West Winch Housing Access Road

Environmental Statement Chapter 12.2: Appendix D: Particle Size Distribution Certificates

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Contents

1 Introduction

1.1.1 This document contains the Particle Size Distribution Certificates, as produced by Norfolk Partnership Laboratory. Some users may not be able to access all technical details. If you require this document in a more accessible format please contact westwinchhar@norfolk.gov.uk.

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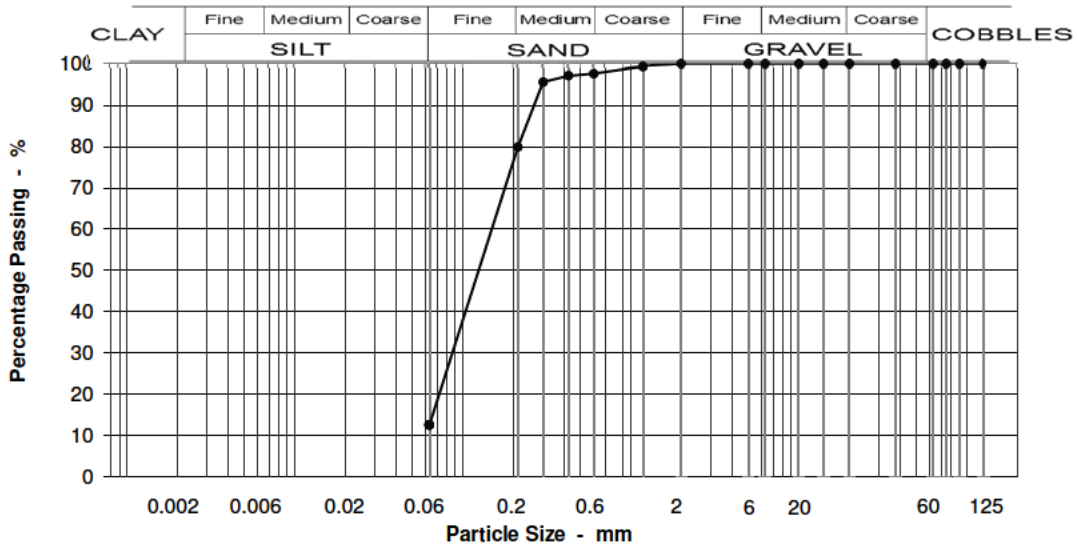
Our reference No. NNPL202009021-610
Our Project No. 100746
Your Sample Ref. 5
Your Order No.
Date Tested 21/09/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 101 @ 1.2 - 2m
Disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	100
6.3	100
5	100
2	100
1.18	99
0.600	98
0.425	97
0.300	96
0.212	80
0.063	13

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6J.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	0
Fine GRAVEL	0
Coarse SAND	2
Medium SAND	18
Fine SAND	67
Silt & Clay	13

Grading Analysis	
D100	1
D60	0.17
D10	0.03
Uniformity Coefficient[!]	6 *

Description
Orangey-brown slightly silty slightly clayey fine SAND.

Moisture content % (BS1377-Part 1, 1990) 19

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

S

Test Code = 610

UKAS TESTING 0920

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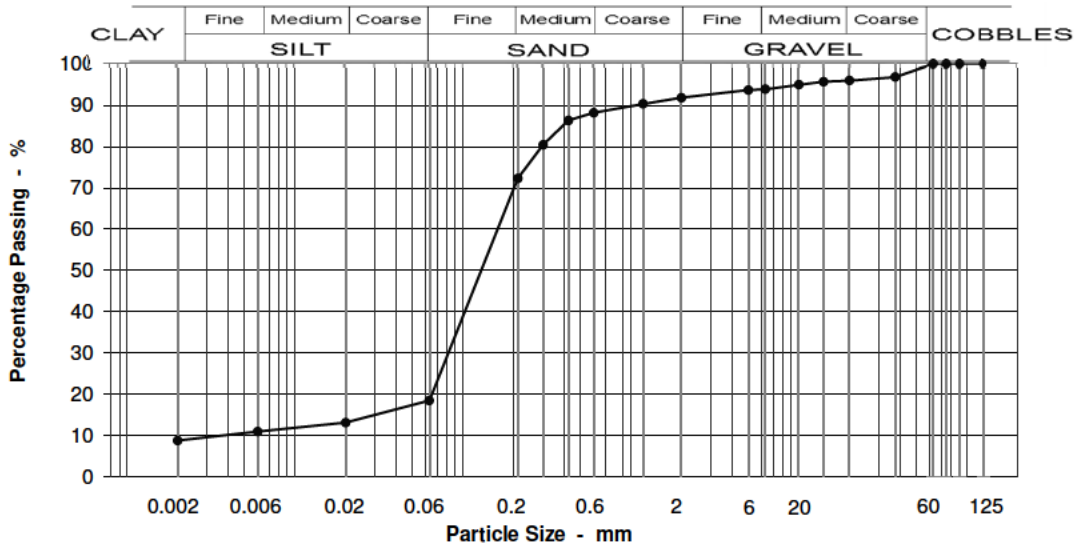
Our reference No. NNPL202008078-610
Our Project No. 100746
Your Sample Ref. 2
Your Order No.
Date Tested 17/08/2020
Date Report Issued 29 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 207 @ 0.5 - 0.7m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	97
20	96
14	96
10	95
6.3	94
5	94
2	92
1.18	90
0.600	88
0.425	86
0.300	80
0.212	72
0.063	18
0.020	13
0.006	11
0.002	9

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 2A/2B.

Moisture content % 10
(BS1377-Part 1, 1990)

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	4
Medium GRAVEL	2
Fine GRAVEL	2
Coarse SAND	4
Medium SAND	16
Fine SAND	54
Silt & Clay	18

Grading Analysis	
D100	38
D60	0.18
D10	0.03
Uniformity Coefficient[!]	5 *

Description
Brown slightly clayey slightly silty slightly gravelly fine SAND. Gravel is fine to coarse angular to subrounded flint.

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

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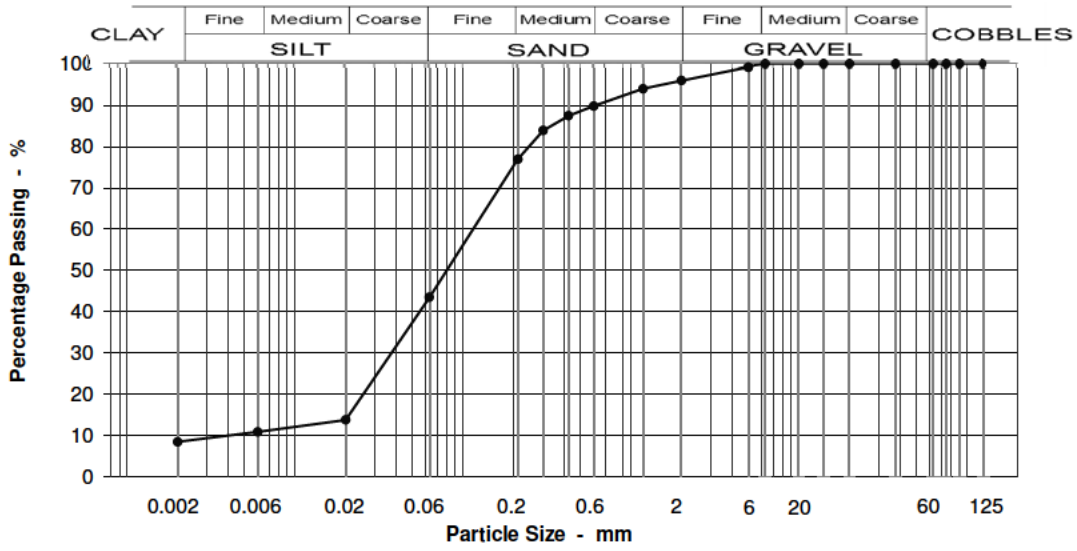
Our reference No. NNPL2020080710-610
Our Project No. 100746
Your Sample Ref. 4
Your Order No.
Date Tested 17/08/2020
Date Report Issued 29 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 207 @ 1.9 - 2.1m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	100
6.3	100
5	99
2	96
1.18	94
0.600	90
0.425	87
0.300	84
0.212	77
0.063	43
0.020	14
0.006	11
0.002	8

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 2A/2B.

Moisture content % 22
(BS1377-Part 1, 1990)

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	0
Fine GRAVEL	4
Coarse SAND	6
Medium SAND	13
Fine SAND	33
Silt & Clay	43

Grading Analysis	
D100	5
D60	0.14
D10	0.03
Uniformity Coefficient[!]	5 *

Description
Dark grey clayey sandy SILT with laminae and thin beds of siltstone.

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

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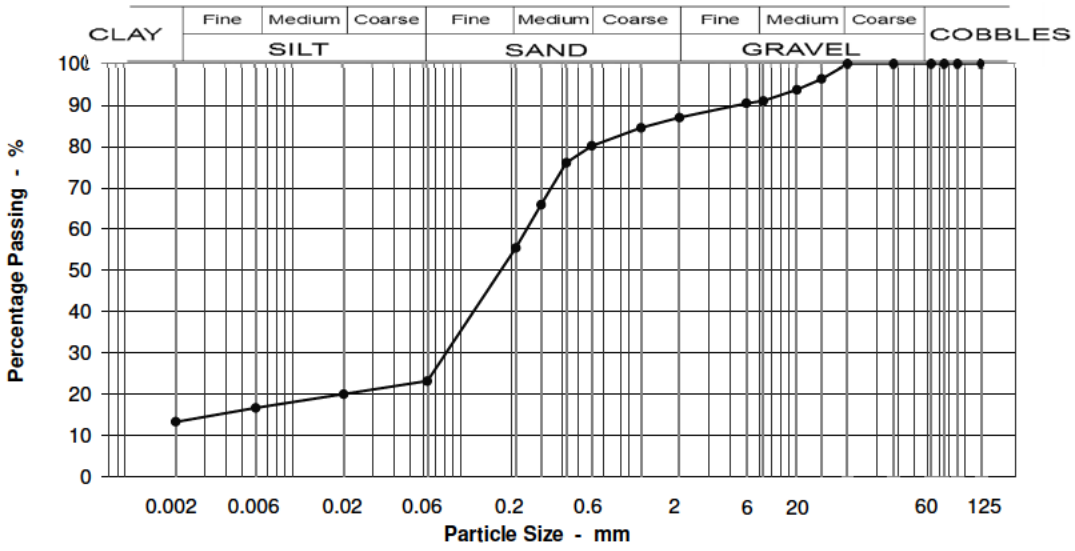
Our Project No. 100746
Your Sample Ref. 5
Your Order No.
Date Tested 14/08/2020
Date Report Issued 29 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 210 @ 2.1 - 2.3m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	96
10	94
6.3	91
5	90
2	87
1.18	85
0.600	80
0.425	76
0.300	66
0.212	55
0.063	23
0.020	20
0.006	17
0.002	13

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 2A/2B.

Moisture content % 22
(BS1377-Part 1, 1990)

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	9
Fine GRAVEL	4
Coarse SAND	7
Medium SAND	25
Fine SAND	32
Silt & Clay	23

Grading Analysis	
D100	14
D60	0.25
D10	0.00
Uniformity Coefficient[!]	>10 *

Description
Grey clayey slightly silty fine to medium SAND.

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

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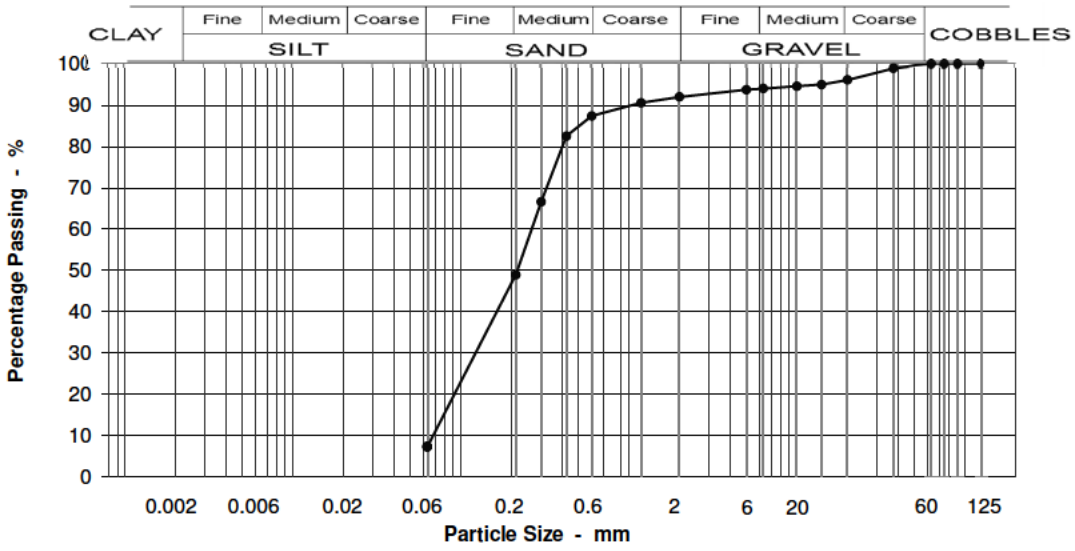
Our Project No. 100746
Your Sample Ref. 2
Your Order No.
Date Tested 17/08/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 213 @ 0.5 - 0.7m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	99
20	96
14	95
10	95
6.3	94
5	94
2	92
1.18	91
0.600	87
0.425	83
0.300	67
0.212	49
0.063	7

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	4
Medium GRAVEL	2
Fine GRAVEL	2
Coarse SAND	5
Medium SAND	38
Fine SAND	42
Silt & Clay	7

Grading Analysis	
D100	38
D60	0.27
D10	0.07
Uniformity Coefficient[1]	4

Description
Light brown gravelly fine to medium SAND. Gravel is fine to coarse angular to subangular flint and carstone.

Moisture content % 3.2
(BS1377-Part 1, 1990)

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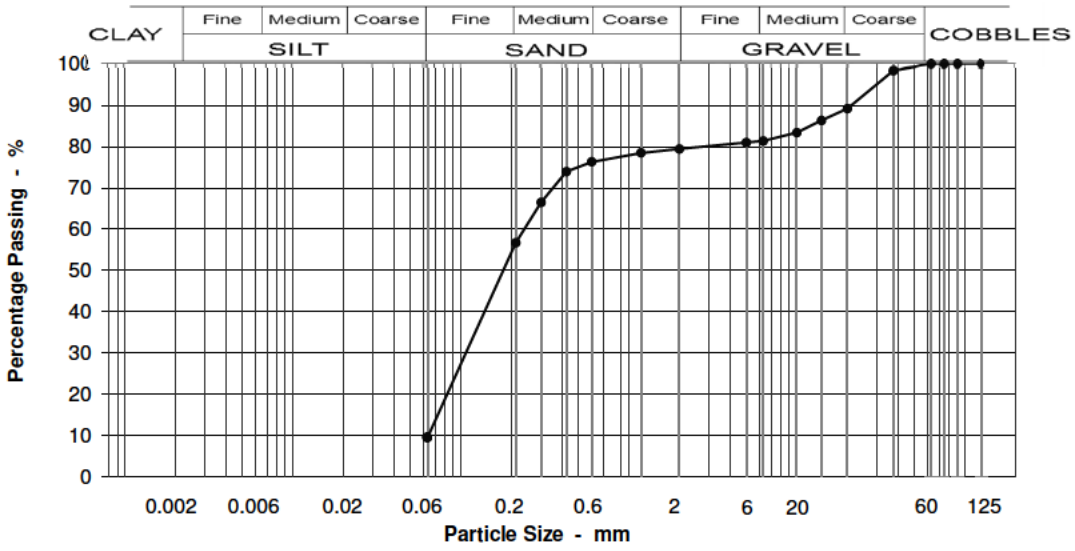
Our reference No. NNPL2020080718-610
Our Project No. 100746
Your Sample Ref. 4
Your Order No.
Date Tested 17/08/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 213 @ 1.7 - 1.9m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	98
20	89
14	86
10	83
6.3	81
5	81
2	79
1.18	78
0.600	76
0.425	74
0.300	66
0.212	57
0.063	10

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	11
Medium GRAVEL	8
Fine GRAVEL	2
Coarse SAND	3
Medium SAND	20
Fine SAND	47
Silt & Clay	10

Grading Analysis	
D100	38
D60	0.24
D10	0.06
Uniformity Coefficient[1]	4

Description
Brown gravelly silty fine SAND with lenses of soft light grey clay. Gravel is medium to coarse subangular to subrounded ironstone.

Moisture content % 17
(BS1377-Part 1, 1990)

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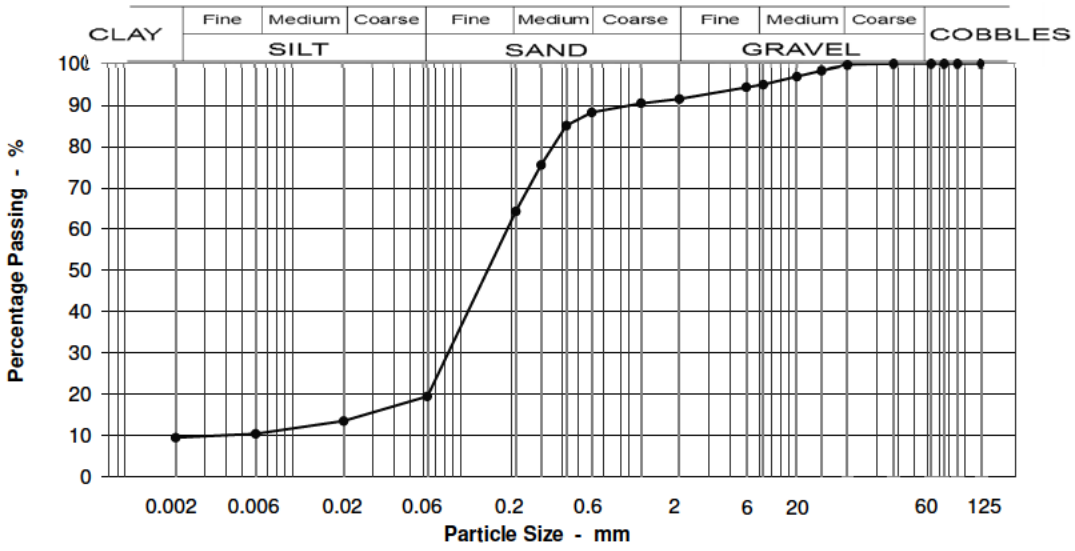
Our Project No. 100746
Your Sample Ref. 2
Your Order No.
Date Tested 14/08/2020
Date Report Issued 29 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 214 @ 0.5 - 0.7m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	98
10	97
6.3	95
5	94
2	92
1.18	90
0.600	88
0.425	85
0.300	76
0.212	64
0.063	19
0.020	14
0.006	10
0.002	9

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 2A/2B.

Moisture content % 14
(BS1377-Part 1, 1990)

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	5
Fine GRAVEL	3
Coarse SAND	3
Medium SAND	24
Fine SAND	45
Silt & Clay	19

Grading Analysis	
D100	20
D60	0.20
D10	0.04
Uniformity Coefficient[!]	5 *

Description
Orangey-brown slightly clayey silty gravelly fine and medium SAND. Gravel is fine to medium angular to subrounded flint.

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

S

Test Code = 610

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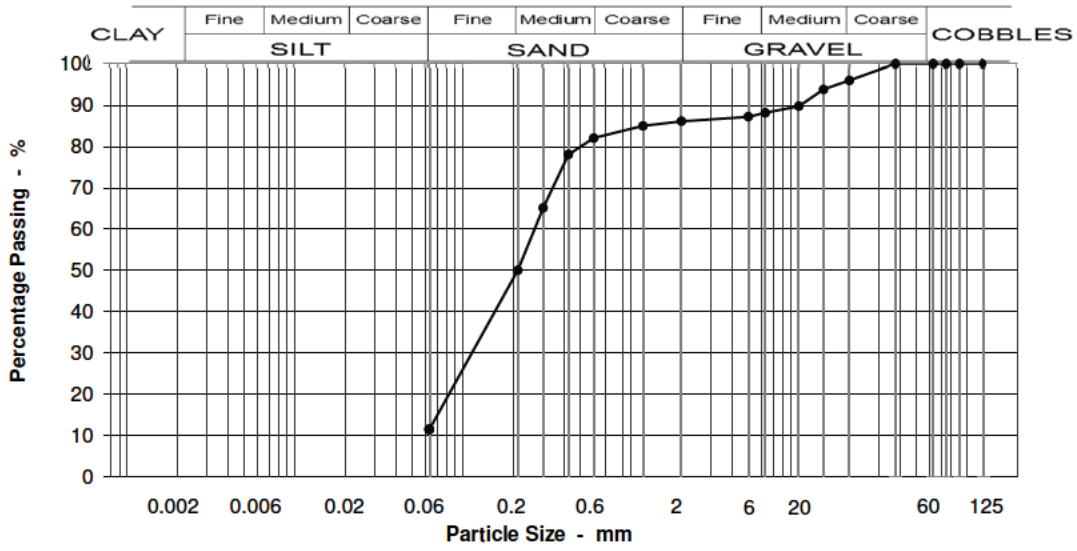
Our reference No. NNPL2020080725-610
Our Project No. 100746
Your Sample Ref. 2
Your Order No.
Date Tested 17/08/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 215 @ 0.5 - 0.7m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	96
14	94
10	90
6.3	88
5	87
2	86
1.18	85
0.600	82
0.425	78
0.300	65
0.212	50
0.063	12

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6J.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	4
Medium GRAVEL	8
Fine GRAVEL	2
Coarse SAND	4
Medium SAND	32
Fine SAND	39
Silt & Clay	12

Grading Analysis	
D100	20
D60	0.27
D10	0.04
Uniformity Coefficient[!]	6 *

Description
Orangey-brown clayey gravelly fine to medium SAND. Gravel is medium to coarse angular to subrounded flint.

Moisture content % 9.7
(BS1377-Part 1, 1990)

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

S

Test Code = 610

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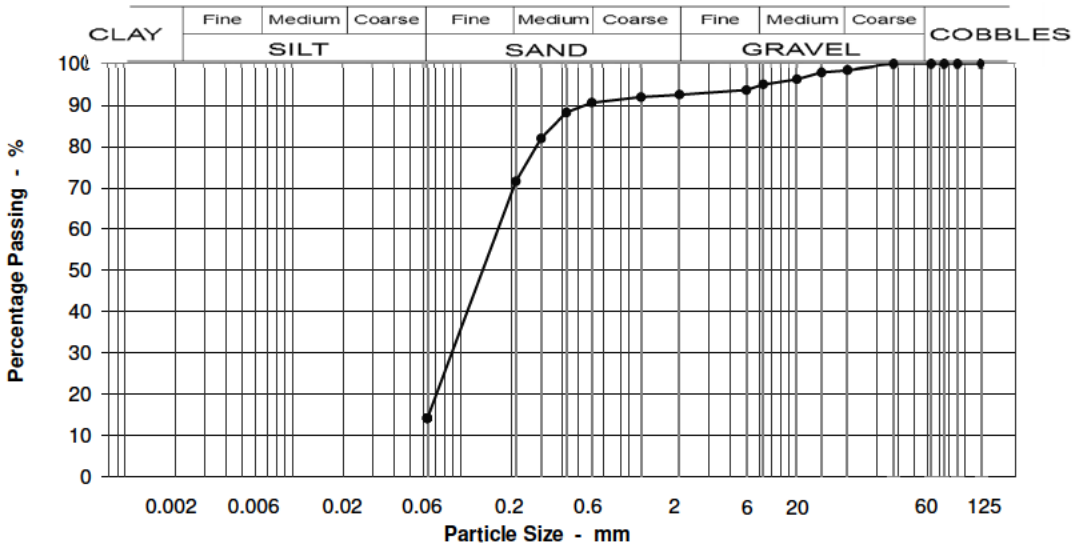
Our reference No. NNPL2020080734-610
Our Project No. 100746
Your Sample Ref. 6
Your Order No.
Date Tested 17/08/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 216 @ 2 - 2.5m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	98
14	98
10	96
6.3	95
5	94
2	93
1.18	92
0.600	91
0.425	88
0.300	82
0.212	72
0.063	14

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6J.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	2
Medium GRAVEL	3
Fine GRAVEL	2
Coarse SAND	2
Medium SAND	19
Fine SAND	57
Silt & Clay	14

Grading Analysis	
D100	20
D60	0.18
D10	0.03
Uniformity Coefficient[!]	6 *

Description
Grey clayey silty fine SAND.

Moisture content % 22
(BS1377-Part 1, 1990)

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

S

Test Code = 610

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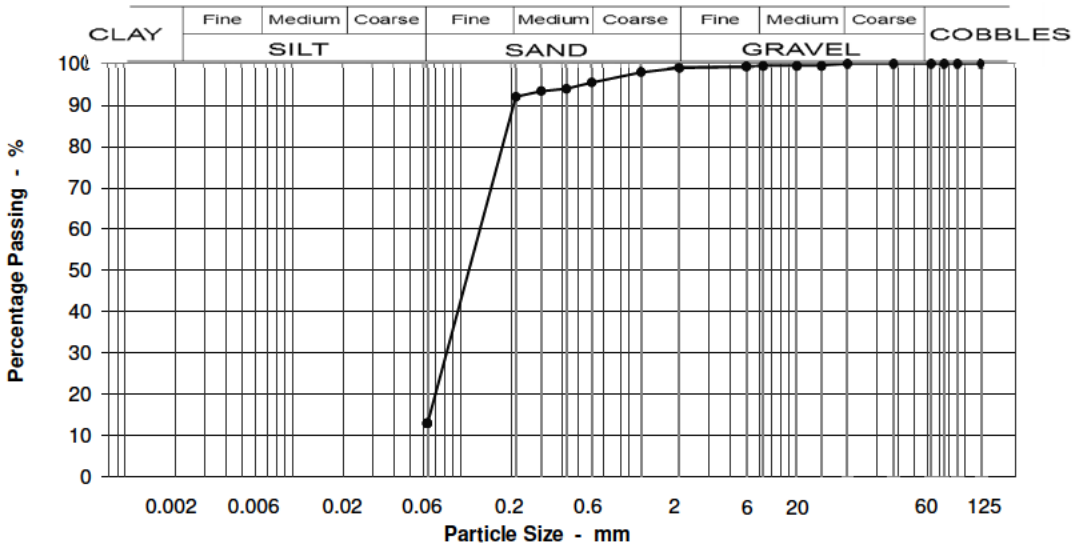
Our reference No. NNPL2020080736-610
Our Project No. 100746
Your Sample Ref. 3
Your Order No.
Date Tested 17/08/2020
Date Report Issued 25 Sep 2020

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: West Winch Relief Road
Location and orientation within sample not applicable

Location: 217 @ 2 - 2.3m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	100
6.3	100
5	99
2	99
1.18	98
0.600	96
0.425	94
0.300	93
0.212	92
0.063	13

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6J.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	0
Fine GRAVEL	0
Coarse SAND	4
Medium SAND	3
Fine SAND	79
Silt & Clay	13

Grading Analysis	
D100	14
D60	0.15
D10	0.02
Uniformity Coefficient[!]	6 *

Description
Grey clayey silty fine SAND.

Moisture content % 27
(BS1377-Part 1, 1990)

* Uniformity coefficient extrapolated

! UC to Spec. For Highway Works, table 6/1 footnote 5

S

Test Code = 610

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