

Date: 1st September 2025
Reference: 16-465- V2

GARDEN VALIDATION – EDENFIELD ROAD, NORDEN

Project Name:	Edenfield Road, Norden
Project Number:	16-465
Client:	Stonebond
Date:	18-08-2025
Project Manager & Qualifications:	M. Wilson
E3P Engineer & Qualifications:	R. Webster
Plots:	5 (Rear) and 1-2 (Front)

OVERVIEW

An E3P engineer attended the above site to validate the thickness of the cover system placed within the rear gardens of Plot 5 and front gardens of Plots 1-2 at Edenfield Road, Norden.

Three hand excavated trial pits were advanced, with the resulting strata detailed at the rear of this letter.

All trial pits were completed to highlight the required cover system of 600 mm (150mm topsoil, 450mm subsoil and no-dig geotextile membrane) within rear gardens, and 300 mm (150 mm topsoil and 450 mm subsoil) within front gardens.

E3P can confirm that our independent validation demonstrates that all rear gardens have been installed with 150 mm of certified topsoil, at least 450 mm of certified subsoil, and a no-dig geotextile membrane; and all front gardens have been installed with 150 mm of certified topsoil, at least 150 mm of certified subsoil under the NHBC requirements for a site of this nature.

A list of plots requiring validation and their associated validation letters is presented in Table 1 for reference.





TOPSOIL

As of 18th August 2025, a total volume of 210m³ of topsoil had been imported onto site from Freeland Horticulture, Nook Lane Farm, Astley, Manchester, M29 7LW.

E3P attended the site on the following dates to obtain samples of the stockpiled imported topsoil deposits, which were analysed following the E3P Remediation Strategy (Topsoil Greenfield Source – 1 per 200m³):

- 7th August 2025 – 2 samples (TS101-TS102).

Analysis of the topsoil was undertaken by Eurofins Chemtest Laboratories using UKAS accredited methods where applicable. The chemical analysis suite comprises heavy metals, sulphates, phenols, speciated Polycyclic Aromatic Hydrocarbons (PAHs), speciated and total Petroleum Hydrocarbons (TPH) and asbestos.

Chemical analysis confirmed that these topsoil deposits were chemically suitable for use within the proposed garden areas.

Chemical analysis results are included within lab reports 25-26533 (attached to this letter).

SUBSOIL

As of 18th August 2025, a total volume of 600m³ of subsoil had been imported onto site from Tong Quarry, Tong Lane, Bacup, OL13 9XA.

E3P attended the site on the following dates to obtain samples of the stockpiled imported subsoil deposits, which were analysed following the E3P Remediation Strategy (Topsoil Greenfield Source – 1 per 200m³):

- 5th March 2025 – 1 sample (SS101)
- 17th June 2025 – 1 sample (SS102)
- 7th August 2025 – 1 sample (SS103).

Analysis of the subsoil was undertaken by Eurofins Chemtest Laboratories using UKAS accredited methods where applicable. The chemical analysis suite comprises heavy metals, sulphates, phenols, speciated Polycyclic Aromatic Hydrocarbons (PAHs), speciated and total Petroleum Hydrocarbons (TPH) and asbestos.

Chemical analysis confirmed that these subsoil deposits were chemically suitable for use within the proposed garden areas.

Chemical analysis results are included within lab reports 25-07909, 25-20566, and 25-26533 (attached to this letter).



CHEMICAL ANALYSIS

TOPSOIL/SUBSOIL	SOURCE	LAB REFERENCE	SAMPLE REFERENCE	PASS/FAIL
TOPSOIL	Freeland Horticulture, Astley	25-26533	TS101-TS102	PASS
SUBSOIL	Tongs Quarry, Bacup	25-07909	SS101	PASS
SUBSOIL	Tongs Quarry, Bacup	25-20566	SS102	PASS
SUBSOIL	Tongs Quarry, Bacup	25-26533	SS103	PASS

The cover system validation photographs are enclosed within this letter. For information, Table 1 includes references and validation dates of previously validated plots.

The garden validation photographs are enclosed within this letter. For information, Table 1 includes references and validation dates of previously validated plots.

Table 1 – Validation Letter Reference

PLOT NUMBER	DATE	REPORT REFERENCE
1-4 (Rear)	07-08-2025	V1
5 (Rear) and 1-2 (Front)	18-08-2025	V2



Garden Cover System Validation

Complete

Score	15 / 15 (100%)
Site Name	Edenfield Road, Norden
Location	Brook House Cottage, Heap Road Rochdale England OL12 7SN United Kingdom (53.62787800401495, - 2.2150478448882662)
Project Number	16-465
Developer	Stonebond
Project Manager	M Wilson
Conducted By	Richard Webster
Date of visit	18 Aug 2025 12:47 PM BST
<u>Subsoil/Topsoil Material Source (If the site manager can't supply you with detail of where the soil is sourced STOP THE INSPECTION and call the PM)</u>	
Where has the Subsoil been sourced	Tongs Quarry, Bacup
Where has the Topsoil been sourced	Freeland Horticulture, Astley



<u>Plot Validation</u>	15 / 15 (100%)
Plot Validation 1	5 / 5 (100%)
Plot Number	1 (Front)
Garden position	Front
Is Plot Ready	Yes
Installation Standard	Pass
Depth of Cover System Materials (record the depth and support with Photos down the hole)	500
 Photo 1	
Depth of Topsoil (mm)	200
Depth of Subsoil (mm)	300
Depth of Cover System at Ground Level (Photo)	
 Photo 2	
Depth of Cover System in Relation to Plot (Ensure the whole plot can be seen in the photo)	
 Photo 3	
Soil suitable (Must be free from Brick, concrete, wood, plastics, glass, metal and anything none natural) if identified contact PM.	Yes
If soil is unsuitable please add a FULL description and support with photos.	Na
Geotextile membrane present	N/A



Plot Validation 2		5 / 5 (100%)
Plot Number	2 (Front)	
Garden position	Front	
Is Plot Ready	Yes	
Installation Standard	Pass	
Depth of Cover System Materials (record the depth and support with Photos down the hole)	300	
 Photo 4		
Depth of Topsoil (mm)	150	
Depth of Subsoil (mm)	150	
Depth of Cover System at Ground Level (Photo)		
 Photo 5		
Depth of Cover System in Relation to Plot (Ensure the whole plot can be seen in the photo)		



Plot Validation 3		5 / 5 (100%)
Plot Number		5 (Rear)
Garden position		Rear
Is Plot Ready		Yes
Installation Standard		Pass
Depth of Cover System Materials (record the depth and support with Photos down the hole)		600
 Photo 7		
Depth of Topsoil (mm)		150
Depth of Subsoil (mm)		450
Depth of Cover System at Ground Level (Photo)		
 Photo 8		
Depth of Cover System in Relation to Plot (Ensure the whole plot can be seen in the photo)		
 Photo 9		
Soil suitable (Must be free from Brick, concrete, wood, plastics, glass, metal and anything none natural) if identified contact PM.		Yes
If soil is unsuitable please add a FULL description and support with photos.		Na
Geotextile membrane present		Yes



Photo 10

Site Manager or Representative

Name

-

Signature

-
18 Aug 2025 1:23 PM BST



Media summary



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Final Report

Report No.: 25-07909-1

Initial Date of Issue: 17-Mar-2025

Re-Issue Details:

Client E3P

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

Contact(s): Mwilson@e3p.co.uk;
gcalvert@e3p.co.uk

Project 16-465 - Edenfield Road, Norden

Quotation No.: Q23-31421

Date Received: 07-Mar-2025

Order No.: 010688

Date Instructed: 07-Mar-2025

No. of Samples: 1

Turnaround (Wkdays): 5

Results Due: 13-Mar-2025

Date Approved: 17-Mar-2025

Approved By:

Details: 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: 16-465 - Edenfield Road, Norden

Client: E3P		Chemtest Job No.:		25-07909		
Quotation No.: Q23-31421		Chemtest Sample ID.:		1943680		
		Client Sample ID.:		SS101		
		Sample Type:		SOIL		
		Date Sampled:		05-Mar-2025		
		Time Sampled:		12:00		
		Asbestos Lab:		NEW-ASB		
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	13
Soil Colour		N	2040		N/A	Brown
Other Material		N	2040		N/A	Stones
Soil Texture		N	2040		N/A	Loam
pH at 20C		M	2010		4.0	7.3
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.34
Total Sulphur		U	2175	%	0.010	0.28
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	3.0
Sulphate (Total)		U	2430	%	0.010	0.68
Arsenic		M	2455	mg/kg	0.5	5.2
Cadmium		M	2455	mg/kg	0.10	0.14
Chromium		M	2455	mg/kg	0.5	23
Copper		M	2455	mg/kg	0.50	200
Mercury		M	2455	mg/kg	0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	34
Lead		M	2455	mg/kg	0.50	26
Selenium		M	2455	mg/kg	0.25	0.56
Zinc		M	2455	mg/kg	0.50	68
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50
Organic Matter		M	2625	%	0.40	1.3
Total Organic Carbon		M	2625	%	0.20	0.76
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	6.0
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	8.0
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	3.6
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	18
Naphthalene		M	2800	mg/kg	0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10

Results - Soil

Project: 16-465 - Edenfield Road, Norden

Client: E3P		Chemtest Job No.:		25-07909		
Quotation No.: Q23-31421		Chemtest Sample ID.:		1943680		
		Client Sample ID.:		SS101		
		Sample Type:		SOIL		
		Date Sampled:		05-Mar-2025		
		Time Sampled:		12:00		
		Asbestos Lab:		NEW-ASB		
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Anthracene		M	2800	mg/kg	0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0
Total Phenols		M	2920	mg/kg	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.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
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	
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*; Dibenz[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

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



Amended Report

Report No.:	25-20566-2		
Initial Date of Issue:	26-Jun-2025	Date of Re-Issue:	07-Jul-2025
Re-Issue Details:	This report has been revised and directly supersedes 25-20566-1 in its entirety		
Client	E3P		
Client Address:	Taylor Road Trafford Park Urmston Manchester M41 7JQ		
Contact(s):	Mwilson@e3p.co.uk		
Project	16-465 - Edenfield Road, Norden		
Quotation No.:	Q23-31421	Date Received:	20-Jun-2025
Order No.:	011448	Date Instructed:	27-Jun-2025
No. of Samples:	1		
Turnaround (Wkdays):	5	Results Due:	03-Jul-2025
Date Approved:	07-Jul-2025	Subcon Results Due:	03-Jul-2025

Approved By:

Details: 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: 16-465 - Edenfield Road, Norden

Client: E3P		Chemtest Job No.:	25-20566			
Quotation No.: Q23-31421		Chemtest Sample ID.:	1989563			
Order No.: 011448		<i>Client Sample Ref.:</i>	SS102			
		<i>Client Sample ID.:</i>	SS102			
		<i>Client Reference:</i>	SS102			
		<i>Sample Type:</i>	SOIL			
		<i>Top Depth (m):</i>	-			
		<i>Bottom Depth (m):</i>	-			
		<i>Date Sampled:</i>	17-Jun-2025			
		<i>Time Sampled:</i>	12:00			
		<i>Asbestos Lab:</i>	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	24
Soil Colour		N	2030		N/A	Brown
Other Material		N	2030		N/A	Stones
Soil Texture		N	2030		N/A	Sand
pH at 20C		M	2010		4.0	6.9
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.28
Total Sulphur		U	2175	%	0.010	0.14
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	2.2
Sulphate (Total)		U	2430	%	0.010	0.31
Arsenic		M	2455	mg/kg	0.5	2.5
Cadmium		M	2455	mg/kg	0.10	< 0.10
Chromium		M	2455	mg/kg	0.5	14
Copper		M	2455	mg/kg	0.50	12
Mercury		M	2455	mg/kg	0.05	< 0.05
Nickel		M	2455	mg/kg	0.50	19
Lead		M	2455	mg/kg	0.50	8.4
Selenium		M	2455	mg/kg	0.25	< 0.25
Zinc		M	2455	mg/kg	0.50	35
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50
Organic Matter		M	2625	%	0.40	2.1
Total Organic Carbon		M	2625	%	0.20	1.2
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	< 0.10

Results - Soil

Project: 16-465 - Edenfield Road, Norden

Client: E3P		Chemtest Job No.:		25-20566	
Quotation No.: Q23-31421		Chemtest Sample ID.:		1989563	
Order No.: 011448		<i>Client Sample Ref.:</i>		SS102	
		<i>Client Sample ID.:</i>		SS102	
		<i>Client Reference:</i>		SS102	
		<i>Sample Type:</i>		SOIL	
		<i>Top Depth (m):</i>		-	
		<i>Bottom Depth (m):</i>		-	
		<i>Date Sampled:</i>		17-Jun-2025	
		<i>Time Sampled:</i>		12:00	
		<i>Asbestos Lab:</i>		DURHAM	
Determinand	HWOL Code	Accred.	SOP	Units	LOD
Acenaphthylene		M	2700	mg/kg	0.10
Acenaphthene		M	2700	mg/kg	0.10
Fluorene		M	2700	mg/kg	0.10
Phenanthrene		M	2700	mg/kg	0.10
Anthracene		M	2700	mg/kg	0.10
Fluoranthene		M	2700	mg/kg	0.10
Pyrene		M	2700	mg/kg	0.10
Benzo[a]anthracene		M	2700	mg/kg	0.10
Chrysene		M	2700	mg/kg	0.10
Benzo[b]fluoranthene		M	2700	mg/kg	0.10
Benzo[k]fluoranthene		M	2700	mg/kg	0.10
Benzo[a]pyrene		M	2700	mg/kg	0.10
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10
Total Of 16 PAH's		M	2700	mg/kg	2.0
Naphthalene		M	2800	mg/kg	0.10
Acenaphthylene		N	2800	mg/kg	0.10
Acenaphthene		M	2800	mg/kg	0.10
Fluorene		M	2800	mg/kg	0.10
Phenanthrene		M	2800	mg/kg	0.10
Anthracene		M	2800	mg/kg	0.10
Fluoranthene		M	2800	mg/kg	0.10
Pyrene		M	2800	mg/kg	0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10
Chrysene		M	2800	mg/kg	0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0
Total Phenols		M	2920	mg/kg	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.	

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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



Final Report

Report No.: 25-26533-1

Initial Date of Issue: 26-Aug-2025

Re-Issue Details:

Client E3P

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

Contact(s): Mwilson@e3p.co.uk

Project 16-465 - Edenfield Road, Norden

Quotation No.: Q23-31421

Date Received: 12-Aug-2025

Order No.: 011892

Date Instructed: 12-Aug-2025

No. of Samples: 3

Turnaround (Wkdays): 5

Results Due: 18-Aug-2025

Date Approved: 26-Aug-2025

Approved By:

Details: 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: 16-465 - Edenfield Road, Norden

Client: E3P		Chemtest Job No.:				25-26533	25-26533	25-26533
Quotation No.: Q23-31421		Chemtest Sample ID.:				2013499	2013500	2013501
Order No.: 011892		Client Sample Ref.:				SS103	TS101	TS102
		Client Sample ID.:				SS103	TS101	TS102
		Client Reference:				SS103	TS101	TS102
		Sample Type:				SOIL	SOIL	SOIL
		Top Depth (m):				-	-	-
		Bottom Depth (m):				-	-	-
		Date Sampled:				07-Aug-2025	07-Aug-2025	07-Aug-2025
		Time Sampled:				12:00	12:00	12:00
		Asbestos Lab:				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
Moisture		N	2030	%	0.020	7.4	13	13
Soil Colour		N	2030		N/A	Brown	Brown	Brown
Other Material		N	2030		N/A	Stones	Stones and Roots	Stones and Roots
Soil Texture		N	2030		N/A	Sand	Loam	Loam
pH at 20C		M	2010		4.0	7.7	8.3	8.1
Sulphate (2:1 Water Soluble) as SO4		M	2120	g/l	0.010	0.44	0.084	0.21
Total Sulphur		U	2175	%	0.010	0.15	0.070	0.10
Cyanide (Total)		M	2300	mg/kg	0.50	< 0.50	< 0.50	0.60
Sulphide (Easily Liberatable)		N	2325	mg/kg	0.50	2.6	2.6	2.5
Sulphate (Total)		U	2430	%	0.010	0.43	0.50	0.17
Arsenic		M	2455	mg/kg	0.5	3.3	6.0	6.1
Cadmium		M	2455	mg/kg	0.10	0.12	0.13	0.18
Chromium		M	2455	mg/kg	0.5	14	8.0	6.4
Copper		M	2455	mg/kg	0.50	14	17	26
Mercury		M	2455	mg/kg	0.05	< 0.05	0.06	0.06
Nickel		M	2455	mg/kg	0.50	24	6.5	7.8
Lead		M	2455	mg/kg	0.50	12	33	96
Selenium		M	2455	mg/kg	0.25	0.77	0.63	0.55
Zinc		M	2455	mg/kg	0.50	38	36	38
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter		M	2625	%	0.40	1.3	12	10
Total Organic Carbon		M	2625	%	0.20	0.77	7.2	6.0
TPH >C6-C8	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	9.5	10
TPH >C8-C10	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	20	12
TPH >C10-C12	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	12	5.7
TPH >C12-C16	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	13	12
TPH >C16-C21	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	37	20
TPH >C21-C25	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	40	25
TPH >C25-C35	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	100	71
TPH >C35-C40	EH_1D_Total	N	2670	mg/kg	1.0	< 1.0	12	10
Total TPH >C6-C40	EH_1D_Total	U	2670	mg/kg	10	< 10	250	170

Results - Soil

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		Asbestos Lab:		DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD	
Naphthalene		M	2800	mg/kg	0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0
Total Phenols		M	2920	mg/kg	0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
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