

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

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 TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°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

Sample Deviation Codes

- 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 - Insufficient Sample (Applies to LOI in Trommel Fines Only)

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

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



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SAMPLING RECORD

Client	Enzo Homes	Project Number	223255
Project Address	Malthouse Lane, Cwnbran	Date	11/07/2022
AAE Operative	S.Philp	Weather	Sunny

Scope of works				
Description of works completed	• Inspection and sampling of soil stockpile (topsoil/subsoil)		Grid Squares Worked	NA
OBSERVATIONS	There's no clear divide between the topsoil and subsoil in the stockpile. The stockpile is observed to be mixed, and is generated from a cut, or strip, of the site. There is some delineation though, subsoil to the north, topsoil to the south.			
	There is some anthropogenic 'waste' material butted against the topsoil / subsoil stockpile. (Tyres, wood, brick, plastic – see photo plates.)			
	Composite samples of topsoil and subsoil were taken.			
	<u>Topsoil</u> Brown slightly sandy slightly gravelly CLAY. Many rootlets. Gravels are subangular sandstone. No visual or olfactory evidence of contamination			
	<u>Subsoil</u> Reddish brown slightly sandy slightly gravelly SILT. Occasional cobbles. Gravels and Cobbles are subangular sandstone. No visual or olfactory evidence of contamination			
Sample Locations	Reference	X Co-ordinate	Y Co-ordinate	Comments
	Topsoil (S1, S2, S3) Composite Samples			See Photo Plates
	Subsoil (S1, S2, S3) Composite Samples			See Photo Plates
Comments	Analysis: AAe Soll Suite 1, BS3882, BS8601			



Comment Topsoil / Subsoil	Project 223255 – Enzo Homes
	Photo Plate 1
	Date 11/07/22
	Originator SP
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment Topsoil / Subsoil Stockpile	Project 223255 – Enzo Homes
	Photo Plate 2
	Date 11/07/22
	Originator SP
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk



Comment
Topsoil / Subsoil Stockpile

Project
223255 – Enzo Homes

Photo Plate
3

Date
11/07/22

Originator
SP



**AA
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Comment
Topsoil / Subsoil Stockpile

Project
223255 – Enzo Homes

Photo Plate
4

Date
11/07/22

Originator
SP



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Comment
Subsoil

Project
223255 – Enzo Homes

Photo Plate
5

Date
11/07/22

Originator
SP



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Comment

'Waste Material' butted against Topsoil / Subsoil stockpile.

Project

223255 – Enzo Homes

Photo Plate

6

Date

11/07/22

Originator

SP



AA Environmental Limited

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Comment 'Waste Material' butted against Topsoil / Subsoil stockpile.	Project 223255 – Enzo Homes
	Photo Plate 7
	Date 11/07/22
	Originator SP
	 Environmental Consultants AA Environmental Limited Units 4-8 Cholswell Court Shippon, Abingdon OX13 6HX T: (01235) 536042 F: (01235) 523849 info@aae-ltd.co.uk www.aae-ltd.co.uk

NP44 3GB

Malthouse Lane
Llantarnam.

-  'Waste' Material
-  'Subsoil'
-  'Topsoil'



APPENDIX B

RESULTS OF THE LABORATORY IN-SITU SOIL ANALYSIS



Integral Geotechnique
Integral House
7 Beddau Way
Castlegate Business Park
CF83 2AX

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

Analytical Report Number : 25-033744

Project / Site name:	Alder Grove	Samples received on:	26/06/2025
Your job number:	14197	Samples instructed on/ Analysis started on:	26/06/2025
Your order number:	14197 RJH	Analysis completed by:	05/07/2025
Report Issue Number:	1	Report issued on:	07/07/2025
Samples Analysed:	6 soil samples		

Anna Guc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting
air	- once the analysis is complete

Excel copies of reports are only valid when accompanied by this PDF certificate.

Retention period for records and reports is minimum 6 years from the date of issue of the final report.
Some records may be kept for longer according to other legal/best practice requirements.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 25-033744

Project / Site name: Alder Grove

Your Order No: 14197 RJH

Lab Sample Number				594843	594844	594845	594846	594847
Sample Reference				Plot 162 Topsoil	Plot 162 Subsoil	Plot 166 Topsoil	Plot 166 Subsoil	Plot 178 Topsoil
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.05	0.5	0.05	0.5	0.05
Date Sampled				25/06/2025	25/06/2025	25/06/2025	25/06/2025	25/06/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Test Limit of detection	Test Accreditation Status		

Stone Content	%	0.1	NONE	28.5	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	15	12	13	16
Total mass of sample received	kg	0.1	NONE	0.8	0.8	0.8	0.8	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSO	DSO	DSO	DSO	DSO
Analysis completed	N/A	N/A	N/A	02/07/2025	02/07/2025	02/07/2025	02/07/2025	02/07/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.2	7.8	7.6	7.9	9
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	780	510	580	400	1700
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	110	300	66	200	800
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0528	0.15	0.0332	0.101	0.399
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	52.8	150	33.2	101	399
Sulphide	mg/kg	1	MCERTS	< 1.0	3.2	4.7	2.2	23
Total Sulphur	mg/kg	50	MCERTS	380	240	330	160	700
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.1	0.4	1.9	0.2	0.4
Loss on Ignition @ 450°C	%	0.2	MCERTS	4	1.4	4	1.2	1.7

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.12	0.1	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.1	0.08	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
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Analytical Report Number: 25-033744

Project / Site name: Alder Grove

Your Order No: 14197 RJH

Lab Sample Number				594843	594844	594845	594846	594847
Sample Reference				Plot 162 Topsoil	Plot 162 Subsoil	Plot 166 Topsoil	Plot 166 Subsoil	Plot 178 Topsoil
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Water Matrix				N/A	N/A	N/A	N/A	N/A
Depth (m)				0.05	0.5	0.05	0.5	0.05
Date Sampled				25/06/2025	25/06/2025	25/06/2025	25/06/2025	25/06/2025
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status					

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.7	3.2	5.9	2.5	5.3
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.97	1.4	0.95	1.3	0.86
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8	0.4	0.6	0.5	1.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.5	< 0.2	< 0.2	3.1
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	42	55	40	50	42
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	24	17	18	41
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	16	22	11	49
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	37	54	36	52	38
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.7	1.5	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	53	45	47	39	49
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	98	100	82	78	220

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC16 - EC35 EH_CU_1D_AL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPHCWG - Aliphatic >EC35 - EC44 EH_CU_1D_AL	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aliphatic >EC5 - EC44 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0	< 1.0	1.4	< 1.0	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0	< 2.0	2.6	< 2.0	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC40 EH_CU_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC35 - EC44 EH_CU_1D_AR	mg/kg	8.4	NONE	< 8.4	< 8.4	< 8.4	< 8.4	< 8.4
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10

TPH Total >EC5 - EC44 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	< 10	< 10
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 25-033744

Project / Site name: Alder Grove

Your Order No: 14197 RJH

Lab Sample Number				594848
Sample Reference				Plot 178 Subsoil
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.5
Date Sampled				25/06/2025
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	17
Total mass of sample received	kg	0.1	NONE	0.8

Asbestos

Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	DSO
Analysis completed	N/A	N/A	N/A	02/07/2025

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.6
Total Cyanide	mg/kg	1	MCERTS	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	590
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	79
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0397
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	39.7
Sulphide	mg/kg	1	MCERTS	< 1.0
Total Sulphur	mg/kg	50	MCERTS	320
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.9
Loss on Ignition @ 450°C	%	0.2	MCERTS	3.8

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80
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Analytical Report Number: 25-033744

Project / Site name: Alder Grove

Your Order No: 14197 RJH

Lab Sample Number				594848
Sample Reference				Plot 178 Subsoil
Sample Number				None Supplied
Water Matrix				N/A
Depth (m)				0.5
Date Sampled				25/06/2025
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Test Limit of detection	Test Accreditation Status	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.3
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.88
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	39
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	23
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	1.1
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	45
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	80

Petroleum Hydrocarbons

TPHCWG - Aliphatic >EC5 - EC6 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC6 - EC8 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC8 - EC10 HS_1D_AL	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aliphatic >EC10 - EC12 EH_CU_1D_AL	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aliphatic >EC12 - EC16 EH_CU_1D_AL	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aliphatic >EC16 - EC21 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC16 - EC35 EH_CU_1D_AL	mg/kg	10	MCERTS	< 10
TPHCWG - Aliphatic >EC21 - EC35 EH_CU_1D_AL	mg/kg	8	MCERTS	< 8.0
TPHCWG - Aliphatic >EC35 - EC44 EH_CU_1D_AL	mg/kg	8.4	NONE	< 8.4
TPHCWG - Aliphatic >EC5 - EC35 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10
TPHCWG - Aliphatic >EC5 - EC44 EH_CU+HS_1D_AL	mg/kg	10	NONE	< 10

TPHCWG - Aromatic >EC5 - EC7 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC7 - EC8 HS_1D_AR	mg/kg	0.01	MCERTS	< 0.010
TPHCWG - Aromatic >EC8 - EC10 HS_1D_AR	mg/kg	0.02	MCERTS	< 0.020
TPHCWG - Aromatic >EC10 - EC12 EH_CU_1D_AR	mg/kg	1	MCERTS	< 1.0
TPHCWG - Aromatic >EC12 - EC16 EH_CU_1D_AR	mg/kg	2	MCERTS	< 2.0
TPHCWG - Aromatic >EC16 - EC21 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC21 - EC35 EH_CU_1D_AR	mg/kg	10	MCERTS	< 10
TPHCWG - Aromatic >EC35 - EC40 EH_CU_1D_AR	mg/kg	10	NONE	< 10
TPHCWG - Aromatic >EC35 - EC44 EH_CU_1D_AR	mg/kg	8.4	NONE	< 8.4
TPHCWG - Aromatic >EC5 - EC35 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10
TPHCWG - Aromatic >EC5 - EC44 EH_CU+HS_1D_AR	mg/kg	10	NONE	< 10

TPH Total >EC5 - EC44 EH_CU+HS_1D_TOTAL	mg/kg	10	NONE	< 10
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U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected



Analytical Report Number : 25-033744

Project / Site name: Alder Grove

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
594843	Plot 162 Topsoil	None Supplied	0.05	Brown sandy loam with gravel and vegetation
594844	Plot 162 Subsoil	None Supplied	0.5	Brown clay with gravel
594845	Plot 166 Topsoil	None Supplied	0.05	Brown sandy loam with gravel and vegetation
594846	Plot 166 Subsoil	None Supplied	0.5	Brown clay with gravel
594847	Plot 178 Topsoil	None Supplied	0.05	Brown clay and loam with gravel and vegetation
594848	Plot 178 Subsoil	None Supplied	0.5	Brown clay and loam with gravel and vegetation

Analytical Report Number : 25-033744

Project / Site name: Alder Grove

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode	In-house method	L010-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Loss on ignition of soil @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	In-house method	L047-PL	D	MCERTS
Speciated PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Total petroleum hydrocarbons with carbon banding by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS with carbon banding aliphatic and aromatic	In-house method	L076B/L088-PL	D/W	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080-PL	W	MCERTS
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	MCERTS



Analytical Report Number : 25-033744

Project / Site name: Alder Grove

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters Heating/Cooling (PrW) DI Process Water (DI PrW)

Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099-PL	D	MCERTS
Soil Descriptions	Textural classification	In-house method	L019B	W	NONE

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Quality control parameter failure associated with individual result applies to calculated sum of individuals.

The result for sum should be interpreted with caution

APPENDIX C

SUMMARY SHEETS OF THE IN-SITU SOIL ANALYSIS RESULTS

SUMMARY OF LABORATORY SOIL TEST RESULTS

METALS AND SEMI-METALS

Job No.: 14197
 Site: Llanwern Phase 4 (Alder Grove)
 Soil Type: Capping Soils
 Soil Organic Matter: 1%

No.	Location	Depth (m)	Arsenic (mg/kg)	Boron (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Mercury (Elemental) (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Vanadium (mg/kg)	Zinc (mg/kg)
7	Plot 162 Topsoil	N/A	6.7	0.8	0.97	0.3	42	< 1.8	19	24	< 0.3	37	1.7	53	98
8	Plot 162 Subsoil	N/A	3.2	0.4	1.4	0.5	55	< 1.8	24	16	< 0.3	54	1.5	45	100
9	Plot 166 Topsoil	N/A	5.9	0.6	0.95	< 0.2	40	< 1.8	17	22	< 0.3	36	< 1.0	47	82
10	Plot 166 Subsoil	N/A	2.5	0.5	1.3	< 0.2	50	< 1.8	18	11	< 0.3	52	< 1.0	39	78
11	Plot 178 Topsoil	N/A	5.3	1.5	0.86	3.1	42	< 1.8	41	49	< 0.3	38	< 1.0	49	220
12	Plot 178 Subsoil	N/A	6.3	0.8	0.88	< 0.2	39	< 1.8	15	23	< 0.3	34	1.1	45	80
Screening Criteria Value			37.0	290.0	1.7	11.0	-	6.0	2400.0	200.0	1.2	130.0	250.0	410.0	3700.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	-	S4UL	S4UL	C4SL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

INORGANIC CHEMICALS & OTHERS

Job No.: 14197
 Site: Llanwern Phase 4 (Alder Grove)
 Soil Type: Capping Soils
 Soil Organic Matter: 1%

No.	Location	Depth (m)	Cyanide (mg/kg)	Loss on ignition, dried solids (%)	Moisture content at 30 C (%)	Phenol (mg/kg)	pH (pH units)	Water Soluble Sulphate (g/l)	Sulphate Total as SO4 (mg/kg)	Sulphide (mg/kg)	Total Sulphur (mg/kg)	TOC by Ignition in O2 (%)	Equivalent SOM (%)	Asbestos in Soil
7	Plot 162 Topsoil	N/A	< 1.0	4.00	12.00	< 1.0	7.20	0.05	780.00	< 1.0	380.00	2.10	3.61	Not-detected
8	Plot 162 Subsoil	N/A	< 1.0	1.40	15.00	< 1.0	7.80	0.15	510.00	3.20	240.00	0.40	0.69	Not-detected
9	Plot 166 Topsoil	N/A	< 1.0	4.00	12.00	< 1.0	7.60	0.03	580.00	4.70	330.00	1.90	3.27	Not-detected
10	Plot 166 Subsoil	N/A	< 1.0	1.20	13.00	< 1.0	7.90	0.10	400.00	2.20	160.00	0.20	0.34	Not-detected
11	Plot 178 Topsoil	N/A	< 1.0	1.70	16.00	< 1.0	9.00	0.40	1700.00	23.00	700.00	0.40	0.69	Not-detected
12	Plot 178 Subsoil	N/A	< 1.0	3.80	17.00	< 1.0	7.60	0.04	590.00	< 1.0	320.00	1.90	3.27	Not-detected
Screening Criteria Value			34.0	-	-	120.0	-	-	-	-	-	-	-	-
Source of Screening Criteria Value			ATRISK	-	-	S4UL	-	-	-	-	-	-	-	-

SUMMARY OF LABORATORY SOIL TEST RESULTS

POLYAROMATIC HYDROCARBONS (PAH)

Job No.: 14197
 Site: Llanwern Phase 4 (Alder Grove)
 Soil Type: Capping Soils
 Soil Organic Matter: 1%

No.	Location	Depth (m)	Acenaphthene (mg/kg)	Acenaphthylene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)	Benzo(b)fluoranthene (mg/kg)	Benzo(ghi)perylene (mg/kg)	Benzo(k)fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(ah)anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(123cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
7	Plot 162 Topsoil	N/A	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	0.12	< 0.05	< 0.05	< 0.05	0.07	0.1
8	Plot 162 Subsoil	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.08
9	Plot 166 Topsoil	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
10	Plot 166 Subsoil	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
11	Plot 178 Topsoil	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
12	Plot 178 Subsoil	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Screening Criteria Value			210.0	170.0	2400.0	7.2	2.2	2.6	320.0	77.0	15.0	0.24	280.0	170.0	27.0	2.3	95.0	620.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

SUMMARY OF LABORATORY SOIL TEST RESULTS

PETROLEUM HYDROCARBONS

Job No.: 14197
Site: Llanwern Phase 4 (Alder Grove)
Soil Type: Capping Soils
Soil Organic Matter: 1%

No.	Location	Depth (m)	Aliphatic C5-C6 (mg/kg)	Aliphatic C6-C8 (mg/kg)	Aliphatic C8-C10 (mg/kg)	Aliphatic C10- C12 EPH (mg/kg)	Aliphatic C12- C16 EPH (mg/kg)	Aliphatic C16-C35 EPH (mg/kg)	Aliphatic C35- C44 EPH (mg/kg)	Aromatic C5-C7 (mg/kg)	Aromatic C7-C8 (mg/kg)	Aromatic C8-C10 (mg/kg)	Aromatic C10- C12 EPH (mg/kg)	Aromatic C12- C16 EPH (mg/kg)	Aromatic C16- C21 EPH (mg/kg)	Aromatic C21- C35 EPH (mg/kg)	Aromatic C35- C40 EPH (mg/kg)
7	Plot 162 Topsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
8	Plot 162 Subsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
9	Plot 166 Topsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	1.4	2.6	< 10	< 10	< 10
10	Plot 166 Subsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
11	Plot 178 Topsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
12	Plot 178 Subsoil	N/A	< 0.010	< 0.010	< 0.010	< 1.0	< 2.0	< 10	< 8.4	< 0.010	< 0.010	< 0.020	< 1.0	< 2.0	< 10	< 10	< 10
Screening Criteria Value			42.0	100.0	27.0	130.0	1100.0	65000.0	65000.0	0.1	130.0	34.0	74.0	140.0	260.0	1100.0	1100.0
Source of Screening Criteria Value			S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL	S4UL

FIGURES



Plot 162 Capped Rear Garden



Plot 162 Capping Validation Depth Check

14197: Llanwern Phase 4 Alder Grove

Figure 3: Capping Validation Photographic Evidencence

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Plots 165-167 Capped Rear Gardens



Plot 166 Capping Validation Depth Check

14197: Llanwern Phase 4 Alder Grove

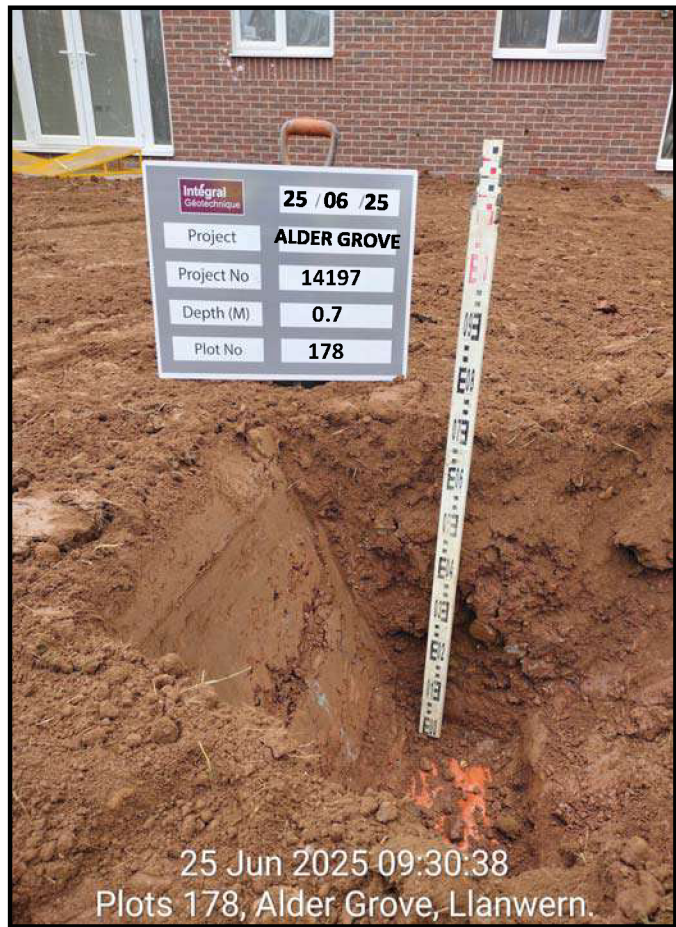
Figure 3: Capping Validation Photographic Evidencence

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Plots 178 & 179 Capped Rear Gardens



Plot 178 Capping Validation Depth Check

14197: Llanwern Phase 4 Alder Grove

Figure 3: Capping Validation Photographic Evendence

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