Ref DP/SJ/20040/LET/GE93

NHBC Ref: 223174

19 June 2024

Countryside Properties
i10 Railway Drive
Wolverhampton
WV1 1LH

Dear

Clean Cover Validation, Plots 674 to 677 – Drakelow Park, Burton-Upon-Trent

In accordance with the proposals made in the Travis Baker Geo-Environmental (TBGE) Remediation Strategy and Verification Plans (Ref: SEJ/20040/LET/GE20A, dated 10 May 2024 to cover Plots 345-580, 625-674, 709-727, 754-758 and 822-823, and SEJ/20040/LET/GE50, dated 14 September 2023 to cover Plots 675-705 and 728-749, this letter documents the placement of a clean cover system, comprising a minimum 600mm thickness of suitably clean topsoil and subsoil beneath the garden areas of Plots 674 to 677.

Samples of the imported topsoil were collected from a stockpile prior to its placement in the garden areas of the above plots. Chemical laboratory testing was undertaken by i2 Analytical, to UKAS and MCERTS accreditation where applicable in order to confirm that the levels of contamination are suitable for placement in garden areas. The results of analysis of the topsoil samples are contained in i2 report reference 23-31379 dated 8 May 2023.

A Travis Baker engineer attended site on 6 June 2024 to verify that a suitable thickness of clean cover material had been placed and to take representative samples of the imported subsoil placed in the garden area of Plot 674.

An inspection pit was dug by hand in the rear garden areas of Plot 674. This revealed:

- Plot 674 – 300mm imported topsoil and 300mm site won subsoil

Photographs showing the placed cover materials are included as Appendix 1.

A sample of the subsoil collected from the inspection pit was also subjected to chemical laboratory testing by i2 Analytical, to UKAS and MCERTS accreditation where applicable. The results are included in i2 report reference 24-023921 dated 13 June 2024.

The results of testing of the topsoil and subsoil have also been compared to the compliance criteria in Appendix 4. The maximum detected concentrations of all of the tested determinants were below the respective compliance criteria.

The foregoing thus demonstrates that a sufficient thickness of suitably clean cover material has been provided to the garden areas of Plot 613 to 616 and 650 to 659.

Travis Baker Limited: Registered in England and Wales 05703678: VAT Registration 881 4949 79
Registered Office: Spring Lodge, 172 Chester Road, Helsby, Cheshire, WA6 0AR

Travis Baker Ltd
Trinity Point
New Road
Halesowen
B63 3HY
Tel: 0121 550 8037
travisbaker.co.uk

19 June 2024

We trust the above and attached are satisfactory, however, if you have any queries please do not hesitate to contact us.

Yours sincerely,

Reviewed and approved by:

Sam Johnson
Associate Director
Geo-Environmental Engineering
Travis Baker Ltd
t: 0121 550 8037
m:
e:

Prepared by:

Daniel Potts
Senior Geo-Environmental Engineer

Encs
Appendix 1 – Photographs showing placed clean cover materials
Appendix 2 – Chemical laboratory test results (topsoil)
Appendix 3 – Chemical laboratory test results (subsoil)
Appendix 4 – Proposed validation tests and compliance criteria for clean cover topsoil and subsoil

APPENDICES

APPENDIX 1
Photographs showing placed clean cover materials



View of inspection pit in rear garden of Plot 674



Depth of pit at Plot 674, proving a 600mm-thickness of clean cover system placed

APPENDIX 2
Chemical laboratory test results (topsoil)

Travis Baker Geo-Environmental Limited
Trinity Point
New Road
Halesowen
West Midlands
B63 3HY

e:

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

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 23-31379

Project / Site name:	Drakeflow Lambes Topsoil Stockpile	**Samples received on:**	28/04/2023
Your job number:	20040	**Samples instructed on/ Analysis started on:**	28/04/2023
Your order number:	3411G	**Analysis completed by:**	08/05/2023
Report Issue Number:	1	**Report issued on:**	08/05/2023
Samples Analysed:	12 soil samples		

Signed:

Anna Goc
Junior Reporting Specialist
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

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

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.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 23-31379
Project / Site name: Drakeflow Lambes Topsoil Stockpile
Your Order No: 3411G

Lab Sample Number				2665515	2665516	2665517	2665518	2665519
Sample Reference				TPS-3001	TPS-3002	TPS-3003	TPS-3004	TPS-3005
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/04/2023	27/04/2023	27/04/2023	27/04/2023	27/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	7.3	10	7.9	9.7	11
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.9
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	SCA	SCA	SCA	SCA

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.3	7.3	7.2	6.9	7
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.032	0.06	0.031	0.021	0.054

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	< 0.05	< 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	0.08	< 0.05	< 0.05	< 0.05	0.17
Pyrene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	0.15
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.07	< 0.05	< 0.05	< 0.05	0.09
Chrysene	mg/kg	0.05	MCERTS	0.06	< 0.05	< 0.05	< 0.05	0.08
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.08	< 0.05	< 0.05	< 0.05	0.09
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	0.07	< 0.05	< 0.05	< 0.05	0.07
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

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.5	6.9	6.3	6.7	6.7
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.5	< 0.2	< 0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5	0.3	0.3	0.3	0.3
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.6	9.2	7.6	9.4	8.7
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	16	13	15	17
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	40	37	42	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	6.7	6.8	6.4	7.2	6.4
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	72	48	45	49	48

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 23-31379
Project / Site name: Drakeflow Lambes Topsoil Stockpile
Your Order No: 3411G

Lab Sample Number				2665520	2665521	2665522	2665523	2665524
Sample Reference				TPS-3006	TPS-3007	TPS-3008	TPS-3009	TPS-3010
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				27/04/2023	27/04/2023	27/04/2023	27/04/2023	27/04/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	12	11	9	7.7
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9	0.9
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	SCA	WEM	WEM	WEM	WEM

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.2	6.6	6.8	7.3	7
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.024	0.026	0.023	0.054	0.016

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	< 0.05	< 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	< 0.05	< 0.05	0.1	0.06	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.09	0.06	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.07	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.07	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.1	< 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	0.07	< 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

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	6.1	6.2	6.5	7.7	6.5
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	0.3	< 0.2	< 0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3	0.3	0.3	0.3	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.4	8.3	8.4	11	8
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	16	14	15	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	37	40	39	40	35
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	6.1	6.3	6.6	8.3	6.1
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	43	45	48	57	43

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 23-31379
Project / Site name: Drakeflow Lambes Topsoil Stockpile
Your Order No: 3411G

Lab Sample Number				2665525	2665526
Sample Reference				TPS-3011	TPS-3012
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				27/04/2023	27/04/2023
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.5	6.8
Total mass of sample received	kg	0.001	NONE	0.9	0.9
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	WEM	WEM

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	6.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.12	0.038

Speciated PAHs

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

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	< 0.80

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.4	7.4
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	8.9	8.7
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	36	37
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	6.6	6.7
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	44	54

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number : 23-31379
Project / Site name: Drakeflow Lambes Topsoil Stockpile

* 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 *
2665515	TPS-3001	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665516	TPS-3002	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665517	TPS-3003	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665518	TPS-3004	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665519	TPS-3005	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665520	TPS-3006	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665521	TPS-3007	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665522	TPS-3008	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665523	TPS-3009	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665524	TPS-3010	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665525	TPS-3011	None Supplied	None Supplied	Brown sand with gravel and vegetation.
2665526	TPS-3012	None Supplied	None Supplied	Brown sand with gravel and vegetation.

Analytical Report Number : 23-31379
Project / Site name: Drakeflow Lambes Topsoil Stockpile

Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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.	L038-PL	D	MCERTS
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	A001-PL	D	ISO 17025
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	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
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
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.	L019-UK/PL	D	NONE
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	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.

APPENDIX 3
Chemical laboratory test results (subsoil)

Travis Baker Geo-Environmental Limited
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Halesowen
West Midlands
B63 3HY

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7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-023921

Project / Site name:	Drakelow Burton on Trent	**Samples received on:**	07/06/2024
Your job number:	20040	**Samples instructed on/ Analysis started on:**	07/06/2024
Your order number:	PKG20700	**Analysis completed by:**	13/06/2024
Report Issue Number:	1	**Report issued on:**	13/06/2024
Samples Analysed:	21 soil samples		

Signed: _____

Anna Goc
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

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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.

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The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 24-023921
Project / Site name: Drakelow Burton on Trent
Your Order No: PKG20700

Lab Sample Number				221303	221304	221305	221306	221307
Sample Reference				Plot 675	Plot 678	Plot 702	Plot 704	Plot 709
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	0.40	0.40	0.40	0.40
Date Sampled				06/06/2024	06/06/2024	06/06/2024	06/06/2024	06/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.5	8.9	7.7	3.4	11
Total mass of sample received	kg	0.1	NONE	0.9	0.9	0.9	0.9	0.9
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	DSA	DSA	DSA	DSA	DSA
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	9	8.4	8.7	8.6	8.8
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	640	63	190	74	280
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.321	0.0314	0.0933	0.0371	0.139
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	321	31.4	93.3	37.1	139
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	0.09	< 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	0.13	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.13	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.93	< 0.05	< 0.05	< 0.05	0.1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	1.3	0.07	< 0.05	< 0.05	0.2
Pyrene	mg/kg	0.05	MCERTS	1.1	0.07	< 0.05	< 0.05	0.19
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.49	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.64	< 0.05	< 0.05	< 0.05	0.09
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.63	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.28	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.54	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.28	< 0.05	< 0.05	< 0.05	0.06
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	0.06
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	6.64	< 0.80	< 0.80	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	7.4	5.7	7.5	19
Boron (water soluble)	mg/kg	0.2	MCERTS	2	1.3	1.1	2.1	7.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.7	< 0.2	< 0.2	0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	29	24	27	22
Copper (aqua regia extractable)	mg/kg	1	MCERTS	36	14	11	13	26
Lead (aqua regia extractable)	mg/kg	1	MCERTS	43	14	12	19	32
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	24	28	24	26	28
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	2	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	68	57	56	86

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-023921
Project / Site name: Drakelow Burton on Trent
Your Order No: PKG20700

Lab Sample Number				221308	221309	221310	221311	221312
Sample Reference				Plot 711	Plot 713	Plot 725	Plot 729	Plot 733
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	0.40	0.40	0.40	0.40
Date Sampled				06/06/2024	06/06/2024	06/06/2024	06/06/2024	06/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	12	2.2	14	16
Total mass of sample received	kg	0.1	NONE	0.9	0.8	0.9	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	DSA	DSA	DSA	DSA	DSA
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	8.2	7.9	8.6	8.1	8.2
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	220	200	76	250	260
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.112	0.102	0.0379	0.126	0.13
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	112	102	37.9	126	130
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	< 0.05	0.14	< 0.05	0.13	0.06
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.09	0.27	0.07	0.15	0.09
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.26	< 0.05	0.14	0.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.14	< 0.05	0.06	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.15	< 0.05	0.06	< 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	0.08	< 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	1.04	< 0.80	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	61	13	8.4	25	31
Boron (water soluble)	mg/kg	0.2	MCERTS	2.4	1.2	1.5	0.8	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.6	< 0.2	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36	23	30	48	56
Copper (aqua regia extractable)	mg/kg	1	MCERTS	64	34	14	18	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	79	69	14	22	28
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	55	26	28	29	34
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	5.2	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	150	110	58	130	130

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-023921
Project / Site name: Drakelow Burton on Trent
Your Order No: PKG20700

Lab Sample Number				221313	221314	221315	221316	221317
Sample Reference				Plot 736	Plot 780	Plot 780	Plot 799	Plot 802
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	0.20	0.40	0.50	0.50
Date Sampled				06/06/2024	06/06/2024	06/06/2024	06/06/2024	06/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	61.4	35.1	< 0.1	14.6
Moisture Content	%	0.01	NONE	15	3.1	6.2	9.5	5.9
Total mass of sample received	kg	0.1	NONE	0.9	0.8	0.9	0.8	0.9
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	DBU	DBU	DBU	DBU	DBU
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.9	8	8.7	8.5	8.6
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	260	51	550	120	80
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.132	0.0256	0.273	0.0608	0.0398
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	132	25.6	273	60.8	39.8
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.32	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.46	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.92	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.2	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.22	0.17	11	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.5	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.28	0.22	10	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.25	0.19	8.5	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.12	< 0.05	3.3	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.13	< 0.05	3.9	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	3.1	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	1.5	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	2.7	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.09	1.2	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.32	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	1.4	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.01	< 0.80	52.5	< 0.80	< 0.80
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	26	9.5	13	7.6	5.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1	0.6	3.7	1	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.6	0.7	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	50	20	22	19	24
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	19	46	23	11
Lead (aqua regia extractable)	mg/kg	1	MCERTS	24	30	84	25	11
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	30	18	32	30	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	1.2	1.3	1.5	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	100	66	140	110	52

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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Analytical Report Number: 24-023921
Project / Site name: Drakelow Burton on Trent
Your Order No: PKG20700

Lab Sample Number				221318	221319	221320	221321	221322
Sample Reference				Plot 805	Plot 810	Plot 812	Plot 826	Plot 830
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	0.40	0.40	0.40	0.40
Date Sampled				06/06/2024	06/06/2024	06/06/2024	06/06/2024	06/06/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	5.4	8.2	11	11	17
Total mass of sample received	kg	0.1	NONE	0.8	0.9	0.8	0.9	0.9
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	IZJ	IZJ	DSA	DSA	DSA
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	8.8	8.8	8.7	8.5	8.3
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	110	34	100	200	200
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0536	0.0168	0.0516	0.0982	0.102
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	53.6	16.8	51.6	98.2	102
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.13	< 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	0.1	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.11	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.25	< 0.05	0.14	1.4	0.2
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.26	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.27	0.11	0.44	1.5	0.41
Pyrene	mg/kg	0.05	MCERTS	0.26	0.09	0.44	1.3	0.37
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.09	< 0.05	0.29	0.6	0.18
Chrysene	mg/kg	0.05	MCERTS	0.13	< 0.05	0.27	0.65	0.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.32	0.61	0.21
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	0.18	0.25	0.11
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.32	0.54	0.21
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.14	0.29	0.1
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.07	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.21	0.31	0.12
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.01	< 0.80	2.75	8.01	2.11
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	9.9	5.7	5.2	6.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2.1	1.1	0.7	1	1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.3	1.3	0.6	1.5
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	27	29	28	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	17	15	27	26	22
Lead (aqua regia extractable)	mg/kg	1	MCERTS	18	19	49	34	39
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	30	28	23	25	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.5	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	67	68	200	100	150

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Analytical Report Number: 24-023921
Project / Site name: Drakelow Burton on Trent
Your Order No: PKG20700

Lab Sample Number				221323
Sample Reference				Plot 835
Sample Number				None Supplied
Depth (m)				0.40
Date Sampled				06/06/2024
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	13
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	DSA
General Inorganics				
pH (L099)	pH Units	N/A	MCERTS	8.4
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	120
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0618
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	61.8
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
Heavy Metals / Metalloids				
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	9.9
Boron (water soluble)	mg/kg	0.2	MCERTS	2
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16
Lead (aqua regia extractable)	mg/kg	1	MCERTS	17
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	36
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	68

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

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The results included within the report relate only to the sample(s) submitted for testing.

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* 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 *
221303	Plot 675	None Supplied	0.4	Brown loam and clay with gravel
221304	Plot 678	None Supplied	0.4	Brown clay and sand with gravel and vegetation
221305	Plot 702	None Supplied	0.4	Brown clay and sand with gravel
221306	Plot 704	None Supplied	0.4	Brown sandy clay with gravel
221307	Plot 709	None Supplied	0.4	Brown clay and sand with gravel and vegetation
221308	Plot 711	None Supplied	0.4	Black clay and loam with gravel and vegetation
221309	Plot 713	None Supplied	0.4	Brown clay and sand with gravel and vegetation
221310	Plot 725	None Supplied	0.4	Light brown sandy clay with gravel
221311	Plot 729	None Supplied	0.4	Brown clay and sand with gravel and vegetation
221312	Plot 733	None Supplied	0.4	Brown clay and sand with gravel and vegetation
221313	Plot 736	None Supplied	0.4	Brown clay with gravel and vegetation
221314	Plot 780	None Supplied	0.2	Brown clay with vegetation and stones
221315	Plot 780	None Supplied	0.4	Brown loam and clay with stones and vegetation
221316	Plot 799	None Supplied	0.5	Brown clay with gravel
221317	Plot 802	None Supplied	0.5	Brown clay and sand with gravel and stones
221318	Plot 805	None Supplied	0.4	Brown clay and sand with gravel
221319	Plot 810	None Supplied	0.4	Brown loam and clay with gravel and vegetation
221320	Plot 812	None Supplied	0.4	Brown loam and clay with gravel and vegetation
221321	Plot 826	None Supplied	0.4	Brown loam and clay with gravel and vegetation
221322	Plot 830	None Supplied	0.4	Brown clay and loam with gravel and vegetation
221323	Plot 835	None Supplied	0.4	Brown clay with gravel

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Water matrix abbreviations:
Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (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
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
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	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
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

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.

APPENDIX 4
Proposed validation tests and compliance criteria for clean cover topsoil and subsoil

APPENDIX 2 – DRAKELOW, BURTON-UPON-TRENT
Proposed Validation Tests and Compliance Criteria for Top Soil / Sub Soil

Table 1 – Minimum test suite for materials from 'Greenfield' sources

Determinant	Compliance criterion (mg/kg)	Source
Arsenic	37	C4SL (residential with homegrown produce)
Cadmium	22	C4SL (residential with homegrown produce)
Chromium (total)	630	S4UL (residential with homegrown produce)
Lead	200	C4SL (residential with homegrown produce)
Mercury (inorganic)	40	S4UL (residential with homegrown produce)
Selenium	250	S4UL (residential with homegrown produce)
Copper	2400	S4UL (residential with homegrown produce)
Nickel	180	S4UL (residential with homegrown produce)
Zinc	3700	S4UL (residential with homegrown produce)
Boron	290	S4UL (residential with homegrown produce)
Acenaphthene	210	S4UL (residential with homegrown produce)
Acenaphthylene	170	S4UL (residential with homegrown produce)
Anthracene	2,400	S4UL (residential with homegrown produce)
Benzo(a)anthracene	7.2	S4UL (residential with homegrown produce)
Benzo(a)pyrene	2.2	S4UL (residential with homegrown produce)
Benzo(a)pyrene	5	S4UL (residential with homegrown produce)
Benzo(b)fluoranthene	2.6	S4UL (residential with homegrown produce)
Benzo(ghi)perylene	320	S4UL (residential with homegrown produce)
Benzo(k)fluoranthene	77	S4UL (residential with homegrown produce)
Chrysene	15	S4UL (residential with homegrown produce)
Dibenzo(ah)anthracene	0.24	S4UL (residential with homegrown produce)
Fluoranthene	280	S4UL (residential with homegrown produce)
Fluorene	170	S4UL (residential with homegrown produce)
Indeno(123-cd)pyrene	27	S4UL (residential with homegrown produce)
Naphthalene	2.3	S4UL (residential with homegrown produce)
Phenanthrene	95	S4UL (residential with homegrown produce)
Pyrene	620	S4UL (residential with homegrown produce)

Table 2 – Additional tests as required for materials sourced from 'Brownfield' sites or 'mixed' sources (including treatment hubs)

Determinant	Compliance criterion (mg/kg)	Source
TPH (aliphatic C_5-C_6)	42	S4UL (residential with homegrown produce)
TPH (aliphatic C_6-C_8)	100	S4UL (residential with homegrown produce)
TPH (aliphatic C_8-C_{10})	27	S4UL (residential with homegrown produce)
TPH (aliphatic C_{10}-C_{12})	130	S4UL (residential with homegrown produce)
TPH (aliphatic C_{12}-C_{16})	1,100	S4UL (residential with homegrown produce)
TPH (aliphatic C_{16}-C_{35})	65,000	S4UL (residential with homegrown produce)
TPH (aliphatic C_{35}-C_{40})	65,000	S4UL (residential with homegrown produce)
TPH (aromatic C_5-C_7)	70	S4UL (residential with homegrown produce)
TPH (aromatic C_7-C_8)	130	S4UL (residential with homegrown produce)
TPH (aromatic C_8-C_{10})	34	S4UL (residential with homegrown produce)
TPH (aromatic C_{10}-C_{12})	74	S4UL (residential with homegrown produce)
TPH (aromatic C_{12}-C_{16})	140	S4UL (residential with homegrown produce)
TPH (aromatic C_{16}-C_{21})	260	S4UL (residential with homegrown produce)
TPH (aromatic C_{21}-C_{35})	1,100	S4UL (residential with homegrown produce)
TPH (aromatic C_{35}-C_{40})	1,100	S4UL (residential with homegrown produce)
Benzene	0.87	S4UL (residential with homegrown produce)
Toluene	130	S4UL (residential with homegrown produce)
Ethylbenzene	47	S4UL (residential with homegrown produce)
m&p-Xylene	59	S4UL (residential with homegrown produce)
o-xylene	56	S4UL (residential with homegrown produce)
Asbestos	<0.001% *	Derived 'in house' by TBGE

Notes:

C4SL = Category 4 Screening Level (DEFRA, 2014)
S4UL = Suitable 4 Use Level (LQM and CIEH, 2015.

Values assume a soil organic matter (SOM) content of 1%, where applicable.

* If asbestos fibres are positively identified at <0.001%, further sampling may be necessary to verify that the test result is not indicative of more substantial contamination in the immediate locality.