



TEST CERTIFICATE

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



Determination of Particle Size Distribution

4041

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

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 27/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998179

Sample Reference: Not Given

Sample description: Greyish brown slightly sandy slightly gravelly slightly clayey SILT

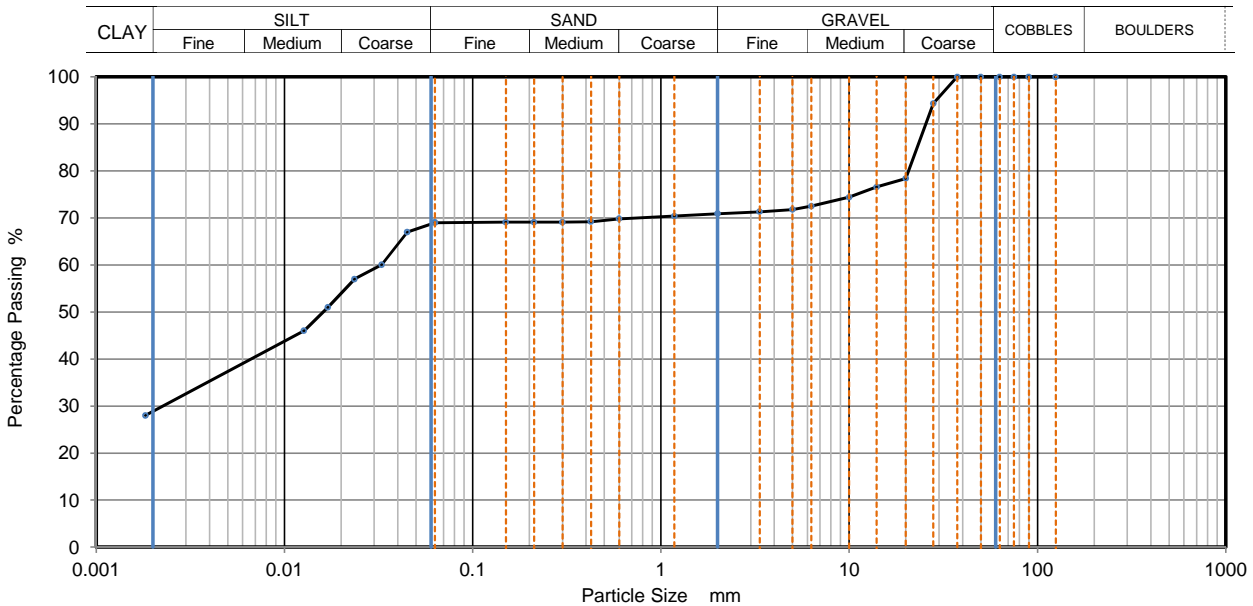
Sample Type: D

Location: BHDA101

Depth Top [m]: 42.50

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0631	69
90	100	0.0450	67
75	100	0.0328	60
63	100	0.0236	57
50	100	0.0170	51
37.5	100	0.0127	46
28	94	0.0018	28
20	78		
14	77		
10	74		
6.3	73		
5	72		
3.35	71		
2	71		
1.18	70		
0.6	70	Particle density (assumed)	
0.425	69	2.65	Mg/m3
0.3	69		
0.212	69		
0.15	69		
0.063	69		

Dry Mass of sample [g]: 1674

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	29.10
Sand	1.80
Silt	40.00
Clay	29.10

Grading Analysis		
D100	mm	37.5
D60	mm	0.0323
D30	mm	0.0022
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below
The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

Date Reported: 20/07/2018

for and on behalf of i2 Analytical Ltd

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The results included within the report are representative of the samples submitted for analysis.
The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."



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Croxley Green Business Park
Watford Herts WD18 8YS



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

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 18/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998180

Sample Reference: Not Given

Sample description: Brown very sandy GRAVEL

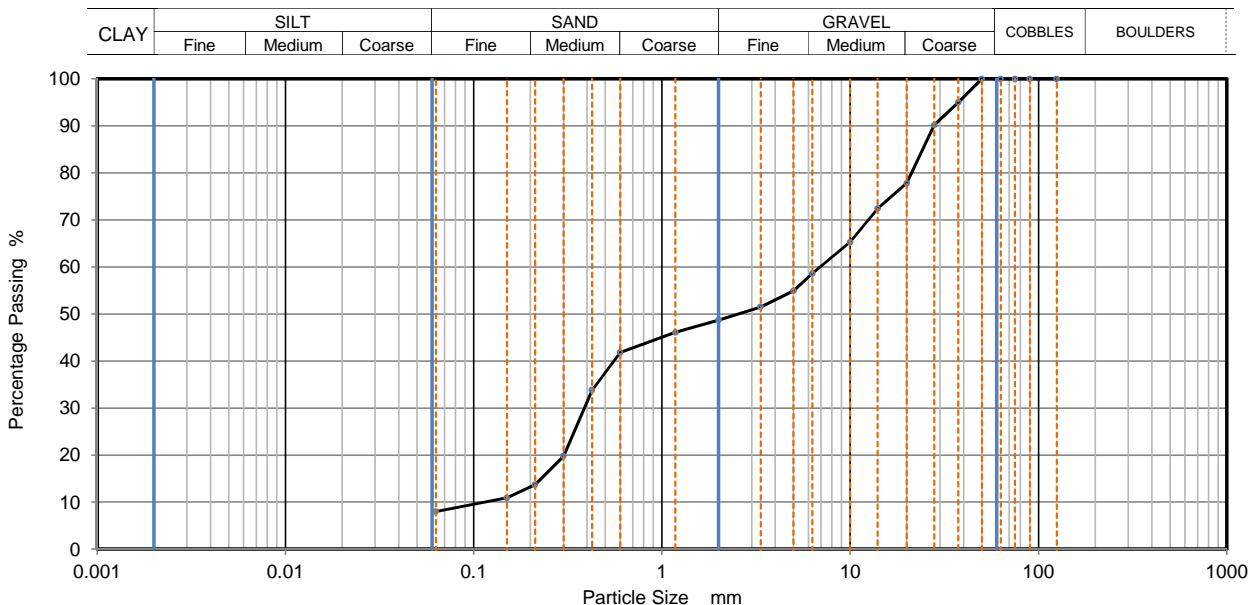
Sample Type: B

Location: BHDA102

Depth Top [m]: 0.50

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	95		
28	90		
20	78		
14	72		
10	65		
6.3	59		
5	55		
3.35	52		
2	49		
1.18	46		
0.6	42		
0.425	34		
0.3	20		
0.212	14		
0.15	11		
0.063	8		

Dry Mass of sample [g]: 3333

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	51.30
Sand	40.40
Fines <0.063mm	8.30

Grading Analysis		
D100	mm	50
D60	mm	6.95
D30	mm	0.387
D10	mm	0.11
Uniformity Coefficient		63
Curvature Coefficient		0.2

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 18/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998181

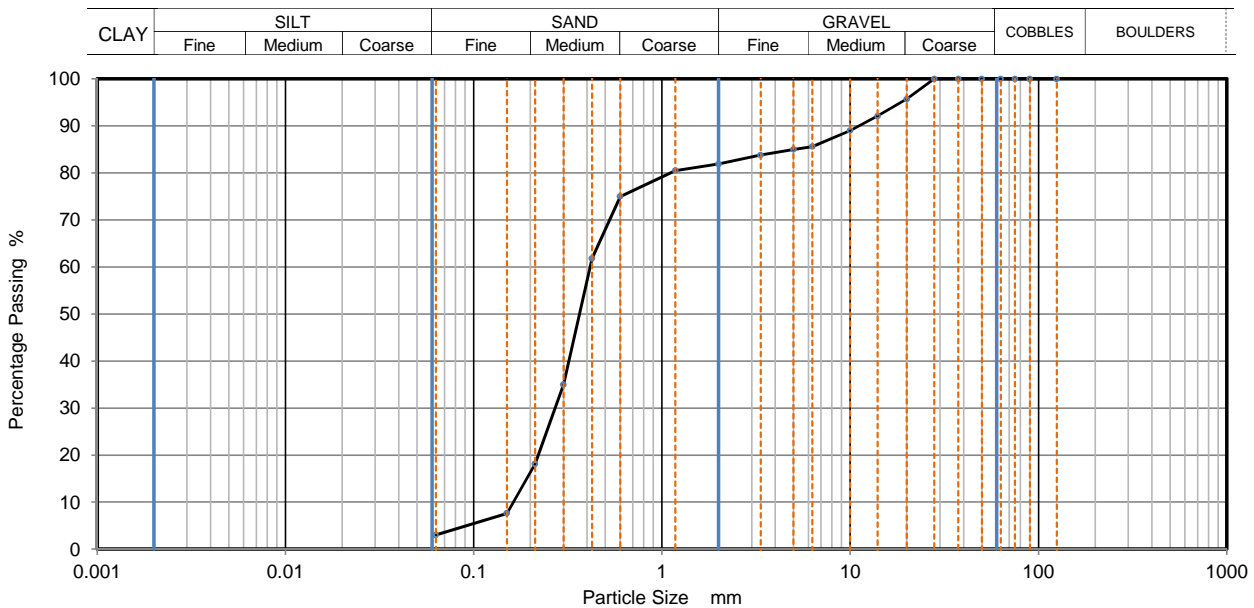
Sample Reference: Not Given

Sample description: Yellowish brown gravelly SAND

Sample Type: B

Location: BHDA102
Supplier: Not Given

Depth Top [m]: 2.00
Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	96		
14	92		
10	89		
6.3	86		
5	85		
3.35	84		
2	82		
1.18	81		
0.6	75		
0.425	62		
0.3	35		
0.212	18		
0.15	8		
0.063	4		

Dry Mass of sample [g]: 2133

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	18.10
Sand	78.00
Fines <0.063mm	3.90

Grading Analysis		
D100	mm	28
D60	mm	0.415
D30	mm	0.271
D10	mm	0.162
Uniformity Coefficient		2.6
Curvature Coefficient		1.1

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

Date Reported: 20/07/2018

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 18/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998182

Sample Reference: Not Given

Sample description: Yellowish brown very sandy GRAVEL

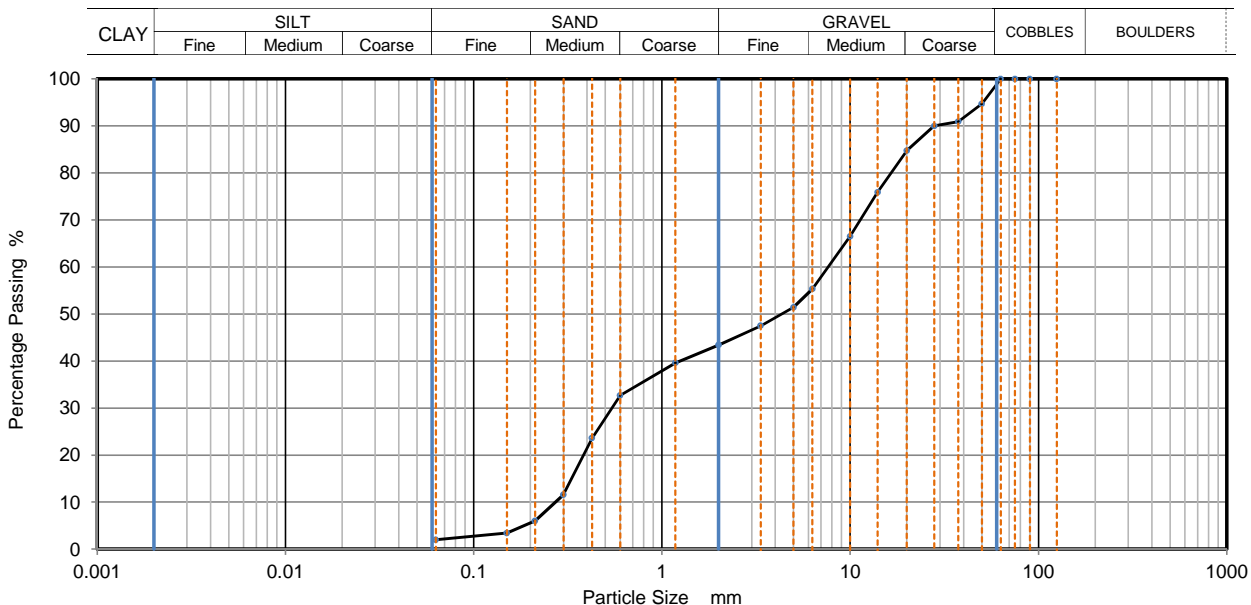
Sample Type: B

Location: BHDA102

Depth Top [m]: 3.00

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	95		
37.5	91		
28	90		
20	85		
14	76		
10	67		
6.3	55		
5	51		
3.35	48		
2	43		
1.18	40		
0.6	33		
0.425	24		
0.3	12		
0.212	6		
0.15	3		
0.063	2		

Dry Mass of sample [g]: 8736

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	56.60
Sand	41.20
Fines <0.063mm	2.20

Grading Analysis		
D100	mm	63
D60	mm	7.64
D30	mm	0.542
D10	mm	0.271
Uniformity Coefficient		28
Curvature Coefficient		0.14

Remarks
Preparation and testing in accordance with BS1377 unless noted below

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

Date Reported: 20/07/2018

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 25/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998198

Sample Reference: Not Given

Sample description: Yellowish brown gravelly SAND

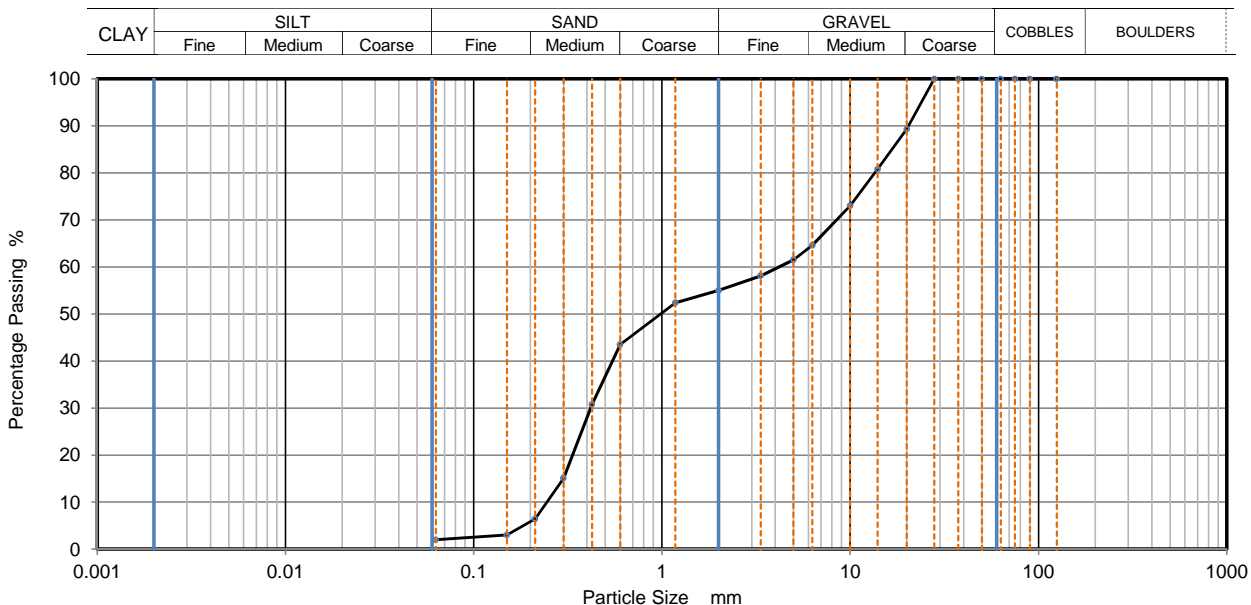
Sample Type: B

Location: BHDA103

Depth Top [m]: 2.00

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	89		
14	81		
10	73		
6.3	65		
5	62		
3.35	58		
2	55		
1.18	52		
0.6	44		
0.425	31		
0.3	15		
0.212	6		
0.15	3		
0.063	2		

Dry Mass of sample [g]: 2559

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	45.00
Sand	52.70
Fines <0.063mm	2.30

Grading Analysis		
D100	mm	28
D60	mm	4.19
D30	mm	0.417
D10	mm	0.245
Uniformity Coefficient		17
Curvature Coefficient		0.17

Remarks
Preparation and testing in accordance with BS1377 unless noted below

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 25/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998199

Sample Reference: Not Given

Sample description: Yellowish brown very sandy GRAVEL

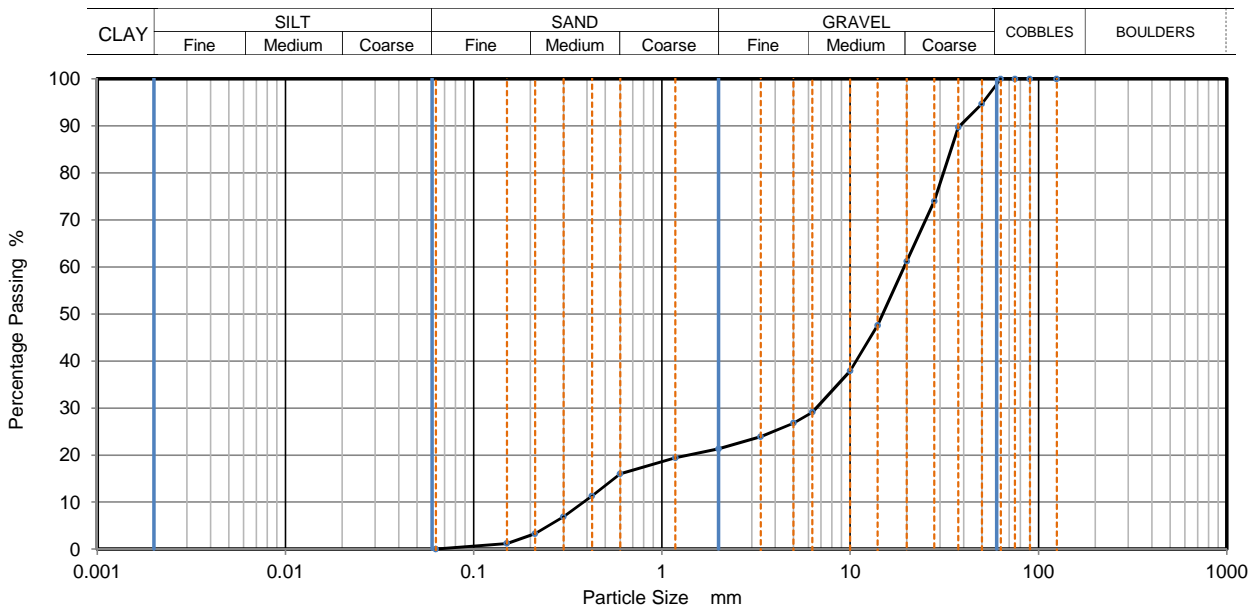
Sample Type: B

Location: BHDA103

Depth Top [m]: 3.00

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	95		
37.5	90		
28	74		
20	61		
14	48		
10	38		
6.3	29		
5	27		
3.35	24		
2	21		
1.18	19		
0.6	16		
0.425	11		
0.3	7		
0.212	3		
0.15	1		
0.063	0		

Dry Mass of sample [g]: 7913

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	78.70
Sand	20.90
Fines <0.063mm	0.40

Grading Analysis		
D100	mm	63
D60	mm	19.4
D30	mm	6.6
D10	mm	0.384
Uniformity Coefficient		50
Curvature Coefficient		5.8

Remarks

Preparation and testing in accordance with BS1377 unless noted below
The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 20/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998207

Sample Reference: Not Given

Sample description: Dark brown slightly sandy gravelly CLAY

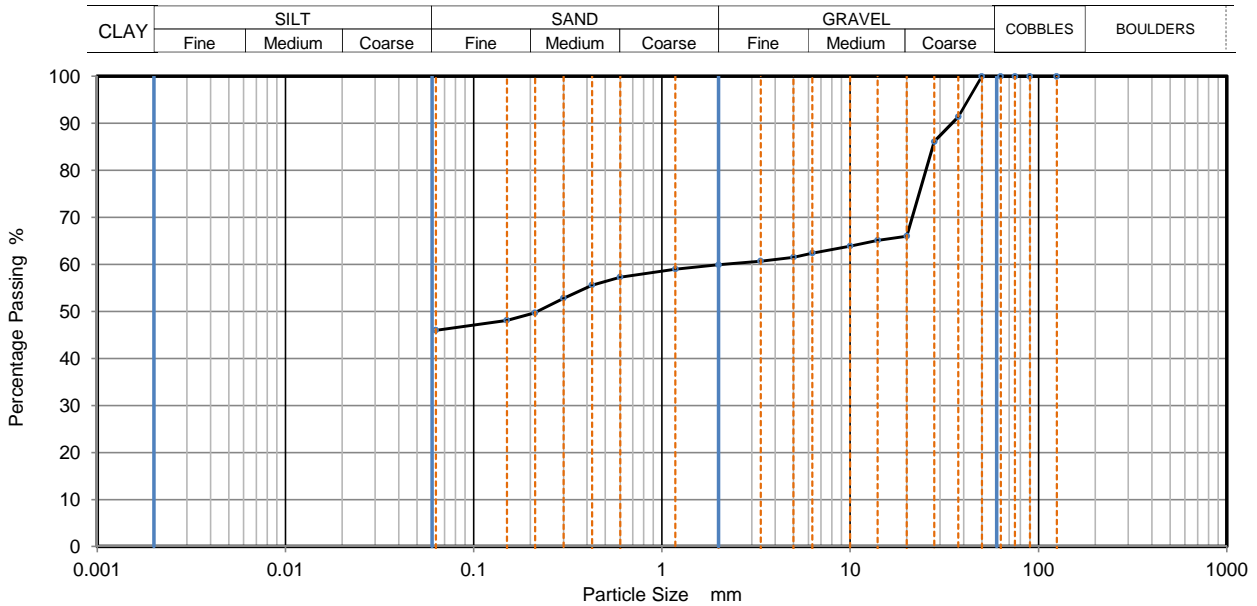
Sample Type: B

Location: BHDA104

Depth Top [m]: 0.50

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	91		
28	86		
20	66		
14	65		
10	64		
6.3	62		
5	62		
3.35	61		
2	60		
1.18	59		
0.6	57		
0.425	56		
0.3	53		
0.212	50		
0.15	48		
0.063	46		

Dry Mass of sample [g]: 2723

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	40.10
Sand	13.80
Fines <0.063mm	46.10

Grading Analysis		
D100	mm	50
D60	mm	2.16
D30	mm	
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

Preparation and testing in accordance with BS1377 unless noted below
The material submitted - fails to meet the minimum mass requirements as stated in BS1377 Part 2 Table 3

Approved:

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Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

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

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 19/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998208

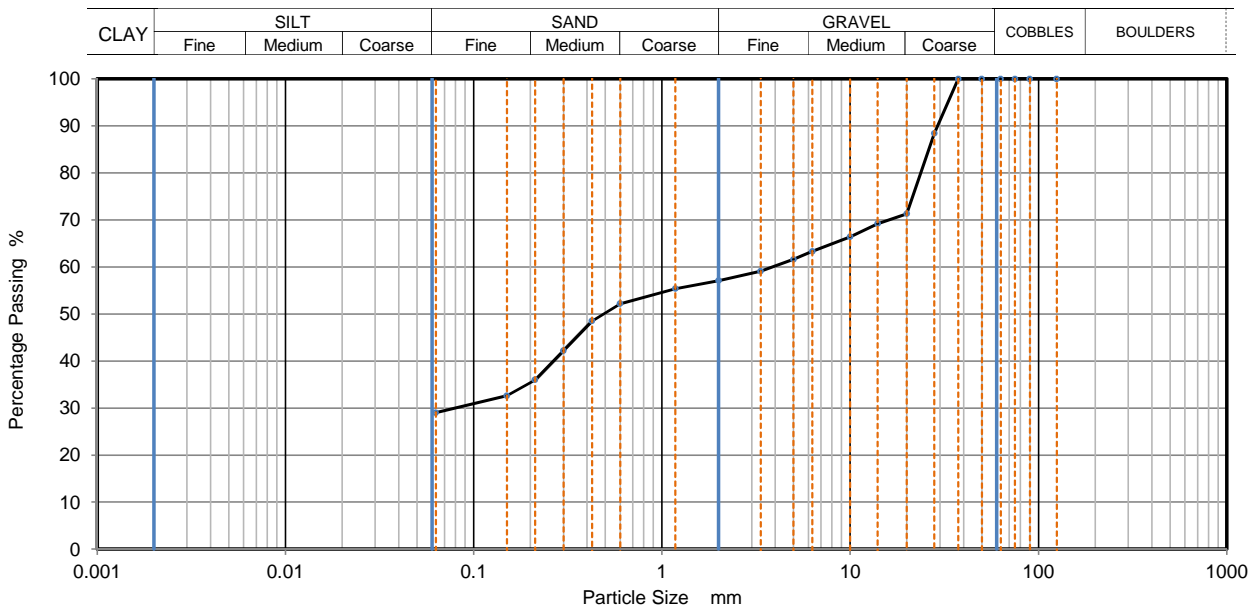
Sample Reference: Not Given

Sample description: Dark brown very sandy GRAVEL

Sample Type: B

Location: BHDA104
Supplier: Not Given

Depth Top [m]: 1.20
Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	88		
20	71		
14	69		
10	66		
6.3	63		
5	62		
3.35	59		
2	57		
1.18	55		
0.6	52		
0.425	49		
0.3	42		
0.212	36		
0.15	33		
0.063	29		

Dry Mass of sample [g]: 2722

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	42.90
Sand	28.10
Fines < 0.063mm	29.00

Grading Analysis		
D100	mm	37.5
D60	mm	3.89
D30	mm	0.08
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

Remarks

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N19 3BD

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 19/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998209

Sample Reference: Not Given

Sample description: Yellowish brown very gravelly SAND

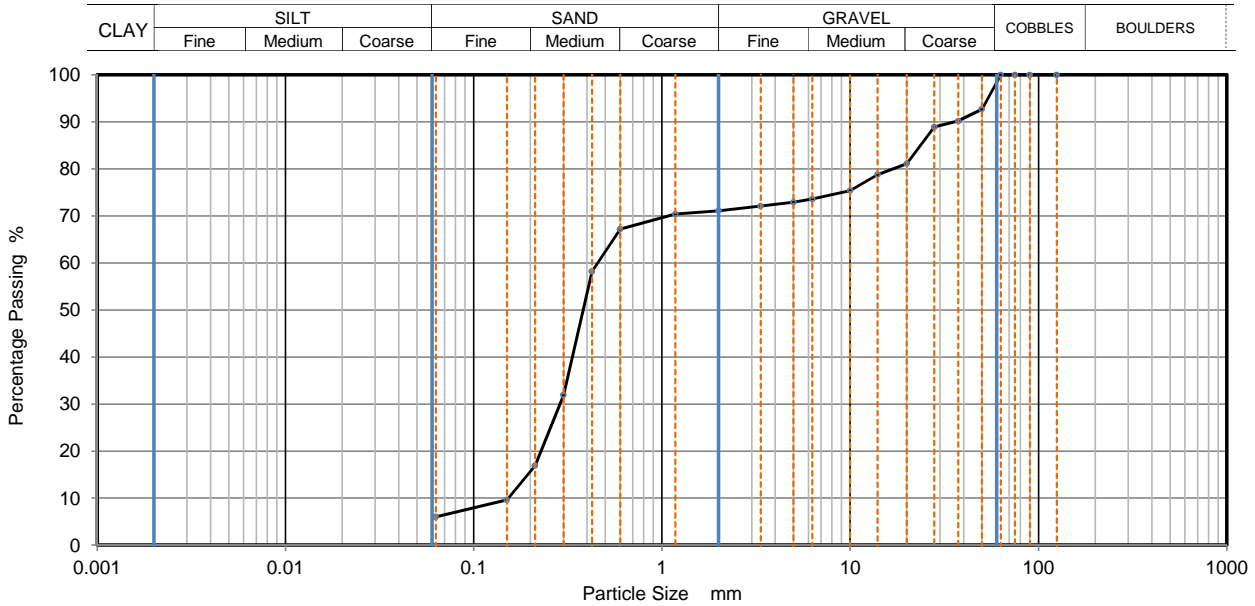
Sample Type: B

Location: BHDA104

Depth Top [m]: 2.00

Supplier: Not Given

Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	93		
37.5	90		
28	89		
20	81		
14	79		
10	75		
6.3	74		
5	73		
3.35	72		
2	71		
1.18	70		
0.6	67		
0.425	58		
0.3	32		
0.212	17		
0.15	10		
0.063	7		

Dry Mass of sample [g]: 3071

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	28.90
Sand	64.50
Fines <0.063mm	6.60

Grading Analysis		
D100	mm	63
D60	mm	0.455
D30	mm	0.287
D10	mm	0.153
Uniformity Coefficient		3
Curvature Coefficient		1.2

Remarks

Preparation and testing in accordance with BS1377 unless noted below
The material submitted - fails to meet the minimum mass requirements
as stated in BS1377 Part 2 Table 3

Approved:

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PL Laboratory Manager
Geotechnical Section

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Client Address: 28 Dresden Road
London
N19 3BD

Client Reference: LMB-CASTLEWOOD
Job Number: 18-92021
Date Sampled: 20/06/2018
Date Received: 20/06/2018
Date Tested: 16/07/2018
Sampled By: PIL/DN

Contact: Philip Lewis
Site Name: Castlewood House
Site Address: Not Given

TEST RESULTS

Laboratory Reference: 998210

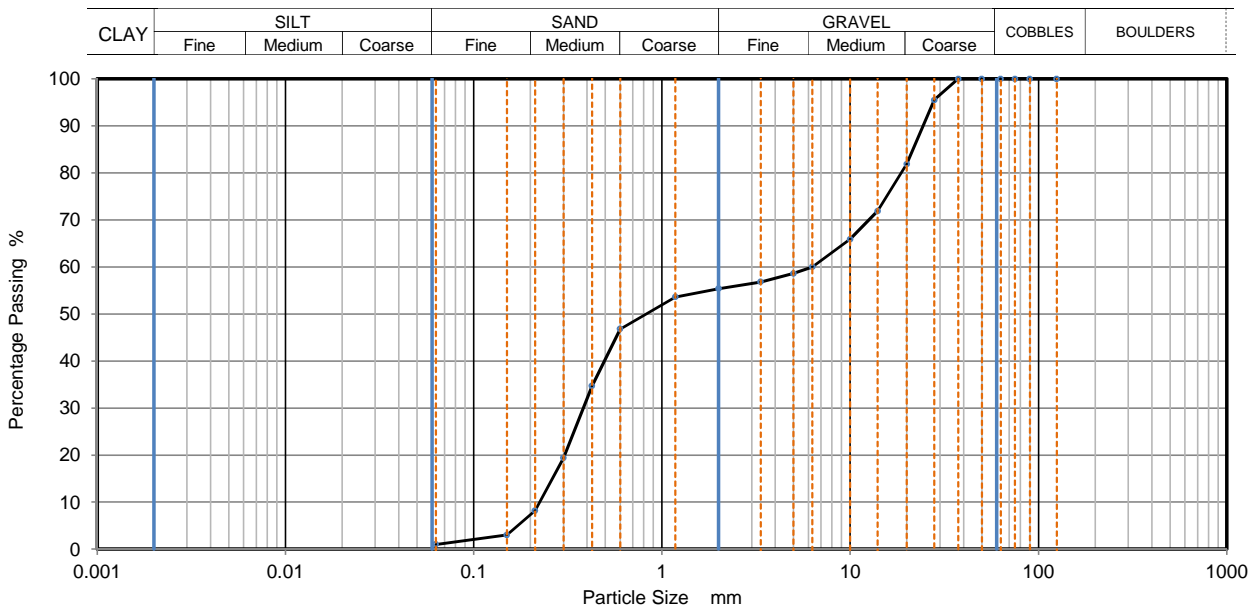
Sample Reference: Not Given

Sample description: Yellowish brown very gravelly SAND

Sample Type: B

Location: BHDA104
Supplier: Not Given

Depth Top [m]: 3.00
Depth Base [m]: Not Given



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	96		
20	82		
14	72		
10	66		
6.3	60		
5	59		
3.35	57		
2	55		
1.18	54		
0.6	47		
0.425	35		
0.3	19		
0.212	8		
0.15	3		
0.063	2		

Dry Mass of sample [g]: 3368

Sample Proportions	% dry mass
Very coarse	0.00
Gravel	44.60
Sand	53.70
Fines <0.063mm	1.70

Grading Analysis		
D100	mm	37.5
D60	mm	6.31
D30	mm	0.382
D10	mm	0.224
Uniformity Coefficient		28
Curvature Coefficient		0.1

Remarks
Preparation and testing in accordance with BS1377 unless noted below

Approved:

Signed:

Dariusz Piotrowski
PL Laboratory Manager
Geotechnical Section

Darren Berrill
Geotechnical General
Manager

Date Reported: 20/07/2018

for and on behalf of i2 Analytical Ltd

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