



SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: Not Given
Job Number: 24-000945-1
Date Sampled: 11/01/2024
Date Received: 17/01/2024
Date Tested: 01/02/2024
Sampled By: Client-PIL

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type							
106666	BH102	Not Given	9.00	9.45	D	Dark grey slightly gravelly clayey SILT		57	Sample was quartered, oven dried at 106.3 °C			

Comments:

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Signed:

Katarzyna Koziel

Katarzyna Koziel
Senior Reporting Specialist
for and on behalf of i2 Analytical Ltd



4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

TEST CERTIFICATE
DETERMINATION OF THE UNDRAINED
SHEAR STRENGTH IN TRIAXIAL COMPRESSION
WITHOUT MEASUREMENT OF PORE PRESSURE

Tested in Accordance with: BS 1377-7: 1990: Clause 8

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client Reference: Not Given
Job Number: 24-000945-1
Date Sampled: 11/01/2024
Date Received: 17/01/2024
Date Tested: 06/02/2024
Sampled By: Client-PIL

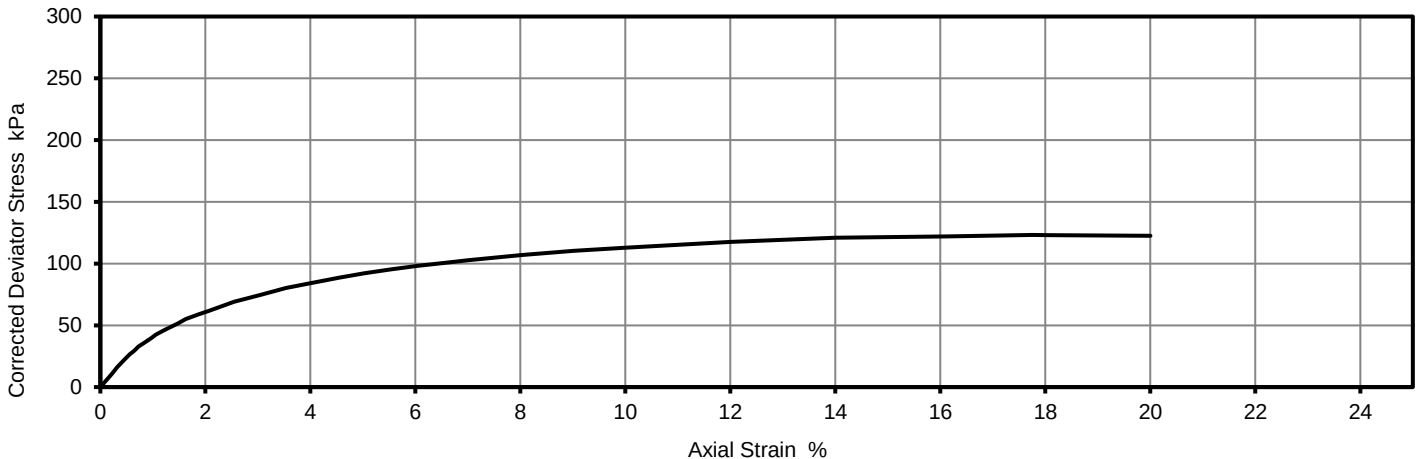
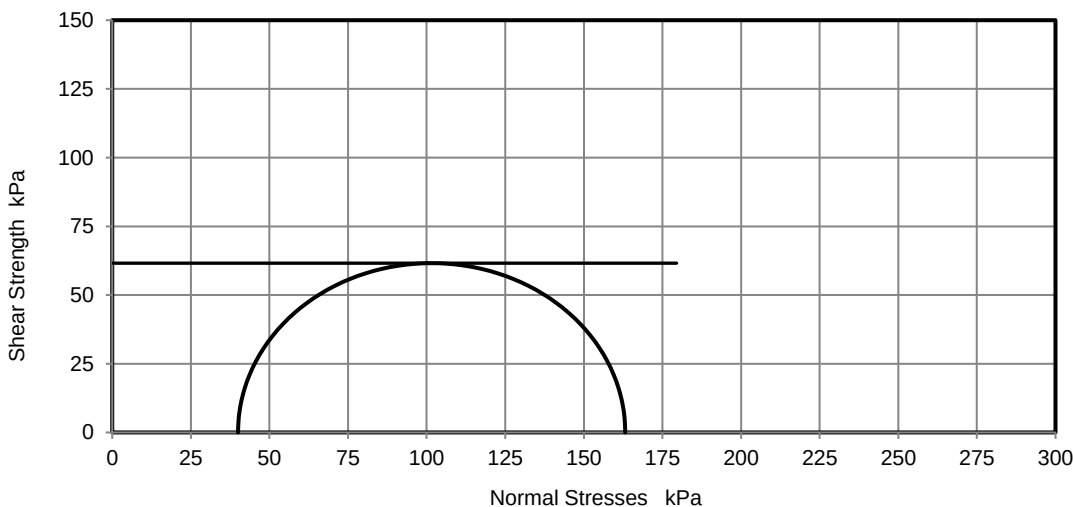
Test Results:

Laboratory Reference: 106664
Hole No.: BH102
Sample Reference: Not Given
Sample Description: Grey CLAY
Sample Preparation: Sample prepared in accordance with BS 1377-1:2016 Clause 9.1.1.

Depth Top [m]: 2.50
Depth Base [m]: 2.60
Sample Type: U

Test Number	1
Length	201.54 mm
Diameter	100.95 mm
Bulk Density	1.91 Mg/m ³
Moisture Content	27 %
Dry Density	1.51 Mg/m ³
Membrane Correction	0.97 kPa

Rate of Strain	1.00 %/min
Cell Pressure	40 kPa
Axial Strain at failure	17.7 %
Deviator Stress, ($\sigma_1 - \sigma_3$) _f	123 kPa
Undrained Shear Strength, c_u	62 kPa $\frac{1}{2}(\sigma_1 - \sigma_3)_f$
Mode of Failure	Compound
Latex membrane thickness	0.28 mm

Deviator Stress v Axial Strain**Mohr Circles**

Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377.
This is provided for information only.

Remarks: Duration of test exceeded time specified in BS 1377-7.

Signed:

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Koziel

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DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

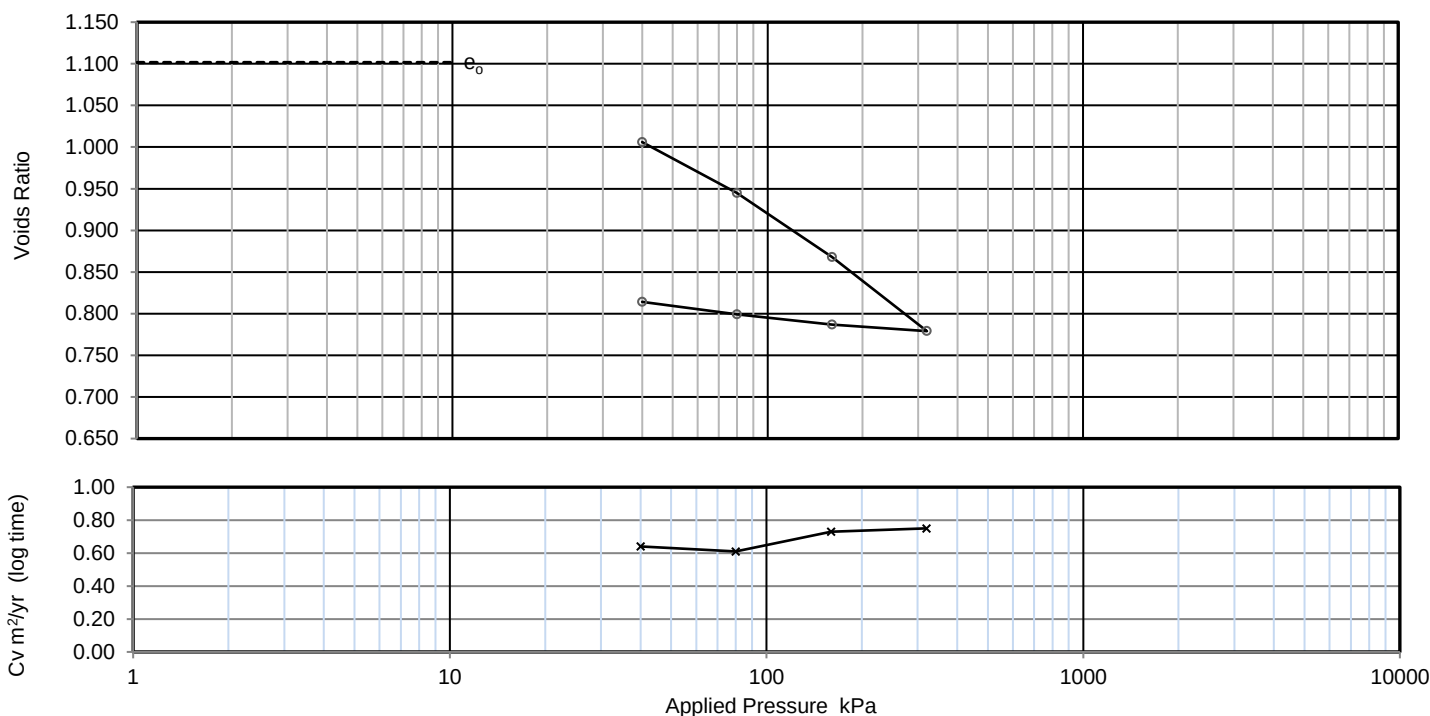
Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: Not Given
Job Number: 24-000945-1
Date Sampled: 11/01/2024
Date Received: 17/01/2024
Date Tested: 06/02/2024
Sampled By: Client-PIL

Laboratory Reference: 106665
Hole No.: BH102
Sample Reference: Not Given
Sample Description: Dark grey CLAY

Depth Top [m]: 4.50
Depth Base [m]: 4.80
Sample Type: U

[illegible]

Preparation

Carried out on top of U100

Index tests

Orientation of the sample

Particle density

Liquid limit

Plastic limit

Vertical		
assumed	2.65	Mg/m3
N/A		%
N/A		%

Specimen details

Diameter

Height

Moisture Content

Bulk density

Dry density

Voids Ratio

Saturation

Avg. temperature for test

Swelling Pressure

Settlement on saturation

Total test time

Initial	Final	
50.00	-	mm
20.10	17.35	mm
43	33	%
1.81	1.94	Mg/m ³
1.26	1.46	Mg/m ³
1.102	0.814	
104	107	%
22.0		°C
Not measured		kPa
		%
5		days

Note: Cv corrected to 20°C

Remarks:

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Senior Reporting Specialist
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Page 1 of 1

Date Reported: 14/02/2024

GF 172.17



TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

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Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937495

Hole No.: TP101

Sample Reference: Not Given

Sample Description: Greyish brown CLAY

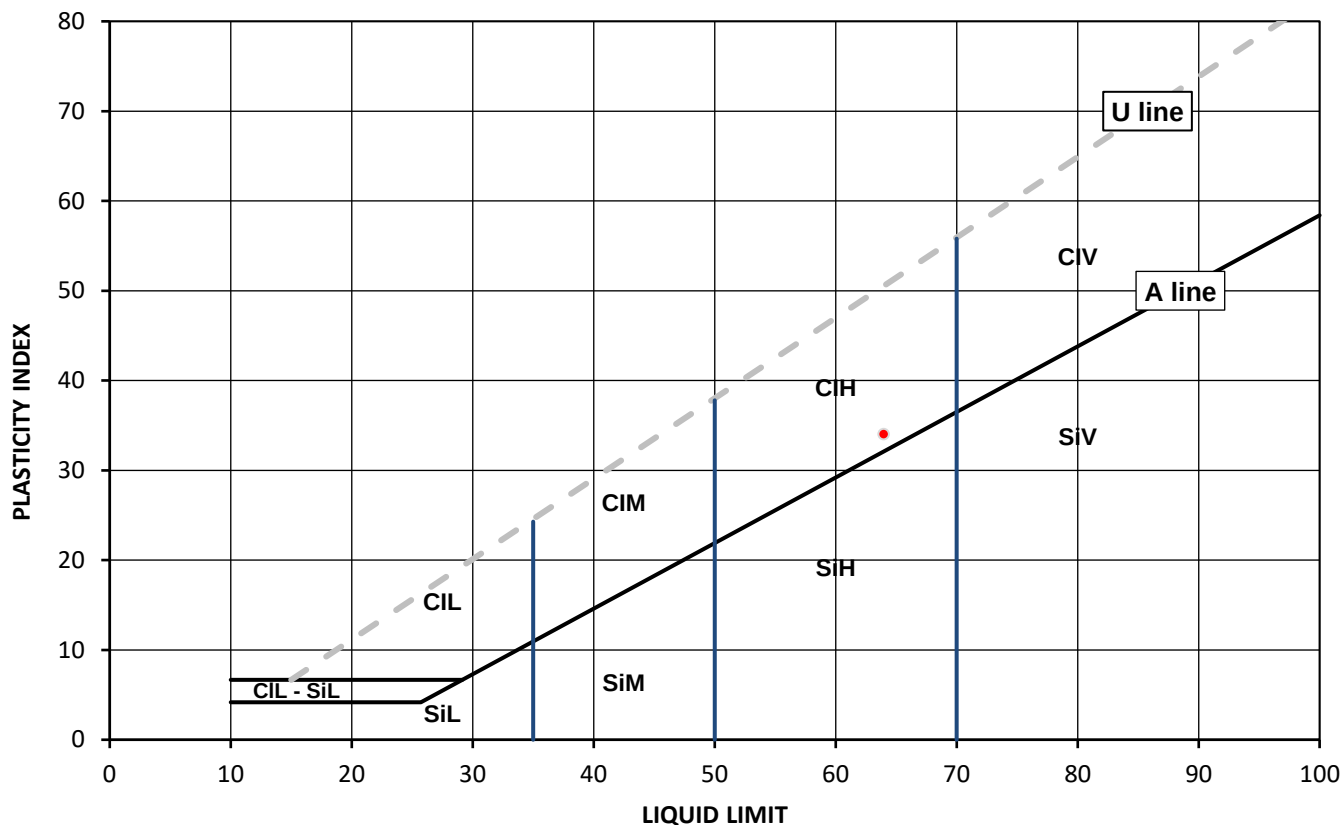
Depth Top [m]: 2.00

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
34	64	30	34	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
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Brackmills Industrial Estate
Northampton NN4 7EB



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Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937497

Hole No.: TP103

Sample Reference: Not Given

Sample Description: Greyish brown CLAY

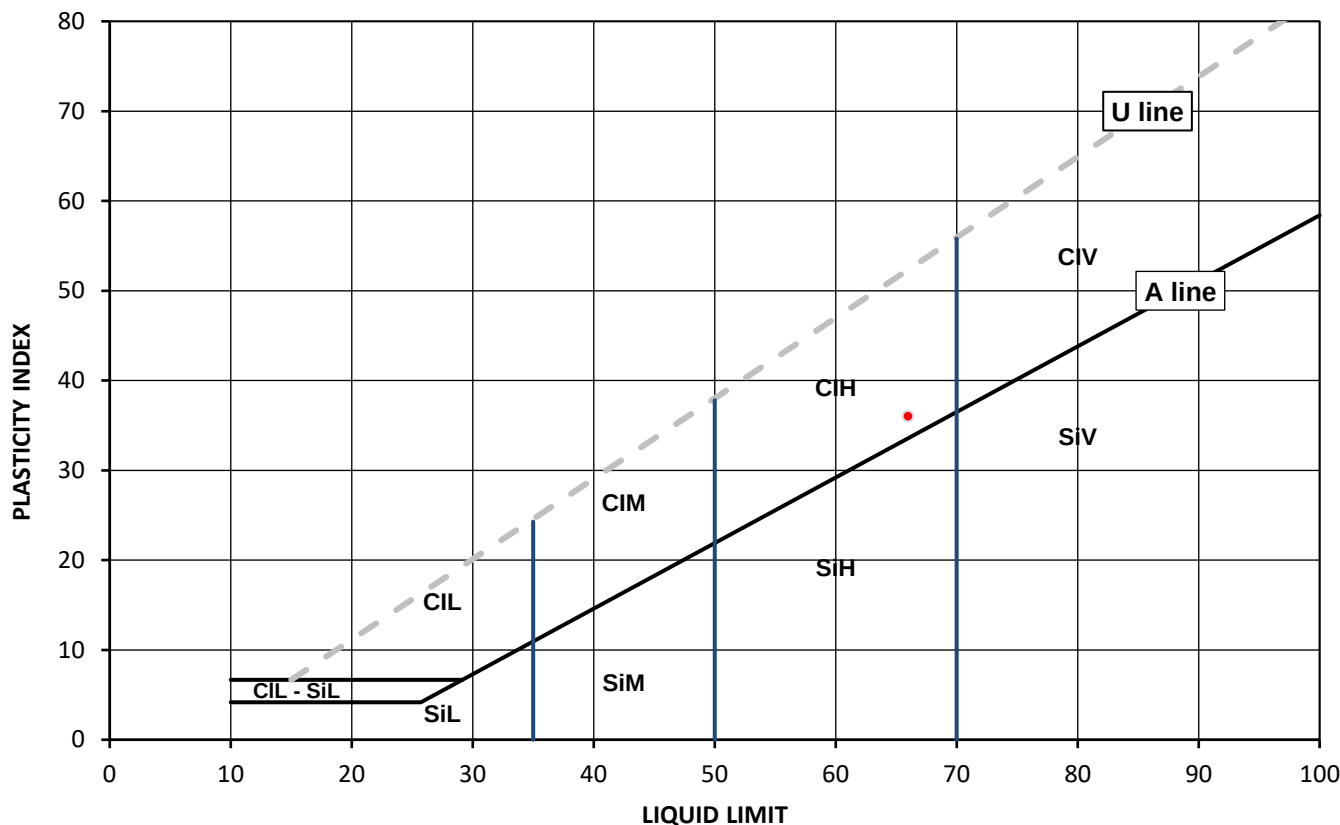
Depth Top [m]: 1.20

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
31	66	30	36	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
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Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937498

Hole No.: TP104

Sample Reference: Not Given

Sample Description: Dark grey gravelly sandy silty CLAY

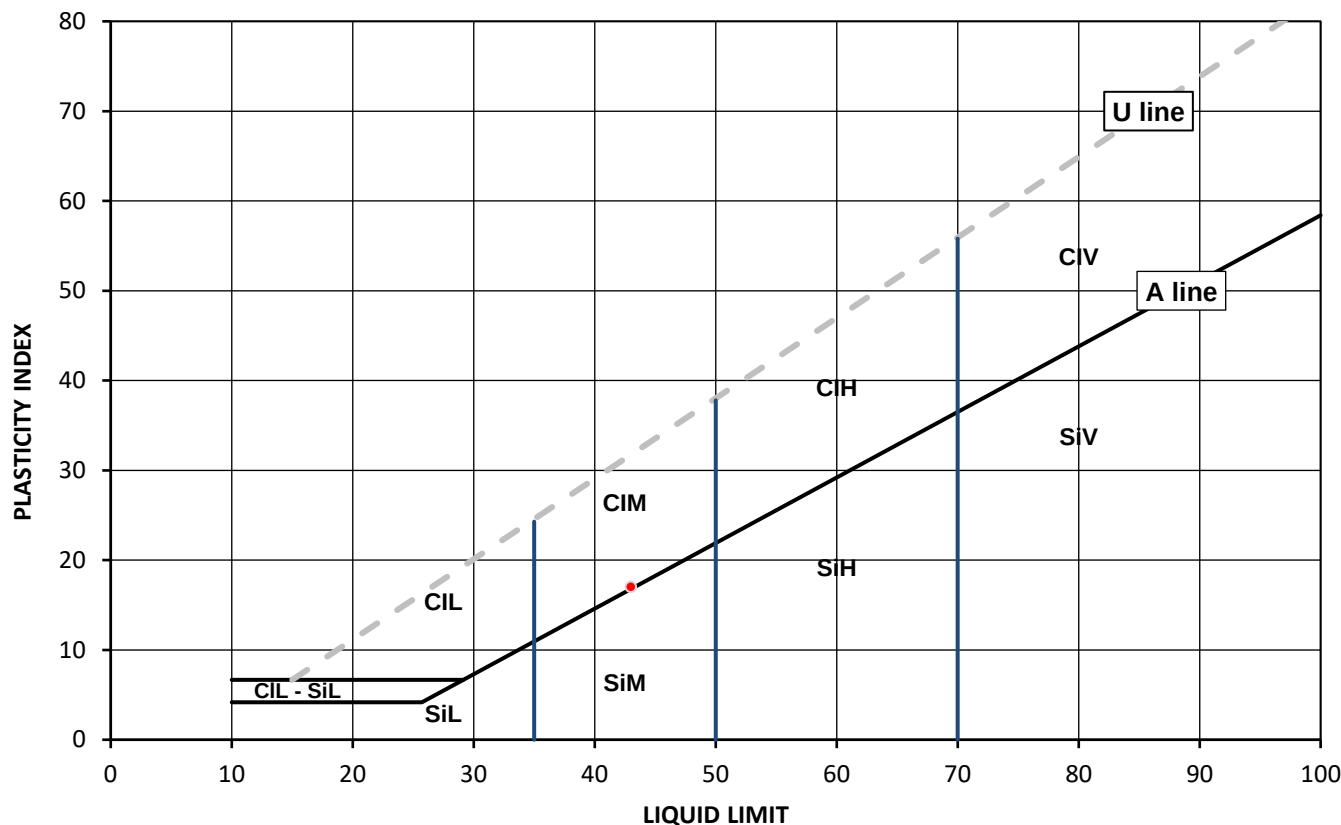
Depth Top [m]: 1.30

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested after washing to remove >425 µm

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
19	43	26	17	39



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		50 to 70
		exceeding 70
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
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Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937499

Hole No.: TP104

Sample Reference: Not Given

Sample Description: Greyish brown slightly gravelly slightly sandy slightly silty CLAY

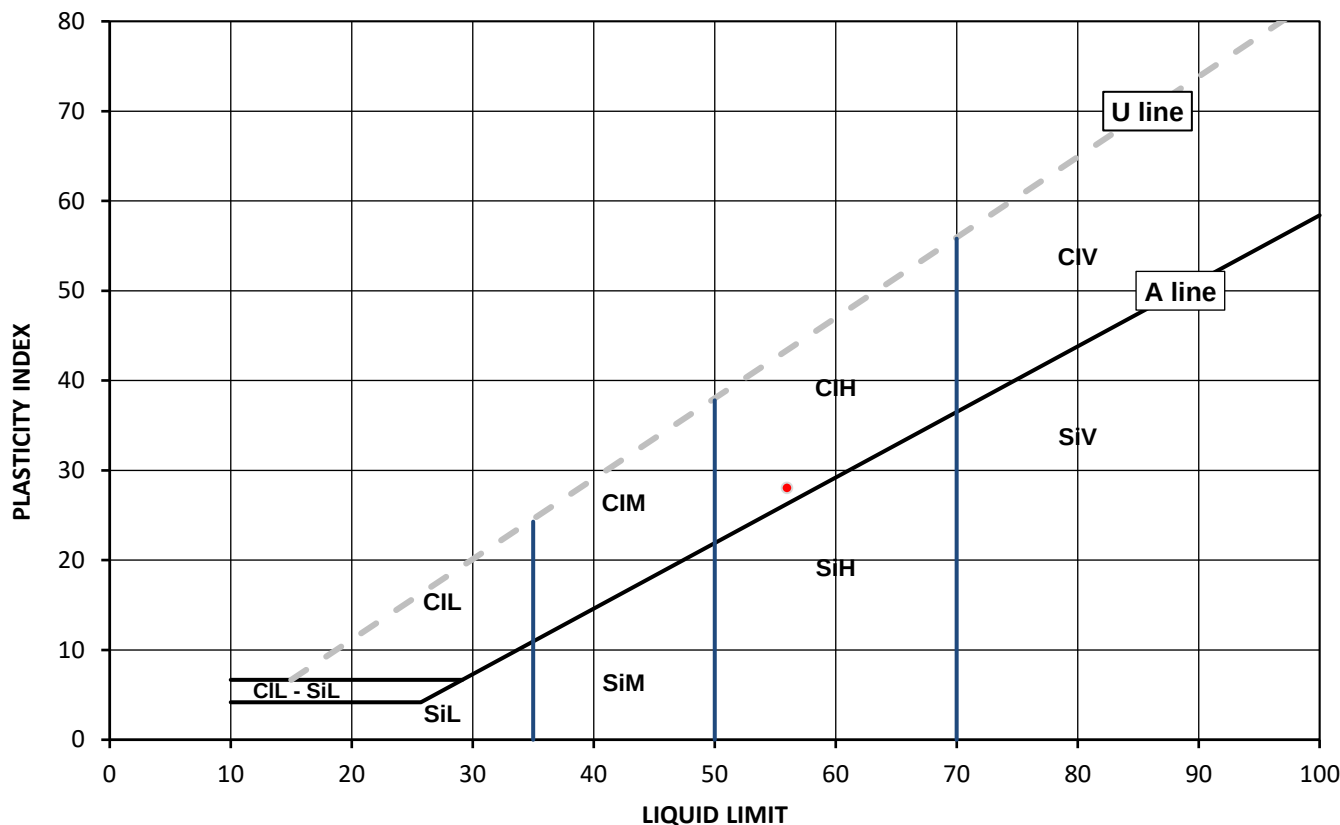
Depth Top [m]: 1.80

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested after >425 µm removed by hand

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
28	56	28	28	99



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

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DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

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Northampton NN4 7EB



Environmental Science

4041

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N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 10/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937501

Hole No.: BH101

Sample Reference: Not Given

Sample Description: Brownish grey slightly gravelly clayey SAND

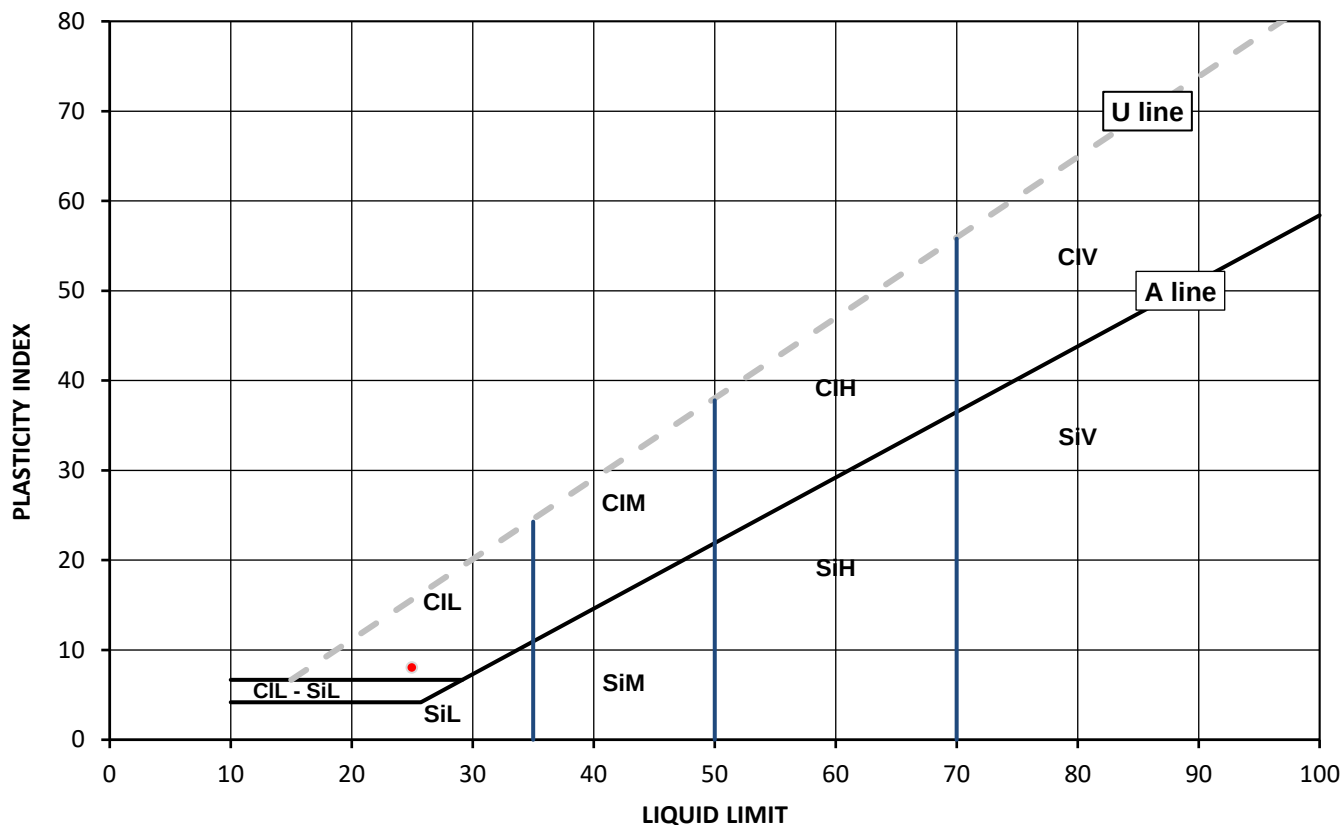
Depth Top [m]: 17.80

Depth Base [m]: Not Given

Sample Type: C

Sample Preparation: Tested after >425 µm removed by hand

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
13	25	17	8	91



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P

Signed:

Monika Siewior

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 11/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937508

Hole No.: BH103

Sample Reference: Not Given

Sample Description: Brown clayey SAND

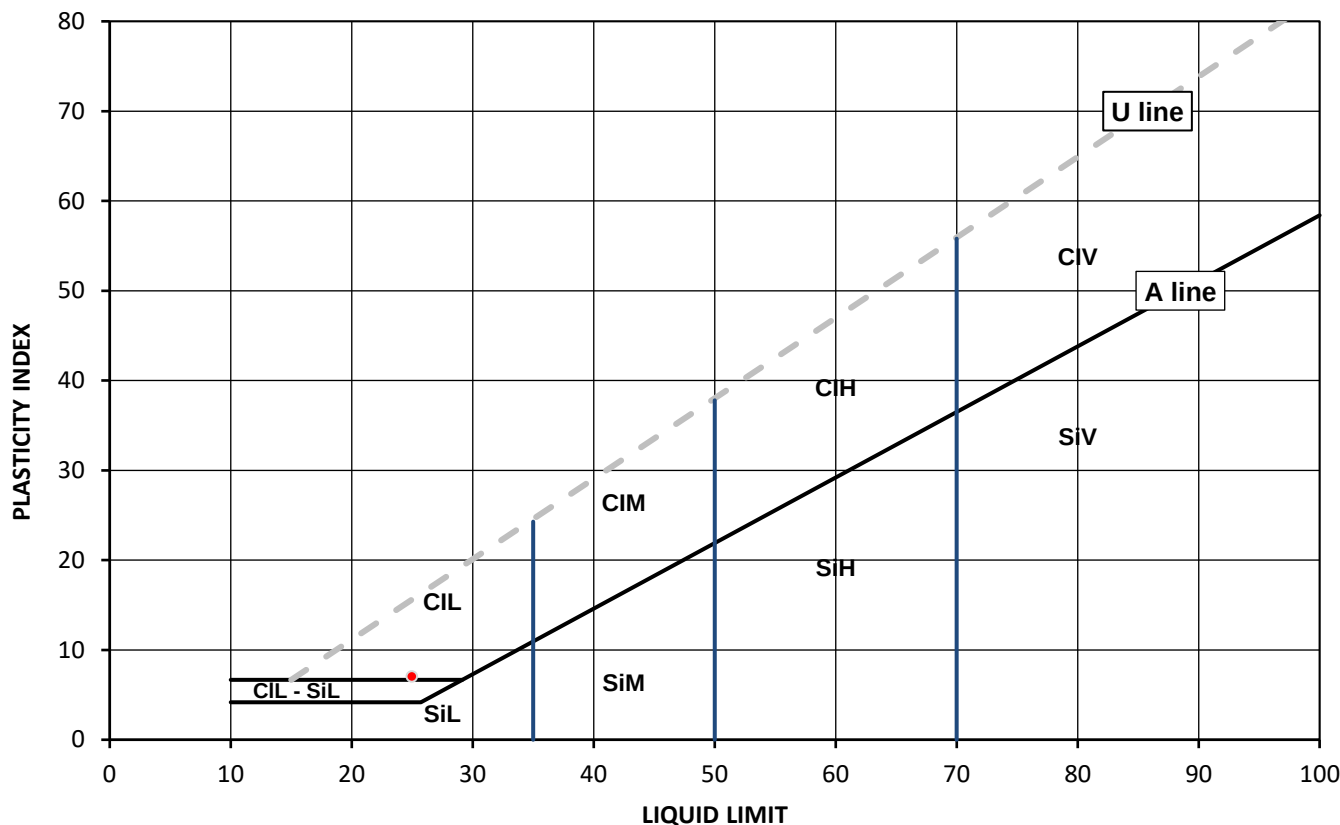
Depth Top [m]: 22.33

Depth Base [m]: Not Given

Sample Type: C

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
15	25	18	7	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P

Signed:

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Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 11/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937510

Hole No.: BH103

Sample Reference: Not Given

Sample Description: Brown clayey SAND

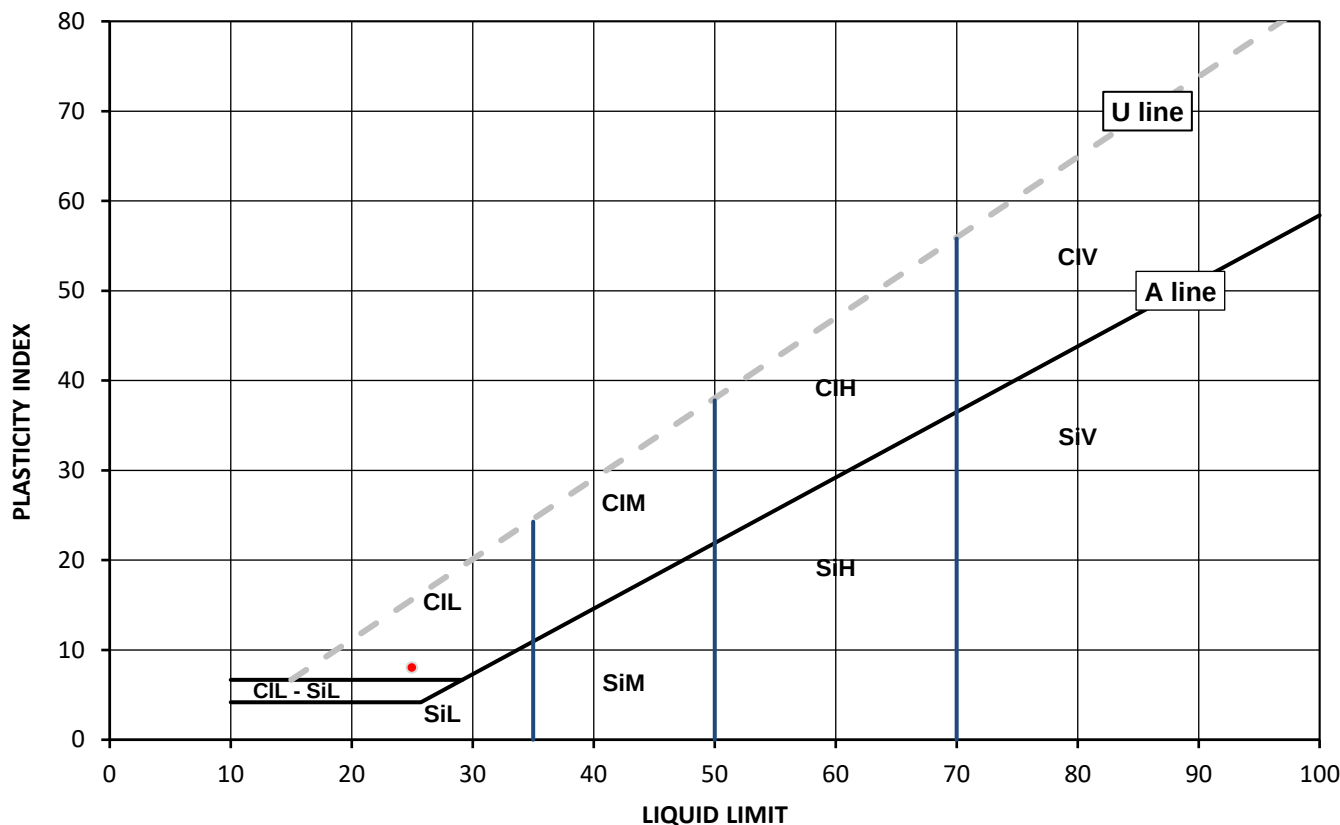
Depth Top [m]: 24.90

Depth Base [m]: Not Given

Sample Type: C

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
13	25	17	8	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
		50 to 70
		exceeding 70
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P

Signed:

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 03/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937512

Hole No.: BH101

Sample Reference: Not Given

Sample Description: Dark brown silty CLAY

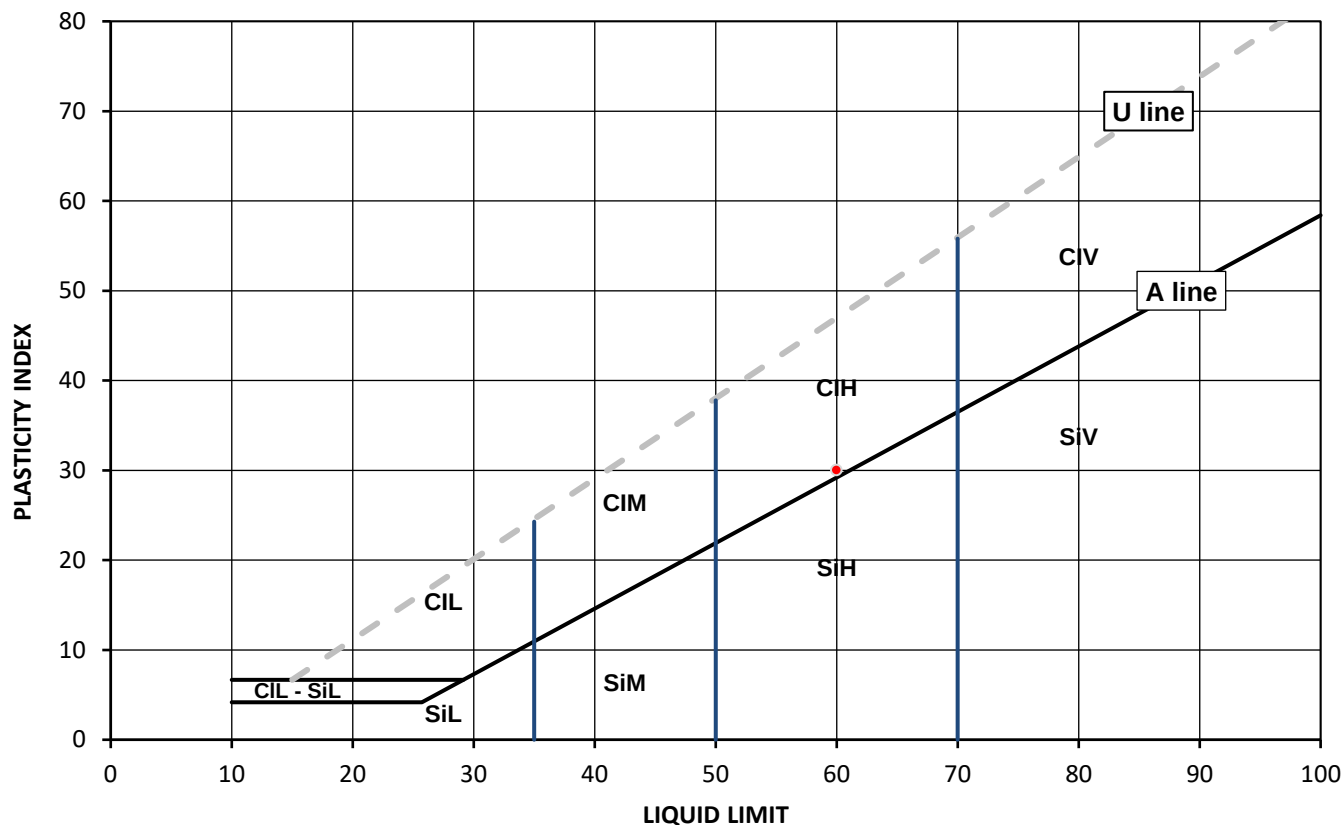
Depth Top [m]: 1.20

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
27	60	30	30	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

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i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 08/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937514

Hole No.: BH101

Sample Reference: Not Given

Sample Description: Brownish grey silty CLAY

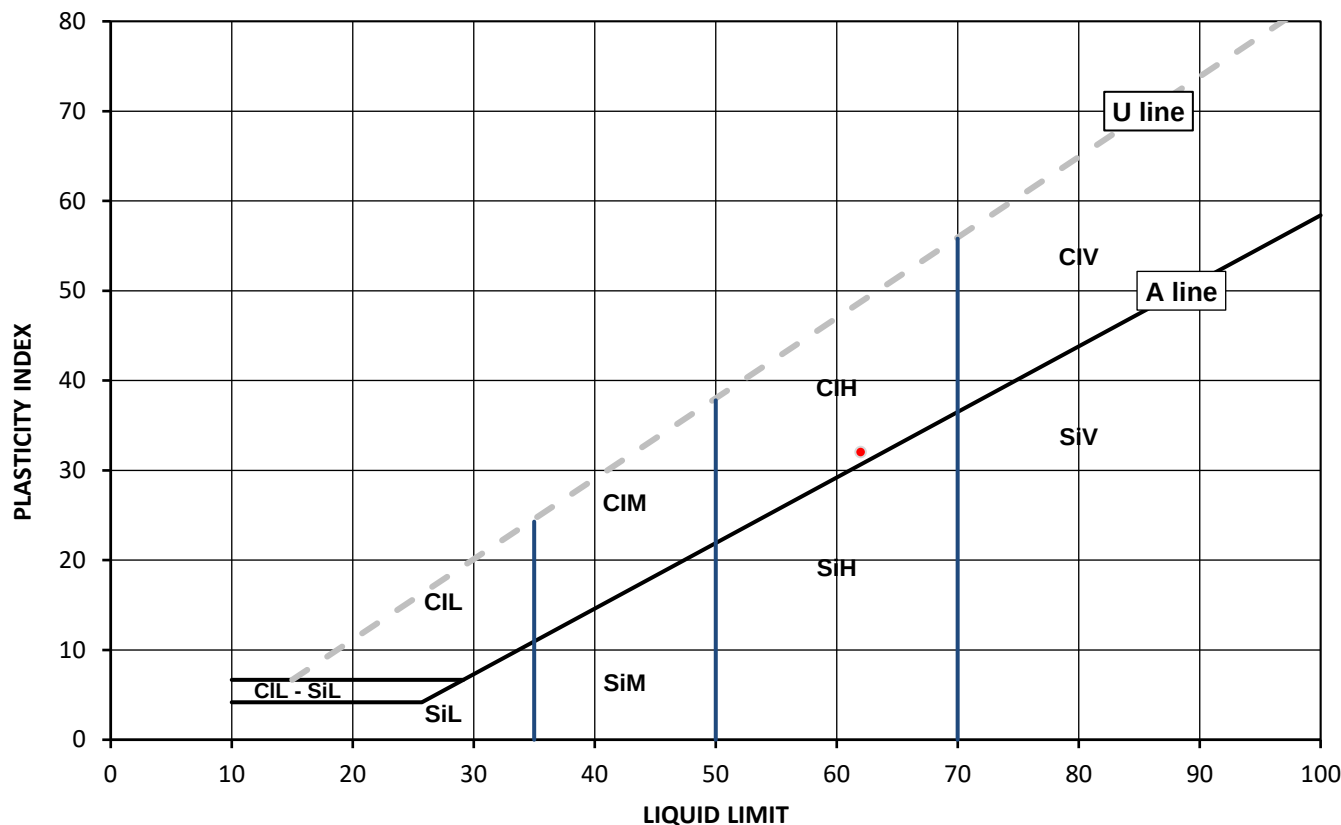
Depth Top [m]: 3.00

Depth Base [m]: Not Given

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
39	62	30	32	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

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Northampton NN4 7EB



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Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 12/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937520

Hole No.: BH102

Sample Reference: Not Given

Sample Description: Dark brown slightly gravelly very sandy CLAY

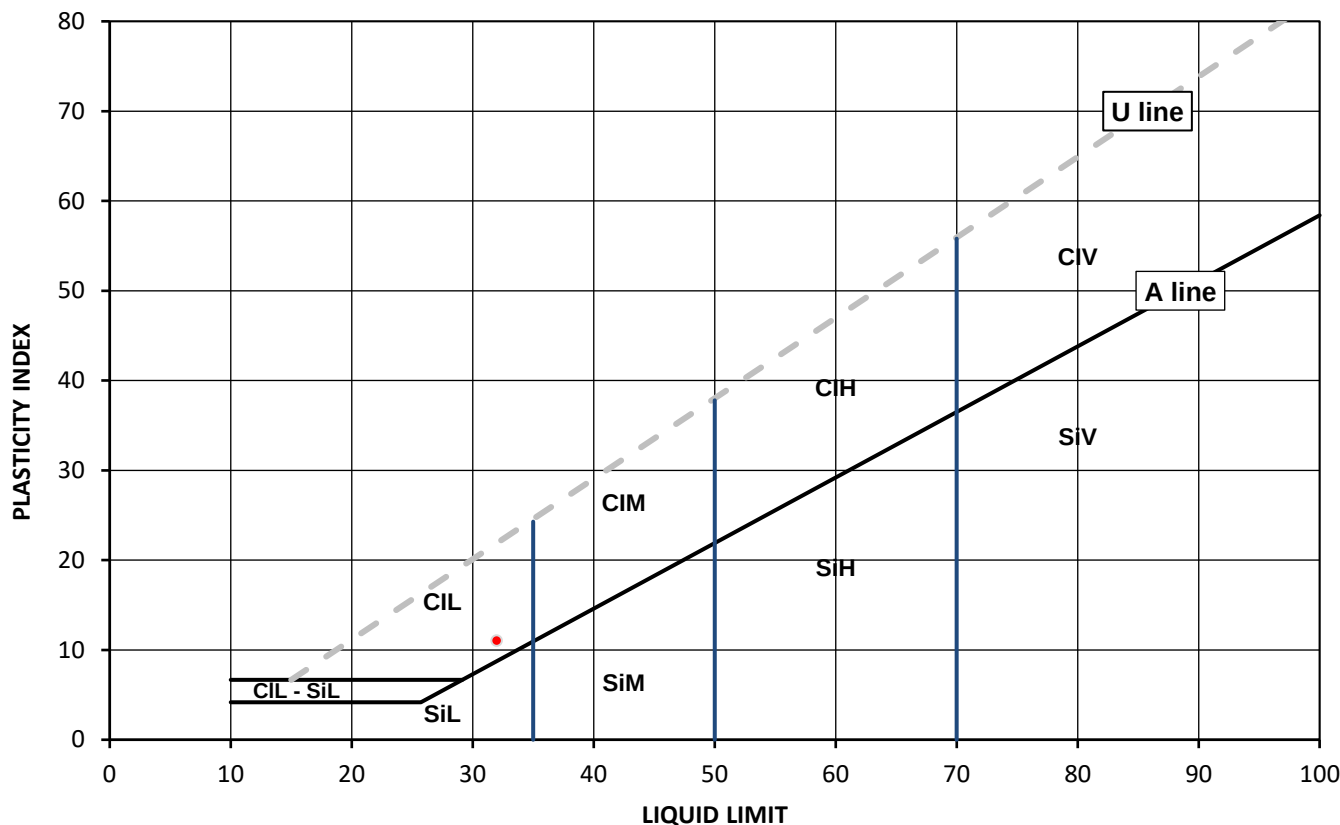
Depth Top [m]: 16.50

Depth Base [m]: 16.95

Sample Type: D

Sample Preparation: Tested after washing to remove >425 µm

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
22	32	21	11	86



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 10/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937524
Hole No.: BH103
Sample Reference: Not Given
Sample Description: Greyish brown sandy CLAY

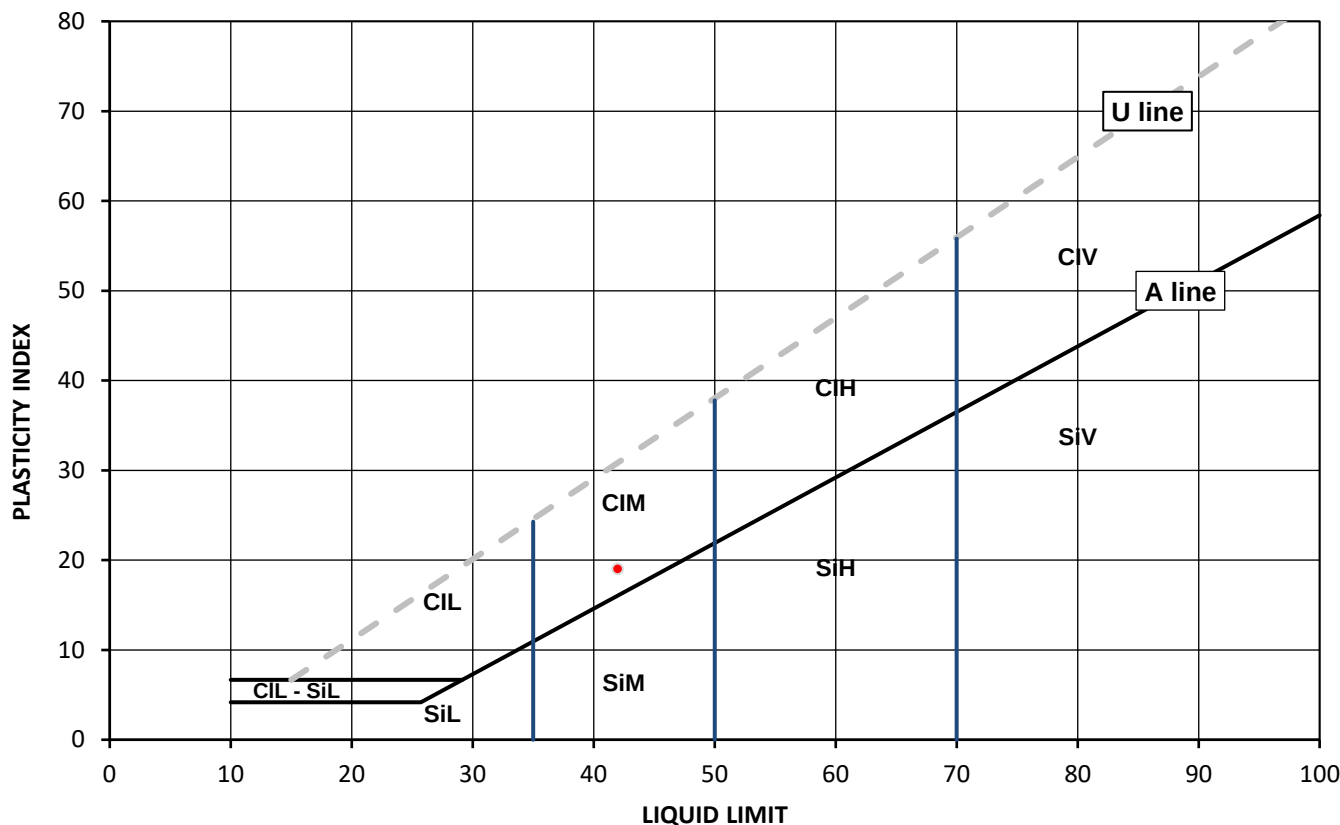
Depth Top [m]: 6.00

Depth Base [m]: 6.45

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
29	42	23	19	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
	L	Low
	M	Medium
	H	High
	V	Very high
	O	Organic
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 15/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937528

Hole No.: BH104

Sample Reference: Not Given

Sample Description: Greyish brown CLAY

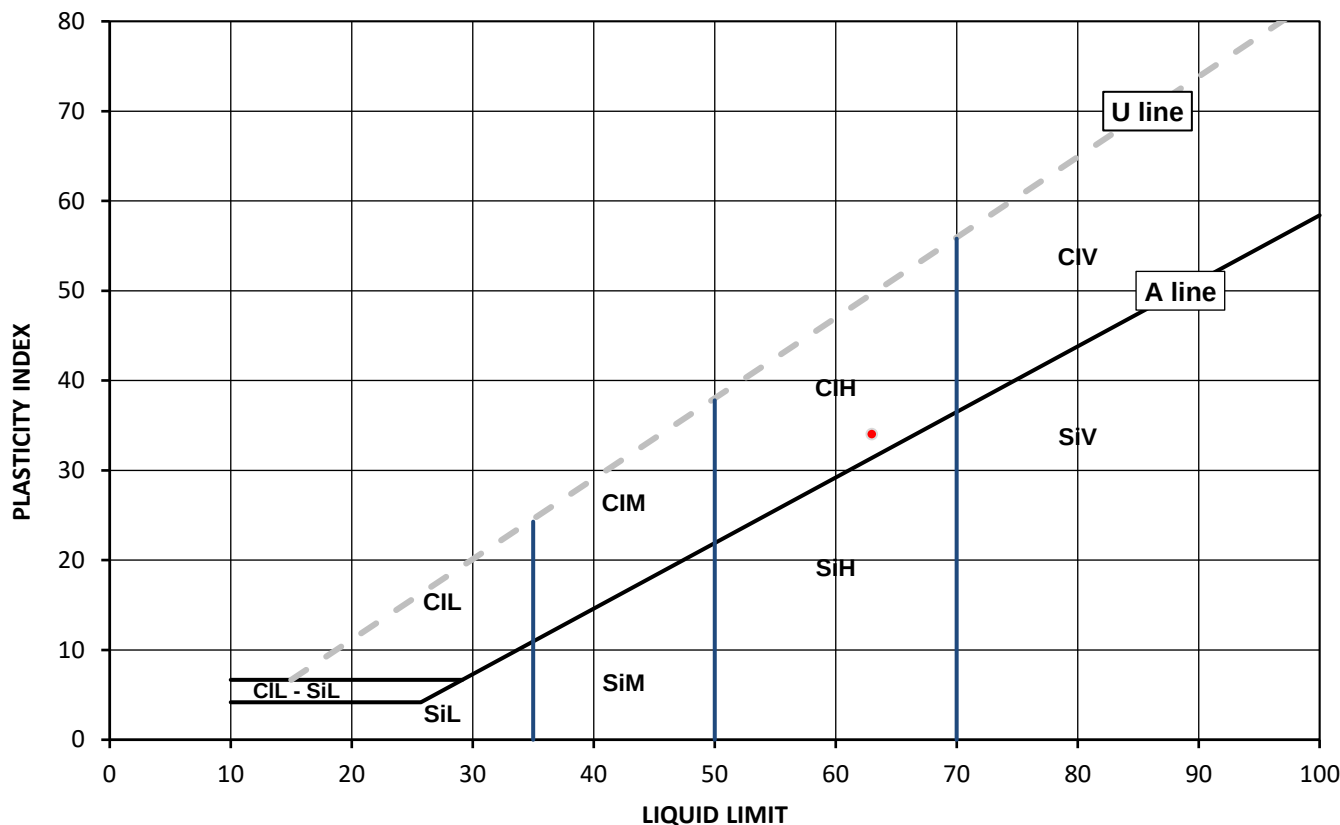
Depth Top [m]: 6.00

Depth Base [m]: 6.45

Sample Type: D

Sample Preparation: Tested in natural condition

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
48	63	29	34	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS 1377-2:1990: Clause 4.4 and 5

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 02/02/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2940777

Hole No.: BH103

Sample Reference: Not Given

Sample Description: Brown slightly gravelly very sandy CLAY

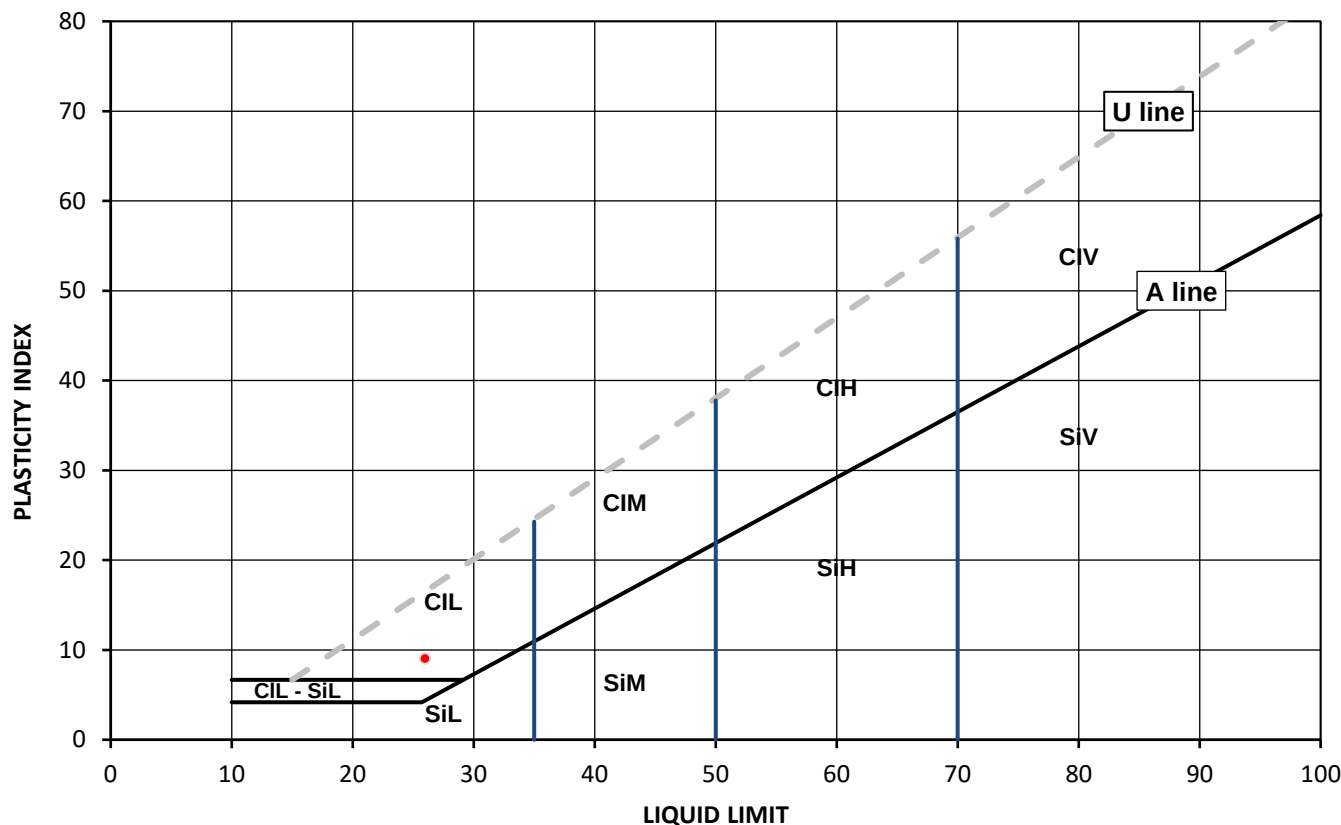
Depth Top [m]: 16.50

Depth Base [m]: 16.95

Sample Type: B

Sample Preparation: Tested after washing to remove >425 µm

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
28	26	17	9	71



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	Plasticity	Liquid Limit
Cl	Clay	below 35
Si	Silt	35 to 50
		50 to 70
		exceeding 70
		append to classification for organic material (eg CIHO)

Note: Water Content by BS 1377-2: 1990: Clause 3.2

Remarks: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Water Content by BS 1377-2:1990: Clause 3.2
Atterberg by BS 1377-2: 1990:
Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W] %	Water Content BS EN ISO 17892-1 [W] %	Atterberg				Density			Total Porosity# %		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m						%	%	%	%	Mg/m3	Mg/m3	Mg/m3			
2937495	TP101	Not Given	2.00	Not Given	D	Greyish brown CLAY	Atterberg 1 Point	34		100	64	30	34						
2937497	TP103	Not Given	1.20	Not Given	D	Greyish brown CLAY	Atterberg 1 Point	31		100	66	30	36						
2937498	TP104	Not Given	1.30	Not Given	D	Dark grey gravelly sandy silty CLAY	Atterberg 1 Point	19		39	43	26	17						
2937499	TP104	Not Given	1.80	Not Given	D	Greyish brown slightly gravelly slightly sandy slightly silty CLAY	Atterberg 1 Point	28		99	56	28	28						
2937501	BH101	Not Given	17.80	Not Given	C	Brownish grey slightly gravelly clayey SAND	Atterberg 1 Point	13		91	25	17	8						
2937508	BH103	Not Given	22.33	Not Given	C	Brown clayey SAND	Atterberg 1 Point	15		100	25	18	7						
2937510	BH103	Not Given	24.90	Not Given	C	Brown clayey SAND	Atterberg 1 Point	13		100	25	17	8						
2937512	BH101	Not Given	1.20	Not Given	D	Dark brown silty CLAY	Atterberg 1 Point	27		100	60	30	30						
2937514	BH101	Not Given	3.00	Not Given	D	Brownish grey silty CLAY	Atterberg 1 Point	39		100	62	30	32						
2937520	BH102	Not Given	16.50	16.95	D	Dark brown slightly gravelly very sandy CLAY	Atterberg 1 Point	22		86	32	21	11						

Note: # Non accredited; NP - Non plastic

Comments: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P (samples 2937501, 2937508, 2937510)

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Water Content by BS 1377-2:1990: Clause 3.2
Atterberg by BS 1377-2: 1990:
Clause 4.3 (4 Point Test), Clause 4.4 (1 Point Test) and 5

Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: 10/01 - 15/01/2024
Date Received: 17/01/2024
Date Tested: 31/01 - 02/02/2024
Sampled By: Client - PIL

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Water Content BS 1377-2 [W] %	Water Content BS EN ISO 17892-1 [W] %	Atterberg				Density			Total Porosity# %		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	WL	Wp	Ip	bulk	dry	PD			
			m	m															
2937524	BH103	Not Given	6.00	6.45	D	Greyish brown sandy CLAY	Atterberg 1 Point	29		100	42	23	19						
2937528	BH104	Not Given	6.00	6.45	D	Greyish brown CLAY	Atterberg 1 Point	48		100	63	29	34						
2940777	BH103	Not Given	16.50	16.95	B	Brown slightly gravelly very sandy CLAY	Atterberg 1 Point	28		71	26	17	9						

Note: # Non accredited; NP - Non plastic

Comments: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P (sample 2940777)

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Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type							
2937495	TP101	Not Given	2.00	Not Given	D	Greyish brown CLAY		34	Sample was quartered, oven dried at 109 °C			
2937497	TP103	Not Given	1.20	Not Given	D	Greyish brown CLAY		31	Sample was quartered, oven dried at 108.7 °C			
2937498	TP104	Not Given	1.30	Not Given	D	Dark grey gravelly sandy silty CLAY		19	Sample was quartered, oven dried at 109 °C			
2937499	TP104	Not Given	1.80	Not Given	D	Greyish brown slightly gravelly slightly sandy slightly silty CLAY		28	Sample was quartered, oven dried at 106.5 °C			
2937501	BH101	Not Given	17.80	Not Given	C	Brownish grey slightly gravelly clayey SAND		13	Sample was quartered, oven dried at 109 °C			
2937508	BH103	Not Given	22.33	Not Given	C	Brown clayey SAND		15	Sample was quartered, oven dried at 109 °C			
2937510	BH103	Not Given	24.90	Not Given	C	Brown clayey SAND		13	Sample was quartered, oven dried at 109 °C			
2937512	BH101	Not Given	1.20	Not Given	D	Dark brown silty CLAY		27	Sample was quartered, oven dried at 109 °C			
2937514	BH101	Not Given	3.00	Not Given	D	Brownish grey silty CLAY		39	Sample was quartered, oven dried at 109 °C			
2937520	BH102	Not Given	16.50	16.95	D	Dark brown slightly gravelly very sandy CLAY		22	Sample was quartered, oven dried at 109 °C			

Comments: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results (samples 2937501, 2937508, 2937510)

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Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF WATER CONTENT

Tested in Accordance with: BS 1377-2: 1990: Clause 3.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: 10/01 - 15/01/2024
Date Received: 17/01/2024
Date Tested: 31/01 - 02/02/2024
Sampled By: Client - PIL

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	WC	Sample preparation / Oven temperature at the time of testing			
		Reference	Depth Top m	Depth Base m	Type							
2937524	BH103	Not Given	6.00	6.45	D	Greyish brown sandy CLAY		29	Sample was quartered, oven dried at 109 °C			
2937528	BH104	Not Given	6.00	6.45	D	Greyish brown CLAY		48	Sample was quartered, oven dried at 109 °C			
2940777	BH103	Not Given	16.50	16.95	B	Brown slightly gravelly very sandy CLAY		28	Sample was quartered, oven dried at 106.2 °C			

Comments: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Atterberg 1P (sample 2940777)

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Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd



4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: Not Given

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937496

Hole No.: TP102

Sample Reference: Not Given

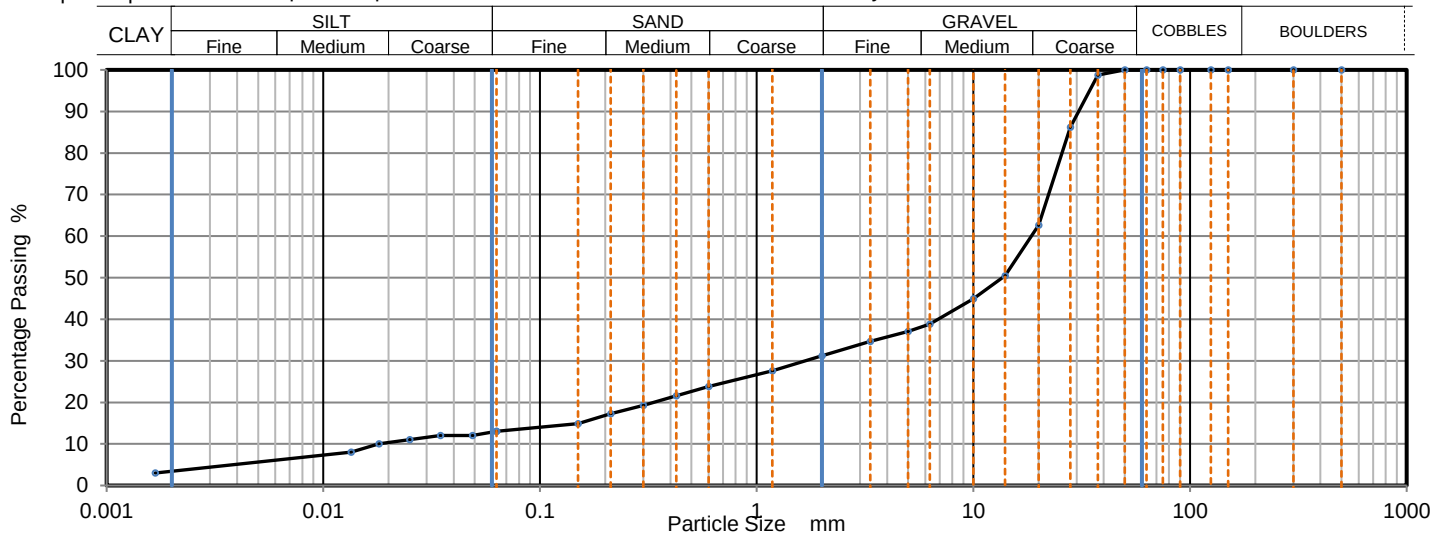
Sample Description: Dark brown sandy slightly clayey GRAVEL with fragments of ceramics, bricks

Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 1.40

Depth Base [m]: Not Given

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	13
300	100	0.0488	12
150	100	0.0347	12
125	100	0.0251	11
90	100	0.0181	10
75	100	0.0134	8
63	100	0.0017	3
50	100		
37.5	99		
28	86		
20	63		
14	51		
10	45		
6.3	39		
5	37		
3.35	35	Particle density (assumed) 2.65 Mg/m3	
2	31		
1.18	28		
0.6	24		
0.425	22		
0.3	19		
0.212	17		
0.15	15		
0.063	13		

Sample Proportions	% dry mass
Very coarse	0
Gravel	69
Sand	18
Silt	9
Clay	4

Grading Analysis	
D100	mm 50
D60	mm 18.5
D30	mm 1.68
D10	mm 0.0203
Uniformity Coefficient	910
Curvature Coefficient	7.5

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

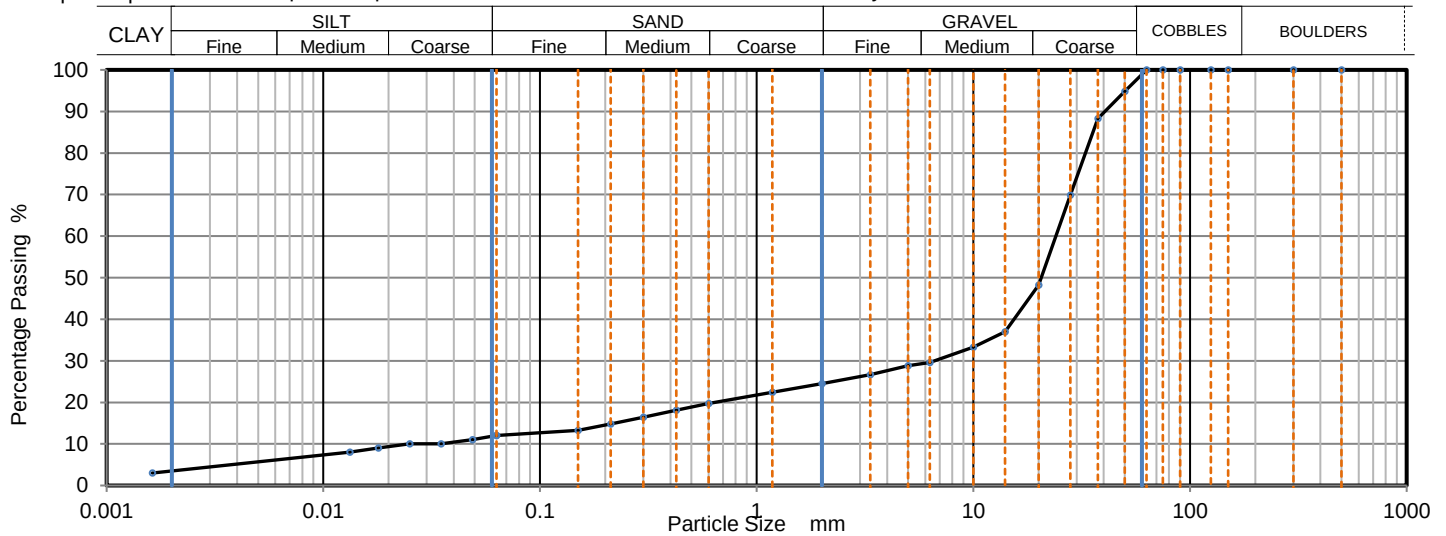
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: Not Given
Date Received: 17/01/2024
Date Tested: 31/01/2024
Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937500
Hole No.: TP104
Sample Reference: Not Given
Sample Description: Black sandy slightly clayey GRAVEL
Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 0.60
Depth Base [m]: Not Given
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	12
300	100	0.0488	11
150	100	0.0350	10
125	100	0.0251	10
90	100	0.0179	9
75	100	0.0133	8
63	100	0.0016	3
50	95		
37.5	88		
28	70		
20	48		
14	37		
10	33		
6.3	30		
5	29		
3.35	27	Particle density (assumed) 2.65 Mg/m ³	
2	25		
1.18	22		
0.6	20		
0.425	18		
0.3	16		
0.212	15		
0.15	13		
0.063	12		

Sample Proportions	% dry mass
Very coarse	0
Gravel	75
Sand	12
Silt	10
Clay	3

Grading Analysis	
D100	mm 63
D60	mm 24
D30	mm 6.64
D10	mm 0.0303
Uniformity Coefficient	790
Curvature Coefficient	61

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Signed:

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 09/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937511

Hole No.: BH101

Sample Reference: Not Given

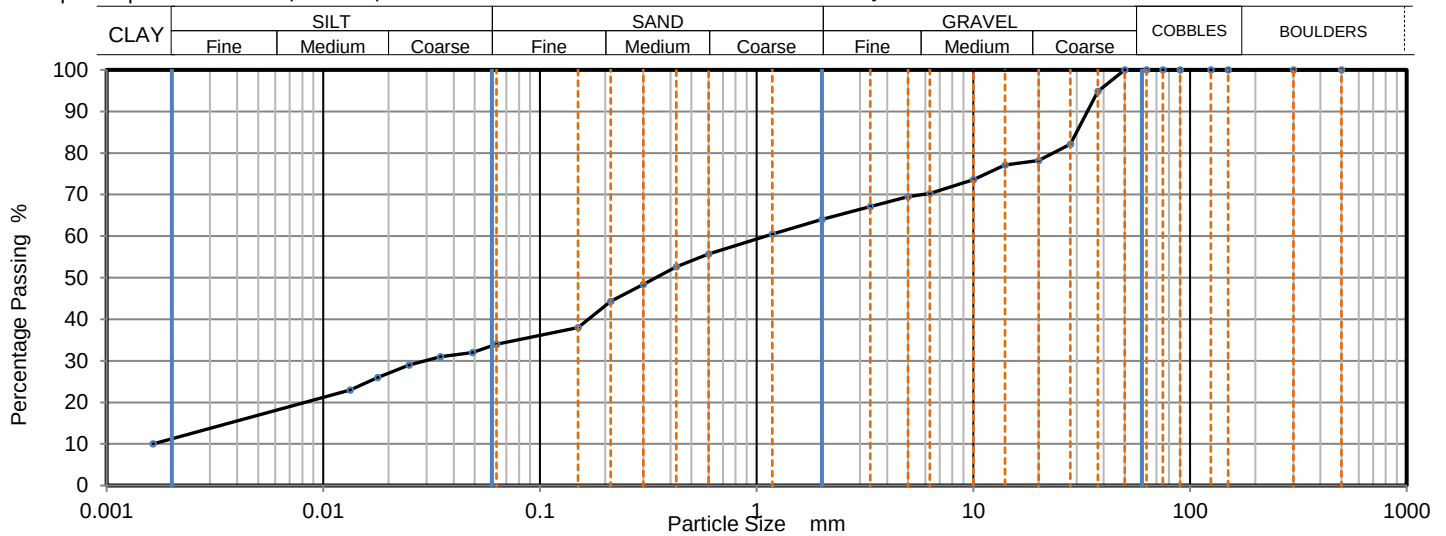
Sample Description: Black very sandy clayey GRAVEL

Sample Preparation: Sample was quartered, oven dried at 106.5 °C and broken down by hand.

Depth Top [m]: 1.00

Depth Base [m]: Not Given

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	34
300	100	0.0488	32
150	100	0.0347	31
125	100	0.0249	29
90	100	0.0178	26
75	100	0.0133	23
63	100	0.0016	10
50	100		
37.5	95		
28	82		
20	78		
14	77		
10	74		
6.3	70		
5	70		
3.35	67	Particle density (assumed) 2.65 Mg/m3	
2	64		
1.18	61		
0.6	56		
0.425	53		
0.3	48		
0.212	44		
0.15	38		
0.063	34		

Sample Proportions	% dry mass
Very coarse	0
Gravel	36
Sand	30
Silt	23
Clay	11

Grading Analysis	
D100	mm 50
D60	mm 1.1
D30	mm 0.0314
D10	mm 0.00176
Uniformity Coefficient	620
Curvature Coefficient	0.51

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

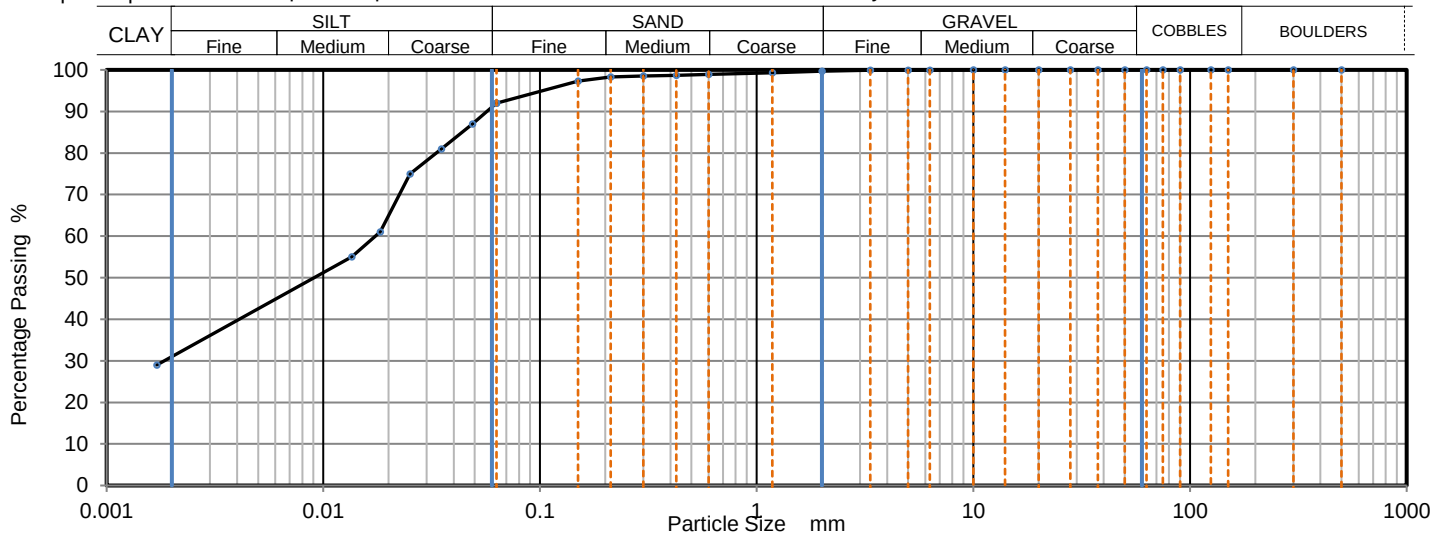
Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: 11/01/2024
Date Received: 17/01/2024
Date Tested: 31/01/2024
Sampled By: Client - PIL

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 2937519
Hole No.: BH102
Sample Reference: Not Given
Sample Description: Grey slightly sandy clayey SILT
Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 8.50
Depth Base [m]: 9.00
Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	92
300	100	0.0488	87
150	100	0.0350	81
125	100	0.0251	75
90	100	0.0183	61
75	100	0.0135	55
63	100	0.0104	48
50	100	0.0075	29
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	99		
0.6	99		
0.425	99		
0.3	99		
0.212	98		
0.15	97		
0.063	92		

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	7
Silt	62
Clay	31

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 10
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 12/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937521

Hole No.: BH102

Sample Reference: Not Given

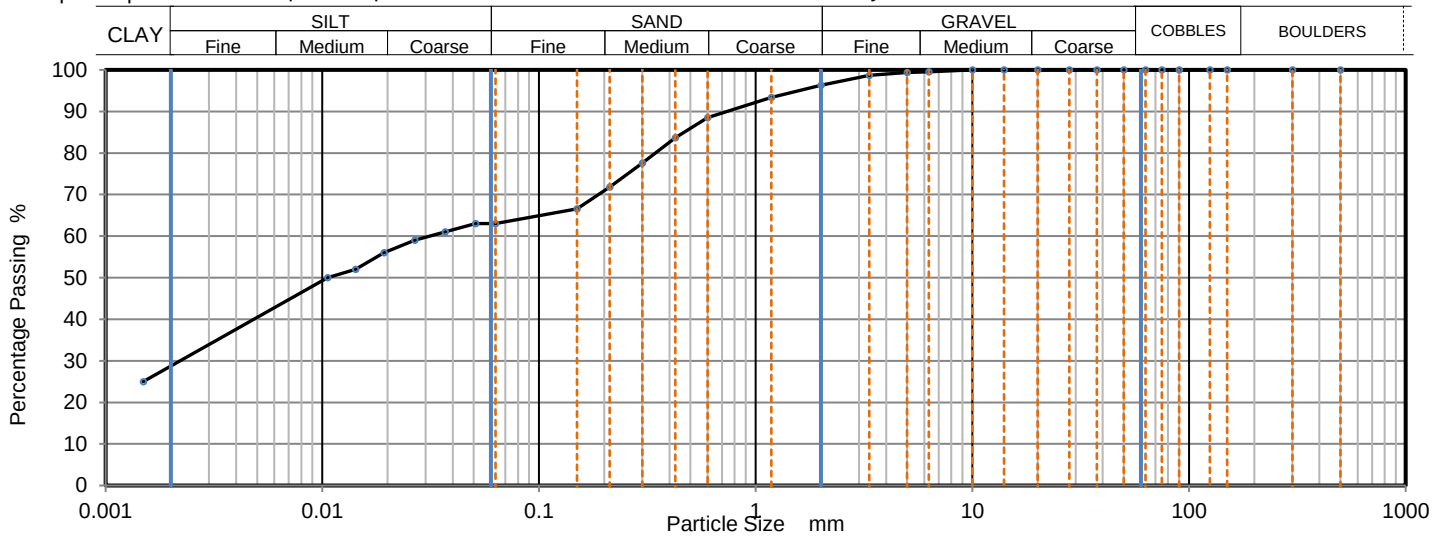
Sample Description: Brown slightly gravelly slightly sandy silty CLAY

Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 15.00

Depth Base [m]: Not Given

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0509	63
300	100	0.0369	61
150	100	0.0267	59
125	100	0.0193	56
90	100	0.0142	52
75	100	0.0106	50
63	100	0.0075	48
50	100	0.0050	45
37.5	100	0.0030	42
28	100	0.0020	40
20	100	0.0015	25
14	100		
10	100		
6.3	100		
5	99		
3.35	99	Particle density (assumed) 2.65 Mg/m ³	
2	96		
1.18	93		
0.6	89		
0.425	84		
0.3	78		
0.212	72		
0.15	67		
0.063	63		

Sample Proportions	% dry mass
Very coarse	0
Gravel	4
Sand	34
Silt	33
Clay	29

Grading Analysis	
D100	mm 10
D60	mm 0.0336
D30	mm 0.00219
D10	mm
Uniformity Coefficient	> 23
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

**TEST CERTIFICATE****DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 12/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937525

Hole No.: BH103

Sample Reference: Not Given

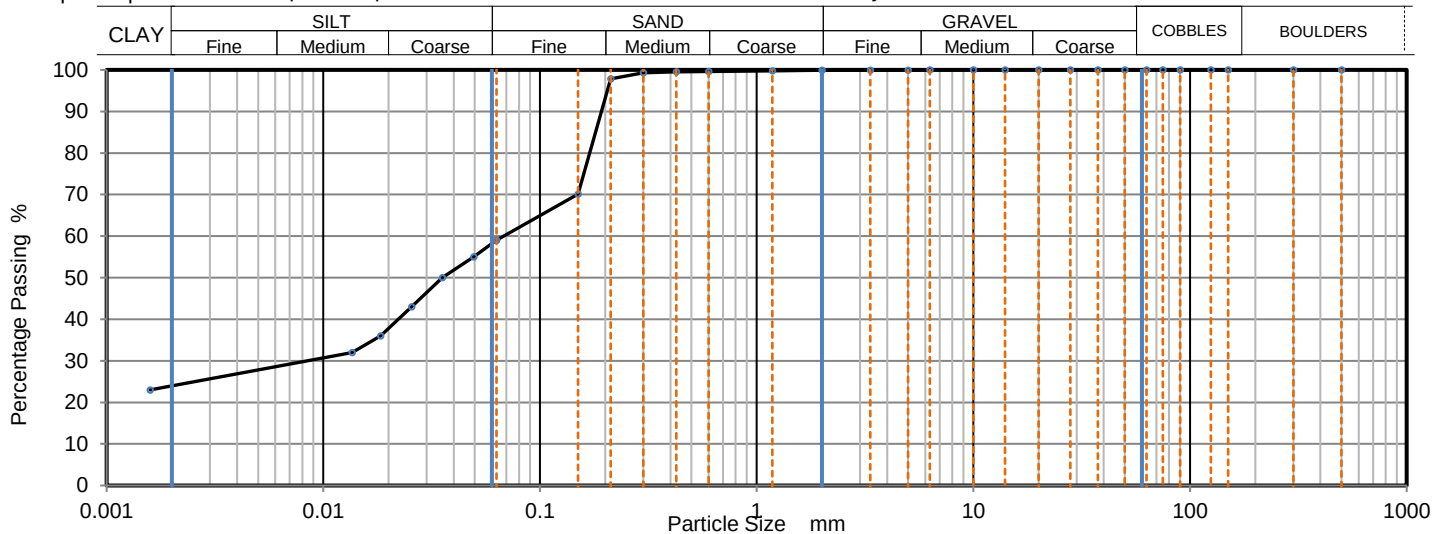
Sample Description: Grey sandy silty CLAY

Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 7.00

Depth Base [m]: 7.50

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	59
300	100	0.0494	55
150	100	0.0354	50
125	100	0.0255	43
90	100	0.0184	36
75	100	0.0136	32
63	100	0.0106	23
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.6	100		
0.425	100		
0.3	99		
0.212	98		
0.15	70		
0.063	59		

Sample Proportions	% dry mass
Very coarse	0
Gravel	0
Sand	41
Silt	35
Clay	24

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 42
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

TEST CERTIFICATE**DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 15/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937529

Hole No.: BH104

Sample Reference: Not Given

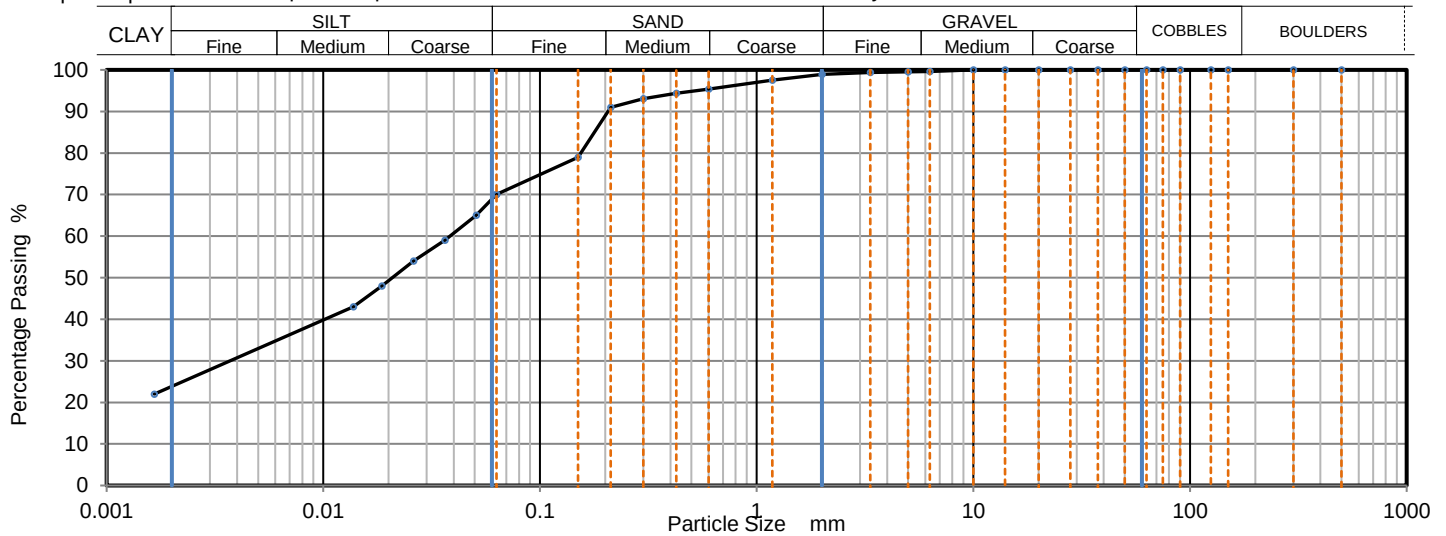
Sample Description: Brownish grey slightly sandy clayey SILT

Sample Preparation: Sample was quartered, oven dried at 108.7 °C and broken down by hand.

Depth Top [m]: 10.20

Depth Base [m]: 10.40

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100	0.0630	70
300	100	0.0508	65
150	100	0.0364	59
125	100	0.0260	54
90	100	0.0186	48
75	100	0.0138	43
63	100	0.0017	22
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99	Particle density (assumed) 2.65 Mg/m ³	
2	99		
1.18	98		
0.6	95		
0.425	94		
0.3	93		
0.212	91		
0.15	79		
0.063	70		

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	29
Silt	47
Clay	23

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 23
Curvature Coefficient	

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clauses 9.2 and 9.5

Remarks:**Signed:**

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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4041

**TEST CERTIFICATE****DETERMINATION OF PARTICLE SIZE DISTRIBUTION**

Tested in Accordance with: BS 1377-2: 1990

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 15/01/2024

Date Received: 17/01/2024

Date Tested: 31/01/2024

Sampled By: Client - PIL

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 2937530

Hole No.: BH104

Sample Reference: Not Given

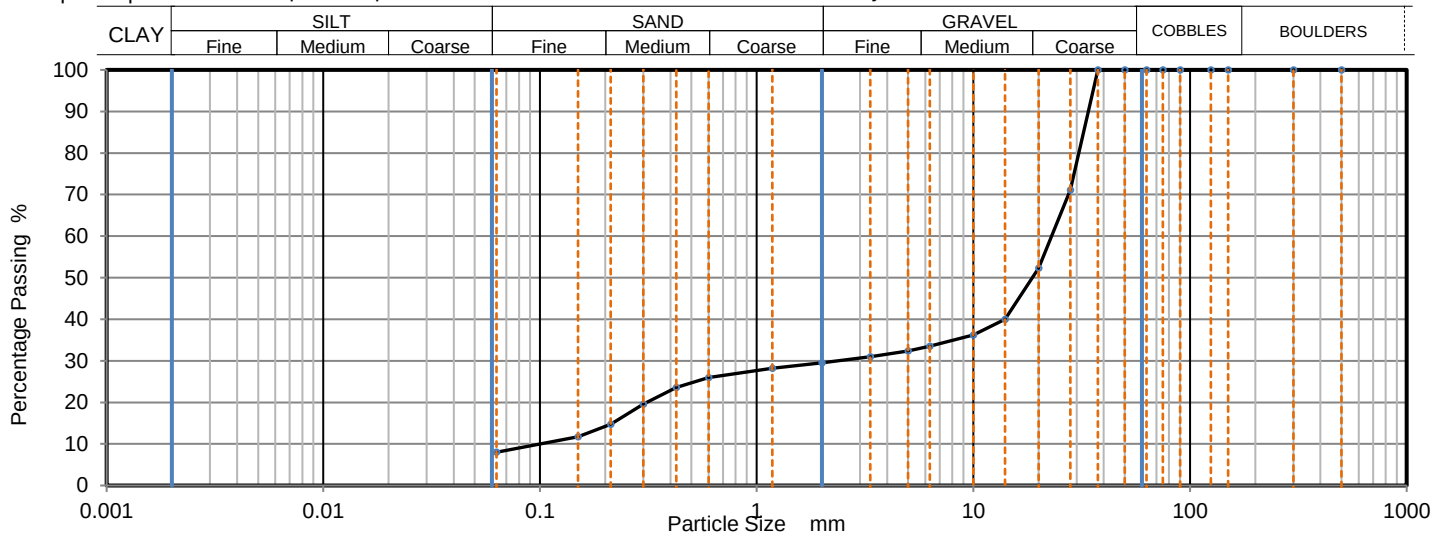
Sample Description: Dark brown very sandy clayey GRAVEL

Sample Preparation: Sample was quartered, oven dried at 109.0 °C and broken down by hand.

Depth Top [m]: 13.00

Depth Base [m]: 13.50

Sample Type: B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
500	100		
300	100		
150	100		
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	71		
20	52		
14	40		
10	36		
6.3	34		
5	32		
3.35	31		
2	30		
1.18	28		
0.6	26		
0.425	24		
0.3	20		
0.212	15		
0.15	12		
0.063	8		

Sample Proportions	% dry mass
Very coarse	0
Gravel	71
Sand	21
Fines <0.063mm	8

Grading Analysis	
D100	mm 37.5
D60	mm 23
D30	mm 2.41
D10	mm 0.0972
Uniformity Coefficient	240
Curvature Coefficient	2.6

Uniformity and Curvature Coefficient calculated in accordance with BS EN ISO 14688-2:2018

Note: Tested in Accordance with BS1377:Part 2:1990, clause 9.2

Remarks: The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Signed:

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Reporting Specialist
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SUMMARY REPORT

DETERMINATION OF BULK DENSITY - IMMERSION IN FLUID METHOD

Tested in Accordance with: BS EN ISO 17892-2: 2014: Clause 5.2

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: 06/01 - 10/01/2024
Date Received: 17/01/2024
Date Tested: 30/01/2024
Sampled By: Client- PIL

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	Bulk density	Dry density	WC	Preparation		
		Reference	Depth Top	Depth Base	Type								
			m	m				Mg/m3	Mg/m3	%			
2937516	BH101	Not Given	8.40	8.60	B	Grey silty CLAY		1.48	0.89	66.2			
2937518	BH101	Not Given	15.50	15.70	B	Brown very sandy CLAY with fragments of plants		2.06	1.70	21.4			
2937523	BH103	Not Given	3.50	3.80	B	Greyish brown CLAY		1.84	1.41	30.4			
2937526	BH103	Not Given	15.50	15.80	B	Brown sandy CLAY		2.04	1.66	22.7			

Note: WC - Water Content by BS EN ISO 17892-1

Comments:

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Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd



SUMMARY REPORT

DETERMINATION OF POINT LOAD STRENGTH

Tested in Accordance with: ISRM: 2007, pages 125-132

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT
Job Number: 24-79891-2
Date Sampled: 10/01 - 11/01/2024
Date Received: 17/01/2024
Date Tested: 07/02 - 14/02/2024
Sampled By: Client - PIL

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks # (including water content if measured)	Specimen Reference	Test Type see ISRM		Failure Valid (Y/N)	Dimensions				Force P kN	Equivalent diameter, De mm	Point Load Strength Index	
		Reference	Depth Top m	Depth Base m	Type				Type (D, A, I, B)	Direction (L, P or U)		Lne mm	W mm	Dps mm	Dps' mm			Is MPa	Is(50) MPa
2937502	BH101	Not Given	19.20	Not Given	C	Brown stiff CLAY	WC = 9.9%, Sample tested as per the client request.	1	A	U	YES	-	92.1	49.0	39.0	0.1	67.6	0.02	0.03
2937503	BH101	Not Given	20.70	Not Given	C	Brown mottled grey SILTSTONE	WC = 4.9%	1	A	P	YES	-	90.1	69.0	35.0	3.2	63.4	0.78	0.87
2937504	BH101	Not Given	22.26	Not Given	C	Brown SILTSTONE	WC = 5.5%	1	A	U	YES	-	88.7	41.0	36.0	1.4	63.8	0.33	0.37
2937505	BH101	Not Given	23.94	Not Given	C	Orangish brown SILTSTONE	WC = 5.8%	1	A	U	YES	-	88.1	71.0	59.0	1.3	81.4	0.20	0.24
2937506	BH101	Not Given	24.00	Not Given	C	Brown SILTSTONE	WC = 7.9%	1	I	U	YES	38.1	55.3	42.0	36.0	0.7	50.3	0.28	0.28
2937507	BH103	Not Given	17.87	Not Given	C	Brown slightly sandy CLAY	WC = 18.6%, Sample tested as per the client request.	1	A	U	YES	-	86.2	57.0	53.0	0.2	76.3	0.03	0.04
2937509	BH103	Not Given	23.80	Not Given	C	Brown mottled grey CLAY	WC = 17.5%, Sample tested as per the client request.	1	A	P	YES	-	86.8	65.0	61.0	0.1	82.1	0.01	0.02

Note: # non accredited; Test Type: D - Diametral, A - Axial, I - Irregular Lump, B - Block; Direction: L - parallel to planes of weakness, P - perpendicular to planes of weakness, U - unknown or random;
Dimensions: Dps - Distance between platens (platen separation), Dps' - at failure (see ISRM note 6), Lne - Length from platens to nearest free end W - Width of shortest dimension perpendicular to load, P;
Detailed legend for test and dimensions, based on ISRM, is shown above; Size factor, F = (De/50)0.45 for all tests

Equipment No.: i2 4341 Calibration Date: 14/03/2023 - 14/03/2024

Comments: Replaces Analytical Report Number 24-79891, issue no. 1; Additional results of Point Load (samples 2937502, 2937506, 2937507, 2937509)

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF THE UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Tested in Accordance with: BS 1377-7: 1990: Clause 8

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 08/01/2024

Date Received: 17/01/2024

Date Tested: 30/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937515

Hole No.: BH101

Sample Reference: Not Given

Sample Description: Grey CLAY

Sample Preparation: Sample prepared in accordance with BS 1377-1:2016 Clause 9.1.1.

Depth Top [m]: 4.00

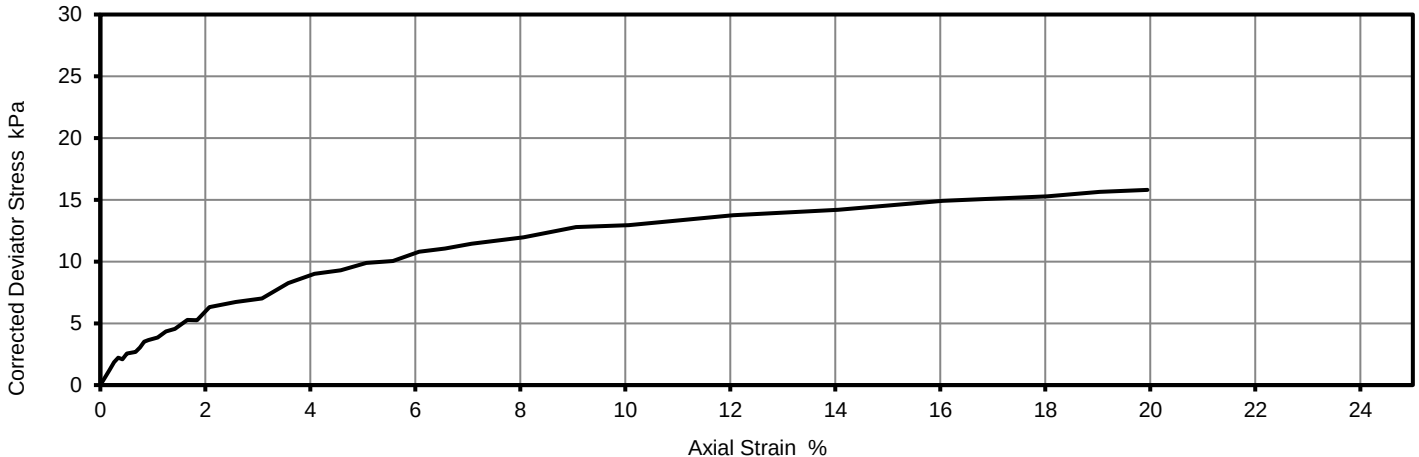
Depth Base [m]: 4.45

Sample Type: C

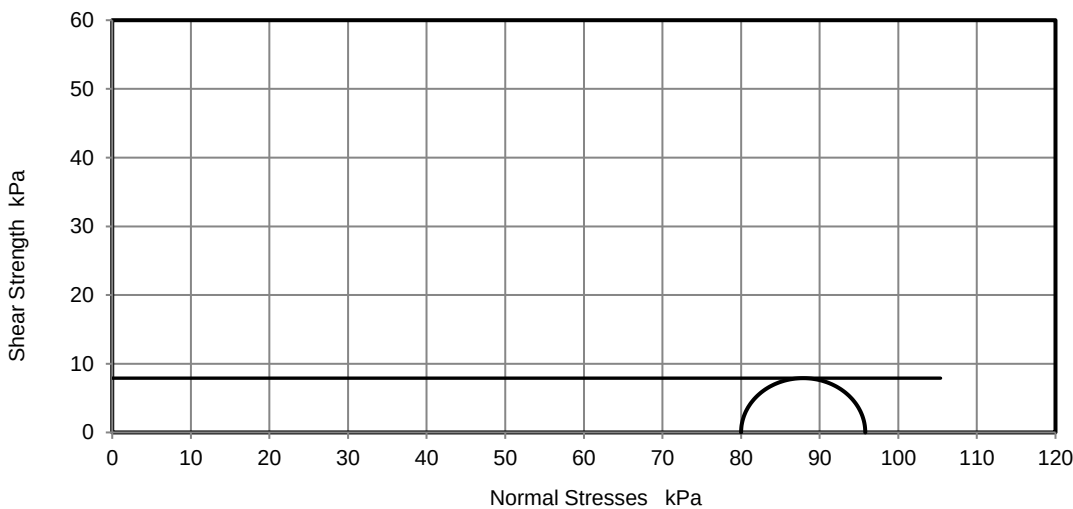
Test Number	1
Length	207.17 mm
Diameter	101.07 mm
Bulk Density	1.50 Mg/m3
Moisture Content	89 %
Dry Density	0.80 Mg/m3
Membrane Correction	1.06 kPa

Rate of Strain	1.00 %/min
Cell Pressure	80 kPa
Axial Strain at failure	19.9 %
Deviator Stress, ($\sigma_1 - \sigma_3$) _f	16 kPa
Undrained Shear Strength, c_u	8 kPa $\frac{1}{2}(\sigma_1 - \sigma_3)_f$
Mode of Failure	Compound
Latex membrane thickness	0.28 mm

Deviator Stress v Axial Strain



Mohr Circles



Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377.
This is provided for information only.

Remarks: Duration of test exceeded time specified in BS 1377-7.

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

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TEST CERTIFICATE

DETERMINATION OF THE UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Tested in Accordance with: BS 1377-7: 1990: Clause 8

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 09/01/2024

Date Received: 17/01/2024

Date Tested: 30/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937517

Hole No.: BH101

Sample Reference: Not Given

Sample Description: Brown CLAY

Sample Preparation: Sample prepared in accordance with BS 1377-1:2016 Clause 9.1.1.

Depth Top [m]: 15.00

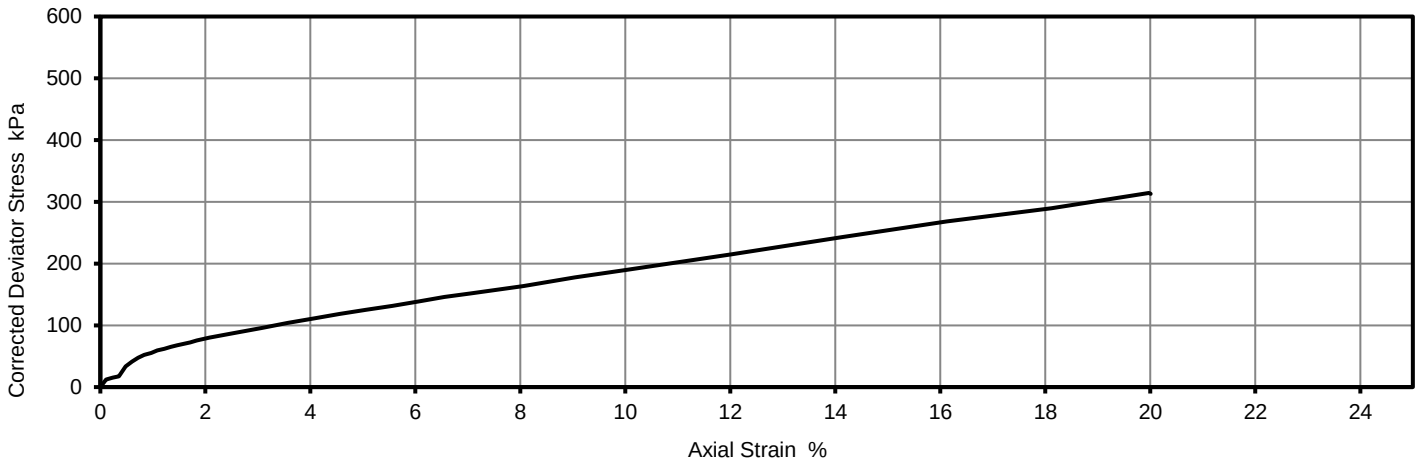
Depth Base [m]: 15.45

Sample Type: C

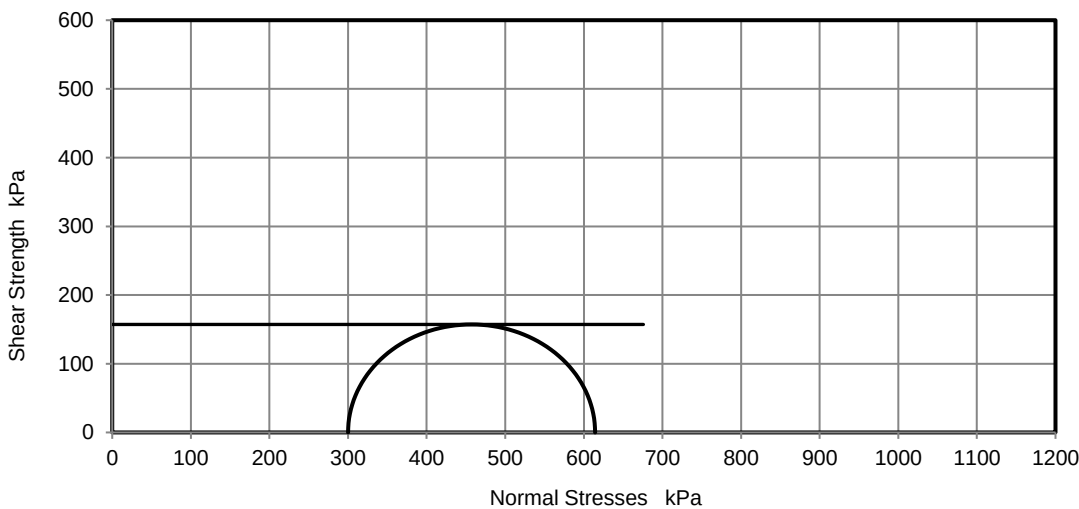
Test Number	1
Length	204.69 mm
Diameter	101.74 mm
Bulk Density	2.21 Mg/m3
Moisture Content	15 %
Dry Density	1.92 Mg/m3
Membrane Correction	1.02 kPa

Rate of Strain	1.50 %/min
Cell Pressure	300 kPa
Axial Strain at failure	20.0 %
Deviator Stress, ($\sigma_1 - \sigma_3$) _f	314 kPa
Undrained Shear Strength, c_u	157 kPa $\frac{1}{2}(\sigma_1 - \sigma_3)_f$
Mode of Failure	Compound
Latex membrane thickness	0.27 mm

Deviator Stress v Axial Strain



Mohr Circles



Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377.
This is provided for information only.

Remarks:

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Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd



TEST CERTIFICATE

DETERMINATION OF THE UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION WITHOUT MEASUREMENT OF PORE PRESSURE

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



Environmental Science

4041

Tested in Accordance with: BS 1377-7: 1990: Clause 8

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Contact: Philip Lewis
Site Address: Home Bargains, Newport

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Client Reference: LMB NEWPORT

Job Number: 24-79891-2

Date Sampled: 10/01/2024

Date Received: 17/01/2024

Date Tested: 30/01/2024

Sampled By: Client - PIL

Test Results:

Laboratory Reference: 2937522

Hole No.: BH103

Sample Reference: Not Given

Sample Description: Grey CLAY

Sample Preparation: Sample prepared in accordance with BS 1377-1:2016 Clause 9.1.1.

Depth Top [m]: 2.00

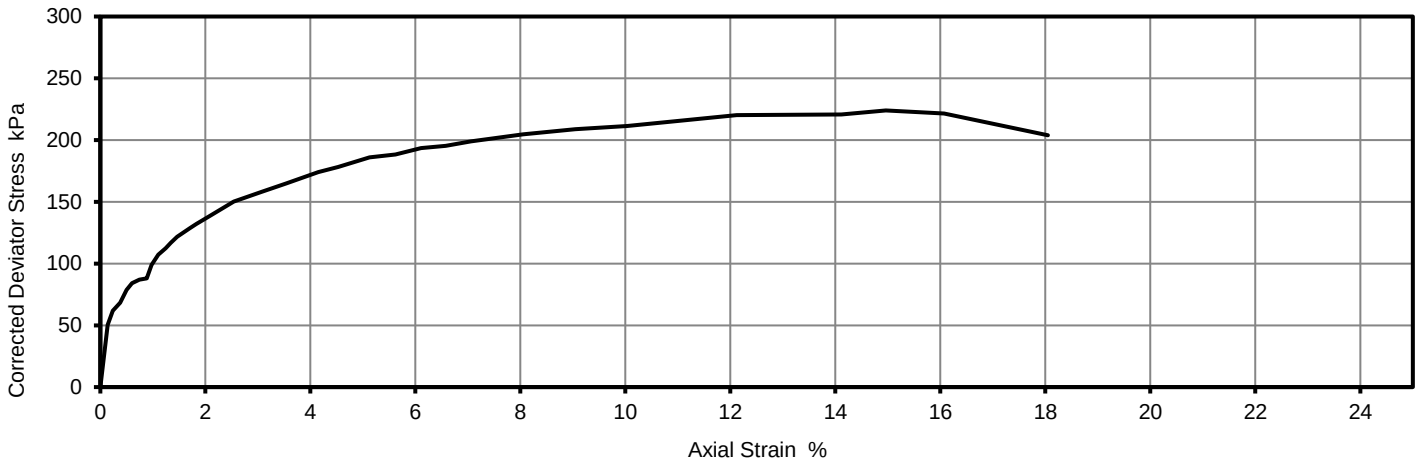
Depth Base [m]: 2.45

Sample Type: C

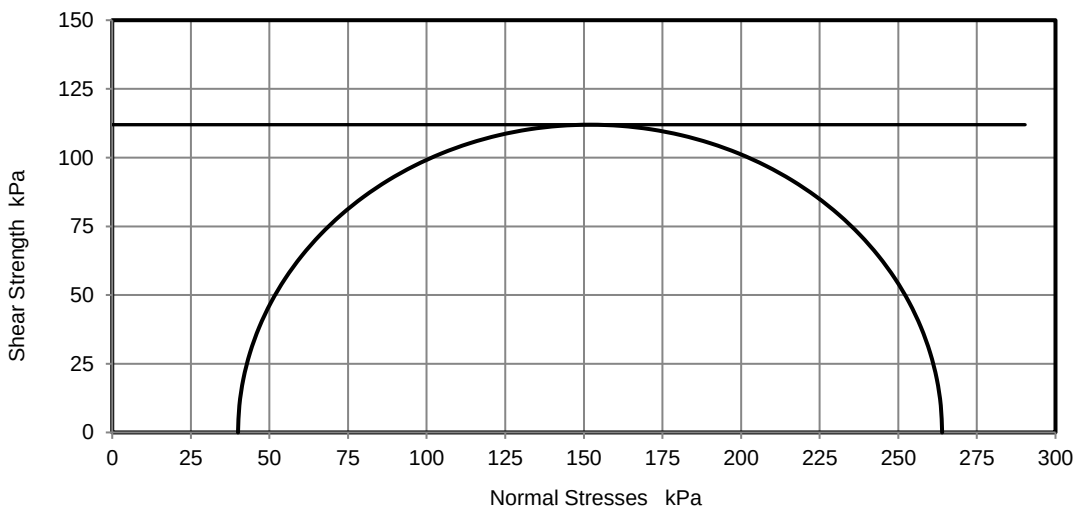
Test Number	1
Length	100.67 mm
Diameter	50.23 mm
Bulk Density	1.95 Mg/m ³
Moisture Content	29 %
Dry Density	1.51 Mg/m ³
Membrane Correction	1.33 kPa

Rate of Strain	1.50 %/min
Cell Pressure	40 kPa
Axial Strain at failure	15.0 %
Deviator Stress, ($\sigma_1 - \sigma_3$) _f	224 kPa
Undrained Shear Strength, c_u	112 kPa $\frac{1}{2}(\sigma_1 - \sigma_3)_f$
Mode of Failure	Brittle
Latex membrane thickness	0.22 mm

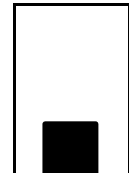
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377.
This is provided for information only.

Remarks:

Signed:

Monika Siewior

Monika Siewior
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.



DETERMINATION OF THE ONE-DIMENSIONAL CONSOLIDATION PROPERTIES

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB



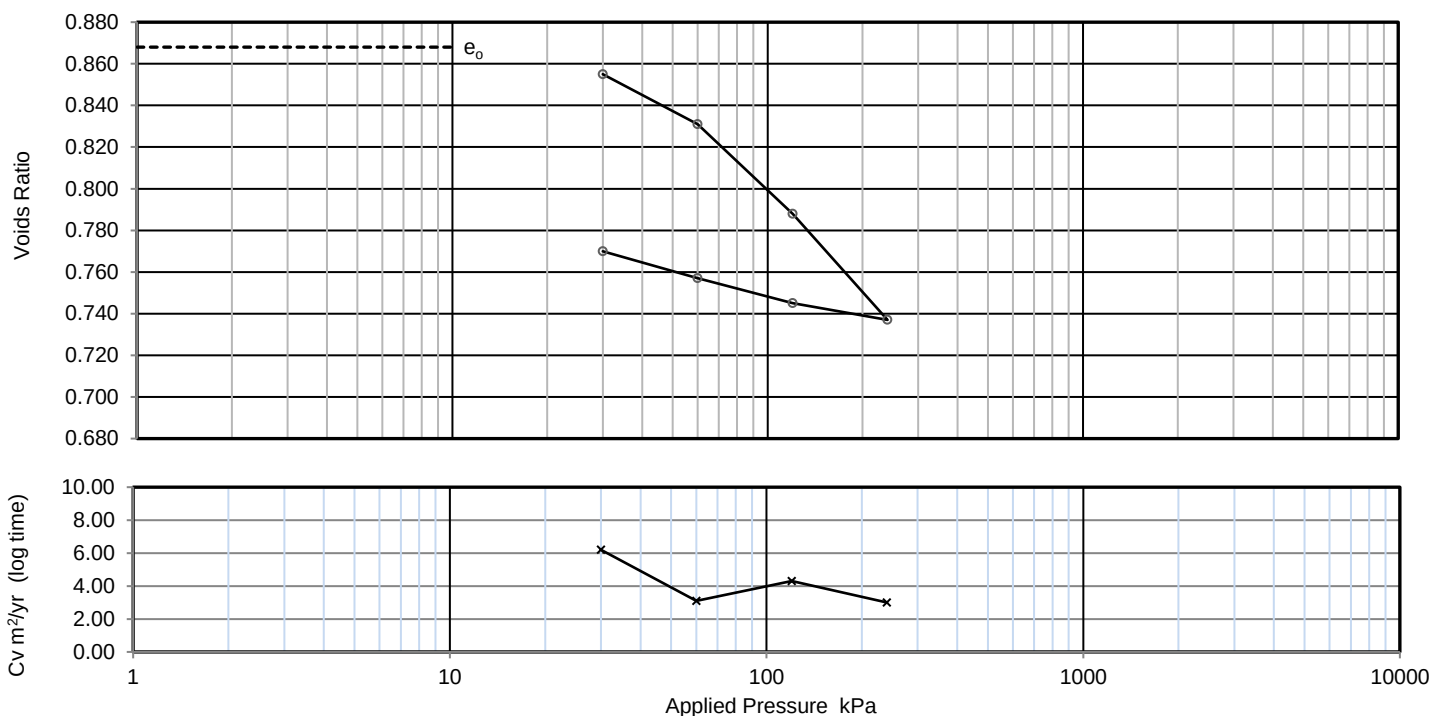
Environmental Science

Client: LMB Geosolutions Ltd
Client Address: 28 Dresden Road, London,
N19 3BD

Sampled By: Client - PIL

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Sample Type: C

[illegible]

Carried out on top of U100

Total test time

Vertical		
assumed	2.65	Mg/m3
N/A		%
N/A		%

Initial	Final	
50.13	-	mm
20.05	18.99	mm
30	30	%
1.84	1.95	Mg/m3
1.42	1.50	Mg/m3
0.868	0.770	
91	105	%
22.0		°C
Not measured		kPa
		%
7		days

Note: Cv corrected to 20°C

Remarks:

Monika
Sienior

for and on behalf of i2 Analytical Ltd

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Date Reported: 16/02/2024

GF 172.17



Philip Lewis
LMB Geosolutions Ltd
28 Dresden Road
London
N19 3BD

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
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e: philip@lmbgeosolutions.com

Analytical Report Number : 24-79892

Project / Site name:	Home Bargains, Newport	Samples received on:	17/01/2024
Your job number:	LMB NEWPORT	Samples instructed on/ Analysis started on:	23/01/2024
Your order number:		Analysis completed by:	06/02/2024
Report Issue Number:	1	Report issued on:	06/02/2024
Samples Analysed:	24 soil samples		

Signed: *A. Czerwińska*

Agnieszka Czerwińska
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

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

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

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 24-79892
Project / Site name: Home Bargains, Newport

Lab Sample Number				2937531	2937532	2937533	2937534	2937535
Sample Reference				TP101	TP101	TP102	TP103	TP103
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.50	1.50	1.00	0.60	1.10
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	55	< 0.1	< 0.1	57	< 0.1
Moisture Content	%	0.01	NONE	6.7	23	8.9	7.8	21
Total mass of sample received	kg	0.001	NONE	0.5	0.5	0.5	0.5	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	-	9.4	8.3	-
Total Sulphate as SO ₄	%	0.005	MCERTS	0.063	-	0.178	0.094	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0234	-	0.344	0.0875	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	9.5	-	40	18	-
Total Sulphur	%	0.005	MCERTS	0.05	-	0.095	0.09	-
Organic Matter (automated)	%	0.1	MCERTS	-	0.9	-	-	1.6
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	-	-	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	-	< 2.0	< 2.0	-

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	15	-	7.8	26	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	7.2	-	3.9	13	-

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

Analytical Report Number: 24-79892
Project / Site name: Home Bargains, Newport

Lab Sample Number				2937536	2937537	2937538	2937539	2937540
Sample Reference				TP105	TP105	BH101	BH101	BH101
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.50	1.00	3.50-4.00	4.50-5.00	6.00
Date Sampled				Deviating	Deviating	08/01/2024	06/01/2024	08/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	23	26	43	31
Total mass of sample received	kg	0.001	NONE	0.5	0.5	0.5	1	1.2

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.1	-	-	-	8.7
Total Sulphate as SO ₄	%	0.005	MCERTS	0.032	-	-	-	0.153
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0173	-	-	-	0.451
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	16	-	-	-	120
Total Sulphur	%	0.005	MCERTS	0.023	-	-	-	1.79
Organic Matter (automated)	%	0.1	MCERTS	-	7	2.4	-	-
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	-	-	16.1	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	-	-	-	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	14	-	-	-	37
Magnesium (leachate equivalent)	mg/l	2.5	NONE	6.8	-	-	-	19

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

Analytical Report Number: 24-79892
Project / Site name: Home Bargains, Newport

Lab Sample Number				2937541	2937542	2937543	2937544	2937545
Sample Reference				BH101	BH101	BH102	BH102	BH102
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				12.00-12.45	16.50-16.95	3.50-3.80	5.50-5.80	15.50-15.80
Date Sampled				08/01/2024	08/01/2024	11/01/2024	11/01/2024	12/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	42	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	12	9.2	25	54	15
Total mass of sample received	kg	0.001	NONE	1.2	0.5	0.5	0.8	2

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	9.3	-	-	-
Total Sulphate as SO ₄	%	0.005	MCERTS	0.043	0.048	-	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.199	0.0835	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	57	38	-	-	-
Total Sulphur	%	0.005	MCERTS	0.189	0.026	-	-	-
Organic Matter (automated)	%	0.1	MCERTS	-	-	1.2	-	0.3
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	-	-	21.4	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	-	-	-

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	22	5.7	-	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	11	2.8	-	-	-

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

Analytical Report Number: 24-79892
Project / Site name: Home Bargains, Newport

Lab Sample Number				2937546	2937547	2937548	2937549	2937550
Sample Reference				BH103	BH103	BH103	BH103	BH103
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				2.50-2.60	4.00-4.45	8.50-8.80	10.00-10.50	1050-10.95
Date Sampled				10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	23	22	21	26	17
Total mass of sample received	kg	0.001	NONE	0.5	0.6	1.2	1.2	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	8.3	8.9	-	8.3
Total Sulphate as SO ₄	%	0.005	MCERTS	-	0.09	0.128	-	0.184
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	-	0.14	0.245	-	0.685
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	30	89	-	130
Total Sulphur	%	0.005	MCERTS	-	0.197	0.418	-	1.31
Organic Matter (automated)	%	0.1	MCERTS	0.8	-	-	-	-
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	-	-	1.7	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-	< 2.0	< 2.0	-	< 2.0

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	-	31	16	-	36
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	16	7.9	-	18

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

Analytical Report Number: 24-79892
Project / Site name: Home Bargains, Newport

Lab Sample Number				2937551	2937552	2937553	2937554
Sample Reference				BH103	BH104	BH104	BH104
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				15.00-15.50	3.00-3.45	4.50-4.80	6.90-7.30
Date Sampled				10/01/2024	15/01/2024	15/01/2024	15/01/2024
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	13	21	0.94	44
Total mass of sample received	kg	0.001	NONE	0.5	1.1	1.2	0.5

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	9.5	7.8	-	-
Total Sulphate as SO ₄	%	0.005	MCERTS	0.059	0.048	-	-
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0598	0.0574	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	47	59	-	-
Total Sulphur	%	0.005	MCERTS	0.036	0.043	-	-
Organic Matter (automated)	%	0.1	MCERTS	-	-	-	12
Loss on Ignition @ 450oC	%	0.2	MCERTS	-	-	2.1	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	-	-

Heavy Metals / Metalloids

Magnesium (water soluble)	mg/kg	5	NONE	5.7	37	-	-
Magnesium (leachate equivalent)	mg/l	2.5	NONE	2.8	19	-	-

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

Analytical Report Number : 24-79892
Project / Site name: Home Bargains, Newport

* 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 *
2937531	TP101	None Supplied	0.5	Brown clay and sand with gravel and stones.
2937532	TP101	None Supplied	1.5	Grey clay.
2937533	TP102	None Supplied	1	Brown gravelly loam with tar.
2937534	TP103	None Supplied	0.6	Brown gravelly loam with stones.
2937535	TP103	None Supplied	1.1	Brown clay and sand.
2937536	TP105	None Supplied	1.5	Brown clay and sand.
2937537	TP105	None Supplied	1	Brown clay and sand with gravel.
2937538	BH101	None Supplied	3.50-4.00	Brown clay.
2937539	BH101	None Supplied	4.50-5.00	Brown clay and gravel with peat and vegetation.
2937540	BH101	None Supplied	6	Grey clay.
2937541	BH101	None Supplied	12.00-12.45	Light grey sand with gravel and stones.
2937542	BH101	None Supplied	16.50-16.95	Brown clay and sand.
2937543	BH102	None Supplied	3.50-3.80	Grey clay.
2937544	BH102	None Supplied	5.50-5.80	Brown clay and gravel with peat and vegetation.
2937545	BH102	None Supplied	15.50-15.80	Brown clay and sand.
2937546	BH103	None Supplied	2.50-2.60	Light grey clay.
2937547	BH103	None Supplied	4.00-4.45	Light grey clay.
2937548	BH103	None Supplied	8.50-8.80	Grey clay.
2937549	BH103	None Supplied	10.00-10.50	Light grey clay.
2937550	BH103	None Supplied	1050-10.95	Brown clay.
2937551	BH103	None Supplied	15.00-15.50	Brown clay and sand with gravel.
2937552	BH104	None Supplied	3.00-3.45	Brown clay.
2937553	BH104	None Supplied	4.50-4.80	Brown clay.
2937554	BH104	None Supplied	6.90-7.30	Brown clay and loam with gravel.

Analytical Report Number : 24-79892

Project / Site name: Home Bargains, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
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
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
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
Organic matter (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report



Analytical Report Number : 24-79892

Project / Site name: Home Bargains, Newport

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH104	None Supplied	S	2937552	c	Chloride, water soluble, in soil	L082-PL	c
BH104	None Supplied	S	2937552	c	Water Soluble Nitrate (2:1) as N in soil	L078-PL	c
BH104	None Supplied	S	2937552	c	pH in soil (automated)	L099-PL	c
TP101	None Supplied	S	2937531	a	None Supplied	None Supplied	None Supplied
TP101	None Supplied	S	2937532	a	None Supplied	None Supplied	None Supplied
TP102	None Supplied	S	2937533	a	None Supplied	None Supplied	None Supplied
TP103	None Supplied	S	2937534	a	None Supplied	None Supplied	None Supplied
TP103	None Supplied	S	2937535	a	None Supplied	None Supplied	None Supplied
TP105	None Supplied	S	2937536	a	None Supplied	None Supplied	None Supplied
TP105	None Supplied	S	2937537	a	None Supplied	None Supplied	None Supplied



LMB Geosolutions Ltd
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WD18 8YS

e: philip@lmbgeosolutions.com

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

Analytical Report Number : 24-000948

Project / Site name:	Home Bargains, Newport	Samples received on:	17/01/2024
Your job number:		Samples instructed on/ Analysis started on:	30/01/2024
Your order number:		Analysis completed by:	09/02/2024
Report Issue Number:	1	Report issued on:	14/02/2024
Samples Analysed:	3 soil samples		

Signed:

Joanna Wawrzeczko
Senior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

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

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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: 24-000948
Project / Site name: Home Bargains, Newport

Lab Sample Number				106672	106673	106674
Sample Reference				BH102	BH102	BH102
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				1.50-1.80	5.00-5.45	12.00-12.45
Date Sampled				11/01/2024	11/01/2024	11/01/2024
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	40
Moisture Content	%	0.01	NONE	13	40	9
Total mass of sample received	kg	0.1	NONE	0.5	1	1

General Inorganics

pH (L099)	pH Units	N/A	MCERTS	7.8	8.3	8.1
Total Sulphate as SO ₄	%	0.005	MCERTS	0.101	0.194	0.025
Water Soluble Sulphate as SO ₄ 16hr extraction (2:1)	mg/kg	2.5	MCERTS	260	1300	180
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	130	663	88.4
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	61	140	94
Total Sulphur	mg/kg	50	MCERTS	1400	21000	980
Total Sulphur	%	0.005	MCERTS	0.136	2.11	0.098
Ammoniacal Nitrogen as NH ₄	mg/kg	0.5	MCERTS	14	14	11
Ammonium as NH ₄ (10:1 leachate equivalent)	mg/l	0.05	MCERTS	0.95	0.67	0.79
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0

Heavy Metals / Metalloids

Magnesium (leachate equivalent)	mg/l	2.5	NONE	18	35	5.6
Magnesium (water soluble)	mg/kg	5	NONE	35	71	11

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

Analytical Report Number : 24-000948

Project / Site name: Home Bargains, Newport

* 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 *
106672	BH102	None Supplied	1.50-1.80	Brown clay
106673	BH102	None Supplied	5.00-5.45	Brown clay
106674	BH102	None Supplied	12.00-12.45	Brown clay and sand with stones

Analytical Report Number : 24-000948

Project / Site name: Home Bargains, Newport

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Total sulphate (as SO ₄ in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES	In-house method	L038B	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES	In-house method	L038B	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078B	D	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
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	L082B	W	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

APPENDICES

APPENDIX D MONITORING RESULTS

PROJECT: Home Bargains, Newport

Date 26/01/2024 Operator pil

Atmospheric Pressure (mb) Start 1032 Finish 1030 Weather dry, cold & sunny Time: 14:15

Location	Time(s)	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO(ppm)	H ₂ S (ppm)	Flow (l/hr)	PID (ppm)	Groundwater Level		Ground Elevation
									m AOD	mbgl	
BH101S	60	1.30	0.60	17.40	0.00	0.00	0.00	0.00	4.43	2.73	7.160
	120	1.30	0.60	17.40	0.00	0.00					
	240	1.30	0.60	17.40	0.00	0.00					
BH101D	60	1.40	2.70	12.80	0.00	0.00	0.00	0.10	3.62	3.54	7.160
	120	1.40	2.70	12.80	0.00	0.00					
	240	1.40	2.70	12.80	0.00	0.00					
BH102S	60	0.00	0.30	15.50	10.00	0.00	0.00	0.20	5.81	1.78	7.590
	120	0.00	0.30	15.50	10.00	0.00					
	240	0.00	0.30	15.50	10.00	0.00					
BH102D	60	6.70	4.30	10.80	0.00	10.00	0.00	0.00	3.18	4.41	7.590
	120	6.70	4.30	10.80	0.00	10.00					
	240	6.70	4.30	10.80	0.00	10.00					
BH103S	60	1.00	2.10	18.00	11.00	0.00	0.00	6.70	4.57	2.69	7.260
	120	1.00	2.10	18.00	11.00	0.00					
	240	1.00	2.10	18.00	11.00	0.00					
BH103D	60	0.00	0.70	19.90	15.00	0.00	7.0/0.0	0.70	3.67	3.59	7.26
	120	0.00	0.70	19.90	15.00	0.00					
	240	0.00	0.70	19.90	15.00	0.00					
BH104	60	0.00	0.20	20.10	12.00	0.00	0.00	0.00	6.43	1.01	7.44
	120	0.00	0.20	20.10	12.00	0.00					
	240	0.00	0.20	20.10	12.00	0.00					

PROJECT: Home Bargains, Newport

Date 07/02/2024 Operator PIL

Atmospheric Pressure (mb) Start 1007 Finish 1005 Weather dry & cloudy Time: 11:50

Location	Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO(ppm)	H ₂ S (ppm)	Flow (l/hr)	PID (ppm)	Groundwater Level		Ground Elevation
									m AOD	mbgl	
BH101S	60	54.90	5.00	5.50	0.00	0.00	25.0/0.0	0.00	4.25	2.91	7.160
	120	54.90	5.00	5.50	0.00	0.00					
	240	54.90	5.00	5.50	0.00	0.00					
BH101D	60	1.50	2.60	11.80	10.00	0.00	.-7/0.0	0.00	3.30	3.86	7.160
	120	1.50	2.60	11.80	10.00	0.00					
	240	1.50	2.60	11.80	10.00	0.00					
BH102S	60	0.20	0.40	14.50	10.00	0.00	0.00	0.20	5.76	1.83	7.590
	120	0.20	0.40	14.50	10.00	0.00					
	240	0.20	0.40	14.50	10.00	0.00					
BH102D	60	15.30	5.70	1.10	10.00	0.00	17.4/0.0	0.00	3.17	4.42	7.590
	120	15.30	5.70	1.10	10.00	0.00					
	240	15.30	5.70	1.10	10.00	0.00					
BH103S	60	1.00	2.70	17.30	12.00	0.00	0.00	0.00	5.28	1.98	7.260
	120	1.00	2.70	17.30	12.00	0.00					
	240	1.00	2.70	17.30	12.00	0.00					
BH103D	60	0.00	1.30	19.50	14.00	0.00	36.7/0.0	1.00	3.60	3.66	7.26
	120	0.00	1.30	19.50	14.00	0.00					
	240	0.00	1.30	19.50	14.00	0.00					
BH104	60	0.00	0.50	19.50	10.00	0.00	0.00	0.10	6.06	1.38	7.44
	120	0.00	0.50	19.50	10.00	0.00					
	240	0.00	0.50	19.50	10.00	0.00					

PROJECT: Home Bargains, Newport

Date 28/02/2024 Operator PIL

Atmospheric Pressure (mb) Start 1020 Finish 1017 Weather cloudy with mist & light rain Time: 09:00

Location	Time	CH ₄ (%)	CO ₂ (%)	O ₂ (%)	CO(ppm)	H ₂ S (ppm)	Flow (l/hr)	PID (ppm)	Groundwater Level		Ground Elevation
									m AOD	mbgl	
BH101S	60	1.80	0.80	18.40	0.00	0.00	.-22.8/0	0.00	4.31	2.85	7.160
	120	2.10	0.80	18.50	0.00	0.00					
	240	2.10	0.80	18.50	0.00	0.00					
BH101D	60	3.10	4.20	8.80	0.00	0.00	.-4.0/0.0	0.00	3.32	3.84	7.160
	120	2.50	3.60	9.80	0.00	0.00					
	240	2.50	3.60	9.80	0.00	0.00					
BH102S	60	0.00	0.90	11.40	10.00	0.00	0.00	0.50	5.61	1.98	7.590
	120	0.00	0.90	11.40	10.00	0.00					
	240	0.00	0.90	11.40	10.00	0.00					
BH102D	60	20.40	4.70	2.60	10.00	0.00	.-16.3/0.0	0.00	2.94	4.65	7.590
	120	20.40	4.70	2.60	10.00	0.00					
	240	20.40	4.70	2.60	10.00	0.00					
BH103S	60	0.90	1.60	16.80	10.00	0.00	0.00	0.20	5.22	2.04	7.260
	120	0.90	1.60	16.80	10.00	0.00					
	240	0.90	1.60	16.80	10.00	0.00					
BH103D	60	0.60	3.20	18.20	10.00	0.00	.-3.0/0.0	0.70	3.80	3.46	7.26
	120	0.60	3.20	18.20	10.00	0.00					
	240	0.60	3.20	18.20	10.00	0.00					
BH104	60	0.00	0.40	19.60	0.00	0.00	0.00	0.20	5.99	1.45	7.44
	120	0.00	0.40	19.60	0.00	0.00					
	240	0.00	0.40	19.60	0.00	0.00					

APPENDICES

APPENDIX E SPT HAMMER CALIBRATION CERTIFICATE

SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

ARCHWAY ENGINEERING UK LTD
AINLEYS INDUSTRIAL ESTATE
ELLAND
WEST YORKSHIRE
HX5 9JP

SPT Hammer Ref: AR1940
Test Date: 07/02/2023
Report Date: 07/02/2023
File Name: AR1940.spt
Test Operator: CM

Instrumented Rod Data

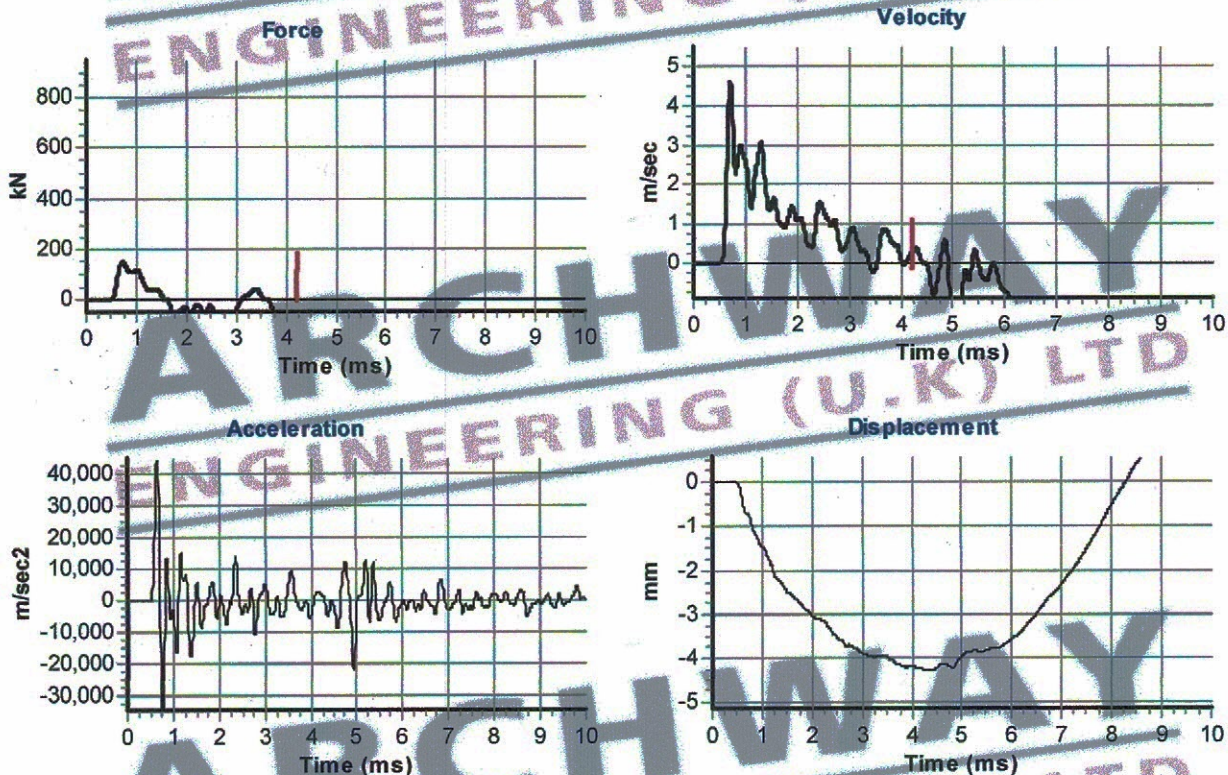
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.0
Assumed Modulus E_a (GPa): 200
Accelerometer No.1: 7080
Accelerometer No.2: 11609

SPT Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
SPT String Length L (m): 10.0

Comments / Location

SEP GEO-TECH LTD-83633



Calculations

Area of Rod A_r (mm²): 905
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 287

Energy Ratio E_r (%):

61

Signed: C. McCLUSKEY
Title: FITTER

The recommended calibration interval is 12 months

APPENDICES

APPENDIX F GAS ANALYSER & PID CALIBRATION CERTIFICATES