

APPENDIX E

Contamination Laboratory Test Methods and Results



These screening values are valid at the time of writing but may be subject to change and any such changes will have implications for the assessments based on them. Their validity should be confirmed at the time of site development.

Table 1 – Tier 1 Screening Values							
Contaminant	Units	Proposed Land Use					
		Residential with home grown produce consumption	Residential without home grown produce consumption	Open Space * (Residential)	Open Space * (Park)	Allotments	Commercial / Industrial
Arsenic (As) [2]	mg/kg	37	40	79	170	43	640
Cadmium (Cd) [2]	mg/kg	11	85	120	555	1.9	190
Trivalent Chromium (CrIII) [2]	mg/kg	910	910	1,500	33,000	18,000	8600
Hexavalent Chromium (CrVI) [2]	mg/kg	6	6	7.7	220	1.8	33
Lead (Pb) [3]	mg/kg	200	310	630	1300	80	2330
Mercury (Hg) [1,2,7]	mg/kg	7.6-11	9.2-15	40	68-71	6.0	29-320
Selenium (Se) [2]	mg/kg	250	430	1,100	1,800	88	12,000
Nickel (Ni) [2,4]	mg/kg	130	180	230	800	53	980
Copper (Cu) [2,4]	mg/kg	2,400	7,100	12,000	44,000	520	68,000
Zinc (Zn) [2,4]	mg/kg	3,700	40,000	81,000	170,000	620	730,000
Phenol [1,2]	mg/kg	120-380	440-1200	440-1300	440-1300	23-83	440-1300
Benzo[a]pyrene [1,5]	mg/kg	1.7-2.4	2.6	4.9	10	0.67-2.7	36
Naphthalene [1,2]	mg/kg	2.3-1.3	2.3-13	77-430*	77-430*	4.1-24	77-430*
Total Cyanide (CN) [6]	mg/kg	/	/	/	/	/	/
Free Cyanide [6]	mg/kg	/	/	/	/	/	/
Complex Cyanides [6]	mg/kg	/	/	/	/	/	/
Thiocyanate [6]	mg/kg	/	/	/	/	/	/

Notes:

* Open Space levels calculated on the basis of the exposure modelling developed in the C4SL research.

+ Screening values constrained to saturation limit. Higher values may be acceptable on a site specific basis.

[1] Where ranges of values are given for organic contaminants the screening value is dependent on the Soil +Organic Matter.

[2] LQM/CIEH S4UL (2014). Copyright Land Quality Management Ltd. reproduced with permission; Publication Number S4UL 3116. All rights reserved.

[3] C4SL (DEFRA 2014).

[4] Copper, Zinc and Nickel may have phototoxic effects at the given concentrations. Alternative criteria should be adopted for importation of Topsoil or other soils for cultivation. BS3882:2015 and BS8601:2013 suggest values of 200 to 300mg/kg for Zn, 100 to 200mg/kg for Cu, and 60 to 110mg/kg for Ni, for topsoil and subsoil, depending on pH.

[5] Based on the Surrogate Marker approach and modelled using the modified exposure parameters of C4SL but retaining 'minimal risk' HCV.

[6] Screening criteria derived on a site specific basis if test results indicate.

[7] S4UL for Methyl Mercury, higher concentrations may be tolerable if inorganic mercury is the only species present. Lower concentrations apply for elemental Mercury.

**Contam Results**

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Analytical Report Number : 21-25753

Project / Site name:	Back Lane, Great Ashby	Samples received on:	26/11/2021
Your job number:	JN1631	Samples instructed on/ Analysis started on:	26/11/2021
Your order number:		Analysis completed by:	07/12/2021
Report Issue Number:	1	Report issued on:	07/12/2021
Samples Analysed:	8 soil samples		

Signed:

Izabela Wójcik
Technical Reviewer (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

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.

Analytical Report Number: 21-25753
Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098234	2098235	2098236	2098237	2098238
Sample Reference				TP01	TP02	TP03	TP04	TP05
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.00	2.00	2.50	1.00	2.00
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
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	16	17	14	15	12
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.5	7.6	7.9	7.8	8.0
Total Sulphate as SO ₄	%	0.005	MCERTS	0.019	0.009	0.007	0.016	0.010
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.014	0.0094	0.012	0.029	0.015
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	14.1	9.4	12.2	29.2	15.3
Total Sulphur	%	0.005	MCERTS	0.008	< 0.005	< 0.005	0.010	< 0.005

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-25753
Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098239	2098240	2098241
Sample Reference				TP06	TP07	TP08
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				3.00	1.00	2.00
Date Sampled				Deviating	Deviating	Deviating
Time Taken				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
Moisture Content	%	0.01	NONE	12	14	14
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	8.1	7.9
Total Sulphate as SO ₄	%	0.005	MCERTS	0.010	0.013	0.010
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0094	0.0048	0.0077
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	9.4	4.8	7.7
Total Sulphur	%	0.005	MCERTS	< 0.005	0.008	< 0.005

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-25753

Project / Site name: Back Lane, Great Ashby

* 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, day 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 *
2098234	TP01	None Supplied	1	Brown day with gravel.
2098235	TP02	None Supplied	2	Brown day with gravel.
2098236	TP03	None Supplied	2.5	Brown day with gravel.
2098237	TP04	None Supplied	1	Brown day with gravel.
2098238	TP05	None Supplied	2	Brown day with gravel.
2098239	TP06	None Supplied	3	Brown day with gravel.
2098240	TP07	None Supplied	1	Brown day with gravel.
2098241	TP08	None Supplied	2	Brown day with gravel.

Analytical Report Number : 21-25753

Project / Site name: Back Lane, Great Ashby

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
Moisture Content	Moisture content, determined gravimetrically, (30 oC)	In house method.	L019-UK/PL	W	NONE
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
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
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
Sulphate, water soluble, in soil	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

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' 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.

Sample Deviation Report



Analytical Report Number : 21-25753
Project / Site name: Back Lane, Great Ashby

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP01	None Supplied	S	2098234	a	None Supplied	None Supplied	None Supplied
TP02	None Supplied	S	2098235	a	None Supplied	None Supplied	None Supplied
TP03	None Supplied	S	2098236	a	None Supplied	None Supplied	None Supplied
TP04	None Supplied	S	2098237	a	None Supplied	None Supplied	None Supplied
TP05	None Supplied	S	2098238	a	None Supplied	None Supplied	None Supplied
TP06	None Supplied	S	2098239	a	None Supplied	None Supplied	None Supplied
TP07	None Supplied	S	2098240	a	None Supplied	None Supplied	None Supplied
TP08	None Supplied	S	2098241	a	None Supplied	None Supplied	None Supplied

**Contam Results**

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Analytical Report Number : 21-25754

Project / Site name:	Back Lane, Great Ashby	Samples received on:	26/11/2021
Your job number:	JN1631	Samples instructed on/ Analysis started on:	26/11/2021
Your order number:		Analysis completed by:	10/12/2021
Report Issue Number:	1	Report issued on:	10/12/2021
Samples Analysed:	10 soil samples		

Signed:

Izabela Wójcik
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 21-25754
Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098193	2098194	2098195	2098196	2098197
Sample Reference				TP01	TP02	TP03	TP03	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.15	0.50	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
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	13	11	8.6	< 0.1	71
Moisture Content	%	0.01	NONE	13	15	16	12	5.3
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.1	1.0	1.0

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	SZS	SZS	SZS	SZS	SZS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.8	5.9	7.3	7.8	7.3
Organic Matter (automated)	%	0.1	MCERTS	2.0	2.8	3.1	1.1	1.6

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	0.57	0.31	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.55	0.28	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.36	0.24	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.29	0.23	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.43	0.25	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.21	0.22	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.36	0.29	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.34	0.26	< 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	0.41	0.26	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	3.52	2.34	< 0.80	< 0.80
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	13	13	13	8.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	31	29	28	27	26
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	31	29	28	27	26
Copper (aqua regia extractable)	mg/kg	1	MCERTS	29	20	26	15	20
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	34	32	20	21
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	18	19	18	21	19
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	54	51	55	45	36

Analytical Report Number: 21-25754

Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098193	2098194	2098195	2098196	2098197
Sample Reference				TP01	TP02	TP03	TP03	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.15	0.50	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

Pesticides

Alachlor	µg/kg	10	NONE	< 10	-	< 10	-	-
Aldrin	µg/kg	10	NONE	< 10	-	< 10	-	-
Azinphos-ethyl	µg/kg	10	NONE	< 10	-	< 10	-	-
Azinphos-methyl	µg/kg	10	NONE	< 10	-	< 10	-	-
BHC-alpha (benzene hexachloride)	µg/kg	10	NONE	< 10	-	< 10	-	-
BHC-beta	µg/kg	10	NONE	< 10	-	< 10	-	-
BHC-delta	µg/kg	10	NONE	< 10	-	< 10	-	-
BHC-gamma (Lindane, gamma HCH)	µg/kg	10	NONE	< 10	-	< 10	-	-
Bifenthrin	µg/kg	10	NONE	< 10	-	< 10	-	-
Carbophenothion	µg/kg	10	NONE	< 10	-	< 10	-	-
Chlordane-cis	µg/kg	10	NONE	< 10	-	< 10	-	-
Chlordane-trans	µg/kg	10	NONE	< 10	-	< 10	-	-
Chlorfenvinphos	µg/kg	10	NONE	< 10	-	< 10	-	-
Chlorothalonil	µg/kg	20	NONE	< 20	-	< 20	-	-
Chlorpyrifos	µg/kg	10	NONE	< 10	-	< 10	-	-
Cyfluthrin (Sum)	µg/kg	10	NONE	< 10	-	< 10	-	-
Cyhalothrin (Lambda)	µg/kg	10	NONE	< 10	-	< 10	-	-
Cypermethrin (Sum)	µg/kg	10	NONE	< 10	-	< 10	-	-
DDD-o,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
DDD-p,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
DDE-o,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
DDE-p,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
DDT-o,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
DDT-p,p'	µg/kg	10	NONE	< 10	-	< 10	-	-
Deltamethrin	µg/kg	10	NONE	< 10	-	< 10	-	-
Demeton-O	µg/kg	10	NONE	< 10	-	< 10	-	-
Demeton-S	µg/kg	10	NONE	< 10	-	< 10	-	-
Diazinon	µg/kg	10	NONE	< 10	-	< 10	-	-
Dichlorobenzonitrile, 2,6-	µg/kg	10	NONE	< 10	-	< 10	-	-
Dichlorvos	µg/kg	10	NONE	< 10	-	< 10	-	-
Dieldrin	µg/kg	10	NONE	< 10	-	< 10	-	-
Dimethoate	µg/kg	10	NONE	< 10	-	< 10	-	-
Dimethylvinphos	µg/kg	10	NONE	< 10	-	< 10	-	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	< 10	-	< 10	-	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	< 10	-	< 10	-	-
Endosulfan sulfate	µg/kg	10	NONE	< 10	-	< 10	-	-
Endrin	µg/kg	20	NONE	< 20	-	< 20	-	-
Endrin aldehyde	µg/kg	10	NONE	< 10	-	< 10	-	-
Endrin ketone	µg/kg	10	NONE	< 10	-	< 10	-	-
Ethion	µg/kg	10	NONE	< 10	-	< 10	-	-
Etrinfos	µg/kg	10	NONE	< 10	-	< 10	-	-
Fenitrothion	µg/kg	10	NONE	< 10	-	< 10	-	-
Fenthion	µg/kg	10	NONE	< 10	-	< 10	-	-
Fenvalerate (Sum)	µg/kg	10	NONE	< 10	-	< 10	-	-
Heptachlor	µg/kg	10	NONE	< 10	-	< 10	-	-
Heptachlor exo-epoxide	µg/kg	10	NONE	< 10	-	< 10	-	-
Hexachlorobenzene	µg/kg	10	NONE	< 10	-	< 10	-	-
Hexachlorobutadiene	µg/kg	10	NONE	< 10	-	< 10	-	-
Isodrin	µg/kg	20	NONE	< 20	-	< 20	-	-
Malathion	µg/kg	10	NONE	< 10	-	< 10	-	-
Methacrifos	µg/kg	10	NONE	< 10	-	< 10	-	-
Methoxychlor, p,p'-	µg/kg	20	NONE	< 20	-	< 20	-	-
Mevinphos, E+Z	µg/kg	10	NONE	< 10	-	< 10	-	-
Omethoate	µg/kg	20	NONE	< 20	-	< 20	-	-
Parathion	µg/kg	10	NONE	< 10	-	< 10	-	-

Analytical Report Number: 21-25754
Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098193	2098194	2098195	2098196	2098197
Sample Reference				TP01	TP02	TP03	TP03	TP04
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.15	0.50	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Parathion-methyl	µg/kg	10	NONE	< 10	-	< 10	-	-
Pendimethalin	µg/kg	10	NONE	< 10	-	34	-	-
Pentachlorobenzene	µg/kg	10	NONE	< 10	-	< 10	-	-
Permethrin, Cis-	µg/kg	10	NONE	< 10	-	< 10	-	-
Permethrin, Trans-	µg/kg	10	NONE	< 10	-	< 10	-	-
Phorate	µg/kg	10	NONE	< 10	-	< 10	-	-
Phosalone	µg/kg	10	NONE	< 10	-	< 10	-	-
Phosphamidon (Sum)	µg/kg	10	NONE	< 10	-	< 10	-	-
Pirimiphos-ethyl	µg/kg	10	NONE	< 10	-	< 10	-	-
Pirimiphos-methyl	µg/kg	10	NONE	< 10	-	< 10	-	-
Propetamphos	µg/kg	10	NONE	< 10	-	< 10	-	-
Propyzamide	µg/kg	10	NONE	< 10	-	< 10	-	-
Tecnazene	µg/kg	10	NONE	< 10	-	< 10	-	-
Tetrachlorobenzene, 1,2,4,5-	µg/kg	10	NONE	< 10	-	< 10	-	-
Trichlorobenzene, 1,2,3-	µg/kg	10	NONE	< 10	-	< 10	-	-
Trichlorobenzene, 1,3,5-	µg/kg	10	NONE	< 10	-	< 10	-	-
Trifluralin	µg/kg	10	NONE	< 10	-	< 10	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 21-25754
Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098198	2098199	2098200	2098201	2098202
Sample Reference				TP05	TP06	TP06	TP07	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.50	0.15	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
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	13	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	9.1	14	17	14	12
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.0	1.0

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	SZS	SZS	SZS	SZS	SZS

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.4	6.6	6.9	6.8	7.6
Organic Matter (automated)	%	0.1	MCERTS	2.2	2.7	2.1	2.6	2.9

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	< 0.05	< 0.05	0.37
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.34
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.25
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	0.20
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 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	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80	1.16
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	13	17	12	11
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.7	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Chromium (III)	mg/kg	1	NONE	24	24	36	23	23
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	24	36	23	23
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	77	23	23	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	31	78	25	31	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	17	21	24	18	14
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	46	170	59	56	49

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Lab Sample Number				2098198	2098199	2098200	2098201	2098202
Sample Reference				TP05	TP06	TP06	TP07	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.50	0.15	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Pesticides								
Alachlor	µg/kg	10	NONE	-	< 10	-	-	-
Aldrin	µg/kg	10	NONE	-	< 10	-	-	-
Azinphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	-
Azinphos-methyl	µg/kg	10	NONE	-	< 10	-	-	-
BHC-alpha (benzene hexachloride)	µg/kg	10	NONE	-	< 10	-	-	-
BHC-beta	µg/kg	10	NONE	-	< 10	-	-	-
BHC-delta	µg/kg	10	NONE	-	< 10	-	-	-
BHC-gamma (Lindane, gamma HCH)	µg/kg	10	NONE	-	< 10	-	-	-
Bifenthrin	µg/kg	10	NONE	-	< 10	-	-	-
Carbophenothion	µg/kg	10	NONE	-	< 10	-	-	-
Chlordane-cis	µg/kg	10	NONE	-	< 10	-	-	-
Chlordane-trans	µg/kg	10	NONE	-	< 10	-	-	-
Chlorfenvinphos	µg/kg	10	NONE	-	< 10	-	-	-
Chlorothalonil	µg/kg	20	NONE	-	< 20	-	-	-
Chlorpyrifos	µg/kg	10	NONE	-	< 10	-	-	-
Cyfluthrin (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Cyhalothrin (Lambda)	µg/kg	10	NONE	-	< 10	-	-	-
Cypermethrin (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
DDD-o,p'	µg/kg	10	NONE	-	< 10	-	-	-
DDD-p,p'	µg/kg	10	NONE	-	< 10	-	-	-
DDE-o,p'	µg/kg	10	NONE	-	< 10	-	-	-
DDE-p,p'	µg/kg	10	NONE	-	< 10	-	-	-
DDT-o,p'	µg/kg	10	NONE	-	< 10	-	-	-
DDT-p,p'	µg/kg	10	NONE	-	< 10	-	-	-
Deltamethrin	µg/kg	10	NONE	-	< 10	-	-	-
Demeton-O	µg/kg	10	NONE	-	< 10	-	-	-
Demeton-S	µg/kg	10	NONE	-	< 10	-	-	-
Diazinon	µg/kg	10	NONE	-	< 10	-	-	-
Dichlorobenzonitrile, 2,6-	µg/kg	10	NONE	-	< 10	-	-	-
Dichlorvos	µg/kg	10	NONE	-	< 10	-	-	-
Dieldrin	µg/kg	10	NONE	-	< 10	-	-	-
Dimethoate	µg/kg	10	NONE	-	< 10	-	-	-
Dimethylvinphos	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan I (alpha isomer)	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan II (beta isomer)	µg/kg	10	NONE	-	< 10	-	-	-
Endosulfan sulfate	µg/kg	10	NONE	-	< 10	-	-	-
Endrin	µg/kg	20	NONE	-	< 20	-	-	-
Endrin aldehyde	µg/kg	10	NONE	-	< 10	-	-	-
Endrin ketone	µg/kg	10	NONE	-	< 10	-	-	-
Ethion	µg/kg	10	NONE	-	< 10	-	-	-
Etrinfos	µg/kg	10	NONE	-	< 10	-	-	-
Fenitrothion	µg/kg	10	NONE	-	< 10	-	-	-
Fenthion	µg/kg	10	NONE	-	< 10	-	-	-
Fenvalerate (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Heptachlor	µg/kg	10	NONE	-	< 10	-	-	-
Heptachlor exo-epoxide	µg/kg	10	NONE	-	< 10	-	-	-
Hexachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
Hexachlorobutadiene	µg/kg	10	NONE	-	< 10	-	-	-
Isodrin	µg/kg	20	NONE	-	< 20	-	-	-
Malathion	µg/kg	10	NONE	-	< 10	-	-	-
Methacrifos	µg/kg	10	NONE	-	< 10	-	-	-
Methoxychlor, p,p'-	µg/kg	20	NONE	-	< 20	-	-	-
Mevinphos, E+Z	µg/kg	10	NONE	-	< 10	-	-	-
Omethoate	µg/kg	20	NONE	-	< 20	-	-	-
Parathion	µg/kg	10	NONE	-	< 10	-	-	-

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Project / Site name: Back Lane, Great Ashby

Lab Sample Number				2098198	2098199	2098200	2098201	2098202
Sample Reference				TP05	TP06	TP06	TP07	TP08
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.15	0.15	0.50	0.15	0.15
Date Sampled				25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Parathion-methyl	µg/kg	10	NONE	-	< 10	-	-	-
Pendimethalin	µg/kg	10	NONE	-	20	-	-	-
Pentachlorobenzene	µg/kg	10	NONE	-	< 10	-	-	-
Permethrin, Cis-	µg/kg	10	NONE	-	< 10	-	-	-
Permethrin, Trans-	µg/kg	10	NONE	-	< 10	-	-	-
Phorate	µg/kg	10	NONE	-	< 10	-	-	-
Phosalone	µg/kg	10	NONE	-	< 10	-	-	-
Phosphamidon (Sum)	µg/kg	10	NONE	-	< 10	-	-	-
Pirimiphos-ethyl	µg/kg	10	NONE	-	< 10	-	-	-
Pirimiphos-methyl	µg/kg	10	NONE	-	< 10	-	-	-
Propetamphos	µg/kg	10	NONE	-	< 10	-	-	-
Propyzamide	µg/kg	10	NONE	-	< 10	-	-	-
Tecnazene	µg/kg	10	NONE	-	< 10	-	-	-
Tetrachlorobenzene, 1,2,4,5-	µg/kg	10	NONE	-	< 10	-	-	-
Trichlorobenzene, 1,2,3-	µg/kg	10	NONE	-	< 10	-	-	-
Trichlorobenzene, 1,3,5-	µg/kg	10	NONE	-	< 10	-	-	-
Trifluralin	µg/kg	10	NONE	-	< 10	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 21-25754

Project / Site name: Back Lane, Great Ashby

* 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 *
2098193	TP01	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
2098194	TP02	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
2098195	TP03	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
2098196	TP03	None Supplied	0.5	Brown loam and clay with gravel.
2098197	TP04	None Supplied	0.15	Brown loam and clay with gravel and stones.
2098198	TP05	None Supplied	0.15	Brown loam and clay with vegetation and stones.
2098199	TP06	None Supplied	0.15	Brown loam and clay with gravel and vegetation.
2098200	TP06	None Supplied	0.5	Brown day and loam with gravel.
2098201	TP07	None Supplied	0.15	Brown day and loam with vegetation and gravel
2098202	TP08	None Supplied	0.15	Brown day and loam with vegetation and gravel

Analytical Report Number : 21-25754

Project / Site name: Back Lane, Great Ashby

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
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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	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
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Pesticides by GC-MS/MS	Determination of Pesticides in soil by GC MS/MS	In-house method	L055B-PL	W	NONE
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' 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.

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Project / Site name: Back Lane, Great Ashby

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP01	None Supplied	S	2098193	b	Pesticides by GC-MS/MS	L055B-PL	b
TP01	None Supplied	S	2098193	b	Pesticides extraction	L055B-PL	b
TP01	None Supplied	S	2098193	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP02	None Supplied	S	2098194	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP03	None Supplied	S	2098195	b	Pesticides by GC-MS/MS	L055B-PL	b
TP03	None Supplied	S	2098195	b	Pesticides extraction	L055B-PL	b
TP03	None Supplied	S	2098195	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP03	None Supplied	S	2098196	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP04	None Supplied	S	2098197	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP05	None Supplied	S	2098198	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP06	None Supplied	S	2098199	b	Pesticides by GC-MS/MS	L055B-PL	b
TP06	None Supplied	S	2098199	b	Pesticides extraction	L055B-PL	b
TP06	None Supplied	S	2098199	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP06	None Supplied	S	2098200	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP07	None Supplied	S	2098201	b	Speciated EPA-16 PAHs in soil	L064-PL	b
TP08	None Supplied	S	2098202	b	Speciated EPA-16 PAHs in soil	L064-PL	b