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Analytical Report Number : 21-97273

Project / Site name:	Long Sutton	**Samples received on:**	03/09/2021
Your job number:	21-0536 01	**Samples instructed on/ Analysis started on:**	03/09/2021
Your order number:	DS63237	**Analysis completed by:**	10/09/2021
Report Issue Number:	1	**Report issued on:**	10/09/2021
Samples Analysed:	4 soil samples		

Signed: Karolina Marek

Karolina Marek
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

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 are representative of the samples submitted for analysis.

Analytical Report Number: 21-97273
Project / Site name: Long Sutton
Your Order No: DS63237

Lab Sample Number				1998723	1998724	1998725	1998726
Sample Reference				SP1	SP1	SP1	HDTP201
Sample Number				1	2	3	1
Depth (m)				None Supplied	None Supplied	None Supplied	0.10-0.30
Date Sampled				02/09/2021	02/09/2021	02/09/2021	02/09/2021
Time Taken				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
Moisture Content	%	0.01	NONE	11	10	12	10
Total mass of sample received	kg	0.001	NONE	0.90	0.90	0.90	0.90
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics							
pH - Automated	pH Units	N/A	MCERTS	8.0	7.8	7.5	7.7
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3300	3600	2500	240
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.7	1.8	1.3	0.12
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1670	1780	1260	118
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.37
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.12
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	1.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.70
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.70
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.77
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.41
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.75
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.41
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.48
Total PAH							
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	6.87
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	8.1	7.9	6.6	13
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.8
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	23	22	21	21
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	17	15	26
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	15	8.7	85
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	22	20	21
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	40	45	34	130
Monoaromatics & Oxygenates							
Benzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
p & m-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
o-xylene	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001

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Project / Site name: Long Sutton
Your Order No: DS63237

Lab Sample Number				1998723	1998724	1998725	1998726
Sample Reference				SP1	SP1	SP1	HDTP201
Sample Number				1	2	3	1
Depth (m)				None Supplied	None Supplied	None Supplied	0.10-0.30
Date Sampled				02/09/2021	02/09/2021	02/09/2021	02/09/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**				
Petroleum Hydrocarbons							
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10	20
TPH-CWG - Aromatic >EC35 - EC40	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	30
TPH (C35 - C40)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10

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

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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 *
1998723	SP1	1	None Supplied	Grey clay and sand with gravel.
1998724	SP1	2	None Supplied	Grey clay and sand with gravel and vegetation.
1998725	SP1	3	None Supplied	Grey clay and sand with gravel and vegetation.
1998726	HDTP201	1	0.10-0.30	Brown loam and sand with gravel and vegetation.

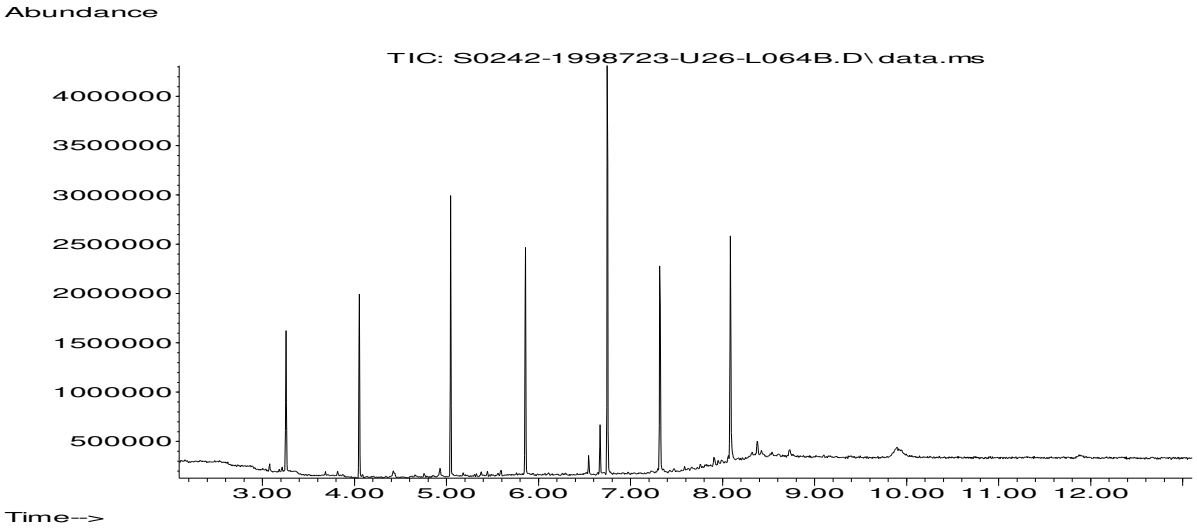
Analytical Report Number : 21-97273
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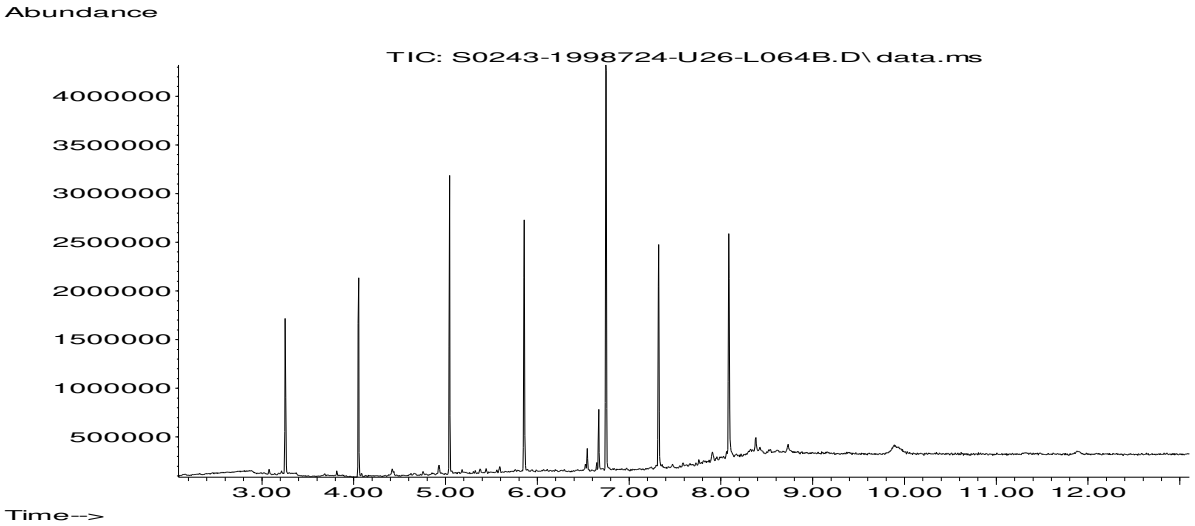
Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

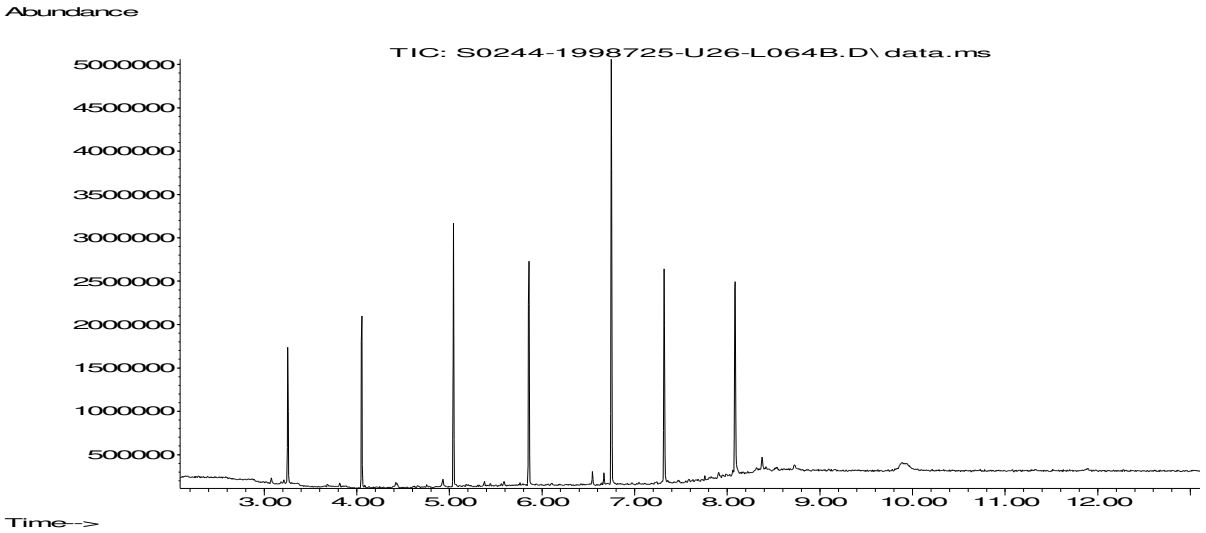
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for 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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide 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
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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

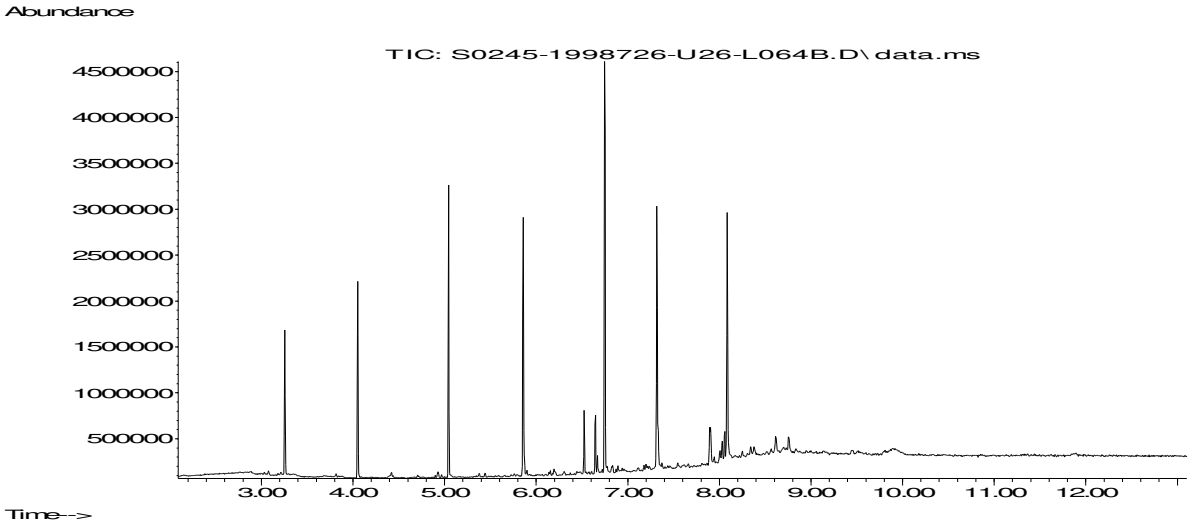
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received 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.


Abundance
TIC: S0242-1998723-U26-L064B.D\data.ms
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0243-1998724-U26-L064B.D\data.ms
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3500000
3000000
2500000
2000000
1500000
1000000
500000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
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3000000
2500000
2000000
1500000
1000000
500000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->


Abundance
TIC: S0245-1998726-U26-L064B.D\data.ms
4500000
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
11.00
12.00
Time-->