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Analytical Report Number : 20-12478

Project / Site name:	Clarendon Road	Samples received on:	03/06/2020
Your job number:		Sample instructed/ Analysis started on:	04/06/2020
Your order number:	SRE6066-00002	Analysis completed by:	09/06/2020
Report Issue Number:	1	Report issued on:	09/06/2020
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.

Iss No 20-12478-1 Clarendon Road

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.

Page 1 of 5

Analytical Report Number: 20-12478

Project / Site name: Clarendon Road

Your Order No: SRE6066-00002

Lab Sample Number				1524869	1524870	1524871	1524872	
Sample Reference				Site won	Site won	Site won	Knotweed	
Sample Number				SP1	SP2	SP3	None Supplied	
Depth (m)				0.20	0.20	0.20	0.10-0.20	
Date Sampled				03/06/2020	03/06/2020	03/06/2020	03/06/2020	
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	
Moisture Content	%	N/A	NONE	-	-	-	0.86	
Total mass of sample received	kg	0.001	NONE	-	-	-	2.0	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	Chrysotile	Chrysotile	
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	< 0.001	< 0.001	
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	< 0.001	< 0.001	

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	-	-	9.0	
Total Cyanide	mg/kg	1	MCERTS	-	-	-	26	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	55	
Barium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	530	
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	1.3	
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	2.4	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	2.1	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	37	
Copper (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	62	
Lead (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	1100	
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	-	-	-	0.8	
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	30	
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	2.9	
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	65	
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	2300	

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	< 1.0	
Toluene	µg/kg	1	MCERTS	-	-	-	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	
o-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	< 1.0	

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	1.3	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	11	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	15	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	25	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	52	

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	2.2	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	22	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	220	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	690	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	940	



Analytical Report Number: 20-12478
Project / Site name: Clarendon Road
Your Order No: SRE6066-00002

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1524869	Site won	0.20	124	Loose Fibres	Chrysotile	< 0.001	< 0.001
1524871	Site won	0.20	137	Loose Fibres	Chrysotile	< 0.001	< 0.001
1524872	Knotweed	0.10-0.20	129	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-12478

Project / Site name: Clarendon Road

* 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 *
1524869	Site won	SP1	0.20	-
1524870	Site won	SP2	0.20	-
1524871	Site won	SP3	0.20	-
1524872	Knotweed	None Supplied	0.10-0.20	Brown sandy loam with gravel and vegetation.

Analytical Report Number : 20-12478

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-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
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
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
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
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 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 (Skalar)	L080-PL	W	MCERTS
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

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.

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Analytical Report Number : 20-33967

Project / Site name:	Clarendon Road	Samples received on:	06/10/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	06/10/2020
Your order number:	S-RE6075/00005	Analysis completed by:	13/10/2020
Report Issue Number:	1	Report issued on:	13/10/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
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.

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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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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: 20-33967
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1641221	1641222
Sample Reference	SP025	SP025
Sample Number	3	4
Depth (m)	None Supplied	None Supplied
Date Sampled	06/10/2020	06/10/2020
Time Taken	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection
		Accred- itation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	98.8	122
Ammonium as NH ₄	µg/l	15	NONE	45	90

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

Analytical Report Number: 20-33967

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1641219	1641220
Sample Reference	SP025	SP025
Sample Number	3	4
Depth (m)	None Supplied	None Supplied
Date Sampled	06/10/2020	06/10/2020
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	%	N/A	NONE	17	27
Total mass of sample received	kg	0.001	NONE	1.8	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3000	3800
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.5	1.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1510	1890
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	1.3

Speciated PAHs

Naphthalene	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
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	1.1
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.93
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.35

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	15	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	16	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	31	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	6.9	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	9.6	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	17	< 10

Analytical Report Number: 20-33967
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number	1641219	1641220
Sample Reference	SP025	SP025
Sample Number	3	4
Depth (m)	None Supplied	None Supplied
Date Sampled	06/10/2020	06/10/2020
Time Taken	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection
	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-33967
Project / Site name: Clarendon Road

* 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 *
1641219	SP025	3	None Supplied	Light brown clay and sand with gravel.
1641220	SP025	4	None Supplied	Light brown clay with gravel.



Analytical Report Number : 20-33967
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
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.



Sample Deviation Report



Analytical Report Number : 20-33967

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP025	3	S	1641219	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP025	3	S	1641219	b	Semi-volatile organic compounds in soil	L064-PL	b
SP025	3	S	1641219	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP025	3	S	1641219	b	TPHCWG (Soil)	L088/76-PL	b
SP025	3	S	1641219	b	Volatile organic compounds in soil	L073B-PL	b
SP025	4	S	1641220	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP025	4	S	1641220	b	Semi-volatile organic compounds in soil	L064-PL	b
SP025	4	S	1641220	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP025	4	S	1641220	b	TPHCWG (Soil)	L088/76-PL	b
SP025	4	S	1641220	b	Volatile organic compounds in soil	L073B-PL	b



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Analytical Report Number : 20-34060

Project / Site name:	Clarendon Road	Samples received on:	04/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	06/10/2020
Your order number:	S-RE6075/00005	Analysis completed by:	12/10/2020
Report Issue Number:	1	Report issued on:	12/10/2020
Samples Analysed:	1 leachate sample		


Signed:

Joanna Wawrzeczko
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

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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: 20-34060
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1641677
Sample Reference	SP008
Sample Number	None Supplied
Depth (m)	None Supplied
Date Sampled	04/09/2020
Time Taken	None Supplied
Analytical Parameter (Leachate Analysis)	Units on Limit of detect Status Accred tation

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	4.7
Ammonium as NH ₄	µg/l	15	NONE	< 15

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



Analytical Report Number : 20-34060
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil ¹⁰⁰	L039-PL	W	ISO 17025

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 30°C.

**Alix Hamilton**

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Analytical Report Number : 20-12482

Project / Site name:	Clarendon Road	Samples received on:	03/06/2020
Your job number:		Sample instructed/ Analysis started on:	04/06/2020
Your order number:	SRE6066-00002	Analysis completed by:	10/06/2020
Report Issue Number:	1	Report issued on:	10/06/2020
Samples Analysed:	10:1 WAC sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Iss No 20-12482-1 Clarendon Road

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

Page 1 of 5

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Waste Acceptance Criteria Analytical Results

Report No:	20-12482						
					Client: KELTBRAY		
Location	Clarendon Road						
Lab Reference (Sample Number)	1524919 / 1524920				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	03/06/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	Knotweed						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	2.1				3%	5%	6%
Loss on Ignition (%) **	8.8				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	440				100	--	--
pH (units)**	7.5				--	>6	--
Acid Neutralisation Capacity (mol / kg)	0.71				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
					using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	< 0.0011			< 0.0110	0.5	2	25
Barium *	0.0049			0.0472	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0010			0.0097	0.5	10	70
Copper *	0.0083			0.081	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30
Nickel *	0.0012			0.012	0.4	10	40
Lead *	0.0032			0.031	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0046			0.044	4	50	200
Chloride *	< 0.15			< 1.5	800	15000	25000
Fluoride	0.38			3.7	10	150	500
Sulphate *	0.35			3.4	1000	20000	50000
TDS*	15			150	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.87			56.9	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	2.0						
Dry Matter (%)	99						
Moisture (%)	0.86						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current legislation							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 20-12482

Project / Site name: Clarendon Road

* 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 *
1524919	Knotweed	None Supplied	None Supplied	Brown sandy loam with gravel and vegetation.

Analytical Report Number : 20-12482

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance"	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	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
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 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. MCERTS accredited except Coronene.	L064-PL	D	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.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Iss No 20-12482-1 Clarendon Road

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Page 4 of 5



Analytical Report Number : 20-12482

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (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.



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Analytical Report Number : 20-12959

Project / Site name:	Clarendon Road	Samples received on:	05/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	05/06/2020
Your order number:	SERE60660002	Analysis completed by:	11/06/2020
Report Issue Number:	1	Report issued on:	11/06/2020
Samples Analysed:	6 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager

For & on behalf of i2 Analytical Ltd.

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

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soils	- 4 weeks from reporting
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Iss No 20-12959-1 Clarendon Road 6075

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Page 1 of 6



Analytical Report Number: 20-12959
Project / Site name: Clarendon Road
Your Order No: SERE60660002

Lab Sample Number				1527860	1527861	1527862	1527863	1527864
Sample Reference				TP 4119 N	TP 4119 E	TP 4119 S	TP 4119 W	TP 4119 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70
Date Sampled				05/06/2020	05/06/2020	05/06/2020	05/06/2020	05/06/2020
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	-	-
Moisture Content				%	N/A	NONE	-	-
Total mass of sample received				kg	0.001	NONE	-	-

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-

General Inorganics

Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	-	-	-	-	-
Ammonium as NH ₄	mg/kg	0.5	NONE	-	-	-	-	-



Analytical Report Number: 20-12959
 Project / Site name: Clarendon Road
 Your Order No: SERE60660002

Lab Sample Number				1527865				
Sample Reference				SP 001				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				05/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	0.30				
Total mass of sample received	kg	0.001	NONE	0.80				
Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-				
Asbestos Quantification Total	%	0.001	ISO 17025	-				
General Inorganics								
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	0.020				
Ammonium as NH ₄	mg/kg	0.5	NONE	7.9				



Analytical Report Number: 20-12959
Project / Site name: Clarendon Road
Your Order No: SERE60660002

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1527860	TP 4119 N	2.00-2.70	166	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527861	TP 4119 E	2.00-2.70	118	Loose Fibrous Debris	Chrysotile & Amosite	0.003	0.003
1527862	TP 4119 S	2.00-2.70	157	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527863	TP 4119 W	2.00-2.70	122	Loose Fibrous Debris	Chrysotile & Amosite	0.382	0.382

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-12959

Project / Site name: Clarendon Road

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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 *
1527860	TP 4119 N	None Supplied	2.00-2.70	-
1527861	TP 4119 E	None Supplied	2.00-2.70	-
1527862	TP 4119 S	None Supplied	2.00-2.70	-
1527863	TP 4119 W	None Supplied	2.00-2.70	-
1527864	TP 4119 B	None Supplied	2.00-2.70	-
1527865	SP 001	None Supplied	None Supplied	Beige concrete with gravel.**

**Non MCERTS matrix.

Analytical Report Number : 20-12959

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
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

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.

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Analytical Report Number : 20-12959-2A

Replaces Analytical Report Number : 20-12959, issue no. 1

Report format change.

Project / Site name:	Clarendon Road	Samples received on:	05/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	05/06/2020
Your order number:	SERE60660002	Analysis completed by:	11/06/2020
Report Issue Number:	2	Report issued on:	16/06/2020
Samples Analysed:	1 soil sample		

Signed:

Will Fardon

Technical Reviewer (CS 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.

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leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Iss No 20-12959-2A Clarendon Road 6075

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Page 1 of 4



Analytical Report Number: 20-12959-2A

Project / Site name: Clarendon Road

Your Order No: SERE60660002

Lab Sample Number				1527865				
Sample Reference				SP-0				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				05/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	0.30				
Total mass of sample received	kg	0.001	NONE	0.80				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
------------------	------	-----	-----------	--------------	--	--	--	--

General Inorganics

Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	None	0.020				
Ammonium as NH ₄	mg/kg	0.5	None	7.9				



Analytical Report Number : 20-12959-2A

Project / Site name: Clarendon Road

* 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 *
1527865	SP-0	None Supplied	None Supplied	Beige concrete with gravel.

Analytical Report Number : 20-12959-2A

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
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

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.

**Alix Hamilton**

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Analytical Report Number : 20-12959-2B

Replaces Analytical Report Number : 20-12959, issue no. 1

Report format change.

Project / Site name:	Clarendon Road	Samples received on:	05/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	05/06/2020
Your order number:	SERE60660002	Analysis completed by:	16/06/2020
Report Issue Number:	2	Report issued on:	16/06/2020
Samples Analysed:	5 soil samples		

Signed:

Will Fardon

Technical Reviewer (CS 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.

Iss No 20-12959-2B Clarendon Road 6075

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

Page 1 of 4



Analytical Report Number: 20-12959-2B

Project / Site name: Clarendon Road

Your Order No: SERE60660002

Lab Sample Number				1527860	1527861	1527862	1527863	1527864
Sample Reference				TP 4119 N	TP 4119 E	TP 4119 S	TP 4119 W	TP 4119 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70
Date Sampled				05/06/2020	05/06/2020	05/06/2020	05/06/2020	05/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-



Analytical Report Number: 20-12959
Project / Site name: Clarendon Road
Your Order No: SERE60660002

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1527860	TP 4119 N	2.00-2.70	166	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527861	TP 4119 E	2.00-2.70	118	Loose Fibrous Debris	Chrysotile & Amosite	0.003	0.003
1527862	TP 4119 S	2.00-2.70	157	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527863	TP 4119 W	2.00-2.70	122	Loose Fibrous Debris	Chrysotile & Amosite	0.382	0.382

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-12959-2B

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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' 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.

**Alix Hamilton**

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e: reception@i2analytical.com

Analytical Report Number : 20-12959

Replaces Analytical Report Number : 20-12959, issue no. 2

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	05/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	05/06/2020
Your order number:	SERE60660002	Analysis completed by:	18/06/2020
Report Issue Number:	3	Report issued on:	18/06/2020
Samples Analysed:	6 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.

Iss No 20-12959-3 Clarendon Road 6075.XLS

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

Page 1 of 6



Analytical Report Number: 20-12959

Project / Site name: Clarendon Road

Your Order No: SERE60660002

Lab Sample Number				1527860	1527861	1527862	1527863	1527864
Sample Reference				TP 4119 N	TP 4119 E	TP 4119 S	TP 4119 W	TP 4119 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70	2.00-2.70
Date Sampled				05/06/2020	05/06/2020	05/06/2020	05/06/2020	05/06/2020
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	-	-	-	-	-
Moisture Content	%	N/A	NONE	-	-	-	-	-
Total mass of sample received	kg	0.001	NONE	-	-	-	-	-

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.003	< 0.001	0.382	-

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	NONE	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	NONE	-	-	-	-	-
Ammonium as NH ₄	mg/kg	0.5	NONE	-	-	-	-	-



Analytical Report Number: 20-12959

Project / Site name: Clarendon Road

Your Order No: SERE60660002

Lab Sample Number				1527865				
Sample Reference				SP-0				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				05/06/2020				
Time Taken				None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	0.30				
Total mass of sample received	kg	0.001	NONE	0.80				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-				
Asbestos Quantification Total	%	0.001	ISO 17025	-				

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	NONE	39				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	0.020				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	NONE	19.6				
Ammonium as NH ₄	mg/kg	0.5	NONE	7.9				



Analytical Report Number: 20-12959
Project / Site name: Clarendon Road
Your Order No: SERE60660002

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1527860	TP 4119 N	2.00-2.70	166	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527861	TP 4119 E	2.00-2.70	118	Loose Fibrous Debris	Chrysotile & Amosite	0.003	0.003
1527862	TP 4119 S	2.00-2.70	157	Loose Fibres	Chrysotile & Amosite	< 0.001	< 0.001
1527863	TP 4119 W	2.00-2.70	122	Loose Fibrous Debris	Chrysotile & Amosite	0.382	0.382

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

**Analytical Report Number : 20-12959****Project / Site name: Clarendon Road**

* 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 *
1527860	TP 4119 N	None Supplied	2.00-2.70	-
1527861	TP 4119 E	None Supplied	2.00-2.70	-
1527862	TP 4119 S	None Supplied	2.00-2.70	-
1527863	TP 4119 W	None Supplied	2.00-2.70	-
1527864	TP 4119 B	None Supplied	2.00-2.70	-
1527865	SP-0	None Supplied	None Supplied	Beige concrete with gravel.**

** Non MCERTS matrix



Analytical Report Number : 20-12959

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
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	NONE

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.

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Analytical Report Number : 20-13109

Project / Site name:	6075	Samples received on:	08/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	08/06/2020
Your order number:	SRE6066-00002	Analysis completed by:	11/06/2020
Report Issue Number:	1	Report issued on:	11/06/2020
Samples Analysed:	5 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager

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.

Iss No 20-13109-1 6075 6075

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

Page 1 of 5



Analytical Report Number: 20-13109

Project / Site name: 6075

Your Order No: SRE6066-00002

Lab Sample Number				1528523	1528524	1528525	1528526	1528527
Sample Reference				VS-TP424	VS-TP424	VS-TP424	VS-TP424	VS-TP424
Sample Number				N	E	S	W	B
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
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		
Asbestos in Soil Screen / Identification Name				Type	N/A	ISO 17025	-	Chrysotile & Crocidolite
Asbestos in Soil				Type	N/A	ISO 17025	Not-detected	Detected
Asbestos Quantification (Stage 2)				%	0.001	ISO 17025	-	0.004
Asbestos Quantification Total				%	0.001	ISO 17025	-	0.004



Analytical Report Number : 20-13109

Project / Site name: 6075

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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 disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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' 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.



Analytical Report Number: 20-13109
Project / Site name: 6075
Your Order No: SRE6066-00002

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1528524	VS-TP424		120	Loose Fibres & Loose Fibrous Debris	Chrysotile & Crocidolite	0.004	0.004
1528525	VS-TP424		143	Loose Fibrous Debris	Chrysotile	0.001	0.001
1528526	VS-TP424		126	Loose Fibres	Chrysotile	< 0.001	< 0.001
1528527	VS-TP424		124	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
VS-TP424	B	S	20-13109	1528527	a			
VS-TP424	E	S	20-13109	1528524	a			
VS-TP424	N	S	20-13109	1528523	a			
VS-TP424	S	S	20-13109	1528525	a			
VS-TP424	W	S	20-13109	1528526	a			



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Preliminary Report Number : 20-13194

Project / Site name:	6075	Samples received on:	09/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	09/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	Not complete
Report Issue Number:	0	Report issued on:	16/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed:

Rachel Bradley

Deputy Quality Manager
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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Preliminary reports provided at the request of the client should be considered as incomplete and have not been through the complete quality control procedure.

Results contained in preliminary reports may be subject to change and therefore should not be used as a basis for decision making, except at the risk of the client.

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 relate only to the sample(s) submitted for testing.

Page 1 of 5



Analytical Report Number: 20-13194

Project / Site name: 6075

Your Order No: S-RE6075/00005

Lab Sample Number				1528930				
Sample Reference				SP-0				
Sample Number				Sample 2				
Depth (m)				None Supplied				
Date Sampled				09/06/2020				
Time Taken				1200				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	0.22				
Total mass of sample received	kg	0.001	NONE	1.2				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	NONE	87				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	0.044				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	NONE	43.5				
Ammonium as NH ₄	mg/kg	0.5	NONE	To follow				



Analytical Report Number: 20-13194

Project / Site name: 6075

Your Order No: S-RE6075/00005

Lab Sample Number				1528931				
Sample Reference				SP-0				
Sample Number				Sample 2				
Depth (m)				None Supplied				
Date Sampled				09/06/2020				
Time Taken				1200				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	32.5				
Ammonium as NH ₄	µg/l	15	NONE	To follow				



Preliminary Report Number : 20-13194

Project / Site name: 6075

* 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 *
1528930	SP-0	Sample 2	None Supplied	Light brown rubble.**

**Non MCERTS matrix.



Preliminary Report Number : 20-13194

Project / Site name: 6075

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

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Analytical Report Number : 20-13194

Project / Site name:	6075	Samples received on:	09/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	09/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	19/06/2020
Report Issue Number:	1	Report issued on:	19/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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.

Iss No 20-13194-1 6075 6075

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

Page 1 of 5



Analytical Report Number: 20-13194

Project / Site name: 6075

Your Order No: S-RE6075/00005

Lab Sample Number				1528930				
Sample Reference				SP-0				
Sample Number				Sample 2				
Depth (m)				None Supplied				
Date Sampled				09/06/2020				
Time Taken				1200				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	0.22				
Total mass of sample received	kg	0.001	NONE	1.2				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	NONE	87				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	NONE	0.044				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	NONE	43.5				
Ammonium as NH ₄	mg/kg	0.5	NONE	1.2				



Analytical Report Number: 20-13194

Project / Site name: 6075

Your Order No: S-RE6075/00005

Lab Sample Number				1528931				
Sample Reference				SP-0				
Sample Number				Sample 2				
Depth (m)				None Supplied				
Date Sampled				09/06/2020				
Time Taken				1200				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	32.5				
Ammonium as NH ₄	µg/l	15	NONE	180				



Analytical Report Number : 20-13194

Project / Site name: 6075

* 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 *
1528930	SP-0	Sample 2	None Supplied	Light brown rubble.**

** Non MCERTS Matrix



Analytical Report Number : 20-13194

Project / Site name: 6075

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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	NONE

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.

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Analytical Report Number : 20-13799

Project / Site name:	Clarendon Road	Samples received on:	11/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	11/06/2020
Your order number:	S-RE6075-00005	Analysis completed by:	17/06/2020
Report Issue Number:	1	Report issued on:	17/06/2020
Samples Analysed:	1 leachate sample - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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Page 1 of 7

Analytical Report Number: 20-13799

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1532005	1532006			
Sample Reference				SR Knotweed	SP-004			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				10/06/2020	11/06/2020			
Time Taken				1500	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	13	4.7			
Total mass of sample received	kg	0.001	NONE	1.8	1.8			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite & Crocidolite	-			
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.001	-			
Asbestos Quantification Total	%	0.001	ISO 17025	0.001	-			

General Inorganics

Total Cyanide	mg/kg	1	MCERTS	2	-			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	0.025			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	50			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	25.0			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	-	< 0.5			

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	130	-			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	410	-			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	2.2	-			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	-			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	-			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	37	-			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	100	-			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	470	-			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.1	-			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	48	-			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	6.5	-			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	100	-			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	620	-			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	-			
Toluene	µg/kg	1	MCERTS	< 1.0	-			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-			
o-xylene	µg/kg	1	MCERTS	< 1.0	-			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-			

Analytical Report Number: 20-13799

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1532005	1532006			
Sample Reference				SR Knotweed	SP-004			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				10/06/2020	11/06/2020			
Time Taken				1500	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	-			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-			

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	11	-			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	17	-			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	100	-			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	180	-			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	310	-			



Analytical Report Number: 20-13799

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1532007				
Sample Reference				SP-004				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				11/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	3.3				
Ammonium as NH ₄	µg/l	15	NONE	37				



Analytical Report Number: 20-13799
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1532005	SR Knotweed		122	Loose Fibres	Chrysotile & Amosite & Crocidolite	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-13799

Project / Site name: Clarendon Road

* 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 *
1532005	SR Knotweed	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1532006	SP-004	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-13799

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-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
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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	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 (Skalar)	L080-PL	W	MCERTS
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

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.

Iss No 20-13799-1 Clarendon Road 6075

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

Page 7 of 7

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Analytical Report Number : 20-13800

Project / Site name:	Clarendon Road	Samples received on:	11/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	11/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	18/06/2020
Report Issue Number:	1	Report issued on:	18/06/2020
Samples Analysed:	10:1 WAC sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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Waste Acceptance Criteria Analytical Results

Report No:	20-13800						
					Client: KELTBRAY		
Location	Clarendon Road						
Lab Reference (Sample Number)	1532008 / 1532009				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	10/06/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	SR Knotweed						
Depth (m)							
Solid Waste Analysis							
TOC (%)**	2.1				3%	5%	6%
Loss on Ignition (%) **	6.3				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	290				100	--	--
pH (units)**	7.8				--	>6	--
Acid Neutralisation Capacity (mol / kg)	15				--	To be evaluated	To be evaluated
Eluate Analysis					Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
	mg/l			mg/kg			
Arsenic *	0.0216			0.185	0.5	2	25
Barium *	0.0183			0.157	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0020			0.017	0.5	10	70
Copper *	0.027			0.23	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0090			0.0774	0.5	10	30
Nickel *	0.0027			0.024	0.4	10	40
Lead *	0.016			0.14	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.016			0.14	4	50	200
Chloride *	2.0			17	800	15000	25000
Fluoride	4.2			36	10	150	500
Sulphate *	43			370	1000	20000	50000
TDS*	110			920	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	19.6			168	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.8						
Dry Matter (%)	87						
Moisture (%)	13						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)		
Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current legislation					** = MCERTS accredited		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 20-13800

Project / Site name: Clarendon Road

* 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 *
1532008	SR Knotweed	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-13800

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance"	L046-PL	W	NONE
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Loss on ignition of soil @ 450oC	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
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Speciated WAC-17 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. MCERTS accredited except Coronene.	L064-PL	D	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.	L019-UK/PL	D	NONE
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

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

Page 4 of 5



Analytical Report Number : 20-13800

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon (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.

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Analytical Report Number : 20-13913

Project / Site name:	Clarendon Road	Samples received on:	12/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	12/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	19/06/2020
Report Issue Number:	1	Report issued on:	19/06/2020
Samples Analysed:	2 leachate samples - 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

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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.

Iss No 20-13913-1 Clarendon Road 6075

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

Page 1 of 6

Analytical Report Number: 20-13913

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1532601	1532602	1532603	1532604	
Sample Reference				SP-005	SP-004	VS-TP419	VS-TP419	
Sample Number				Crush concrete	Type 1	0.5W	1.0W	
Depth (m)				None Supplied	None Supplied	2.00	2.00	
Date Sampled				12/06/2020	12/06/2020	12/06/2020	12/06/2020	
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	-	-	
Moisture Content	%	N/A	NONE	3.7	4.2	-	-	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	-	-	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite	-	-	Chrysotile	
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	360	22	-	-	
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.18	0.011	-	-	
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	178	10.8	-	-	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	3.6	3.9	-	-	



Analytical Report Number: 20-13913
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1532601	SP-005		165	Loose Fibres	Amosite	< 0.001	< 0.001
1532604	VS-TP419	2.00	162	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-13913

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1532605	1532606			
Sample Reference				SP-005	SP-004			
Sample Number				Type 1	Crush concrete			
Depth (m)				None Supplied	None Supplied			
Date Sampled				12/06/2020	12/06/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	0.9	19.6			
Ammonium as NH ₄	µg/l	15	NONE	51	150			



Analytical Report Number : 20-13913

Project / Site name: Clarendon Road

* 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 *
1532601	SP-005	Crush concrete	None Supplied	Brown loam and clay with gravel and vegetation.
1532602	SP-004	Type 1	None Supplied	Brown loam and clay with gravel.
1532603	VS-TP419	0.5W	2.00	-
1532604	VS-TP419	1.0W	2.00	-

Analytical Report Number : 20-13913

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

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Analytical Report Number : 20-14472

Project / Site name:	Clarendon Rd.	Samples received on:	16/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	16/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	23/06/2020
Report Issue Number:	1	Report issued on:	23/06/2020
Samples Analysed:	6 leachate samples - 6 soil samples		

Signed:

Joanna Wawrzeczko
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.

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

Page 1 of 8

Analytical Report Number: 20-14472

Project / Site name: Clarendon Rd.

Your Order No: S-RE6075/00005

Lab Sample Number	1535576	1535577	1535578	1535579	1535580
Sample Reference	SP1	Pocket Park	Pocket Park	G12	G12
Sample Number	sample 2	1	2	1.5	1.8
Depth (m)	None Supplied	None Supplied	None Supplied	1.50	1.80
Date Sampled	12/06/2020	12/06/2020	12/06/2020	12/06/2020	12/06/2020
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
Moisture Content	%	N/A	NONE	4.0	2.0
Total mass of sample received	kg	0.001	NONE	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.001	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.001	-	-	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.11	0.022	0.086	1.7	1.2
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	230	45	170	3300	2400
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	114	22.3	86.2	1670	1180
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	3.8	< 0.5	110	97

Analytical Report Number: 20-14472

Project / Site name: Clarendon Rd.

Your Order No: S-RE6075/00005

Lab Sample Number	1535581				
Sample Reference	SP- Asb hotspot				
Sample Number	None Supplied				
Depth (m)	None Supplied				
Date Sampled	16/06/2020				
Time Taken	None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	7.7				
Total mass of sample received	kg	0.001	NONE	2.0				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-				
Asbestos in Soil	Type	N/A	ISO 17025	-				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-				
Asbestos Quantification Total	%	0.001	ISO 17025	-				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.6				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3300				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1640				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5				



Analytical Report Number: 20-14472
Project / Site name: Clarendon Rd.
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1535576	SP1		168	Hard/Cement Type Material	Chrysotile	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-14472

Project / Site name: Clarendon Rd.

Your Order No: S-RE6075/00005

Lab Sample Number				1535582	1535583	1535584	1535585	1535586
Sample Reference				SP2	Pocket Park	Pocket Park	G12	G12
Sample Number				sample 2	1	2	1.5	1.8
Depth (m)				None Supplied	None Supplied	None Supplied	1.50	1.80
Date Sampled				12/06/2020	12/06/2020	12/06/2020	12/06/2020	12/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	12.3	2.7	3.5	286	83.8
Ammonium as NH ₄	µg/l	15	NONE	100	48	49	15000	9300



Analytical Report Number: 20-14472

Project / Site name: Clarendon Rd.

Your Order No: S-RE6075/00005

Lab Sample Number				1535587				
Sample Reference				SP- Asb hotspot				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				16/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	196				
Ammonium as NH ₄	µg/l	15	NONE	72				



Analytical Report Number : 20-14472

Project / Site name: Clarendon Rd.

* 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 *
1535576	SP1	sample 2	None Supplied	Brown loam and sand with gravel.
1535577	Pocket Park	1	None Supplied	Light brown loam and sand with gravel.
1535578	Pocket Park	2	None Supplied	Light brown loam and sand with gravel.
1535579	G12	1.5	1.50	Black clay and sand with gravel.
1535580	G12	1.8	1.80	Light brown clay and sand with gravel.
1535581	P- Asb hotsp	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-14472

Project / Site name: Clarendon Rd.

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-14477

Project / Site name:	Clarendon Road	Samples received on:	17/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	17/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	23/06/2020
Report Issue Number:	1	Report issued on:	23/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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.

Iss No 20-14477-1 Clarendon Road 6075

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

Page 1 of 7

Analytical Report Number: 20-14477

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1535604				
Sample Reference				SP-006(2)				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	11				
Total mass of sample received	kg	0.001	NONE	2.0				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.014				
Asbestos Quantification Total	%	0.001	ISO 17025	0.014				

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	4700				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.4				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	2370				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	140				



Analytical Report Number: 20-14477
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1535604	SP-006(2)		136	Sheeting/Board Debris & Loose Fibres	Chrysotile & Amosite	0.014	0.014

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-14477

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1535605				
Sample Reference				SP-006(2)				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	490				
Ammonium as NH ₄	µg/l	15	NONE	13000				



Analytical Report Number : 20-14477

Project / Site name: Clarendon Road

* 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 *
1535604	SP-006(2)	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-14477

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-006(2)		L	20-14477	1535605	a			
SP-006(2)		S	20-14477	1535604	a			

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Analytical Report Number : 20-14478

Project / Site name:	Clarendon Road	Samples received on:	17/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	17/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	23/06/2020
Report Issue Number:	1	Report issued on:	23/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 6

Analytical Report Number: 20-14478

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1535606				
Sample Reference				Q-1				
Sample Number				None Supplied				
Depth (m)				1.00-1.20				
Date Sampled				16/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	8.9				
Total mass of sample received	kg	0.001	NONE	2.0				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001				
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001				

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	560				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.28				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	279				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	14				



Analytical Report Number: 20-14478
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1535606	Q-1	1.00-1.20	134	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-14478

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1535607				
Sample Reference				Q-1				
Sample Number				None Supplied				
Depth (m)				1.00-1.20				
Date Sampled				16/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	6.9				
Ammonium as NH ₄	µg/l	15	NONE	320				



Analytical Report Number : 20-14478

Project / Site name: Clarendon Road

* 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 *
1535606	Q-1	None Supplied	1.00-1.20	Brown loam and clay with gravel.

Analytical Report Number : 20-14478

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

**Alix Hamilton**

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Analytical Report Number : 20-15008

Project / Site name:	Clarendon Road	Samples received on:	18/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	18/06/2020
Your order number:	S-RE6075-00005	Analysis completed by:	24/06/2020
Report Issue Number:	1	Report issued on:	24/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed:

Will Fardon

Technical Reviewer (CS 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.

Iss No 20-15008-1 Clarendon Road 6075

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

Page 1 of 7



Analytical Report Number: 20-15008

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1538593				
Sample Reference				SP-007 (Pocket Park)				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	11				
Total mass of sample received	kg	0.001	NONE	1.5				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.012				
Asbestos Quantification Total	%	0.001	ISO 17025	0.012				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2500				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1250				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5				



Analytical Report Number: 20-15008

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1538594				
Sample Reference				SP-007 (Pocket Park)				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	97.5				
Ammonium as NH ₄	µg/l	15	NONE	47				



Analytical Report Number: 20-15008
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1538593	SP-007 (Pocket Park)		144	Loose Fibrous Debris	Chrysotile	0.012	0.012

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-15008

Project / Site name: Clarendon Road

* 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 *
1538593	007 (Pocket P)	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-15008

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-007 (Pocket Park)		L	20-15008	1538594	a			
SP-007 (Pocket Park)		S	20-15008	1538593	a			

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Analytical Report Number : 20-15279

Project / Site name:	Clarendon Road	Samples received on:	19/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	19/06/2020
Your order number:	SRE-6075-00005	Analysis completed by:	25/06/2020
Report Issue Number:	1	Report issued on:	29/06/2020
Samples Analysed:	15 leachate samples - 15 soil samples		

Signed:

Will Fardon

Technical Reviewer (CS 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 relate only to the sample(s) submitted for testing.

Page 1 of 10

Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539831	1539832	1539833	1539834	1539835
Sample Reference				SP005	VS-G12-W	SP008	VS-G11	VS-H11
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
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	%	N/A	NONE	6.0	20	24	20	22
Total mass of sample received	kg	0.001	NONE	1.0	2.0	2.0	1.4	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	Amosite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.003	-	< 0.001	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.003	-	< 0.001	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.069	0.60	1.5	1.2	3.5
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	140	1200	3000	2400	7000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	68.9	602	1480	1190	3510
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	1.8	320	260	330

Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539836	1539837	1539838	1539839	1539840
Sample Reference				VS-K4	VS-L4	VS-K3	VS-L3	VS-K2
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
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	%	N/A	NONE	21	21	20	21	21
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	0.60	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.5	3.4	1.6	1.0	2.9
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	7000	6800	3200	2000	5700
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3490	3380	1590	1020	2870
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.7	1.9	0.8	1.0	1.3

Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539841	1539842	1539843	1539844	1539845
Sample Reference				VS-L2	VS-M3	VS-M2	VS-M4	VS-J3
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
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	%	N/A	NONE	21	21	21	21	22
Total mass of sample received	kg	0.001	NONE	1.5	1.5	2.0	0.60	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.5	3.3	3.1	3.2	9.3
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	7000	6700	6200	6500	19000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3520	3340	3090	3240	9250
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.4	1.6	2.0	1.8	1100



Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539846	1539847	1539848	1539849	1539850
Sample Reference				SP005	VS-G12-W	SP008	VS-G11	VS-H11
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	29.3	96.7	147	154	141
Ammonium as NH ₄	µg/l	15	NONE	460	280	17000	15000	21000



Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539851
Sample Reference				VS-K4
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				19/06/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	1100
Ammonium as NH ₄	µg/l	15	NONE	310



Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539852	1539853	1539854	1539855	1539856
Sample Reference				VS-L4	VS-K3	VS-L3	VS-K2	VS-L2
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	672	278	125	1400	454
Ammonium as NH ₄	µg/l	15	NONE	240	240	240	210	260



Analytical Report Number: 20-15279

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539857	1539858	1539859	1539860
Sample Reference				VS-M3	VS-M2	VS-M4	VS-J3
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				19/06/2020	19/06/2020	19/06/2020	19/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	347	357	1060	217
Ammonium as NH ₄	µg/l	15	NONE	250	210	180	68000



Analytical Report Number : 20-15279

Project / Site name: Clarendon Road

* 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 *
1539831	SP005	None Supplied	None Supplied	Brown loam and sand with gravel and brick.
1539832	VS-G12-W	None Supplied	None Supplied	Brown clay.
1539833	SP008	None Supplied	None Supplied	Brown clay with gravel.
1539834	VS-G11	None Supplied	None Supplied	Brown clay with gravel.
1539835	VS-H11	None Supplied	None Supplied	Brown clay with gravel.
1539836	VS-K4	None Supplied	None Supplied	Brown clay with gravel.
1539837	VS-L4	None Supplied	None Supplied	Brown clay.
1539838	VS-K3	None Supplied	None Supplied	Brown clay.
1539839	VS-L3	None Supplied	None Supplied	Brown clay.
1539840	VS-K2	None Supplied	None Supplied	Brown clay.
1539841	VS-L2	None Supplied	None Supplied	Brown clay.
1539842	VS-M3	None Supplied	None Supplied	Brown clay.
1539843	VS-M2	None Supplied	None Supplied	Brown clay.
1539844	VS-M4	None Supplied	None Supplied	Brown clay.
1539845	VS-J3	None Supplied	None Supplied	Brown clay with gravel.

Analytical Report Number : 20-15279

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-15279-A

Replaces Analytical Report Number : 20-15279-A, issue no. 3

Report format change.

Project / Site name:	Clarendon Road	Samples received on:	19/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	19/06/2020
Your order number:	SRE-6075-00005	Analysis completed by:	07/07/2020
Report Issue Number:	4	Report issued on:	08/07/2020
Samples Analysed:	13 leachate samples - 13 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.

Iss No 20-15279-4A Clarendon Road 6075.XLS

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.

Page 1 of 10

Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539831	1539832	1539834	1539835	1539836
Sample Reference				SP005	VS-G12-W	VS-G11	VS-H11	VS-K4
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
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	%	N/A	NONE	6.0	20	20	22	21
Total mass of sample received	kg	0.001	NONE	1.0	2.0	1.4	1.5	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.003	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.003	-	-	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	11.8	8.0	7.9	7.9	7.6
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.069	0.60	1.2	3.5	3.5
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	140	1200	2400	7000	7000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	68.9	602	1190	3510	3490
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	1.4	200	260	1.3
Ammonia as NH ₃	mg/kg	0.5	MCERTS	< 0.5	1.7	240	310	1.6
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	1.8	260	330	1.7

Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539837	1539838	1539839	1539840	1539841
Sample Reference				VS-L4	VS-K3	SP-008	VS-K2	VS-L2
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
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	%	N/A	NONE	21	20	21	21	21
Total mass of sample received	kg	0.001	NONE	2.0	2.0	0.60	1.5	1.5

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.6	7.6	7.8	7.7	7.7
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.4	1.6	1.0	2.9	3.5
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	6800	3200	2000	5700	7000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3380	1590	1020	2870	3520
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	1.4	0.6	0.8	1.0	1.1
Ammonia as NH ₃	mg/kg	0.5	MCERTS	1.8	0.8	0.9	1.2	1.3
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.9	0.8	1.0	1.3	1.4

Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539842	1539843	1539844		
Sample Reference				VS-M3	VS-M2	VS-M4		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				19/06/2020	19/06/2020	19/06/2020		
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	%	N/A	NONE	21	21	21		
Total mass of sample received	kg	0.001	NONE	1.5	2.0	0.60		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-		
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-		

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.6	7.7	7.6		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.3	3.1	3.2		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	6700	6200	6500		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3340	3090	3240		
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	1.2	1.5	1.4		
Ammonia as NH ₃	mg/kg	0.5	MCERTS	1.5	1.9	1.7		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.6	2.0	1.8		



Analytical Report Number: 20-15279-A
Project / Site name: Clarendon Road
Your Order No: SRE-6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1539831	SP005		142	Loose Fibres	Chrysotile & Amosite	0.003	0.003

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539846	1539847	1539849	1539850	1539851
Sample Reference				SP005	VS-G12-W	VS-G11	VS-H11	VS-K4
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	29.3	96.7	154	141	1100
Ammonium as NH ₄	µg/l	15	NONE	460	280	15000	21000	310



Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539852	1539853	1539854	1539855	1539856
Sample Reference				VS-L4	VS-K3	SP-008	VS-K2	VS-L2
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				19/06/2020	19/06/2020	19/06/2020	19/06/2020	19/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	672	278	125	1400	454
Ammonium as NH ₄	µg/l	15	NONE	240	240	240	210	260



Analytical Report Number: 20-15279-A

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1539857	1539858	1539859		
Sample Reference				VS-M3	VS-M2	VS-M4		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				19/06/2020	19/06/2020	19/06/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	347	357	1060		
Ammonium as NH ₄	µg/l	15	NONE	250	210	180		



Analytical Report Number : 20-15279-A

Project / Site name: Clarendon Road

* 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 *
1539831	SP005	None Supplied	None Supplied	Brown loam and sand with gravel and brick.
1539832	VS-G12-W	None Supplied	None Supplied	Brown clay.
1539834	VS-G11	None Supplied	None Supplied	Brown clay with gravel.
1539835	VS-H11	None Supplied	None Supplied	Brown clay with gravel.
1539836	VS-K4	None Supplied	None Supplied	Brown clay with gravel.
1539837	VS-L4	None Supplied	None Supplied	Brown clay.
1539838	VS-K3	None Supplied	None Supplied	Brown clay.
1539839	SP-008	None Supplied	None Supplied	Brown clay.
1539840	VS-K2	None Supplied	None Supplied	Brown clay.
1539841	VS-L2	None Supplied	None Supplied	Brown clay.
1539842	VS-M3	None Supplied	None Supplied	Brown clay.
1539843	VS-M2	None Supplied	None Supplied	Brown clay.
1539844	VS-M4	None Supplied	None Supplied	Brown clay.

Analytical Report Number : 20-15279-A

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH ₃ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-15770

Project / Site name:	Clarendon Road	Samples received on:	16/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	23/06/2020
Your order number:	SRE6075-0005	Analysis completed by:	29/06/2020
Report Issue Number:	1	Report issued on:	29/06/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

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.

Iss No 20-15770-1 Clarendon Road 6075

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.

Page 1 of 6



Analytical Report Number: 20-15770

Project / Site name: Clarendon Road

Your Order No: SRE6075-0005

Lab Sample Number				1542490				
Sample Reference				SP004				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				16/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	9.6				
Total mass of sample received	kg	0.001	NONE	1.5				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite & Chrysotile				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.006				
Asbestos Quantification Total	%	0.001	ISO 17025	0.006				

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.75				
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1500				
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	747				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.5				



Analytical Report Number: 20-15770
Project / Site name: Clarendon Road
Your Order No: SRE6075-0005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1542490	SP004		151	Sheeting/Board Debris & Loose Fibres	Amosite & Chrysotile	0.006	0.006

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-15770

Project / Site name: Clarendon Road

Your Order No: SRE6075-0005

Lab Sample Number				1542491				
Sample Reference				SP004				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				16/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	106				
Ammonium as NH ₄	µg/l	15	NONE	730				



Analytical Report Number : 20-15770

Project / Site name: Clarendon Road

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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 *
1542490	SP004	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-15770

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-15772

Replaces Analytical Report Number : 20-15772, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	23/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	23/06/2020
Your order number:	SRE-6075-00005	Analysis completed by:	31/07/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	5 leachate samples - 5 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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.

Iss No 20-15772-2 Clarendon Road 6075.XLS

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

Page 1 of 7

Analytical Report Number: 20-15772

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1542494	1542495	1542496	1542497	1542498
Sample Reference				SP-010	SP-010	SP-011	SP-011	SP-011
Sample Number				1	2	1	2	3
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				23/06/2020	23/06/2020	23/06/2020	23/06/2020	23/06/2020
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	%	N/A	NONE	29	24	21	22	21
Total mass of sample received	kg	0.001	NONE	1.5	2.0	2.0	2.0	2.0

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.38	0.75	3.0	2.3	3.6
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	750	1500	5900	4600	7200
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	377	746	2960	2320	3620
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.9	1.8	0.5	0.5	< 0.5

Speciated PAHs

Naphthalene	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	0.26	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.35	0.27	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	2.8	3.3	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	2.5	3.1	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	1.8	2.0	< 0.05	< 0.05	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
Toluene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
Ethylbenzene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
p & m-xylene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
o-xylene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 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	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 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	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	I/S	I/S	I/S	I/S	I/S

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	I/S	I/S	I/S	I/S	I/S
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	9.7	7.1	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	20	23	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	34	40	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	I/S	I/S	I/S	I/S	I/S

Analytical Report Number: 20-15772

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number	1542494	1542495	1542496	1542497	1542498
Sample Reference	SP-010	SP-010	SP-011	SP-011	SP-011
Sample Number	1	2	1	2	3
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	23/06/2020	23/06/2020	23/06/2020	23/06/2020	23/06/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	I/S	I/S	I/S	I/S	I/S
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
1,1-Dichloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
1,1,1-Trichloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
1,2-Dichloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
Trans-1,2-dichloroethene	µg/kg	1	NONE	I/S	I/S	I/S	I/S	I/S
Tetrachloromethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
Trichloroethene	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
1,1,2-Trichloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
Tetrachloroethene	µg/kg	1	NONE	I/S	I/S	I/S	I/S	I/S
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	I/S	I/S	I/S	I/S	I/S

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
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Analytical Report Number: 20-15772

Project / Site name: Clarendon Road

Your Order No: SRE-6075-00005

Lab Sample Number				1542499	1542500	1542501	1542502	1542503
Sample Reference				SP-010	SP-010	SP-011	SP-011	SP-011
Sample Number				1	2	1	2	3
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				23/06/2020	23/06/2020	23/06/2020	23/06/2020	23/06/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	3.3	100	894	635	1040
Ammonium as NH ₄	µg/l	15	NONE	410	180	70	110	100



Analytical Report Number : 20-15772

Project / Site name: Clarendon Road

* 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 *
1542494	SP-010	1	None Supplied	Brown clay with vegetation.
1542495	SP-010	2	None Supplied	Brown clay with vegetation.
1542496	SP-011	1	None Supplied	Brown clay.
1542497	SP-011	2	None Supplied	Brown clay.
1542498	SP-011	3	None Supplied	Brown clay.

Analytical Report Number : 20-15772

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-010	1	S	20-15772	1542494	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-010	1	S	20-15772	1542494	b	TPHCWG (Soil)	L088/76-PL	b
SP-010	1	S	20-15772	1542494	b	Volatile organic compounds in soil	L073B-PL	b
SP-010	2	S	20-15772	1542495	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-010	2	S	20-15772	1542495	b	TPHCWG (Soil)	L088/76-PL	b
SP-010	2	S	20-15772	1542495	b	Volatile organic compounds in soil	L073B-PL	b
SP-011	1	S	20-15772	1542496	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011	1	S	20-15772	1542496	b	TPHCWG (Soil)	L088/76-PL	b
SP-011	1	S	20-15772	1542496	b	Volatile organic compounds in soil	L073B-PL	b
SP-011	2	S	20-15772	1542497	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011	2	S	20-15772	1542497	b	TPHCWG (Soil)	L088/76-PL	b
SP-011	2	S	20-15772	1542497	b	Volatile organic compounds in soil	L073B-PL	b
SP-011	3	S	20-15772	1542498	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011	3	S	20-15772	1542498	b	TPHCWG (Soil)	L088/76-PL	b
SP-011	3	S	20-15772	1542498	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-16043

Replaces Analytical Report Number : 20-16043, issue no. 1

Client references/information amended.

Project / Site name:		Samples received on:	24/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	24/06/2020
Your order number:	SRE-6075-00005	Analysis completed by:	09/07/2020
Report Issue Number:	2	Report issued on:	09/07/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Joanna Wawrzeczko
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

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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.

Iss No 20-16043-2 6075

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

Page 1 of 6

Analytical Report Number: 20-16043

Your Order No: SRE-6075-00005

Lab Sample Number				1543887	1543888	1543889		
Sample Reference				VS-SP011	SP-014	SP-016		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				24/06/2020	24/06/2020	24/06/2020		
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	%	N/A	NONE	3.6	1.6	0.93		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.015		
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.015		

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.0	0.47	0.37		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2000	940	730		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	995	471	366		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	53	13	10		



Analytical Report Number: 20-16043
Project / Site name:
Your Order No: SRE-6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1543889	SP-016		115	Sheeting/Board Debris	Amosite	0.015	0.015

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-16043

Your Order No: SRE-6075-00005

Lab Sample Number				1543890	1543891	1543892		
Sample Reference				VS-SP011	SP-014	SP-016		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				24/06/2020	24/06/2020	24/06/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	194	105	8.4		
Ammonium as NH ₄	µg/l	15	NONE	3200	1400	350		



Analytical Report Number : 20-16043

Project / Site name:

* 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 *
1543887	VS-SP011	None Supplied	None Supplied	Brown loam and clay with gravel.
1543888	SP-014	None Supplied	None Supplied	Brown loam and clay with gravel.
1543889	SP-016	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-16043

Project / Site name:

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-16473

Replaces Analytical Report Number : 20-16473, issue no. 1

Client references/information amended.

Project / Site name:	Claredon Road	Samples received on:	18/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	29/06/2020
Your order number:	SRE 6075 00005	Analysis completed by:	09/07/2020
Report Issue Number:	2	Report issued on:	09/07/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Joanna Wawrzeczko
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

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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.

Iss No 20-16473-2 Claredon Road 6075

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

Page 1 of 7

Analytical Report Number: 20-16473

Project / Site name: Claredon Road

Your Order No: SRE 6075 00005

Lab Sample Number				1546338	1546339	1546340		
Sample Reference				VS-L3	Ramp (mg fill)	Sp- Pocket Park - SP007		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
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
Moisture Content				%	N/A	NONE	23	7.2
Total mass of sample received				kg	0.001	NONE	1.2	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001		
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001		

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	6300	3700	1700		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	3.2	1.8	0.85		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	3160	1830	854		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	1.4		



Analytical Report Number: 20-16473
Project / Site name: Claredon Road
Your Order No: SRE 6075 00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1546340	Sp- Pocket Park - SP007		149	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-16473

Project / Site name: Claredon Road

Your Order No: SRE 6075 00005

Lab Sample Number				1546341	1546342	1546343		
Sample Reference				VS-L3	Ramp (mg fill)	Sp- Pocket Park - SP007		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	736	27.2	110		
Ammonium as NH ₄	µg/l	15	NONE	< 15	< 15	< 15		



Analytical Report Number : 20-16473

Project / Site name: Claredon Road

* 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 *
1546338	VS-L3	None Supplied	None Supplied	Brown loam and clay with gravel.
1546339	Ramp (mg fill)	None Supplied	None Supplied	Brown loam and clay with gravel.
1546340	ocket Park - S	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-16473

Project / Site name: Claredon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
Ramp (mg fill)		L	20-16473	1546342	a			
Ramp (mg fill)		S	20-16473	1546339	a			
Sp- Pocket Park - SP007		L	20-16473	1546343	a			
Sp- Pocket Park - SP007		S	20-16473	1546340	a			
VS-L3		L	20-16473	1546341	a			
VS-L3		S	20-16473	1546338	a			

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Analytical Report Number : 20-16478

Replaces Analytical Report Number : 20-16478, issue no. 1

Additional analysis undertaken.

Project / Site name:		Samples received on:	26/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	26/06/2020
Your order number:	SRE6075 00005	Analysis completed by:	04/08/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 8

Analytical Report Number: 20-16478

Your Order No: SRE6075 00005

Lab Sample Number				1546376	1546377	1546378		
Sample Reference				SP-012	SP-012	SP-009		
Sample Number				1	2	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				26/06/2020	26/06/2020	26/06/2020		
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	%	N/A	NONE	21	22	4.0		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001		
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001		

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.14	0.13	0.53		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	270	260	1100		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	137	129	535		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	100	130	13		

Speciated PAHs

Naphthalene	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	-		
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)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	-		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	I/S	I/S	-		
Toluene	µg/kg	1	MCERTS	I/S	I/S	-		
Ethylbenzene	µg/kg	1	MCERTS	I/S	I/S	-		
p & m-xylene	µg/kg	1	MCERTS	I/S	I/S	-		
o-xylene	µg/kg	1	MCERTS	I/S	I/S	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	I/S	I/S	-		

Petroleum Hydrocarbons

Analytical Report Number: 20-16478

Your Order No: SRE6075 00005

Lab Sample Number				1546376	1546377	1546378		
Sample Reference				SP-012	SP-012	SP-009		
Sample Number				1	2	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				26/06/2020	26/06/2020	26/06/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	-		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	-		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	I/S	I/S	-		

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	I/S	I/S	-		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	-		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	-		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	I/S	I/S	-		

VOCs

Vinyl Chloride	µg/kg	1	NONE	I/S	I/S	-		
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	I/S	I/S	-		
1,1-Dichloroethane	µg/kg	1	MCERTS	I/S	I/S	-		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	I/S	I/S	-		
1,2-Dichloroethane	µg/kg	1	MCERTS	I/S	I/S	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE	I/S	I/S	-		
Tetrachloromethane	µg/kg	1	MCERTS	I/S	I/S	-		
Trichloroethene	µg/kg	1	MCERTS	I/S	I/S	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	I/S	I/S	-		
Tetrachloroethene	µg/kg	1	NONE	I/S	I/S	-		
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	I/S	I/S	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	I/S	I/S	-		

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	-		
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Analytical Report Number: 20-16478
Project / Site name:
Your Order No: SRE6075 00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1546378	SP-009		162	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-16478

Your Order No: SRE6075 00005

Lab Sample Number				1546379	1546380	1546381		
Sample Reference				SP-012	SP-012	SP-009		
Sample Number				1	2	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				26/06/2020	26/06/2020	26/06/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	21.9	17.8	182		
Ammonium as NH ₄	µg/l	15	NONE	5400	5900	770		



Analytical Report Number : 20-16478

Project / Site name:

* 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 *
1546376	SP-012	1	None Supplied	Brown clay with gravel.
1546377	SP-012	2	None Supplied	Brown loam and clay with gravel.
1546378	SP-009	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-16478

Project / Site name:

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

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

Page 7 of 8

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-012	1	S	20-16478	1546376	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-012	1	S	20-16478	1546376	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-012	1	S	20-16478	1546376	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-012	1	S	20-16478	1546376	b	TPHCWG (Soil)	L088/76-PL	b
SP-012	1	S	20-16478	1546376	b	Volatile organic compounds in soil	L073B-PL	b
SP-012	2	S	20-16478	1546377	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-012	2	S	20-16478	1546377	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-012	2	S	20-16478	1546377	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-012	2	S	20-16478	1546377	b	TPHCWG (Soil)	L088/76-PL	b
SP-012	2	S	20-16478	1546377	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-16493

Project / Site name:	Clarendon Road	Samples received on:	29/06/2020
Your job number:	6075	Sample instructed/ Analysis started on:	29/06/2020
Your order number:	S-RE6075/00005	Analysis completed by:	02/07/2020
Report Issue Number:	1	Report issued on:	02/07/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed:

Rachel Bradley

Deputy Quality Manager
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.

Iss No 20-16493-1 Clarendon Road 6075

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

Page 1 of 6

Analytical Report Number: 20-16493

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1546426				
Sample Reference	SP-009				
Sample Number	None Supplied				
Depth (m)	None Supplied				
Date Sampled	29/06/2020				
Time Taken	None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	9.9				
Total mass of sample received	kg	0.001	NONE	2.0				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001				
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.75				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1500				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	750				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5				



Analytical Report Number: 20-16493

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1546427				
Sample Reference				SP-009				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				29/06/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	74.2				
Ammonium as NH ₄	µg/l	15	NONE	68				



Analytical Report Number: 20-16493
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1546426	SP-009		165	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-16493

Project / Site name: Clarendon Road

* 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 *
1546426	SP-009	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-16493

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-17011

Replaces Analytical Report Number : 20-17011, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	01/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	01/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	05/08/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	9 leachate samples - 9 soil samples		

Signed:

Joanna Wawrzeczko
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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 12

Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548962	1548963	1548964	1548965	1548966
Sample Reference				VS-I11	VS-I12	VS-I13	VS-H11	VS-H12
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				01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020
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	%	N/A	NONE	16	9.0	14	14	13
Total mass of sample received	kg	0.001	NONE	1.0	1.0	1.0	1.4	1.3

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.3	1.2	1.3	1.6	0.95
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4600	2400	2500	3200	1900
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2280	1180	1260	1620	948
Ammonium as NH ₄	mg/kg	0.5	MCERTS	560	590	680	800	640

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Petroleum Hydrocarbons

Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548962	1548963	1548964	1548965	1548966
Sample Reference				VS-I11	VS-I12	VS-I13	VS-H11	VS-H12
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				01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
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Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548967	1548968	1548969	1548970	
Sample Reference				VS-G11	VS-G12	VS-G13	SP014	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				01/07/2020	01/07/2020	01/07/2020	01/07/2020	
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	%	N/A	NONE	21	24	21	1.2	
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	1.2	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001	
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001	

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.0	2.2	2.6	0.37	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	6000	4400	5100	740	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3000	2210	2560	372	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	7.8	2.0	17	120	

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Fluorene	mg/kg	0.05	MCERTS	-	-	-	< 0.05	
Anthracene	mg/kg	0.05	MCERTS	-	-	-	0.24	
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	1.6	
Pyrene	mg/kg	0.05	MCERTS	-	-	-	1.4	
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	0.48	

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	< 1.0	
Toluene	µg/kg	1	MCERTS	-	-	-	< 1.0	
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	< 1.0	
p & m-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	
o-xylene	µg/kg	1	MCERTS	-	-	-	< 1.0	
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	< 1.0	

Petroleum Hydrocarbons

Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548967	1548968	1548969	1548970	
Sample Reference				VS-G11	VS-G12	VS-G13	SP014	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				01/07/2020	01/07/2020	01/07/2020	01/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	3.0	
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	6.3	
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	15	
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	58	
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	82	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	< 0.001	
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	< 1.0	
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	< 2.0	
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	11	
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	56	
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	68	

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	< 1.0	
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	< 1.0	
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
Trichloroethene	µg/kg	1	MCERTS	-	-	-	< 1.0	
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
Tetrachloroethene	µg/kg	1	NONE	-	-	-	< 1.0	
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	
1,1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	< 1.0	

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	< 0.2	
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Analytical Report Number: 20-17011
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1548970	SP014		181	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548971	1548972	1548973	1548974	1548975
Sample Reference				VS-I11	VS-I12	VS-I13	VS-H11	VS-H12
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				01/07/2020	01/07/2020	01/07/2020	01/07/2020	01/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	145	179	283	258	145
Ammonium as NH ₄	µg/l	15	NONE	40000	50000	60000	55000	41000



Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548976
Sample Reference				VS-G11
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				01/07/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	148
Ammonium as NH ₄	µg/l	15	NONE	600



Analytical Report Number: 20-17011

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1548977	1548978	1548979	
Sample Reference				VS-G12	VS-G13	SP014	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	
Date Sampled				01/07/2020	01/07/2020	01/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	735	1810	365	
Ammonium as NH ₄	µg/l	15	NONE	270	2300	4200	



Analytical Report Number : 20-17011

Project / Site name: Clarendon Road

* 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 *
1548962	VS-I11	None Supplied	None Supplied	Brown loam and clay with gravel.
1548963	VS-I12	None Supplied	None Supplied	Brown loam and clay with gravel.
1548964	VS-I13	None Supplied	None Supplied	Brown loam and clay with gravel.
1548965	VS-H11	None Supplied	None Supplied	Brown loam and clay with gravel.
1548966	VS-H12	None Supplied	None Supplied	Brown loam and clay with gravel.
1548967	VS-G11	None Supplied	None Supplied	Brown loam and clay with gravel.
1548968	VS-G12	None Supplied	None Supplied	Brown loam and clay with gravel.
1548969	VS-G13	None Supplied	None Supplied	Brown loam and clay with gravel.
1548970	SP014	None Supplied	None Supplied	Brown gravelly loam.

Analytical Report Number : 20-17011

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Iss No 20-17011-2 Clarendon Road 6075

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

Page 11 of 12

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP014		S	20-17011	1548970	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP014		S	20-17011	1548970	b	Semi-volatile organic compounds in soil	L064-PL	b
SP014		S	20-17011	1548970	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP014		S	20-17011	1548970	b	TPHCWG (Soil)	L088/76-PL	b
SP014		S	20-17011	1548970	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-17260

Replaces Analytical Report Number : 20-17260, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	02/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	02/07/2020
Your order number:	SRE6075-00005	Analysis completed by:	05/08/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	6 leachate samples - 6 soil samples		

Signed:

Will Fardon

Technical Reviewer (CS 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.

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

Page 1 of 11

Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550194	1550195	1550196	1550197	1550198
Sample Reference				VS-Q-2	VS-Q-2	SP-011	SP-011	SP-011
Sample Number				East	West	4	5	6
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
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	%	N/A	NONE	16	19	20	22	22
Total mass of sample received	kg	0.001	NONE	1.6	1.4	1.4	1.0	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.064	0.11	2.3	0.25	0.059
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	130	220	4600	510	120
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	64.4	111	2310	253	59.1
Ammonium as NH ₄	mg/kg	0.5	MCERTS	25	35	1.8	6.3	15

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	0.36	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	0.47	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	< 10	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	< 10	< 10	< 10

Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550194	1550195	1550196	1550197	1550198
Sample Reference				VS-Q-2	VS-Q-2	SP-011	SP-011	SP-011
Sample Number				East	West	4	5	6
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
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		

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
1,1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	< 0.2	< 0.2
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Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550199				
Sample Reference				SP-009				
Sample Number				3				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	7.2				
Total mass of sample received	kg	0.001	NONE	1.0				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.21				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	430				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	213				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.2				

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.58				
Acenaphthene	mg/kg	0.05	MCERTS	0.42				
Fluorene	mg/kg	0.05	MCERTS	0.94				
Anthracene	mg/kg	0.05	MCERTS	2.8				
Fluoranthene	mg/kg	0.05	MCERTS	20				
Pyrene	mg/kg	0.05	MCERTS	20				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	11				

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	1.9				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	6.9				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	19				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	53				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	80				

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	11				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	250				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	370				

Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550199				
Sample Reference				SP-009				
Sample Number				3				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Vinyl Chloride	µg/kg	1	NONE	< 1.0				
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0				
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0				
Trichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
Tetrachloroethene	µg/kg	1	NONE	< 1.0				
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				
SVOCs								
Phenol	mg/kg	0.2	ISO 17025	< 0.2				



Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550200	1550201	1550202	1550203	1550204
Sample Reference				VS-Q-2	VS-Q-2	SP-011	SP-011	SP-011
Sample Number				East	West	4	5	6
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	4.5	4.8	3.9	17.0	18.4
Ammonium as NH ₄	µg/l	15	NONE	1300	1500	83	49	48



Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1550205
Sample Reference				SP009
Sample Number				3
Depth (m)				None Supplied
Date Sampled				Deviating
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)		Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	16.8
Ammonium as NH ₄	µg/l	15	NONE	59



Analytical Report Number: 20-17260

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number							
Sample Reference							
Sample Number							
Depth (m)							
Date Sampled							
Time Taken							
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025				
Ammonium as NH ₄	µg/l	15	NONE				



Analytical Report Number : 20-17260

Project / Site name: Clarendon Road

* 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 *
1550194	VS-Q-2	East	None Supplied	Brown clay and sand with gravel.
1550195	VS-Q-2	West	None Supplied	Brown clay and sand with vegetation and gravel
1550196	SP-011	4	None Supplied	Brown clay with vegetation and gravel
1550197	SP-011	5	None Supplied	Brown clay with vegetation and gravel
1550198	SP-011	6	None Supplied	Brown clay with vegetation and gravel
1550199	SP-009	3	None Supplied	Brown clay and sand with rubble and vegetation.

Analytical Report Number : 20-17260

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-009		3 S	20-17260	1550199	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-009		3 S	20-17260	1550199	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-009		3 S	20-17260	1550199	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-009		3 S	20-17260	1550199	ab	TPHCWG (Soil)	L088/76-PL	b
SP-009		3 S	20-17260	1550199	ab	Volatile organic compounds in soil	L073B-PL	b
SP-011		4 L	20-17260	1550202	a			
SP-011		4 S	20-17260	1550196	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011		4 S	20-17260	1550196	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-011		4 S	20-17260	1550196	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-011		4 S	20-17260	1550196	ab	TPHCWG (Soil)	L088/76-PL	b
SP-011		4 S	20-17260	1550196	ab	Volatile organic compounds in soil	L073B-PL	b
SP-011		5 L	20-17260	1550203	a			
SP-011		5 S	20-17260	1550197	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011		5 S	20-17260	1550197	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-011		5 S	20-17260	1550197	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-011		5 S	20-17260	1550197	ab	TPHCWG (Soil)	L088/76-PL	b
SP-011		5 S	20-17260	1550197	ab	Volatile organic compounds in soil	L073B-PL	b
SP-011		6 L	20-17260	1550204	a			
SP-011		6 S	20-17260	1550198	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-011		6 S	20-17260	1550198	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-011		6 S	20-17260	1550198	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-011		6 S	20-17260	1550198	ab	TPHCWG (Soil)	L088/76-PL	b
SP-011		6 S	20-17260	1550198	ab	Volatile organic compounds in soil	L073B-PL	b
SP009		3 L	20-17260	1550205	a			
VS-Q-2	East	L	20-17260	1550200	a			
VS-Q-2	East	S	20-17260	1550194	a			
VS-Q-2	West	L	20-17260	1550201	a			
VS-Q-2	West	S	20-17260	1550195	a			

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Analytical Report Number : 20-17541

Project / Site name:	Clarendon Road	Samples received on:	03/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	03/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	08/07/2020
Report Issue Number:	1	Report issued on:	08/07/2020
Samples Analysed:	23 leachate samples - 23 soil samples		

Signed:

Will Fardon

Technical Reviewer (CS 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.

Iss No 20-17541-1 Clarendon Road 6075

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.

Page 1 of 15

Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551763	1551764	1551765	1551766	1551767
Sample Reference				VS-I1	VS-I0	VS-I1	VS-I0	VS-J1
Sample Number				None Supplied	None Supplied	West	West	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
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	%	N/A	NONE	3.7	4.4	11	9.9	9.9
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	Chrysotile	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.004	< 0.001	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.004	< 0.001	< 0.001

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.056	0.062	0.67	0.29	0.22
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	110	120	1300	580	440
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	55.9	62.1	675	291	222
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	1.5

Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551768	1551769	1551770	1551771	1551772
Sample Reference				VS-J0	VS-J0	VS-I0	VS-K0	VS-K0
Sample Number				None Supplied	South	South	None Supplied	South
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
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
Moisture Content		%	N/A	NONE	5.3	4.6	3.9	4.3
Total mass of sample received		kg	0.001	NONE	2.0	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.001	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.001	-	-	-	-

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.059	0.075	0.052	0.035	0.027
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	120	150	100	71	54
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	58.8	75.4	52.2	35.3	27.1
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551773	1551774	1551775	1551776	1551777
Sample Reference				VS-L0	VS-L0	VS-M0	VS-M0	VS-K1
Sample Number				None Supplied	South	None Supplied	South	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
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	27	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	4.3	3.2	6.6	12	12
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	< 0.001

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.039	0.034	0.076	0.39	0.045
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	79	69	150	780	90
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	39.4	34.3	76.3	390	45.0
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.9	2.5	0.5

Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551778	1551779	1551780	1551781	1551782
Sample Reference				VS-L1	VS-M1	VS-N1	VS-N0	VS-N1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	Burday
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
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	%	N/A	NONE	8.2	15	3.6	13	2.9
Total mass of sample received	kg	0.001	NONE	2.0	2.0	1.8	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	-	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.059	1.2	0.027	0.16	0.051
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	120	2400	54	320	100
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	58.5	1210	26.9	160	50.6
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.7	< 0.5	< 0.5	< 0.5	< 0.5

Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551783	1552030	1552031		
Sample Reference				VS-01	VS-N-1	VS-01		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				03/07/2020	03/07/2020	03/07/2020		
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	%	N/A	NONE	17	2.5	14		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	Chrysotile & Amosite		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	0.001		
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	0.001		

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	820	130		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.41	0.064		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	411	63.8		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.25	-	-		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	500	-	-		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	250	-	-		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.8		



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551784	1551785	1551786	1551787	1551788
Sample Reference				VS-I1	VS-I0	VS-I1	VS-I0	VS-J1
Sample Number				None Supplied	None Supplied	West	West	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	7.0	4.8	56.0	37.4	24.2
Ammonium as NH ₄	µg/l	15	NONE	60	76	140	180	190



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551789
Sample Reference				VS-J0
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				03/07/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	8.8
Ammonium as NH ₄	µg/l	15	NONE	89



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551790	1551791	1551792	1551793	1551794
Sample Reference				VS-J0	VS-I0	VS-K0	VS-K0	VS-L0
Sample Number				South	South	None Supplied	South	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	10.3	8.4	4.5	5.3	5.4
Ammonium as NH ₄	µg/l	15	NONE	94	160	260	170	130



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551795	1551796	1551797	1551798	1551799
Sample Reference				VS-L0	VS-M0	VS-M0	VS-K1	VS-L1
Sample Number				South	None Supplied	South	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	5.7	8.7	114	6.6	6.1
Ammonium as NH ₄	µg/l	15	NONE	130	43	370	50	33



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1551800	1551801	1551802	1551803	1551804
Sample Reference				VS-M1	VS-N1	VS-N0	VS-N1	VS-01
Sample Number				None Supplied	None Supplied	None Supplied	Burday	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	225	4.1	4.4	12.6	35.8
Ammonium as NH ₄	µg/l	15	NONE	29	46	53	43	28



Analytical Report Number: 20-17541

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1552032	1552033		
Sample Reference				VS-N-1	VS-01		
Sample Number				None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied		
Date Sampled				03/07/2020	03/07/2020		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	8.6	5.8		
Ammonium as NH ₄	µg/l	15	NONE	41	30		



Analytical Report Number: 20-17541
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1551765	VS-I1		131	Loose Fibres	Chrysotile	0.004	0.004
1551766	VS-I0		139	Loose Fibres	Chrysotile	< 0.001	< 0.001
1551767	VS-J1		139	Loose Fibres	Chrysotile	< 0.001	< 0.001
1551768	VS-J0		143	Loose Fibres	Chrysotile	0.001	0.001
1551777	VS-K1		153	Loose Fibres	Chrysotile	< 0.001	< 0.001
1551783	VS-01		172	Loose Fibres	Chrysotile	< 0.001	< 0.001
1552031	VS-01		153	Loose Fibres	Chrysotile & Amosite	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-17541

Project / Site name: Clarendon Road

* 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 *
1551763	VS-I1	None Supplied	None Supplied	Light grey clay and sand with gravel.
1551764	VS-I0	None Supplied	None Supplied	Light grey clay and sand with gravel.
1551765	VS-I1	West	None Supplied	Brown clay and sand with gravel.
1551766	VS-I0	West	None Supplied	Brown clay and sand with brick and gravel
1551767	VS-J1	None Supplied	None Supplied	Brown clay and sand with gravel.
1551768	VS-J0	None Supplied	None Supplied	Light grey clay and sand with gravel.
1551769	VS-J0	South	None Supplied	Grey sand with gravel.
1551770	VS-I0	South	None Supplied	Grey sand with gravel.
1551771	VS-K0	None Supplied	None Supplied	Brown clay and sand with gravel.
1551772	VS-K0	South	None Supplied	Brown clay and sand with gravel.
1551773	VS-L0	None Supplied	None Supplied	Brown clay and sand with gravel.
1551774	VS-L0	South	None Supplied	Brown clay and sand with gravel and stones.
1551775	VS-M0	None Supplied	None Supplied	Brown clay and sand with gravel.
1551776	VS-M0	South	None Supplied	Brown clay with gravel.
1551777	VS-K1	None Supplied	None Supplied	Brown clay and sand with gravel and brick.
1551778	VS-L1	None Supplied	None Supplied	Brown loam and sand with gravel and clinker
1551779	VS-M1	None Supplied	None Supplied	Brown clay and sand.
1551780	VS-N1	None Supplied	None Supplied	Beige sand with gravel.
1551781	VS-N0	None Supplied	None Supplied	Brown clay.
1551782	VS-N1	Burday	None Supplied	Brown clay and sand with gravel.
1551783	VS-O1	None Supplied	None Supplied	Brown clay.
1552030	VS-N-1	None Supplied	None Supplied	Brown clay and sand with gravel.
1552031	VS-O1	None Supplied	None Supplied	Brown clay and sand with gravel.

Analytical Report Number : 20-17541

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-17780

Project / Site name:	Clarendon Road	Samples received on:	06/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	06/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	09/07/2020
Report Issue Number:	1	Report issued on:	09/07/2020
Samples Analysed:	8 leachate samples - 8 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.

Iss No 20-17780-1 Clarendon Road 6075

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.

Page 1 of 8

Analytical Report Number: 20-17780

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1553018	1553019	1553020	1553021	1553022
Sample Reference				VS-00	VS-P-2	VS-P-1	VS-P-0	VS-Q-2
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				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
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	%	N/A	NONE	13	4.3	4.6	12	16
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.002	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.002	-	< 0.001

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.97	0.14	0.20	0.31	0.15
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1900	290	410	620	300
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	967	145	203	312	151
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.9	< 0.5	< 0.5	1.5	< 0.5



Analytical Report Number: 20-17780

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1553023	1553024	1553025		
Sample Reference				VS-Q-1	VS-Q-0	VS-R-1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				03/07/2020	03/07/2020	03/07/2020		
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	%	N/A	NONE	16	16	23		
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-		
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-		

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.44	0.31	0.11		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	880	620	220		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	441	309	112		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.7	18	0.8		



Analytical Report Number: 20-17780
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1553020	VS-P-1		165	Loose Fibres	Chrysotile	0.002	0.002
1553022	VS-Q-2		137	Loose Fibres	Chrysotile	< 0.001	< 0.001
1553023	VS-Q-1		138	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-17780

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1553026	1553027	1553028	1553029	1553030
Sample Reference				VS-00	VS-P-2	VS-P-1	VS-P-0	VS-Q-2
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				03/07/2020	03/07/2020	03/07/2020	03/07/2020	03/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	41.9	12.2	26.3	16.0	13.7
Ammonium as NH ₄	µg/l	15	NONE	52	93	71	77	71



Analytical Report Number: 20-17780

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1553031	1553032	1553033		
Sample Reference				VS-Q-1	VS-Q-0	VS-R-1		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				03/07/2020	03/07/2020	03/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	138	26.9	11.1		
Ammonium as NH ₄	µg/l	15	NONE	3100	1200	96		



Analytical Report Number : 20-17780

Project / Site name: Clarendon Road

* 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 *
1553018	VS-00	None Supplied	None Supplied	Brown sandy clay with gravel and rubble.
1553019	VS-P-2	None Supplied	None Supplied	Brown gravelly loam.
1553020	VS-P-1	None Supplied	None Supplied	Brown gravelly loam.
1553021	VS-P-0	None Supplied	None Supplied	Black loam and gravel.
1553022	VS-Q-2	None Supplied	None Supplied	Brown gravelly clay.
1553023	VS-Q-1	None Supplied	None Supplied	Brown gravelly clay.
1553024	VS-Q-0	None Supplied	None Supplied	Brown gravelly clay.
1553025	VS-R-1	None Supplied	None Supplied	Brown gravelly clay.

Analytical Report Number : 20-17780

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-18076

Replaces Analytical Report Number : 20-18076, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road P3	Samples received on:	07/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	07/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	05/08/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	23 leachate samples - 23 soil samples		

Signed:

Joanna Wawrzeczko
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.

Iss No 20-18076-2 Clarendon Road P3 6075

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.

Page 1 of 21

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554847	1554848	1554849	1554850	1554851
Sample Reference				VS-G13 - N	VS-G13 - W	VS-H13 - N	VS-G12 - W	VS-G11 - S
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				06/07/2020	06/07/2020	06/07/2020	06/07/2020	06/07/2020
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	%	N/A	NONE	17	24	21	22	19
Total mass of sample received	kg	0.001	NONE	1.9	1.8	1.1	1.2	0.71

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	6400	850	4800	2100	1600
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	3.2	0.42	2.4	1.0	0.82
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	3220	423	2380	1040	824
Ammonium as NH ₄	mg/kg	0.5	MCERTS	2.5	2.0	180	5.4	65

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554847	1554848	1554849	1554850	1554851
Sample Reference				VS-G13 - N	VS-G13 - W	VS-H13 - N	VS-G12 - W	VS-G11 - S
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				06/07/2020	06/07/2020	06/07/2020	06/07/2020	06/07/2020
Time Taken				None Supplied	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	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
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Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554852	1554853	1554854	1554855	1554856
Sample Reference				VS-H11 - S	VS-Q12	VS-P12	VS-O12	VS-Q11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	5.00	5.00	5.00	5.00
Date Sampled				06/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
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	%	N/A	NONE	7.7	15	9.5	19	22
Total mass of sample received	kg	0.001	NONE	1.8	2.0	1.2	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-	-

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	5300	1900	1000	1500	1900
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.6	0.95	0.50	0.75	0.97
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	2640	954	498	753	969
Ammonium as NH ₄	mg/kg	0.5	MCERTS	44	11	2.1	14	13

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554852	1554853	1554854	1554855	1554856
Sample Reference				VS-H11 - S	VS-Q12	VS-P12	VS-O12	VS-Q11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	5.00	5.00	5.00	5.00
Date Sampled				06/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
Time Taken				None Supplied	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	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
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Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554857	1554858	1554859	1554860	1554861
Sample Reference				VS-P11	VS-O11	VS-N11	VS-N10	VS-N9
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	5.00	5.00
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
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	%	N/A	NONE	8.1	24	25	18	12
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	0.80

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001	-	< 0.001

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	800	1900	1600	1800	2100
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.40	0.96	0.81	0.90	1.1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	398	958	811	898	1070
Ammonium as NH ₄	mg/kg	0.5	MCERTS	6.4	7.9	15	5.0	< 0.5

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	-

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554857	1554858	1554859	1554860	1554861
Sample Reference				VS-P11	VS-O11	VS-N11	VS-N10	VS-N9
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	5.00	5.00
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
Time Taken				None Supplied	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	-	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	-
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Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554862	1554863	1554864	1554865	1554866
Sample Reference				VS-O10	VS-O9	VS-R11	VS-H13	SP-O15
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				07/07/2020	07/07/2020	07/07/2020	06/07/2020	07/07/2020
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	%	N/A	NONE	4.5	6.1	18	26	14
Total mass of sample received	kg	0.001	NONE	1.6	0.95	2.0	0.99	0.87

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	Amosite	Amosite & Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	0.008
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	< 0.001	0.008

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1500	670	950	3300	4000
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.74	0.33	0.47	1.6	2.0
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	741	335	475	1650	1980
Ammonium as NH ₄	mg/kg	0.5	MCERTS	4.9	< 0.5	5.3	910	19

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-	0.76
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-	0.51
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-	1.5
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-	2.5
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-	14
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-	13
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-	5.5

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-	< 1.0

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554862	1554863	1554864	1554865	1554866
Sample Reference				VS-O10	VS-O9	VS-R11	VS-H13	SP-O15
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				07/07/2020	07/07/2020	07/07/2020	06/07/2020	07/07/2020
Time Taken				None Supplied	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
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	22
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-	80
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-	53
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	150

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-	2.9
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-	21
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-	140
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-	190
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-	350

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-	< 0.2
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Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554867	1554868	1554869		
Sample Reference				SP-016	VS-Q10	VS-R10		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/07/2020	07/07/2020	07/07/2020		
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	%	N/A	NONE	0.94	7.0	20		
Total mass of sample received	kg	0.001	NONE	1.2	1.6	1.8		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.005	0.003		
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.005	0.003		

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3500	1200	770		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.8	0.58	0.38		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1750	576	384		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	13	< 0.5	8.7		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Fluorene	mg/kg	0.05	MCERTS	0.29	-	-		
Anthracene	mg/kg	0.05	MCERTS	0.68	-	-		
Fluoranthene	mg/kg	0.05	MCERTS	5.9	-	-		
Pyrene	mg/kg	0.05	MCERTS	5.1	-	-		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.5	-	-		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	-	-		
Toluene	µg/kg	1	MCERTS	< 1.0	-	-		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-		
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-		

Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554867	1554868	1554869		
Sample Reference				SP-016	VS-Q10	VS-R10		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				07/07/2020	07/07/2020	07/07/2020		
Time Taken				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	-	-		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.2	-	-		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	23	-	-		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	17	-	-		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	43	-	-		

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.7	-	-		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	51	-	-		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	100	-	-		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	160	-	-		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-		
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-		
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-		
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-		
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-		
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-		

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-		
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Analytical Report Number: 20-18076
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1554859	VS-N11	5.00	122	Loose Fibres	Chrysotile	< 0.001	< 0.001
1554861	VS-N9	5.00	159	Loose Fibres	Chrysotile	< 0.001	< 0.001
1554862	VS-O10		155	Loose Fibres	Chrysotile	< 0.001	< 0.001
1554865	VS-H13		118	Loose Fibres	Amosite	< 0.001	< 0.001
1554866	SP-O15		153	Loose Fibres & Loose Fibrous Debris	Amosite & Chrysotile	0.008	0.008
1554867	SP-O16		189	Loose Fibres	Chrysotile	< 0.001	< 0.001
1554868	VS-Q10		168	Loose Fibrous Debris	Chrysotile	0.005	0.005
1554869	VS-R10		151	Hard/Cement Type Material	Chrysotile	0.003	0.003

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554870	1554871	1554872	1554873	1554874
Sample Reference				VS-G13 - N	VS-G13 - W	VS-H13 - N	VS-G12 - W	VS-G11 - S
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				06/07/2020	06/07/2020	06/07/2020	06/07/2020	06/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	285	50.6	202	143	132
Ammonium as NH ₄	µg/l	15	NONE	300	170	7400	350	3500



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554875
Sample Reference				VS-H11 - S
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				06/07/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	337
Ammonium as NH ₄	µg/l	15	NONE	3400



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554876	1554877	1554878	1554879	1554880
Sample Reference				VS-Q12	VS-P12	VS-O12	VS-Q11	VS-P11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	5.00	5.00
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	72.4	34.2	93.7	90.2	16.5
Ammonium as NH ₄	µg/l	15	NONE	870	2800	2100	1000	100



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554881	1554882	1554883	1554884	1554885
Sample Reference				VS-O11	VS-N11	VS-N10	VS-N9	VS-O10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	5.00	5.00	5.00	None Supplied
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	07/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	118	117	179	104	34.8
Ammonium as NH ₄	µg/l	15	NONE	570	990	300	51	52



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554886	1554887	1554888	1554889	1554890
Sample Reference				VS-O9	VS-R11	VS-H13	SP-O15	SP-O16
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				07/07/2020	07/07/2020	06/07/2020	07/07/2020	07/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	95.1	89.6	107	921	338
Ammonium as NH ₄	µg/l	15	NONE	600	1000	20000	1400	1400



Analytical Report Number: 20-18076

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1554891	1554892		
Sample Reference				VS-Q10	VS-R10		
Sample Number				None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied		
Date Sampled				07/07/2020	07/07/2020		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	40.3	57.0		
Ammonium as NH ₄	µg/l	15	NONE	70	1100		



Analytical Report Number : 20-18076

Project / Site name: Clarendon Road P3

* 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 *
1554847	VS-G13 - N	None Supplied	None Supplied	Brown clay with gravel and vegetation.
1554848	VS-G13 - W	None Supplied	None Supplied	Brown clay with gravel.
1554849	VS-H13 - N	None Supplied	None Supplied	Light brown clay with gravel and chalk.
1554850	VS-G12 - W	None Supplied	None Supplied	Brown clay with vegetation and gravel
1554851	VS-G11 - S	None Supplied	None Supplied	Brown clay with vegetation and gravel
1554852	VS-H11 - S	None Supplied	None Supplied	Brown clay with gravel.
1554853	VS-Q12	None Supplied	5.00	Brown clay and sand with gravel and vegetation.
1554854	VS-P12	None Supplied	5.00	Brown clay and sand with vegetation and gravel
1554855	VS-O12	None Supplied	5.00	Brown clay and sand with gravel and vegetation.
1554856	VS-Q11	None Supplied	5.00	Brown clay and sand with vegetation and gravel
1554857	VS-P11	None Supplied	5.00	Light brown clay and sand with vegetation and gravel.
1554858	VS-O11	None Supplied	5.00	Brown clay and sand with vegetation and gravel
1554859	VS-N11	None Supplied	5.00	Brown clay and sand with gravel and vegetation.
1554860	VS-N10	None Supplied	5.00	Brown clay and sand with gravel and vegetation.
1554861	VS-N9	None Supplied	5.00	Brown clay and sand with gravel and vegetation.
1554862	VS-O10	None Supplied	None Supplied	Brown sand with gravel and vegetation.
1554863	VS-O9	None Supplied	None Supplied	Brown sand with vegetation and gravel
1554864	VS-R11	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1554865	VS-H13	None Supplied	None Supplied	Brown clay with gravel.
1554866	SP-O15	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1554867	SP-O16	None Supplied	None Supplied	Light brown sand with gravel.
1554868	VS-Q10	None Supplied	None Supplied	Brown sand with vegetation and gravel
1554869	VS-R10	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.

Analytical Report Number : 20-18076

Project / Site name: Clarendon Road P3

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-O15		S	20-18076	1554866	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-O15		S	20-18076	1554866	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-O15		S	20-18076	1554866	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-O15		S	20-18076	1554866	b	TPHCWG (Soil)	L088/76-PL	b
SP-O15		S	20-18076	1554866	b	Volatile organic compounds in soil	L073B-PL	b
SP-O16		S	20-18076	1554867	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-O16		S	20-18076	1554867	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-O16		S	20-18076	1554867	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-O16		S	20-18076	1554867	b	TPHCWG (Soil)	L088/76-PL	b
SP-O16		S	20-18076	1554867	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-18145

Project / Site name:	Clarendon Road	Samples received on:	08/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	08/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	13/07/2020
Report Issue Number:	1	Report issued on:	13/07/2020
Samples Analysed:	4 leachate samples - 4 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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.

Iss No 20-18145-1 Clarendon Road 6075.XLS

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.

Page 1 of 6

Analytical Report Number: 20-18145

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1555131	1555132	1555133	1555134	
Sample Reference				VS-O8	VS-Q8	VS-N8	VS-R8	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	
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	%	N/A	NONE	13	6.7	15	20	
Total mass of sample received	kg	0.001	NONE	1.4	1.8	1.5	1.8	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile	
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001	
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001	

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.67	1.7	2.8	1.6	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1300	3300	5600	3100	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	665	1660	2800	1570	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	6.2	0.6	18	



Analytical Report Number: 20-18145
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1555134	VS-R8		127	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-18145

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1555135	1555136	1555137	1555138	
Sample Reference				VS-O8	VS-Q8	VS-N8	VS-R8	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				07/07/2020	07/07/2020	07/07/2020	07/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	41.1	128	249	110	
Ammonium as NH ₄	µg/l	15	NONE	< 15	990	< 15	910	



Analytical Report Number : 20-18145

Project / Site name: Clarendon Road

* 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 *
1555131	VS-Q8	None Supplied	None Supplied	Brown loam and sand with vegetation and gravel.
1555132	VS-Q8	None Supplied	None Supplied	Brown loam and sand with vegetation and gravel.
1555133	VS-N8	None Supplied	None Supplied	Brown clay and sand with vegetation and gravel
1555134	VS-R8	None Supplied	None Supplied	Brown clay and sand with vegetation and gravel

Analytical Report Number : 20-18145

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-18682-B

Replaces Analytical Report Number: 20-18682, issue no. 2
Report format change.

Project / Site name:	Clarendon Road	Samples received on:	10/07/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	10/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	05/08/2020
Report Issue Number:	3	Report issued on:	17/11/2020
Samples Analysed:	1 water sample		

Signed:

Joanna Wawrzeczko
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: 20-18682-B
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Total Station Ref: S 1210042/00000				
Lab Sample Number			1558170	
Sample Reference			WS506	
Sample Number			2	
Depth (m)			None Supplied	
Date Sampled			10/07/2020	
Time Taken			None Supplied	
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	570
Free Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	12
Thiocyanate as SCN	µg/l	200	ISO 17025	130000
Sulphate as SO4	mg/l	0.045	ISO 17025	2720
Sulphide	µg/l	5	NONE	< 5.0
Ammonia as NH3	µg/l	15	ISO 17025	570000

Total Phenols

Total Phenols (monohydric)	µg/l	10	ISO 17025	< 10
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01
Fluorene	µg/l	0.01	ISO 17025	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	< 0.16
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Heavy Metals / Metalloids

Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0

Arsenic (dissolved)	µg/l	0.15	ISO 17025	6.33
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	0.7
Copper (dissolved)	µg/l	0.5	ISO 17025	7.4
Lead (dissolved)	µg/l	0.2	ISO 17025	0.6
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	3.9
Selenium (dissolved)	µg/l	0.6	ISO 17025	2.9
Zinc (dissolved)	µg/l	0.5	ISO 17025	48



Analytical Report Number: 20-18682-B

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1558170
Sample Reference				WS506
Sample Number				2
Depth (m)				None Supplied
Date Sampled				10/07/2020
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditati on Status	

Monoaromatics & Oxygenates

Benzene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10

TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	50
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	130
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	180

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



Analytical Report Number : 20-18682-B

Project / Site name: Clarendon Road

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
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Monohydric phenols in water	Determination of phenols in water by continuous flow analyser. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Sulphide in water	Determination of sulphide in water by ion selective electrode.	In-house method	L029-PL	W	NONE
Thiocyanate in water	Determination of thiocyanate in water by discrete analyser (colorimetry). Accredited matrices SW, GW, PW.	In house method based on SMWW 4500-CN-M. Accredited matrices: SW, PW, GW.	L082-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammonia as NH3 in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Low level total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Free cyanide (low level) in water	Determination of free cyanide by distillation followed by colorimetry. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025

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.

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Analytical Report Number : 20-19107

Replaces Analytical Report Number : 20-19107, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	14/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	14/07/2020
Your order number:	SRE6075-00005	Analysis completed by:	05/08/2020
Report Issue Number:	2	Report issued on:	11/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
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.

Iss No 20-19107-2 Clarendon Road 6075

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

Page 1 of 7

Analytical Report Number: 20-19107

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1560691	1560692			
Sample Reference				SP-010	SP-020			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				13/07/2020	13/07/2020			
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				%	N/A	NONE	17	18
Total mass of sample received				kg	0.001	NONE	2.0	2.0

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected			
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.4	1.5			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2900	3000			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1450	1500			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	6.7	24			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.94			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.32			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.77			
Anthracene	mg/kg	0.05	MCERTS	0.62	2.7			
Fluoranthene	mg/kg	0.05	MCERTS	4.2	14			
Pyrene	mg/kg	0.05	MCERTS	3.8	11			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.0	5.7			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Analytical Report Number: 20-19107

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1560691	1560692			
Sample Reference				SP-010	SP-020			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				13/07/2020	13/07/2020			
Time Taken				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			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	14			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	19			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	35			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	170			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	240			

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	25			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.7	40			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	19	70			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	42	66			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	64	200			

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
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Analytical Report Number: 20-19107

Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1560693	1560694			
Sample Reference				SP-010	SP-020			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				13/07/2020	13/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	185	75.8			
Ammonium as NH ₄	µg/l	15	NONE	400	1300			



Analytical Report Number : 20-19107

Project / Site name: Clarendon Road

* 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 *
1560691	SP-010	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1560692	SP-020	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-19107

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-010		S	20-19107	1560691	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-010		S	20-19107	1560691	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-010		S	20-19107	1560691	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-010		S	20-19107	1560691	b	TPHCWG (Soil)	L088/76-PL	b
SP-010		S	20-19107	1560691	b	Volatile organic compounds in soil	L073B-PL	b
SP-020		S	20-19107	1560692	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-020		S	20-19107	1560692	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-020		S	20-19107	1560692	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-020		S	20-19107	1560692	b	TPHCWG (Soil)	L088/76-PL	b
SP-020		S	20-19107	1560692	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-20234

Replaces Analytical Report Number : 20-20234, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	20/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	20/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	05/08/2020
Report Issue Number:	2	Report issued on:	05/08/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed:

Will Fardon

Technical Reviewer (CS 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 relate only to the sample(s) submitted for testing.

Page 1 of 7

Analytical Report Number: 20-20234

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number	1566873				
Sample Reference	SP-020				
Sample Number	None Supplied				
Depth (m)	None Supplied				
Date Sampled	20/07/2020				
Time Taken	None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	21				
Total mass of sample received	kg	0.001	NONE	0.76				

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	940				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.47				
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	468				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	260				

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.25				
Acenaphthene	mg/kg	0.05	MCERTS	0.44				
Fluorene	mg/kg	0.05	MCERTS	0.54				
Anthracene	mg/kg	0.05	MCERTS	0.70				
Fluoranthene	mg/kg	0.05	MCERTS	6.4				
Pyrene	mg/kg	0.05	MCERTS	5.5				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	3.4				

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				

Petroleum Hydrocarbons

Analytical Report Number: 20-20234

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1566873				
Sample Reference				SP-020				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				20/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10				

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	37				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	59				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	96				

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0				
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0				
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0				
Trichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
Tetrachloroethene	µg/kg	1	NONE	< 1.0				
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2				
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Analytical Report Number: 20-20234

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1566874				
Sample Reference				SP-020				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				20/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	116				
Ammonium as NH ₄	µg/l	15	NONE	17000				



Analytical Report Number : 20-20234

Project / Site name: Clarendon Road

* 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 *
1566873	SP-020	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-20234

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-020		S	20-20234	1566873	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-020		S	20-20234	1566873	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-020		S	20-20234	1566873	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-020		S	20-20234	1566873	b	TPHCWG (Soil)	L088/76-PL	b
SP-020		S	20-20234	1566873	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-20260

Project / Site name:	Clarendon Road	Samples received on:	20/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	20/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	24/07/2020
Report Issue Number:	1	Report issued on:	24/07/2020
Samples Analysed:	18 leachate samples - 18 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.

Iss No 20-20260-1 Clarendon Road 6075

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.

Page 1 of 11

Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1566987	1566988	1566989	1566990	1566991
Sample Reference				VS-12T	VS-12T-E	VS-12-S	VS-13-T	VS-13T-E
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
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	%	N/A	NONE	17	11	9.3	9.5	14
Total mass of sample received	kg	0.001	NONE	0.89	0.62	0.82	0.87	0.65

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.1	0.36	2.5	0.21	0.58
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4200	720	5100	410	1200
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2110	361	2540	207	584
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	2.2	1.3	2.1	5.5

Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1566992	1566993	1566994	1566995	1566996
Sample Reference				VS-13R	VS-13R-N	VS-13-S	VS-13T-N	VS12-R
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
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	%	N/A	NONE	9.7	11	3.4	10	15
Total mass of sample received	kg	0.001	NONE	0.80	0.76	0.77	0.55	0.77

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.48	0.095	1.9	0.18	0.86
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	950	190	3900	370	1700
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	477	95.1	1950	184	855
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.6	1.5	5.6	6.9	1.7

Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1566997	1566998	1566999	1567000	1567001
Sample Reference				VS13Q	VS-13Q-N	VS11T-E	VS13P	VS-11T
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
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	%	N/A	NONE	14	12	15	12	17
Total mass of sample received	kg	0.001	NONE	0.79	0.81	0.62	0.96	0.88

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.045	0.079	0.54	0.38	0.84
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	90	160	1100	760	1700
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	44.8	78.8	539	378	845
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	0.6



Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1567002	1567038	1567039		
Sample Reference				VS-11S	VS-13S-N	VS13P-N		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				20/07/2020	20/07/2020	20/07/2020		
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
Moisture Content				%	N/A	NONE	15	13
Total mass of sample received				kg	0.001	NONE	0.81	0.78

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.2	0.37	0.058		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	6300	740	120		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3170	369	58.1		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.9	5.9	2.9		



Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1567003	1567004	1567005	1567006	1567007
Sample Reference				VS-12T	VS-12T-E	VS-12-S	VS-13-T	VS-13T-E
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	175	41.2	435	7.4	11.2
Ammonium as NH ₄	µg/l	15	NONE	100	66	490	160	21



Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1567008	1567009	1567010	1567011	1567012
Sample Reference				VS-13R	VS-13R-N	VS-13-S	VS-13T-N	VS12-R
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	41.9	3.9	223	30.2	111
Ammonium as NH ₄	µg/l	15	NONE	140	59	370	210	170



Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1567013	1567014	1567015	1567016	1567017
Sample Reference				VS13Q	VS-13Q-N	VS11T-E	VS13P	VS-11T
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	< 0.1	3.8	18.2	32.4	358
Ammonium as NH ₄	µg/l	15	NONE	29	50	19	21	34



Analytical Report Number: 20-20260

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1567018	1567040	1567041		
Sample Reference				VS-11S	VS13S-N	VS13P-N		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				20/07/2020	20/07/2020	20/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	287	28.9	4.5		
Ammonium as NH ₄	µg/l	15	NONE	240	260	32		



Analytical Report Number : 20-20260

Project / Site name: Clarendon Road

* 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 *
1566987	VS-12T	None Supplied	None Supplied	Brown clay and loam with vegetation.
1566988	VS-12T-E	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
1566989	VS-12-S	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
1566990	VS-13-T	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1566991	VS-13T-E	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1566992	VS-13R	None Supplied	None Supplied	Brown clay and loam with vegetation and gravel
1566993	VS-13R-N	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1566994	VS-13-S	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1566995	VS-13T-N	None Supplied	None Supplied	Brown loam and clay with vegetation and gravel
1566996	VS12-R	None Supplied	None Supplied	Brown clay with gravel.
1566997	VS13Q	None Supplied	None Supplied	Brown loam and clay with gravel.
1566998	VS-13Q-N	None Supplied	None Supplied	Brown loam and clay with gravel.
1566999	VS11T-E	None Supplied	None Supplied	Brown loam and clay with gravel.
1567000	VS13P	None Supplied	None Supplied	Brown loam and clay with gravel.
1567001	VS-11T	None Supplied	None Supplied	Brown clay.
1567002	VS-11S	None Supplied	None Supplied	Brown clay and loam with gravel.
1567038	VS-13S-N	None Supplied	None Supplied	Brown loam and clay with gravel.
1567039	VS13P-N	None Supplied	None Supplied	Brown loam and clay with gravel.

Analytical Report Number : 20-20260

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-20488

Project / Site name:	Clarendon Road	Samples received on:	21/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	21/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	24/07/2020
Report Issue Number:	1	Report issued on:	24/07/2020
Samples Analysed:	11 leachate samples - 11 soil samples		

Signed:

Joanna Wawrzeczko
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.

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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.

Page 1 of 10

Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568286	1568287	1568288	1568289	1568290
Sample Reference				VS-40	VS-13N	VS-12N	VS-12M	VS-13O
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
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	%	N/A	NONE	10	9.2	0.74	1.8	19
Total mass of sample received	kg	0.001	NONE	0.84	0.84	0.73	0.79	0.92

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.36	0.089	2.4	2.3	2.8
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	710	180	4800	4500	5600
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	357	89.1	2420	2270	2810
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	0.5	14	110	21

Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568291	1568292	1568293	1568294	1568295
Sample Reference				VS-13M	VS-11M	VS-30	VS-3P	VS-4P
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				20/07/2020	20/07/2020	21/07/2020	21/07/2020	21/07/2020
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	%	N/A	NONE	17	21	3.2	8.7	1.9
Total mass of sample received	kg	0.001	NONE	0.97	0.87	0.86	0.79	0.93

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile	Chrysotile & Amosite & Crocidolite
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001	0.002
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001	0.002

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.4	0.10	2.5	3.5	0.91
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4700	200	5100	7100	1800
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2360	100	2540	3530	909
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.3	< 0.5	3.2	1.5	1.1

Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568296				
Sample Reference				VS-3N				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				21/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	14				
Total mass of sample received	kg	0.001	NONE	0.83				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-				
Asbestos Quantification Total	%	0.001	ISO 17025	-				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.5				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	5000				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2520				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.6				



Analytical Report Number: 20-20488
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1568286	VS-40		168	Loose Fibres	Chrysotile	< 0.001	< 0.001
1568294	VS-3P		141	Loose Fibres	Chrysotile	< 0.001	< 0.001
1568295	VS-4P		160	Loose Fibres & Loose Fibrous Debris	Chrysotile & Amosite & Crocidolite	0.002	0.002

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568297	1568298	1568299	1568300	1568301
Sample Reference				VS-4O	VS-13N	VS-12N	VS-12M	VS-13O
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				20/07/2020	20/07/2020	20/07/2020	20/07/2020	20/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	304	11.0	252	204	268
Ammonium as NH ₄	µg/l	15	NONE	< 15	110	22000	2100	900



Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568302	1568303	1568304	1568305	1568306
Sample Reference				VS-13M	VS-11M	VS-3O	VS-3P	VS-4P
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				20/07/2020	20/07/2020	21/07/2020	21/07/2020	21/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	253	13.0	279	1450	115
Ammonium as NH ₄	µg/l	15	NONE	65	16	170	200	50



Analytical Report Number: 20-20488

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1568307				
Sample Reference				VS-3N				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				21/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	1120				
Ammonium as NH ₄	µg/l	15	NONE	37				



Analytical Report Number : 20-20488

Project / Site name: Clarendon Road

* 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 *
1568286	VS-40	None Supplied	None Supplied	Brown clay and sand with gravel.
1568287	VS-13N	None Supplied	None Supplied	Brown clay and loam with gravel.
1568288	VS-12N	None Supplied	None Supplied	Grey clay and sand with gravel.
1568289	VS-12M	None Supplied	None Supplied	Beige clay and sand with gravel.
1568290	VS-130	None Supplied	None Supplied	Brown clay.
1568291	VS-13M	None Supplied	None Supplied	Brown clay and loam with vegetation.
1568292	VS-11M	None Supplied	None Supplied	Brown clay.
1568293	VS-30	None Supplied	None Supplied	Beige clay and sand.
1568294	VS-3P	None Supplied	None Supplied	Beige clay and sand.
1568295	VS-4P	None Supplied	None Supplied	Beige clay and sand with gravel.
1568296	VS-3N	None Supplied	None Supplied	Brown clay.

Analytical Report Number : 20-20488

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-20770

Project / Site name:	Clarendon	Samples received on:	22/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	22/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	27/07/2020
Report Issue Number:	1	Report issued on:	27/07/2020
Samples Analysed:	5 leachate samples - 5 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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.

Iss No 20-20770-1 Clarendon 6075

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.

Page 1 of 6

Analytical Report Number: 20-20770

Project / Site name: Clarendon

Your Order No: S-RE6075-00005

Lab Sample Number				1569752	1569753	1569754	1569755	1569756
Sample Reference				VS-O-2	VS-O-1	VS-2N	VS-10	VS-20
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				22/07/2020	22/07/2020	22/07/2020	22/07/2020	22/07/2020
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	%	N/A	NONE	2.3	9.0	10	4.6	2.1
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.001	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.001	-	< 0.001

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.065	1.7	1.2	0.74	1.1
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	130	3500	2400	1500	2300
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	64.7	1730	1200	737	1130
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	1.0	12	18	1.9



Analytical Report Number: 20-20770
Project / Site name: Clarendon
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1569754	VS-2N		207	Loose Fibrous Debris	Amosite	0.001	0.001
1569756	VS-2O		179	Loose Fibrous Debris	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-20770

Project / Site name: Clarendon

Your Order No: S-RE6075-00005

Lab Sample Number				1569757	1569758	1569759	1569760	1569761
Sample Reference				VS-O-2	VS-O-1	VS-2N	VS-10	VS-20
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				22/07/2020	22/07/2020	22/07/2020	22/07/2020	22/07/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	7.0	156	86.0	154	122
Ammonium as NH ₄	µg/l	15	NONE	110	64	140	320	210



Analytical Report Number : 20-20770

Project / Site name: Clarendon

* 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 *
1569752	VS-O-2	None Supplied	None Supplied	Brown sand with gravel.
1569753	VS-O-1	None Supplied	None Supplied	Brown sandy clay with gravel.
1569754	VS-2N	None Supplied	None Supplied	Brown clay and sand with gravel.
1569755	VS-1O	None Supplied	None Supplied	Light brown clay and sand with gravel.
1569756	VS-2O	None Supplied	None Supplied	Light brown clay and sand with gravel.

Analytical Report Number : 20-20770

Project / Site name: Clarendon

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-21000

Project / Site name:	Clarendon Road	Samples received on:	23/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	23/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	28/07/2020
Report Issue Number:	1	Report issued on:	28/07/2020
Samples Analysed:	4 leachate samples - 4 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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.

Iss No 20-21000-1 Clarendon Road 6075

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

Page 1 of 6

Analytical Report Number: 20-21000

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1571111	1571112	1571113	1571114	
Sample Reference				SP-023	SP-024(1)	SP-024(2)	SP-015.2	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				23/07/2020	23/07/2020	23/07/2020	23/07/2020	
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	%	N/A	NONE	18	19	16	7.6	
Total mass of sample received	kg	0.001	NONE	1.7	2.0	2.0	1.6	

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Crocidolite	Amosite	Amosite & Crocidolite	Chrysotile	
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Detected	
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	< 0.001	0.001	0.001	
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	< 0.001	0.001	0.001	

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	3.5	2.5	2.5	2.2	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	7000	5100	5000	4500	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	3500	2550	2520	2240	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	110	41	65	18	



Analytical Report Number: 20-21000

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1571115	1571116	1571117	1571118	
Sample Reference				SP-023	SP-024(1)	SP-024(2)	SP-015.2	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				23/07/2020	23/07/2020	23/07/2020	23/07/2020	
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	1900	1510	1650	1240	
Ammonium as NH ₄	µg/l	15	NONE	35000	2500	3300	1500	



Analytical Report Number: 20-21000
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1571111	SP-023		154	Loose Fibres & Loose Fibrous Debris	Chrysotile & Crocidolite	< 0.001	< 0.001
1571112	SP-024(1)		154	Loose Fibrous Debris	Amosite	< 0.001	< 0.001
1571113	SP-024(2)		142	Loose Fibres	Chrysotile & Amosite & Crocidolite	0.001	0.001
1571114	SP-015.2		160	Loose Fibres & Loose Fibrous Debris	Chrysotile	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-21000

Project / Site name: Clarendon Road

* 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 *
1571111	SP-023	None Supplied	None Supplied	Grey clay and sand with gravel.
1571112	SP-024(1)	None Supplied	None Supplied	Brown clay and sand with gravel.
1571113	SP-024(2)	None Supplied	None Supplied	Grey clay and sand with gravel.
1571114	SP-015.2	None Supplied	None Supplied	Brown clay and sand with gravel and rubble.

Analytical Report Number : 20-21000

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-21255

Project / Site name:	Clarendon Road	Samples received on:	24/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	24/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	29/07/2020
Report Issue Number:	1	Report issued on:	29/07/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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.

Iss No 20-21255-1 Clarendon Road 6075

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

Page 1 of 8

Analytical Report Number: 20-21255

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1572535	1572536			
Sample Reference				SP-016	SP-019			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				24/07/2020	24/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	39	< 0.1			
Moisture Content	%	N/A	NONE	3.0	4.1			
Total mass of sample received	kg	0.001	NONE	1.4	1.9			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	-			
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.007	-			
Asbestos Quantification Total	%	0.001	ISO 17025	0.007	-			

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.8	0.22			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3600	440			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1810	222			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	92	0.9			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	3.6	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	0.27	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	1.3	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	2.9	0.28			
Fluoranthene	mg/kg	0.05	MCERTS	13	1.4			
Pyrene	mg/kg	0.05	MCERTS	10	1.3			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	5.4	0.85			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	13	3.2			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	19	7.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	62	12			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	80	32			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	170	54			

Analytical Report Number: 20-21255

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1572535	1572536			
Sample Reference				SP-016	SP-019			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				24/07/2020	24/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
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Analytical Report Number: 20-21255
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1572535	SP-016		169	Loose Fibrous Debris & Loose Fibres	Chrysotile & Amosite	0.007	0.007

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-21255

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1572537	1572538			
Sample Reference				SP-016	SP-019			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				24/07/2020	24/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	304	34.2			
Ammonium as NH ₄	µg/l	15	NONE	12000	260			



Analytical Report Number : 20-21255

Project / Site name: Clarendon Road

* 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 *
1572535	SP-016	None Supplied	None Supplied	Brown clay and sand with gravel and stones.
1572536	SP-019	None Supplied	None Supplied	Brown clay and sand with rubble and gravel

Analytical Report Number : 20-21255

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

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

Page 7 of 8

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-016		S	20-21255	1572535	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-016		S	20-21255	1572535	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-016		S	20-21255	1572535	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-016		S	20-21255	1572535	b	TPHCWG (Soil)	L088/76-PL	b
SP-016		S	20-21255	1572535	b	Volatile organic compounds in soil	L073B-PL	b
SP-019		S	20-21255	1572536	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-019		S	20-21255	1572536	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-019		S	20-21255	1572536	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-019		S	20-21255	1572536	b	TPHCWG (Soil)	L088/76-PL	b
SP-019		S	20-21255	1572536	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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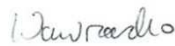
t: 01923 225404

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e: reception@i2analytical.com

Analytical Report Number : 20-21545

Project / Site name:	Clarendon Road	Samples received on:	27/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	27/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	31/07/2020
Report Issue Number:	1	Report issued on:	03/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples		


Signed:

Joanna Wawrzeczko
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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 8

Analytical Report Number: 20-21545

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1573888	1573889			
Sample Reference				SP-025	SP-026			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/07/2020	27/07/2020			
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	%	N/A	NONE	22	11			
Total mass of sample received	kg	0.001	NONE	1.0	1.0			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001			
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001			

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.25	1.3			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	490	2600			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	246	1320			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	5.5			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.43			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.43			
Fluorene	mg/kg	0.05	MCERTS	< 0.05	1.7			
Anthracene	mg/kg	0.05	MCERTS	< 0.05	5.3			
Fluoranthene	mg/kg	0.05	MCERTS	0.31	49			
Pyrene	mg/kg	0.05	MCERTS	0.26	43			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	33			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	5.9			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	9.8			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	33			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	81			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	130			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	12			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	24			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	160			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	290			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	490			

Analytical Report Number: 20-21545

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1573888	1573889			
Sample Reference				SP-025	SP-026			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/07/2020	27/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
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Analytical Report Number: 20-21545
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1573889	SP-026		167	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-21545

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1573890	1573891			
Sample Reference				SP-025	SP-026			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				27/07/2020	27/07/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	34.4	230			
Ammonium as NH ₄	µg/l	15	NONE	16	1200			



Analytical Report Number : 20-21545

Project / Site name: Clarendon Road

* 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 *
1573888	SP-025	None Supplied	None Supplied	Brown clay with gravel.
1573889	SP-026	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-21545

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

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

Page 7 of 8

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-025		S	20-21545	1573888	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-025		S	20-21545	1573888	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-025		S	20-21545	1573888	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-025		S	20-21545	1573888	b	TPHCWG (Soil)	L088/76-PL	b
SP-025		S	20-21545	1573888	b	Volatile organic compounds in soil	L073B-PL	b
SP-026		S	20-21545	1573889	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-026		S	20-21545	1573889	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-026		S	20-21545	1573889	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-026		S	20-21545	1573889	b	TPHCWG (Soil)	L088/76-PL	b
SP-026		S	20-21545	1573889	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-21674

Project / Site name:	Clarendon Road P3	Samples received on:	28/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	28/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	31/07/2020
Report Issue Number:	1	Report issued on:	31/07/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager
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.

Iss No 20-21674-1 Clarendon Road P3 6075

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

Page 1 of 7

Analytical Report Number: 20-21674

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574738	1574739			
Sample Reference				SP020	SP020			
Sample Number				3	4			
Depth (m)				None Supplied	None Supplied			
Date Sampled				Deviating	Deviating			
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	%	N/A	NONE	14	12			
Total mass of sample received	kg	0.001	NONE	1.5	1.4			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Amosite			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001			
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001			

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	4200	4500			
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.1	2.3			
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	2090	2250			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	290	290			



Analytical Report Number: 20-21674
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1574739	SP020		158	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-21674

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574740	1574741			
Sample Reference				SP020	SP020			
Sample Number				3	4			
Depth (m)				None Supplied	None Supplied			
Date Sampled				Deviating	Deviating			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	279	183			
Ammonium as NH ₄	µg/l	15	NONE	43000	28000			



Analytical Report Number : 20-21674

Project / Site name: Clarendon Road P3

* 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 *
1574738	SP020	3	None Supplied	Brown loam and clay with gravel and vegetation.
1574739	SP020	4	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-21674

Project / Site name: Clarendon Road P3

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP020	3	L	20-21674	1574740	a			
SP020	3	S	20-21674	1574738	a			
SP020	4	L	20-21674	1574741	a			
SP020	4	S	20-21674	1574739	a			

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Analytical Report Number : 20-21676

Project / Site name:	Clarendon Road P3	Samples received on:	28/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	28/07/2020
Your order number:	S-RE6075-00005	Analysis completed by:	31/07/2020
Report Issue Number:	1	Report issued on:	31/07/2020
Samples Analysed:	2 soil samples - 1 water sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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.

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waters	- 2 weeks from reporting
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Page 1 of 9

Analytical Report Number: 20-21676

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574751	1574752			
Sample Reference				SP020	SP020			
Sample Number				3	4			
Depth (m)				None Supplied	None Supplied			
Date Sampled				Deviating	Deviating			
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	%	N/A	NONE	14	12			
Total mass of sample received	kg	0.001	NONE	1.5	2.0			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.67	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	mg/kg	0.05	MCERTS	0.36	< 0.05			
Anthracene	mg/kg	0.05	MCERTS	1.5	0.62			
Fluoranthene	mg/kg	0.05	MCERTS	9.4	3.4			
Pyrene	mg/kg	0.05	MCERTS	8.6	3.3			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	5.3	2.0			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	7.8	8.3			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	4.5	9.6			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	32	26			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	40	54			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	84	98			

Analytical Report Number: 20-21676
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075-00005

Lab Sample Number				1574751	1574752			
Sample Reference				SP020	SP020			
Sample Number				3	4			
Depth (m)				None Supplied	None Supplied			
Date Sampled				Deviating	Deviating			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
VOCS								
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
SVOCs								
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			



Analytical Report Number: 20-21676
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574753				
Sample Reference				IBC1				
Sample Number				4				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	U/S				
Total Cyanide	µg/l	10	ISO 17025	U/S				
Settleable Solids - Total (1 hour)	mg/l	2	NONE	U/S				

Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01				
Acenaphthene	µg/l	0.01	ISO 17025	< 0.01				
Fluorene	µg/l	0.01	ISO 17025	13200*				
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01				
Anthracene	µg/l	0.01	ISO 17025	< 0.01				
Fluoranthene	µg/l	0.01	ISO 17025	3840*				
Pyrene	µg/l	0.01	ISO 17025	10400*				
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Chrysene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01				

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	27500				
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Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	370000000*				
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Analytical Report Number: 20-21676

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574753				
Sample Reference				IBC1				
Sample Number				4				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0				
Chloroethane	µg/l	1	ISO 17025	< 1.0				
Bromomethane	µg/l	1	ISO 17025	< 1.0				
Vinyl Chloride	µg/l	1	NONE	< 1.0				
Trichlorofluoromethane	µg/l	1	NONE	< 1.0				
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloromethane	µg/l	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
Benzene	µg/l	1	ISO 17025	< 1.0				
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloroethene	µg/l	1	ISO 17025	< 1.0				
Dibromomethane	µg/l	1	ISO 17025	< 1.0				
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Toluene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0				
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0				
Chlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	< 1.0				
p & m-Xylene	µg/l	1	ISO 17025	< 1.0				
Styrene	µg/l	1	ISO 17025	< 1.0				
Tribromomethane	µg/l	1	ISO 17025	< 1.0				
o-Xylene	µg/l	1	ISO 17025	< 1.0				
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0				
Bromobenzene	µg/l	1	ISO 17025	< 1.0				
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0				
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	29500				
tert-Butylbenzene	µg/l	1	ISO 17025	12000				
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	16600				
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	µg/l	1	ISO 17025	3860				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Butylbenzene	µg/l	1	ISO 17025	8370				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0				
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				

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

Iss No 20-21676-1 Clarendon Road P3 6075

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

Page 5 of 9



Analytical Report Number: 20-21676

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075-00005

Lab Sample Number				1574753				
Sample Reference				IBC1				
Sample Number				4				
Depth (m)				None Supplied				
Date Sampled				Deviating				
Time Taken				None Supplied				
Analytical Parameter (Water Analysis)				Units	Limit of detection	Accreditation Status		

*Over range data, sample was diluted and results are estimated from an extrapolated calibration. Results should be interpreted with care.



Analytical Report Number : 20-21676

Project / Site name: Clarendon Road P3

* 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 *
1574751	SP020	3	None Supplied	Brown loam and clay with gravel and vegetation.
1574752	SP020	4	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-21676

Project / Site name: Clarendon Road P3

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
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 cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Settleable Solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	NONE
TPH1 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
IBC1	4	W	20-21676	1574753	a			
SP020	3	S	20-21676	1574751	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP020	3	S	20-21676	1574751	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP020	3	S	20-21676	1574751	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP020	3	S	20-21676	1574751	ab	TPHCWG (Soil)	L088/76-PL	b
SP020	3	S	20-21676	1574751	ab	Volatile organic compounds in soil	L073B-PL	b
SP020	4	S	20-21676	1574752	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP020	4	S	20-21676	1574752	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP020	4	S	20-21676	1574752	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP020	4	S	20-21676	1574752	ab	TPHCWG (Soil)	L088/76-PL	b
SP020	4	S	20-21676	1574752	ab	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-22284

Project / Site name:	Clarendon Road	Samples received on:	30/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	30/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	04/08/2020
Report Issue Number:	1	Report issued on:	04/08/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Will Fardon

Technical Reviewer (CS 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.

Iss No 20-22284-1 Clarendon Road 6075.XLS

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

Page 1 of 8



4041



Environmental Science

Analytical Report Number: 20-22284

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1578585	1578586	1578587		
Sample Reference				SP-026	SP-024-3	SP-023-2		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				30/07/2020	30/07/2020	30/07/2020		
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	%	N/A	NONE	14	19	15		
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.6		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Chrysotile & Amosite & Crocidolite	Chrysotile		
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected	Detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.012	< 0.001		
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.012	< 0.001		

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.1	2.5	2.3		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4200	4900	4500		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2080	2450	2270		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	170	81		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	66	8.4		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	2.1	1.0		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	7.1	3.3		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	6.2	4.5		
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	29	20		
Pyrene	mg/kg	0.05	MCERTS	< 0.05	24	20		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	13	8.2		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	6.2	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	87	24		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	240	64		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	120	59		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	450	150		

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	0.015	< 0.001		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	76	14		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	89	27		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	260	110		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	170	73		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	600	230		

Analytical Report Number: 20-22284

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1578585	1578586	1578587		
Sample Reference				SP-026	SP-024-3	SP-023-2		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				30/07/2020	30/07/2020	30/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
VOCs								
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0		
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0		
SVOCs								
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2		



Analytical Report Number: 20-22284
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1578586	SP-024-3		121	Loose Fibrous Debris	Chrysotile & Amosite & Crocidolite	0.012	0.012
1578587	SP-023-2		137	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-22284

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1578588	1578589	1578590		
Sample Reference				SP-026	SP-024-3	SP-023-2		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				30/07/2020	30/07/2020	30/07/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	39.2	1080	1200		
Ammonium as NH ₄	µg/l	15	NONE	< 15	4800	6400		



Analytical Report Number : 20-22284

Project / Site name: Clarendon Road

* 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 *
1578585	SP-026	None Supplied	None Supplied	Brown clay and sand.
1578586	SP-024-3	None Supplied	None Supplied	Black clay and loam with gravel.
1578587	SP-023-2	None Supplied	None Supplied	Brown clay and sand with gravel.

Analytical Report Number : 20-22284

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

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Page 7 of 8

Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-023-2		S	20-22284	1578587	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-023-2		S	20-22284	1578587	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-023-2		S	20-22284	1578587	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-023-2		S	20-22284	1578587	b	TPHCWG (Soil)	L088/76-PL	b
SP-023-2		S	20-22284	1578587	b	Volatile organic compounds in soil	L073B-PL	b
SP-024-3		S	20-22284	1578586	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-024-3		S	20-22284	1578586	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-024-3		S	20-22284	1578586	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-024-3		S	20-22284	1578586	b	TPHCWG (Soil)	L088/76-PL	b
SP-024-3		S	20-22284	1578586	b	Volatile organic compounds in soil	L073B-PL	b
SP-026		S	20-22284	1578585	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-026		S	20-22284	1578585	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-026		S	20-22284	1578585	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-026		S	20-22284	1578585	b	TPHCWG (Soil)	L088/76-PL	b
SP-026		S	20-22284	1578585	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-22445

Project / Site name:	Clarendon Road P3	Samples received on:	31/07/2020
Your job number:	6075	Sample instructed/ Analysis started on:	31/07/2020
Your order number:	S-RE6075/00005	Analysis completed by:	05/08/2020
Report Issue Number:	1	Report issued on:	05/08/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed:

Will Fardon

Technical Reviewer (CS 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.

Iss No 20-22445-1 Clarendon Road P3 6075

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

Page 1 of 7

Analytical Report Number: 20-22445

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1579539				
Sample Reference				SP026.2				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				30/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	6.3				
Total mass of sample received	kg	0.001	NONE	1.6				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Crocidolite				
Asbestos in Soil	Type	N/A	ISO 17025	Detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.007				
Asbestos Quantification Total	%	0.001	ISO 17025	0.007				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.3				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4600				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2280				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	23				

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.72				
Acenaphthene	mg/kg	0.05	MCERTS	0.54				
Fluorene	mg/kg	0.05	MCERTS	2.9				
Anthracene	mg/kg	0.05	MCERTS	3.6				
Fluoranthene	mg/kg	0.05	MCERTS	17				
Pyrene	mg/kg	0.05	MCERTS	17				
Benzo(a)pyrene	mg/kg	0.05	MCERTS	7.4				

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0				
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				

Petroleum Hydrocarbons

Analytical Report Number: 20-22445

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1579539				
Sample Reference				SP026.2				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				30/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	2.5				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	50				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	160				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	110				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	320				

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	37				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	260				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	320				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	620				

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0				
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0				
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0				
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0				
Trichloroethene	µg/kg	1	MCERTS	< 1.0				
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0				
Tetrachloroethene	µg/kg	1	NONE	< 1.0				
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0				

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2				
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Analytical Report Number: 20-22445

Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1579540				
Sample Reference				SP026.2				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				30/07/2020				
Time Taken				None Supplied				
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	863				
Ammonium as NH ₄	µg/l	15	NONE	1700				



Analytical Report Number : 20-22445

Project / Site name: Clarendon Road P3

* 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 *
1579539	SP026.2	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-22445

Project / Site name: Clarendon Road P3

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

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

Page 6 of 7

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP026.2		S	20-22445	1579539	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP026.2		S	20-22445	1579539	b	Semi-volatile organic compounds in soil	L064-PL	b
SP026.2		S	20-22445	1579539	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP026.2		S	20-22445	1579539	b	TPHCWG (Soil)	L088/76-PL	b
SP026.2		S	20-22445	1579539	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-22815

Project / Site name:	Clarendon Road	Samples received on:	04/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	04/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	07/08/2020
Report Issue Number:	1	Report issued on:	07/08/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Joanna Wawrzeczko
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.

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

Page 1 of 7

Analytical Report Number: 20-22815

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1581737	1581738	1581739		
Sample Reference				SP025	VS-P5	VS-O5		
Sample Number				2	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/08/2020	04/08/2020	04/08/2020		
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
Moisture Content				%	N/A	NONE	0.53	13
Total mass of sample received				kg	0.001	NONE	1.5	1.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected		
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.49	0.030	0.051		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	980	61	100		
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	490	30.4	51.3		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5		

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-		
Fluoranthene	mg/kg	0.05	MCERTS	0.47	-	-		
Pyrene	mg/kg	0.05	MCERTS	0.64	-	-		
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.28	-	-		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	-	-		
Toluene	µg/kg	1	MCERTS	< 1.0	-	-		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-	-		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-	-		
o-xylene	µg/kg	1	MCERTS	< 1.0	-	-		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-	-		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-	-		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-	-		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	-		

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-	-		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-	-		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-	-		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-	-		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-	-		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	-	-		

Analytical Report Number: 20-22815

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1581737	1581738	1581739		
Sample Reference				SP025	VS-P5	VS-O5		
Sample Number				2	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/08/2020	04/08/2020	04/08/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
VOCs								
Vinyl Chloride	µg/kg	1	NONE	< 1.0	-	-		
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	-	-		
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	-	-		
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	-	-		
Trichloroethene	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
Tetrachloroethene	µg/kg	1	NONE	< 1.0	-	-		
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	-	-		
SVOCs								
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-		



Analytical Report Number: 20-22815

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1581740	1581741	1581742		
Sample Reference				SP025	VS-P5	VS-O5		
Sample Number				2	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				04/08/2020	04/08/2020	04/08/2020		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	103	7.6	3.5		
Ammonium as NH ₄	µg/l	15	NONE	38	< 15	26		



Analytical Report Number : 20-22815

Project / Site name: Clarendon Road

* 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 *
1581737	SP025	2	None Supplied	Light brown clay and sand with gravel.
1581738	VS-P5	None Supplied	None Supplied	Light brown sand with gravel.
1581739	VS-O5	None Supplied	None Supplied	Light brown clay and sand with gravel.

Analytical Report Number : 20-22815

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP025	2	S	20-22815	1581737	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP025	2	S	20-22815	1581737	b	Semi-volatile organic compounds in soil	L064-PL	b
SP025	2	S	20-22815	1581737	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP025	2	S	20-22815	1581737	b	TPHCWG (Soil)	L088/76-PL	b
SP025	2	S	20-22815	1581737	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-23041

Project / Site name:	Clarendon Road	Samples received on:	05/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	05/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	10/08/2020
Report Issue Number:	1	Report issued on:	10/08/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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.

Iss No 20-23041-1 Clarendon Road 6075.XLS

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

Page 1 of 7

Analytical Report Number: 20-23041

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1582840	1582841	1582842		
Sample Reference				VS-01-N	VS-0Q-N	VS-IR-N		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
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	%	N/A	NONE	2.1	0.83	1.2		
Total mass of sample received	kg	0.001	NONE	1.5	1.3	1.8		

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile	-		
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected		
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.012	< 0.001	-		
Asbestos Quantification Total	%	0.001	ISO 17025	0.012	< 0.001	-		

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	550	810	250		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.27	0.41	0.12		
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	274	407	124		
Ammonium as NH ₄	mg/kg	0.5	MCERTS	2.2	6.6	1.2		



Analytical Report Number: 20-23041

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1582843	1582844	1582845		
Sample Reference				VS-01-N	VS-0Q-N	VS-IR-N		
Sample Number				None Supplied	None Supplied	None Supplied		
Depth (m)				None Supplied	None Supplied	None Supplied		
Date Sampled				Deviating	Deviating	Deviating		
Time Taken				None Supplied	None Supplied	None Supplied		
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	4.8	63.5	8.2		
Ammonium as NH ₄	µg/l	15	NONE	130	420	46		



Analytical Report Number: 20-23041
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1582840	VS-01-N		145	Sheeting/Board Debris	Chrysotile	0.012	0.012
1582841	VS-0Q-N		157	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-23041

Project / Site name: Clarendon Road

* 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 *
1582840	VS-01-N	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1582841	VS-0Q-N	None Supplied	None Supplied	Brown clay and sand with gravel.
1582842	VS-1R-N	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.

Analytical Report Number : 20-23041

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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

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.

Sample Deviation Report



Sample ID	Other ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
VS-01-N		L	20-23041	1582843	a			
VS-01-N		S	20-23041	1582840	a			
VS-0Q-N		L	20-23041	1582844	a			
VS-0Q-N		S	20-23041	1582841	a			
VS-IR-N		L	20-23041	1582845	a			
VS-IR-N		S	20-23041	1582842	a			

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Analytical Report Number : 20-23325

Replaces Analytical Report Number : 20-23325, issue no. 1

Additional analysis undertaken.

Project / Site name:	Clarendon Road	Samples received on:	06/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	06/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	13/08/2020
Report Issue Number:	2	Report issued on:	18/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples - 1 water sample		

Signed:

Zina Abdul Razzak
Senior Quality 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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 11

Analytical Report Number: 20-23325

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1584702	1584703			
Sample Reference				SP-027	SP-028			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				06/08/2020	06/08/2020			
Time Taken				1200	1200			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	2.6	9.6			
Total mass of sample received	kg	0.001	NONE	1.6	1.4			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Crocidolite	Amosite			
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.067	< 0.001			
Asbestos Quantification Total	%	0.001	ISO 17025	0.067	< 0.001			

General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	5000	1000			
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.5	0.51			
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	2520	507			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	57	2.0			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	1.5	< 0.05			
Acenaphthene	mg/kg	0.05	MCERTS	0.50	0.20			
Fluorene	mg/kg	0.05	MCERTS	2.0	0.80			
Anthracene	mg/kg	0.05	MCERTS	2.1	2.0			
Fluoranthene	mg/kg	0.05	MCERTS	9.4	12			
Pyrene	mg/kg	0.05	MCERTS	9.5	10			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	3.9	4.5			

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	2.7	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	24	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	53	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	53	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	< 10			

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	15	< 1.0			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	53	9.1			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	130	32			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	150	67			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	350	110			

Analytical Report Number: 20-23325

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1584702	1584703			
Sample Reference				SP-027	SP-028			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				06/08/2020	06/08/2020			
Time Taken				1200	1200			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			
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Analytical Report Number: 20-23325
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1584702	SP-027		168	Loose Fibres & Hard/Cement Type Material	Chrysotile & Crocidolite	0.067	0.067
1584703	SP-028		168	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-23325

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1584706				
Sample Reference				I10/11 GW				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				06/08/2020				
Time Taken				1200				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

General Inorganics

pH	pH Units	N/A	ISO 17025	7.4				
Total Cyanide	µg/l	10	ISO 17025	110				
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	120000				
Ammonia as NH ₃	µg/l	15	ISO 17025	150000				
Ammonium as NH ₄	µg/l	15	ISO 17025	160000				
Settleable Solids - Total (1 hour)	mg/l	2	NONE	1970				

Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	488				
Acenaphthylene	µg/l	0.01	ISO 17025	4.59				
Acenaphthene	µg/l	0.01	ISO 17025	8.40				
Fluorene	µg/l	0.01	ISO 17025	17.8				
Phenanthrene	µg/l	0.01	ISO 17025	15.5				
Anthracene	µg/l	0.01	ISO 17025	2.61				
Fluoranthene	µg/l	0.01	ISO 17025	4.93				
Pyrene	µg/l	0.01	ISO 17025	3.85				
Benzo(a)anthracene	µg/l	0.01	ISO 17025	0.89				
Chrysene	µg/l	0.01	ISO 17025	0.74				
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	0.56				
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	0.27				
Benzo(a)pyrene	µg/l	0.01	ISO 17025	0.35				
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01				
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01				
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01				

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	548				
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Petroleum Hydrocarbons

TPH1 (C10 - C40)	µg/l	10	NONE	5100				
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Analytical Report Number: 20-23325

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1584706				
Sample Reference				I10/11 GW				
Sample Number				None Supplied				
Depth (m)				None Supplied				
Date Sampled				06/08/2020				
Time Taken				1200				
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status					

VOCs

Chloromethane	µg/l	1	ISO 17025	< 1.0				
Chloroethane	µg/l	1	ISO 17025	< 1.0				
Bromomethane	µg/l	1	ISO 17025	< 1.0				
Vinyl Chloride	µg/l	1	NONE	< 1.0				
Trichlorofluoromethane	µg/l	1	NONE	< 1.0				
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloromethane	µg/l	1	ISO 17025	< 1.0				
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0				
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0				
Benzene	µg/l	1	ISO 17025	4270				
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0				
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Trichloroethene	µg/l	1	ISO 17025	< 1.0				
Dibromomethane	µg/l	1	ISO 17025	< 1.0				
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0				
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0				
Toluene	µg/l	1	ISO 17025	37.2				
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0				
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0				
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0				
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0				
Chlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Ethylbenzene	µg/l	1	ISO 17025	116				
p & m-Xylene	µg/l	1	ISO 17025	317				
Styrene	µg/l	1	ISO 17025	< 1.0				
Tribromomethane	µg/l	1	ISO 17025	< 1.0				
o-Xylene	µg/l	1	ISO 17025	119				
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0				
Isopropylbenzene	µg/l	1	ISO 17025	8.7				
Bromobenzene	µg/l	1	ISO 17025	< 1.0				
n-Propylbenzene	µg/l	1	ISO 17025	9.2				
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0				
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	35.6				
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	131				
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0				
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Butylbenzene	µg/l	1	ISO 17025	< 1.0				
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0				
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0				
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0				

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

Iss No 20-23325-2 Clarendon Road 6075

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

Page 6 of 11



Analytical Report Number: 20-23325

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1584704	1584705			
Sample Reference				SP-027	SP-028			
Sample Number				None Supplied	None Supplied			
Depth (m)				None Supplied	None Supplied			
Date Sampled				06/08/2020	06/08/2020			
Time Taken				1200	1200			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	856	49.1			
Ammonium as NH ₄	µg/l	15	NONE	7700	220			



Analytical Report Number : 20-23325

Project / Site name: Clarendon Road

* 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 *
1584702	SP-027	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1584703	SP-028	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.

Analytical Report Number : 20-23325

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonia as NH ₃ in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammonium as NH ₄ in water	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
pH at 20oC in water	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L005-PL	W	ISO 17025
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
Speciated EPA-16 PAHs in water	Determination of PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards. Accredited matrices: SW PW GW	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025

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Page 9 of 11

Analytical Report Number : 20-23325

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

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
Total cyanide in water	Determination of total cyanide by distillation followed by colorimetry. Accredited matrices: SW PW GW	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	ISO 17025
Total Settleable Solids in water	Determined gravimetrically with GFC filtration papers.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	NONE
TPH1 (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS.	In-house method	L070-PL	W	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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

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.

Sample Deviation Report



Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP-027		S	20-23325	1584702	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-027		S	20-23325	1584702	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-027		S	20-23325	1584702	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-027		S	20-23325	1584702	b	TPHCWG (Soil)	L088/76-PL	b
SP-027		S	20-23325	1584702	b	Volatile organic compounds in soil	L073B-PL	b
SP-028		S	20-23325	1584703	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-028		S	20-23325	1584703	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-028		S	20-23325	1584703	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-028		S	20-23325	1584703	b	TPHCWG (Soil)	L088/76-PL	b
SP-028		S	20-23325	1584703	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-23702

Project / Site name:	Clarendon Road	Samples received on:	10/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	10/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	13/08/2020
Report Issue Number:	1	Report issued on:	13/08/2020
Samples Analysed:	9 leachate samples - 9 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 8

Analytical Report Number: 20-23702

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1587052	1587053	1587054	1587055	1587056
Sample Reference				VS-O7	VS-P5-E	VS-P6	VS-P7	VS-O6
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				10/08/2020	10/08/2020	10/08/2020	10/08/2020	10/08/2020
Time Taken				0900	0900	0900	0900	0900
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Stone Content				%	0.1	NONE	< 0.1	< 0.1
Moisture Content				%	N/A	NONE	2.7	3.2
Total mass of sample received				kg	0.001	NONE	1.1	1.2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.20	0.088	0.088	0.061	0.060
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	400	180	180	120	120
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	200	88.0	87.8	60.7	59.9
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.8	2.5	1.0	< 0.5	< 0.5



Analytical Report Number: 20-23702

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1587057	1587058	1587059	1587060	
Sample Reference				VS-M5	VS-M6	VS-N5	VS-N6	
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	
Date Sampled				10/08/2020	10/08/2020	10/08/2020	10/08/2020	
Time Taken				0900	0900	0900	0900	
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Stone Content				%	0.1	NONE	< 0.1	< 0.1
Moisture Content				%	N/A	NONE	22	20
Total mass of sample received				kg	0.001	NONE	1.8	1.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.30	0.42	0.23	0.79	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	600	840	460	1600	
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	298	422	229	792	
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.2	0.6	< 0.5	0.9	



Analytical Report Number: 20-23702

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1587061	1587062	1587063	1587064	1587065
Sample Reference				VS-O7	VS-P5-E	VS-P6	VS-P7	VS-O6
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				10/08/2020	10/08/2020	10/08/2020	10/08/2020	10/08/2020
Time Taken				0900	0900	0900	0900	0900
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	63.3	17.1	21.3	8.5	18.3
Ammonium as NH ₄	µg/l	15	NONE	150	110	71	41	40



Analytical Report Number: 20-23702

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1587066
Sample Reference				VS-M5
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				10/08/2020
Time Taken				0900
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	23.4
Ammonium as NH ₄	µg/l	15	NONE	< 15



Analytical Report Number: 20-23702

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1587067	1587068	1587069	
Sample Reference				VS-M6	VS-N5	VS-N6	
Sample Number				None Supplied	None Supplied	None Supplied	
Depth (m)				None Supplied	None Supplied	None Supplied	
Date Sampled				10/08/2020	10/08/2020	10/08/2020	
Time Taken				0900	0900	0900	
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	22.8	26.7	108	
Ammonium as NH ₄	µg/l	15	NONE	35	43	47	



Analytical Report Number : 20-23702

Project / Site name: Clarendon Road

* 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 *
1587052	VS-O7	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587053	VS-P5-E	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587054	VS-P6	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587055	VS-P7	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587056	VS-O6	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587057	VS-M5	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587058	VS-M6	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587059	VS-N5	None Supplied	None Supplied	Brown clay and loam with vegetation.
1587060	VS-N6	None Supplied	None Supplied	Brown clay and loam with vegetation.

Analytical Report Number : 20-23702

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-24084

Project / Site name:	Clarendon Road	Samples received on:	11/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	11/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	14/08/2020
Report Issue Number:	1	Report issued on:	14/08/2020
Samples Analysed:	6 leachate samples - 6 soil samples		

Signed:

Joanna Wawrzeczko
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

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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 relate only to the sample(s) submitted for testing.

Page 1 of 9

Analytical Report Number: 20-24084

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1589176	1589177	1589178	1589179	1589180
Sample Reference				VS-J13	VS-J13-N	Sludge	VS-J12	VS-J11
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				11/08/2020	11/08/2020	11/08/2020	11/08/2020	11/08/2020
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
Moisture Content				%	N/A	NONE	0.76	0.33
Total mass of sample received				kg	0.001	NONE	36	0.77
							1.4	2.0
							2.0	1.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite	Chrysotile & Amosite	Chrysotile & Amosite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.010	0.008	0.003	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.010	0.008	0.003	-	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.6	0.43	4.3	2.4	3.2
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3300	850	8500	4800	6400
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1650	427	4270	2410	3210
Ammonium as NH ₄	mg/kg	0.5	MCERTS	7.6	3.5	850	580	1100



Analytical Report Number: 20-24084

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number	1589181				
Sample Reference	VS-J10				
Sample Number	None Supplied				
Depth (m)	None Supplied				
Date Sampled	11/08/2020				
Time Taken	None Supplied				

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	1.3				
Total mass of sample received	kg	0.001	NONE	1.5				

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-				
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected				
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-				
Asbestos Quantification Total	%	0.001	ISO 17025	-				

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2400				
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1180				
Ammonium as NH ₄	mg/kg	0.5	MCERTS	620				



Analytical Report Number: 20-24084
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1589176	VS-J13		175	Loose Fibres & Hard/Cement Type Material	Chrysotile & Amosite	0.010	0.010
1589177	VS-J13-N		168	Loose Fibres & Sheeting/Board Debris	Chrysotile & Amosite	0.008	0.008
1589178	Sludge		104	Sheeting/Board Debris & Loose Fibres	Chrysotile & Amosite	0.003	0.003

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-24084

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1589182	1589183	1589184	1589185	1589186
Sample Reference				VS-J13	VS-J13-N	Sludge	VS-J12	VS-J11
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				11/08/2020	11/08/2020	11/08/2020	11/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	251	14.9	1820	881	1170
Ammonium as NH ₄	µg/l	15	NONE	670	180	47000	51000	78000



Analytical Report Number: 20-24084

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1589187
Sample Reference				VS-J10
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				11/08/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)		Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	444
Ammonium as NH ₄	µg/l	15	NONE	85000



Analytical Report Number: 20-24084

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number							
Sample Reference							
Sample Number							
Depth (m)							
Date Sampled							
Time Taken							
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025				
Ammonium as NH ₄	µg/l	15	NONE				



Analytical Report Number : 20-24084

Project / Site name: Clarendon Road

* 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 *
1589176	VS-J13	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1589177	VS-J13-N	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1589178	Sludge	None Supplied	None Supplied	Black clay and sand with gravel and tar.
1589179	VS-J12	None Supplied	None Supplied	Brown clay and sand with gravel.
1589180	VS-J11	None Supplied	None Supplied	Brown clay and sand.
1589181	VS-J10	None Supplied	None Supplied	Brown clay and sand.

Analytical Report Number : 20-24084

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-24088

Project / Site name:	Clarendon Road	Samples received on:	11/08/2020
Your job number:	6075	Sample instructed/ Analysis started on:	11/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	14/08/2020
Report Issue Number:	1	Report issued on:	14/08/2020
Samples Analysed:	5 leachate samples - 5 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska

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

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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.

Iss No 20-24088-1 Clarendon Road 6075

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

Page 1 of 5



Analytical Report Number: 20-24088

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1589198	1589199	1589200	1589201	1589202
Sample Reference				VS-K13	VS-K13-N	VS-L12	VS-L13	VS-L13-N
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				11/08/2020	11/08/2020	11/08/2020	11/08/2020	11/08/2020
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	%	N/A	NONE	5.1	0.14	0.66	0.13	0.21
Total mass of sample received	kg	0.001	NONE	1.9	1.4	1.4	1.4	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.9	0.50	0.36	0.66	0.29
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3800	1000	720	1300	570
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1920	500	360	658	287
Ammonium as NH ₄	mg/kg	0.5	MCERTS	25	28	62	91	19



Analytical Report Number: 20-24088

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1589203	1589204	1589205	1589206	1589207
Sample Reference				VS-K13	VS-K13-N	VS-L12	VS-L13	VS-L13-N
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				11/08/2020	11/08/2020	11/08/2020	11/08/2020	11/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	375	5.2	128	162	28.0
Ammonium as NH ₄	µg/l	15	NONE	2300	470	5900	8000	820



Analytical Report Number : 20-24088

Project / Site name: Clarendon Road

* 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 *
1589198	VS-K13	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
1589199	VS-K13-N	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1589200	VS-L12	None Supplied	None Supplied	Brown clay and sand.
1589201	VS-L13	None Supplied	None Supplied	Brown clay and sand.
1589202	VS-L13-N	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.

Analytical Report Number : 20-24088

Project / Site name: Clarendon Road

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	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.	L019-UK/PL	D	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-24386

Project / Site name:	KT10 9TA	Samples received on:	12/08/2020
Your job number:	S-RE6075	Sample instructed/ Analysis started on:	12/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	17/08/2020
Report Issue Number:	1	Report issued on:	17/08/2020
Samples Analysed:	7 leachate samples - 7 soil samples		

Signed:

Rachel Bradley

Deputy Quality Manager
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.

Iss No 20-24386-1 KT10 9TA S-RE6075

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

Page 1 of 12

Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590953	1590954	1590955	1590956	1590957
Sample Reference				SP028	SP028	VS-K11	VS-K10	VS-K12
Sample Number				(2)	(3)	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020
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	%	N/A	NONE	3.0	22	13	12	9.8
Total mass of sample received	kg	0.001	NONE	1.9	1.9	1.9	1.6	1.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Amosite	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001	< 0.001

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.47	1.3	2.4	2.5	2.4
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	950	2500	4900	5000	4900
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	474	1270	2450	2510	2450
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.5	< 0.5	49	100	47

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	4.8	3.5	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	0.20	0.70	-	-	-
Fluorene	mg/kg	0.05	MCERTS	0.36	0.84	-	-	-
Anthracene	mg/kg	0.05	MCERTS	0.99	1.1	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	4.1	2.8	-	-	-
Pyrene	mg/kg	0.05	MCERTS	5.3	4.0	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	2.3	3.5	-	-	-

Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number	1590953	1590954	1590955	1590956	1590957
Sample Reference	SP028	SP028	VS-K11	VS-K10	VS-K12
Sample Number	(2)	(3)	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	50	7.8	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	11	9.0	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	30	19	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	52	49	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	140	85	-	-	-

Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number	1590953	1590954	1590955	1590956	1590957
Sample Reference	SP028	SP028	VS-K11	VS-K10	VS-K12
Sample Number	(2)	(3)	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	-	-	-
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Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590958	1590959			
Sample Reference				VS-K11	SP022			
Sample Number				1	2			
Depth (m)				None Supplied	None Supplied			
Date Sampled				12/08/2020	12/08/2020			
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	%	N/A	NONE	0.14	0.03			
Total mass of sample received	kg	0.001	NONE	1.9	1.9			

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Amosite & Chrysotile			
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected			
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	0.303			
Asbestos Quantification Total	%	0.001	ISO 17025	-	0.303			

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.1	0.27			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2200	550			
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1100	274			
Ammonium as NH ₄	mg/kg	0.5	MCERTS	16	5.9			

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.93	1.5			
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Fluorene	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	0.48			
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.40			
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			

Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590958	1590959			
Sample Reference				VS-K11	SP022			
Sample Number				1	2			
Depth (m)				None Supplied	None Supplied			
Date Sampled				12/08/2020	12/08/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status		
Monoaromatics & Oxygenates								
Benzene				µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene				µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene				µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene				µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene				µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)				µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	4.0	2.9			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10			

Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590958	1590959			
Sample Reference				VS-K11	SP022			
Sample Number				1	2			
Depth (m)				None Supplied	None Supplied			
Date Sampled				12/08/2020	12/08/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
VOCs								
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0			
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0			
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0			
SVOCs								
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2			



Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590960	1590961	1590962	1590963	1590964
Sample Reference				SP028	SP028	VS-K11	VS-K10	VS-K12
Sample Number				(2)	(3)	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				12/08/2020	12/08/2020	12/08/2020	12/08/2020	12/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	153	81.6	687	643	1070
Ammonium as NH ₄	µg/l	15	NONE	800	47	7100	11000	7600



Analytical Report Number: 20-24386

Project / Site name: KT10 9TA

Your Order No: S-RE6075-00005

Lab Sample Number				1590965	1590966			
Sample Reference				SP022	SP022			
Sample Number				1	2			
Depth (m)				None Supplied	None Supplied			
Date Sampled				12/08/2020	12/08/2020			
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	75.6	69.7			
Ammonium as NH ₄	µg/l	15	NONE	640	600			



Analytical Report Number : 20-24386

Project / Site name: KT10 9TA

* 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 *
1590953	SP028	(2)	None Supplied	Light brown sandy clay.
1590954	SP028	(3)	None Supplied	Brown clay and sand.
1590955	VS-K11	None Supplied	None Supplied	Brown loam and clay with gravel.
1590956	VS-K10	None Supplied	None Supplied	Brown loam and clay with gravel.
1590957	VS-K12	None Supplied	None Supplied	Brown sandy clay with gravel.
1590958	VS-K11	1	None Supplied	Light brown gravel.**
1590959	SP022	2	None Supplied	Light brown sandy gravel.**

**Non MCERTS matrix.

Analytical Report Number : 20-24386

Project / Site name: KT10 9TA

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Ammonium as NH ₄ in leachate	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH ₄ in soil	Determination of Ammonium/Ammonia/Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
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
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
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
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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 (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
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
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	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.

Iss No 20-24386-1 KT10 9TA S-RE6075

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

Page 11 of 12

Sample ID	Other_ID	Sample Type	Job	Sample Number	Sample Deviation Code	test_name	test_ref	Test Deviation code
SP022	2	S	20-24386	1590959	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP022	2	S	20-24386	1590959	b	Semi-volatile organic compounds in soil	L064-PL	b
SP022	2	S	20-24386	1590959	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP022	2	S	20-24386	1590959	b	TPHCWG (Soil)	L088/76-PL	b
SP022	2	S	20-24386	1590959	b	Volatile organic compounds in soil	L073B-PL	b
SP028	-2	S	20-24386	1590953	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP028	-2	S	20-24386	1590953	b	Semi-volatile organic compounds in soil	L064-PL	b
SP028	-2	S	20-24386	1590953	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP028	-2	S	20-24386	1590953	b	TPHCWG (Soil)	L088/76-PL	b
SP028	-2	S	20-24386	1590953	b	Volatile organic compounds in soil	L073B-PL	b
SP028	-3	S	20-24386	1590954	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP028	-3	S	20-24386	1590954	b	Semi-volatile organic compounds in soil	L064-PL	b
SP028	-3	S	20-24386	1590954	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP028	-3	S	20-24386	1590954	b	TPHCWG (Soil)	L088/76-PL	b
SP028	-3	S	20-24386	1590954	b	Volatile organic compounds in soil	L073B-PL	b
VS-K11	1	S	20-24386	1590958	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
VS-K11	1	S	20-24386	1590958	b	Semi-volatile organic compounds in soil	L064-PL	b
VS-K11	1	S	20-24386	1590958	b	Speciated EPA-16 PAHs in soil	L064-PL	b
VS-K11	1	S	20-24386	1590958	b	TPHCWG (Soil)	L088/76-PL	b
VS-K11	1	S	20-24386	1590958	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-24468

Project / Site name:	Clarendon Road	Samples received on:	13/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	13/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	18/08/2020
Report Issue Number:	1	Report issued on:	18/08/2020
Samples Analysed:	3 leachate samples - 3 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.



Analytical Report Number: 20-24468
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075-00005

Lab Sample Number				1591388	1591389	1591390
Sample Reference				VS N4	SP-030	SP-029
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/08/2020	13/08/2020	13/08/2020
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	%	N/A	NONE	17	5.2	7.1
Total mass of sample received	kg	0.001	NONE	1.7	2	1.6

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite & Crocidolite
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.43	1.6	2.5
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	870	3200	5000
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	433	1590	2490
Ammonium as NH4	mg/kg	0.5	MCERTS	1	4.1	250

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	2.1	42
Acenaphthene	mg/kg	0.05	MCERTS	-	2.4	7.6
Fluorene	mg/kg	0.05	MCERTS	-	10	21
Anthracene	mg/kg	0.05	MCERTS	-	12	18
Fluoranthene	mg/kg	0.05	MCERTS	-	45	51
Pyrene	mg/kg	0.05	MCERTS	-	40	44
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	16	13

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	60
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	12	270
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	41	490
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	34	230
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	87	1100

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	0.044
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	11	260
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	43	570
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	160	1800
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	170	1200
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	380	3800

Analytical Report Number: 20-24468
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075-00005

Lab Sample Number				1591388	1591389	1591390
Sample Reference				VS N4	SP-030	SP-029
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/08/2020	13/08/2020	13/08/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-24468
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1591390	SP-029		155	Loose Fibres	Amosite & Crocidolite	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-24468

Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1591391	1591392	1591393
Sample Reference				VS N4	SP-030	SP-029
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/08/2020	13/08/2020	13/08/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	9.2	223	1670
Ammonium as NH ₄	µg/l	15	NONE	150	450	23000

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



Analytical Report Number : 20-24468

Project / Site name: Clarendon Road

* 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 *
1591388	VS N4	None Supplied	None Supplied	Brown clay with gravel.
1591389	SP-030	None Supplied	None Supplied	Brown clay and sand with rubble and gravel
1591390	SP-029	None Supplied	None Supplied	Grey clay and sand with gravel and vegetation.



Analytical Report Number : 20-24468

Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



4041

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Analytical Report Number : 20-24468

Replaces Analytical Report Number: 20-24468, issue no. 1

Deviation page added.

Project / Site name:	Clarendon Road	Samples received on:	13/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	13/08/2020
Your order number:	S-RE6075-00005	Analysis completed by:	18/08/2020
Report Issue Number:	2	Report issued on:	09/09/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Zina Abdul Razzak
Senior Quality 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.



Analytical Report Number: 20-24468
Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1591391	1591392	1591393
Sample Reference				VS N4	SP-030	SP-029
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/08/2020	13/08/2020	13/08/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO4	mg/l	0.1	ISO 17025	9.2	223	1670
Ammonium as NH4	µg/l	15	NONE	150	450	23000

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



Analytical Report Number: 20-24468
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Lab Sample Number	1591388	1591389	1591390
Sample Reference	VS N4	SP-030	SP-029
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	13/08/2020	13/08/2020	13/08/2020
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	%	N/A	NONE	17	5.2	7.1
Total mass of sample received	kg	0.001	NONE	1.7	2	1.6

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite & Crocidolite
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.001

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.43	1.6	2.5
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	870	3200	5000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	433	1590	2490
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1	4.1	250

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	2.1	42
Acenaphthene	mg/kg	0.05	MCERTS	-	2.4	7.6
Fluorene	mg/kg	0.05	MCERTS	-	10	21
Anthracene	mg/kg	0.05	MCERTS	-	12	18
Fluoranthene	mg/kg	0.05	MCERTS	-	45	51
Pyrene	mg/kg	0.05	MCERTS	-	40	44
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	16	13

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	60
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	12	270
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	41	490
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	34	230
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	87	1100

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	0.044
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	11	260
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	43	570
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	160	1800
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	170	1200
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	380	3800



Analytical Report Number: 20-24468
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075-00005

Lab Sample Number				1591388	1591389	1591390
Sample Reference				VS N4	SP-030	SP-029
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				13/08/2020	13/08/2020	13/08/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-24468
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1591390	SP-029		155	Loose Fibres	Amosite & Crocidolite	0.001	0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-24468

Project / Site name: Clarendon Road

* 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 *
1591388	VS N4	None Supplied	None Supplied	Brown clay with gravel.
1591389	SP-030	None Supplied	None Supplied	Brown clay and sand with rubble and gravel
1591390	SP-029	None Supplied	None Supplied	Grey clay and sand with gravel and vegetation.



Analytical Report Number : 20-24468
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS



Analytical Report Number : 20-24468
Project / Site name: Clarendon Road

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
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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.



Sample Deviation Report



Analytical Report Number : 20-24468
Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-029	None Supplied	S	1591390	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-029	None Supplied	S	1591390	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-029	None Supplied	S	1591390	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-029	None Supplied	S	1591390	b	TPHCWG (Soil)	L088/76-PL	b
SP-029	None Supplied	S	1591390	b	Volatile organic compounds in soil	L073B-PL	b
SP-030	None Supplied	S	1591389	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-030	None Supplied	S	1591389	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-030	None Supplied	S	1591389	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-030	None Supplied	S	1591389	b	TPHCWG (Soil)	L088/76-PL	b
SP-030	None Supplied	S	1591389	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-24792

Project / Site name:	Clarendon Road	Samples received on:	14/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	14/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	19/08/2020
Report Issue Number:	1	Report issued on:	19/08/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

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.



Analytical Report Number: 20-24792
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1592887
Sample Reference				VS-Q6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				13/08/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	19
Total mass of sample received	kg	0.001	NONE	1.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.47
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	940
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	468
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5

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



Analytical Report Number: 20-24792

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1592888
Sample Reference				VS-Q6
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				13/08/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	77.2
Ammonium as NH ₄	µg/l	15	NONE	28

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



Analytical Report Number : 20-24792
Project / Site name: Clarendon Road

* 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 *
1592887	VS-Q6	None Supplied	None Supplied	Brown clay.



Analytical Report Number : 20-24792
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



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Analytical Report Number : 20-25538

Replaces Analytical Report Number: 20-25538, issue no. 1

Client references/information amended.

Project / Site name:	Clarendon Road P3	Samples received on:	19/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	19/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	24/08/2020
Report Issue Number:	2	Report issued on:	14/09/2020
Samples Analysed:	6 leachate samples - 6 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.



Analytical Report Number: 20-25538
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1597229	1597230	1597231	1597232
Sample Reference				VSK13	VSK12	VSK11	VSK13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020	19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

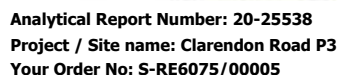
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	18	27	28	26
Total mass of sample received	kg	0.001	NONE	1.9	1.8	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2800	4300	4300	4300
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.4	2.2	2.2	2.2
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1410	2160	2160	2170
Ammonium as NH4	mg/kg	0.5	MCERTS	610	220	83	76

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



Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	10	13
Total mass of sample received	kg	0.001	NONE	1.9	1.6

General Inorganics

Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1400	1200
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.7	0.62
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	697	616
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5

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



Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1597235	1597236	1597237	1597238
Sample Reference				VSK13	VSK12	VSK11	VSK10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020	19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	337	108	646	718
Ammonium as NH ₄	µg/l	15	NONE	45000	19000	5400	6900

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



Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3



Your Order No: S-RE6075/00005

Lab Sample Number				1597239	1597240
Sample Reference				VSJ2	VSJ3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	83.6	80.5
Ammonium as NH ₄	µg/l	15	NONE	17	16

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



Analytical Report Number : 20-25538
Project / Site name: Clarendon Road P3

* 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 *
1597229	VSK13	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597230	VSK12	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597231	VSK11	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597232	VSK13	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597233	VSJ2	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
1597234	VSJ3	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.



Analytical Report Number : 20-25538
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
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.

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Analytical Report Number : 20-25538

Replaces Analytical Report Number: 20-25538, issue no. 2
Client references/information amended.

Project / Site name:	Clarendon Road P3	Samples received on:	19/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	19/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	14/09/2020
Report Issue Number:	3	Report issued on:	18/11/2020
Samples Analysed:	6 leachate samples - 6 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

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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.

Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Lab Sample Number				1597229	1597230	1597231	1597232
Sample Reference				VSK13	VSK12	VSK11	VSK10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020	19/08/2020	19/08/2020
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	18	27	28	26
Total mass of sample received	kg	0.001	NONE	1.9	1.8	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	2800	4300	4300	4300
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	1.4	2.2	2.2	2.2
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	1410	2160	2160	2170
Ammonium as NH ₄	mg/kg	0.5	MCERTS	610	220	83	76

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

Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Lab Sample Number				1597233	1597234
Sample Reference				VSJ2	VSJ3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection
					Accreditation Status
Stone Content				%	0.1
Moisture Content				%	0.01
Total mass of sample received				kg	0.001
				NONE	NONE
				< 0.1	< 0.1
				10	13
				1.9	1.6

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	1400	1200
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.7	0.62
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	697	616
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	< 0.5

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



Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1597235	1597236	1597237	1597238
Sample Reference	VSK13	VSK12	VSK11	VSK10
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	19/08/2020	19/08/2020	19/08/2020	19/08/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	337	108	646	718
Ammonium as NH ₄	µg/l	15	NONE	45000	19000	5400	6900

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



Analytical Report Number: 20-25538
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1597239	1597240
Sample Reference				VSJ2	VSJ3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	83.6	80.5
Ammonium as NH ₄	µg/l	15	NONE	17	16

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

Analytical Report Number : 20-25538

Project / Site name: Clarendon Road P3

* 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 *
1597229	VSK13	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597230	VSK12	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597231	VSK11	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597232	VSK10	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597233	VSJ2	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
1597234	VSJ3	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-25538
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
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.

**Alix Hamilton**

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Analytical Report Number : 20-25631

Project / Site name:	Clarendon Road	Samples received on:	19/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	20/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	25/08/2020
Report Issue Number:	1	Report issued on:	25/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-25631
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1597849	1597850
Sample Reference				VSL12	VSL13
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				Deviating	Deviating
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	65	37.6
Ammonium as NH ₄	µg/l	15	NONE	15000	13000

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

Analytical Report Number: 20-25631

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1597847	1597848
Sample Reference				VSL12	VSL13
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				Deviating	Deviating
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	%	N/A	NONE	21	21
Total mass of sample received	kg	0.001	NONE	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.67	0.3
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1300	610
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	673	303
Ammonium as NH ₄	mg/kg	0.5	MCERTS	210	210

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



Analytical Report Number : 20-25631
Project / Site name: Clarendon Road

* 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 *
1597847	VSL12	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1597848	VSL13	None Supplied	None Supplied	Brown clay and loam with vegetation.



Analytical Report Number : 20-25631
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-25631

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
VSL12	None Supplied	L	1597849	a	None Supplied	None Supplied	None Supplied
VSL12	None Supplied	S	1597847	a	None Supplied	None Supplied	None Supplied
VSL13	None Supplied	L	1597850	a	None Supplied	None Supplied	None Supplied
VSL13	None Supplied	S	1597848	a	None Supplied	None Supplied	None Supplied

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Analytical Report Number : 20-25684

Project / Site name:	Clarendon Road	Samples received on:	19/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	19/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	24/08/2020
Report Issue Number:	1	Report issued on:	24/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
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: 20-25684
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1598155	1598156
Sample Reference				SP022	SP022
Sample Number				3	4
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	665	574
Ammonium as NH ₄	µg/l	15	NONE	6500	9700

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

Analytical Report Number: 20-25684

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1598153	1598154
Sample Reference				SP022	SP022
Sample Number				3	4
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
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	%	N/A	NONE	7.4	8.2
Total mass of sample received	kg	0.001	NONE	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.5	1.5
Ammonium as NH ₄	mg/kg	0.5	MCERTS	69	61

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	46	1.3
Acenaphthene	mg/kg	0.05	MCERTS	7.6	0.45
Fluorene	mg/kg	0.05	MCERTS	39	3.8
Anthracene	mg/kg	0.05	MCERTS	35	2.6
Fluoranthene	mg/kg	0.05	MCERTS	49	7.4
Pyrene	mg/kg	0.05	MCERTS	51	7.7
Benzo(a)pyrene	mg/kg	0.05	MCERTS	23	2.6

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	35	2.1
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	170	23
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	160	76
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	160	92
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	530	190

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	22	7
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	160	30
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	450	66
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	360	95
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	990	200

Analytical Report Number: 20-25684

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1598153	1598154
Sample Reference				SP022	SP022
Sample Number				3	4
Depth (m)				None Supplied	None Supplied
Date Sampled				19/08/2020	19/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-25684
Project / Site name: Clarendon Road

* 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 *
1598153	SP022	3	None Supplied	Brown clay and sand with gravel and rubble.
1598154	SP022	4	None Supplied	Brown clay and sand with gravel and rubble.



Analytical Report Number : 20-25684
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-25684

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP022	3	S	1598153	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP022	3	S	1598153	b	Semi-volatile organic compounds in soil	L064-PL	b
SP022	3	S	1598153	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP022	3	S	1598153	b	TPHCWG (Soil)	L088/76-PL	b
SP022	3	S	1598153	b	Volatile organic compounds in soil	L073B-PL	b
SP022	4	S	1598154	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP022	4	S	1598154	b	Semi-volatile organic compounds in soil	L064-PL	b
SP022	4	S	1598154	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP022	4	S	1598154	b	TPHCWG (Soil)	L088/76-PL	b
SP022	4	S	1598154	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-25764

Project / Site name:	Clarendon Road	Samples received on:	20/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	20/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	25/08/2020
Report Issue Number:	1	Report issued on:	25/08/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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: 20-25764
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1598504	1598505
Sample Reference				VS-I2	VS-I3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				20/08/2020	20/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accred- itation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	26.5	30.7
Ammonium as NH ₄	µg/l	15	NONE	82	68

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

Analytical Report Number: 20-25764

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1598502	1598503
Sample Reference				VS-I2	VS-I3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				20/08/2020	20/08/2020
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	%	N/A	NONE	6.2	5.2
Total mass of sample received	kg	0.001	NONE	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.26	0.27
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	520	550
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	258	273
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.7	< 0.5

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



Analytical Report Number : 20-25764
Project / Site name: Clarendon Road

* 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 *
1598502	VS-I2	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.
1598503	VS-I3	None Supplied	None Supplied	Brown loam and sand with gravel and vegetation.



Analytical Report Number : 20-25764
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-26156

Project / Site name:	Clarendon Road P3	Samples received on:	21/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	21/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	26/08/2020
Report Issue Number:	1	Report issued on:	26/08/2020
Samples Analysed:	6 leachate samples - 6 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-26156
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1600275	1600276	1600277	1600278	1600279
Sample Reference				J10	J9	J10	J9	J10
Sample Number				West	Base	Base	West	East
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Time Taken				1200	1200	1200	1200	1200
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	212	157	176	173	194
Ammonium as NH ₄	µg/l	15	NONE	28000	9200	1500	51000	23000

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



Analytical Report Number: 20-26156
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1600280
Sample Reference				J9
Sample Number				East
Depth (m)				None Supplied
Date Sampled				21/08/2020
Time Taken				1200
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	151
Ammonium as NH ₄	µg/l	15	NONE	1600

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



Analytical Report Number: 20-26156
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1600269	1600270	1600271	1600272	1600273
Sample Reference				J10	J9	J10	J9	J10
Sample Number				West	Base	Base	West	East
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/08/2020	21/08/2020	21/08/2020	21/08/2020	21/08/2020
Time Taken				1200	1200	1200	1200	1200
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	%	N/A	NONE	16	11	19	19	15
Total mass of sample received	kg	0.001	NONE	1.3	1.6	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2	0.98	1.1	1.6	1.7
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2300	2000	2200	3200	3400
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1160	977	1110	1620	1720
Ammonium as NH4	mg/kg	0.5	MCERTS	360	89	19	670	240

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



Analytical Report Number: 20-26156
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1600274
Sample Reference				J9
Sample Number				East
Depth (m)				None Supplied
Date Sampled				21/08/2020
Time Taken				1200
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	18
Total mass of sample received	kg	0.001	NONE	1.4

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.5
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1500
Ammonium as NH ₄	mg/kg	0.5	MCERTS	18

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



Analytical Report Number : 20-26156
Project / Site name: Clarendon Road P3

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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 *
1600269	J10	West	None Supplied	Brown clay.
1600270	J9	Base	None Supplied	Brown clay and loam with gravel.
1600271	J10	Base	None Supplied	Brown clay.
1600272	J9	West	None Supplied	Brown clay.
1600273	J10	East	None Supplied	Brown clay and sand.
1600274	J9	East	None Supplied	Brown clay.



Analytical Report Number : 20-26156
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-26701

Project / Site name:	Clarendon Road	Samples received on:	26/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	26/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	01/09/2020
Report Issue Number:	1	Report issued on:	01/09/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
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: 20-26701
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1603513	1603514
Sample Reference				SP031	SP031
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				26/08/2020	26/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status		

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	509	272
Ammonium as NH ₄	µg/l	15	NONE	89	150

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

Analytical Report Number: 20-26701
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1603511			1603512	
Sample Reference	SP031			SP031	
Sample Number	1			2	
Depth (m)	None Supplied			None Supplied	
Date Sampled	26/08/2020			26/08/2020	
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	%	N/A	NONE	22	20
Total mass of sample received	kg	0.001	NONE	1.8	1.6

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	3900	4500
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivale	g/l	0.00125	MCERTS	2	2.3
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivale	mg/l	1.25	MCERTS	1960	2270
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.8	3

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.35	0.27
Acenaphthene	mg/kg	0.05	MCERTS	0.19	< 0.05
Fluorene	mg/kg	0.05	MCERTS	0.29	< 0.05
Anthracene	mg/kg	0.05	MCERTS	0.97	0.28
Fluoranthene	mg/kg	0.05	MCERTS	8	2.7
Pyrene	mg/kg	0.05	MCERTS	7.1	2.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.9	1.4

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	4.3	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	8.9	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	28	30
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	42	36

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	1.9	5.3
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	3.9	8.2
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	21	11
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	52	19
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	79	44

Analytical Report Number: 20-26701
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1603511	1603512
Sample Reference				SP031	SP031
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				26/08/2020	26/08/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-26701
Project / Site name: Clarendon Road

* 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 *
1603511	SP031	1	None Supplied	Brown clay.
1603512	SP031	2	None Supplied	Brown clay.



Analytical Report Number : 20-26701
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
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.



Sample Deviation Report



Analytical Report Number : 20-26701

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP031	1	S	1603511	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP031	1	S	1603511	b	Semi-volatile organic compounds in soil	L064-PL	b
SP031	1	S	1603511	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP031	1	S	1603511	b	TPHCWG (Soil)	L088/76-PL	b
SP031	1	S	1603511	b	Volatile organic compounds in soil	L073B-PL	b
SP031	2	S	1603512	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP031	2	S	1603512	b	Semi-volatile organic compounds in soil	L064-PL	b
SP031	2	S	1603512	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP031	2	S	1603512	b	TPHCWG (Soil)	L088/76-PL	b
SP031	2	S	1603512	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-26983

Project / Site name:	Clarendon Road	Samples received on:	27/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	27/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	02/09/2020
Report Issue Number:	1	Report issued on:	02/09/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed:

Joanna Wawrzeczko
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

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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.



Analytical Report Number: 20-26983
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1604885	1604886	1604887
Sample Reference				VS-N7	VS-J13	VS-J13
Sample Number				None Supplied	1	2
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/08/2020	26/08/2020	26/08/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status			

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	374	496	468
Ammonium as NH ₄	µg/l	15	NONE	250	79000	96000

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



Analytical Report Number: 20-26983
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1604882	1604883	1604884
Sample Reference				VS-N7	VS-J13	VS-J13
Sample Number				None Supplied	1	2
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				26/08/2020	26/08/2020	26/08/2020
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	%	N/A	NONE	16	25	27
Total mass of sample received	kg	0.001	NONE	1.2	1.2	1.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-

General Inorganics

Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	4700	4900	4700
Water Soluble SO4 16hr extraction (2:1 Leachate Equivale	g/l	0.00125	MCERTS	2.3	2.5	2.3
Water Soluble SO4 16hr extraction (2:1 Leachate Equivale	mg/l	1.25	MCERTS	2340	2460	2350
Ammonium as NH4	mg/kg	0.5	MCERTS	3.5	350	1600

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



Analytical Report Number: 20-26983
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1604882	VS-N7		133	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-26983

Project / Site name: Clarendon Road

* 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 *
1604882	VS-N7	None Supplied	None Supplied	Brown clay with gravel.
1604883	VS-J13	1	None Supplied	Brown clay with gravel.
1604884	VS-J13	2	None Supplied	Brown clay with gravel.



Analytical Report Number : 20-26983
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
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.



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Analytical Report Number : 20-27378

Project / Site name:	Clarendon Road P3	Samples received on:	28/08/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	28/08/2020
Your order number:	S-RE6075/00005	Analysis completed by:	03/09/2020
Report Issue Number:	1	Report issued on:	03/09/2020
Samples Analysed:	12 leachate samples - 12 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-27378
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1607298	1607299	1607300	1607301
Sample Reference	VS-I13-N	VS-J13-N	VS-L13-N	VS-M13-N
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	28/08/2020	28/08/2020	28/08/2020	28/08/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	8.2	1.6	18.6	976
Ammonium as NH ₄	µg/l	15	NONE	49	< 15	160	7500

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



Analytical Report Number: 20-27378
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1607302	1607303	1607304	1607305
Sample Reference	VS-N13-N	VS-O13-N	VS-P4-E	VS-P3-E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	28/08/2020	28/08/2020	28/08/2020	28/08/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	51.5	76.4	6.4	26.9
Ammonium as NH ₄	µg/l	15	NONE	820	580	< 15	15

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



Analytical Report Number: 20-27378
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1607306	1607307	1607308	1607309
Sample Reference				VS-R6-E	VS-I3-W	VS-I2-W	VS-G11-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				28/08/2020	28/08/2020	28/08/2020	27/08/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	88.1	75.4	47	96.8
Ammonium as NH ₄	µg/l	15	NONE	24	42	< 15	5000

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



Analytical Report Number: 20-27378
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1607286	1607287	1607288	1607289
Sample Reference				VS-I13-N	VS-J13-N	VS-L13-N	VS-M13-N
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				28/08/2020	28/08/2020	28/08/2020	28/08/2020
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	%	N/A	NONE	13	7.6	11	11
Total mass of sample received	kg	0.001	NONE	2	1.7	1.6	1.6

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.11	0.064	0.29	1.5
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	210	130	570	3000
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	107	64	286	1510
Ammonium as NH4	mg/kg	0.5	MCERTS	1.3	< 0.5	7.1	4.7

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



Analytical Report Number: 20-27378
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number	1607290	1607291	1607292	1607293
Sample Reference	VS-N13-N	VS-O13-N	VS-P4-E	VS-P3-E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	28/08/2020	28/08/2020	28/08/2020	28/08/2020
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	%	N/A	NONE	11	14	8.5	8.6
Total mass of sample received	kg	0.001	NONE	1.7	1.9	2	1.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Amosite	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.039	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.039	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.2	0.65	0.15	0.32
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	390	1300	290	640
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	195	648	147	322
Ammonium as NH4	mg/kg	0.5	MCERTS	12	6.6	< 0.5	< 0.5

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



Analytical Report Number: 20-27378
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1607294	1607295	1607296	1607297
Sample Reference				VS-R6-E	VS-I3-W	VS-I2-W	VS-G11-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				28/08/2020	28/08/2020	28/08/2020	27/08/2020
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	%	N/A	NONE	17	7	7	23
Total mass of sample received	kg	0.001	NONE	1.3	1.8	1.8	1.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Amosite	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	0.002	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	0.002	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.1	1.1	0.72	0.58
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2300	2100	1400	1200
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1130	1060	723	579
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	1.2	< 0.5	71

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

Analytical Report Number: 20-27378
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1607292	VS-P4-E		157	Loose Fibrous Debris	Amosite	0.039	0.039
1607294	VS-R6-E		135	Loose Fibres	Chrysotile	< 0.001	< 0.001
1607295	VS-I3-W		140	Loose Fibrous Debris	Amosite	0.002	0.002

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-27378
Project / Site name: Clarendon Road P3

* 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 *
1607286	VS-I13-N	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1607287	VS-J13-N	None Supplied	None Supplied	Brown loam with gravel.
1607288	VS-L13-N	None Supplied	None Supplied	Brown loam with gravel and vegetation.
1607289	VS-M13-N	None Supplied	None Supplied	Brown loam and clay with gravel.
1607290	VS-N13-N	None Supplied	None Supplied	Brown loam with gravel and vegetation.
1607291	VS-O13-N	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1607292	VS-P4-E	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1607293	VS-P3-E	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1607294	VS-R6-E	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1607295	VS-I3-W	None Supplied	None Supplied	Brown loam with gravel and brick.
1607296	VS-I2-W	None Supplied	None Supplied	Brown loam with gravel.
1607297	VS-G11-W	None Supplied	None Supplied	Brown loam and clay with gravel.



Analytical Report Number : 20-27378
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-27546

Project / Site name:	Clarendon Road	Samples received on:	01/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	01/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	09/09/2020
Report Issue Number:	1	Report issued on:	09/09/2020
Samples Analysed:	4 leachate samples - 4 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-27546
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1608107	1608108	1608109	1608110
Sample Reference	VS-R6	VS-R7	VS-Q7	VS-S8
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/09/2020	01/09/2020	01/09/2020	01/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accred- itation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	24.4	72	40.7	33.9
Ammonium as NH ₄	µg/l	15	NONE	33	32	50	32

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

Analytical Report Number: 20-27546

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1608103	1608104	1608105	1608106
Sample Reference	VS-R6	VS-R7	VS-Q7	VS-S8
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/09/2020	01/09/2020	01/09/2020	01/09/2020
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	%	N/A	NONE	21	29	22	11
Total mass of sample received	kg	0.001	NONE	1.6	1.7	1.7	1.2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	750	1400	1100	580
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.38	0.7	0.56	0.29
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	377	700	562	291
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	12	0.7	< 0.5

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



Analytical Report Number : 20-27546

Project / Site name: Clarendon Road

* 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 *
1608103	VS-R6	None Supplied	None Supplied	Brown clay with vegetation.
1608104	VS-R7	None Supplied	None Supplied	Brown clay with vegetation.
1608105	VS-Q7	None Supplied	None Supplied	Brown clay with vegetation.
1608106	VS-S8	None Supplied	None Supplied	Brown clay with vegetation.



Analytical Report Number : 20-27546

Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
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.



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Analytical Report Number : 20-27771

Project / Site name:	Clarendon Road P3	Samples received on:	02/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	02/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	07/09/2020
Report Issue Number:	1	Report issued on:	08/09/2020
Samples Analysed:	17 leachate samples - 17 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1609107	1609108	1609109	1609110
Sample Reference	VS-S9	VS-S10	VS-T10	VS-L11
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	01/09/2020	01/09/2020	01/09/2020	02/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	117	80.3	81	462
Ammonium as NH ₄	µg/l	15	NONE	< 15	< 15	< 15	84000

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



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1609111	1609112	1609113	1609114
Sample Reference				VS-I9	VS-I10	VS-K10	VS-L10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	320	279	86.8	109
Ammonium as NH ₄	µg/l	15	NONE	88000	90000	4200	31000

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



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1609115	1609116	1609117	1609118
Sample Reference	VS-J10	VS-J9	VS-R9	VS-Q7
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	431	336	239	544
Ammonium as NH ₄	µg/l	15	NONE	95000	94000	1100	570

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



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1609119	1609120	1609121	1609122
Sample Reference				VS-P8	SP32	SP33	SP34
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	264	218	270	197
Ammonium as NH ₄	µg/l	15	NONE	3800	21000	1300	4400

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



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1609123
Sample Reference				SP35
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	1310
Ammonium as NH ₄	µg/l	15	NONE	2500

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



Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609090	1609091	1609092	1609093
Sample Reference				VS-S9	VS-S10	VS-T10	VS-L11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/09/2020	01/09/2020	01/09/2020	02/09/2020
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	%	N/A	NONE	11	17	11	17
Total mass of sample received	kg	0.001	NONE	1.2	1.6	1.3	1.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.41	0.3	0.43	1.9
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	810	600	860	3800
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	407	298	429	1880
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	960

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-



Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609090	1609091	1609092	1609093
Sample Reference				VS-S9	VS-S10	VS-T10	VS-L11
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				01/09/2020	01/09/2020	01/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Lab Sample Number				1609094	1609095	1609096	1609097
Sample Reference				VS-I9	VS-I10	VS-K10	VS-L10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
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	%	N/A	NONE	24	16	14	18
Total mass of sample received	kg	0.001	NONE	1.7	1.4	2	1.9

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2	1.1	0.49	0.65
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2500	2300	970	1300
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1230	1140	486	647
Ammonium as NH4	mg/kg	0.5	MCERTS	950	790	53	370

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609094	1609095	1609096	1609097
Sample Reference				VS-I9	VS-I10	VS-K10	VS-L10
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609098	1609099	1609100	1609101
Sample Reference				VS-J10	VS-J9	VS-R9	VS-Q7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
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	%	N/A	NONE	20	25	16	17
Total mass of sample received	kg	0.001	NONE	1.7	1.5	1.8	1.6

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.8	2.5	1.6	2.4
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3600	5000	3300	4800
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1780	2510	1630	2420
Ammonium as NH4	mg/kg	0.5	MCERTS	820	1200	17	6.4

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609098	1609099	1609100	1609101
Sample Reference				VS-J10	VS-J9	VS-R9	VS-Q7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609102	1609103	1609104	1609105
Sample Reference				VS-P8	SP32	SP33	SP34
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
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	%	N/A	NONE	18	20	1.5	19
Total mass of sample received	kg	0.001	NONE	1.8	1.6	1.8	1.7

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.8	1.1	0.97	0.6
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3700	2300	1900	1200
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1830	1130	972	599
Ammonium as NH4	mg/kg	0.5	MCERTS	61	450	12	47

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	20	0.61	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	13	1.1	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	15	3.5	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	13	2.5	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	29	6.2	0.65
Pyrene	mg/kg	0.05	MCERTS	-	29	7.4	0.63
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	12	1.8	0.27

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	22	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	10	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	9.6	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	-	11	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	19	5.7	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	150	18	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	380	29	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	180	27	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	720	79	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	0.022	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	0.064	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	47	5.4	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	230	20	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	510	36	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	270	41	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	1100	100	< 10

Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609102	1609103	1609104	1609105
Sample Reference				VS-P8	SP32	SP33	SP34
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				02/09/2020	02/09/2020	02/09/2020	02/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609106
Sample Reference				SP35
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	3.4
Total mass of sample received	kg	0.001	NONE	1.6

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile & Amosite
Asbestos in Soil	Type	N/A	ISO 17025	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.003
Asbestos Quantification Total	%	0.001	ISO 17025	0.003

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2.2
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4300
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2160
Ammonium as NH ₄	mg/kg	0.5	MCERTS	29

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	4.4
Acenaphthene	mg/kg	0.05	MCERTS	4.6
Fluorene	mg/kg	0.05	MCERTS	5.5
Anthracene	mg/kg	0.05	MCERTS	6.8
Fluoranthene	mg/kg	0.05	MCERTS	38
Pyrene	mg/kg	0.05	MCERTS	36
Benzo(a)pyrene	mg/kg	0.05	MCERTS	15

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	21
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	220
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	500
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	280
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	1000

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	25
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	200
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	500
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	310
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	1000

Analytical Report Number: 20-27771
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609106
Sample Reference				SP35
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27771
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1609106	SP35		143	Loose Fibrous Debris & Hard/Cement Type Material	Chrysotile & Amosite	0.003	0.003

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-27771
Project / Site name: Clarendon Road P3

* 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 *
1609090	VS-S9	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.
1609091	VS-S10	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1609092	VS-T10	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.
1609093	VS-L11	None Supplied	None Supplied	Brown clay with gravel.
1609094	VS-T9	None Supplied	None Supplied	Brown loam and clay with gravel and brick.
1609095	VS-I10	None Supplied	None Supplied	Brown loam and clay with gravel.
1609096	VS-K10	None Supplied	None Supplied	Brown clay.
1609097	VS-L10	None Supplied	None Supplied	Brown clay.
1609098	VS-J10	None Supplied	None Supplied	Brown loam and clay with gravel.
1609099	VS-J9	None Supplied	None Supplied	Brown loam and clay with gravel.
1609100	VS-R9	None Supplied	None Supplied	Brown clay with gravel.
1609101	VS-Q7	None Supplied	None Supplied	Brown clay with brick.
1609102	VS-P8	None Supplied	None Supplied	Brown clay with gravel.
1609103	SP32	None Supplied	None Supplied	Brown loam and clay with brick.
1609104	SP33	None Supplied	None Supplied	Brown gravel.**
1609105	SP34	None Supplied	None Supplied	Brown clay.
1609106	SP35	None Supplied	None Supplied	Brown clay and sand with gravel.

** Non MCERTS Matrix



Analytical Report Number : 20-27771
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-27771
Project / Site name: Clarendon Road P3

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP32	None Supplied	S	1609103	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP32	None Supplied	S	1609103	b	Semi-volatile organic compounds in soil	L064-PL	b
SP32	None Supplied	S	1609103	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP32	None Supplied	S	1609103	b	TPHCWG (Soil)	L088/76-PL	b
SP32	None Supplied	S	1609103	b	Volatile organic compounds in soil	L073B-PL	b
SP33	None Supplied	S	1609104	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP33	None Supplied	S	1609104	b	Semi-volatile organic compounds in soil	L064-PL	b
SP33	None Supplied	S	1609104	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP33	None Supplied	S	1609104	b	TPHCWG (Soil)	L088/76-PL	b
SP33	None Supplied	S	1609104	b	Volatile organic compounds in soil	L073B-PL	b
SP34	None Supplied	S	1609105	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP34	None Supplied	S	1609105	b	Semi-volatile organic compounds in soil	L064-PL	b
SP34	None Supplied	S	1609105	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP34	None Supplied	S	1609105	b	TPHCWG (Soil)	L088/76-PL	b
SP34	None Supplied	S	1609105	b	Volatile organic compounds in soil	L073B-PL	b
SP35	None Supplied	S	1609106	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP35	None Supplied	S	1609106	b	Semi-volatile organic compounds in soil	L064-PL	b
SP35	None Supplied	S	1609106	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP35	None Supplied	S	1609106	b	TPHCWG (Soil)	L088/76-PL	b
SP35	None Supplied	S	1609106	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-27927

Project / Site name:	Clarendon Road Phase 3	Samples received on:	02/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	02/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	09/09/2020
Report Issue Number:	1	Report issued on:	09/09/2020
Samples Analysed:	6 leachate samples - 6 soil samples		

Signed:

Joanna Wawrzeczko
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

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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.



Analytical Report Number: 20-27927
Project / Site name: Clarendon Road Phase 3

Your Order No: S-RE6075/00005

Lab Sample Number				1609911	1609912	1609913	1609914
Sample Reference				SP-22	SP-22	SP-22	SP-22
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	6.00	7.00	8.00
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	106	194	271	287
Ammonium as NH ₄	µg/l	15	NONE	790	860	930	1500

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



Analytical Report Number: 20-27927
Project / Site name: Clarendon Road Phase 3

Your Order No: S-RE6075/00005

Lab Sample Number				1609915	1609916
Sample Reference				SP-22	Type 1
Sample Number				None Supplied	None Supplied
Depth (m)				9.00	None Supplied
Date Sampled				Deviating	Deviating
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	270	114
Ammonium as NH ₄	µg/l	15	NONE	810	890

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



Analytical Report Number: 20-27927
Project / Site name: Clarendon Road Phase 3
Your Order No: S-RE6075/00005

Lab Sample Number				1609905	1609906	1609907	1609908
Sample Reference				SP-22	SP-22	SP-22	SP-22
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	6.00	7.00	8.00
Date Sampled				Deviating	Deviating	Deviating	Deviating
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	%	N/A	NONE	1.7	6	4	2.9
Total mass of sample received	kg	0.001	NONE	1.7	2	1.8	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2	1.3	1.3	1.1
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2300	2500	2700	2200
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1170	1260	1330	1080
Ammonium as NH4	mg/kg	0.5	MCERTS	30	12	12	11

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	1.4	0.95	2	0.66
Acenaphthene	mg/kg	0.05	MCERTS	0.64	0.33	0.51	< 0.05
Fluorene	mg/kg	0.05	MCERTS	2.2	1.2	1.5	0.66
Anthracene	mg/kg	0.05	MCERTS	3.7	1.5	2.7	0.74
Fluoranthene	mg/kg	0.05	MCERTS	12	7.8	12	4.7
Pyrene	mg/kg	0.05	MCERTS	10	6.8	9.4	4.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.3	3.7	5	2.2

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

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	6.1	< 1.0	38	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	10	3.3	60	2.8
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	41	16	23	12
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	130	57	79	40
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	190	76	200	54

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	2.9	2.9	4.1	1
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	15	9.4	24	6.5
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	66	37	46	31
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	130	97	87	68
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	220	150	160	110



Analytical Report Number: 20-27927
 Project / Site name: Clarendon Road Phase 3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609905	1609906	1609907	1609908
Sample Reference				SP-22	SP-22	SP-22	SP-22
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				5.00	6.00	7.00	8.00
Date Sampled				Deviating	Deviating	Deviating	Deviating
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27927
 Project / Site name: Clarendon Road Phase 3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609909	1609910
Sample Reference				SP-22	Type 1
Sample Number				None Supplied	None Supplied
Depth (m)				9.00	None Supplied
Date Sampled				Deviating	Deviating
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	%	N/A	NONE	2.9	2.9
Total mass of sample received	kg	0.001	NONE	2	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	Amosite
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.2	1.2
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2300	2300
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1150	1170
Ammonium as NH4	mg/kg	0.5	MCERTS	14	8.8

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	1.1	1.4
Acenaphthene	mg/kg	0.05	MCERTS	0.39	0.5
Fluorene	mg/kg	0.05	MCERTS	1.6	1.1
Anthracene	mg/kg	0.05	MCERTS	1.8	1.4
Fluoranthene	mg/kg	0.05	MCERTS	7.6	6.7
Pyrene	mg/kg	0.05	MCERTS	7	6.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	3.6	3.8

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	2.2
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	9.3	12
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	41	24
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	76	41
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	130	80

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	1.4	2.4
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	14	14
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	62	44
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	96	49
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	170	110

Analytical Report Number: 20-27927
 Project / Site name: Clarendon Road Phase 3
 Your Order No: S-RE6075/00005

Lab Sample Number				1609909	1609910
Sample Reference				SP-22	Type 1
Sample Number				None Supplied	None Supplied
Depth (m)				9.00	None Supplied
Date Sampled				Deviating	Deviating
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-27927
Project / Site name: Clarendon Road Phase 3
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1609907	SP-22	7.00	150	Loose Fibrous Debris	Chrysotile	< 0.001	< 0.001
1609910	Type 1		180	Loose Fibrous Debris	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-27927

Project / Site name: Clarendon Road Phase 3

* 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 *
1609905	SP-22	None Supplied	5	Light brown gravelly sand.
1609906	SP-22	None Supplied	6	Light brown gravelly sand.
1609907	SP-22	None Supplied	7	Light brown gravelly sand.
1609908	SP-22	None Supplied	8	Light brown gravelly sand.
1609909	SP-22	None Supplied	9	Light brown gravelly sand.
1609910	Type 1	None Supplied	None Supplied	Brown sandy gravel.**

**Non MCERTS Matrix



Analytical Report Number : 20-27927

Project / Site name: Clarendon Road Phase 3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS



Analytical Report Number : 20-27927
Project / Site name: Clarendon Road Phase 3

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
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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.



Sample Deviation Report



Analytical Report Number : 20-27927

Project / Site name: Clarendon Road Phase 3

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-22	None Supplied	L	1609911	a	None Supplied	None Supplied	None Supplied
SP-22	None Supplied	L	1609912	a	None Supplied	None Supplied	None Supplied
SP-22	None Supplied	L	1609913	a	None Supplied	None Supplied	None Supplied
SP-22	None Supplied	L	1609914	a	None Supplied	None Supplied	None Supplied
SP-22	None Supplied	L	1609915	a	None Supplied	None Supplied	None Supplied
SP-22	None Supplied	S	1609905	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	None Supplied	S	1609905	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	None Supplied	S	1609905	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	None Supplied	S	1609905	ab	TPHCWG (Soil)	L088/76-PL	b
SP-22	None Supplied	S	1609905	ab	Volatile organic compounds in soil	L073B-PL	b
SP-22	None Supplied	S	1609906	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	None Supplied	S	1609906	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	None Supplied	S	1609906	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	None Supplied	S	1609906	ab	TPHCWG (Soil)	L088/76-PL	b
SP-22	None Supplied	S	1609906	ab	Volatile organic compounds in soil	L073B-PL	b
SP-22	None Supplied	S	1609907	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	None Supplied	S	1609907	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	None Supplied	S	1609907	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	None Supplied	S	1609907	ab	TPHCWG (Soil)	L088/76-PL	b
SP-22	None Supplied	S	1609907	ab	Volatile organic compounds in soil	L073B-PL	b
SP-22	None Supplied	S	1609908	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	None Supplied	S	1609908	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	None Supplied	S	1609908	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	None Supplied	S	1609908	ab	TPHCWG (Soil)	L088/76-PL	b
SP-22	None Supplied	S	1609908	ab	Volatile organic compounds in soil	L073B-PL	b
SP-22	None Supplied	S	1609909	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	None Supplied	S	1609909	ab	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	None Supplied	S	1609909	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	None Supplied	S	1609909	ab	TPHCWG (Soil)	L088/76-PL	b
SP-22	None Supplied	S	1609909	ab	Volatile organic compounds in soil	L073B-PL	b
Type 1	None Supplied	L	1609916	a	None Supplied	None Supplied	None Supplied
Type 1	None Supplied	S	1609910	ab	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Type 1	None Supplied	S	1609910	ab	Semi-volatile organic compounds in soil	L064-PL	b
Type 1	None Supplied	S	1609910	ab	Speciated EPA-16 PAHs in soil	L064-PL	b
Type 1	None Supplied	S	1609910	ab	TPHCWG (Soil)	L088/76-PL	b
Type 1	None Supplied	S	1609910	ab	Volatile organic compounds in soil	L073B-PL	b



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Analytical Report Number : 20-27996

Project / Site name:	Clarendon Road P3	Samples received on:	03/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	03/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	08/09/2020
Report Issue Number:	1	Report issued on:	08/09/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-27996
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1610226
Sample Reference				SP036
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	421
Ammonium as NH ₄	µg/l	15	NONE	1500

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

Analytical Report Number: 20-27996
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Lab Sample Number				1610225
Sample Reference				SP036
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	1.7
Total mass of sample received	kg	0.001	NONE	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.4
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2800
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1410
Ammonium as NH ₄	mg/kg	0.5	MCERTS	13

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	1.6
Acenaphthene	mg/kg	0.05	MCERTS	0.98
Fluorene	mg/kg	0.05	MCERTS	1.6
Anthracene	mg/kg	0.05	MCERTS	2.6
Fluoranthene	mg/kg	0.05	MCERTS	15
Pyrene	mg/kg	0.05	MCERTS	14
Benzo(a)pyrene	mg/kg	0.05	MCERTS	9.5

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	14
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	73
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	150
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	380
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	620

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	13
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	57
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	100
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	170
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	340

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0

Analytical Report Number: 20-27996
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1610225
Sample Reference				SP036
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				02/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-27996
Project / Site name: Clarendon Road P3

* 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 *
1610225	SP036	None Supplied	None Supplied	Light brown sand with gravel and vegetation.



Analytical Report Number : 20-27996
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-27996
Project / Site name: Clarendon Road P3

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP036	None Supplied	S	1610225	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP036	None Supplied	S	1610225	b	Semi-volatile organic compounds in soil	L064-PL	b
SP036	None Supplied	S	1610225	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP036	None Supplied	S	1610225	b	TPHCWG (Soil)	L088/76-PL	b
SP036	None Supplied	S	1610225	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-28265

Replaces Analytical Report Number: 20-28265, issue no. 1

Client references/information amended.

Project / Site name:	Clarendon Road	Samples received on:	04/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	04/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	11/09/2020
Report Issue Number:	2	Report issued on:	15/09/2020
Samples Analysed:	3 leachate samples - 8 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-28265
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1611529	1611530	1611531
Sample Reference	SP025	SP035	SP036.2
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	03/09/2020	03/09/2020	03/09/2020
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	158	722	632
Ammonium as NH ₄	µg/l	15	NONE	1000	310	2000

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



Analytical Report Number: 20-28265

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1611521	1611522	1611523	1611524
Sample Reference				SP007	SP008	SP009	SP025
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/09/2020	04/09/2020	04/09/2020	03/09/2020
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	%	N/A	NONE	0.63	10	6.5	18
Total mass of sample received	kg	0.001	NONE	1.4	0.9	1.3	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	-	-	-	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	-	-	1.1
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	-	-	2300
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	-	-	1130
Ammonium as NH4	mg/kg	0.5	MCERTS	-	-	-	4.2

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	15	2.1	0.58
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.3	1.2	0.39
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.98	4.2	0.7
Anthracene	mg/kg	0.05	MCERTS	< 0.05	1.2	5.1	1.3
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	5.3	35	7.2
Pyrene	mg/kg	0.05	MCERTS	< 0.05	4.7	37	6.5
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	1.8	18	4.3

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

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	4	9.8	14
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	12	53	23
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	37	120	31
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	53	190	69

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	0.009	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	18	12	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	13	59	9.4
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	42	170	30
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	34	44	270	42
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	34	120	510	81



Analytical Report Number: 20-28265
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1611521	1611522	1611523	1611524
Sample Reference				SP007	SP008	SP009	SP025
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				04/09/2020	04/09/2020	04/09/2020	03/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-28265

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1611525	1611526	1611527	1611528
Sample Reference				SP035	SP036.2	SP0	SP004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/09/2020	06/09/2020	04/09/2020	04/09/2020
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	%	N/A	NONE	15	13	9.4	5.6
Total mass of sample received	kg	0.001	NONE	1.7	1.1	1.7	1.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	Chrysotile	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Detected	-	-
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	0.002	0.008	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	0.002	0.008	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.6	1.5	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3200	3000	-	-
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1580	1480	-	-
Ammonium as NH4	mg/kg	0.5	MCERTS	17	22	-	-

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	14	1.7	2.3	1
Acenaphthene	mg/kg	0.05	MCERTS	8.9	1.1	1.4	0.55
Fluorene	mg/kg	0.05	MCERTS	16	3.5	2.4	1.6
Anthracene	mg/kg	0.05	MCERTS	20	4.9	3.3	3.2
Fluoranthene	mg/kg	0.05	MCERTS	52	36	14	22
Pyrene	mg/kg	0.05	MCERTS	57	35	13	22
Benzo(a)pyrene	mg/kg	0.05	MCERTS	45	16	5.1	11

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

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	26	3.9	2.1	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	530	29	84	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	920	77	150	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	470	110	130	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	1900	220	360	< 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	18	2.8	2.3	5.4
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	280	36	51	21
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	860	120	160	59
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	520	160	120	78
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	1700	330	330	160



Analytical Report Number: 20-28265
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1611525	1611526	1611527	1611528
Sample Reference				SP035	SP036.2	SP0	SP004
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				03/09/2020	06/09/2020	04/09/2020	04/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	0.3	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-28265
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1611524	SP025		135	Loose Fibres	Chrysotile	< 0.001	< 0.001
1611525	SP035		123	Loose Fibres & Loose Fibrous Debris	Chrysotile	0.002	0.002
1611526	SP036.2		147	Loose Fibrous Debris	Chrysotile	0.008	0.008

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-28265

Project / Site name: Clarendon Road

* 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 *
1611521	SP007	None Supplied	None Supplied	Non Soil**
1611522	SP008	None Supplied	None Supplied	Brown clay and sand with gravel.
1611523	SP009	None Supplied	None Supplied	Brown loam and clay with gravel.
1611524	SP025	None Supplied	None Supplied	Brown clay and sand with gravel.
1611525	SP035	None Supplied	None Supplied	Black clay and sand with gravel.
1611526	SP036.2	None Supplied	None Supplied	Light brown clay and sand with gravel.
1611527	SP0	None Supplied	None Supplied	Light brown loam and clay with gravel.
1611528	SP004	None Supplied	None Supplied	Light brown loam and clay with gravel.

** Non MCERTS matrix



Analytical Report Number : 20-28265
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS



Analytical Report Number : 20-28265
Project / Site name: Clarendon Road

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
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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.



Sample Deviation Report



Analytical Report Number : 20-28265

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP0	None Supplied	S	1611527	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP0	None Supplied	S	1611527	b	Semi-volatile organic compounds in soil	L064-PL	b
SP0	None Supplied	S	1611527	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP0	None Supplied	S	1611527	b	TPHCWG (Soil)	L088/76-PL	b
SP0	None Supplied	S	1611527	b	Volatile organic compounds in soil	L073B-PL	b
SP004	None Supplied	S	1611528	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP004	None Supplied	S	1611528	b	Semi-volatile organic compounds in soil	L064-PL	b
SP004	None Supplied	S	1611528	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP004	None Supplied	S	1611528	b	TPHCWG (Soil)	L088/76-PL	b
SP004	None Supplied	S	1611528	b	Volatile organic compounds in soil	L073B-PL	b
SP007	None Supplied	S	1611521	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP007	None Supplied	S	1611521	b	Semi-volatile organic compounds in soil	L064-PL	b
SP007	None Supplied	S	1611521	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP007	None Supplied	S	1611521	b	TPHCWG (Soil)	L088/76-PL	b
SP007	None Supplied	S	1611521	b	Volatile organic compounds in soil	L073B-PL	b
SP008	None Supplied	S	1611522	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP008	None Supplied	S	1611522	b	Semi-volatile organic compounds in soil	L064-PL	b
SP008	None Supplied	S	1611522	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP008	None Supplied	S	1611522	b	TPHCWG (Soil)	L088/76-PL	b
SP008	None Supplied	S	1611522	b	Volatile organic compounds in soil	L073B-PL	b
SP009	None Supplied	S	1611523	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP009	None Supplied	S	1611523	b	Semi-volatile organic compounds in soil	L064-PL	b
SP009	None Supplied	S	1611523	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP009	None Supplied	S	1611523	b	TPHCWG (Soil)	L088/76-PL	b
SP009	None Supplied	S	1611523	b	Volatile organic compounds in soil	L073B-PL	b
SP025	None Supplied	S	1611524	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP025	None Supplied	S	1611524	b	Semi-volatile organic compounds in soil	L064-PL	b
SP025	None Supplied	S	1611524	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP025	None Supplied	S	1611524	b	TPHCWG (Soil)	L088/76-PL	b
SP025	None Supplied	S	1611524	b	Volatile organic compounds in soil	L073B-PL	b
SP035	None Supplied	S	1611525	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP035	None Supplied	S	1611525	b	Semi-volatile organic compounds in soil	L064-PL	b
SP035	None Supplied	S	1611525	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP035	None Supplied	S	1611525	b	TPHCWG (Soil)	L088/76-PL	b
SP035	None Supplied	S	1611525	b	Volatile organic compounds in soil	L073B-PL	b
SP036.2	None Supplied	S	1611526	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP036.2	None Supplied	S	1611526	b	Semi-volatile organic compounds in soil	L064-PL	b
SP036.2	None Supplied	S	1611526	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP036.2	None Supplied	S	1611526	b	TPHCWG (Soil)	L088/76-PL	b
SP036.2	None Supplied	S	1611526	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-28266

Project / Site name:	Clarendon Road	Samples received on:	04/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	04/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	09/09/2020
Report Issue Number:	1	Report issued on:	09/09/2020
Samples Analysed:	1 leachate sample - 1 soil sample		

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

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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.



Analytical Report Number: 20-28266

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1611532
Sample Reference				SP036.2
Sample Number				Left
Depth (m)				None Supplied
Date Sampled				03/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	4
Total mass of sample received	kg	0.001	NONE	1.2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Amosite
Asbestos in Soil	Type	N/A	ISO 17025	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	NONE	1.6
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	NONE	3200
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	NONE	1600
Ammonium as NH4	mg/kg	0.5	NONE	20

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	7.9
Acenaphthene	mg/kg	0.05	NONE	1.1
Fluorene	mg/kg	0.05	NONE	2.8
Anthracene	mg/kg	0.05	NONE	3.5
Fluoranthene	mg/kg	0.05	NONE	17
Pyrene	mg/kg	0.05	NONE	16
Benzo(a)pyrene	mg/kg	0.05	NONE	12

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0
Toluene	µg/kg	1	NONE	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	8.7
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	27
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	44
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	37
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	120

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	27
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	37
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	140
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	160
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	360



Analytical Report Number: 20-28266
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1611532
Sample Reference				SP036.2
Sample Number				Left
Depth (m)				None Supplied
Date Sampled				03/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-28266
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1611532	SP036.2		159	Loose Fibres	Amosite	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-28266
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1611533
Sample Reference				SP036.2
Sample Number				Left
Depth (m)				None Supplied
Date Sampled				03/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
Units				
Limit of detection				
Accreditation Status				

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	1490
Ammonium as NH ₄	µg/l	15	NONE	2500

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



Analytical Report Number : 20-28266

Project / Site name: Clarendon Road

* 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 *
1611532	SP036.2	Left	None Supplied	Brown sandy gravel.**

** Non MCERTS matrix



Analytical Report Number : 20-28266

Project / Site name: Clarendon Road

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	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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	NONE
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	NONE



Analytical Report Number : 20-28266

Project / Site name: Clarendon Road

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
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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.

Sample Deviation Report



Analytical Report Number : 20-28266

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP036.2	Left	S	1611532	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP036.2	Left	S	1611532	b	Semi-volatile organic compounds in soil	L064-PL	b
SP036.2	Left	S	1611532	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP036.2	Left	S	1611532	b	TPHCWG (Soil)	L088/76-PL	b
SP036.2	Left	S	1611532	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-28444

Project / Site name:	Clarendon Road	Samples received on:	07/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	07/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	10/09/2020
Report Issue Number:	1	Report issued on:	10/09/2020
Samples Analysed:	9 leachate samples - 9 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

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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.



Analytical Report Number: 20-28444
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1612406	1612407	1612408	1612409
Sample Reference				VS-J5	VS-I5-W	VS-J6	VS-K6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.50	None Supplied	None Supplied	None Supplied
Date Sampled				07/09/2020	07/09/2020	07/09/2020	07/09/2020
Time Taken				0800	0800	0800	0800
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	%	N/A	NONE	22	21	9.7	19
Total mass of sample received	kg	0.001	NONE	2	2	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.074	0.28	0.38	0.45
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	150	550	750	890
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	73.5	276	375	446
Ammonium as NH ₄	mg/kg	0.5	MCERTS	130	420	67	38

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



Analytical Report Number: 20-28444
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1612410	1612411	1612412	1612413
Sample Reference				VS-I5	VS-I6-W	VS-I6	VS-I9-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	2.00
Date Sampled				07/09/2020	07/09/2020	07/09/2020	07/09/2020
Time Taken				0800	0800	0800	1200
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	%	N/A	NONE	14	19	19	22
Total mass of sample received	kg	0.001	NONE	2	2	2	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.24	0.098	0.17	3
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	480	200	340	6000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	240	98.4	171	3000
Ammonium as NH ₄	mg/kg	0.5	MCERTS	210	210	260	970

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

Analytical Report Number: 20-28444

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1612414
Sample Reference				VS-I10
Sample Number				None Supplied
Depth (m)				2.00
Date Sampled				07/09/2020
Time Taken				1200
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	22
Total mass of sample received	kg	0.001	NONE	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.9
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1800
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	901
Ammonium as NH ₄	mg/kg	0.5	MCERTS	2.1

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



Analytical Report Number: 20-28444

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1612415	1612416	1612417	1612418
Sample Reference				VS-J5	VS-I5-W	VS-J6	VS-K6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.50	None Supplied	None Supplied	None Supplied
Date Sampled				07/09/2020	07/09/2020	07/09/2020	07/09/2020
Time Taken				0800	0800	0800	0800
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	31	32.1	33.1	70.8
Ammonium as NH ₄	µg/l	15	NONE	14000	33000	6300	6500

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



Analytical Report Number: 20-28444

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1612419	1612420	1612421	1612422
Sample Reference				VS-I5	VS-I6-W	VS-I6	VS-I9-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	2.00
Date Sampled				07/09/2020	07/09/2020	07/09/2020	07/09/2020
Time Taken				0800	0800	0800	1200
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	34.6	33.5	78.7	671
Ammonium as NH ₄	µg/l	15	NONE	22000	26000	25000	160000

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



Analytical Report Number: 20-28444

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1612423
Sample Reference				VS-I10
Sample Number				None Supplied
Depth (m)				2.00
Date Sampled				07/09/2020
Time Taken				1200
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	211
Ammonium as NH ₄	µg/l	15	NONE	94

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



Analytical Report Number : 20-28444

Project / Site name: Clarendon Road

* 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 *
1612406	VS-J5	None Supplied	2.5	Brown clay and sand with gravel.
1612407	VS-I5-W	None Supplied	None Supplied	Brown clay and sand with gravel.
1612408	VS-J6	None Supplied	None Supplied	Light brown clay and sand with gravel.
1612409	VS-K6	None Supplied	None Supplied	Brown clay and sand with gravel.
1612410	VS-I5	None Supplied	None Supplied	Light brown clay and sand with gravel.
1612411	VS-I6-W	None Supplied	None Supplied	Brown clay and sand with gravel.
1612412	VS-I6	None Supplied	None Supplied	Brown clay and sand with gravel.
1612413	VS-I9-W	None Supplied	2	Light brown clay and sand with gravel.
1612414	VS-I10	None Supplied	2	Light brown clay and sand with gravel.



Analytical Report Number : 20-28444
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-28790

Project / Site name:	Clarendon Road	Samples received on:	08/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	08/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	11/09/2020
Report Issue Number:	1	Report issued on:	11/09/2020
Samples Analysed:	9 leachate samples - 9 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

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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.



Analytical Report Number: 20-28790
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1614222	1614223	1614224	1614225
Sample Reference				VS-K5	VS-L5	VS-L6	VS-I6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	3.00	3.00	3.00
Date Sampled				08/09/2020	08/09/2020	08/09/2020	07/09/2020
Time Taken				0900	0900	0900	0900
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	%	N/A	NONE	17	13	18	21
Total mass of sample received	kg	0.001	NONE	2	2	2	1

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.22	0.089	0.37	0.74
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	430	180	750	1500
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	217	88.6	375	739
Ammonium as NH4	mg/kg	0.5	MCERTS	11	38	4.7	29

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



Analytical Report Number: 20-28790
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1614226	1614227	1614228	1614229
Sample Reference				VS-Q9	VS-P9	VS-P10	VS-S8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				1200	1200	1200	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	%	N/A	NONE	20	23	23	20
Total mass of sample received	kg	0.001	NONE	1.7	1.8	1.5	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	< 0.001	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	< 0.001	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.7	1.8	1.9	1.7
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3500	3600	3800	3300
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1730	1800	1900	1670
Ammonium as NH4	mg/kg	0.5	MCERTS	2.6	2.2	3.9	1.7

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



Analytical Report Number: 20-28790

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1614230
Sample Reference				VS-S8E
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	15
Total mass of sample received	kg	0.001	NONE	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.7
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3300
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1650
Ammonium as NH4	mg/kg	0.5	MCERTS	2.3

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



Analytical Report Number: 20-28790
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1614228	VS-P10		138	Loose Fibres	Chrysotile	< 0.001	< 0.001
1614229	VS-S8		137	Loose Fibres	Chrysotile	< 0.001	< 0.001
1614230	VS-S8E		181	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number: 20-28790

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1614231	1614232	1614233	1614234
Sample Reference				VS-K5	VS-L5	VS-L6	VS-I6
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	3.00	3.00	3.00
Date Sampled				08/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				0900	0900	0900	0900
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	29.8	10.6	52.3	99.6
Ammonium as NH ₄	µg/l	15	NONE	760	2800	360	2100

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



Analytical Report Number: 20-28790
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1614235	1614236	1614237	1614238
Sample Reference				VS-Q9	VS-P9	VS-P10	VS-S8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				1200	1200	1200	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	207	472	481	73.4
Ammonium as NH ₄	µg/l	15	NONE	130	130	290	230

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



Analytical Report Number: 20-28790

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1614239
Sample Reference				VS-S8E
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	168
Ammonium as NH ₄	µg/l	15	NONE	86

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



Analytical Report Number : 20-28790

Project / Site name: Clarendon Road

* 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 *
1614222	VS-K5	None Supplied	3	Light brown clay and sand with gravel.
1614223	VS-L5	None Supplied	3	Light brown clay and sand with gravel.
1614224	VS-L6	None Supplied	3	Light brown clay and sand with gravel.
1614225	VS-I6	None Supplied	3	Light brown clay and sand with gravel.
1614226	VS-Q9	None Supplied	None Supplied	Light brown clay and sand with gravel.
1614227	VS-P9	None Supplied	None Supplied	Light brown clay and sand with gravel.
1614228	VS-P10	None Supplied	None Supplied	Light brown clay and sand with gravel.
1614229	VS-S8	None Supplied	None Supplied	Light brown clay and sand with gravel.
1614230	VS-S8E	None Supplied	None Supplied	Light brown clay and sand with gravel.



Analytical Report Number : 20-28790
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



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Analytical Report Number : 20-29048

Project / Site name:	Clarendon Road	Samples received on:	09/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	09/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	14/09/2020
Report Issue Number:	1	Report issued on:	14/09/2020
Samples Analysed:	13 leachate samples - 13 soil samples		

Signed:

Rachel Bradley
Deputy Quality Manager
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.



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1615597	1615598	1615599	1615600
Sample Reference				VS-Q5	VS-M7	VS-M8	VS-M9
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO4	mg/l	0.1	ISO 17025	12.3	330	374	148
Ammonium as NH4	µg/l	15	NONE	52	320	190	220

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



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1615601	1615602	1615603	1615604
Sample Reference	VS-Q5-E	VS-9E	VS-T10E	VS-R7-E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO4	mg/l	0.1	ISO 17025	29.8	171	596	156
Ammonium as NH4	µg/l	15	NONE	120	28	40	22

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



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1615605	1615606	1615607	1615608
Sample Reference				VS-R6-E	VS-NI2	SP-37	SP-37.2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/09/2020	09/09/2020	09/09/2020	09/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO4	mg/l	0.1	ISO 17025	93.3	808	54.9	36.9
Ammonium as NH4	µg/l	15	NONE	95	270	11000	7300

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



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1615609
Sample Reference				SP-37.3
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				09/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	134
Ammonium as NH ₄	µg/l	15	NONE	15000

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



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number				1615584	1615585	1615586	1615587
Sample Reference				VS-Q5	VS-M7	VS-M8	VS-M9
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/09/2020	08/09/2020	08/09/2020	08/09/2020
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	%	N/A	NONE	22	16	16	10
Total mass of sample received	kg	0.001	NONE	1.7	2	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.11	1.1	1.9	0.97
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	220	2300	3700	1900
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	108	1130	1870	974
Ammonium as NH ₄	mg/kg	0.5	MCERTS	0.7	3.1	2.3	2

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-



Analytical Report Number: 20-29048
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1615584	1615585	1615586	1615587
Sample Reference				VS-Q5	VS-M7	VS-M8	VS-M9
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				09/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1615588	1615589	1615590	1615591
Sample Reference	VS-Q5-E	VS-9E	VS-T10E	VS-R7-E
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/09/2020	08/09/2020	08/09/2020	08/09/2020
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	%	N/A	NONE	6.9	13	15	13
Total mass of sample received	kg	0.001	NONE	2	2	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.19	1.5	2.1	1.8
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	380	2900	4200	3500
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	191	1450	2120	1760
Ammonium as NH4	mg/kg	0.5	MCERTS	1	< 0.5	< 0.5	1.1

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	-	-

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-



Analytical Report Number: 20-29048
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1615588	1615589	1615590	1615591
Sample Reference				VS-Q5-E	VS-9E	VS-T10E	VS-R7-E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/09/2020	08/09/2020	08/09/2020	08/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	-	-
Tetrachloromethane	µg/kg	1	MCERTS	-	-	-	-
Trichloroethene	µg/kg	1	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	-	-
Tetrachloroethene	µg/kg	1	NONE	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	-	-

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-29048
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1615592	1615593	1615594	1615595
Sample Reference	VS-R6-E	VS-NI2	SP-37	SP-37.2
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	08/09/2020	09/09/2020	09/09/2020	09/09/2020
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	%	N/A	NONE	16	11	27	23
Total mass of sample received	kg	0.001	NONE	2	1.6	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.9	2.3	0.28	0.46
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3900	4500	560	910
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1930	2270	281	457
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	1.3	190	110

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	9.2	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	3.9	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	-	15	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	10	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	-	-	10	1.1
Pyrene	mg/kg	0.05	MCERTS	-	-	15	1.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	4.9	0.63

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	87	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	31	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	39	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	22	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	62	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	31	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	32	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	150	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	0.49	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	49	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	230	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	310	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	140	17
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	730	26

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0



Analytical Report Number: 20-29048
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1615592	1615593	1615594	1615595
Sample Reference				VS-R6-E	VS-NI2	SP-37	SP-37.2
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/09/2020	09/09/2020	09/09/2020	09/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-29048
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1615596
Sample Reference				SP-37.3
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				09/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	20
Total mass of sample received	kg	0.001	NONE	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	2
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	4000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	2010
Ammonium as NH ₄	mg/kg	0.5	MCERTS	460

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.82
Acenaphthene	mg/kg	0.05	MCERTS	0.81
Fluorene	mg/kg	0.05	MCERTS	1.3
Anthracene	mg/kg	0.05	MCERTS	1.5
Fluoranthene	mg/kg	0.05	MCERTS	6.9
Pyrene	mg/kg	0.05	MCERTS	6.9
Benzo(a)pyrene	mg/kg	0.05	MCERTS	4.1

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	21
p & m-xylene	µg/kg	1	MCERTS	25
o-xylene	µg/kg	1	MCERTS	19
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	2.2
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	23
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	62
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	87

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	13
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	45
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	55
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	110

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0



Analytical Report Number: 20-29048
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1615596
Sample Reference				SP-37.3
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				09/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-29048

Project / Site name: Clarendon Road

* 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 *
1615584	VS-Q5	None Supplied	None Supplied	Brown clay with gravel and vegetation.
1615585	VS-M7	None Supplied	None Supplied	Brown clay with gravel and vegetation.
1615586	VS-M8	None Supplied	None Supplied	Brown clay with gravel.
1615587	VS-M9	None Supplied	None Supplied	Brown clay with gravel and vegetation.
1615588	VS-Q5-E	None Supplied	None Supplied	Brown clay with gravel.
1615589	VS-9E	None Supplied	None Supplied	Brown clay and sand with clinker and gravel
1615590	VS-T10E	None Supplied	None Supplied	Brown clay and sand with vegetation and gravel
1615591	VS-R7-E	None Supplied	None Supplied	Brown clay and sand with brick and rubble.
1615592	VS-R6-E	None Supplied	None Supplied	Brown clay and sand with gravel and vegetation.
1615593	VS-N12	None Supplied	None Supplied	Brown clay and sand with gravel.
1615594	SP-37	None Supplied	None Supplied	Grey clay with gravel and vegetation.
1615595	SP-37.2	None Supplied	None Supplied	Grey clay with gravel.
1615596	SP-37.3	None Supplied	None Supplied	Grey clay with gravel.



Analytical Report Number : 20-29048
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-29048

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-37	None Supplied	S	1615594	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-37	None Supplied	S	1615594	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-37	None Supplied	S	1615594	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-37	None Supplied	S	1615594	b	TPHCWG (Soil)	L088/76-PL	b
SP-37	None Supplied	S	1615594	b	Volatile organic compounds in soil	L073B-PL	b
SP-37.2	None Supplied	S	1615595	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-37.2	None Supplied	S	1615595	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-37.2	None Supplied	S	1615595	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-37.2	None Supplied	S	1615595	b	TPHCWG (Soil)	L088/76-PL	b
SP-37.2	None Supplied	S	1615595	b	Volatile organic compounds in soil	L073B-PL	b
SP-37.3	None Supplied	S	1615596	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-37.3	None Supplied	S	1615596	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-37.3	None Supplied	S	1615596	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-37.3	None Supplied	S	1615596	b	TPHCWG (Soil)	L088/76-PL	b
SP-37.3	None Supplied	S	1615596	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-29199

Project / Site name:	Clarendon Road	Samples received on:	10/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	10/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	15/09/2020
Report Issue Number:	1	Report issued on:	15/09/2020
Samples Analysed:	3 leachate samples - 3 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

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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.



Analytical Report Number: 20-29199
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1616214	1616215	1616216
Sample Reference	Imported 6F2-1	Imported 6F2-2	Imported 6F2-3
Sample Number	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	10/09/2020	10/09/2020	10/09/2020
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	%	N/A	NONE	2.8	1.8	1.3
Total mass of sample received	kg	0.001	NONE	1.3	1.4	1.3

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	g/l	0.00125	NONE	0.63	1.5	0.09
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/kg	2.5	NONE	1300	3100	180
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/l	1.25	NONE	627	1530	90.4
Ammonium as NH ₄	mg/kg	0.5	NONE	< 0.5	1.7	< 0.5

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	0.67	1.2	< 0.05
Pyrene	mg/kg	0.05	NONE	0.72	1.2	< 0.05
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	0.25	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	180	150	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	180	150	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10	15	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10	230	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	< 10	250	< 10



Analytical Report Number: 20-29199
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1616214	1616215	1616216
Sample Reference				Imported 6F2-1	Imported 6F2-2	Imported 6F2-3
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				10/09/2020	10/09/2020	10/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-29199
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1616217	1616218	1616219
Sample Reference				Imported 6F2-1	Imported 6F2-2	Imported 6F2-3
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				10/09/2020	10/09/2020	10/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	60.5	27.2	147
Ammonium as NH ₄	µg/l	15	NONE	120	68	150

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



Analytical Report Number : 20-29199

Project / Site name: Clarendon Road

* 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 *
1616214	Imported 6F2-1	None Supplied	None Supplied	Brown rubble with brick.**
1616215	Imported 6F2-2	None Supplied	None Supplied	Brown rubble with brick.**
1616216	Imported 6F2-3	None Supplied	None Supplied	Brown rubble with brick.**

** Non MCERTS matrix



Analytical Report Number : 20-29199
Project / Site name: Clarendon Road

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	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	NONE

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.

Sample Deviation Report



Analytical Report Number : 20-29199

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
Imported 6F2-1	None Supplied	S	1616214	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Imported 6F2-1	None Supplied	S	1616214	b	Semi-volatile organic compounds in soil	L064-PL	b
Imported 6F2-1	None Supplied	S	1616214	b	Speciated EPA-16 PAHs in soil	L064-PL	b
Imported 6F2-1	None Supplied	S	1616214	b	TPHCWG (Soil)	L088/76-PL	b
Imported 6F2-1	None Supplied	S	1616214	b	Volatile organic compounds in soil	L073B-PL	b
Imported 6F2-2	None Supplied	S	1616215	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Imported 6F2-2	None Supplied	S	1616215	b	Semi-volatile organic compounds in soil	L064-PL	b
Imported 6F2-2	None Supplied	S	1616215	b	Speciated EPA-16 PAHs in soil	L064-PL	b
Imported 6F2-2	None Supplied	S	1616215	b	TPHCWG (Soil)	L088/76-PL	b
Imported 6F2-2	None Supplied	S	1616215	b	Volatile organic compounds in soil	L073B-PL	b
Imported 6F2-3	None Supplied	S	1616216	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Imported 6F2-3	None Supplied	S	1616216	b	Semi-volatile organic compounds in soil	L064-PL	b
Imported 6F2-3	None Supplied	S	1616216	b	Speciated EPA-16 PAHs in soil	L064-PL	b
Imported 6F2-3	None Supplied	S	1616216	b	TPHCWG (Soil)	L088/76-PL	b
Imported 6F2-3	None Supplied	S	1616216	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-29545

Project / Site name:	Clarendon Road	Samples received on:	11/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	11/09/2020
Your order number:	SRF6075-00005	Analysis completed by:	16/09/2020
Report Issue Number:	1	Report issued on:	16/09/2020
Samples Analysed:	3 leachate samples - 3 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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: 20-29545
Project / Site name: Clarendon Road

Your Order No: SRF6075-00005

Lab Sample Number				1617816	1617817	1617818
Sample Reference				VS-I4	VS-J4	VS-I4-E
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				11/09/2020	11/09/2020	11/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	75	78.7	38.1
Ammonium as NH ₄	µg/l	15	NONE	560	860	34000

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



Analytical Report Number: 20-29545
 Project / Site name: Clarendon Road
 Your Order No: SRF6075-00005

Lab Sample Number				1617813	1617814	1617815
Sample Reference				VS-I4	VS-J4	VS-I4-E
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				11/09/2020	11/09/2020	11/09/2020
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	%	N/A	NONE	19	19	26
Total mass of sample received	kg	0.001	NONE	1.5	1.7	1.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.5	0.52	0.56
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1000	1000	1100
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	499	519	559
Ammonium as NH4	mg/kg	0.5	MCERTS	7.2	10	370

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



Analytical Report Number : 20-29545
Project / Site name: Clarendon Road

* 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 *
1617813	VS-14	None Supplied	None Supplied	Brown clay with gravel.
1617814	VS-14	None Supplied	None Supplied	Brown clay with gravel.
1617815	VS-14-E	None Supplied	None Supplied	Brown clay with gravel.



Analytical Report Number : 20-29545
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-29682

Project / Site name:	Clarendon Road P3	Samples received on:	14/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	14/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	17/09/2020
Report Issue Number:	1	Report issued on:	17/09/2020
Samples Analysed:	4 leachate samples - 4 non 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

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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.



Analytical Report Number: 20-29682
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1618380	1618381	1618382	1618383
Sample Reference				Type 1	Type 1	6F5	6F5
Sample Number				2	3	1	2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				1200	1200	1200	1200
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	10.8	1.4	176	137
Ammonium as NH ₄	µg/l	15	NONE	58	28	160	110

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



Analytical Report Number: 20-29682
Project / Site name: Clarendon Road P3
Your Order No: S-RE6075/00005

Lab Sample Number				1618376	1618377	1618378	1618379
Sample Reference				Type 1	Type 1	6F5	6F5
Sample Number				2	3	1	2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				1200	1200	1200	1200
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	%	N/A	NONE	0.06	0.07	0.25	0.28
Total mass of sample received	kg	0.001	NONE	2	2	2	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	g/l	0.00125	NONE	0.13	0.051	0.15	0.54
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/kg	2.5	NONE	270	100	290	1100
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/l	1.25	NONE	135	50.6	146	541
Ammonium as NH ₄	mg/kg	0.5	NONE	4.7	1.7	1.1	< 0.5

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	0.58
Pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	0.72
Benzo(a)pyrene	mg/kg	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	34
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	< 8.0	< 8.0	< 8.0	420
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	< 10	< 10	< 10	450

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	< 10	< 10	< 10	150
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	< 10	< 10	< 10	150



Analytical Report Number: 20-29682
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1618376	1618377	1618378	1618379
Sample Reference				Type 1	Type 1	6F5	6F5
Sample Number				2	3	1	2
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				14/09/2020	14/09/2020	14/09/2020	14/09/2020
Time Taken				1200	1200	1200	1200
Analytical Parameter (Soil Analysis)				Units	Limit of detection	Accreditation Status	

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-29682
Project / Site name: Clarendon Road P3

* 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 *
1618376	Type 1	2	None Supplied	Non Soil**
1618377	Type 1	3	None Supplied	Non Soil**
1618378	6F5	1	None Supplied	Non Soil**
1618379	6F5	2	None Supplied	Non Soil**

** Non MCERTS matrix



Analytical Report Number : 20-29682
Project / Site name: Clarendon Road P3

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	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	NONE

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.

Sample Deviation Report



Analytical Report Number : 20-29682
Project / Site name: Clarendon Road P3

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
6F5	1	S	1618378	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
6F5	1	S	1618378	b	Semi-volatile organic compounds in soil	L064-PL	b
6F5	1	S	1618378	b	Speciated EPA-16 PAHs in soil	L064-PL	b
6F5	1	S	1618378	b	TPHCWG (Soil)	L088/76-PL	b
6F5	1	S	1618378	b	Volatile organic compounds in soil	L073B-PL	b
6F5	2	S	1618379	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
6F5	2	S	1618379	b	Semi-volatile organic compounds in soil	L064-PL	b
6F5	2	S	1618379	b	Speciated EPA-16 PAHs in soil	L064-PL	b
6F5	2	S	1618379	b	TPHCWG (Soil)	L088/76-PL	b
6F5	2	S	1618379	b	Volatile organic compounds in soil	L073B-PL	b
Type 1	2	S	1618376	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Type 1	2	S	1618376	b	Semi-volatile organic compounds in soil	L064-PL	b
Type 1	2	S	1618376	b	Speciated EPA-16 PAHs in soil	L064-PL	b
Type 1	2	S	1618376	b	TPHCWG (Soil)	L088/76-PL	b
Type 1	2	S	1618376	b	Volatile organic compounds in soil	L073B-PL	b
Type 1	3	S	1618377	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
Type 1	3	S	1618377	b	Semi-volatile organic compounds in soil	L064-PL	b
Type 1	3	S	1618377	b	Speciated EPA-16 PAHs in soil	L064-PL	b
Type 1	3	S	1618377	b	TPHCWG (Soil)	L088/76-PL	b
Type 1	3	S	1618377	b	Volatile organic compounds in soil	L073B-PL	b

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Analytical Report Number : 20-30328

Replaces Analytical Report Number: 20-30328, issue no. 1

Client references/information amended.

Project / Site name:	Clarendon Road	Samples received on:	16/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	16/09/2020
Your order number:	SRE6075-0005	Analysis completed by:	21/09/2020
Report Issue Number:	2	Report issued on:	22/09/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
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

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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.



Analytical Report Number: 20-30328
Project / Site name: Clarendon Road

Your Order No: SRE6075-0005

Lab Sample Number				1621614	1621615
Sample Reference				SP- 39	SP- 39
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				16/09/2020	16/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	255	457
Ammonium as NH ₄	µg/l	15	NONE	410	1500

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

Analytical Report Number: 20-30328
 Project / Site name: Clarendon Road
 Your Order No: SRE6075-0005

Lab Sample Number				1621612	1621613
Sample Reference				SP- 39	SP- 39
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				16/09/2020	16/09/2020
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	%	N/A	NONE	12	13
Total mass of sample received	kg	0.001	NONE	1.9	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.1	8.1
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1
Water Soluble Sulphate as SO4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	9900	9900
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	4.9	4.9
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	4930	4940
Ammonium as NH4	mg/kg	0.5	MCERTS	4.9	7

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0
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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	0.21
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	1
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.23
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.54
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.56
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.27
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.2
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 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	MCERTS	< 0.80	3.01
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Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	14	14
Barium (aqua regia extractable)	mg/kg	1	MCERTS	61	54
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.5	1.4
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	1.1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	42	37
Copper (aqua regia extractable)	mg/kg	1	MCERTS	32	30
Lead (aqua regia extractable)	mg/kg	1	MCERTS	13	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	37	36
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	86	72

Analytical Report Number: 20-30328
 Project / Site name: Clarendon Road
 Your Order No: SRE6075-0005

Lab Sample Number				1621612	1621613
Sample Reference				SP- 39	SP- 39
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				16/09/2020	16/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	76	73

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

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



Analytical Report Number : 20-30328
Project / Site name: Clarendon Road

* 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 *
1621612	SP- 39	1	None Supplied	Brown clay with gravel.
1621613	SP- 39	2	None Supplied	Brown clay with gravel.



Analytical Report Number : 20-30328
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
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
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 (skalar)	L080-PL	W	MCERTS
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
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 (Skalar)	L080-PL	W	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025



Analytical Report Number : 20-30328

Project / Site name: Clarendon Road

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
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
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.



Sample Deviation Report



Analytical Report Number : 20-30328

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP- 39	1	S	1621612	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP- 39	1	S	1621612	b	Monohydric phenols in soil	L080-PL	b
SP- 39	1	S	1621612	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP- 39	1	S	1621612	b	TPHCWG (Soil)	L088/76-PL	b
SP- 39	1	S	1621612	b	Volatile organic compounds in soil	L073B-PL	b
SP- 39	2	S	1621613	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP- 39	2	S	1621613	b	Monohydric phenols in soil	L080-PL	b
SP- 39	2	S	1621613	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP- 39	2	S	1621613	b	TPHCWG (Soil)	L088/76-PL	b
SP- 39	2	S	1621613	b	Volatile organic compounds in soil	L073B-PL	b



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Analytical Report Number : 20-30330

Project / Site name:	Clarendon Road	Samples received on:	16/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	17/09/2020
Your order number:	SRE6075-0005	Analysis completed by:	23/09/2020
Report Issue Number:	1	Report issued on:	23/09/2020
Samples Analysed:	2 10:1 WAC samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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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Waste Acceptance Criteria Analytical Results								
Report No:	20-30330							
					Client: KELTBRAY			
Location	Clarendon Road							
Lab Reference (Sample Number)	1621617 / 1621618				Landfill Waste Acceptance Criteria			
					Limits			
Sampling Date	16/09/2020				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	SP- 39 1							
Depth (m)								
Solid Waste Analysis								
TOC (%)**	0.2				3%	5%	6%	
Loss on Ignition (%) **	3.0				--	--	10%	
BTEX (µg/kg) **	< 10				6000	--	--	
Sum of PCBs (mg/kg) **	< 0.007				1	--	--	
Mineral Oil (mg/kg)	< 10				500	--	--	
Total PAH (WAC-17) (mg/kg)	1.62				100	--	--	
pH (units)**	7.3				--	>6	--	
Acid Neutralisation Capacity (mol / kg)	1.1				--	To be evaluated	To be evaluated	
Eluate Analysis (BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)			
Arsenic *	< 0.0011			< 0.0110	0.5	2	25	
Barium *	0.0127			0.108	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	< 0.0004			< 0.0040	0.5	10	70	
Copper *	0.0019			0.017	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30	
Nickel *	0.0014			0.012	0.4	10	40	
Lead *	0.0018			0.016	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.0048			0.041	4	50	200	
Chloride *	18			150	800	15000	25000	
Fluoride	1.3			11	10	150	500	
Sulphate *	130			1100	1000	20000	50000	
TDS*	210			1800	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	3.66			31.2	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	1.9							
Dry Matter (%)	88							
Moisture (%)	12							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					** = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current legislation					** = MCFRTS accredited			

Results are expressed on a dry weight basis, after correction for moisture content where applicable.

*= UKAS accredited (liquid eluate analysis only)

Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



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This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 20-30330

Project / Site name: Clarendon Road

* 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 *
1621617	SP- 39	1	None Supplied	Brown clay with gravel.
1621619	SP- 39	2	None Supplied	Brown clay with gravel.



Analytical Report Number : 20-30330
Project / Site name: Clarendon Road

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
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	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
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 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. MCERTS accredited except Coronene.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	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 organic carbon (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
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025

Analytical Report Number : 20-30330
Project / Site name: Clarendon Road

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
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

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.



Sample Deviation Report



Analytical Report Number : 20-30330

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP- 39	1	S	1621617	b	BTEX in soil (Monoaromatics)	L073B-PL	b
SP- 39	1	S	1621617	b	Mineral Oil (Soil) C10 - C40	L076-PL	b
SP- 39	1	S	1621617	b	PCB's By GC-MS in soil	L027-PL	b
SP- 39	1	S	1621617	b	Speciated WAC-17 PAHs in soil	L064-PL	b
SP- 39	1	S	1621617	b	Total BTEX in soil (Poland)	L073-PL	b
SP- 39	2	S	1621619	b	BTEX in soil (Monoaromatics)	L073B-PL	b
SP- 39	2	S	1621619	b	Mineral Oil (Soil) C10 - C40	L076-PL	b
SP- 39	2	S	1621619	b	PCB's By GC-MS in soil	L027-PL	b
SP- 39	2	S	1621619	b	Speciated WAC-17 PAHs in soil	L064-PL	b
SP- 39	2	S	1621619	b	Total BTEX in soil (Poland)	L073-PL	b



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Analytical Report Number : 20-30457

Project / Site name:	Clarendon Road	Samples received on:	17/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	17/09/2020
Your order number:	S-RE6075-00005	Analysis completed by:	22/09/2020
Report Issue Number:	1	Report issued on:	22/09/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-30457
Project / Site name: Clarendon Road

Your Order No: S-RE6075-00005

Lab Sample Number				1622191	1622192
Sample Reference				VS-M10	SP025-3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				17/09/2020	17/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	213	1.1
Ammonium as NH ₄	µg/l	15	NONE	85	78

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

Analytical Report Number: 20-30457
Project / Site name: Clarendon Road
Your Order No: S-RE6075-00005

Lab Sample Number	1622189	1622190
Sample Reference	VS-M10	SP025-3
Sample Number	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied
Date Sampled	17/09/2020	17/09/2020
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	%	N/A	NONE	2.7	2.6
Total mass of sample received	kg	0.001	NONE	1.9	1.9

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.7	0.95
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3300	1900
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1650	954
Ammonium as NH ₄	mg/kg	0.5	MCERTS	< 0.5	1.7

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05
Fluorene	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)pyrene	mg/kg	0.05	MCERTS	-	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	< 1.0
Toluene	µg/kg	1	MCERTS	-	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0
o-xylene	µg/kg	1	MCERTS	-	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	< 10

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	< 1.0

Analytical Report Number: 20-30457
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075-00005

Lab Sample Number				1622189	1622190
Sample Reference				VS-M10	SP025-3
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				17/09/2020	17/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
1,1-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-30457

Project / Site name: Clarendon Road

* 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 *
1622189	VS-M10	None Supplied	None Supplied	Brown clay with gravel.
1622190	SP025-3	None Supplied	None Supplied	Brown clay with gravel.



Analytical Report Number : 20-30457
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



Sample Deviation Report



Analytical Report Number : 20-30457

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP025-3	None Supplied	S	1622190	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP025-3	None Supplied	S	1622190	b	Semi-volatile organic compounds in soil	L064-PL	b
SP025-3	None Supplied	S	1622190	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP025-3	None Supplied	S	1622190	b	TPHCWG (Soil)	L088/76-PL	b
SP025-3	None Supplied	S	1622190	b	Volatile organic compounds in soil	L073B-PL	b



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Analytical Report Number : 20-30822

Replaces Analytical Report Number: 20-30822, issue no. 1

Client references/information amended.

Project / Site name:	Clarendon Road	Samples received on:	18/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	18/09/2020
Your order number:	6075-00005	Analysis completed by:	23/09/2020
Report Issue Number:	2	Report issued on:	24/09/2020
Samples Analysed:	9 leachate samples - 9 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-30822
Project / Site name: Clarendon Road

Your Order No: 6075-00005

Lab Sample Number				1623925	1623926	1623927	1623928
Sample Reference				VS-J7	VS-I7	VS-I7-E	VS-I8-E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/09/2020	18/09/2020	18/09/2020	18/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	45.7	143	102	124
Ammonium as NH ₄	µg/l	15	NONE	14000	39000	27000	38000

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



Analytical Report Number: 20-30822
Project / Site name: Clarendon Road

Your Order No: 6075-00005

Lab Sample Number				1623929	1623930	1623931	1623932
Sample Reference				VS-K7	VS-J8	VS-J7-BASE	VS-J7-EAST
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/09/2020	18/09/2020	18/09/2020	18/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	54.8	109	279	115
Ammonium as NH ₄	µg/l	15	NONE	12000	16000	76000	14000

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



Analytical Report Number: 20-30822
Project / Site name: Clarendon Road

Your Order No: 6075-00005

Lab Sample Number				1623933
Sample Reference				VS-J7-WEST
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				18/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)				
Units				
Limit of detection				
Accreditation Status				

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	125
Ammonium as NH ₄	µg/l	15	NONE	84

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



Analytical Report Number: 20-30822
 Project / Site name: Clarendon Road
 Your Order No: 6075-00005

Lab Sample Number				1623916	1623917	1623918	1623919
Sample Reference				VS-J7	VS-I7	VS-I7-E	VS-I8-E
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/09/2020	18/09/2020	18/09/2020	18/09/2020
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	%	N/A	NONE	12	14	11	15
Total mass of sample received	kg	0.001	NONE	2	2	2	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	0.054
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	0.054

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.43	1.3	1.1	2.2
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	850	2600	2100	4500
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	425	1310	1060	2230
Ammonium as NH4	mg/kg	0.5	MCERTS	180	610	300	500

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



Analytical Report Number: 20-30822
 Project / Site name: Clarendon Road
 Your Order No: 6075-00005

Lab Sample Number				1623920	1623921	1623922	1623923
Sample Reference				VS-K7	VS-J8	VS-J7-BASE	VS-J7-EAST
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				18/09/2020	18/09/2020	18/09/2020	18/09/2020
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	%	N/A	NONE	9.5	17	16	20
Total mass of sample received	kg	0.001	NONE	2	2	2	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.28	0.91	2	0.84
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	560	1800	3900	1700
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	281	912	1970	844
Ammonium as NH4	mg/kg	0.5	MCERTS	120	110	850	140

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

Analytical Report Number: 20-30822

Project / Site name: Clarendon Road

Your Order No: 6075-00005

Lab Sample Number				1623924
Sample Reference				VS-J7-WEST
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				18/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)		Units	Limit of detection	Accreditation Status

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	22
Total mass of sample received	kg	0.001	NONE	2

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-
Asbestos Quantification Total	%	0.001	ISO 17025	-

General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.89
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1800
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	893
Ammonium as NH ₄	mg/kg	0.5	MCERTS	12

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



Analytical Report Number: 20-30822
Project / Site name: Clarendon Road
Your Order No: 6075-00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1623919	VS-I8-E		134	Loose Fibrous Debris	Chrysotile	0.054	0.054

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number : 20-30822

Project / Site name: Clarendon Road

* 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 *
1623916	VS-J7	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623917	VS-I7	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623918	VS-I7-E	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623919	VS-I8-E	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623920	VS-K7	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623921	VS-J8	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623922	VS-J7-BASE	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623923	VS-J7-EAST	None Supplied	None Supplied	Light brown clay and sand with gravel.
1623924	VS-J7-WEST	None Supplied	None Supplied	Light brown clay and sand with gravel.



Analytical Report Number : 20-30822
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

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Analytical Report Number : 20-31009

Project / Site name:	Clarendon Road	Samples received on:	21/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	21/09/2020
Your order number:	SRE6075-00005	Analysis completed by:	24/09/2020
Report Issue Number:	1	Report issued on:	24/09/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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: 20-31009
Project / Site name: Clarendon Road

Your Order No: SRE6075-00005

Lab Sample Number				1625093	1625094
Sample Reference				SP022	SP022
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				21/09/2020	21/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	33.9	36.6
Ammonium as NH ₄	µg/l	15	NONE	160	200

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

Analytical Report Number: 20-31009
Project / Site name: Clarendon Road
Your Order No: SRE6075-00005

Lab Sample Number	1625091	1625092
Sample Reference	SP022	SP022
Sample Number	1	2
Depth (m)	None Supplied	None Supplied
Date Sampled	21/09/2020	21/09/2020
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	%	N/A	NONE	0.54	0.62
Total mass of sample received	kg	0.001	NONE	1.7	1.7

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.18	1
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	360	2000
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	178	1020
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1.1	3.2

Phenols by GC-MS

Phenol	mg/kg	0.2	NONE	< 0.2	< 0.2
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	< 0.2	< 0.2
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1
2,4-Dichlorophenol	mg/kg	0.3	NONE	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	NONE	< 0.3	< 0.3
2-Chlorophenol	mg/kg	0.1	NONE	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3
2-Nitrophenol	mg/kg	0.3	NONE	< 0.3	< 0.3
4-Chloro-3-methylphenol	mg/kg	0.1	ISO 17025	< 0.1	< 0.1
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2

Total Phenols

Total Phenols (GC-MS)	mg/kg	1	NONE	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	2.7
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.84
Anthracene	mg/kg	0.05	MCERTS	0.26	1.5
Fluoranthene	mg/kg	0.05	MCERTS	1.2	5.4
Pyrene	mg/kg	0.05	MCERTS	1.1	5.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.6	2.5

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0

Analytical Report Number: 20-31009
 Project / Site name: Clarendon Road
 Your Order No: SRE6075-00005

Lab Sample Number				1625091	1625092
Sample Reference				SP022	SP022
Sample Number				1	2
Depth (m)				None Supplied	None Supplied
Date Sampled				21/09/2020	21/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	24	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	24	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	21
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	33
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	60
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	88
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	200

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0

Total Xylenes	µg/kg	1	NONE	< 1.0	< 1.0
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-31009
Project / Site name: Clarendon Road

* 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 *
1625091	SP022	1	None Supplied	Light brown sand with gravel and brick.
1625092	SP022	2	None Supplied	Light brown sand with rubble and brick.



Analytical Report Number : 20-31009
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
Phenols, speciated, in soil, by GCMS	Determination of speciated phenols in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS
Sum of m, p & o-Xylene	Sum of xylene species, quantified by HS-GC-MS	In house method	L017-UK	W	NONE



Analytical Report Number : 20-31009
Project / Site name: Clarendon Road

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
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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.



Sample Deviation Report



Analytical Report Number : 20-31009

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP022	1	S	1625091	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP022	1	S	1625091	b	Phenols, speciated, in soil, by GCMS	L064-PL	b
SP022	1	S	1625091	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP022	1	S	1625091	b	Sum of m, p & o-Xylene	L017-UK	b
SP022	1	S	1625091	b	TPHCWG (Soil)	L088/76-PL	b
SP022	1	S	1625091	b	Volatile organic compounds in soil	L073B-PL	b
SP022	2	S	1625092	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP022	2	S	1625092	b	Phenols, speciated, in soil, by GCMS	L064-PL	b
SP022	2	S	1625092	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP022	2	S	1625092	b	Sum of m, p & o-Xylene	L017-UK	b
SP022	2	S	1625092	b	TPHCWG (Soil)	L088/76-PL	b
SP022	2	S	1625092	b	Volatile organic compounds in soil	L073B-PL	b



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Analytical Report Number : 20-31267

Project / Site name:	Clarendon Road P3	Samples received on:	22/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	22/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	25/09/2020
Report Issue Number:	1	Report issued on:	25/09/2020
Samples Analysed:	9 leachate samples - 9 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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.



Analytical Report Number: 20-31267
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number	1626950	1626951	1626952	1626953
Sample Reference	VS-L7	VS-L8	VS-J8-B	VS-K8
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	21/09/2020	21/09/2020	21/09/2020	21/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	20.5	38.9	106	33.1
Ammonium as NH ₄	µg/l	15	NONE	76	590	16000	4000

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



Analytical Report Number: 20-31267
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1626954	1626955	1626956	1626957
Sample Reference				VS-J9-E	VS-J8-W	VS-J9-B	VS-J9-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/09/2020	21/09/2020	21/09/2020	21/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	98.7	109	75.3	133
Ammonium as NH ₄	µg/l	15	NONE	31000	1600	1400	3200

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



Analytical Report Number: 20-31267
Project / Site name: Clarendon Road P3

Your Order No: S-RE6075/00005

Lab Sample Number				1626958
Sample Reference				VS-J8-E
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				21/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	108
Ammonium as NH ₄	µg/l	15	NONE	18000

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



Analytical Report Number: 20-31267
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1626941	1626942	1626943	1626944
Sample Reference				VS-L7	VS-L8	VS-J8-B	VS-K8
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/09/2020	21/09/2020	21/09/2020	21/09/2020
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	%	N/A	NONE	2.2	2.6	17	18
Total mass of sample received	kg	0.001	NONE	2	1.8	1.4	1.6

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.79	0.58	0.85	0.54
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1600	1200	1700	1100
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	789	582	851	538
Ammonium as NH4	mg/kg	0.5	MCERTS	2.7	5.1	180	54

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



Analytical Report Number: 20-31267
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1626945	1626946	1626947	1626948
Sample Reference				VS-J9-E	VS-J8-W	VS-J9-B	VS-J9-W
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				21/09/2020	21/09/2020	21/09/2020	21/09/2020
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	%	N/A	NONE	16	15	15	16
Total mass of sample received	kg	0.001	NONE	1	1.5	1.1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.1	0.93	0.9	0.88
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	2200	1900	1800	1800
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1090	928	899	880
Ammonium as NH4	mg/kg	0.5	MCERTS	370	30	170	34

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

Analytical Report Number: 20-31267
 Project / Site name: Clarendon Road P3
 Your Order No: S-RE6075/00005

Lab Sample Number				1626949
Sample Reference				VS-J8-E
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				21/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)				
	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	13
Total mass of sample received	kg	0.001	NONE	1.4

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.92
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1800
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	918
Ammonium as NH ₄	mg/kg	0.5	MCERTS	300

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



Analytical Report Number : 20-31267
Project / Site name: Clarendon Road P3

* 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 *
1626941	VS-L7	None Supplied	None Supplied	Brown sand with gravel.
1626942	VS-L8	None Supplied	None Supplied	Brown sand with gravel.
1626943	VS-J8-B	None Supplied	None Supplied	Light brown clay and sand.
1626944	VS-K8	None Supplied	None Supplied	Brown clay and sand.
1626945	VS-J9-E	None Supplied	None Supplied	Brown clay and sand.
1626946	VS-J8-W	None Supplied	None Supplied	Brown clay and sand.
1626947	VS-J9-B	None Supplied	None Supplied	Brown clay and sand.
1626948	VS-J9-W	None Supplied	None Supplied	Brown clay and sand.
1626949	VS-J8-E	None Supplied	None Supplied	Brown clay and sand.



Analytical Report Number : 20-31267
Project / Site name: Clarendon Road P3

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.



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Analytical Report Number : 20-31490

Replaces Analytical Report Number: 20-31490, issue no. 1

Client references/information amended.

Project / Site name:	Clarendon Road	Samples received on:	23/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	23/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	29/09/2020
Report Issue Number:	2	Report issued on:	08/10/2020
Samples Analysed:	7 leachate samples - 7 soil samples		

Signed:

Rachel Bradley
Deputy Quality Manager
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.



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number	1627926	1627927	1627928	1627929
Sample Reference	VS-L9	VS-K9	SP-Z2	SP-Z2
Sample Number	SL	SL	5	7
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	23/09/2020	23/09/2020	23/09/2020	23/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	278	213	80.8	101
Ammonium as NH ₄	µg/l	15	NONE	600	430	1400	1400

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



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1627930	1627931	1627932
Sample Reference				SP-22	SP-39	SP-40
Sample Number				8	3	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied
Date Sampled				23/09/2020	23/09/2020	23/09/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	34.7	78.1	91.9
Ammonium as NH ₄	µg/l	15	NONE	1600	2100	1400

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



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1627919	1627920	1627921	1627922
Sample Reference	VS-L9	VS-K9	SP-Z2	SP-Z2
Sample Number	SL	SL	6	7
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	23/09/2020	23/09/2020	23/09/2020	23/09/2020
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	%	N/A	NONE	2.3	4.6	2.3	3.7
Total mass of sample received	kg	0.001	NONE	1.5	1.4	1.3	1.1

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	< 0.001
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	< 0.001

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.83	1.7	0.15	0.92
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	1700	3300	290	1800
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	829	1670	145	917
Ammonium as NH4	mg/kg	0.5	MCERTS	5.9	11	4.7	43

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	0.49
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	0.37
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	0.57
Fluoranthene	mg/kg	0.05	MCERTS	-	-	1.2	2.6
Pyrene	mg/kg	0.05	MCERTS	-	-	1.1	2.6
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	0.38	0.95



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1627919	1627920	1627921	1627922
Sample Reference	VS-L9	VS-K9	SP-Z2	SP-Z2
Sample Number	SL	SL	6	7
Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled	23/09/2020	23/09/2020	23/09/2020	23/09/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	28
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	< 8.0	120
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	14	71
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	22	210

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	< 2.0	4.4
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	< 10	19
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	13	18
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	-	-	17	42

VOCs

Vinyl Chloride	µg/kg	1	NONE	-	-	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	-	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	-	-	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1627923	1627924	1627925
Sample Reference	SP-22	SP-39	SP-40
Sample Number	8	3	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	23/09/2020	23/09/2020	23/09/2020
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	%	N/A	NONE	6.8	12	13
Total mass of sample received	kg	0.001	NONE	1.1	1	0.97

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	Chrysotile	-	-
Asbestos in Soil	Type	N/A	ISO 17025	Detected	Not-detected	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	< 0.001	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	< 0.001	-	-

General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	1.6	0.85	1
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	3100	1700	2100
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	1570	851	1030
Ammonium as NH4	mg/kg	0.5	MCERTS	28	28	19

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.78	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.82	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.24	< 0.05	< 0.05



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number	1627923	1627924	1627925
Sample Reference	SP-22	SP-39	SP-40
Sample Number	8	3	None Supplied
Depth (m)	None Supplied	None Supplied	None Supplied
Date Sampled	23/09/2020	23/09/2020	23/09/2020
Time Taken	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	23	130	16
Toluene	µg/kg	1	MCERTS	15	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	21	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	88	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	49	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	14	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	16	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	0.023	0.13	0.015
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	0.015	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	0.23	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-31490
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
1627922	SP-22		166	Loose Fibres	Chrysotile	< 0.001	< 0.001
1627923	SP-22		197	Loose Fibres	Chrysotile	< 0.001	< 0.001

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.



Analytical Report Number : 20-31490

Project / Site name: Clarendon Road

* 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 *
1627919	VS-L9	SL	None Supplied	Brown clay with gravel and vegetation.
1627920	VS-K9	SL	None Supplied	Brown clay with gravel and vegetation.
1627921	SP-22	6	None Supplied	Grey concrete with gravel.**
1627922	SP-22	7	None Supplied	Grey concrete with gravel.**
1627923	SP-22	8	None Supplied	Grey rubble.**
1627924	SP-39	3	None Supplied	Brown clay with gravel.
1627925	SP-40	None Supplied	None Supplied	Brown clay with gravel.

**Non MCERTS matrix.



Analytical Report Number : 20-31490
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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
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
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
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
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	MCERTS



Analytical Report Number : 20-31490
Project / Site name: Clarendon Road

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
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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.



Sample Deviation Report



Analytical Report Number : 20-31490
Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
SP-22	6	S	1627921	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	6	S	1627921	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	6	S	1627921	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	6	S	1627921	b	TPHCWG (Soil)	L088/76-PL	b
SP-22	6	S	1627921	b	Volatile organic compounds in soil	L073B-PL	b
SP-22	7	S	1627922	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	7	S	1627922	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	7	S	1627922	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	7	S	1627922	b	TPHCWG (Soil)	L088/76-PL	b
SP-22	7	S	1627922	b	Volatile organic compounds in soil	L073B-PL	b
SP-22	8	S	1627923	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-22	8	S	1627923	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-22	8	S	1627923	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-22	8	S	1627923	b	TPHCWG (Soil)	L088/76-PL	b
SP-22	8	S	1627923	b	Volatile organic compounds in soil	L073B-PL	b
SP-39	3	S	1627924	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-39	3	S	1627924	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-39	3	S	1627924	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-39	3	S	1627924	b	TPHCWG (Soil)	L088/76-PL	b
SP-39	3	S	1627924	b	Volatile organic compounds in soil	L073B-PL	b
SP-40	None Supplied	S	1627925	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
SP-40	None Supplied	S	1627925	b	Semi-volatile organic compounds in soil	L064-PL	b
SP-40	None Supplied	S	1627925	b	Speciated EPA-16 PAHs in soil	L064-PL	b
SP-40	None Supplied	S	1627925	b	TPHCWG (Soil)	L088/76-PL	b
SP-40	None Supplied	S	1627925	b	Volatile organic compounds in soil	L073B-PL	b

**Alix Hamilton**

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Analytical Report Number : 20-31732

Project / Site name:	Clarendon Road	Samples received on:	24/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	24/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	29/09/2020
Report Issue Number:	1	Report issued on:	29/09/2020
Samples Analysed:	4 leachate samples - 4 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
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

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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: 20-31732
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1629233	1629234	1629235	1629236
Sample Reference				VS-P13-Base	VS-P13-East	VS-P13-West	VS-P13-South
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/09/2020	24/09/2020	24/09/2020	24/09/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	37.6	121	113	117
Ammonium as NH ₄	µg/l	15	NONE	30	26	29	36

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



Analytical Report Number: 20-31732
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1629229	1629230	1629231	1629232
Sample Reference				VS-P13-Base	VS-P13-East	VS-P13-West	VS-P13-South
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				24/09/2020	24/09/2020	24/09/2020	24/09/2020
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	%	N/A	NONE	18	20	21	16
Total mass of sample received	kg	0.001	NONE	1.8	1.7	1.7	1.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected
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General Inorganics

Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.36	0.91	0.88	0.8
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	730	1800	1800	1600
Water Soluble SO4 (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	364	915	876	798
Ammonium as NH4	mg/kg	0.5	MCERTS	< 0.5	< 0.5	< 0.5	0.7

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



Analytical Report Number : 20-31732

Project / Site name: Clarendon Road

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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 *
1629229	VS-P13-Base	None Supplied	None Supplied	Brown clay and sand with vegetation.
1629230	VS-P13-East	None Supplied	None Supplied	Brown clay and sand with vegetation.
1629231	VS-P13-West	None Supplied	None Supplied	Brown clay and sand.
1629232	VS-P13-South	None Supplied	None Supplied	Brown clay and sand with vegetation.



Analytical Report Number : 20-31732

Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-32245

Project / Site name:	Clarendon Road	Samples received on:	18/09/2020
Your job number:	6075	Samples instructed on/ Analysis started on:	28/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	01/10/2020
Report Issue Number:	1	Report issued on:	01/10/2020
Samples Analysed:	1 leachate sample - 1 soil sample		


Signed:

Joanna Wawrzeczko
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.

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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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An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-32245

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1631815
Sample Reference				VS-18
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				18/09/2020
Time Taken				None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	220
Ammonium as NH ₄	µg/l	15	NONE	87000

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



Analytical Report Number: 20-32245

Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1631814
Sample Reference				VS-18
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				18/09/2020
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	N/A	NONE	14
Total mass of sample received	kg	0.001	NONE	2

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.02
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	40
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	19.8
Ammonium as NH ₄	mg/kg	0.5	MCERTS	1200

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



Analytical Report Number : 20-32245
Project / Site name: Clarendon Road

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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 *
1631814	VS-18	None Supplied	None Supplied	Brown loam and clay with gravel.



Analytical Report Number : 20-32245
Project / Site name: Clarendon Road

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
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	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.

**Alix Hamilton**

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Analytical Report Number : 20-32643

Project / Site name:	Clarendon Road	Samples received on:	29/09/2020
Your job number:	6074	Samples instructed on/ Analysis started on:	29/09/2020
Your order number:	S-RE6075/00005	Analysis completed by:	02/10/2020
Report Issue Number:	1	Report issued on:	02/10/2020
Samples Analysed:	2 leachate samples - 2 soil samples		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

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Analytical Report Number: 20-32643
Project / Site name: Clarendon Road

Your Order No: S-RE6075/00005

Lab Sample Number				1633863	1633864
Sample Reference				6F5 impar 1	6F5 impar 2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				29/09/2020	29/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)				Units	Limit of detection
				Accreditation Status	

General Inorganics

Sulphate as SO ₄	mg/l	0.1	ISO 17025	78.8	54.6
Ammonium as NH ₄	µg/l	15	NONE	220	1400

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



Analytical Report Number: 20-32643
Project / Site name: Clarendon Road
Your Order No: S-RE6075/00005

Lab Sample Number				1633861	1633862
Sample Reference				6F5 impar 1	6F5 impar 2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				29/09/2020	29/09/2020
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	%	N/A	NONE	2.3	3.4
Total mass of sample received	kg	0.001	NONE	1.4	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	g/l	0.00125	NONE	0.29	0.5
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/kg	2.5	NONE	580	1000
Water Soluble SO ₄ (2:1 Leach, Equiv.) 1hr extraction	mg/l	1.25	NONE	291	505
Ammonium as NH ₄	mg/kg	0.5	NONE	6.3	41

Speciated PAHs

Naphthalene	mg/kg	0.05	NONE	2.7	< 0.05
Acenaphthene	mg/kg	0.05	NONE	0.53	< 0.05
Fluorene	mg/kg	0.05	NONE	0.96	< 0.05
Anthracene	mg/kg	0.05	NONE	0.79	< 0.05
Fluoranthene	mg/kg	0.05	NONE	3	0.45
Pyrene	mg/kg	0.05	NONE	2.7	0.43
Benzo(a)pyrene	mg/kg	0.05	NONE	1.3	< 0.05

Monoaromatics & Oxygenates

Benzene	µg/kg	1	NONE	< 1.0	< 1.0
Toluene	µg/kg	1	NONE	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	NONE	< 1.0	< 1.0
p & m-xylene	µg/kg	1	NONE	< 1.0	< 1.0
o-xylene	µg/kg	1	NONE	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	NONE	< 1.0	< 1.0

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	NONE	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	NONE	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	NONE	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	NONE	15	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	NONE	17	< 10

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	NONE	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	NONE	4.4	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	NONE	2.3	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	NONE	11	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	NONE	39	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	NONE	56	< 10

VOCs

Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0



Analytical Report Number: 20-32643
 Project / Site name: Clarendon Road
 Your Order No: S-RE6075/00005

Lab Sample Number				1633861	1633862
Sample Reference				6F5 impar 1	6F5 impar 2
Sample Number				None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied
Date Sampled				29/09/2020	29/09/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
1,2-Dichloroethane	µg/kg	1	NONE	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	NONE	< 1.0	< 1.0
Trichloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	NONE	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	NONE	< 1.0	< 1.0

SVOCs

Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2
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U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-32643

Project / Site name: Clarendon Road

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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 *
1633861	6F5 impar 1	None Supplied	None Supplied	Brown rubble.**
1633862	6F5 impar 2	None Supplied	None Supplied	Brown rubble.**

**Non MCERTS Matrix



Analytical Report Number : 20-32643
Project / Site name: Clarendon Road

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	NONE
NRA Leachate Prep	10:1 extract with de-ionised water shaken for 24 hours then filtered.	In-house method based on National Rivers Authority	L020-PL	W	NONE
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
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	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.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	ISO 17025
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-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	NONE
Ammonium as NH4 in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	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	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	D	NONE

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.

Sample Deviation Report



Analytical Report Number : 20-32643

Project / Site name: Clarendon Road

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
6F5 impar 1	None Supplied	S	1633861	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
6F5 impar 1	None Supplied	S	1633861	b	Semi-volatile organic compounds in soil	L064-PL	b
6F5 impar 1	None Supplied	S	1633861	b	Speciated EPA-16 PAHs in soil	L064-PL	b
6F5 impar 1	None Supplied	S	1633861	b	TPHCWG (Soil)	L088/76-PL	b
6F5 impar 1	None Supplied	S	1633861	b	Volatile organic compounds in soil	L073B-PL	b
6F5 impar 2	None Supplied	S	1633862	b	BTEX and MTBE in soil (Monoaromatics)	L073B-PL	b
6F5 impar 2	None Supplied	S	1633862	b	Semi-volatile organic compounds in soil	L064-PL	b
6F5 impar 2	None Supplied	S	1633862	b	Speciated EPA-16 PAHs in soil	L064-PL	b
6F5 impar 2	None Supplied	S	1633862	b	TPHCWG (Soil)	L088/76-PL	b
6F5 impar 2	None Supplied	S	1633862	b	Volatile organic compounds in soil	L073B-PL	b