.
-  Proposed Hedgerows
Evergreen hedgerows to be planted in 10L containers at a rate of 3-4 per lin. metre.
-  Proposed Shrub Planting
Ornamental shrub planting, to be planted in 3-4L containers at 3-4 p/m², and enhanced by feature specimens in 10-20L pots.
-  Proposed Amenity Grass
-  Proposed Flag Paving
450 x 450mm concrete flags
Colour: Light grey
-  Proposed Tarmac
To engineers' details
-  Proposed Gravel
-  Proposed Fence
To architects details

REVISION NOTES

Rev	By	Description	Date
A	AJ	Updated in line with revised layout	01.04.22

Client
Russell WBHO

Project
New Smithfield Market, Openshaw

Description
Landscape Masterplan

Status
For Approval

Scale @ A1
1:500

Job number
4068

Drawn
JS

Drawing number
101

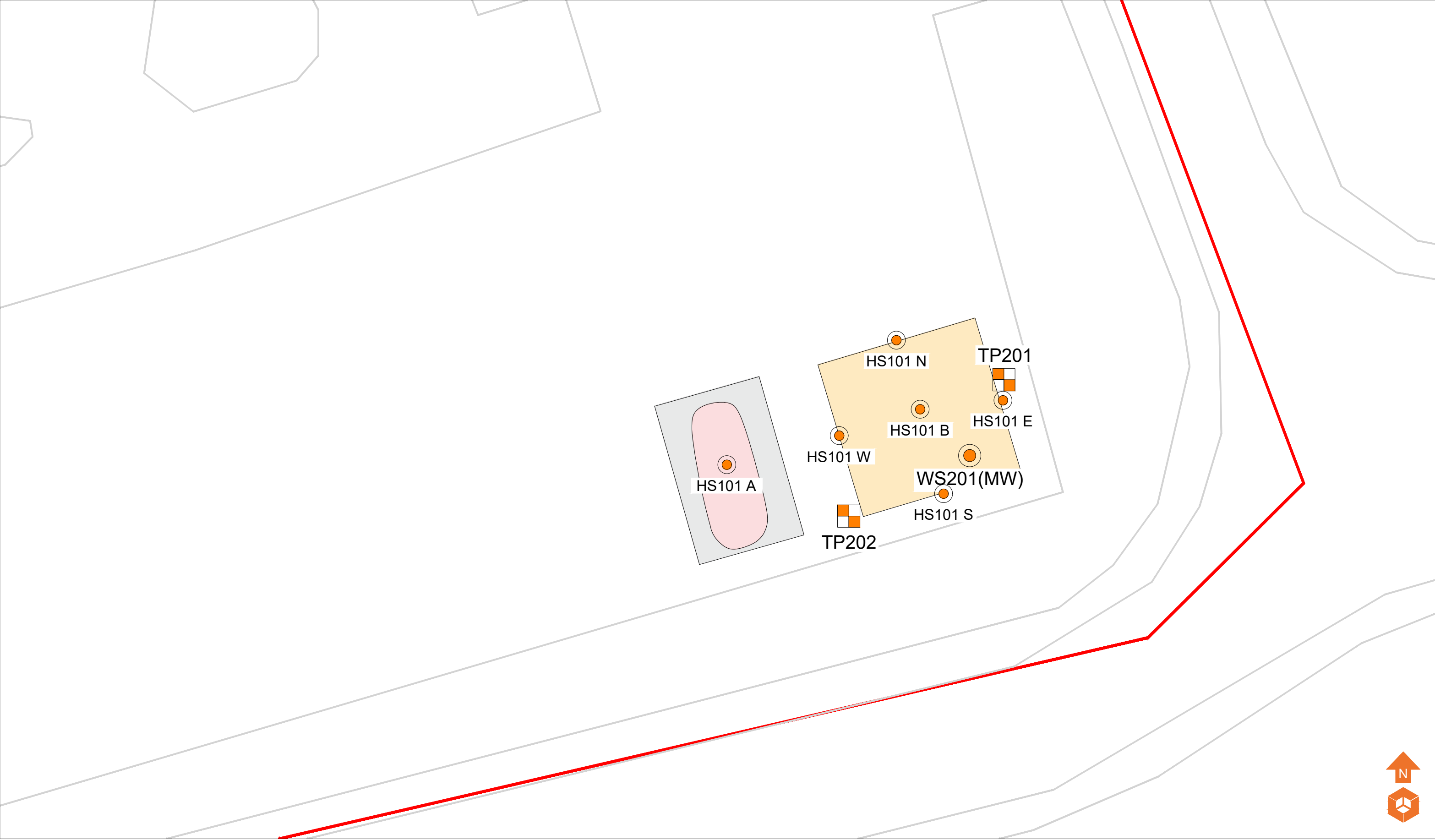
Checked
DC

Revision
A

Date
11.02.22



Location Symbols Approximate Window Sample Probehole Location Approximate Trial Pit Location Approximate Sample Location Approximate Trial Trench Location						Notes:						Client: Barnfield Construction Limited		Job No: 18-256		Date: 18.09.2025		Environmental Engineering Partnership Ltd Taylor Road, Trafford Park Urmston, Manchester, M41 7JQ Tel: 0161 707 9612 E-mail: info@e3p.co.uk Website: www.e3p.co.uk					
<table><tr><td>P1</td><td>REVA</td><td>18.09.2025</td><td>CB</td><td>ND</td><td>ND</td></tr><tr><td>Phase</td><td>Issue</td><td>Date</td><td>Drawn</td><td>Checked</td><td>PM</td></tr></table>						P1	REVA	18.09.2025	CB	ND	ND	Phase	Issue	Date	Drawn	Checked	PM			Job Title: Smithfield Market		Drawing No: 031	
P1	REVA	18.09.2025	CB	ND	ND																		
Phase	Issue	Date	Drawn	Checked	PM																		
								Drawing Title: Trial Trench Location Plan		The client must not amend any drawing, design or other intellectual property produced by E3P Ltd without permission in writing from E3P Ltd in advance of any amendments being made. In the event that such written permission is not obtained in advance of the amendments being made, E3P Ltd shall not be liable for any damage and/or losses occurring as a result of the amended drawing, design or intellectual property.													



Location Symbols

- Approximate Window Sample Probehole Location
- Approximate Trial Pit Location
- Approximate Sample Location
- Hotspot
- Visqueen Temporary Storage

Notes:

P1	REVA	18.09.2025	CB	ND	ND
Phase	Issue	Date	Drawn	Checked	PM

Client:

Barnfield Construction Limited

Job Title:

Smithfield Market

Job No:

18-256

Drawing No:

032

Date:

18.09.2025

Scale:

NTS

Drawing Title:

Hotspot Sample Location Plan



Environmental Engineering
Partnership Ltd
Taylor Road, Trafford Park
Urmston, Manchester, M41 7JQ
Tel: 0161 707 9612
E-mail: info@e3p.co.uk
Website: www.e3p.co.uk

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Final Report

Report No.: 25-16681-1

Initial Date of Issue: 04-Jun-2025

Re-Issue Details:

Client E3P

Client Address: Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

Contact(s): ndawson@e3p.co.uk;
bwhalley@e3p.co.uk

Project Smithfield Market

Quotation No.: **Date Received:** 20-May-2025

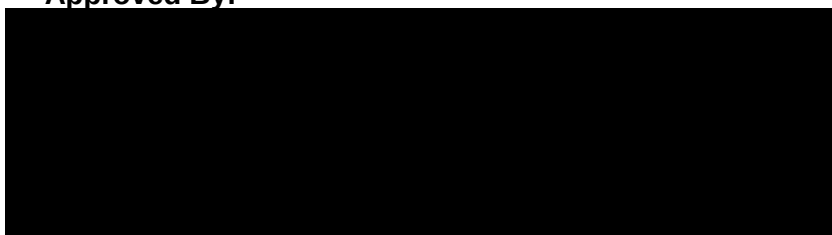
Order No.: 011237 **Date Instructed:** 20-May-2025

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 27-May-2025

Date Approved: 04-Jun-2025

Approved By:



For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: Smithfield Market

Client: E3P		Chemtest Job No.:				25-16681	25-16681	25-16681	25-16681
Quotation No.:		Chemtest Sample ID.:				1975399	1975400	1975401	1975402
		Client Sample ID.:				TP101	TP102	TP102	TP103
		Sample Type:				SOIL	SOIL	SOIL	SOIL
		Bottom Depth (m):				1	1.5	2.2	2
		Date Sampled:				14-May-2025	14-May-2025	14-May-2025	14-May-2025
		Time Sampled:				12:00	12:00	12:00	12:00
		Asbestos Lab:						DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
ACM Type		N	2192		N/A			-	
Asbestos Identification		U	2192		N/A			No Asbestos Detected	
Moisture		N	2030	%	0.020	12	7.3	14	16
Soil Colour		N	2030		N/A			Brown	
Other Material		N	2030		N/A			None	
Soil Texture		N	2030		N/A			Clay	
pH at 20C		M	2010		4.0			8.4	
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.35	0.54	0.049	0.12
Total Sulphur		U	2175	%	0.010	0.11	0.23	0.070	0.12
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	4.8	2.8	7.7	7.4
Sulphate (Total)		U	2430	%	0.010	0.29	0.40	0.19	0.25
Arsenic		M	2455	mg/kg	0.5	16	17	9.8	13
Cadmium		M	2455	mg/kg	0.10	0.71	1.5	0.13	0.29
Chromium		M	2455	mg/kg	0.5	40	18	37	49
Copper		M	2455	mg/kg	0.50	56	120	30	37
Mercury		M	2455	mg/kg	0.05	0.15	0.41	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	50	34	45	60
Lead		M	2455	mg/kg	0.50	44	140	16	26
Selenium		M	2455	mg/kg	0.25	1.0	0.99	0.85	1.0
Zinc		M	2455	mg/kg	0.50	110	120	73	91
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40			1.7	
Total Organic Carbon		M	2625	%	0.20			0.97	
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0			< 1.0	
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10			< 10	
Naphthalene		M	2700	mg/kg	0.10			4.1	
Acenaphthylene		M	2700	mg/kg	0.10			0.27	
Acenaphthene		M	2700	mg/kg	0.10			0.90	
Fluorene		M	2700	mg/kg	0.10			0.89	

Results - Soil

Project: Smithfield Market

Client: E3P		Chemtest Job No.:				25-16681	25-16681	25-16681	25-16681
Quotation No.:		Chemtest Sample ID.:				1975399	1975400	1975401	1975402
		<i>Client Sample ID.:</i>				TP101	TP102	TP102	TP103
		<i>Sample Type:</i>				SOIL	SOIL	SOIL	SOIL
		<i>Bottom Depth (m):</i>				1	1.5	2.2	2
		<i>Date Sampled:</i>				14-May-2025	14-May-2025	14-May-2025	14-May-2025
		<i>Time Sampled:</i>				12:00	12:00	12:00	12:00
		<i>Asbestos Lab:</i>						DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Phenanthrene		M	2700	mg/kg	0.10			2.7	
Anthracene		M	2700	mg/kg	0.10			0.40	
Fluoranthene		M	2700	mg/kg	0.10			0.91	
Pyrene		M	2700	mg/kg	0.10			0.89	
Benzo[a]anthracene		M	2700	mg/kg	0.10			0.16	
Chrysene		M	2700	mg/kg	0.10			0.27	
Benzo[b]fluoranthene		M	2700	mg/kg	0.10			< 0.10	
Benzo[k]fluoranthene		M	2700	mg/kg	0.10			< 0.10	
Benzo[a]pyrene		M	2700	mg/kg	0.10			< 0.10	
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10			< 0.10	
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10			< 0.10	
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10			< 0.10	
Total Of 16 PAH's		M	2700	mg/kg	2.0			12	
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - 2 Stage WAC

Project: Smithfield Market

Chemtest Job No: 25-16681							Landfill Waste Acceptance Criteria			
Chemtest Sample ID: 1975399							Limits			
Sample Ref:							Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID: TP101										
Client Reference:										
Top Depth(m):										
Bottom Depth(m): 1										
Sampling Date: 14-May-2025										
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	M	%				0.79	3	5	6
Loss On Ignition	2610	M	%				3.0	--	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--	--
TPH Total WAC	2670	M	mg/kg				< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				13	100	--	--
pH at 20C	2010	M					8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.017	--	To evaluate	To evaluate			
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative mg/kg 10:1	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg			
Arsenic	1455	U	0.0010	0.0010	0.0020	0.010	0.5	2	25	
Barium	1455	U	0.036	0.035	0.072	0.35	20	100	300	
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5	
Chromium	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	70	
Copper	1455	U	0.0013	0.0012	0.0026	0.0018	2	50	100	
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2	
Molybdenum	1455	U	0.010	0.0024	0.020	0.035	0.5	10	30	
Nickel	1455	U	0.0007	0.0007	0.0013	0.0066	0.4	10	40	
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50	
Antimony	1455	U	0.0007	< 0.0005	0.0013	0.0009	0.06	0.7	5	
Selenium	1455	U	0.0016	0.0008	0.0031	0.0087	0.1	0.5	7	
Zinc	1455	U	0.008	0.004	0.016	0.048	4	50	200	
Chloride	1220	U	3.3	< 1.0	< 10	< 10	800	15000	25000	
Fluoride	1220	U	0.20	0.13	< 1.0	1.4	10	150	500	
Sulphate	1220	U	570	57	1100	1300	1000	20000	50000	
Total Dissolved Solids	1020	N	710	120	1400	2100	4000	60000	100000	
Phenol Index	1920	U	< 0.030	0.15	< 0.30	1.3	1	-	-	
Dissolved Organic Carbon	1610	U	3.6	3.1	< 50	< 50	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	5.9
WAC Sample Weight	1471

Leachate Test Information	
Leachant volume 1st extract/l	0.339
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.246

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Project: Smithfield Market

Chemtest Job No: 25-16681							Landfill Waste Acceptance Criteria			
Chemtest Sample ID: 1975400							Limits			
Sample Ref:							Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID: TP102										
Client Reference:										
Top Depth(m):										
Bottom Depth(m): 1.5										
Sampling Date: 14-May-2025										
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	M	%				4.4	3	5	6
Loss On Ignition	2610	M	%				1.5	--	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--	--
TPH Total WAC	2670	M	mg/kg				33	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				32	100	--	--
pH at 20C	2010	M					8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg	0.014	--	To evaluate	To evaluate			
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative mg/kg 10:1	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg			
Arsenic	1455	U	0.0026	0.0022	0.0052	0.023	0.5	2	25	
Barium	1455	U	0.036	0.038	0.071	0.38	20	100	300	
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5	
Chromium	1455	U	< 0.0005	0.0008	< 0.0005	0.0071	0.5	10	70	
Copper	1455	U	0.0019	0.0013	0.0038	0.0026	2	50	100	
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2	
Molybdenum	1455	U	0.019	0.0055	0.038	0.073	0.5	10	30	
Nickel	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.4	10	40	
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50	
Antimony	1455	U	0.0038	0.0026	0.0075	0.027	0.06	0.7	5	
Selenium	1455	U	0.0015	0.0009	0.0029	0.0094	0.1	0.5	7	
Zinc	1455	U	0.007	0.004	0.014	0.042	4	50	200	
Chloride	1220	U	4.5	< 1.0	< 10	< 10	800	15000	25000	
Fluoride	1220	U	0.32	0.21	< 1.0	2.3	10	150	500	
Sulphate	1220	U	240	35	480	640	1000	20000	50000	
Total Dissolved Solids	1020	N	390	110	790	1500	4000	60000	100000	
Phenol Index	1920	U	< 0.030	0.17	< 0.30	1.5	1	-	-	
Dissolved Organic Carbon	1610	U	3.9	2.8	< 50	< 50	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	2.9
WAC Sample Weight	1640

Leachate Test Information	
Leachant volume 1st extract/l	0.345
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.242

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Project: Smithfield Market

Chemtest Job No: 25-16681							Landfill Waste Acceptance Criteria			
Chemtest Sample ID: 1975402							Limits			
Sample Ref:							Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID: TP103										
Client Reference:										
Top Depth(m):										
Bottom Depth(m): 2										
Sampling Date: 14-May-2025										
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	M	%				0.92	3	5	6
Loss On Ignition	2610	M	%				4.7	--	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--	--
TPH Total WAC	2670	M	mg/kg				< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				< 2.0	100	--	--
pH at 20C	2010	M					8.6	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg				0.021	--	To evaluate	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative mg/kg 10:1	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg			
Arsenic	1455	U	0.0004	0.0006	0.0009	0.0060	0.5	2	25	
Barium	1455	U	0.029	0.058	0.057	0.56	20	100	300	
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5	
Chromium	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	70	
Copper	1455	U	0.0015	0.0017	0.0030	0.0012	2	50	100	
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2	
Molybdenum	1455	U	0.0026	0.0012	0.0051	0.013	0.5	10	30	
Nickel	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.4	10	40	
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50	
Antimony	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.06	0.7	5	
Selenium	1455	U	0.0032	0.0014	0.0064	0.016	0.1	0.5	7	
Zinc	1455	U	0.008	0.005	0.016	0.055	4	50	200	
Chloride	1220	U	5.4	1.7	11	20	800	15000	25000	
Fluoride	1220	U	0.16	0.13	< 1.0	1.3	10	150	500	
Sulphate	1220	U	31	7.7	62	96	1000	20000	50000	
Total Dissolved Solids	1020	N	100	64	210	680	4000	60000	100000	
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-	
Dissolved Organic Carbon	1610	U	3.6	4.4	< 50	< 50	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	6.8
WAC Sample Weight	1048

Leachate Test Information	
Leachant volume 1st extract/l	0.337
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.141

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Chemtest Sample ID	Clients Sample Ref:	Clients Sample ID:	Clients Reference:	Sampled Date:	Deviation Code(s):	Containers Received:
1975399		TP101		14-May-2025	E	Amber Glass 250ml
1975399		TP101		14-May-2025	E	Amber Glass 60ml
1975399		TP101		14-May-2025	E	Plastic Tub 500g
1975400		TP102		14-May-2025	E	Amber Glass 250ml
1975400		TP102		14-May-2025	E	Amber Glass 60ml
1975400		TP102		14-May-2025	E	Plastic Tub 500g
1975402		TP103		14-May-2025	E	Amber Glass 250ml
1975402		TP103		14-May-2025	E	Amber Glass 60ml
1975402		TP103		14-May-2025	E	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity at 25°C and Total Dissolved Solids (TDS) in Waters	Conductivity Meter	TE LE SW GW
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	RE PW PL LE DW GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation	PL SW GW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	
2010	pH Value of Soils	pH at 20°C	pH Meter	
2015	Acid Neutralisation Capacity	Acid Reserve	Titration	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS. Reported PCB 101 results may contain contributions from PCB 90 due to inseparable chromatography.	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	
650	Characterisation of Waste (Leaching WAC)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Text example All items indicated in italic font represent customer-supplied information that may not be independently verified by the laboratory
This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.
For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL
DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - The required amount of sample for analysis was not received
- H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Results - 2 Stage WAC

Chemtest Job No: 25-16681							Landfill Waste Acceptance Criteria			
Chemtest Sample ID: 1975399							Limits			
Sample Ref:							Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID: TP101										
Client Reference:										
Top Depth(m): 1										
Bottom Depth(m): 1										
Sampling Date: 14-May-2025										
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	M	%				0.79	3	5	6
Loss On Ignition	2610	M	%				3.0	--	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--	--
TPH Total WAC	2670	M	mg/kg				< 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				13	100	--	--
pH at 20C	2010	M					8.5	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg				0.017	--	To evaluate	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg			
Arsenic	1455	U	0.0010	0.0010	0.0020	0.010	0.5	2	25	
Barium	1455	U	0.036	0.035	0.072	0.35	20	100	300	
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5	
Chromium	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	70	
Copper	1455	U	0.0013	0.0012	0.0026	0.0018	2	50	100	
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2	
Molybdenum	1455	U	0.010	0.0024	0.020	0.035	0.5	10	30	
Nickel	1455	U	0.0007	0.0007	0.0013	0.0066	0.4	10	40	
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50	
Antimony	1455	U	0.0007	< 0.0005	0.0013	0.0009	0.06	0.7	5	
Selenium	1455	U	0.0016	0.0008	0.0031	0.0087	0.1	0.5	7	
Zinc	1455	U	0.008	0.004	0.016	0.048	4	50	200	
Chloride	1220	U	3.3	< 1.0	< 10	< 10	800	15000	25000	
Fluoride	1220	U	0.20	0.13	< 1.0	1.4	10	150	500	
Sulphate	1220	U	570	57	1100	1300	1000	20000	50000	
Total Dissolved Solids	1020	N	710	120	1400	2100	4000	60000	100000	
Phenol Index	1920	U	< 0.030	0.15	< 0.30	1.3	1	-	-	
Dissolved Organic Carbon	1610	U	3.6	3.1	< 50	< 50	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	5.9

Leachate Test Information	
Leachant volume 1st extract/l	0.339
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.246

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Chemtest Job No: 25-16681 Chemtest Sample ID: 1975400 Sample Ref: Sample ID: TP102 Client Reference: Top Depth(m): Bottom Depth(m): 1.5 Sampling Date: 14-May-2025							Landfill Waste Acceptance Criteria Limits		
							Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	M	%				4.4	3	5
Loss On Ignition	2610	M	%				1.5	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--
TPH Total WAC	2670	M	mg/kg				33	500	--
Total (Of 17) PAH's	2700	N	mg/kg				32	100	--
pH at 20C	2010	M					8.6	--	>6
Acid Neutralisation Capacity	2015	N	mol/kg				0.014	--	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0026	0.0022	0.0052	0.023	0.5	2	25
Barium	1455	U	0.036	0.038	0.071	0.38	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	0.0008	< 0.0005	0.0071	0.5	10	70
Copper	1455	U	0.0019	0.0013	0.0038	0.0026	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.019	0.0055	0.038	0.073	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	0.0038	0.0026	0.0075	0.027	0.06	0.7	5
Selenium	1455	U	0.0015	0.0009	0.0029	0.0094	0.1	0.5	7
Zinc	1455	U	0.007	0.004	0.014	0.042	4	50	200
Chloride	1220	U	4.5	< 1.0	< 10	< 10	800	15000	25000
Fluoride	1220	U	0.32	0.21	< 1.0	2.3	10	150	500
Sulphate	1220	U	240	35	480	640	1000	20000	50000
Total Dissolved Solids	1020	N	390	110	790	1500	4000	60000	100000
Phenol Index	1920	U	< 0.030	0.17	< 0.30	1.5	1	-	-
Dissolved Organic Carbon	1610	U	3.9	2.8	< 50	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	2.9

Leachate Test Information	
Leachant volume 1st extract/l	0.345
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.242

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Results - 2 Stage WAC

Chemtest Job No: 25-16681 Chemtest Sample ID: 1975402 Sample Ref: Sample ID: TP103 Client Reference: Top Depth(m): Bottom Depth(m): 2 Sampling Date: 14-May-2025							Landfill Waste Acceptance Criteria Limits		
							Inert Waste Landfill	Stable Non-reactive Hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	M	%				0.92	3	5
Loss On Ignition	2610	M	%				4.7	--	10
Total BTEX	2760	M	mg/kg				< 0.010	6	--
Total PCBs (7 Congeners)	2815	M	mg/kg				< 0.05	1	--
TPH Total WAC	2670	M	mg/kg				< 10	500	--
Total (Of 17) PAH's	2700	N	mg/kg				< 2.0	100	--
pH at 20C	2010	M					8.6	--	--
Acid Neutralisation Capacity	2015	N	mol/kg				0.021	--	To evaluate
Eluate Analysis			2:1 mg/l	8:1 mg/l	2:1 mg/kg	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/kg		
Arsenic	1455	U	0.0004	0.0006	0.0009	0.0060	0.5	2	25
Barium	1455	U	0.029	0.058	0.057	0.56	20	100	300
Cadmium	1455	U	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.04	1	5
Chromium	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	70
Copper	1455	U	0.0015	0.0017	0.0030	0.0012	2	50	100
Mercury	1455	U	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.01	0.2	2
Molybdenum	1455	U	0.0026	0.0012	0.0051	0.013	0.5	10	30
Nickel	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.4	10	40
Lead	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.5	10	50
Antimony	1455	U	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.06	0.7	5
Selenium	1455	U	0.0032	0.0014	0.0064	0.016	0.1	0.5	7
Zinc	1455	U	0.008	0.005	0.016	0.055	4	50	200
Chloride	1220	U	5.4	1.7	11	20	800	15000	25000
Fluoride	1220	U	0.16	0.13	< 1.0	1.3	10	150	500
Sulphate	1220	U	31	7.7	62	96	1000	20000	50000
Total Dissolved Solids	1020	N	100	64	210	680	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	3.6	4.4	< 50	< 50	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	6.8

Leachate Test Information	
Leachant volume 1st extract/l	0.337
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.141

Waste Acceptance Criteria

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Amended Report

Report No.:	25-20346-2		
Initial Date of Issue:	26-Jun-2025	Date of Re-Issue:	08-Jul-2025
Re-Issue Details:	This report has been revised and directly supersedes 25-20346-1 in its entirety		
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	ndawson@e3p.co.uk; bwhalley@e3p.co.uk		
Project	18-256 - Smithfield Market - Hotspot June 2025		
Quotation No.:	Q23-31421	Date Received:	19-Jun-2025
Order No.:	011490	Date Instructed:	27-Jun-2025
No. of Samples:	6		
Turnaround (Wkdays):	5	Results Due:	03-Jul-2025
Date Approved:	08-Jul-2025	Subcon Results Due:	03-Jul-2025

Approved By:

David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Soil

Project: 18-256 - Smithfield Market - Hotspot June 2025

Client: E3P		Chemtest Job No.:		25-20346	25-20346	25-20346	25-20346	25-20346	25-20346	25-20346
Quotation No.: Q23-31421		Chemtest Sample ID.:		1988876	1988877	1988878	1988879	1988880	1988881	
		Client Sample ID.:		HS101-N	HS101-S	HS101-E	HS101-W	HS101-B	HS101-A	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Date Sampled:		17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025	
		Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
ACM Type		N	2192		N/A	-	-	-	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture		N	2030	%	0.020	15	10	11	18	17
Soil Colour		N	2030		N/A	Brown	Brown	Brown	Brown	Brown
Other Material		N	2030		N/A	Stones	Stones	Stones	None	None
Soil Texture		N	2030		N/A	Sand	Clay	Clay	Clay	Clay
pH at 20C		M	2010		4.0	8.8	8.4	8.3	8.2	8.4
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.070	0.026	0.035	0.081	0.039
Total Sulphur		U	2175	%	0.010	0.15	0.080	0.090	0.060	0.080
Cyanide (Total)		M	2300	mg/kg	0.50	0.90	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.2	3.2	2.4	2.9	4.5
Sulphate (Total)		U	2430	%	0.010	0.18	0.28	0.30	0.11	0.21
Arsenic		M	2455	mg/kg	0.5	6.2	9.1	6.7	6.0	13
Cadmium		M	2455	mg/kg	0.10	0.13	0.16	0.18	< 0.10	0.16
Chromium		M	2455	mg/kg	0.5	22	25	24	26	52
Copper		M	2455	mg/kg	0.50	20	30	27	19	39
Mercury		M	2455	mg/kg	0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	29	36	32	32	63
Lead		M	2455	mg/kg	0.50	10	13	19	8.9	19
Selenium		M	2455	mg/kg	0.25	0.47	0.54	0.51	0.43	0.82
Zinc		M	2455	mg/kg	0.50	47	71	61	46	95
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	1.5	1.7	2.4	1.9	1.1
Total Organic Carbon		M	2625	%	0.20	0.88	0.98	1.4	1.1	0.63
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10	< 10	< 10	< 10	< 10	< 10
Naphthalene		M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.60	< 0.10	< 0.10

Results - Soil

Project: 18-256 - Smithfield Market - Hotspot June 2025

Client: E3P		Chemtest Job No.:		25-20346	25-20346	25-20346	25-20346	25-20346	25-20346
Quotation No.: Q23-31421		Chemtest Sample ID.:		1988876	1988877	1988878	1988879	1988880	1988881
		Client Sample ID.:		HS101-N	HS101-S	HS101-E	HS101-W	HS101-B	HS101-A
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:		17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025	17-Jun-2025
		Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD				
Anthracene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.18	< 0.10
Fluoranthene		M	2700	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10
Pyrene		M	2700	mg/kg	0.10	< 0.10	< 0.10	1.3	< 0.10
Benzo[a]anthracene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.98	< 0.10
Chrysene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.78	< 0.10
Benzo[b]fluoranthene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.95	< 0.10
Benzo[k]fluoranthene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.36	< 0.10
Benzo[a]pyrene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.71	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.46	< 0.10
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10	< 0.10	< 0.10	0.47	< 0.10
Total Of 16 PAH's		M	2700	mg/kg	2.0	< 2.0	< 2.0	7.9	< 2.0
Naphthalene		M	2800	mg/kg	0.10	0.11	0.13	0.14	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	0.22	0.17	0.21	0.17
Anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.	
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.	
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.	
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Text example All items indicated in italic font represent customer-supplied information that may not be independently verified by the laboratory
This report shall not be reproduced except in full, and only with the prior approval of the laboratory.
Any comments or interpretations are outside the scope of UKAS accreditation.
The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.
Uncertainty of measurement for the determinands tested are available upon request .
None of the results in this report have been recovery corrected.
All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.
For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.
All Asbestos testing is performed at the indicated laboratory .
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

NEW_ASB Eurofins Chemtest Limited, 11 Depot Road, Newmarket, CB8 0AL
DURHAM Eurofins Chemtest Limited, Unit A North Wing, Prospect Business Park, Crookhall Lane, Consett, Co Durham, DH8 7PW

Sample Deviation Codes

As a result of any of the below deviations applying, the test results may be unreliable

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - The required amount of sample for analysis was not received
- H - Appropriate cooling measures were not taken for sample transportation

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.
All water samples will be retained for 14 days from the date of receipt.
Charges may apply to extended sample storage.

Report Information

Water Sample Category Key for Accreditation

DW - Drinking Water
GW - Ground Water
LE - Land Leachate
NA - Not Applicable
PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

Asbestos Tests LOD = LOQ

Limit of Detection = Limit of Quantification for asbestos results only

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Plate 1 Trial Trenching TS101



Plate 2 Trial Trenching TS101



Plate 3 Trial Trenching TS102



Plate 4 Trial Trenching TS102



Plate 5 Trial Trenching TS103



Plate 6 Trial Trenching TS103



Plate 7 Hotspot Delineation



Plate 8 Hotspot Delineation

