

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

Client: ROC Consulting Ltd
Client Address: Commercial Wharf, 6 Commercial Street,
Castlefield, Manchester,
M15 4PZ
Contact: Reece McGuinness
Site Address: MKCC

Client Reference: 4423
Job Number: 23-10574
Date Sampled: 20/12/2022
Date Received: 22/12/2022
Date Tested: 17/01/2023
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

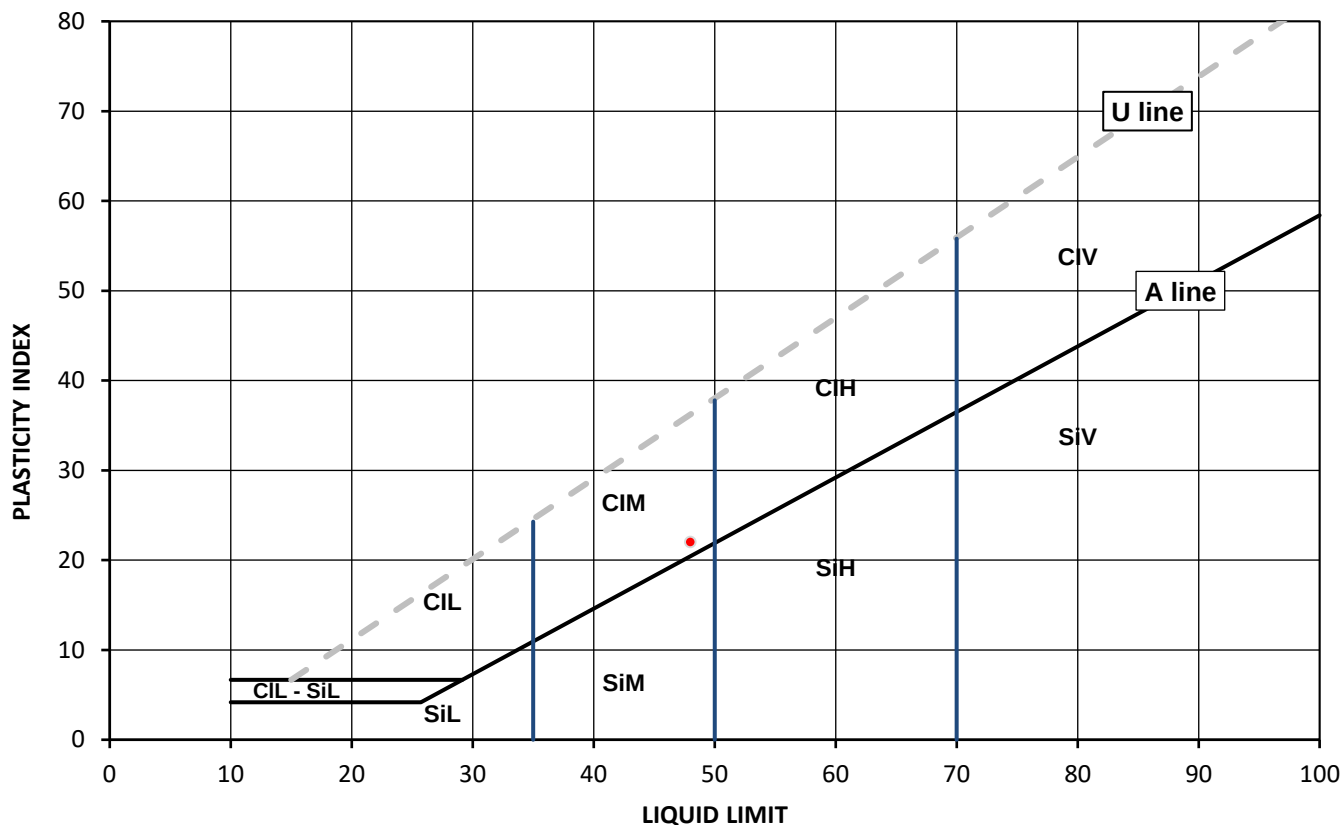
Test Results:

Laboratory Reference: 2547312
Hole No.: WS101
Sample Reference: Not Given
Sample Description: Brown slightly gravelly slightly sandy CLAY

Depth Top [m]: 1.20
Depth Base [m]: Not Given
Sample Type: D

Sample Preparation: Tested after >425um removed by hand

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
33	48	26	22	89



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

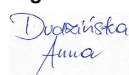
	Plasticity	Liquid Limit
Cl Clay	L Low	below 35
Si Silt	M Medium	35 to 50
	H High	50 to 70
	V Very high	exceeding 70
	O Organic	append to classification for organic material (eg CIHO)

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

Remarks:

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Signed:



Anna Dudzinska
PL Deputy Head of Reporting Team
for and on behalf of i2 Analytical Ltd

4041

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Castlefield, Manchester,
M15 4PZ
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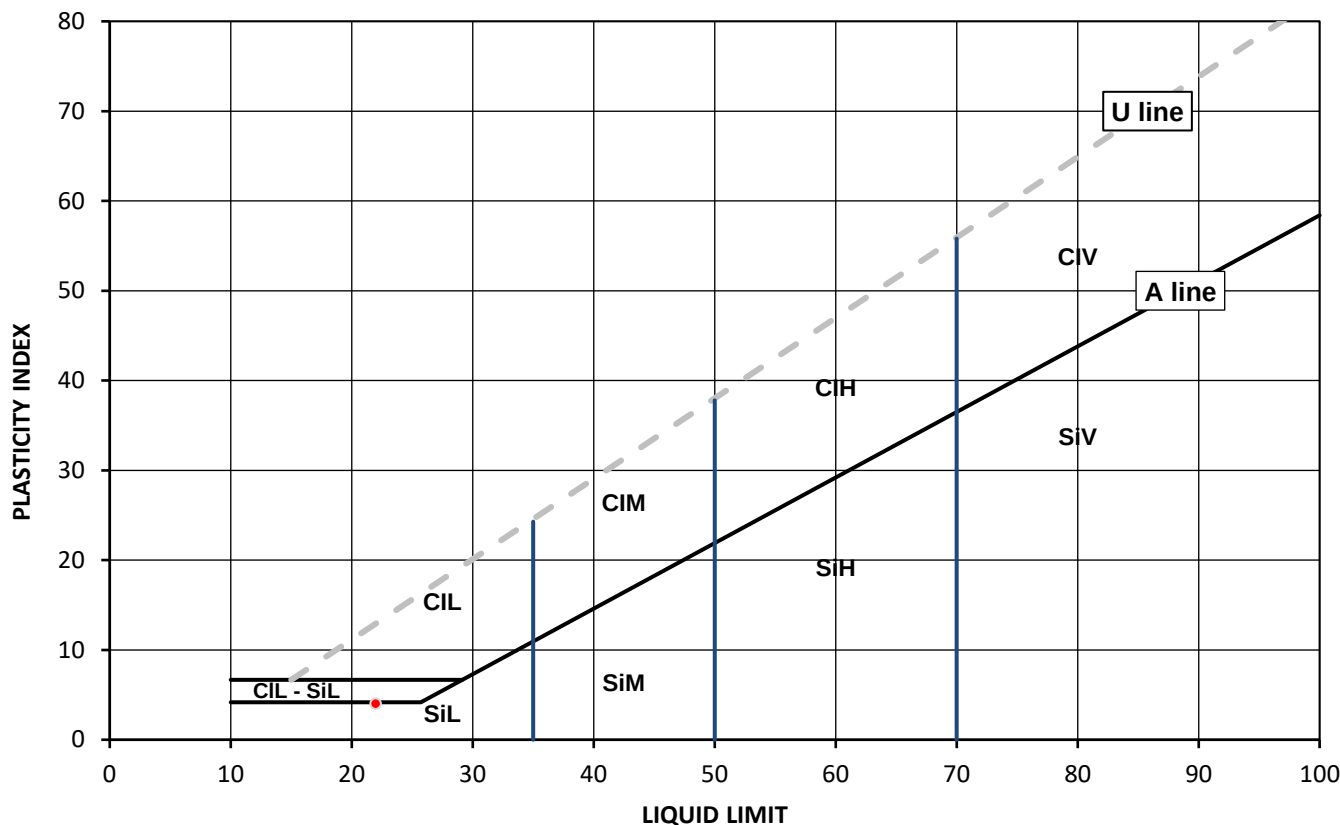
Test Results:

Laboratory Reference: 2547313
Hole No.: WS102
Sample Reference: Not Given
Sample Description: Brownish grey slightly gravelly sandy CLAY

Depth Top [m]: 1.90
Depth Base [m]: 2.00
Sample Type: D

Sample Preparation: Tested after >425um removed by hand

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	% Passing 425µm BS Test Sieve
17	22	18	4	87



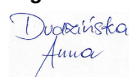
Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

	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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SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

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; PD by BS 1377-2:
1990: Clause 8.2

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



Environmental Science

Client Reference: 4423
Job Number: 23-10574
Date Sampled: 20/12/2022
Date Received: 22/12/2022
Date Tested: 17/01/2023
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 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 m	Depth Base m	Type					% Passing 425um %	WL %	Wp %	Ip %	bulk Mg/m3	dry Mg/m3	PD Mg/m3			
2547312	WS101	Not Given	1.20	Not Given	D	Brown slightly gravelly slightly sandy CLAY	Atterberg 1 Point	33		89	48	26	22						
2547313	WS102	Not Given	1.90	2.00	D	Brownish grey slightly gravelly sandy CLAY	Atterberg 1 Point	17		87	22	18	4						

Note: # Non accredited; NP - Non plastic

Comments:

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Dudzińska Anna

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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

Client Reference: 4423
Job Number: 23-10574
Date Sampled: 20/12/2022
Date Received: 22/12/2022
Date Tested: 17/01/2023
Sampled By: Client - RM

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							
2547312	WS101	Not Given	1.20	Not Given	D	Brown slightly gravelly slightly sandy CLAY		33	Sample was quartered, oven dried at 109 °C			
2547313	WS102	Not Given	1.90	2.00	D	Brownish grey slightly gravelly sandy CLAY		17	Sample was quartered, oven dried at 109 °C			

Comments:

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Dudzińska Anna

Anna Dudzińska
PL Deputy Head of Reporting Team
for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

DETERMINATION OF PARTICLE SIZE DISTRIBUTION

Tested in Accordance with: BS 1377-2: 1990

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Unit 8 Harrowden Road
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Client: ROC Consulting Ltd
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Site Address: MKCC

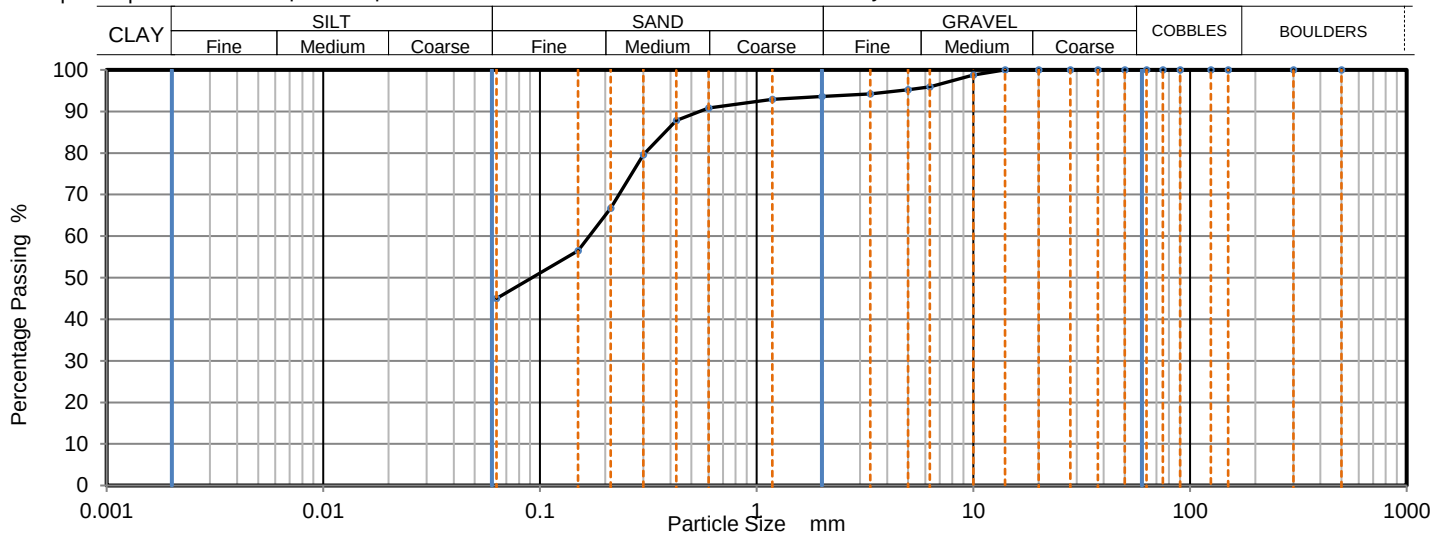
Client Reference: 4423
Job Number: 23-10574
Date Sampled: 20/12/2022
Date Received: 22/12/2022
Date Tested: 17/01/2023
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 2547313
Hole No.: WS102
Sample Reference: Not Given
Sample Description: Brownish grey slightly gravelly sandy CLAY
Sample Preparation: Sample was quartered, oven dried at 109.0 °C and broken down by hand.

Depth Top [m]: 1.90
Depth Base [m]: 2.00
Sample Type: D



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	100		
20	100		
14	100		
10	99		
6.3	96		
5	95		
3.35	94		
2	94		
1.18	93		
0.6	91		
0.425	88		
0.3	80		
0.212	67		
0.15	57		
0.063	45		

Sample Proportions	% dry mass
Very coarse	0
Gravel	6
Sand	48
Fines <0.063mm	45

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 2.7
Curvature Coefficient	

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

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

Remarks:

Signed:

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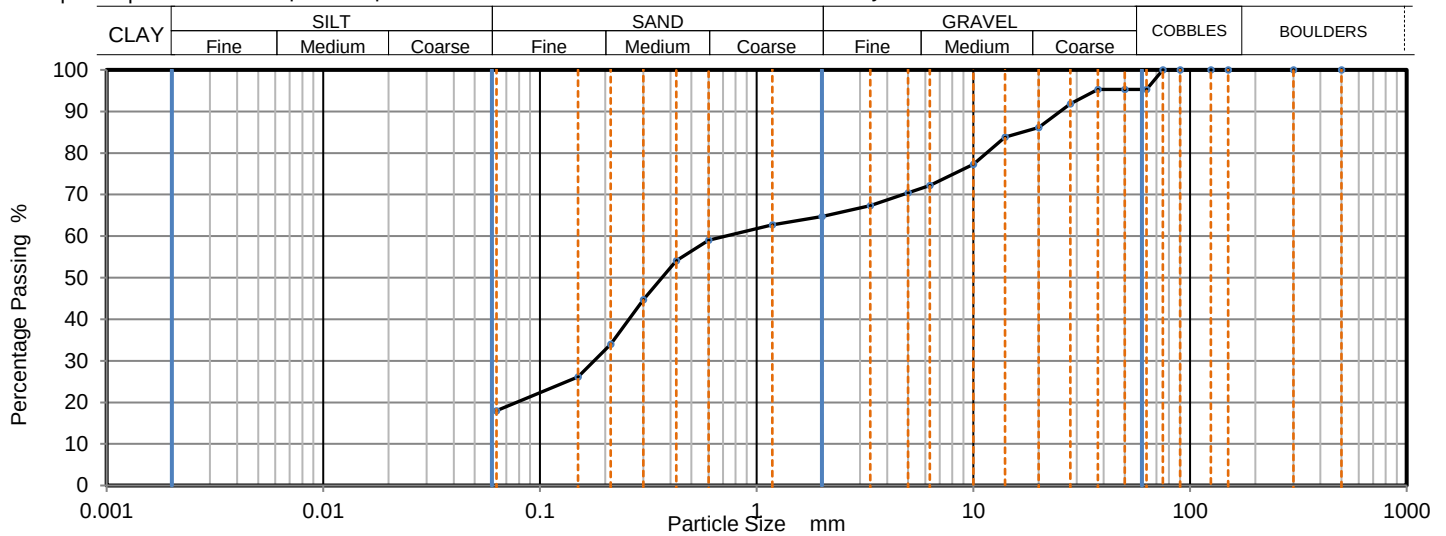
Client Reference: 4423
Job Number: 23-10574
Date Sampled: 20/12/2022
Date Received: 22/12/2022
Date Tested: 16/01/2023
Sampled By: Client - RM

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 2547314
Hole No.: HDP103B
Sample Reference: Not Given
Sample Description: Brown gravelly clayey SAND with fragments of brick
Sample Preparation: Sample was quartered, oven dried at 108.2 °C and broken down by hand.

Depth Top [m]: 0.60
Depth Base [m]: 1.00
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	95		
50	95		
37.5	95		
28	92		
20	86		
14	84		
10	77		
6.3	72		
5	70		
3.35	67		
2	65		
1.18	63		
0.6	59		
0.425	54		
0.3	45		
0.212	34		
0.15	26		
0.063	18		

Sample Proportions	% dry mass
Very coarse	5
Gravel	31
Sand	46
Fines <0.063mm	18

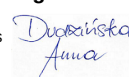
Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	> 11
Curvature Coefficient	

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

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

Remarks:

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