

**Alix Hamilton**

Keltbray Remediation Ltd
St Andrew's House
Portsmouth Road
Esher
KT10 9TA

t: 02076431000

e: alix.hamilton@keltbray.com

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

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 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

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: 20-28444
 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
------------------	------	-----	-----------	--------------	--------------	--------------	--------------

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
------------------	------	-----	-----------	--------------	--------------	--------------	--------------

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
------------------	------	-----	-----------	--------------

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.