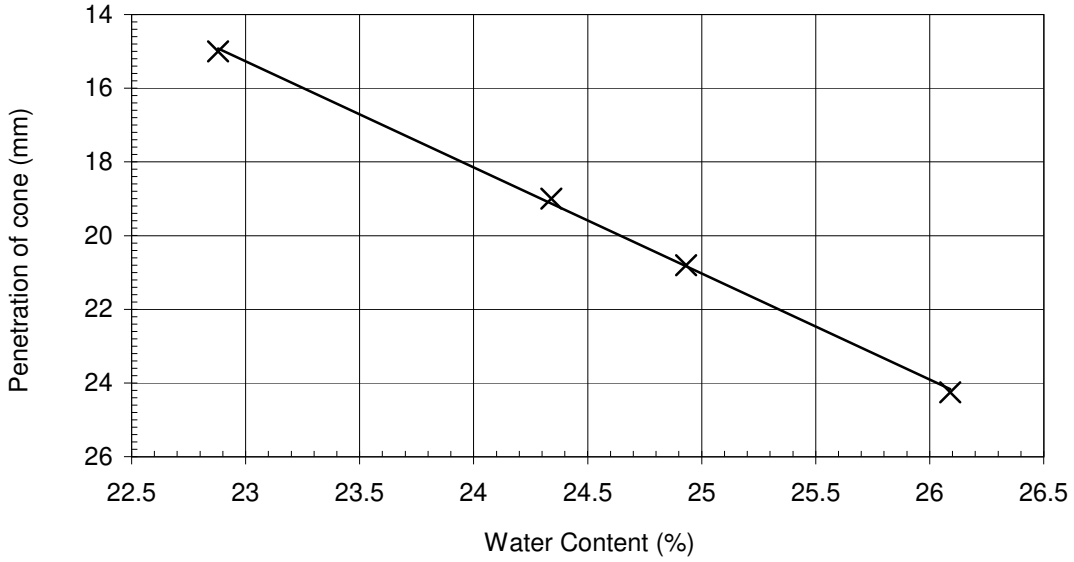
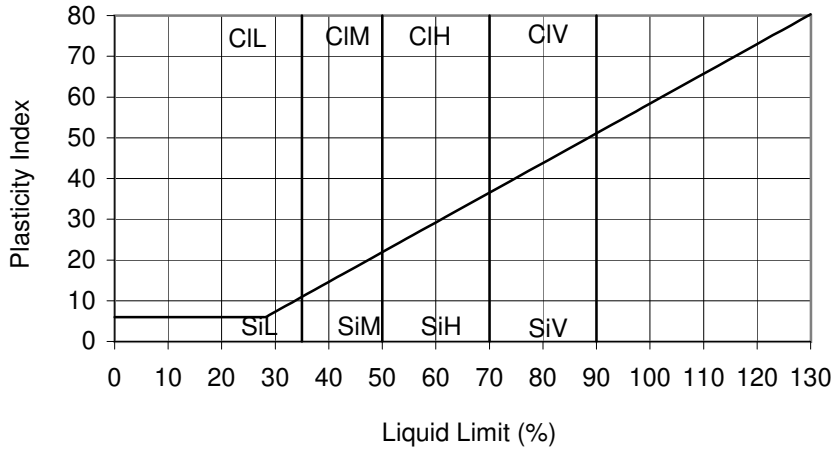
igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No. 26762**
	Client	Balfour Beatty	Hole ID WS06
	Engineer	WSP	Sample Ref Depth (m) 3.00 Sample Type D

Non Engineering Description : Brown silty SAND and GRAVEL. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving





Sample was determined to be Non-Plastic after preparation
Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

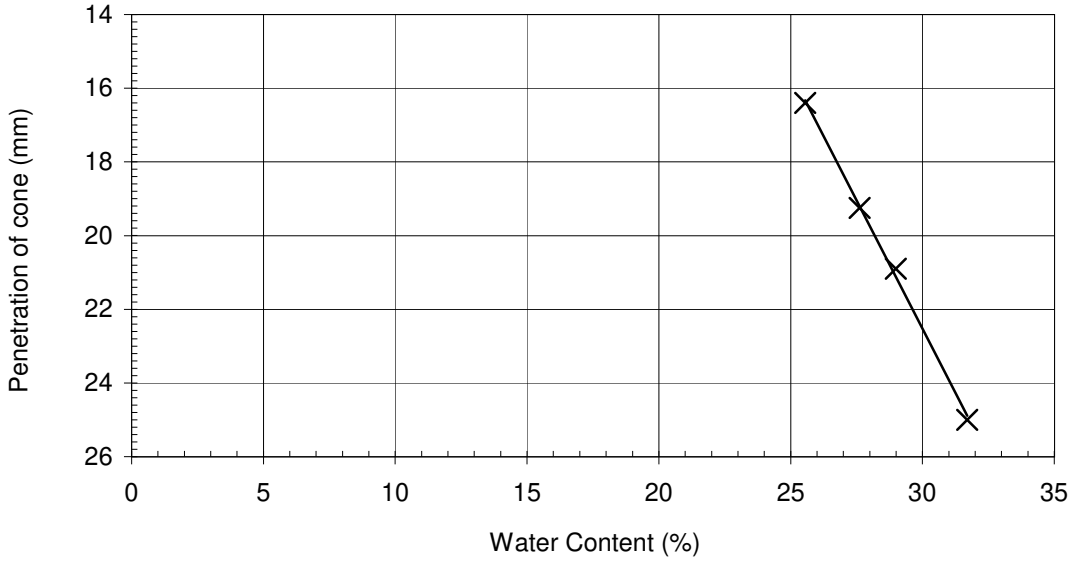
As Received Water Content : (BS EN ISO 17892-1:2014)	13.0	%
Percentage retained on 425µm sieve :	41	%
Liquid Limit :	25	%
Plastic Limit :	Non-Plastic	%
Equivalent water content of material passing 425µm sieve :	22.0	%

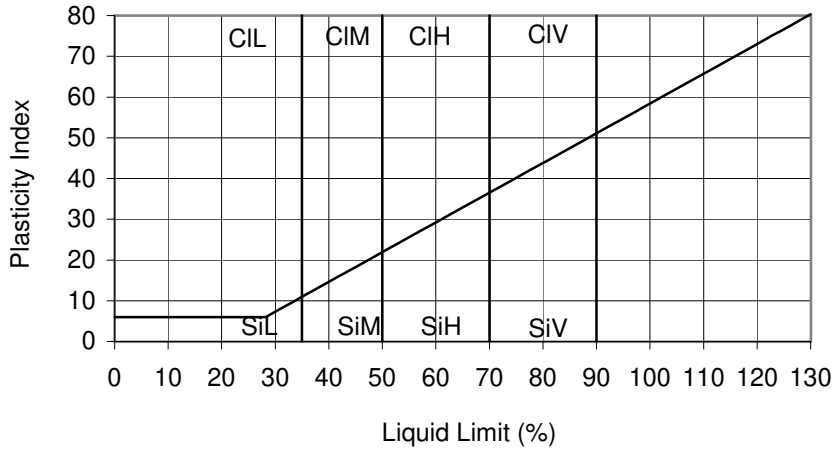
Originator	Checked & Approved	**Liquid Limit (Four Point Cone Penetrometer Method)** **Plastic Limit, Plasticity Index & Liquidity Index** BS EN ISO 17892-12:2018 Clause 5.3 BS EN ISO 17892-12:2018 Clause 5.5	Figure C14 Sheet 1 of 1
CM	CD 26/11/2024		

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No. 26762**
	Client	Balfour Beatty	Hole ID WS07
	Engineer	WSP	Sample Ref Depth (m) 1.20 Sample Type D

Non Engineering Description : Brown silty SAND and GRAVEL. Gravel is fine to coarse

Preparation : Sample oven dried, Percentage retained on 425µm sieve measured by wet sieving





Sample was determined to be Non-Plastic after preparation
Liquid Limit was determined by mixing using increasing water content and 30° cone

Results :

As Received Water Content : (BS EN ISO 17892-1:2014)	17.3	%
Percentage retained on 425µm sieve :	45	%
Liquid Limit :	28	%
Plastic Limit :	Non-Plastic	%
Equivalent water content of material passing 425µm sieve :	31.5	%

Originator	Checked & Approved	**Liquid Limit (Four Point Cone Penetrometer Method)** **Plastic Limit, Plasticity Index & Liquidity Index** BS EN ISO 17892-12:2018 Clause 5.3 BS EN ISO 17892-12:2018 Clause 5.5	Figure C15 Sheet 1 of 1
CM	CD 26/11/2024		

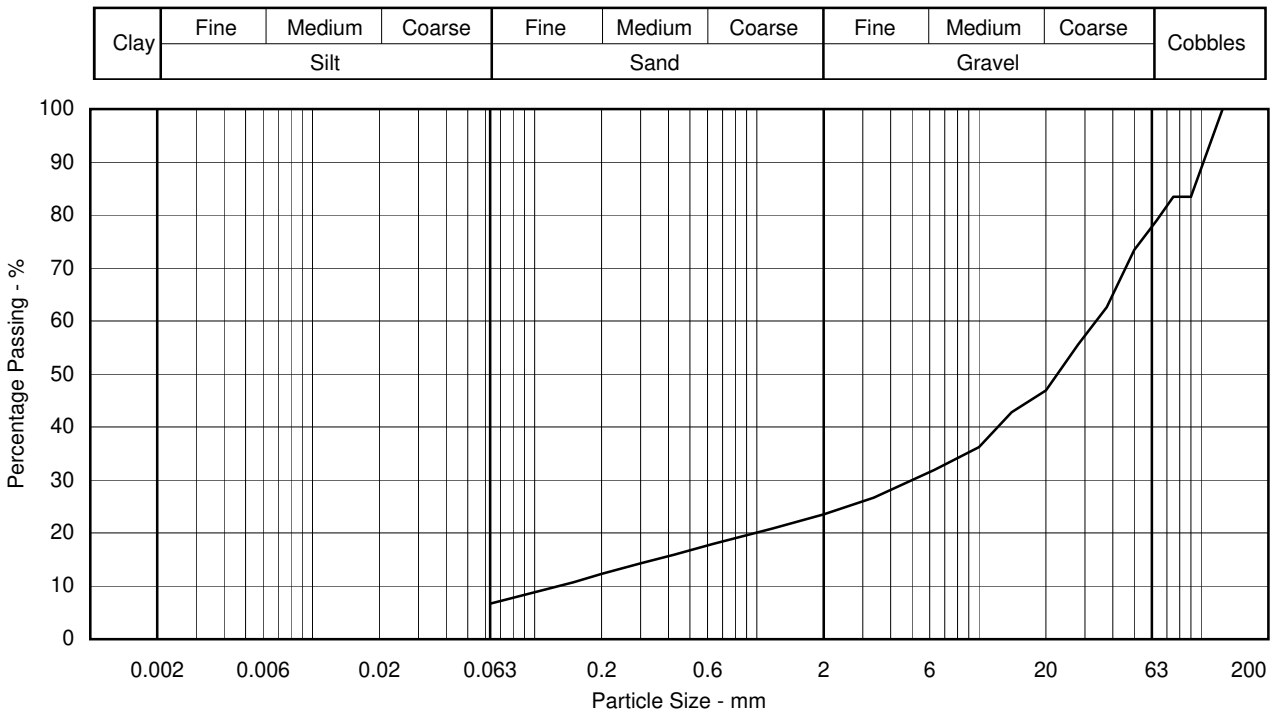
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole BH01
	Engineer WSP	Sample Ref Depth (m) 0.80 Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	83
75.0 mm	83
63.0 mm	79
50.0 mm	73
37.5 mm	63
28.0 mm	56
20.0 mm	47
14.0 mm	43
10.0 mm	36
6.30 mm	32
5.00 mm	30
3.35 mm	27
2.00 mm	23
1.18 mm	21
630 µm	18
425 µm	16
300 µm	14
200 µm	12
150 µm	11
63 µm	7

Non Engineering Description
Brown silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	21.0
Gravel	55.5
Sand	16.8
Silt & Clay	6.6
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	34
D10	0.13
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	261.5

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C16

Sheet 1 of 1

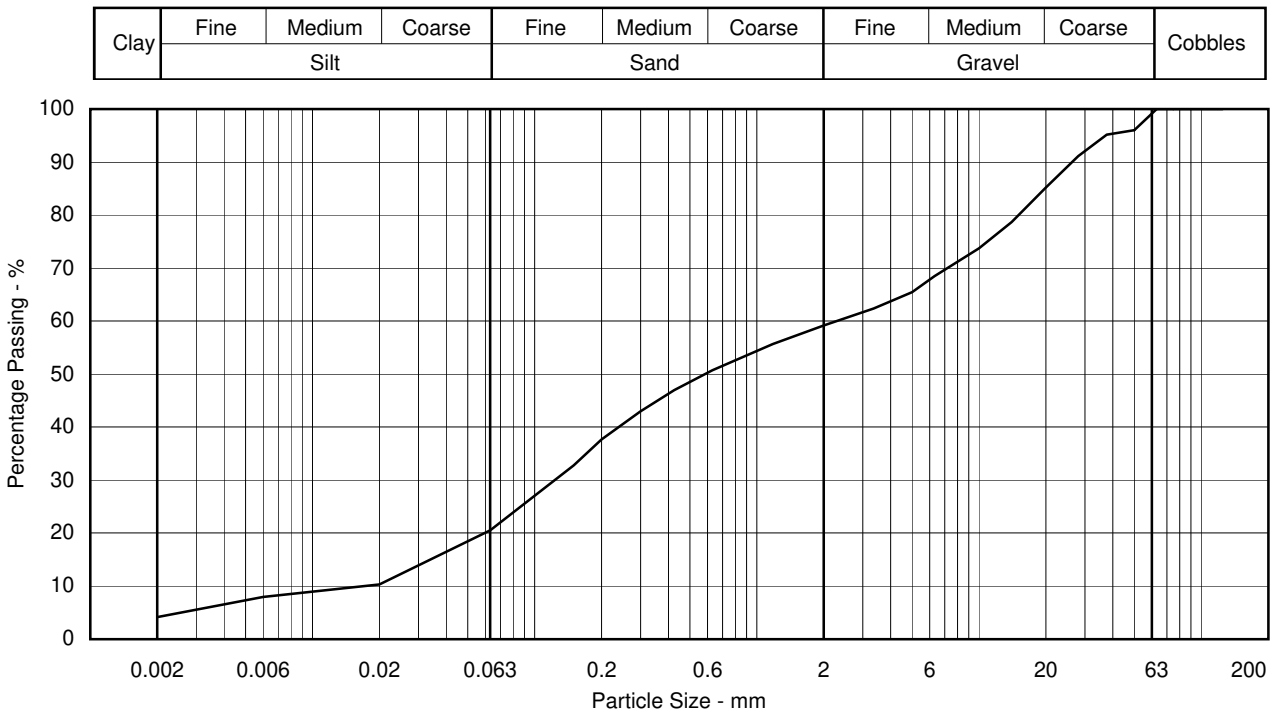
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole BH01
	Engineer WSP	Sample Ref
		Depth (m) 1.20
		Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	96
37.5 mm	95
28.0 mm	91
20.0 mm	85
14.0 mm	79
10.0 mm	74
6.30 mm	68
5.00 mm	65
3.35 mm	62
2.00 mm	59
1.18 mm	56
630 µm	51
425 µm	47
300 µm	43
200 µm	38
150 µm	33
63 µm	20
20 µm	10
6 µm	8
2 µm	4

Non Engineering Description
Brown silty SAND and GRAVEL. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	40.9
Sand	39.4
Silt	15.6
Clay	4.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	2.3
D10	0.017
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	135.3

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C17

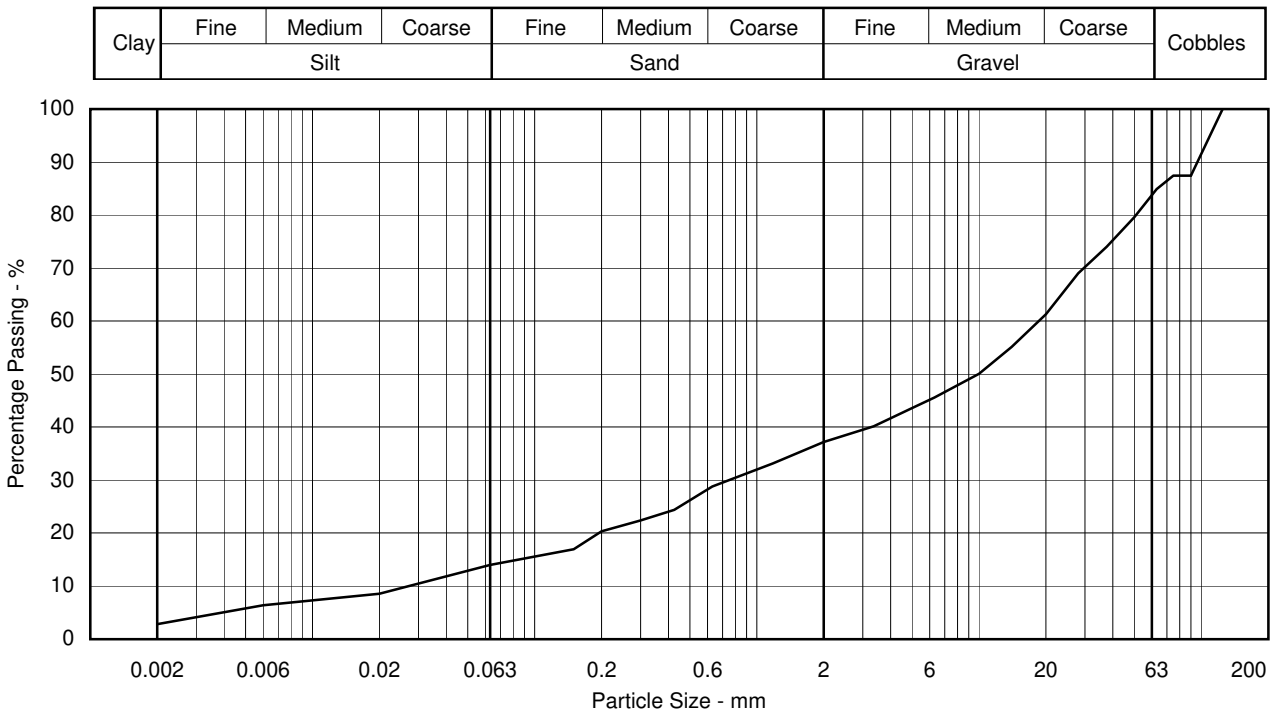
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole BH02
	Engineer WSP	Sample Ref
		Depth (m) 0.20
		Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	87
75.0 mm	87
63.0 mm	85
50.0 mm	80
37.5 mm	74
28.0 mm	69
20.0 mm	61
14.0 mm	55
10.0 mm	50
6.30 mm	46
5.00 mm	44
3.35 mm	40
2.00 mm	37
1.18 mm	33
630 µm	29
425 µm	24
300 µm	22
200 µm	20
150 µm	17
63 µm	14
20 µm	9
6 µm	6
2 µm	3

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	15.1
Gravel	47.8
Sand	23.6
Silt	10.8
Clay	2.8
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	19
D10	0.027
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	703.7

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C18

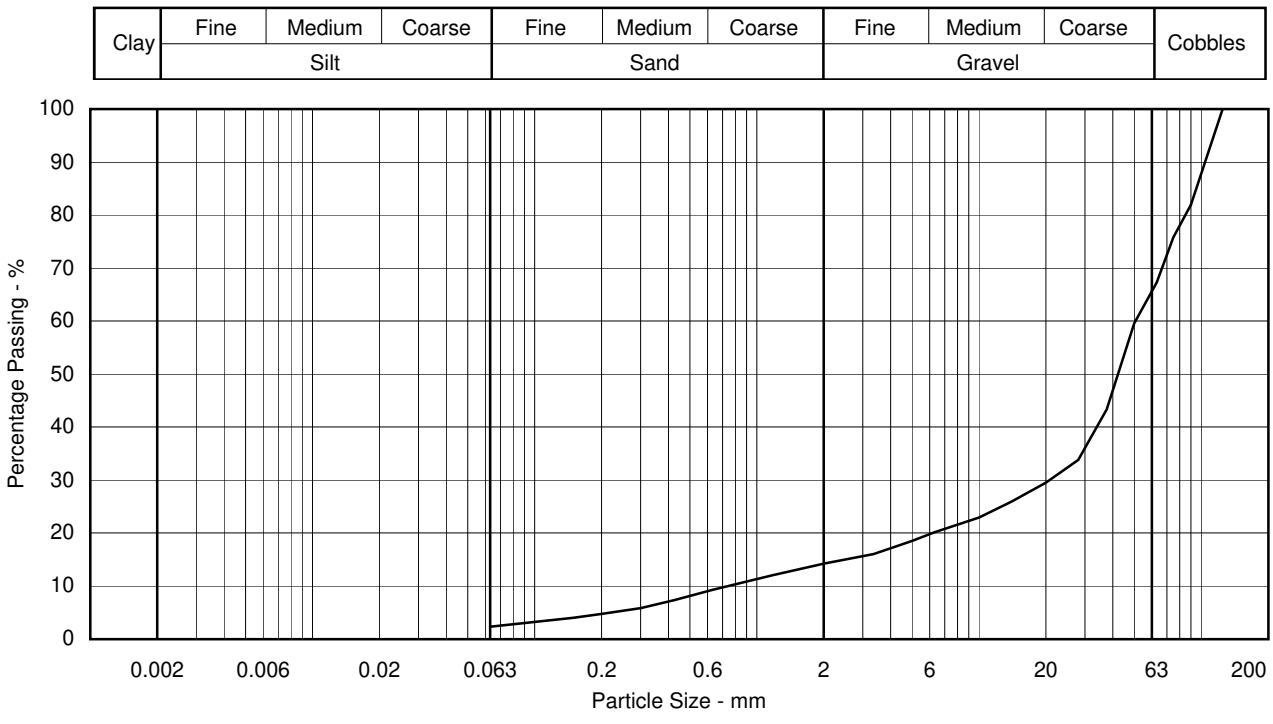
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole BH02
	Engineer WSP	Sample Ref
		Depth (m) 0.80
		Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	82
75.0 mm	76
63.0 mm	67
50.0 mm	60
37.5 mm	43
28.0 mm	34
20.0 mm	29
14.0 mm	26
10.0 mm	23
6.30 mm	20
5.00 mm	19
3.35 mm	16
2.00 mm	14
1.18 mm	12
630 µm	9
425 µm	7
300 µm	6
200 µm	5
150 µm	4
63 µm	2

Non Engineering Description
Brown slightly silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	32.7
Gravel	53.1
Sand	11.9
Silt & Clay	2.3
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	51
D10	0.75
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	68.0

Notes



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C19

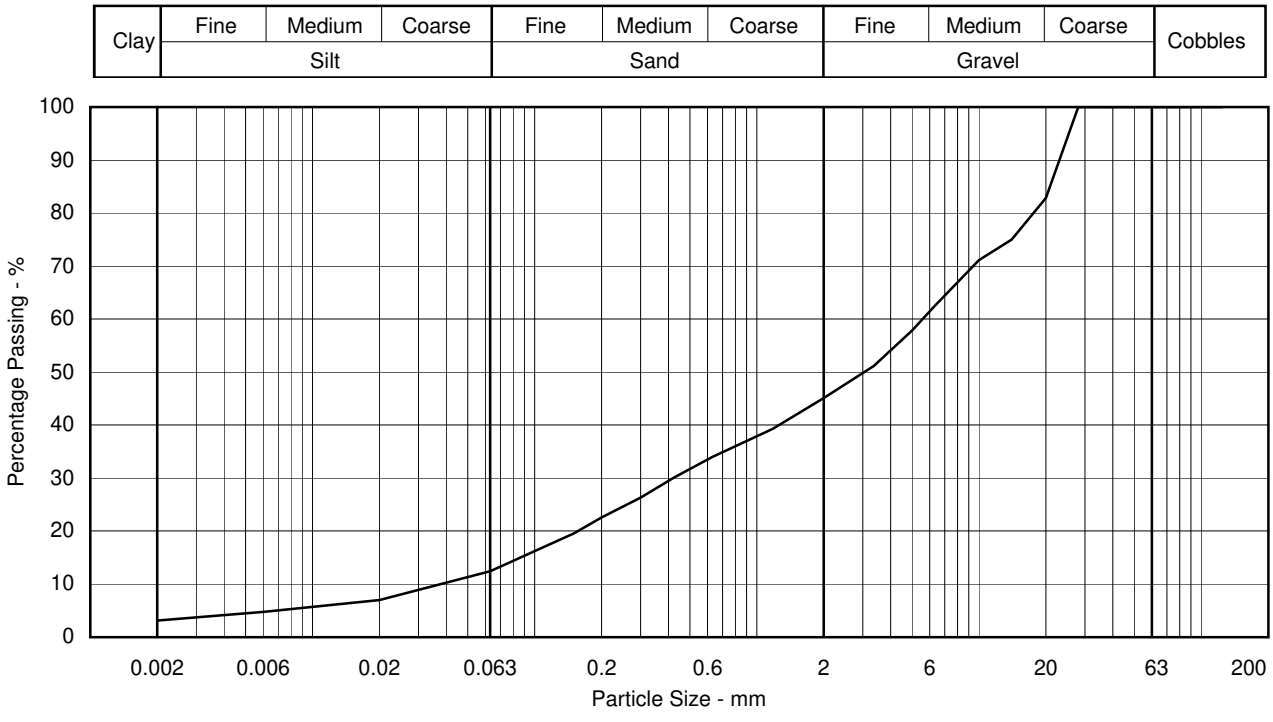
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole BH02
	Engineer WSP	Sample Ref Depth (m) 1.20 Sample Type D

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	100
20.0 mm	83
14.0 mm	75
10.0 mm	71
6.30 mm	62
5.00 mm	58
3.35 mm	51
2.00 mm	45
1.18 mm	39
630 µm	34
425 µm	30
300 µm	26
200 µm	23
150 µm	20
63 µm	12
20 µm	7
6 µm	5
2 µm	3

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	0.0
Gravel	54.9
Sand	33.0
Silt	9.0
Clay	3.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	28
D60	5.6
D10	0.038
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	147.4

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements Sedimentation sample not pre-treated



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C20

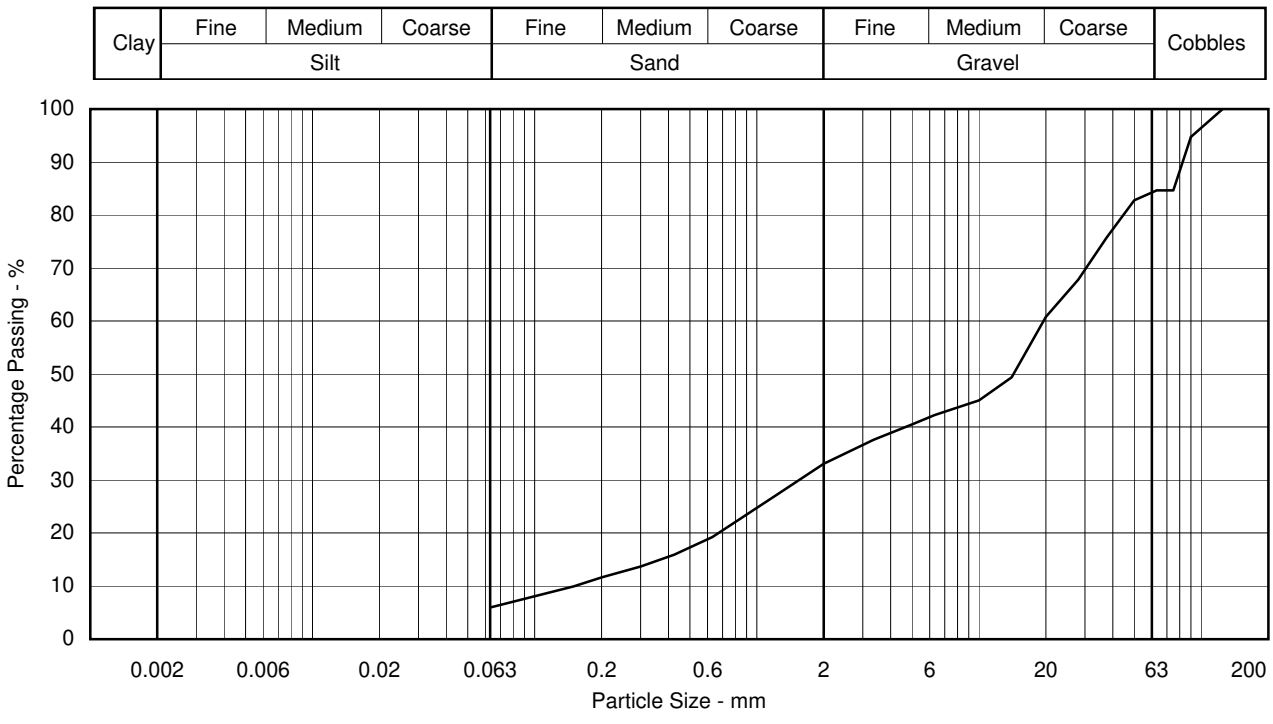
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP01
	Engineer WSP	Sample Ref
		Depth (m) 0.20
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	95
75.0 mm	85
63.0 mm	85
50.0 mm	83
37.5 mm	76
28.0 mm	68
20.0 mm	61
14.0 mm	49
10.0 mm	45
6.30 mm	42
5.00 mm	40
3.35 mm	38
2.00 mm	33
1.18 mm	27
630 µm	19
425 µm	16
300 µm	14
200 µm	12
150 µm	10
63 µm	6

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	15.3
Gravel	51.6
Sand	27.1
Silt & Clay	5.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	20
D10	0.15
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	133.3

Notes



Originator	Checked & Approved
CTTTTTTTT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C21

62 Rochsolloch Road, Airdrie, ML6 9BG

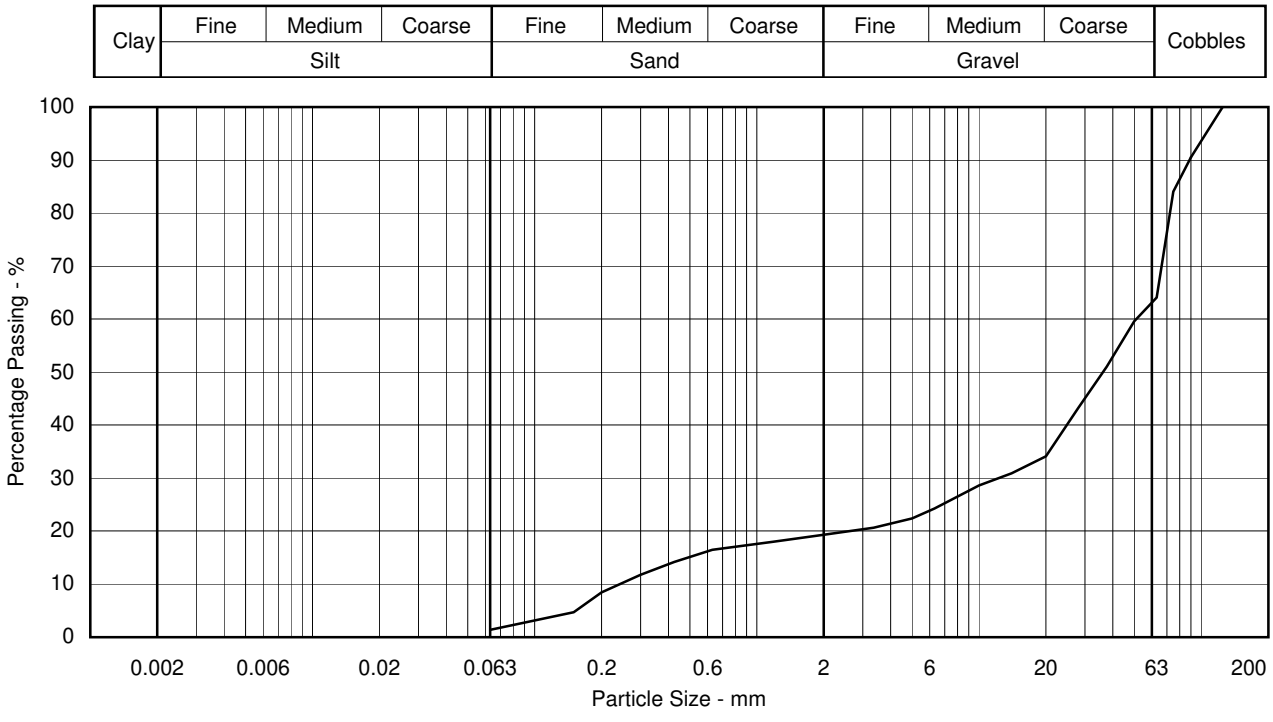
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP01
	Engineer WSP	Sample Ref Depth (m) 2.20 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	91
75.0 mm	84
63.0 mm	64
50.0 mm	60
37.5 mm	51
28.0 mm	43
20.0 mm	34
14.0 mm	31
10.0 mm	29
6.30 mm	24
5.00 mm	22
3.35 mm	21
2.00 mm	19
1.18 mm	18
630 µm	16
425 µm	14
300 µm	12
200 µm	8
150 µm	5
63 µm	1

Non Engineering Description
Brown slightly silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	35.9
Gravel	44.8
Sand	17.9
Silt & Clay	1.3
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	51
D10	0.24
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	212.5

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C22

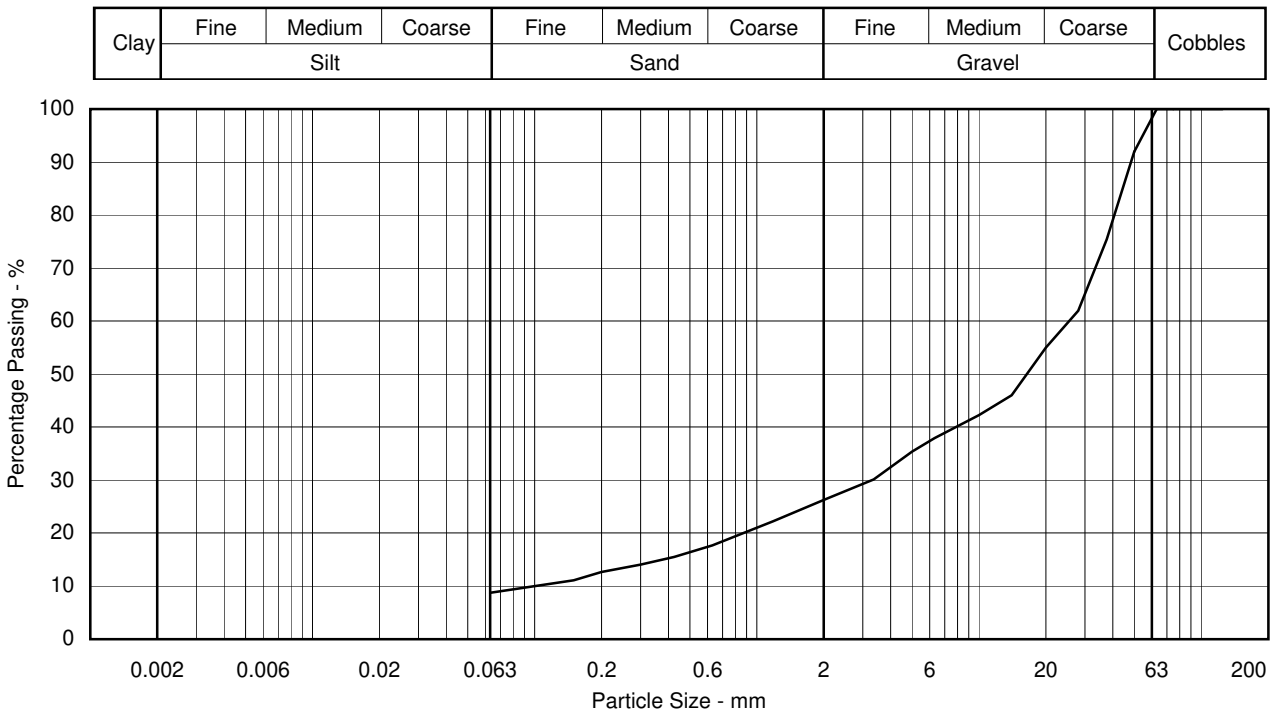
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP02
	Engineer WSP	Sample Ref
		Depth (m) 1.00
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	92
37.5 mm	75
28.0 mm	62
20.0 mm	55
14.0 mm	46
10.0 mm	42
6.30 mm	38
5.00 mm	35
3.35 mm	30
2.00 mm	26
1.18 mm	22
630 µm	18
425 µm	15
300 µm	14
200 µm	13
150 µm	11
63 µm	9

Non Engineering Description
Brown silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	0.0
Gravel	73.8
Sand	17.5
Silt & Clay	8.7
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	26
D10	0.10
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	260.0

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C23

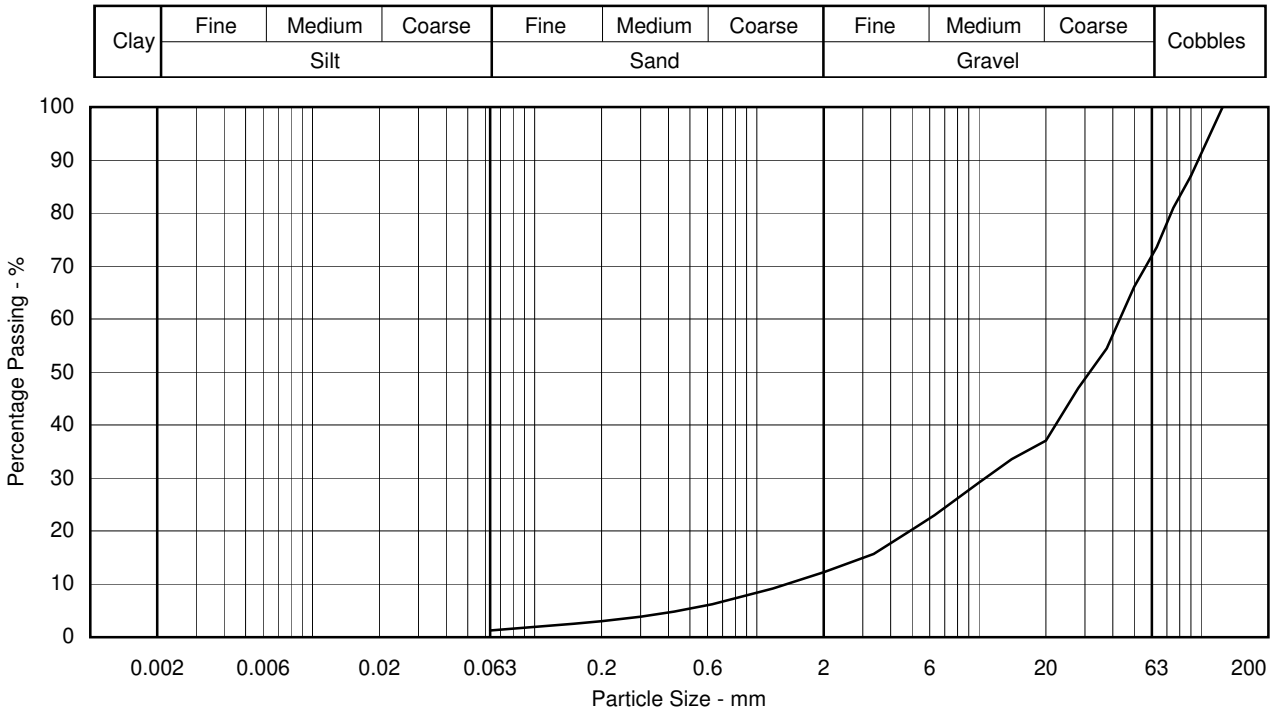
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP03
	Engineer WSP	Sample Ref Depth (m) 2.00 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	87
75.0 mm	81
63.0 mm	74
50.0 mm	66
37.5 mm	54
28.0 mm	47
20.0 mm	37
14.0 mm	34
10.0 mm	29
6.30 mm	23
5.00 mm	20
3.35 mm	16
2.00 mm	12
1.18 mm	9
630 µm	6
425 µm	5
300 µm	4
200 µm	3
150 µm	2
63 µm	1

Non Engineering Description
Brown slightly silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	26.4
Gravel	61.3
Sand	11.0
Silt & Clay	1.2
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	43
D10	1.4
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	30.7

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C24

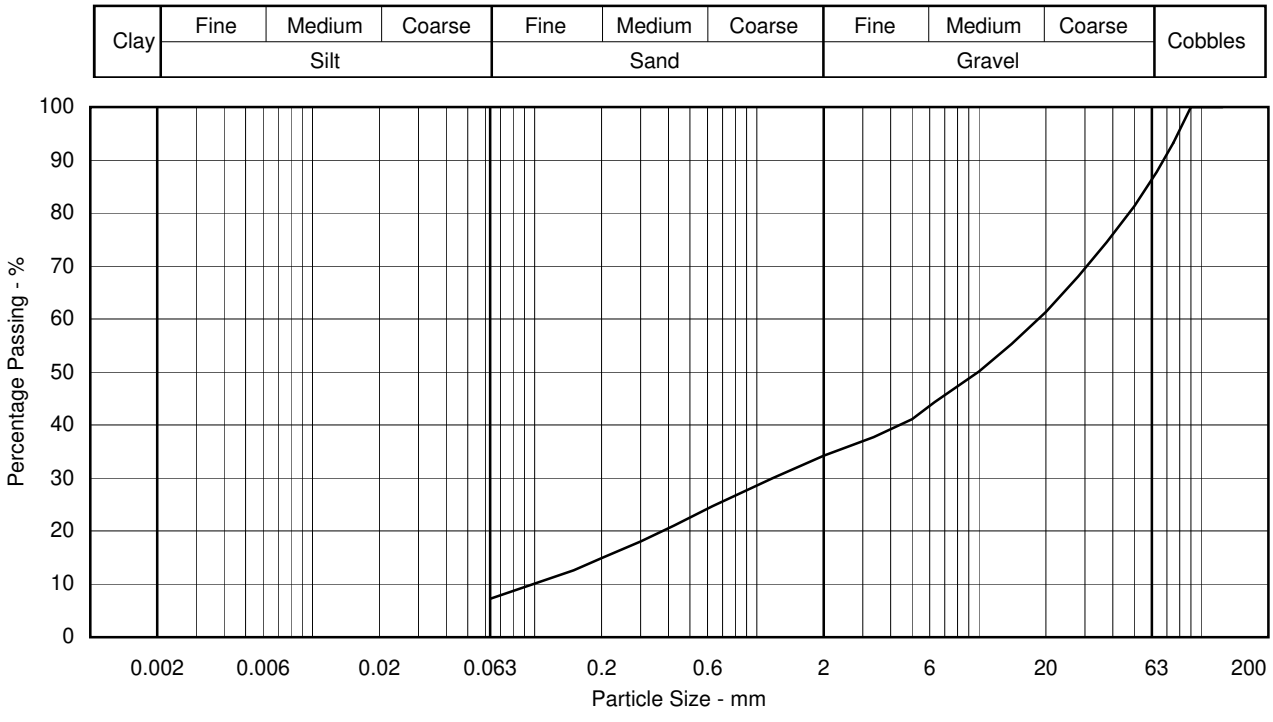
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP04
	Engineer WSP	Sample Ref Depth (m) 2.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	93
63.0 mm	88
50.0 mm	81
37.5 mm	75
28.0 mm	68
20.0 mm	61
14.0 mm	55
10.0 mm	50
6.30 mm	44
5.00 mm	41
3.35 mm	38
2.00 mm	34
1.18 mm	30
630 µm	25
425 µm	21
300 µm	18
200 µm	15
150 µm	13
63 µm	7

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	12.2
Gravel	53.6
Sand	27.0
Silt & Clay	7.2
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	90
D60	18
D10	0.099
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	181.8

Notes



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C25

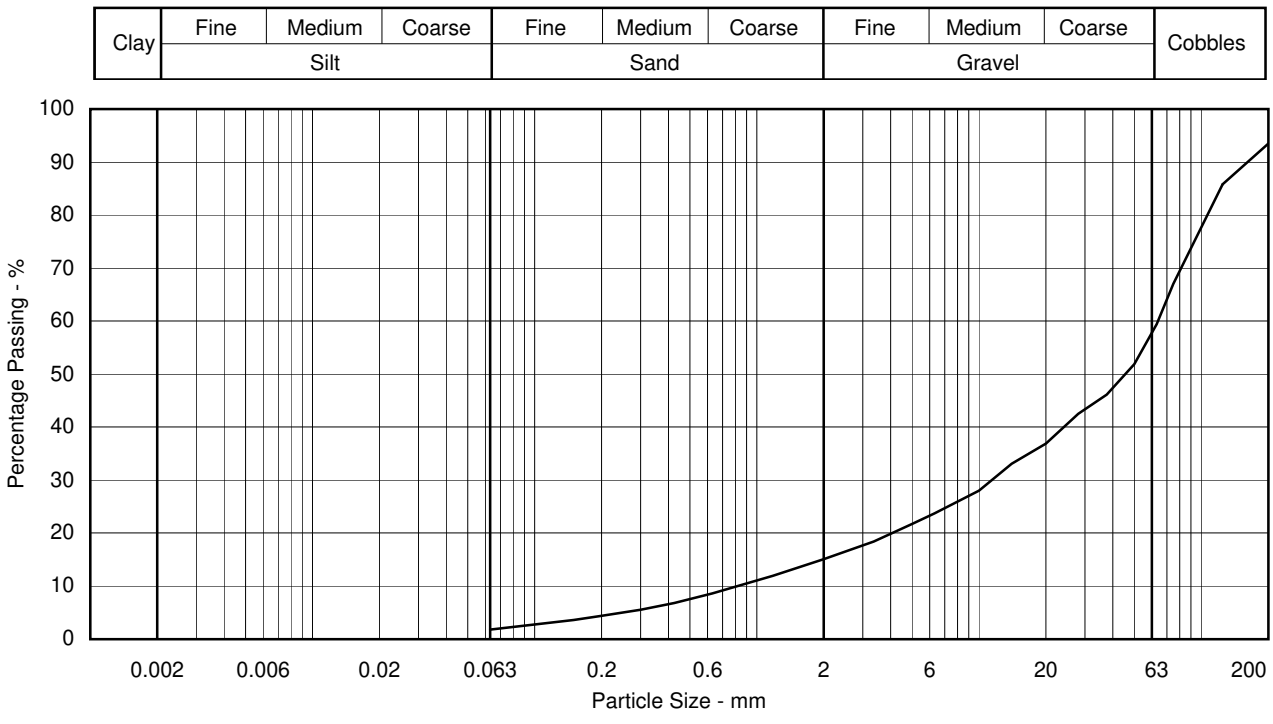
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP05
	Engineer WSP	Sample Ref
		Depth (m) 2.60
		Sample Type LB

Particle Size	% Passing
300.0 mm	100
125.0 mm	86
75.0 mm	67
63.0 mm	59
50.0 mm	52
37.5 mm	46
28.0 mm	42
20.0 mm	37
14.0 mm	33
10.0 mm	28
6.30 mm	24
5.00 mm	22
3.35 mm	18
2.00 mm	15
1.18 mm	12
630 µm	9
425 µm	7
300 µm	5
200 µm	4
150 µm	4
63 µm	2

Non Engineering Description
Brown slightly silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	40.6
Gravel	44.4
Sand	13.3
Silt & Clay	1.7
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	300
D60	64
D10	0.82
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	78.0

Notes



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C26

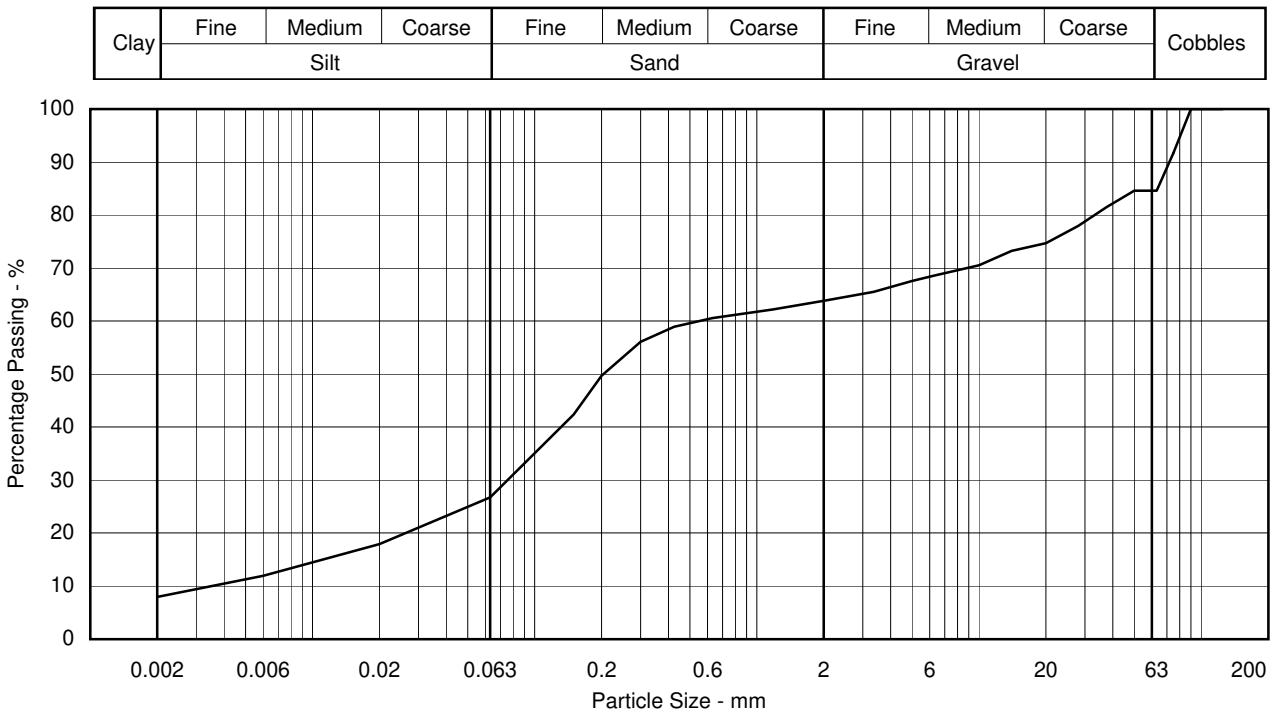
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP06
	Engineer WSP	Sample Ref Depth (m) 1.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	92
63.0 mm	85
50.0 mm	85
37.5 mm	82
28.0 mm	78
20.0 mm	75
14.0 mm	73
10.0 mm	71
6.30 mm	69
5.00 mm	68
3.35 mm	65
2.00 mm	64
1.18 mm	62
630 µm	61
425 µm	59
300 µm	56
200 µm	50
150 µm	42
63 µm	27
20 µm	18
6 µm	12
2 µm	8

Non Engineering Description
Brown silty very gravelly SAND with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	15.4
Gravel	20.8
Sand	37.7
Silt	18.2
Clay	7.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	90
D60	0.55
D10	0.0035
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	157.1

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C27

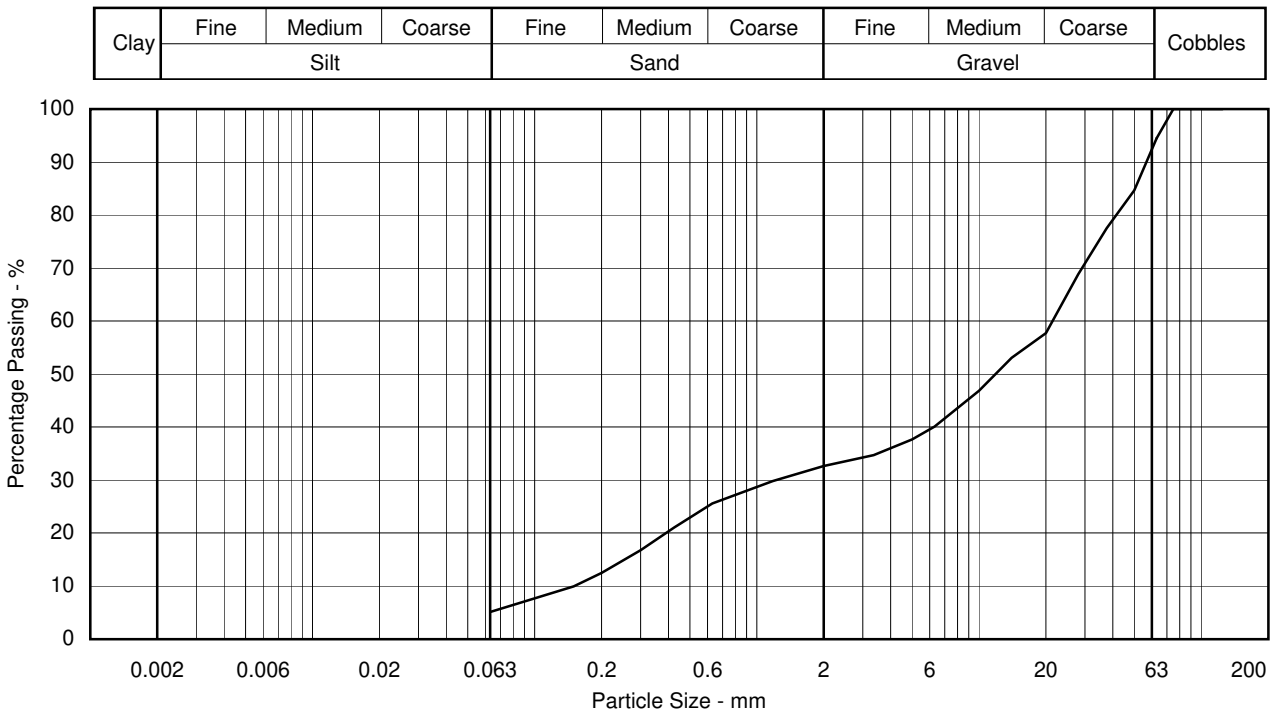
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP07
	Engineer WSP	Sample Ref
		Depth (m) 2.50
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	95
50.0 mm	85
37.5 mm	78
28.0 mm	69
20.0 mm	58
14.0 mm	53
10.0 mm	47
6.30 mm	40
5.00 mm	38
3.35 mm	35
2.00 mm	33
1.18 mm	30
630 µm	26
425 µm	21
300 µm	17
200 µm	12
150 µm	10
63 µm	5

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	5.5
Gravel	61.9
Sand	27.5
Silt & Clay	5.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	21
D10	0.15
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	140.0

Notes



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C28

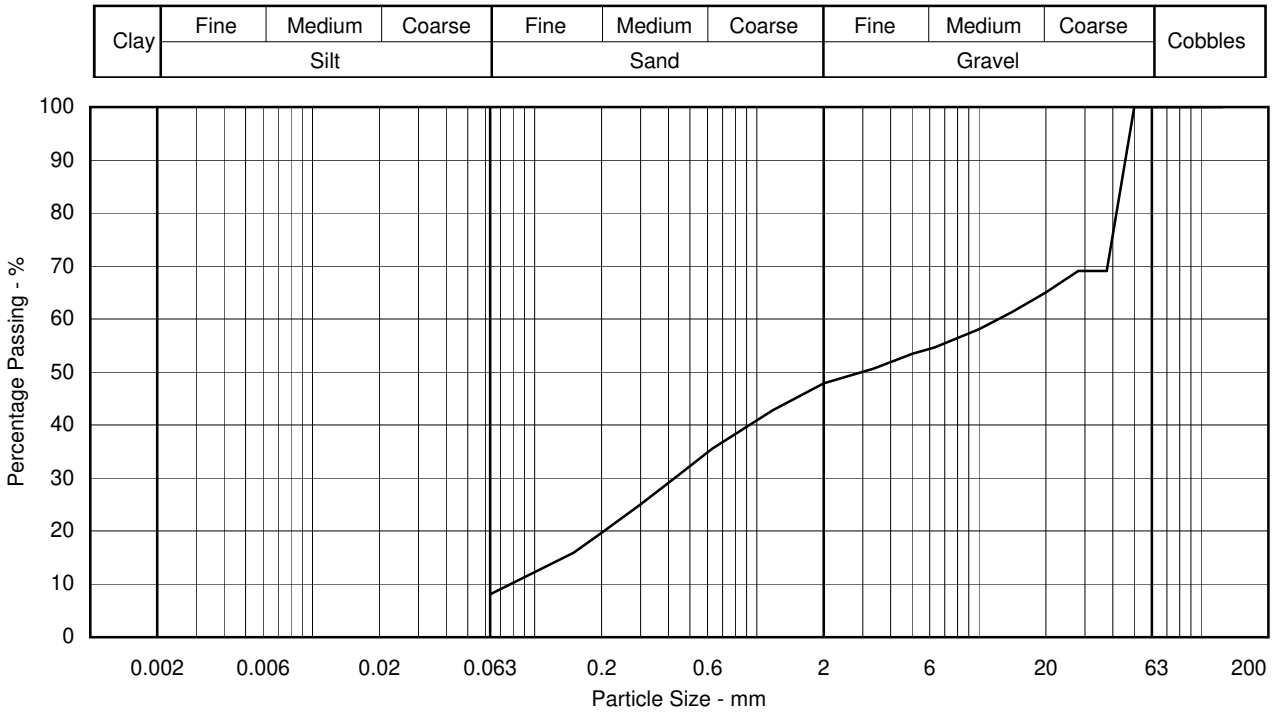
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP08
	Engineer WSP	Sample Ref
		Depth (m) 1.20
		Sample Type D

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	69
28.0 mm	69
20.0 mm	65
14.0 mm	61
10.0 mm	58
6.30 mm	55
5.00 mm	53
3.35 mm	51
2.00 mm	48
1.18 mm	43
630 µm	36
425 µm	30
300 µm	25
200 µm	20
150 µm	16
63 µm	8

Non Engineering Description
Brown silty very sany fine to coarse GRAVEL

Sample Proportions - %	
Cobbles	0.0
Gravel	52.1
Sand	39.8
Silt & Clay	8.0
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	50
D60	12
D10	0.078
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	153.8

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C29

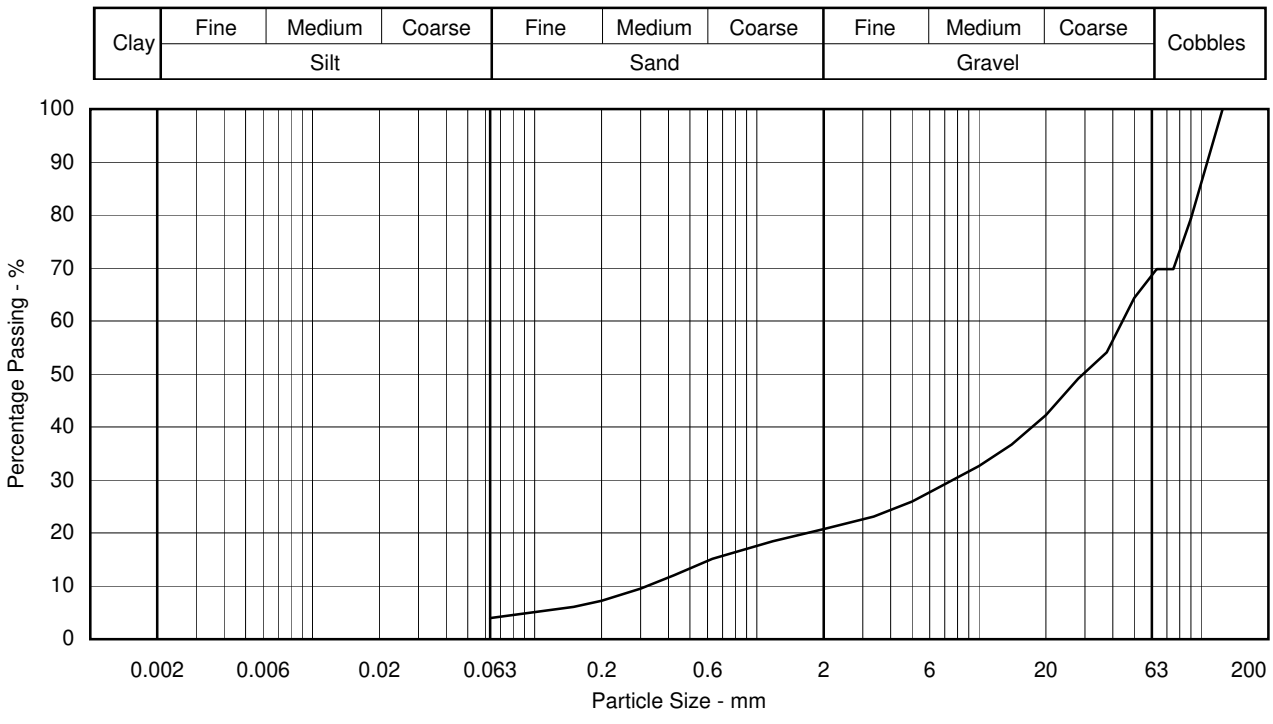
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP09
	Engineer WSP	Sample Ref Depth (m) 2.20 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	79
75.0 mm	70
63.0 mm	70
50.0 mm	64
37.5 mm	54
28.0 mm	49
20.0 mm	42
14.0 mm	37
10.0 mm	33
6.30 mm	28
5.00 mm	26
3.35 mm	23
2.00 mm	21
1.18 mm	18
630 µm	15
425 µm	12
300 µm	9
200 µm	7
150 µm	6
63 µm	4

Non Engineering Description
Brown slightly silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	30.2
Gravel	49.1
Sand	16.8
Silt & Clay	3.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	125
D60	44
D10	0.32
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	137.5

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C30

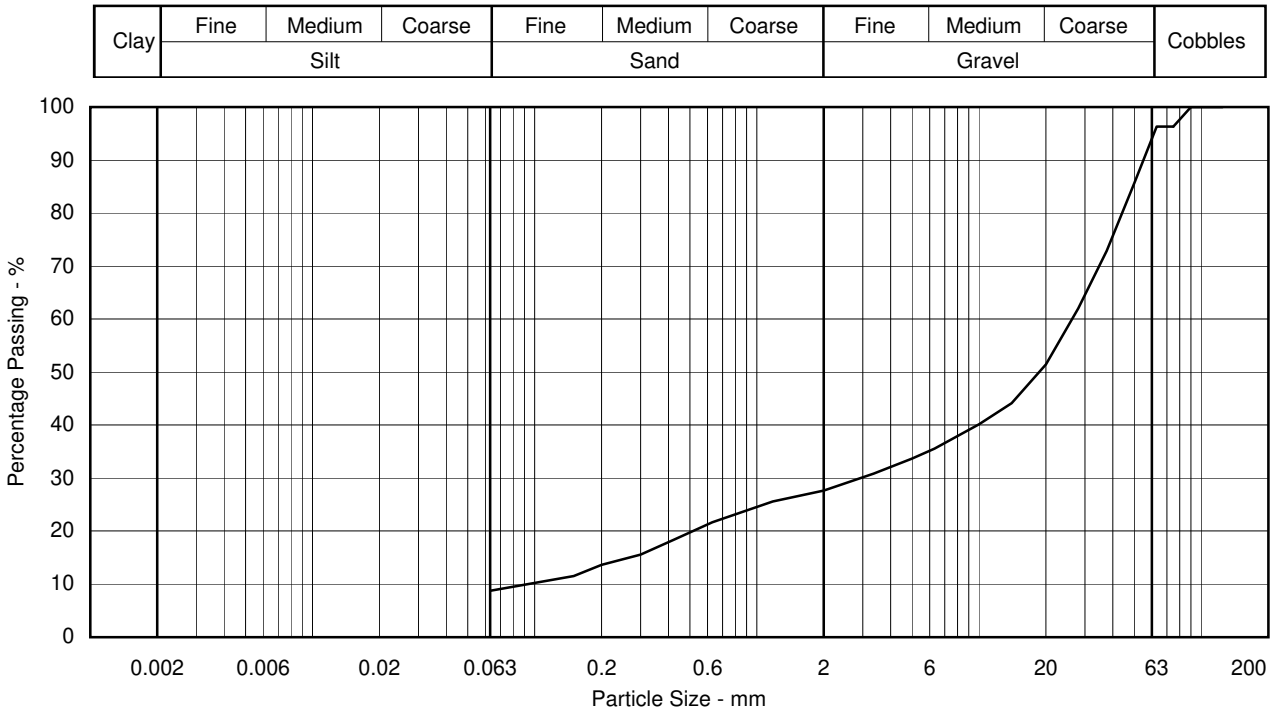
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP10
	Engineer WSP	Sample Ref Depth (m) 1.00 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	96
63.0 mm	96
50.0 mm	86
37.5 mm	73
28.0 mm	62
20.0 mm	51
14.0 mm	44
10.0 mm	40
6.30 mm	36
5.00 mm	34
3.35 mm	31
2.00 mm	28
1.18 mm	26
630 µm	22
425 µm	18
300 µm	16
200 µm	14
150 µm	11
63 µm	9

Non Engineering Description
Brown silty sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	3.7
Gravel	68.7
Sand	18.9
Silt & Clay	8.7
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	90
D60	26
D10	0.094
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	276.6

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
TP	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C31

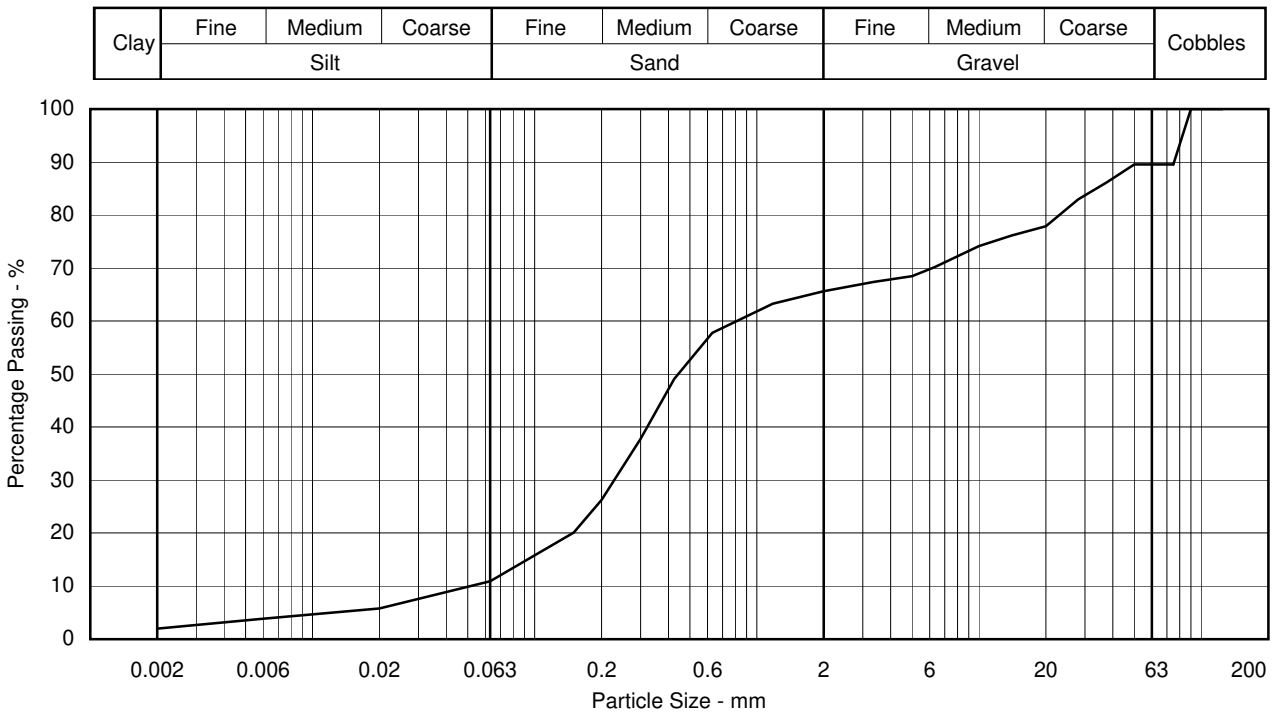
igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole TP11
	Engineer	WSP	Sample Ref Depth (m) 1.00 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	90
63.0 mm	90
50.0 mm	90
37.5 mm	86
28.0 mm	83
20.0 mm	78
14.0 mm	76
10.0 mm	74
6.30 mm	70
5.00 mm	68
3.35 mm	67
2.00 mm	66
1.18 mm	63
630 µm	58
425 µm	49
300 µm	38
200 µm	26
150 µm	20
63 µm	11
20 µm	6
6 µm	4
2 µm	2

Non Engineering Description
Brown silty very gravelly SAND with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	10.5
Gravel	24.0
Sand	55.1
Silt	8.6
Clay	1.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	90
D60	0.81
D10	0.052
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	15.6

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C32
Sheet 1 of 1

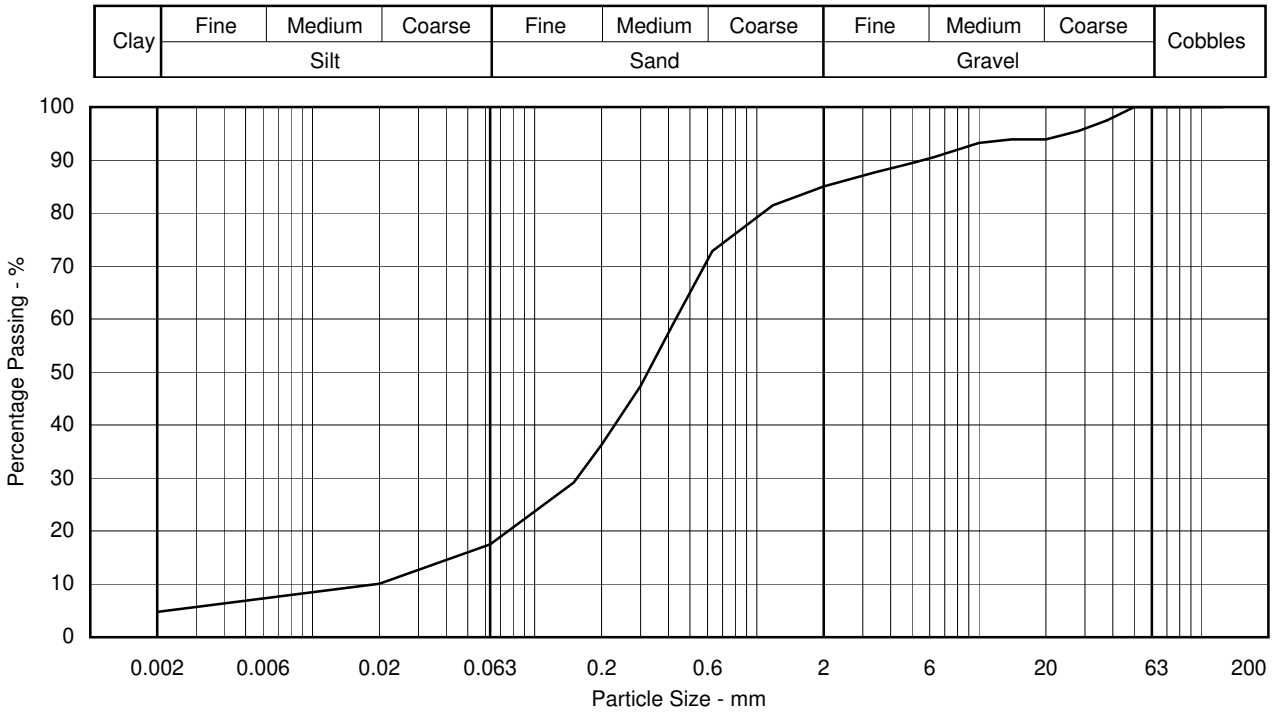
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP12
	Engineer WSP	Sample Ref Depth (m) 2.20 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	97
28.0 mm	95
20.0 mm	94
14.0 mm	94
10.0 mm	93
6.30 mm	91
5.00 mm	89
3.35 mm	88
2.00 mm	85
1.18 mm	81
630 µm	73
425 µm	59
300 µm	47
200 µm	36
150 µm	29
63 µm	17
20 µm	10
6 µm	7
2 µm	5

Non Engineering Description
Brown silty gravelly SAND . Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	15.0
Sand	68.1
Silt	12.2
Clay	4.7
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	50
D60	0.43
D10	0.020
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	21.5

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C33

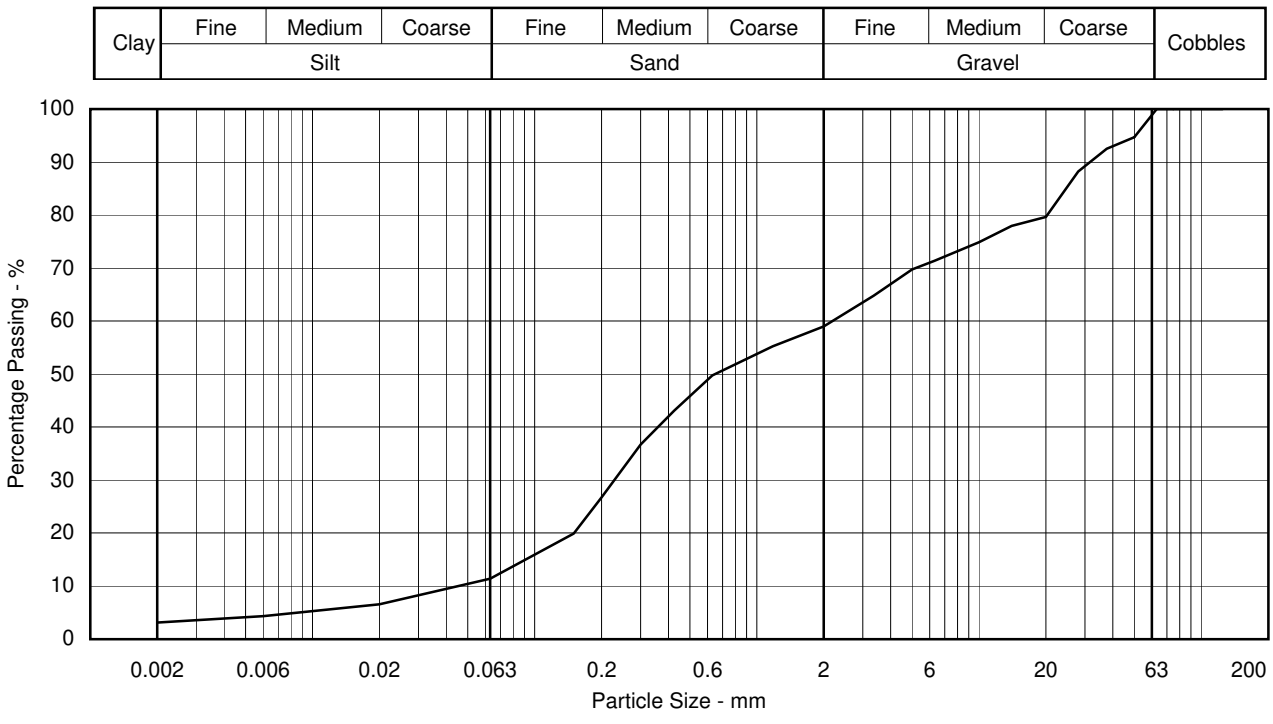
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP13
	Engineer WSP	Sample Ref Depth (m) 1.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	95
37.5 mm	93
28.0 mm	88
20.0 mm	80
14.0 mm	78
10.0 mm	75
6.30 mm	71
5.00 mm	70
3.35 mm	65
2.00 mm	59
1.18 mm	55
630 µm	50
425 µm	43
300 µm	37
200 µm	27
150 µm	20
63 µm	11
20 µm	7
6 µm	4
2 µm	3

Non Engineering Description
Brown silty SAND and GRAVEL. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	41.0
Sand	48.0
Silt	7.9
Clay	3.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	2.2
D10	0.045
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	48.9

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C34

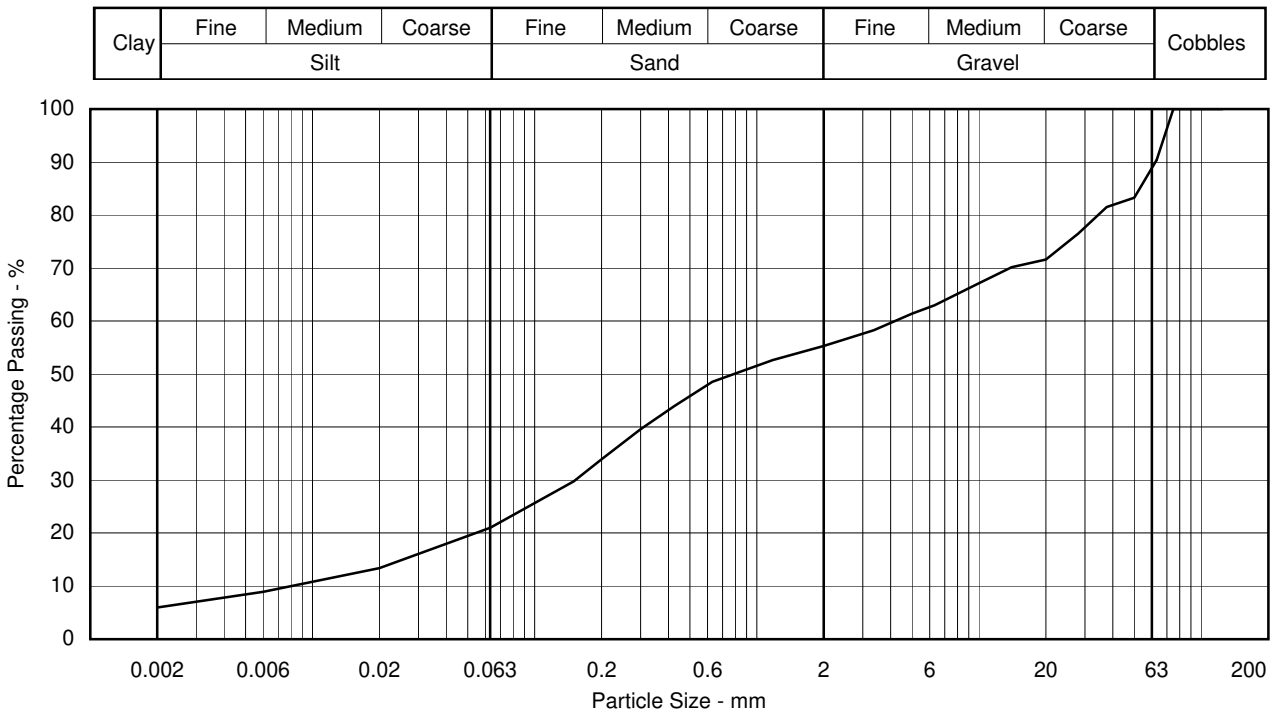
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP13
	Engineer WSP	Sample Ref Depth (m) 2.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	90
50.0 mm	83
37.5 mm	82
28.0 mm	76
20.0 mm	72
14.0 mm	70
10.0 mm	67
6.30 mm	63
5.00 mm	61
3.35 mm	58
2.00 mm	55
1.18 mm	53
630 µm	48
425 µm	44
300 µm	40
200 µm	34
150 µm	30
63 µm	21
20 µm	13
6 µm	9
2 µm	6

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	9.6
Gravel	35.1
Sand	34.8
Silt	14.5
Clay	5.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	4.2
D10	0.0081
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	518.5

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C35

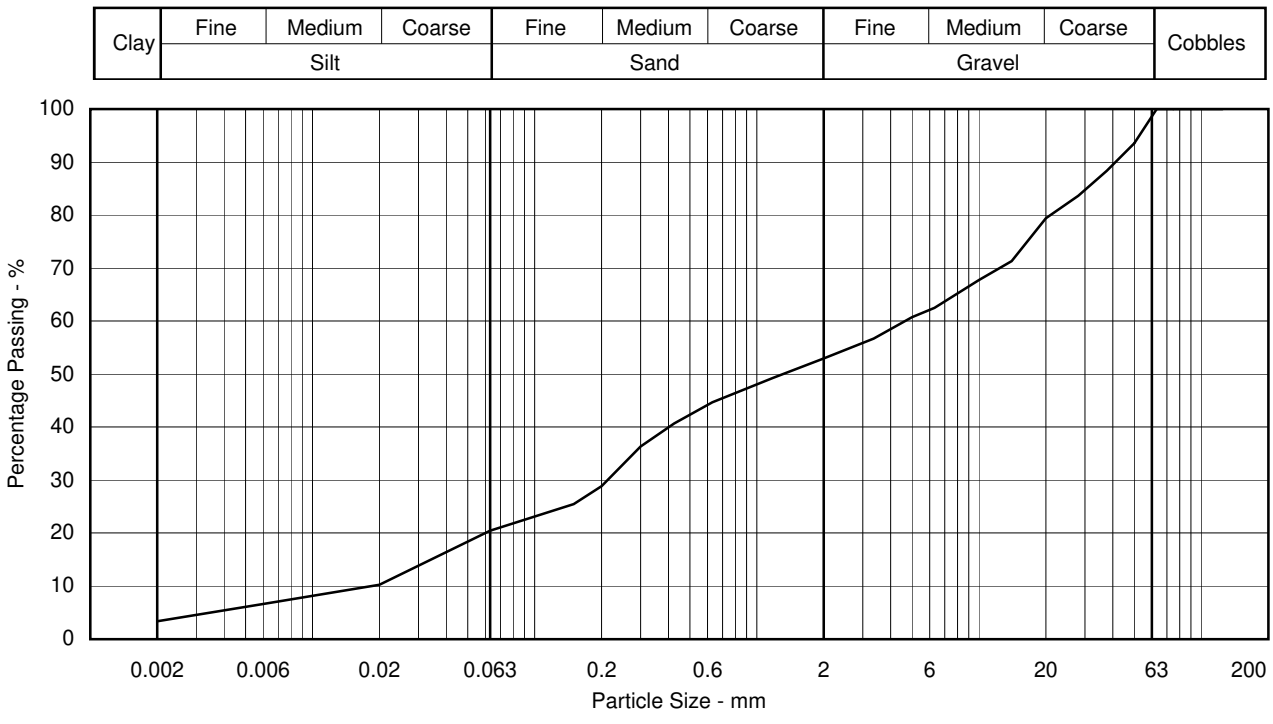
igne	Site: CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client: Balfour Beatty	Hole: TP14
	Engineer: WSP	Sample Ref:
		Depth (m): 0.50
		Sample Type: LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	94
37.5 mm	88
28.0 mm	84
20.0 mm	79
14.0 mm	71
10.0 mm	68
6.30 mm	62
5.00 mm	61
3.35 mm	57
2.00 mm	53
1.18 mm	49
630 µm	45
425 µm	41
300 µm	36
200 µm	29
150 µm	25
63 µm	20
20 µm	10
6 µm	7
2 µm	3

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	47.1
Sand	33.2
Silt	16.4
Clay	3.3
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	4.7
D10	0.019
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	247.4

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
TP	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C36

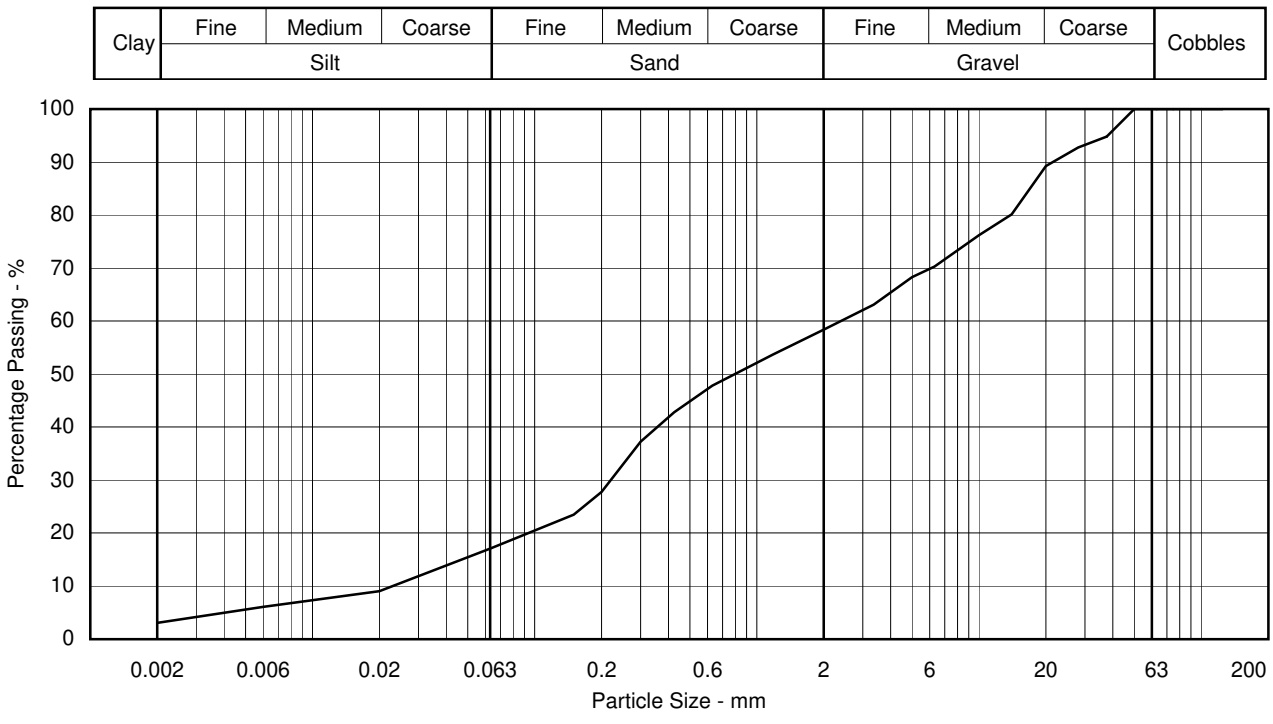
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP14
	Engineer WSP	Sample Ref Depth (m) 2.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	95
28.0 mm	93
20.0 mm	89
14.0 mm	80
10.0 mm	76
6.30 mm	70
5.00 mm	68
3.35 mm	63
2.00 mm	58
1.18 mm	54
630 µm	48
425 µm	43
300 µm	37
200 µm	28
150 µm	23
63 µm	17
20 µm	9
6 µm	6
2 µm	3

Non Engineering Description
Brown silty SAND and GRAVEL. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	41.6
Sand	41.9
Silt	13.5
Clay	3.0
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	50
D60	2.4
D10	0.023
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	104.3

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
TP	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C37

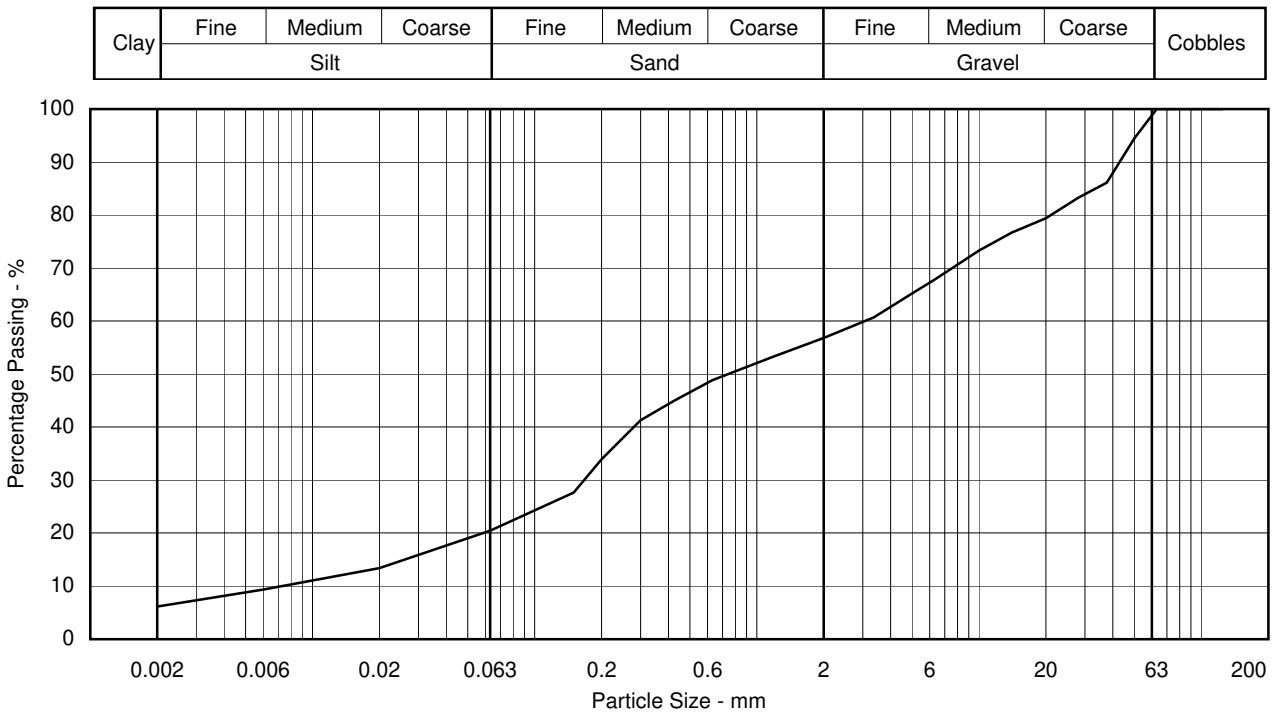
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP15
	Engineer WSP	Sample Ref
		Depth (m) 1.00
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	94
37.5 mm	86
28.0 mm	83
20.0 mm	79
14.0 mm	77
10.0 mm	73
6.30 mm	68
5.00 mm	65
3.35 mm	61
2.00 mm	57
1.18 mm	53
630 µm	49
425 µm	45
300 µm	41
200 µm	34
150 µm	28
63 µm	20
20 µm	13
6 µm	9
2 µm	6

Non Engineering Description
Brown silty SAND and GRAVEL. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	43.2
Sand	36.8
Silt	13.9
Clay	6.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	3.1
D10	0.0073
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	424.7

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C38

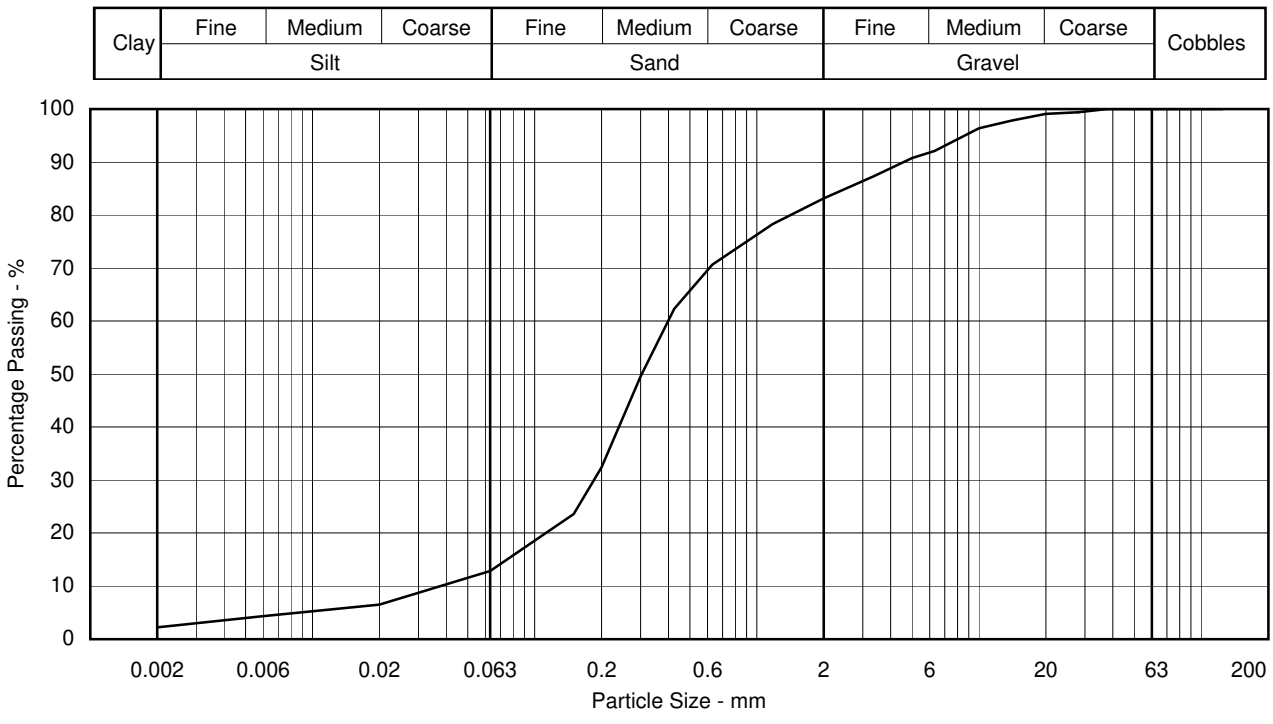
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP16
	Engineer WSP	Sample Ref
		Depth (m) 1.00
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	99
20.0 mm	99
14.0 mm	98
10.0 mm	96
6.30 mm	92
5.00 mm	91
3.35 mm	87
2.00 mm	83
1.18 mm	78
630 µm	71
425 µm	62
300 µm	50
200 µm	32
150 µm	24
63 µm	13
20 µm	6
6 µm	4
2 µm	2

Non Engineering Description
Brown silty gravelly SAND . Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	16.9
Sand	70.8
Silt	10.2
Clay	2.2
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	38
D60	0.40
D10	0.038
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	10.5

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C39

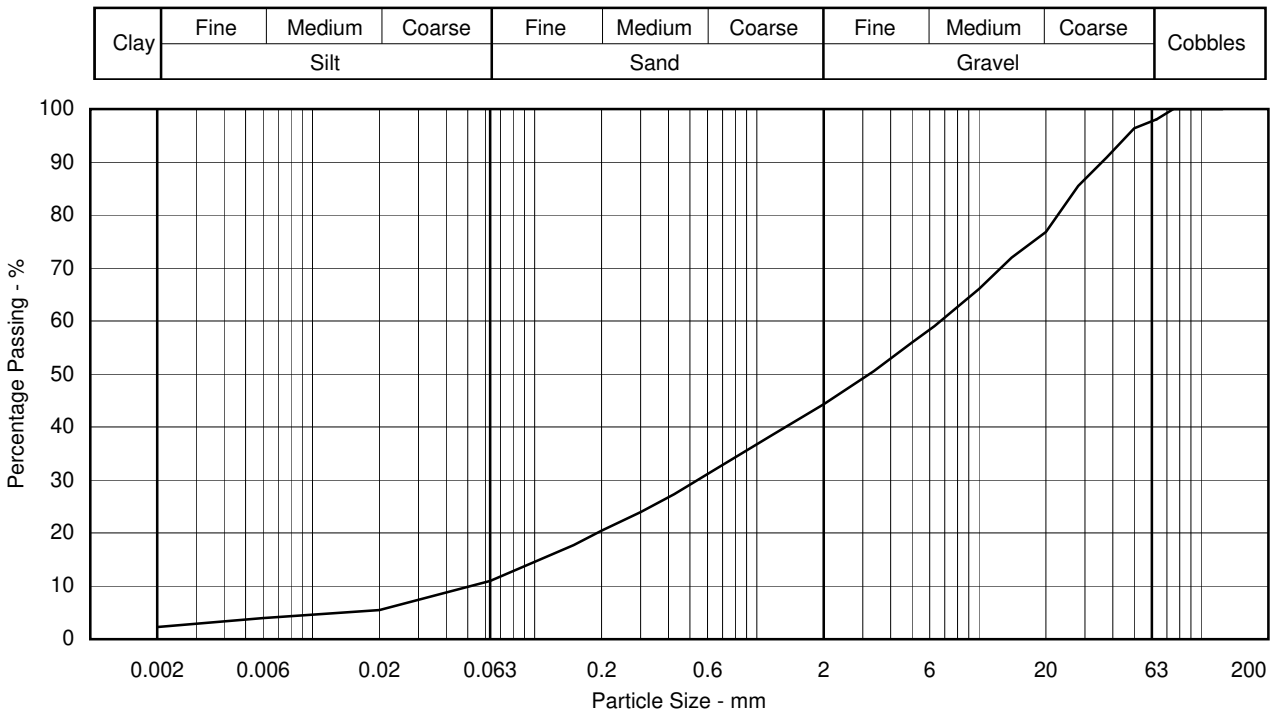
igne	Site: CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client: Balfour Beatty	Hole: TP17
	Engineer: WSP	Sample Ref:
		Depth (m): 0.50
		Sample Type: LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	98
50.0 mm	96
37.5 mm	91
28.0 mm	86
20.0 mm	77
14.0 mm	72
10.0 mm	66
6.30 mm	59
5.00 mm	56
3.35 mm	50
2.00 mm	44
1.18 mm	39
630 µm	32
425 µm	27
300 µm	24
200 µm	20
150 µm	18
63 µm	11
20 µm	5
6 µm	4
2 µm	2

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL with cobbles

Sample Proportions - %	
Cobbles	2.0
Gravel	53.8
Sand	33.7
Silt	8.3
Clay	2.2
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	6.7
D10	0.052
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	128.8

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C40

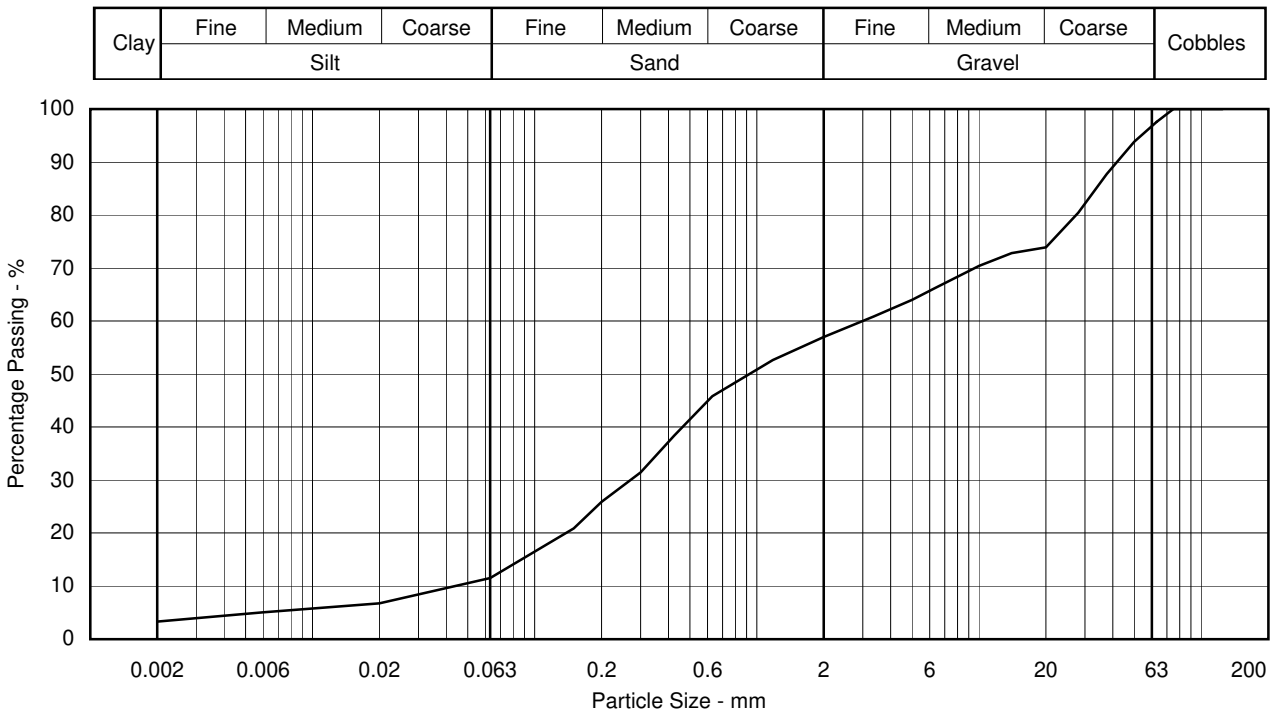
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP18
	Engineer WSP	Sample Ref
		Depth (m) 2.50
		Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	98
50.0 mm	94
37.5 mm	88
28.0 mm	80
20.0 mm	74
14.0 mm	73
10.0 mm	70
6.30 mm	66
5.00 mm	64
3.35 mm	61
2.00 mm	57
1.18 mm	53
630 µm	46
425 µm	38
300 µm	31
200 µm	26
150 µm	21
63 µm	11
20 µm	7
6 µm	5
2 µm	3

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	2.4
Gravel	40.6
Sand	45.8
Silt	7.9
Clay	3.3
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	3.0
D10	0.044
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	68.2

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C41

62 Rochsolloch Road, Airdrie, ML6 9BG

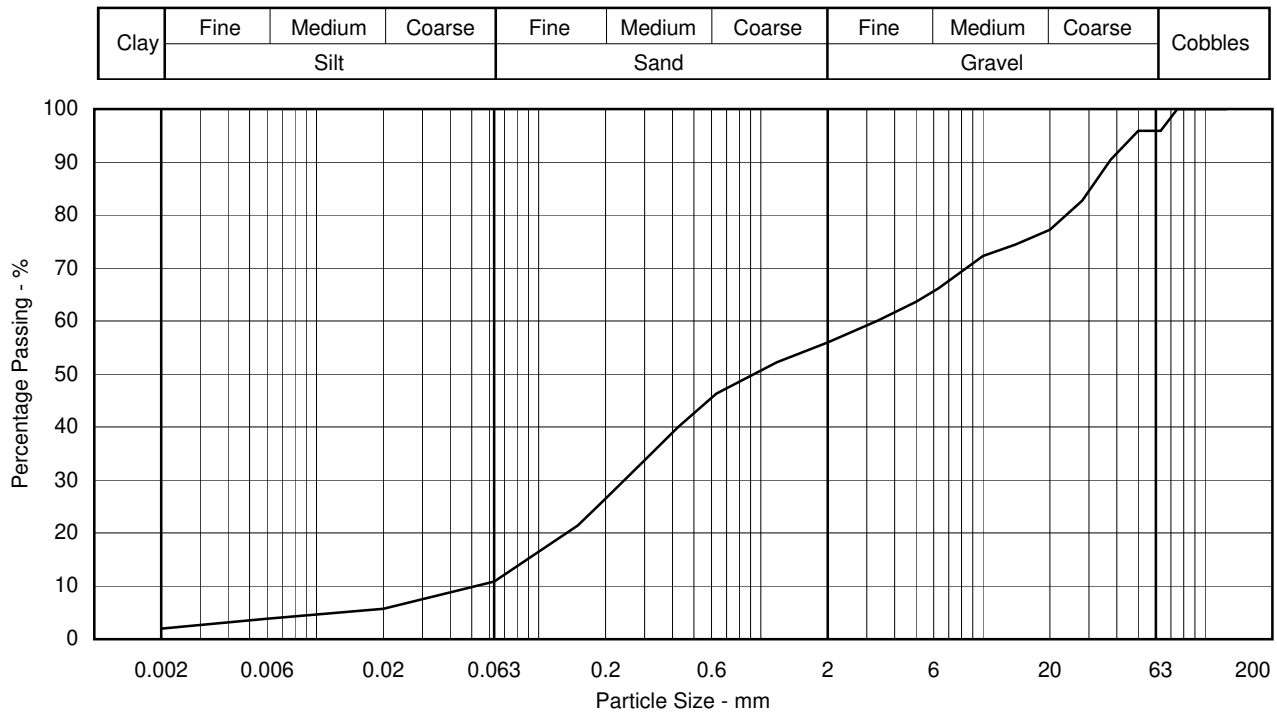
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP19
	Engineer WSP	Sample Ref Depth (m) 1.00 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	96
50.0 mm	96
37.5 mm	90
28.0 mm	83
20.0 mm	77
14.0 mm	74
10.0 mm	72
6.30 mm	66
5.00 mm	64
3.35 mm	60
2.00 mm	56
1.18 mm	52
630 µm	46
425 µm	40
300 µm	34
200 µm	26
150 µm	21
63 µm	11
20 µm	6
6 µm	4
2 µm	2

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	4.1
Gravel	40.0
Sand	45.5
Silt	8.5
Clay	1.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	3.3
D10	0.053
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	62.3

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C42

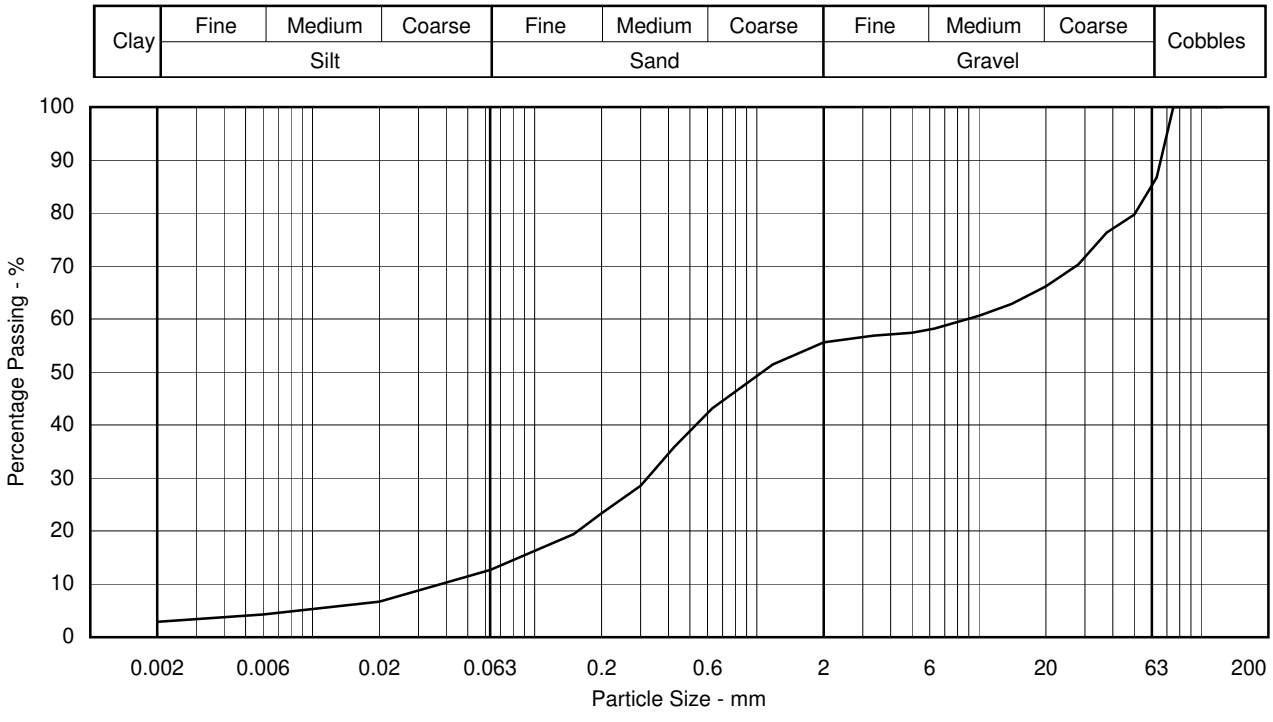
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP20
	Engineer WSP	Sample Ref Depth (m) 2.50 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	87
50.0 mm	80
37.5 mm	76
28.0 mm	70
20.0 mm	66
14.0 mm	63
10.0 mm	61
6.30 mm	58
5.00 mm	57
3.35 mm	57
2.00 mm	56
1.18 mm	51
630 µm	43
425 µm	36
300 µm	29
200 µm	23
150 µm	19
63 µm	13
20 µm	7
6 µm	4
2 µm	3

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	13.3
Gravel	31.1
Sand	43.4
Silt	9.3
Clay	2.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	8.9
D10	0.038
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	234.2

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C43

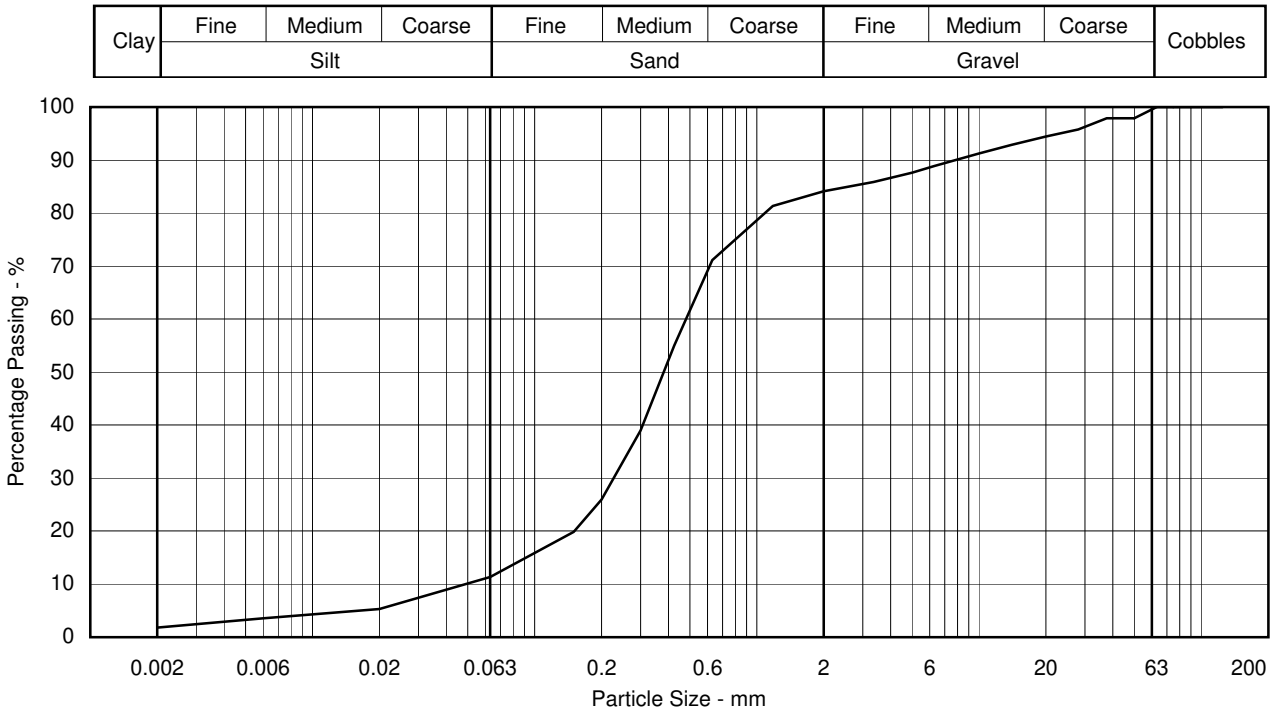
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole TP21
	Engineer WSP	Sample Ref Depth (m) 1.00 Sample Type LB

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	98
37.5 mm	98
28.0 mm	96
20.0 mm	94
14.0 mm	93
10.0 mm	91
6.30 mm	89
5.00 mm	88
3.35 mm	86
2.00 mm	84
1.18 mm	81
630 µm	71
425 µm	55
300 µm	39
200 µm	26
150 µm	20
63 µm	11
20 µm	5
6 µm	4
2 µm	2

Non Engineering Description
Brown silty gravelly SAND . Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	15.9
Sand	73.2
Silt	9.1
Clay	1.8
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	0.48
D10	0.049
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	9.8

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C44

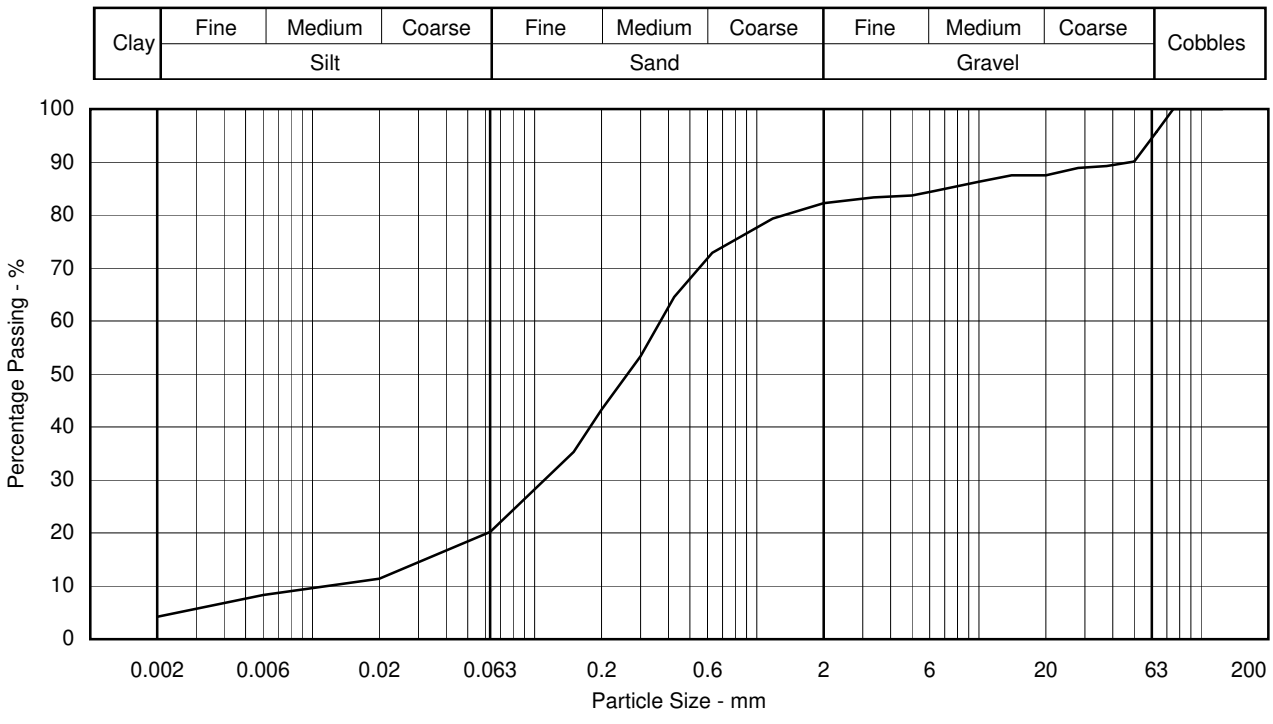
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS01
	Engineer WSP	Sample Ref Depth (m) 0.20 Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	96
50.0 mm	90
37.5 mm	89
28.0 mm	89
20.0 mm	88
14.0 mm	88
10.0 mm	86
6.30 mm	85
5.00 mm	84
3.35 mm	83
2.00 mm	82
1.18 mm	79
630 µm	73
425 µm	65
300 µm	53
200 µm	43
150 µm	35
63 µm	20
20 µm	11
6 µm	8
2 µm	4

Non Engineering Description
Brown gravelly silty SAND with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	4.3
Gravel	13.5
Sand	62.7
Silt	15.4
Clay	4.2
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	0.37
D10	0.012
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	30.8

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C45

62 Rochsolloch Road, Airdrie, ML6 9BG

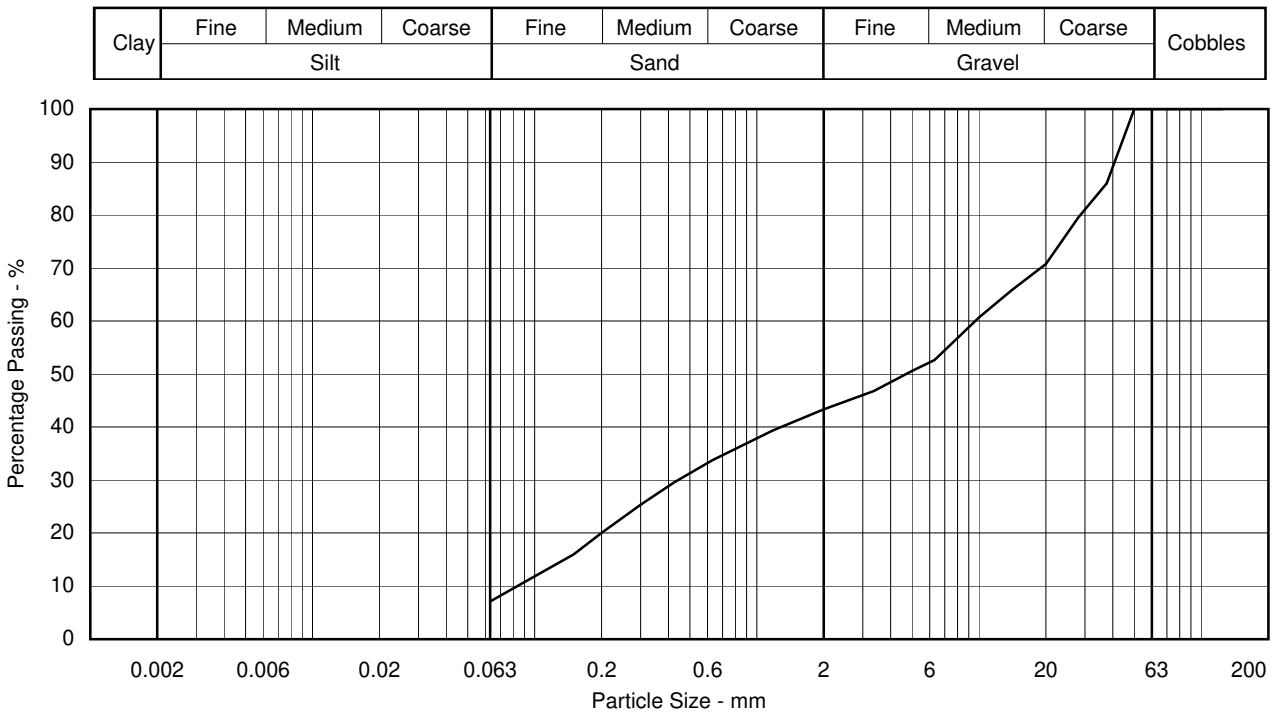
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS01
	Engineer WSP	Sample Ref Depth (m) 1.20 Sample Type UL

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	86
28.0 mm	80
20.0 mm	71
14.0 mm	66
10.0 mm	61
6.30 mm	53
5.00 mm	51
3.35 mm	47
2.00 mm	43
1.18 mm	39
630 µm	34
425 µm	30
300 µm	25
200 µm	20
150 µm	16
63 µm	7

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL

Sample Proportions - %	
Cobbles	0.0
Gravel	56.7
Sand	36.3
Silt & Clay	7.1
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	50
D60	9.6
D10	0.084
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	114.3

Notes
Sample does not comply with BS EN ISO 17892-4 minimum mass requirements



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C46

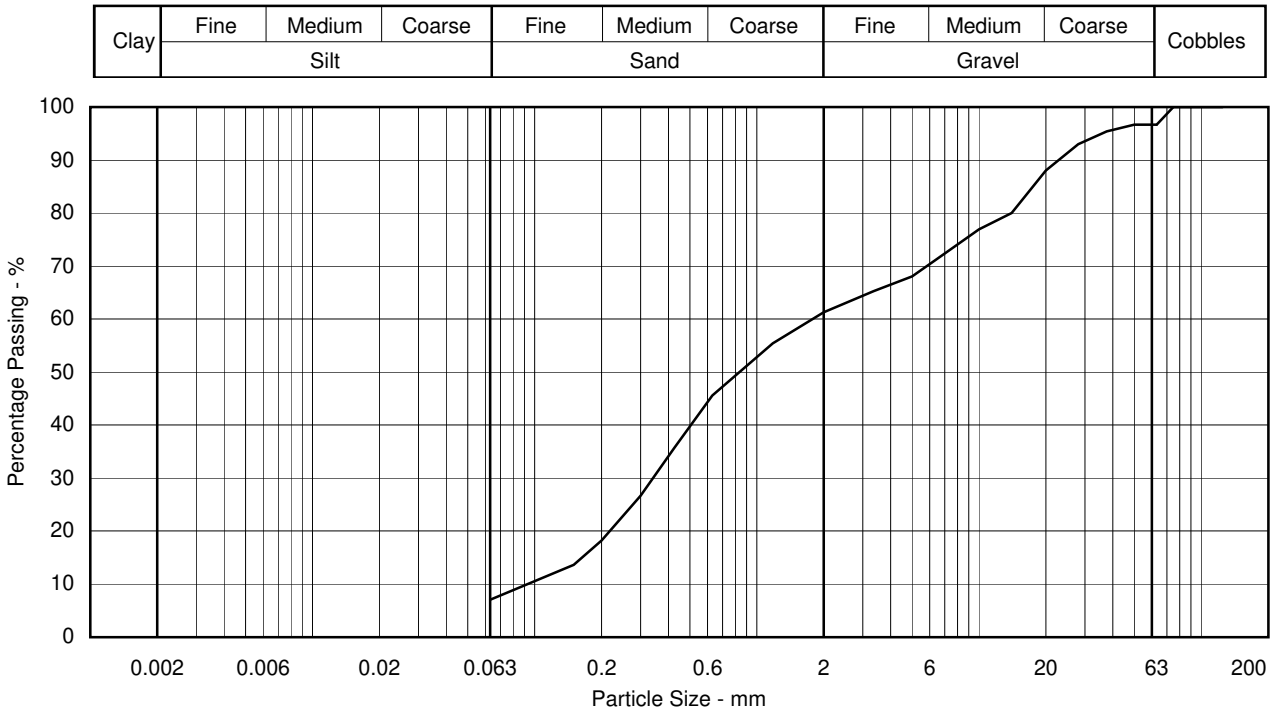
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS02
	Engineer WSP	Sample Ref Depth (m) 0.80 Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	97
50.0 mm	97
37.5 mm	95
28.0 mm	93
20.0 mm	88
14.0 mm	80
10.0 mm	77
6.30 mm	71
5.00 mm	68
3.35 mm	65
2.00 mm	61
1.18 mm	55
630 µm	46
425 µm	36
300 µm	27
200 µm	18
150 µm	14
63 µm	7

Non Engineering Description
Brown silty very gravelly SAND with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	3.3
Gravel	35.4
Sand	54.3
Silt & Clay	7.0
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	75
D60	1.8
D10	0.093
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	19.4

Notes



Originator	Checked & Approved
RF	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C47

62 Rochsolloch Road, Airdrie, ML6 9BG

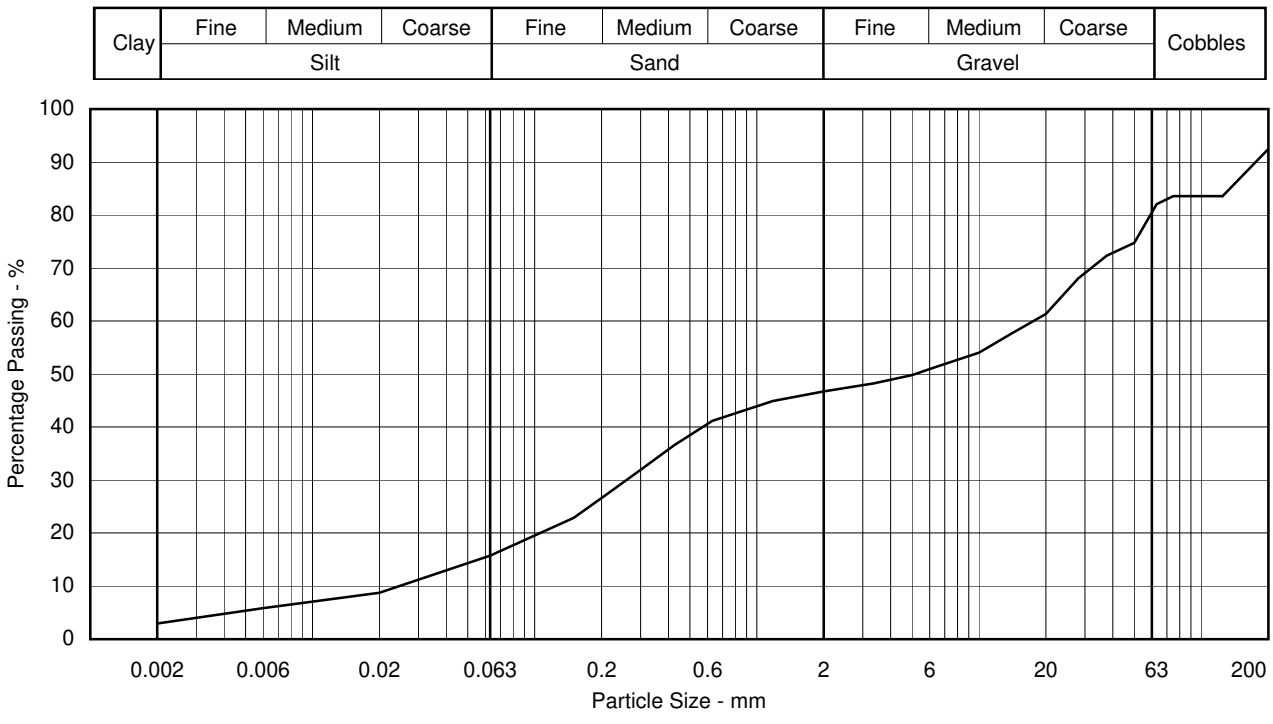
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS03
	Engineer WSP	Sample Ref Depth (m) 0.75 Sample Type B

Particle Size	% Passing
300.0 mm	100
125.0 mm	84
75.0 mm	84
63.0 mm	82
50.0 mm	75
37.5 mm	72
28.0 mm	68
20.0 mm	61
14.0 mm	58
10.0 mm	54
6.30 mm	51
5.00 mm	50
3.35 mm	48
2.00 mm	47
1.18 mm	45
630 µm	41
425 µm	37
300 µm	32
200 µm	27
150 µm	23
63 µm	16
20 µm	9
6 µm	6
2 µm	3

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	18.0
Gravel	35.3
Sand	31.5
Silt	12.3
Clay	2.9
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	300
D60	18
D10	0.025
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	720.0

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C48

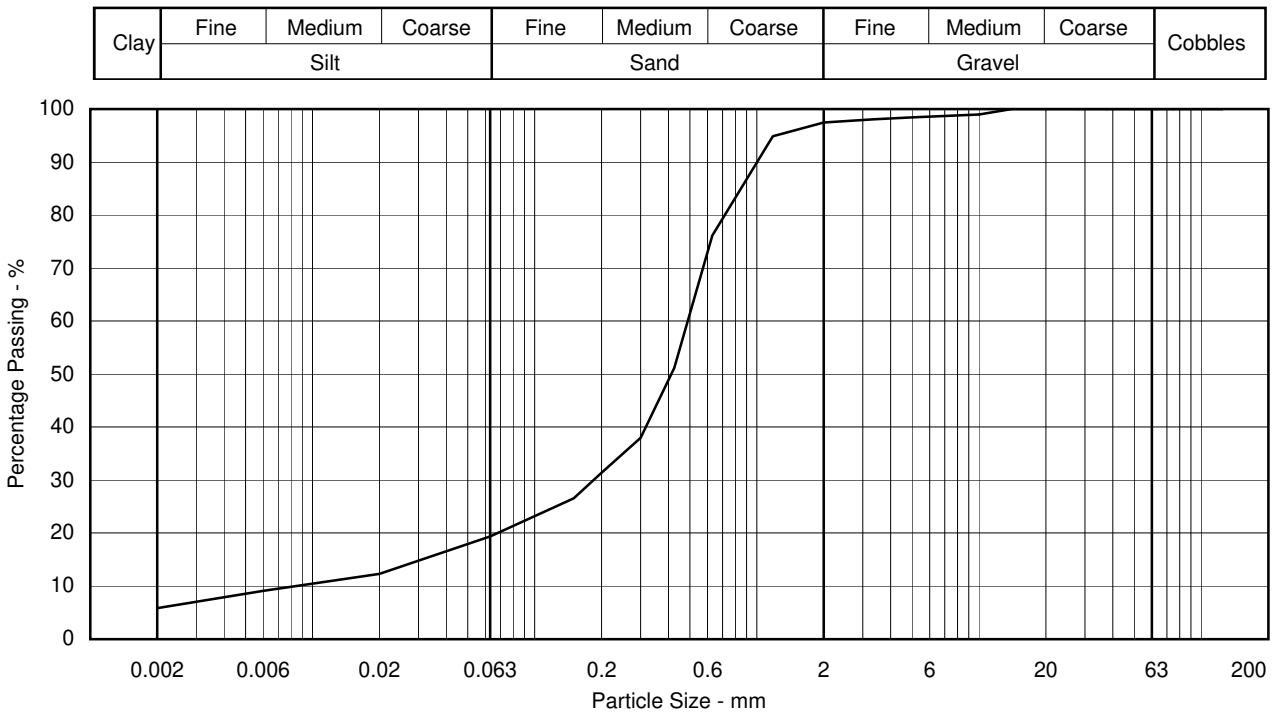
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS03
	Engineer WSP	Sample Ref Depth (m) 2.20 Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	100
28.0 mm	100
20.0 mm	100
14.0 mm	100
10.0 mm	99
6.30 mm	99
5.00 mm	98
3.35 mm	98
2.00 mm	97
1.18 mm	95
630 µm	76
425 µm	51
300 µm	38
200 µm	31
150 µm	27
63 µm	19
20 µm	12
6 µm	9
2 µm	6

Non Engineering Description
Brown slightly gravelly silty SAND. Gravel is fine to medium

Sample Proportions - %	
Cobbles	0.0
Gravel	2.6
Sand	78.6
Silt	13.1
Clay	5.8
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	14
D60	0.49
D10	0.0086
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	57.0

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C49

62 Rochsolloch Road, Airdrie, ML6 9BG

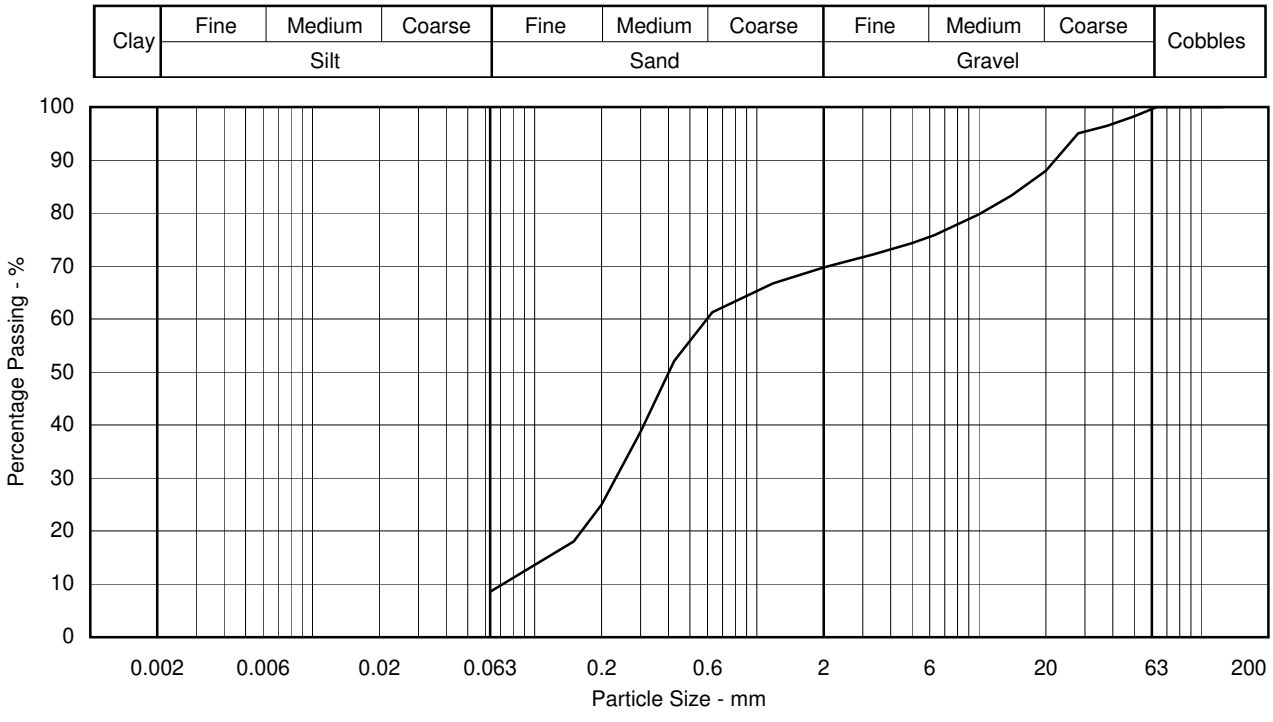
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS04
	Engineer WSP	Sample Ref
		Depth (m) 0.80
		Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	98
37.5 mm	96
28.0 mm	95
20.0 mm	88
14.0 mm	83
10.0 mm	80
6.30 mm	76
5.00 mm	74
3.35 mm	72
2.00 mm	70
1.18 mm	67
630 µm	61
425 µm	52
300 µm	39
200 µm	25
150 µm	18
63 µm	9

Non Engineering Description
Brown silty very gravelly SAND. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	0.0
Gravel	30.3
Sand	61.2
Silt & Clay	8.5
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	63
D60	0.60
D10	0.072
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	8.3

Notes



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method

Figure C50

62 Rochsolloch Road, Airdrie, ML6 9BG

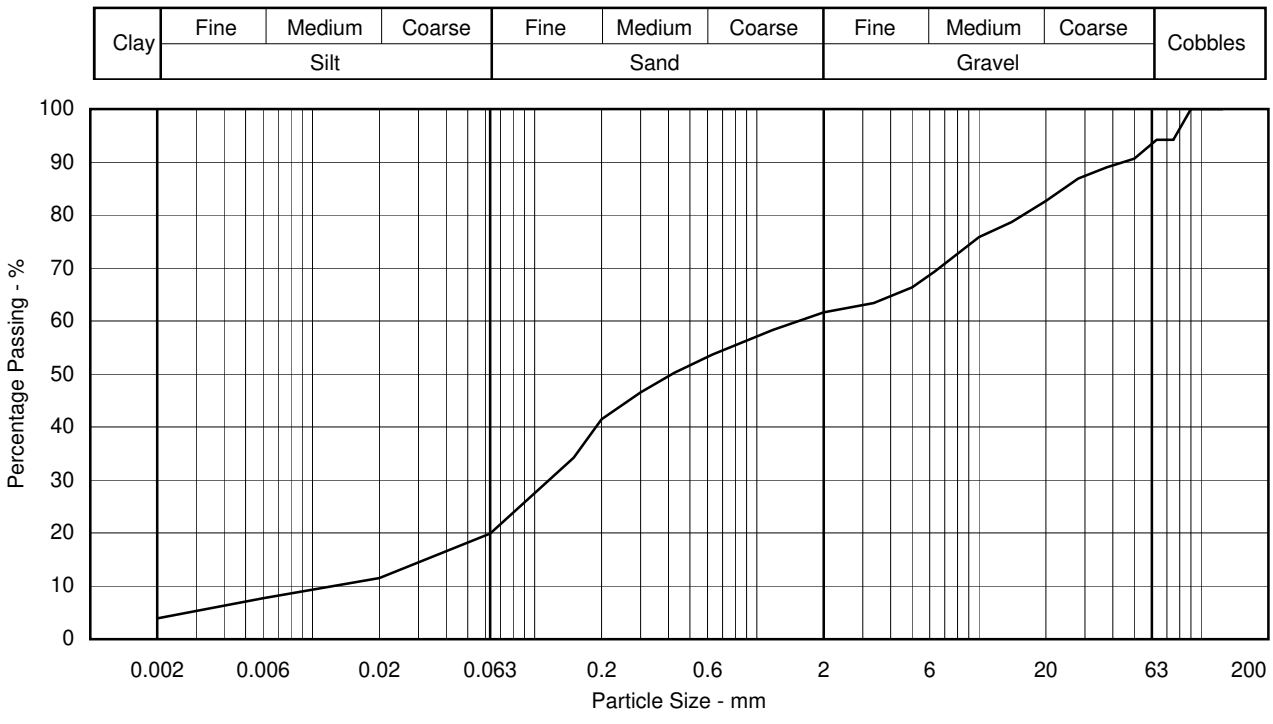
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS06
	Engineer WSP	Sample Ref Depth (m) 0.80 Sample Type B

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	94
63.0 mm	94
50.0 mm	91
37.5 mm	89
28.0 mm	87
20.0 mm	83
14.0 mm	79
10.0 mm	76
6.30 mm	69
5.00 mm	66
3.35 mm	63
2.00 mm	62
1.18 mm	58
630 µm	54
425 µm	50
300 µm	47
200 µm	41
150 µm	34
63 µm	20
20 µm	11
6 µm	8
2 µm	4

Non Engineering Description
Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse

Sample Proportions - %	
Cobbles	5.8
Gravel	32.5
Sand	42.3
Silt	15.4
Clay	3.8
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	90
D60	1.5
D10	0.013
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	115.4

Notes
Sedimentation sample not pre-treated



Originator	Checked & Approved
CT	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C51

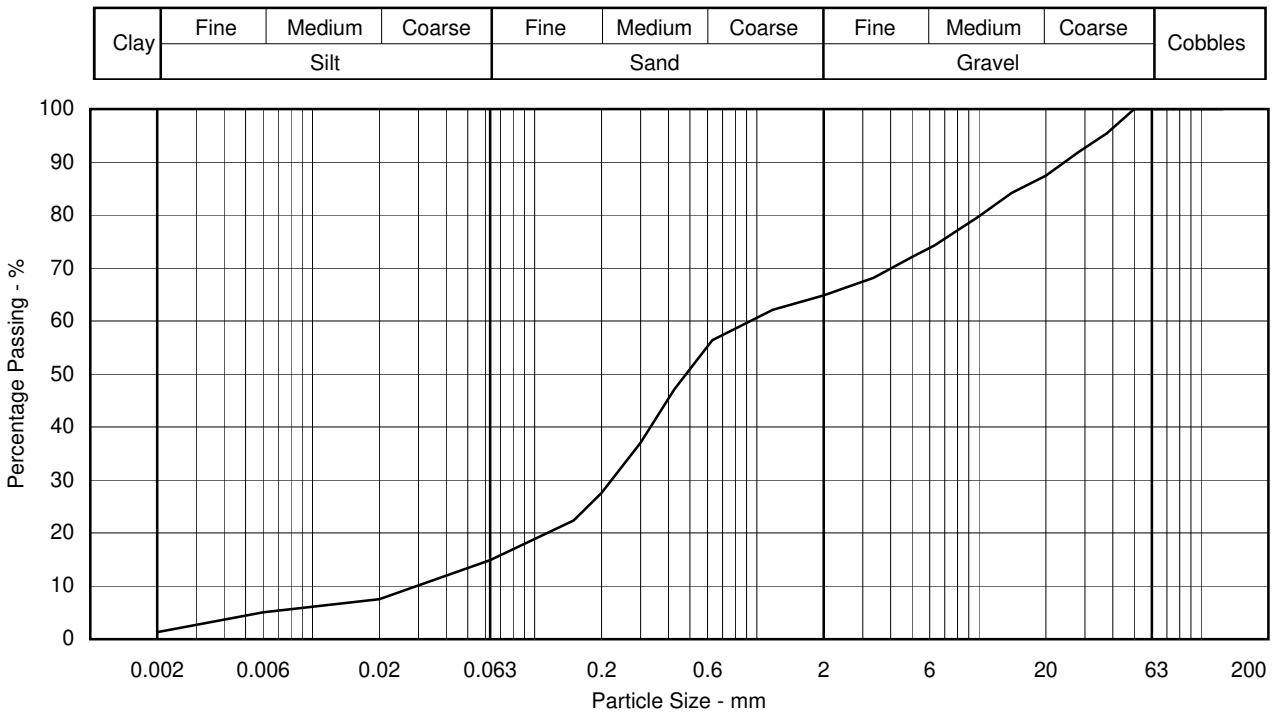
igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole WS07
	Engineer WSP	Sample Ref
		Depth (m) 1.20
		Sample Type UL

Particle Size	% Passing
125.0 mm	100
90.0 mm	100
75.0 mm	100
63.0 mm	100
50.0 mm	100
37.5 mm	95
28.0 mm	92
20.0 mm	87
14.0 mm	84
10.0 mm	80
6.30 mm	74
5.00 mm	72
3.35 mm	68
2.00 mm	65
1.18 mm	62
630 µm	56
425 µm	47
300 µm	37
200 µm	28
150 µm	22
63 µm	15
20 µm	8
6 µm	5
2 µm	1

Non Engineering Description
Brown silty very sandy fine to coarse GRAVEL

Sample Proportions - %	
Cobbles	0.0
Gravel	35.2
Sand	50.4
Silt	13.1
Clay	1.3
Particle Density - Assumed (Mg/m3)	2.65
Particle Diameter - mm	
D100	50
D60	0.94
D10	0.029
Uniformity Coefficient (SHW series 600, Table 6/1, footnote 5)	32.4

Notes
Sedimentation sample not pre-treated



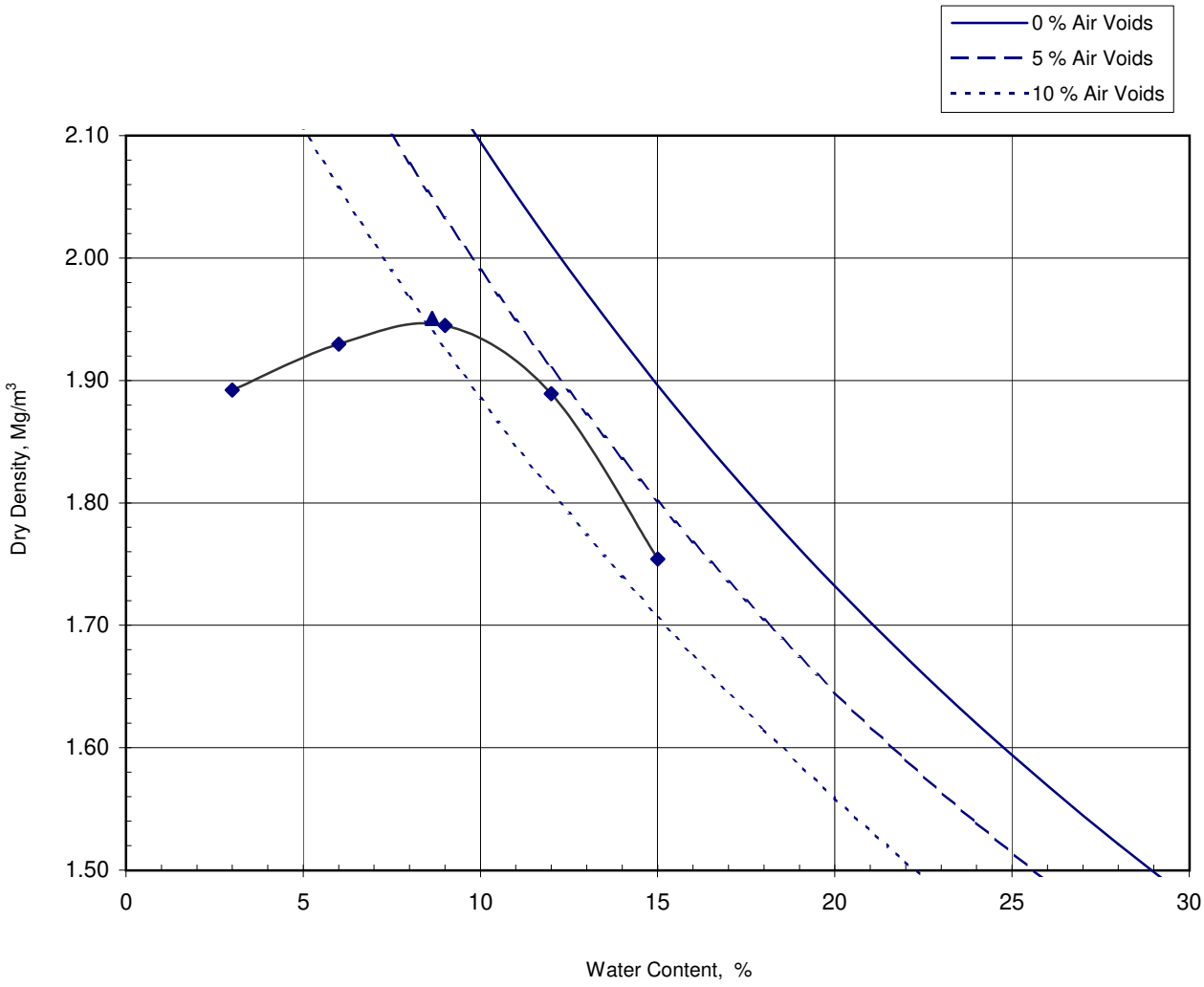
Originator	Checked & Approved
AD	CD 26/11/2024

PARTICLE SIZE DISTRIBUTION
BS EN ISO 17892-4 2016 Clause 5.2 - Sieving Method
BS EN ISO 17892-4 2016 Clause 5.4 - Pipette Method

Figure C52

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole TP13
	Engineer	WSP	Sample Ref Depth (m) 1.50 Sample Type LB

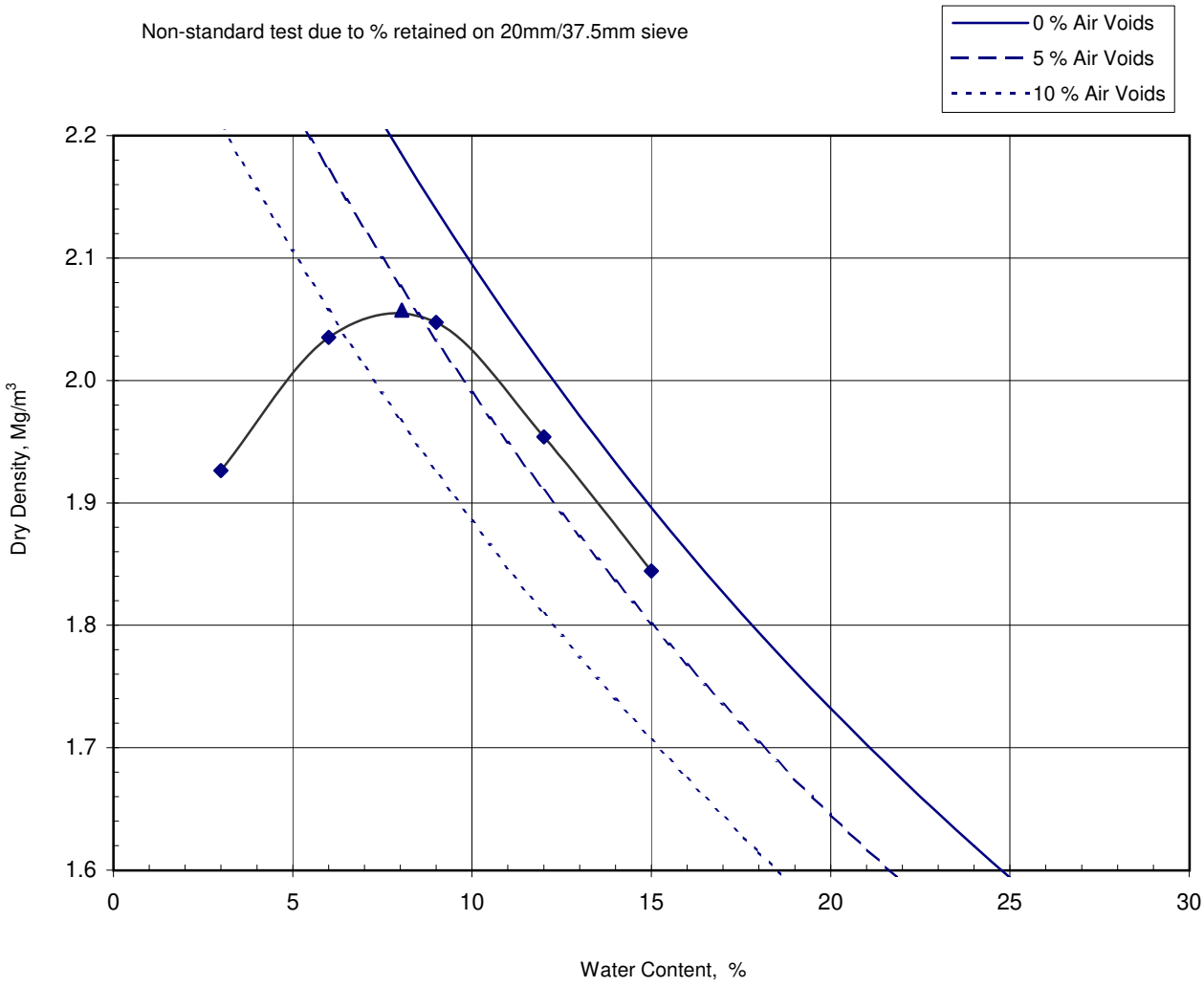


Non Engineering Description		Brown silty SAND and GRAVEL. Gravel is fine to coarse
Preparation		Oven dried
Test Method		Compaction method using 2.5kg rammer with CBR mould
Samples Used		Single
Mass Retained on 37.5 mm Sieve	%	7
Mass Retained on 20.0 mm Sieve	%	19
Grading zone		5
Particle Density - Assumed	Mg/m³	2.65
Natural Water Content	%	15
Maximum Dry Density	Mg/m³	1.95
Optimum Water Content	%	8.6

Originator	Checked & Approved	**Determination of dry density/water content relationship**	Figure C53
BC	CD 26/11/2024	BS 1377-2: 2022 cl. 11.4	Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole TP13
	Engineer	WSP	Sample Ref Depth (m) 2.50 Sample Type LB

Non-standard test due to % retained on 20mm/37.5mm sieve



Non Engineering Description		Brown silty SAND and GRAVEL with cobbles. Gravel is fine to coarse
Preparation		Oven dried
Test Method		Compaction method using 2.5kg rammer with CBR mould
Samples Used		Single
Mass Retained on 37.5 mm Sieve	%	18
Mass Retained on 20.0 mm Sieve	%	29
Grading zone		x
Particle Density - Assumed	Mg/m³	2.65
Natural Water Content	%	13
Maximum Dry Density	Mg/m³	2.06
Optimum Water Content	%	8.0

Originator	Checked & Approved
RF	CD 26/11/2024

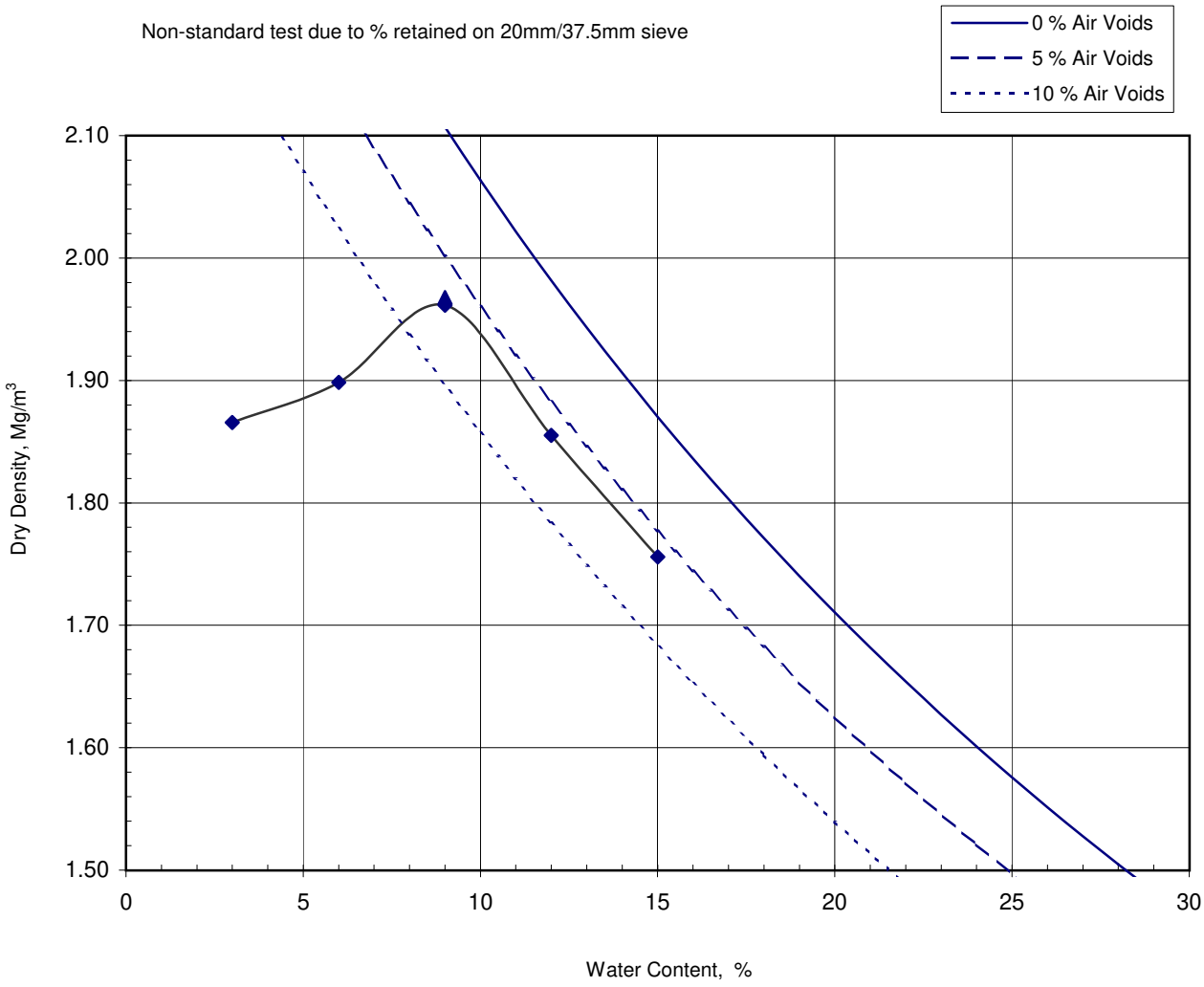
Determination of dry density/water content relationship
BS 1377-2: 2022 cl. 11.4

Figure C54

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole TP14
	Engineer	WSP	Sample Ref Depth (m) 0.50 Sample Type LB

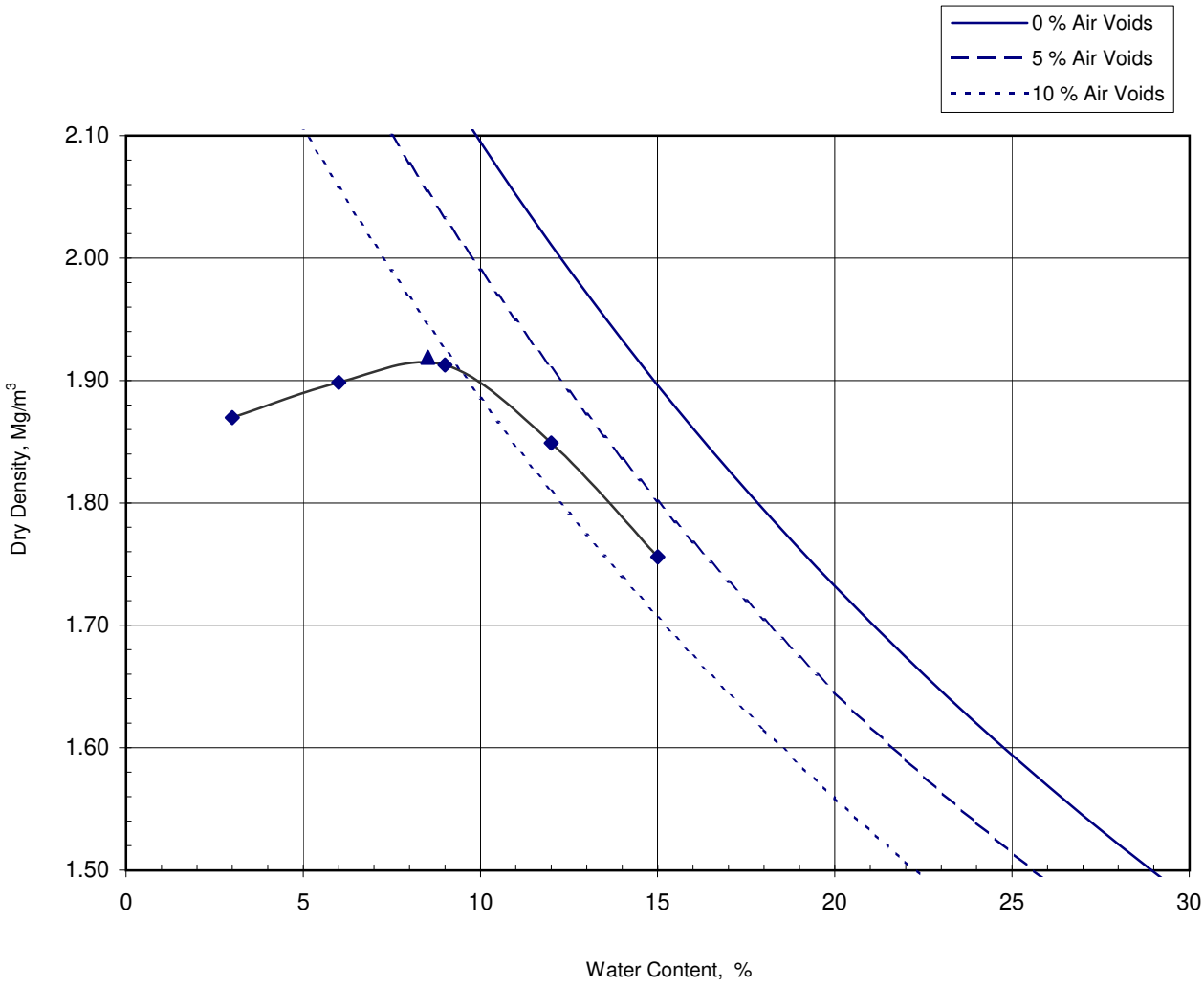
Non-standard test due to % retained on 20mm/37.5mm sieve



Non Engineering Description		Brown silty very sandy fine to coarse GRAVEL. Gravel is fine to coarse
Preparation		Oven dried
Test Method		Compaction method using 2.5kg rammer with CBR mould
Samples Used		Single
Mass Retained on 37.5 mm Sieve	%	10
Mass Retained on 20.0 mm Sieve	%	32
Grading zone		x
Particle Density - Assumed	Mg/m³	2.60
Natural Water Content	%	16
Maximum Dry Density	Mg/m³	1.97
Optimum Water Content	%	9.0

Originator	Checked & Approved	**Determination of dry density/water content relationship**	Figure C55
BC	CD 26/11/2024	BS 1377-2: 2022 cl. 11.4	Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole TP14
	Engineer	WSP	Sample Ref Depth (m) 2.50 Sample Type LB



Non Engineering Description		Brown silty SAND and GRAVEL. Gravel is fine to coarse
Preparation		Oven dried
Test Method		Compaction method using 2.5kg rammer with CBR mould
Samples Used		Single
Mass Retained on 37.5 mm Sieve	%	4
Mass Retained on 20.0 mm Sieve	%	13
Grading zone		5
Particle Density - Assumed	Mg/m³	2.65
Natural Water Content	%	16
Maximum Dry Density	Mg/m³	1.92
Optimum Water Content	%	8.5

Originator	Checked & Approved	**Determination of dry density/water content relationship**	Figure C56
BC	CD 26/11/2024	BS 1377-2: 2022 cl. 11.4	Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole ID WS01
	Engineer	WSP	Sample No Depth (m) 0.80 Sample Type B

Non Engineering Description: Brown gravelly silty SAND. Gravel is fine to coarse

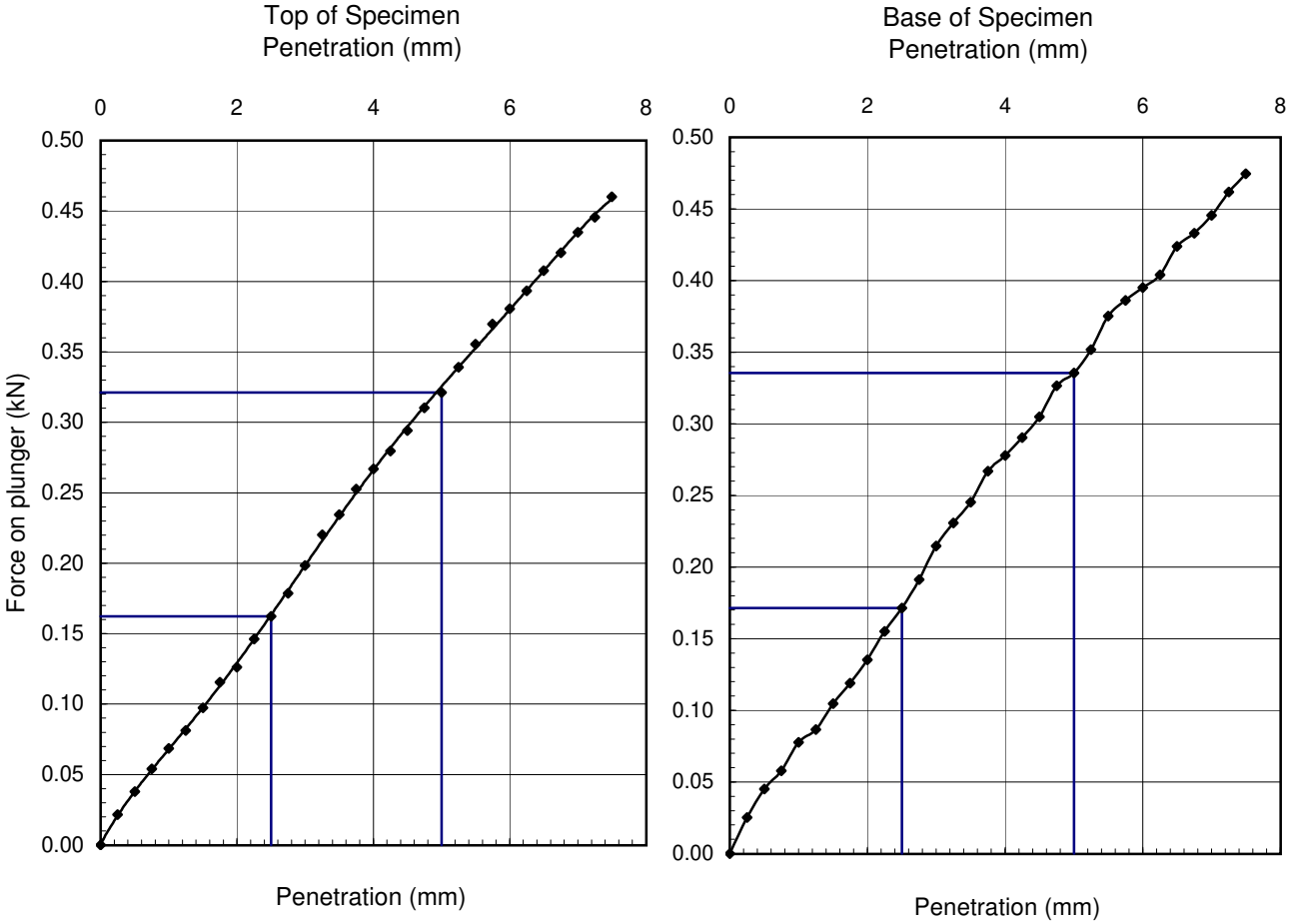
Preparation Details:

Specimen was prepared at Natural Moisture Content
Compaction using 2.5kg compactive effort

Specimen Bulk Density	2.01	Mg/m³
Specimen Dry Density	1.66	Mg/m³
Mass of sample > 20 mm	1.8	%

Specimen Soaked

Test Details:	**Top**		**Base**	
Surcharge:	2.0	kg	2.0	kg
Seating Load:	10	N	10	N
Moisture Content:	21	%	22	%
CBR Value:	1.6	%	1.7	%



Sample soaked for 4 days. Measurement of swelling = 0.14mm

Originator	Checked & Approved
AM	CD 26/11/2024

CALIFORNIA BEARING RATIO
BS1377 : Part 4 : Clause 7 : 1990

Figure C57

Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole ID WS01
	Engineer	WSP	Sample No
			Depth (m) 1.20
			Sample Type UL

Non Engineering Description: Brown silty very sandy fine to coarse GRAVEL

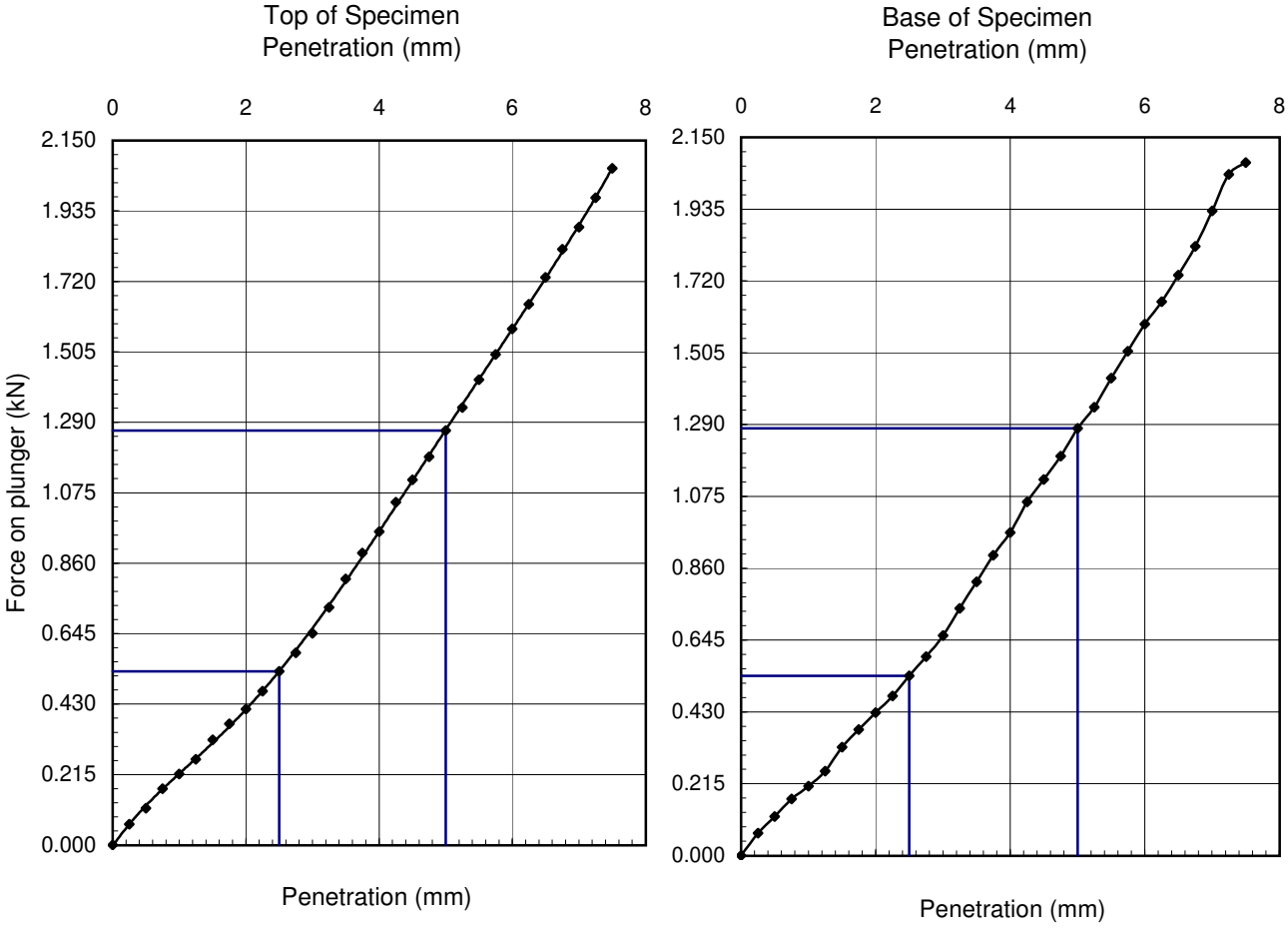
Preparation Details:

Specimen was prepared at Natural Moisture Content
Compaction using 2.5kg compactive effort

Specimen Bulk Density	2.22	Mg/m³
Specimen Dry Density	1.95	Mg/m³
Mass of sample > 20 mm	28.8	%

Specimen Soaked

Test Details:	**Top**		**Base**	
Surcharge:	2.0	kg	2.0	kg
Seating Load:	10	N	10	N
Moisture Content:	14	%	13	%
CBR Value:	6.3	%	6.4	%



Sample soaked for 4 days. Measurement of swelling = 0.07mm

Originator	Checked & Approved
AM	CD 26/11/2024

CALIFORNIA BEARING RATIO
BS1377 : Part 4 : Clause 7 : 1990

Figure C58

Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole ID WS02
	Engineer	WSP	Sample No Depth (m) 1.20 Sample Type B

Non Engineering Description: Brown silty SAND and GRAVEL. Gravel is fine to coarse

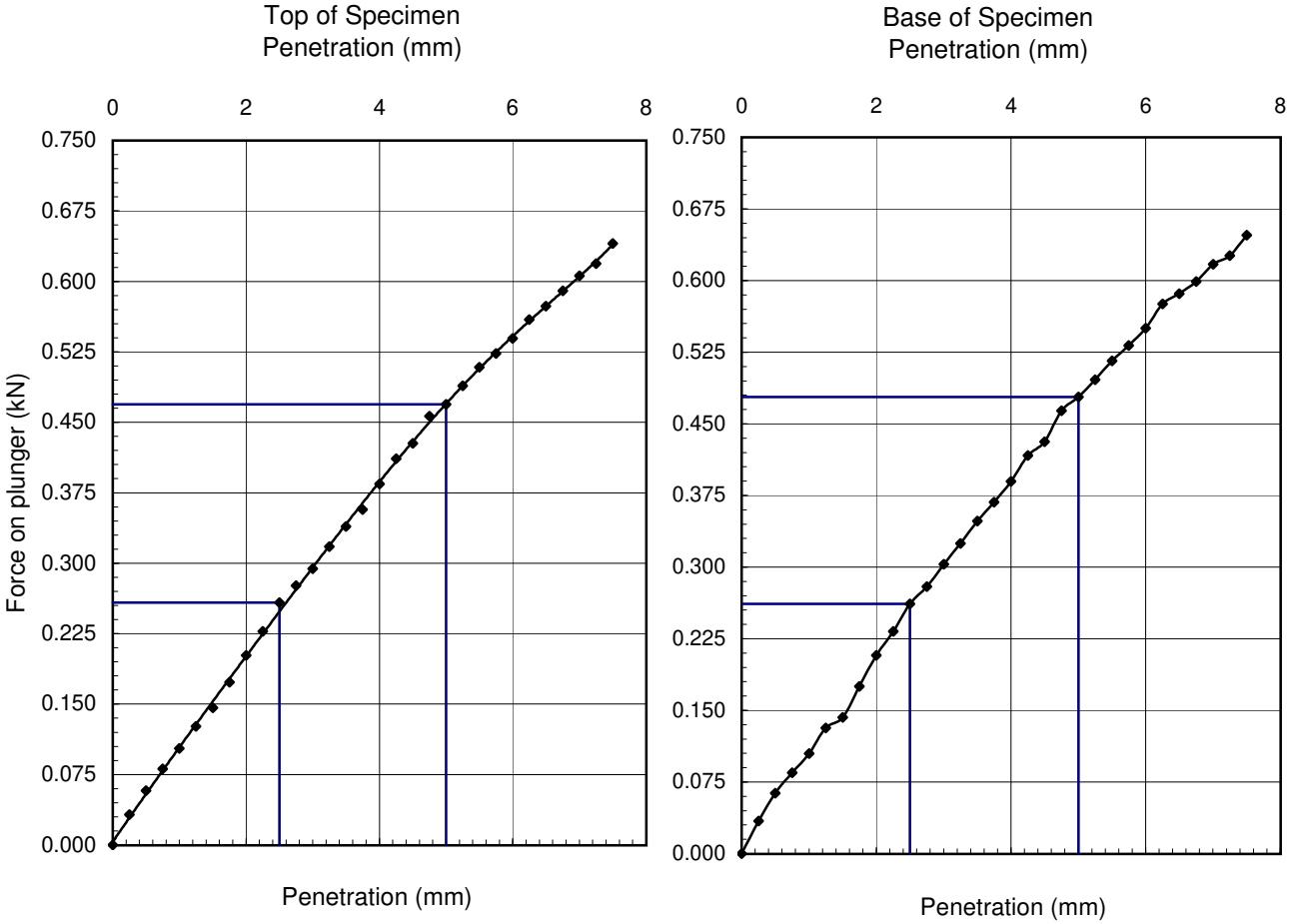
Preparation Details:

Specimen was prepared at Natural Moisture Content
Compaction using 2.5kg compactive effort

Specimen Bulk Density	2.21	Mg/m³
Specimen Dry Density	1.92	Mg/m³
Mass of sample > 20 mm	22.7	%

Specimen Soaked

Test Details:	**Top**		**Base**	
Surcharge:	2.0	kg	2.0	kg
Seating Load:	10	N	10	N
Moisture Content:	15	%	15	%
CBR Value:	2.3	%	2.4	%



Sample soaked for 4 days. Measurement of swelling = 0.21mm

Originator	Checked & Approved
AM	CD 26/11/2024

CALIFORNIA BEARING RATIO
BS1377 : Part 4 : Clause 7 : 1990

Figure C59

Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole ID WS03
	Engineer	WSP	Sample No Depth (m) 0.50 Sample Type D

Non Engineering Description: Brown gravelly silty SAND. Gravel is fine to medium

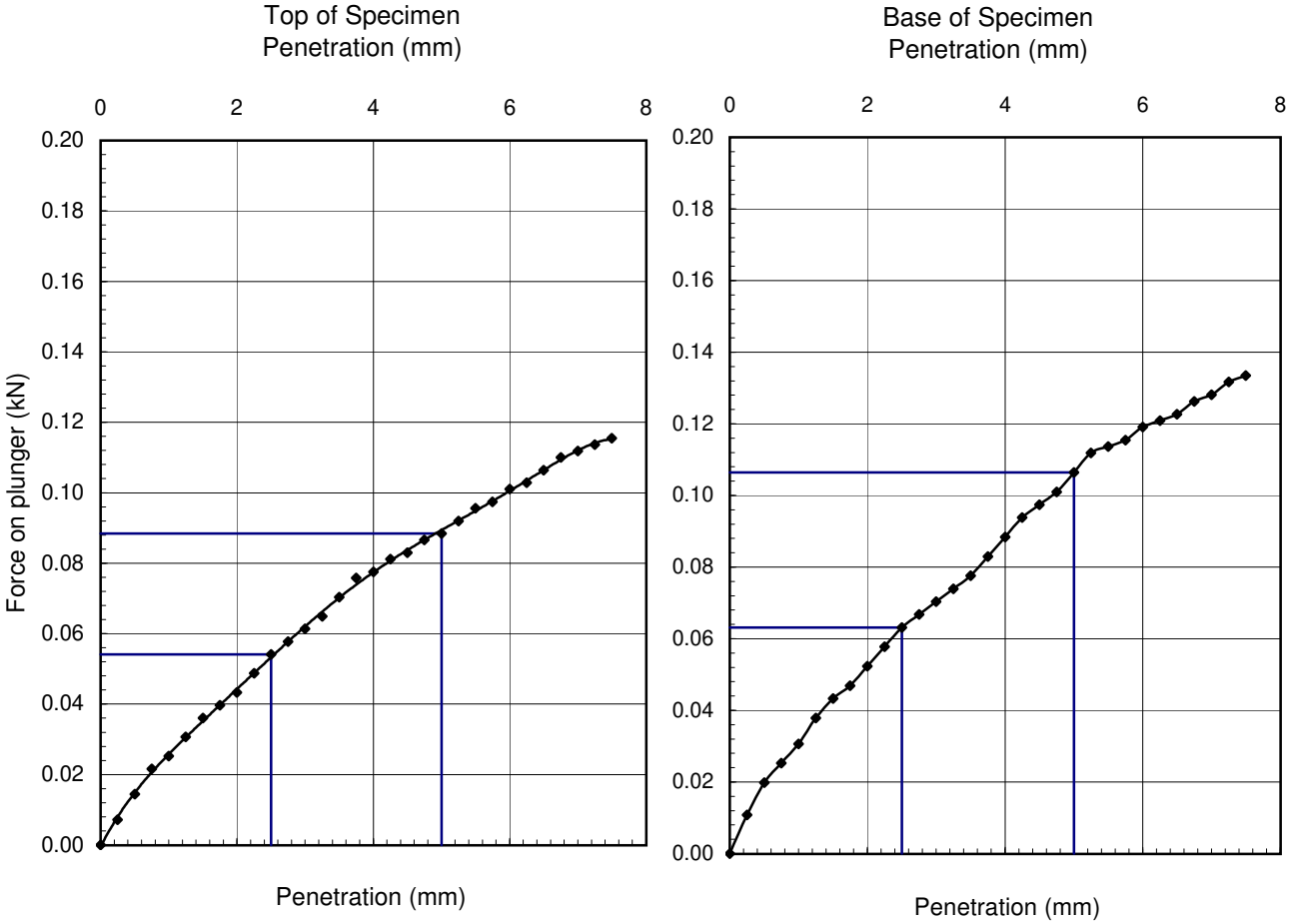
Preparation Details:

Specimen was prepared at Natural Moisture Content
Compaction using 2.5kg compactive effort

Specimen Bulk Density	1.66	Mg/m³
Specimen Dry Density	1.22	Mg/m³
Mass of sample > 20 mm	17.7	%

Specimen Soaked

Test Details:	**Top**		**Base**	
Surcharge:	2.0	kg	2.0	kg
Seating Load:	10	N	10	N
Moisture Content:	36	%	37	%
CBR Value:	0.4	%	0.5	%



Sample soaked for 4 days. Measurement of swelling = 0.26mm

Originator	Checked & Approved
AM	CD 26/11/2024

CALIFORNIA BEARING RATIO
BS1377 : Part 4 : Clause 7 : 1990

Figure C60

Sheet 1 of 1

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No** **26762**
	Client	Balfour Beatty	Hole ID WS05
	Engineer	WSP	Sample No
			Depth (m) 0.40
			Sample Type B

Non Engineering Description: ~

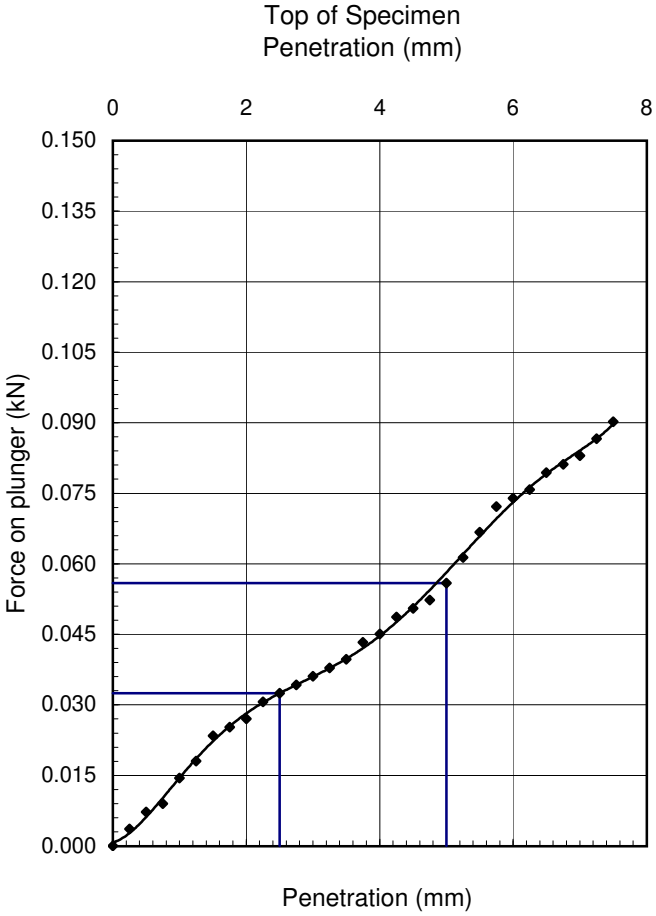
Preparation Details:

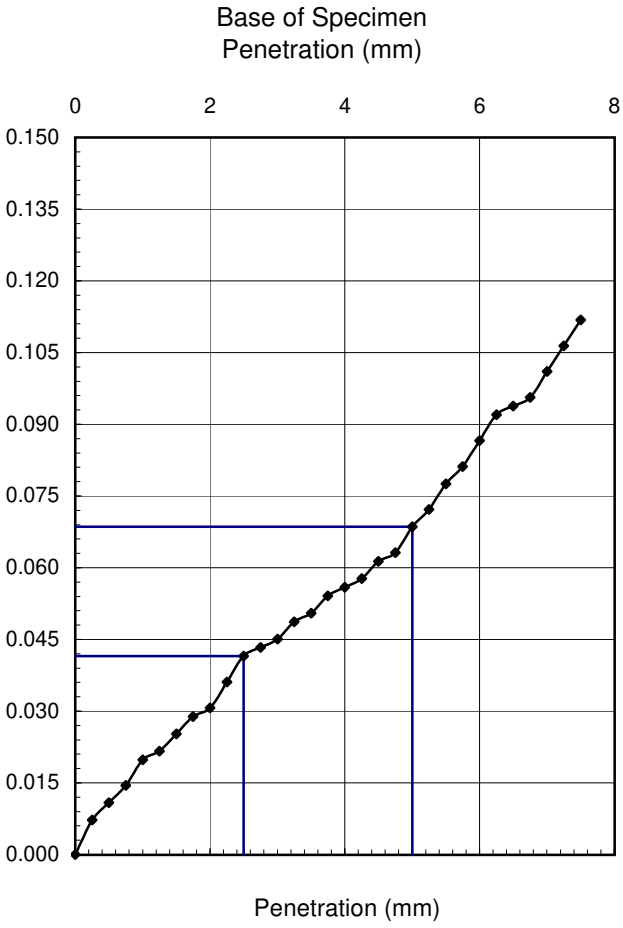
Specimen was prepared at Natural Moisture Content
Compaction using 2.5kg compactive effort

Specimen Bulk Density	0.00	Mg/m³
Specimen Dry Density	0.00	Mg/m³
Mass of sample > 20 mm	19.2	%

Specimen Soaked

Test Details:	**Top**		**Base**	
Surcharge:	2.0	kg	2.0	kg
Seating Load:	10	N	10	N
Moisture Content:	35	%	36	%
CBR Value:	0.3	%	0.3	%





Sample soaked for 4 days. Measurement of swelling = 0.27mm

Originator	Checked & Approved
AM	CD 26/11/2024

CALIFORNIA BEARING RATIO
BS1377 : Part 4 : Clause 7 : 1990

Figure C61

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site	CAMBUSHINNIE HAUL ROAD	**Contract No.** **26762**
	Client	Balfour Beatty	Exp. Point BH01
	Engineer	WSP	Sample Ref Depth (m) 5.70 Sample Type UT

Sample Details				
Sample Condition		Undisturbed		
Height	mm	203.0		
Diameter	mm	103.0		
Moisture Content	%	24		
Bulk Density	Mg/m³	2.00		
Dry Density	Mg/m³	1.62		
Test Details				
Membrane Thickness	mm	0.50		
Membrane Correction	kPa	0.77		
Rate of Axial Displacement	%/min	1.97		
Cell Pressure	kPa	110		
Strain at Failure	%	6.4		
Maximum Deviator Stress	kPa	25		
Shear Strength	kPa	12		
Mode of Failure		Plastic		
Non Engineering Description		Brown gravelly very silty SAND. Gravel is fine to coarse		

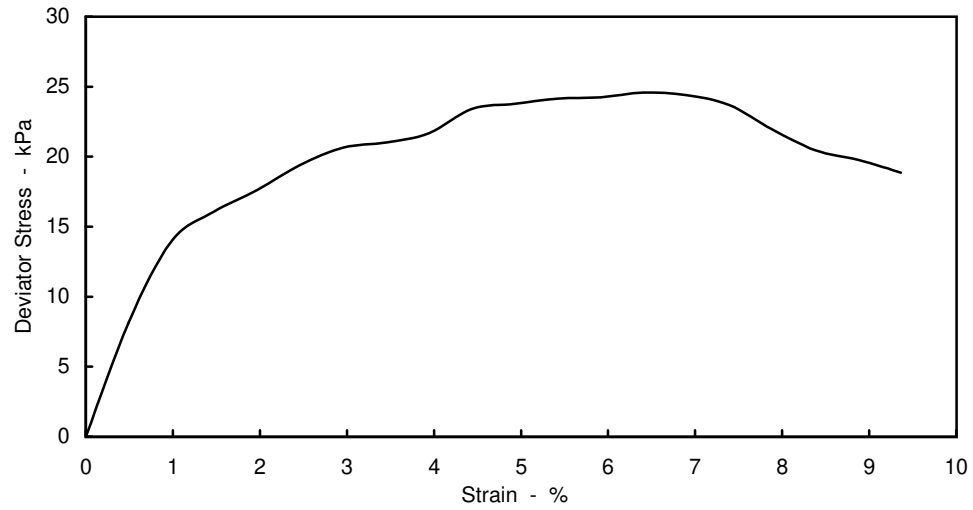
Comments

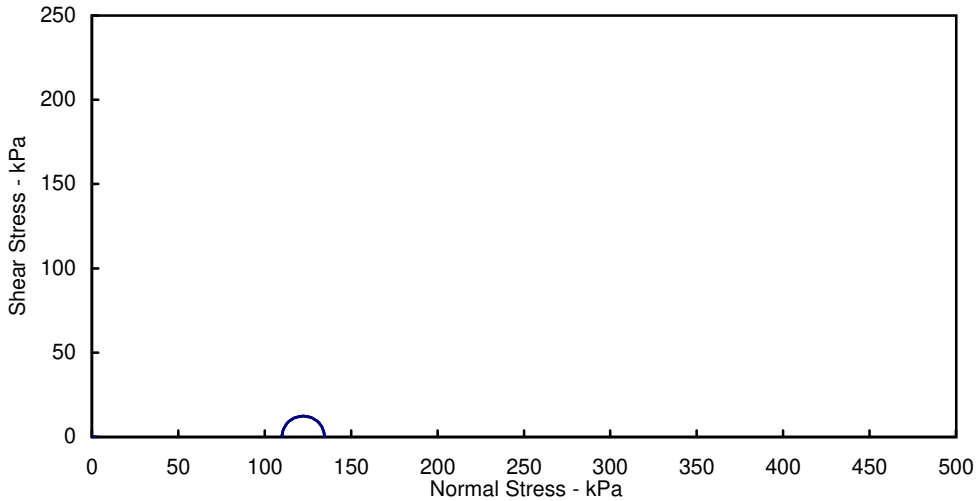
Prepared by vertical extrusion.Undisturbed specimen taken 100mm below top of tube in a horizontal orientation.

Drawing of specimen failure

Shear Strength Parameters

C	n/a	kPa
Phi	n/a	°





Originator	Checked & Approved
GL	CD 26/11/2024

UNCONSOLIDATED UNDRAINED SINGLE STAGE TRIAXIAL COMPRESSION

BS 1377 : Part 7 : 1990 Clause 8

Figure C62

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole ID BH01
	Engineer WSP	Sample Ref
		Depth (m) 5.70
		Sample Type UT

Originator	Checked & Approved	PHOTOGRAPHS OF SPECIMEN FAILURE	Figure C63
GL	CD 26/11/2024		Sheet 1 of 1

Site	CAMBUSHINNIE HAUL ROAD	**Contract No.**	**26762**
Client	Balfour Beatty	Exp. Point	BH01
Engineer	WSP	Sample Ref	
		Depth (m)	11.70
		Sample Type	UT

Sample Details				
Sample Condition		Undisturbed		
Height	mm	206.1		
Diameter	mm	104.1		
Moisture Content	%	25		
Bulk Density	Mg/m³	1.94		
Dry Density	Mg/m³	1.55		
Test Details				
Membrane Thickness	mm	0.50		
Membrane Correction	kPa	0.71		
Rate of Axial Displacement	%/min	1.94		
Cell Pressure	kPa	220		
Strain at Failure	%	5.8		
Maximum Deviator Stress	kPa	111		
Shear Strength	kPa	56		
Mode of Failure		Plastic		
Non Engineering Description		Brown gravelly very silty SAND. Gravel is fine to coarse		

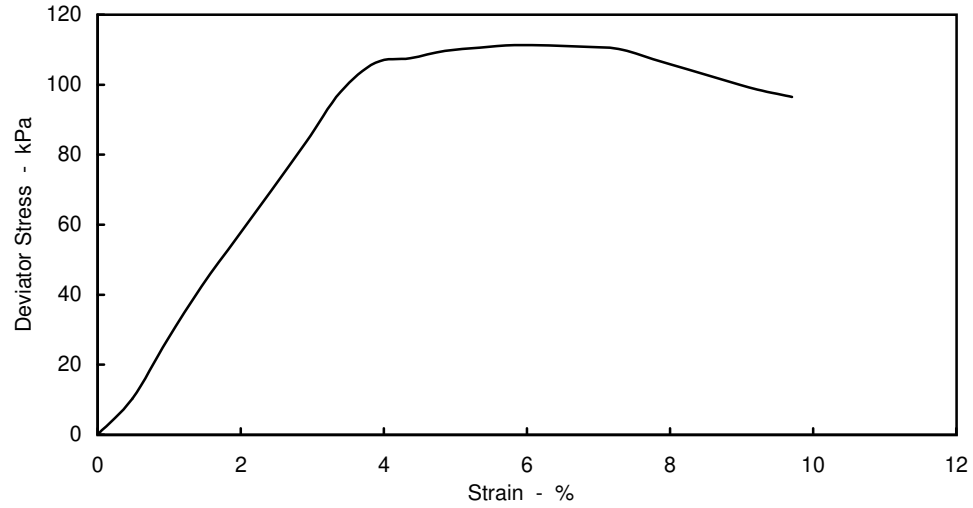
Comments

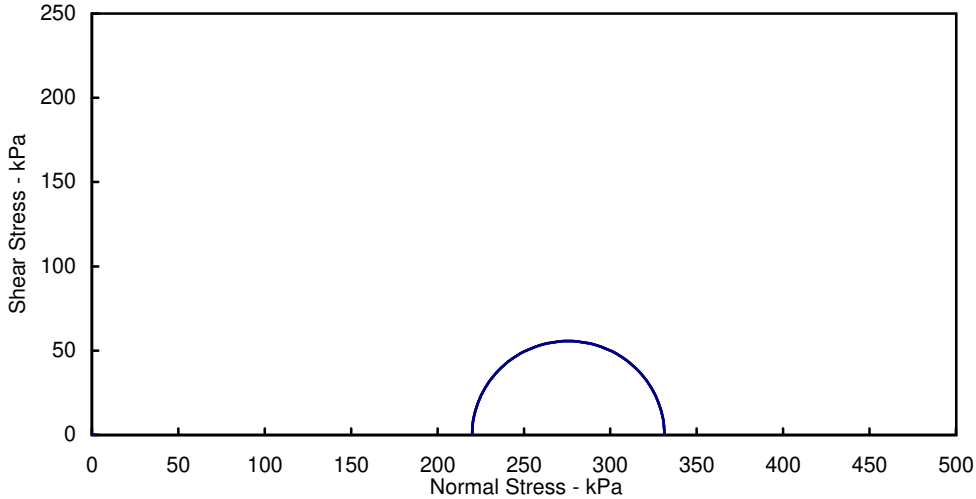
Prepared by vertical extrusion.Undisturbed specimen taken 100mm below top of tube in a horizontal orientation.

Drawing of specimen failure

Shear Strength Parameters

C	n/a	kPa
Phi	n/a	°





Originator	Checked & Approved
GL	CD 26/11/2024

UNCONSOLIDATED UNDRAINED SINGLE STAGE TRIAXIAL COMPRESSION

BS 1377 : Part 7 : 1990 Clause 8

Figure C64

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
	Client Balfour Beatty	Hole ID BH01
	Engineer WSP	Sample Ref
		Depth (m) 11.70
		Sample Type UT

Originator	Checked & Approved	PHOTOGRAPHS OF SPECIMEN FAILURE	Figure C65
GL	CD 26/11/2024		Sheet 1 of 1

Site	CAMBUSHINNIE HAUL ROAD	**Contract No.** **26762**
Client	Balfour Beatty	Exp. Point BH01
Engineer	WSP	Sample Ref Depth (m) 14.70 Sample Type UT

Sample Details				
Sample Condition		Undisturbed		
Height	mm	203.7		
Diameter	mm	105.0		
Moisture Content	%	23		
Bulk Density	Mg/m³	1.93		
Dry Density	Mg/m³	1.57		
Test Details				
Membrane Thickness	mm	0.50		
Membrane Correction	kPa	1.41		
Rate of Axial Displacement	%/min	1.96		
Cell Pressure	kPa	280		
Strain at Failure	%	14.2		
Maximum Deviator Stress	kPa	184		
Shear Strength	kPa	92		
Mode of Failure		Plastic		
Non Engineering Description		Brown gravelly very silty SAND. Gravel is fine to coarse		

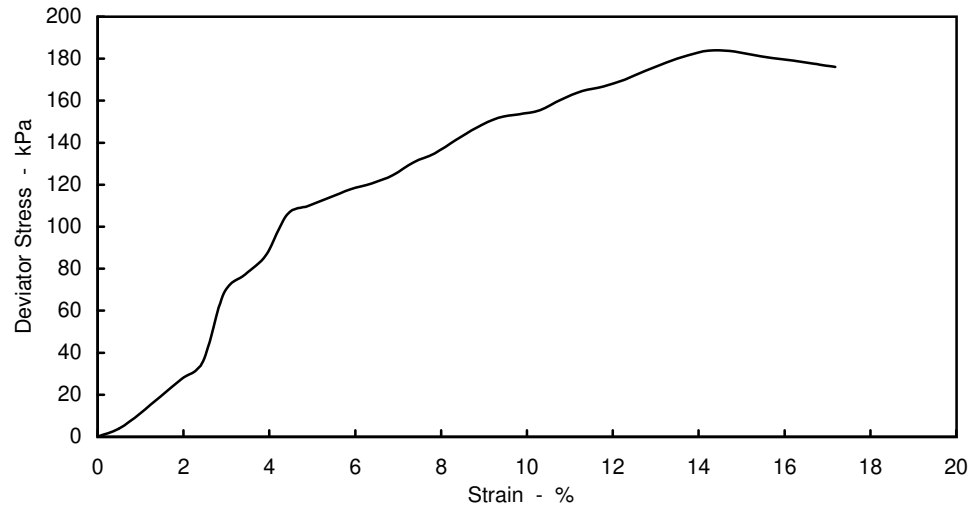
Comments

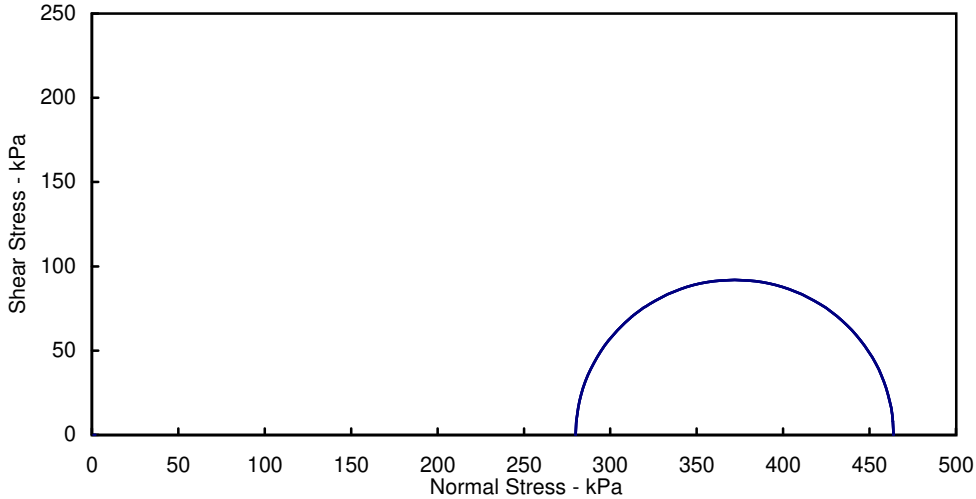
Prepared by vertical extrusion.Undisturbed specimen taken 100mm below top of tube in a horizontal orientation.

Drawing of specimen failure

Shear Strength Parameters

C	n/a	kPa
Phi	n/a	°





Originator	Checked & Approved
GL	CD 26/11/2024

UNCONSOLIDATED UNDRAINED SINGLE STAGE TRIAXIAL COMPRESSION

BS 1377 : Part 7 : 1990 Clause 8

Figure C66

62 Rochsolloch Road, Airdrie, ML6 9BG

igne	Site CAMBUSHINNIE HAUL ROAD Client Balfour Beatty Engineer WSP	**Contract No 26762** Hole ID BH01 Sample Ref Depth (m) 14.70 Sample Type UT

Originator	Checked & Approved	PHOTOGRAPHS OF SPECIMEN FAILURE	Figure C67
GL	CD 26/11/2024		Sheet 1 of 1

Site	CAMBUSHINNIE HAUL ROAD	Contract No.	26762
Client	Balfour Beatty	Exp. Point	WS05
Engineer	WSP	Sample Ref	
		Depth (m)	2.20
		Sample Type	UL

Sample Details				
Sample Condition		Undisturbed		
Height	mm	191.0		
Diameter	mm	89.0		
Moisture Content	%	9.6		
Bulk Density	Mg/m³	2.05		
Dry Density	Mg/m³	1.87		
Test Details				
Membrane Thickness	mm	0.50		
Membrane Correction	kPa	1.05		
Rate of Axial Displacement	%/min	2.09		
Cell Pressure	kPa	40		
Strain at Failure	%	7.9		
Maximum Deviator Stress	kPa	39		
Shear Strength	kPa	20		
Mode of Failure		Plastic		
Non Engineering Description		Brown silty SAND and GRAVEL. Gravel is fine to coarse		

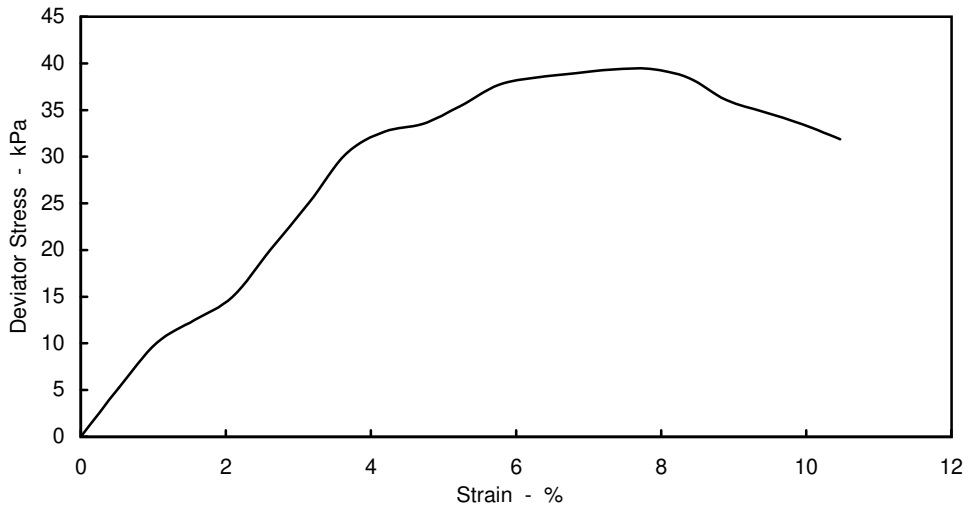
Comments

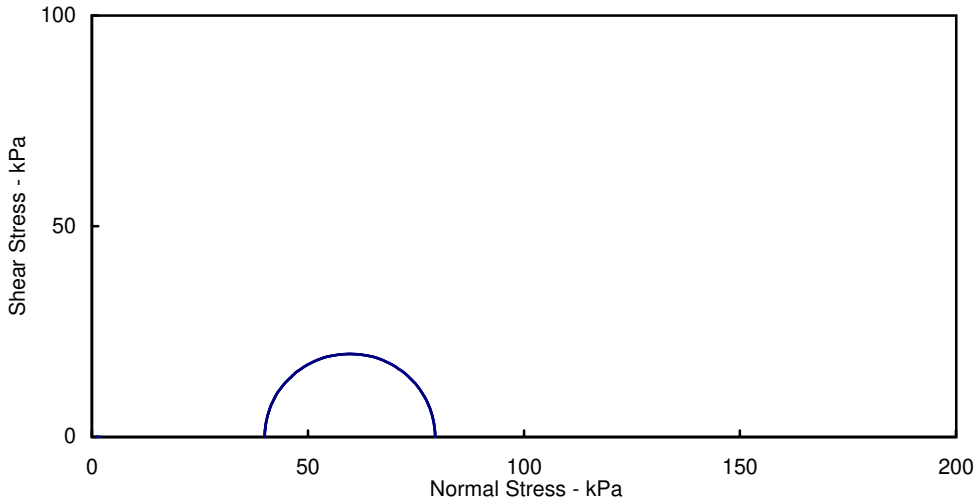
Prepared by vertical extrusion.Undisturbed specimen taken 100mm below top of tube in a horizontal orientation.

Drawing of specimen failure

Shear Strength Parameters

C	n/a	kPa
Phi	n/a	°





Originator	Checked & Approved
GL	CD 26/11/2024

UNCONSOLIDATED UNDRAINED SINGLE STAGE TRIAXIAL COMPRESSION

BS 1377 : Part 7 : 1990 Clause 8

Figure C68

igne	Site CAMBUSHINNIE HAUL ROAD Client Balfour Beatty Engineer WSP	**Contract No 26762** Hole ID WS05 Sample Ref Depth (m) 2.20 Sample Type UL

Originator	Checked & Approved	PHOTOGRAPHS OF SPECIMEN FAILURE	Figure C69
GL	CD 26/11/2024		Sheet 1 of 1

Site	CAMBUSHINNIE HAUL ROAD	**Contract No 26762**
Client	Balfour Beatty	~ Indicates test not carried out
Engineer	WSP	

Sample Identification		Orientation of Test	Dimension A	Dimension B	Load	Is	Corrected Is(50)	Comments
Exploratory Hole	Depth m		mm	mm	kN	MN/m²	MN/m²	
BH02	14.00	Lump	45.0	76.0	1.3	0.30	0.34	
BH02	17.00	Lump	48.0	59.0	1.3	0.36	0.39	

Notes

1. Dimension A= Minimum Width for Lump Tests
   Dimension A=Length for Diametral Tests
   Dimension A=Diameter for Axial Tests
   Dimension B=Platen Separation
2. Moisture Content of sample : as-received
3. All preparation and testing carried out in accordance with ISRM Commission on Testing Methods 1985
4. Opinions and interpretations are outside the scope of UKAS accreditation
5. Carried out parallel/perpendicular to bedding planes where obvious otherwise core shape used to determine orientation

Originator	Approved
DW	CD 26/11/2024

POINT LOAD INDEX TESTS

Figure C70

Sheet 1 of 1

SOCOTEC
Environmental Chemistry

Certificate of Analysis

Client: Igne

Project: 24112491

Quote: BEC240334631 V3.1

Project Ref: A15413-1

Site: Cambushinnie Haul Road 1

Contact: Craig Donnelly

Address: 62 Rochsolloch Road
Airdrie
North Lanarckshire
ML6 9BG

E-Mail: Craig.donnelly@igne.com

Phone: 01236 747949

No. Samples Received: 24

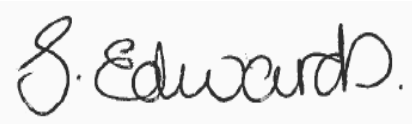
Date Received: 19/11/2024

Analysis Completed: 27/11/2024

Date Issued: 27/11/2024

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Co-Ordinator
Samantha Edwards
01283 554 541
Samantha.Edwards@socotec.co.uk

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Samples Analysed

Text ID	Sample Reference	Sampling Date	Sample Type	Sample Description
24112491-001	BH01-0-D-1.20		SOLID	Silt Sample
24112491-002	BH01-0-UT-5.70		SOLID	Silt Sample
24112491-003	BH01-0-UT-11.70		SOLID	Silt Sample
24112491-004	BH01-0-UT-14.70		SOLID	Sand Sample
24112491-005	BH02-0-B-0.80		SOLID	Silt Sample
24112491-006	BH02-0-D-7.20		SOLID	Sand Sample
24112491-007	TP03-0-D-1.50		SOLID	Gravel Sample
24112491-008	TP13-0-D-1.50		SOLID	Silt Sample
24112491-009	TP13-0-D-2.50		SOLID	Silt Sample
24112491-010	TP15-0-D-0.50		SOLID	Silt Sample
24112491-011	TP15-0-LB-1.00		SOLID	Silt Sample
24112491-012	TP16-0-LB-1.00		SOLID	Sand Sample
24112491-013	TP22-0-LB-2.60		SOLID	Silt Sample
24112491-014	WS01-0-U-2.20		SOLID	Gravel Sample
24112491-015	WS01-0-D-4.20		SOLID	Sand Sample
24112491-016	WS03-0-B-0.10		SOLID	Silt Sample
24112491-017	WS03-0-B-1.20		SOLID	Sand Sample
24112491-018	WS03-0-B-2.20		SOLID	Gravel Sample
24112491-019	WS04-0-D-0.50		SOLID	Silt Sample
24112491-020	WS04-0-D-2.00		SOLID	Sand Sample
24112491-021	WS05-0-D-1.20		SOLID	Sand Sample
24112491-022	WS06-0-D-1.20		SOLID	Sand Sample
24112491-023	WS07-0-D-1.00		SOLID	Sand Sample
24112491-024	WS07-0-D-2.00		SOLID	Sand Sample

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

UKAS TESTING 1252

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112491-001	24112491-002	24112491-003	24112491-004	24112491-005
				Sampling Date:					
				Customer ID:	BH01-0-D-1.20	BH01-0-UT-5.70	BH01-0-UT-11.70	BH01-0-UT-14.70	BH02-0-B-0.80
CLANDPREP	Total Moisture at 35°C	0.1 %	N		9.3	17.7	17.9	15.3	8.0
	Major Constituents	-	N		SILT	SILT	SILT	SAND	SILT
	Minor Constituents	-	N		Gravel	Clay	Clay	None	Gravel
	Miscellaneous Constituents	-	N		Clay	n/a	n/a	n/a	n/a
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	U		7.9	8.4	8.7	8.9	8.3
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	U		13	<10	<10	<10	<10
ICPACIDS	Acid Soluble Sulphate as SO4	20 mg/kg	U		99	40	62	67	81
WSLM59	Sulphur as S	0.005 % m/m	N		0.005	<0.005	<0.005	<0.005	<0.005

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

1252

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112491-006	24112491-007	24112491-008	24112491-009	24112491-010
				Sampling Date:					
				Customer ID:	BH02-0-D-7.20	TP03-0-D-1.50	TP13-0-D-1.50	TP13-0-D-2.50	TP15-0-D-0.50
CLANDPREP	Total Moisture at 35°C	0.1 %	N		20.2	6.5	10.9	11.3	14.8
	Major Constituents	-	N		SAND	GRAVEL	SILT	SILT	SILT
	Minor Constituents	-	N		None	Silt	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		n/a	n/a	Organic Matter	n/a	Clay
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	U		8.2	8.2*	7.6	7.4	6.8
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	U		<10	<10*	<10	<10	<10
ICPACIDS	Acid Soluble Sulphate as SO4	20 mg/kg	U		<20	57*	50	43	89
WSLM59	Sulphur as S	0.005 % m/m	N		<0.005	<0.005	<0.005	<0.005	<0.005

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

UKAS TESTING 1252

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112491-011	24112491-012	24112491-013	24112491-014	24112491-015
				Sampling Date:					
				Customer ID:	TP15-0-LB-1.00	TP16-0-LB-1.00	TP22-0-LB-2.60	WS01-0-U-2.20	WS01-0-D-4.20
CLANDPREP	Total Moisture at 35°C	0.1 %	N		10.2	16.5	7.3	12.6	13.0
	Major Constituents	-	N		SILT	SAND	SILT	GRAVEL	SAND
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Sand	Gravel
	Miscellaneous Constituents	-	N		Clay	n/a	n/a	Clay	n/a
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	U		8.7		8.3	8.1*	7.8
ORGMAT	Organic Matter	0.2 % m/m	N			0.2			
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	U		<10		20	<10*	<10
ICPACIDS	Acid Soluble Sulphate as SO4	20 mg/kg	U		73		71	<20*	33
WSLM59	Sulphur as S	0.005 % m/m	N		<0.005		<0.005	<0.005	<0.005

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

UKAS TESTING 1252

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112491-016	24112491-017	24112491-018	24112491-019	24112491-020
				Sampling Date:					
				Customer ID:	WS03-0-B-0.10	WS03-0-B-1.20	WS03-0-B-2.20	WS04-0-D-0.50	WS04-0-D-2.00
CLANDPREP	Total Moisture at 35°C	0.1 %	N		23.7	12.3	13.5	21.6	17.1
	Major Constituents	-	N		SILT	SAND	GRAVEL	SILT	SAND
	Minor Constituents	-	N		Gravel	Gravel	Sand	Gravel	Gravel
	Miscellaneous Constituents	-	N		n/a	n/a	Clay	n/a	n/a
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	U		6.7	7.2	7.3*	6.5	6.2
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	U		15	<10	<10*	<10	19
ICPACIDS	Acid Soluble Sulphate as SO4	20 mg/kg	U		253	21	<20*	344	98
WSLM59	Sulphur as S	0.005 % m/m	N		0.007	<0.005	<0.005	0.007	<0.005

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

1252

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112491-021	24112491-022	24112491-023	24112491-024
				Sampling Date:				
				Customer ID:	WS05-0-D-1.20	WS06-0-D-1.20	WS07-0-D-1.00	WS07-0-D-2.00
CLANDPREP	Total Moisture at 35°C	0.1 %	N		13.3	10.1	18.1	20.4
	Major Constituents	-	N		SAND	SAND	SAND	SAND
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Clay	n/a	n/a	n/a
	Colour of Material	-	N		Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	U		7.8	8.4	5.5	5.3
ICPWSS	Water Soluble Sulphate as SO4 2:1 Ext	10 mg/l	U		<10	<10	74	70
ICPACIDS	Acid Soluble Sulphate as SO4	20 mg/kg	U		58	64	317	278
WSLM59	Sulphur as S	0.005 % m/m	N		<0.005	<0.005	0.013	0.053

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Deviating Sample Report

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
BH01-0-D-1.20	24112491-001	CLANDPREP					✓	✓
BH01-0-D-1.20	24112491-001	ICPACIDS					✓	✓
BH01-0-D-1.20	24112491-001	ICPWSS					✓	✓
BH01-0-D-1.20	24112491-001	PHSOIL					✓	✓
BH01-0-D-1.20	24112491-001	WSLM59					✓	✓
BH01-0-UT-5.70	24112491-002	CLANDPREP					✓	✓
BH01-0-UT-5.70	24112491-002	ICPACIDS					✓	✓
BH01-0-UT-5.70	24112491-002	ICPWSS					✓	✓
BH01-0-UT-5.70	24112491-002	PHSOIL					✓	✓
BH01-0-UT-5.70	24112491-002	WSLM59					✓	✓
BH01-0-UT-11.70	24112491-003	CLANDPREP					✓	✓
BH01-0-UT-11.70	24112491-003	ICPACIDS					✓	✓
BH01-0-UT-11.70	24112491-003	ICPWSS					✓	✓
BH01-0-UT-11.70	24112491-003	PHSOIL					✓	✓
BH01-0-UT-11.70	24112491-003	WSLM59					✓	✓
BH01-0-UT-14.70	24112491-004	CLANDPREP					✓	✓
BH01-0-UT-14.70	24112491-004	ICPACIDS					✓	✓
BH01-0-UT-14.70	24112491-004	ICPWSS					✓	✓
BH01-0-UT-14.70	24112491-004	PHSOIL					✓	✓
BH01-0-UT-14.70	24112491-004	WSLM59					✓	✓
BH02-0-B-0.80	24112491-005	CLANDPREP					✓	✓
BH02-0-B-0.80	24112491-005	ICPACIDS					✓	✓
BH02-0-B-0.80	24112491-005	ICPWSS					✓	✓
BH02-0-B-0.80	24112491-005	PHSOIL					✓	✓
BH02-0-B-0.80	24112491-005	WSLM59					✓	✓
BH02-0-D-7.20	24112491-006	CLANDPREP					✓	✓
BH02-0-D-7.20	24112491-006	ICPACIDS					✓	✓
BH02-0-D-7.20	24112491-006	ICPWSS					✓	✓
BH02-0-D-7.20	24112491-006	PHSOIL					✓	✓
BH02-0-D-7.20	24112491-006	WSLM59					✓	✓
TP03-0-D-1.50	24112491-007	CLANDPREP					✓	✓
TP03-0-D-1.50	24112491-007	ICPACIDS					✓	✓
TP03-0-D-1.50	24112491-007	ICPWSS					✓	✓
TP03-0-D-1.50	24112491-007	PHSOIL					✓	✓

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP03-0-D-1.50	24112491-007	**WSLM59**					✓	✓
TP13-0-D-1.50	24112491-008	**CLANDPREP**					✓	✓
TP13-0-D-1.50	24112491-008	**ICPACIDS**					✓	✓
TP13-0-D-1.50	24112491-008	**ICPWSS**					✓	✓
TP13-0-D-1.50	24112491-008	**PHSOIL**					✓	✓
TP13-0-D-1.50	24112491-008	**WSLM59**					✓	✓
TP13-0-D-2.50	24112491-009	**CLANDPREP**					✓	✓
TP13-0-D-2.50	24112491-009	**ICPACIDS**					✓	✓
TP13-0-D-2.50	24112491-009	**ICPWSS**					✓	✓
TP13-0-D-2.50	24112491-009	**PHSOIL**					✓	✓
TP13-0-D-2.50	24112491-009	**WSLM59**					✓	✓
TP15-0-D-0.50	24112491-010	**CLANDPREP**					✓	✓
TP15-0-D-0.50	24112491-010	**ICPACIDS**					✓	✓
TP15-0-D-0.50	24112491-010	**ICPWSS**					✓	✓
TP15-0-D-0.50	24112491-010	**PHSOIL**					✓	✓
TP15-0-D-0.50	24112491-010	**WSLM59**					✓	✓
TP15-0-LB-1.00	24112491-011	**CLANDPREP**					✓	✓
TP15-0-LB-1.00	24112491-011	**ICPACIDS**					✓	✓
TP15-0-LB-1.00	24112491-011	**ICPWSS**					✓	✓
TP15-0-LB-1.00	24112491-011	**PHSOIL**					✓	✓
TP15-0-LB-1.00	24112491-011	**WSLM59**					✓	✓
TP16-0-LB-1.00	24112491-012	**CLANDPREP**					✓	✓
TP16-0-LB-1.00	24112491-012	**ORGMAT**					✓	✓
TP22-0-LB-2.60	24112491-013	**CLANDPREP**					✓	✓
TP22-0-LB-2.60	24112491-013	**ICPACIDS**					✓	✓
TP22-0-LB-2.60	24112491-013	**ICPWSS**					✓	✓
TP22-0-LB-2.60	24112491-013	**PHSOIL**					✓	✓
TP22-0-LB-2.60	24112491-013	**WSLM59**					✓	✓
WS01-0-U-2.20	24112491-014	**CLANDPREP**					✓	✓
WS01-0-U-2.20	24112491-014	**ICPACIDS**					✓	✓
WS01-0-U-2.20	24112491-014	**ICPWSS**					✓	✓
WS01-0-U-2.20	24112491-014	**PHSOIL**					✓	✓
WS01-0-U-2.20	24112491-014	**WSLM59**					✓	✓
WS01-0-D-4.20	24112491-015	**CLANDPREP**					✓	✓
WS01-0-D-4.20	24112491-015	**ICPACIDS**					✓	✓

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS01-0-D-4.20	24112491-015	ICPWSS					✓	✓
WS01-0-D-4.20	24112491-015	PHSOIL					✓	✓
WS01-0-D-4.20	24112491-015	WSLM59					✓	✓
WS03-0-B-0.10	24112491-016	CLANDPREP					✓	✓
WS03-0-B-0.10	24112491-016	ICPACIDS					✓	✓
WS03-0-B-0.10	24112491-016	ICPWSS					✓	✓
WS03-0-B-0.10	24112491-016	PHSOIL					✓	✓
WS03-0-B-0.10	24112491-016	WSLM59					✓	✓
WS03-0-B-1.20	24112491-017	CLANDPREP					✓	✓
WS03-0-B-1.20	24112491-017	ICPACIDS					✓	✓
WS03-0-B-1.20	24112491-017	ICPWSS					✓	✓
WS03-0-B-1.20	24112491-017	PHSOIL					✓	✓
WS03-0-B-1.20	24112491-017	WSLM59					✓	✓
WS03-0-B-2.20	24112491-018	CLANDPREP					✓	✓
WS03-0-B-2.20	24112491-018	ICPACIDS					✓	✓
WS03-0-B-2.20	24112491-018	ICPWSS					✓	✓
WS03-0-B-2.20	24112491-018	PHSOIL					✓	✓
WS03-0-B-2.20	24112491-018	WSLM59					✓	✓
WS04-0-D-0.50	24112491-019	CLANDPREP					✓	✓
WS04-0-D-0.50	24112491-019	ICPACIDS					✓	✓
WS04-0-D-0.50	24112491-019	ICPWSS					✓	✓
WS04-0-D-0.50	24112491-019	PHSOIL					✓	✓
WS04-0-D-0.50	24112491-019	WSLM59					✓	✓
WS04-0-D-2.00	24112491-020	CLANDPREP					✓	✓
WS04-0-D-2.00	24112491-020	ICPACIDS					✓	✓
WS04-0-D-2.00	24112491-020	ICPWSS					✓	✓
WS04-0-D-2.00	24112491-020	PHSOIL					✓	✓
WS04-0-D-2.00	24112491-020	WSLM59					✓	✓
WS05-0-D-1.20	24112491-021	CLANDPREP					✓	✓
WS05-0-D-1.20	24112491-021	ICPACIDS					✓	✓
WS05-0-D-1.20	24112491-021	ICPWSS					✓	✓
WS05-0-D-1.20	24112491-021	PHSOIL					✓	✓
WS05-0-D-1.20	24112491-021	WSLM59					✓	✓
WS06-0-D-1.20	24112491-022	CLANDPREP					✓	✓
WS06-0-D-1.20	24112491-022	ICPACIDS					✓	✓

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS06-0-D-1.20	24112491-022	**ICPWSS**					✓	✓
WS06-0-D-1.20	24112491-022	**PHSOIL**					✓	✓
WS06-0-D-1.20	24112491-022	**WSLM59**					✓	✓
WS07-0-D-1.00	24112491-023	**CLANDPREP**					✓	✓
WS07-0-D-1.00	24112491-023	**ICPACIDS**					✓	✓
WS07-0-D-1.00	24112491-023	**ICPWSS**					✓	✓
WS07-0-D-1.00	24112491-023	**PHSOIL**					✓	✓
WS07-0-D-1.00	24112491-023	**WSLM59**					✓	✓
WS07-0-D-2.00	24112491-024	**CLANDPREP**					✓	✓
WS07-0-D-2.00	24112491-024	**ICPACIDS**					✓	✓
WS07-0-D-2.00	24112491-024	**ICPWSS**					✓	✓
WS07-0-D-2.00	24112491-024	**PHSOIL**					✓	✓
WS07-0-D-2.00	24112491-024	**WSLM59**					✓	✓

Analysis Method

Method Code	Method Description	Analysis Method
CLANDPREP	Moisture Content @ 35°C	As Received
CLANDPREP	Solid Material Description	As Received
ICPACIDS	Sulphate as SO4 (Acid Soluble)	Air Dried & Ground
ICPWSS	Sulphate as SO4 (Water Soluble 2:1 Extract)	Air Dried & Ground
ORGMAT	Organic Matter Content by Colorimetry	Air Dried & Ground
PHSOIL	pH (2.5:1)	As Received
WSLM59	Total Sulphur	Air Dried & Ground

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Project Number: 24112491

Client: Igne
Date Issued: 27/11/2024
Project Name: A15413-1 - Cambushinnie Haul Road 1

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 105 ° C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° C.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

APPENDIX D
GEOCHEMICAL LABORATORY TESTING

SOCOTEC
Environmental Chemistry

Certificate of Analysis

Client: Igne

Project: 24111509

Quote: BEC241137921 V1.1

Project Ref: 26762

Site: Cambushinnie 1

Contact: Ramsay Bell

Address: Whistleberry Road
Hamilton
ML3 0HP

E-Mail: ramsay.bell@igne.com

Phone: 07392483849

No. Samples Received: 1

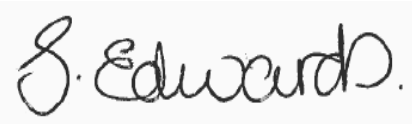
Date Received: 12/11/2024

Analysis Completed: 21/11/2024

Date Issued: 21/11/2024

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory



Reported by Customer Service Co-Ordinator
Samantha Edwards
01283 554 541
Samantha.Edwards@socotec.co.uk

Project Number: 24111509

Client: Igne
Date Issued: 21/11/2024
Project Name: 26762 - Cambushinnie 1

Samples Analysed

Text ID	Sample Reference	Sampling Date	Sample Type	Sample Description
24111509-001	WS07-0-ES-0.80	18/10/2024 12:10:00	SOLID	Silt Sample

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID: 24111509-001 Sampling Date: 18/10/2024 12:10 Customer ID: WS07-0-ES-0.80
CLANDPREP	Total Moisture at 35°C	0.1 %	N	18.1
	Major Constituents	-	N	SILT
	Minor Constituents	-	N	Gravel
	Miscellaneous Constituents	-	N	n/a
	Colour of Material	-	N	Brown
SUB002	Asbestos Identification	-	N	CH
SUB002	Asbestos Stage 2	0.001 %	N	<0.001
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^	5.1
WSLM59	Soil Organic Matter	0.04 % m/m	U^	0.73
SFAPI	Total Cyanide	0.5 mg/kg	M^	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^	<0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^	161
ICPMSS	Arsenic as As	0.3 mg/kg	M^	6.1
ICPSOIL	Boron as B	10 mg/kg	N^	<10
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^	25.1
ICPMSS	Copper as Cu	1.6 mg/kg	M^	9.1
ICPMSS	Lead as Pb	0.7 mg/kg	M^	12.1
ICPMSS	Mercury as Hg	0.5 mg/kg	M^	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^	21.4
ICPMSS	Zinc as Zn	16 mg/kg	M^	34.8
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^	<12
	Toluene (HS_1D_AR)	10 µg/kg	M^	<12
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^	<12* B
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^	<24
	o-Xylene (HS_1D_AR)	10 µg/kg	M^	<12
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^	<0.244
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.244
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.244
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^	<0.244* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^	<0.012
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^	<0.012
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^	<0.049* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^	<24.4
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.88
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.88
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^	<4.88
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^	<12.2
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^	<7.33
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^	30.3
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	<4.88
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	7.62
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^	6.39
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^	<12.2
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^	<7.33
PAHMSUS	Acenaphthene	0.08 mg/kg	M^	<0.10
	Acenaphthylene	0.08 mg/kg	U^	<0.10
	Anthracene	0.08 mg/kg	U^	<0.10
	Benzo[a]anthracene	0.08 mg/kg	M^	<0.10
	Benzo[a]pyrene	0.08 mg/kg	M^	<0.10
	Benzo[b]fluoranthene	0.08 mg/kg	M^	<0.10
	Benzo[g,h,i]perylene	0.08 mg/kg	M^	<0.10
	Benzo[k]fluoranthene	0.08 mg/kg	M^	<0.10
	Chrysene	0.08 mg/kg	M^	<0.10
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^	<0.10
	Fluoranthene	0.08 mg/kg	M^	<0.10
	Fluorene	0.08 mg/kg	M^	<0.10
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^	<0.10
	Naphthalene	0.08 mg/kg	M^	<0.10
	Phenanthrene	0.08 mg/kg	M^	<0.10
	Pyrene	0.08 mg/kg	M^	<0.10
	Total PAH 16	1.28 mg/kg	U^	<1.56
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^	<1
	1,1,1-Trichloroethane	1 µg/kg	M^	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^	<1
	1,1,2-Trichloroethane	1 µg/kg	M^	<1
	1,1-Dichloroethane	1 µg/kg	M^	<1
	1,1-Dichloroethene	1 µg/kg	U^	<1* B
	1,1-Dichloropropene	1 µg/kg	M^	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^	<3
	1,2,3-Trichloropropane	1 µg/kg	M^	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^	<3
	1,2,4-Trimethylbenzene	1 µg/kg	M^	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^	<1* B
	1,2-Dibromoethane	1 µg/kg	M^	<1
	1,2-Dichlorobenzene	1 µg/kg	M^	<1
	1,2-Dichloroethane	1 µg/kg	M^	<1
	1,2-Dichloropropane	1 µg/kg	M^	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^	<1

Project Number: 24111509

Client: Igne
Date Issued: 21/11/2024
Project Name: 26762 - Cambushinnie 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID: 24111509-001 Sampling Date: 18/10/2024 12:10 Customer ID: WS07-0-ES-0.80
VOCHSAS	1,3-Dichlorobenzene	1 µg/kg	M^	<1
	1,3-Dichloropropane	1 µg/kg	M^	<1
	1,4-Dichlorobenzene	1 µg/kg	M^	<1
	2,2-Dichloropropane	2 µg/kg	M^	<2* B
	2-Chlorotoluene	1 µg/kg	M^	<1
	4-Chlorotoluene	1 µg/kg	M^	<1
	Benzene	1 µg/kg	M^	<1
	Bromobenzene	1 µg/kg	M^	<1
	Bromochloromethane	1 µg/kg	M^	<1
	Bromodichloromethane	1 µg/kg	M^	<1
	Bromoform	1 µg/kg	M^	<1
	Bromomethane	1 µg/kg	M^	<1
	Carbon Tetrachloride	1 µg/kg	M^	<1
	Chlorobenzene	1 µg/kg	M^	<1
	Chloroethane	2 µg/kg	M^	<2
	Chloroform	1 µg/kg	M^	<1
	Chloromethane	3 µg/kg	U^	<3
	cis 1,2-Dichloroethene	5 µg/kg	M^	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^	<1* B
	Dibromochloromethane	1 µg/kg	M^	<1
	Dibromomethane	1 µg/kg	M^	<1
	Dichlorodifluoromethane	1 µg/kg	N^	<1
	Ethylbenzene	2 µg/kg	M^	<2
	Hexachlorobutadiene	2 µg/kg	N^	<2
	iso-Propylbenzene	1 µg/kg	M^	<1
	m and p-Xylene	4 µg/kg	M^	<5
	MTBE	1 µg/kg	M^	<1* B
	Naphthalene	5 µg/kg	M^	<6
	n-Butylbenzene	1 µg/kg	U^	<1
	o-Xylene	2 µg/kg	M^	<2
	p-Isopropyltoluene	1 µg/kg	M^	<1
	Propylbenzene	1 µg/kg	M^	<1
	sec-Butylbenzene	1 µg/kg	M^	<1
	Styrene	1 µg/kg	M^	<1
	tert-Butylbenzene	1 µg/kg	M^	<1
	Tetrachloroethene	3 µg/kg	M^	<3
	Toluene	5 µg/kg	M^	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^	<1* B
	Trichloroethene	1 µg/kg	U^	<1
	Trichlorofluoromethane	1 µg/kg	M^	<1
	Vinyl Chloride	1 µg/kg	M^	<1

ASBESTOS ANALYSIS RESULTS

SOCOTEC Asbestos Limited Certificate of Analysis for Asbestos in Soils, Sediments and Aggregates

Detection limit of Method SCI-ASB-020 is 0.001%

Sampling has been carried out by a third party

Client:		Page 1 of 1	
Address:		Report No:	ANO-0503-30467
For the attention of:		Report Date:	20/11/2024
Site Address:		Project Number:	24111509

Sample Number	Sample Date	Sample Location & Matrix	Test Date	Total Sample Dry Weight (g)	Weight of <10mm Fraction (g)	Asbestos(g) in >10mm	Asbestos(g) in < 10mm	% Asbestos by weight of Total Dried Sample	Moisture Content	Asbestos Fibre Types Identified

Keys

NAACR = Not Analysed at Clients Request

NAIIS = No Asbestos Identified in Sample (Identification Only)

* visible to naked eye

NADIS = No Asbestos Detected in Sample (ID & Quant Only)

Project Number: 24111509

Client: Igne
Date Issued: 21/11/2024
Project Name: 26762 - Cambushinnie 1

Deviating Sample Report

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS07-0-ES-0.80	24111509-001	**BTEXHSA**						✓
WS07-0-ES-0.80	24111509-001	**GROHSA/BTEXHSA**						✓
WS07-0-ES-0.80	24111509-001	**PAHMSUS**						✓
WS07-0-ES-0.80	24111509-001	**PHSOIL**						✓
WS07-0-ES-0.80	24111509-001	**SFAPI**						✓
WS07-0-ES-0.80	24111509-001	**TPHFIDUS (Aliphatic)**						✓
WS07-0-ES-0.80	24111509-001	**TPHFIDUS (Aromatic)**						✓
WS07-0-ES-0.80	24111509-001	**VOCHSAS**						✓
WS07-0-ES-0.80	24111509-001	**WSLM59**						✓

Analysis Method

Method Code	Method Description	Analysis Method
BTEXHSA	BTEX by GCFID	As Received
CLANDPREP	CLand Prep and Dry Weight Correction to 35°C	As Received
CLANDPREP	Solid Material Description	As Received
GROHSA/BTEXHSA	GRO CWG UK (C5-C10) Ali/Aro Split	As Received
ICPMSS	Arsenic in Solids by ICPMS	Air Dried & Ground
ICPMSS	Cadmium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Chromium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Copper in Solids by ICPMS	Air Dried & Ground
ICPMSS	Lead in Solids by ICPMS	Air Dried & Ground
ICPMSS	Mercury in Solids by ICPMS	Air Dried & Ground
ICPMSS	Nickel in Solids by ICPMS	Air Dried & Ground
ICPMSS	Zinc in Solids by ICPMS	Air Dried & Ground
ICPSOIL	Boron in Solids by ICPOES	Air Dried & Ground
ICPWSS	Sulphate as SO4 (Water Soluble)	Air Dried & Ground
PAHMSUS	16 PAHs by GCMS	As Received
PHSOIL	pH (2.5:1)	As Received
SFAPI	Cyanide (Total) by SFA	As Received
SFAPI	Phenol Index (Total) by SFA	As Received
SUB002	Asbestos Stage 1 (with Stage 2 Trigger)	
SUB002	Asbestos Stage 2: Quantification	
TPHFIDUS (Aliphatic)	TPH (CWG UK) Aliphatic Split with Carbon Banding	As Received
TPHFIDUS (Aromatic)	TPH (CWG UK) Aromatic Split with Carbon Banding	As Received
VOCHSAS	VOCs (Target List) by GCMS	As Received
WSLM59	SOM: Soil Organic Matter (%) (Calc)	Air Dried & Ground

Project Number: 24111509

Client: Igne
Date Issued: 21/11/2024
Project Name: 26762 - Cambushinnie 1

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Project Number: 24111509

Client: Igne
Date Issued: 21/11/2024
Project Name: 26762 - Cambushinnie 1

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 35 ° C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° C.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

SOCOTEC
Environmental Chemistry

Certificate of Analysis

Client: Igne

Project: 24112027

Quote: BEC241137921 V1.1

Project Ref: 26762

Site: Cambushinnie 400KV Substation 1

Contact: Ramsay Bell

Address: Whistleberry Road
Hamilton
ML3 0HP

E-Mail: ramsay.bell@igne.com

Phone: 07392483849

No. Samples Received: 35

Date Received: 15/11/2024

Analysis Completed: 25/11/2024

Date Issued: 25/11/2024

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory

Reported by Customer Service Co-Ordinator
Julie Dickinson
01283 554670
Julie.Dickinson@socotec.co.uk

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Samples Analysed

Text ID	Sample Reference	Sampling Date	Sample Type	Sample Description
24112027-001	BH01-0-ES-0.20		SOLID	Silt Sample
24112027-002	BH01-0-ES-0.80		SOLID	Silt Sample
24112027-003	BH01-0-ES-3.20		SOLID	Silt Sample
24112027-004	BH02-0-ES-0.20		SOLID	Silt Sample
24112027-005	TP1-0-ES-0.20		SOLID	Silt Sample
24112027-006	TP2-0-ES-0.50		SOLID	Silt Sample
24112027-007	TP3-0-ES-0.50		SOLID	Silt Sample
24112027-008	TP4-0-ES-0.50		SOLID	Silt Sample
24112027-009	TP5-0-ES-0.60		SOLID	Silt Sample
24112027-010	TP6-0-ES-1.00		SOLID	Silt Sample
24112027-011	TP7-0-ES-0.50		SOLID	Silt Sample
24112027-012	TP8-0-ES-0.20		SOLID	Silt Sample
24112027-013	TP9-0-ES-1.20		SOLID	Sand Sample
24112027-014	TP10-0-ES-0.50		SOLID	Silt Sample
24112027-015	TP11-0-ES-0.50		SOLID	Silt Sample
24112027-016	TP12-0-ES-1.20		SOLID	Silt Sample
24112027-017	TP13-0-ES-0.50		SOLID	Silt Sample
24112027-018	TP13-0-ES-1.50		SOLID	Silt Sample
24112027-019	TP13-0-ES-2.50		SOLID	Silt Sample
24112027-020	TP14-0-ES-0.50		SOLID	Silt Sample
24112027-021	TP14-0-ES-1.50		SOLID	Silt Sample
24112027-022	TP14-0-ES-2.50		SOLID	Silt Sample
24112027-023	TP15-0-ES-0.50		SOLID	Silt Sample
24112027-024	TP16-0-ES-0.50		SOLID	Silt Sample
24112027-025	TP17-0-ES-0.50		SOLID	Silt Sample
24112027-026	TP18-0-ES-0.50		SOLID	Silt Sample
24112027-027	TP19-0-ES-0.50		SOLID	Silt Sample
24112027-028	TP20-0-ES-1.20		SOLID	Silt Sample
24112027-029	TP22-0-ES-1.60		SOLID	Silt Sample
24112027-030	WS01-0-ES-0.80		SOLID	Silt Sample
24112027-031	WS02-0-ES-0.80		SOLID	Silt Sample
24112027-032	WS03-0-ES-0.80		SOLID	Silt Sample
24112027-033	WS04-0-ES-0.80		SOLID	Silt Sample
24112027-034	WS05-0-ES-0.80		SOLID	Silt Sample
24112027-035	WS06-0-ES-0.80		SOLID	Silt Sample

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-001	24112027-002	24112027-003	24112027-004	24112027-005
				Sampling Date:					
				Customer ID:	BH01-0-ES-0.20	BH01-0-ES-0.80	BH01-0-ES-3.20	BH02-0-ES-0.20	TP1-0-ES-0.20
CLANDPREP	Total Moisture at 35°C	0.1 %	N		16.3	9.4	10.9	11.8	13.5
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		CH	NAIIS	NAIIS	NAIIS	CH
SUB002	Asbestos Stage 2	0.001 %	N		<0.001				<0.001
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		7.3	7.1	7.2	7.0	6.8
WSLM59	Soil Organic Matter	0.04 % m/m	U^		0.96	0.27	0.18	0.75	1.35
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	<20	<20	<20	<20
ICPMSS	Arsenic as As	0.3 mg/kg	M^		7.8	6.4	13.3	7.0	10.0
ICPSOIL	Boron as B	10 mg/kg	N^		<10	12	<10	<10	<10
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		33.9	38.6	31.4	39.8	29.8
ICPMSS	Copper as Cu	1.6 mg/kg	M^		12.8	21.0	13.0	13.2	32.9
ICPMSS	Lead as Pb	0.7 mg/kg	M^		19.9	10.2	10.0	17.4	21.0
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		28.4	36.6	27.0	38.4	30.0
ICPMSS	Zinc as Zn	16 mg/kg	M^		53.5	55.2	46.9	63.3	62.9
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<12	<11	<11	<11	<12
	Toluene (HS_1D_AR)	10 µg/kg	M^		<12	<11	<11	<11	<12
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<12	<11	<11	<11	<12
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<24	<22	<22	<23	<23
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<12* B	<11* B	<11* B	<11* B	<12* B
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.239	<0.221	<0.224	<0.227	<0.231
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.239	<0.221	<0.224	<0.227	<0.231
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.239	<0.221	<0.224	<0.227	<0.231
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.239* B	<0.221* B	<0.224* B	<0.227* B	<0.231* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.011	<0.011	<0.011	<0.012
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.011	<0.011	<0.011	<0.012
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.048* B	<0.044* B	<0.045* B	<0.045* B	<0.047* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<23.9	<22.1	<22.4	<22.7	<23.1
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.78	<4.42	<4.49	<4.54	<4.62
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.78	<4.42	<4.49	<4.54	<4.62
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.78	<4.42	<4.49	<4.54	<4.62
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<11.9	<11.0	<11.2	<11.3	<11.6
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<7.17	<6.62	<6.73	<6.80	<6.94
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<23.9	<22.1	27.6	28.0	<23.1
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.78	<4.42	<4.49	<4.54	<4.62
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.78* B	<4.42* B	<4.49* B	<4.54* B	<4.62* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.78	<4.42	<4.49	<4.54	<4.62
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		<11.9	<11.0	19.4	16.4	<11.6
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<7.17	<6.62	<6.73	<6.80	<6.94
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.10	<0.09	<0.09	<0.09	<0.09
	Anthracene	0.08 mg/kg	U^		<0.10	<0.09	<0.09	<0.09	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	0.10	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Chrysene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	0.12	<0.09
	Fluorene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	<0.09	<0.09
	Pyrene	0.08 mg/kg	M^		<0.10	<0.09	<0.09	0.10	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.53	<1.41	<1.44	1.50	<1.48
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<3	<3	<3	<3	<4
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<3	<3	<3	<3	<4
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-001	24112027-002	24112027-003	24112027-004	24112027-005
				Sampling Date:					
				Customer ID:	BH01-0-ES-0.20	BH01-0-ES-0.80	BH01-0-ES-3.20	BH02-0-ES-0.20	TP1-0-ES-0.20
VOCHSAS	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<2	<2	<2	<2	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<2	<2	<2	<2	<2
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<3	<3	<3	<3	<4
	cis 1,2-Dichloroethene	5 µg/kg	M^		<6	<6	<5	<5	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<2	<2	<2	<2	<2
	Hexachlorobutadiene	2 µg/kg	N^		<2	<2	<2	<2	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<5	<5	<4	<4	<5
	MTBE	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Naphthalene	5 µg/kg	M^		<6	<6	<5	<5	<6
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<2	<2	<2	<2	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<3	<3	<3	<3	<4
	Toluene	5 µg/kg	M^		<6	<6	<5	<5	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1	<1	<1	<1	<1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-006	24112027-007	24112027-008	24112027-009	24112027-010
				Sampling Date:					
				Customer ID:	TP2-0-ES-0.50	TP3-0-ES-0.50	TP4-0-ES-0.50	TP5-0-ES-0.60	TP6-0-ES-1.00
CLANDPREP	Total Moisture at 35°C	0.1 %	N		16.0	17.9	15.8	18.7	8.6
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		NAIIS	NAIIS	NAIIS	NAIIS	NAIIS
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		6.6	6.3	6.6	6.4	6.7
WSLM59	Soil Organic Matter	0.04 % m/m	U^		1.29	1.08	0.46	0.61	0.39
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.5
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	<0.5
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	<20	<20	<20	51
ICPMSS	Arsenic as As	0.3 mg/kg	M^		10.7	12.7	7.9	5.7	6.5
ICPSOIL	Boron as B	10 mg/kg	N^		<10	10	10	<10	<10
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		33.9	34.9	48.2	31.1	27.7
ICPMSS	Copper as Cu	1.6 mg/kg	M^		20.9	13.7	11.6	10.9	11.8
ICPMSS	Lead as Pb	0.7 mg/kg	M^		25.4	18.3	11.2	10.1	10.4
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		28.8	29.4	28.8	27.5	27.2
ICPMSS	Zinc as Zn	16 mg/kg	M^		62.8	54.5	48.9	42.1	44.8
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<12	<11
	Toluene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<12	<11
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<12	<11
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<24	<24	<24	<25	<22
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<12* B	<12* B	<12* B	<12* B	<11* B
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.238	<0.244	<0.238	<0.246	<0.219
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.238	<0.244	<0.238	<0.246	<0.219
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.238	<0.244	<0.238	<0.246	<0.219
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.238* B	<0.244* B	<0.238* B	<0.246* B	<0.219* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.012	<0.011
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.012	<0.011
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.048* B	<0.049* B	<0.048* B	<0.049* B	<0.044* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<23.8	<24.4	<23.8	<24.6	<21.9
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.76	<4.87	<4.75	<4.92	<4.38
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.76	<4.87	<4.75	<4.92	<4.38
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.76	<4.87	<4.75	<4.92	<4.38
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<11.9	<12.2	<11.9	<12.3	<10.9
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<7.14	<7.31	<7.13	<7.38	<6.56
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<23.8	<24.4	<23.8	<24.6	<21.9
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.76	<4.87	<4.75	<4.92	<4.38
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.76* B	<4.87* B	<4.75* B	<4.92* B	<4.38* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.76	<4.87	<4.75	<4.92	5.52
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		<11.9	<12.2	<11.9	<12.3	<10.9
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<7.14	<7.31	<7.13	<7.38	<6.56
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.10	<0.10	<0.10	<0.10	<0.09
	Anthracene	0.08 mg/kg	U^		<0.10	<0.10	<0.10	<0.10	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Chrysene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Fluorene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.52	<1.56	<1.52	<1.57	<1.40
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<4	<3	<4	<4	<3
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<4	<3	<4	<4	<3
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-006	24112027-007	24112027-008	24112027-009	24112027-010
				Sampling Date:					
				Customer ID:	TP2-0-ES-0.50	TP3-0-ES-0.50	TP4-0-ES-0.50	TP5-0-ES-0.60	TP6-0-ES-1.00
VOCHSAS	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<3	<2	<2	<2	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<3	<2	<2	<2	<2
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<4	<3	<4	<4	<3
	cis 1,2-Dichloroethene	5 µg/kg	M^		<6	<6	<6	<6	<5
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<3	<2	<2	<2	<2
	Hexachlorobutadiene	2 µg/kg	N^		<3	<2	<2	<2	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<5	<5	<5	<5	<4
	MTBE	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	Naphthalene	5 µg/kg	M^		<6	<6	<6	<6	<5
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<3	<2	<2	<2	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<4	<3	<4	<4	<3
	Toluene	5 µg/kg	M^		<6	<6	<6	<6	<5
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1	<1	<1	<1	<1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-011	24112027-012	24112027-013	24112027-014	24112027-015
				Sampling Date:					
				Customer ID:	TP7-0-ES-0.50	TP8-0-ES-0.20	TP9-0-ES-1.20	TP10-0-ES-0.50	TP11-0-ES-0.50
CLANDPREP	Total Moisture at 35°C	0.1 %	N		16.8	18.8	18.5	21.9	25.3
	Major Constituents	-	N		SILT	SILT	SAND	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	n/a	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		CH	NAIIS	NAIIS	NAIIS	NAIIS
SUB002	Asbestos Stage 2	0.001 %	N		<0.001				
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		6.7	6.5	6.6	6.4	6.4
WSLM59	Soil Organic Matter	0.04 % m/m	U^		0.62	1.94	0.46	2.82	2.53
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.7
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	<0.7
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		42	<20	<20	<20	<20
ICPMSS	Arsenic as As	0.3 mg/kg	M^		6.8	9.6	4.3	10.6	15.5
ICPSOIL	Boron as B	10 mg/kg	N^		<10	<10	<10	<10	<10
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	0.2	<0.2	0.2	0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		31.8	33.5	30.1	28.8	32.7
ICPMSS	Copper as Cu	1.6 mg/kg	M^		10.8	12.8	6.3	9.7	9.1
ICPMSS	Lead as Pb	0.7 mg/kg	M^		10.7	25.9	9.6	24.8	24.5
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		27.9	25.2	21.2	18.1	20.5
ICPMSS	Zinc as Zn	16 mg/kg	M^		49.8	60.9	32.3	51.9	53.6
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<13	<13
	Toluene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<13	<13
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<13	<13
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<24	<25	<25	<26	<27
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<12* B	<12* B	<12* B	<13* B	<13* B
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.240	<0.246	<0.245	<0.256	<0.268
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.240	<0.246	<0.245	<0.256	<0.268
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.240	<0.246	<0.245	<0.256	<0.268
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.240* B	<0.246* B	<0.245* B	<0.256* B	<0.268* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.013	<0.013
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.013	<0.013
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.048* B	<0.049* B	<0.049* B	<0.052* B	<0.054* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<24.0	<24.6	<24.5	<25.6	<26.8
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.81	<4.93	<4.91	<5.12	<5.35
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.81	<4.93	<4.91	<5.12	<5.35
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.81	<4.93	<4.91	<5.12	<5.35
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<12.0	<12.3	<12.3	<12.8	<13.4
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<7.21	<7.39	<7.36	<7.68	<8.03
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<24.0	<24.6	<24.5	<25.6	<26.8
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.81	<4.93	<4.91	<5.12	<5.35
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.81* B	<4.93* B	<4.91* B	<5.12* B	<5.35* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.81	<4.93	<4.91	<5.12	<5.35
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		14.3	<12.3	<12.3	<12.8	<13.4
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<7.21	<7.39	<7.36	<7.68	<8.03
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Acenaphthylene	0.08 mg/kg	U^		<0.10	<0.10	<0.10	<0.10	<0.11
	Anthracene	0.08 mg/kg	U^		<0.10	<0.10	<0.10	<0.10	<0.11
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Benzo[b]fluoranthene	0.08 mg/kg	M^		0.10	<0.10	<0.10	<0.10	<0.11
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Chrysene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Fluoranthene	0.08 mg/kg	M^		0.25	<0.10	<0.10	<0.10	<0.11
	Fluorene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Naphthalene	0.08 mg/kg	M^		<0.10	<0.10	<0.10	<0.10	<0.11
	Phenanthrene	0.08 mg/kg	M^		0.21	<0.10	<0.10	<0.10	<0.11
	Pyrene	0.08 mg/kg	M^		0.20	<0.10	<0.10	<0.10	<0.11
	Total PAH 16	1.28 mg/kg	U^		1.92	<1.58	<1.57	<1.64	<1.71
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<3	<4	<4	<4	<4
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<3	<4	<4	<4	<4
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1* B	<1	<1	<1	<1
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-011	24112027-012	24112027-013	24112027-014	24112027-015
				Sampling Date:					
				Customer ID:	TP7-0-ES-0.50	TP8-0-ES-0.20	TP9-0-ES-1.20	TP10-0-ES-0.50	TP11-0-ES-0.50
VOCHSAS	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<2	<2	<2	<3	<3
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1* B	<1	<1	<1	<1
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<2	<2	<2	<3	<3
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<3	<4	<4	<4	<4
	cis 1,2-Dichloroethene	5 µg/kg	M^		<5	<6	<6	<6	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1* B	<1	<1	<1	<1
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<2	<2	<2	<3	<3
	Hexachlorobutadiene	2 µg/kg	N^		<2	<2	<2	<3	<3
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<4	<5	<5	<5	<5
	MTBE	1 µg/kg	M^		<1* B	<1	<1	<1	<1
	Naphthalene	5 µg/kg	M^		<5	<6	<6	<6	<6
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<2	<2	<2	<3	<3
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<3	<4	<4	<4	<4
	Toluene	5 µg/kg	M^		<5	<6	<6	<6	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1	<1* B	<1* B	<1* B	<1* B

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-016	24112027-017	24112027-018	24112027-019	24112027-020
				Sampling Date:					
				Customer ID:	TP12-0-ES-1.20	TP13-0-ES-0.50	TP13-0-ES-1.50	TP13-0-ES-2.50	TP14-0-ES-0.50
CLANDPREP	Total Moisture at 35°C	0.1 %	N		9.2	21.3	10.1	11.8	11.6
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		NAIIS	NAIIS	NAIIS	NAIIS	NAIIS
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		6.8	5.8	6.0	6.3	7.5
WSLM59	Soil Organic Matter	0.04 % m/m	U^		0.22	2.17	0.35	0.34	0.17
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	<0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	<20	<20	<20	<20
ICPMSS	Arsenic as As	0.3 mg/kg	M^		7.8	7.4	6.5	6.0	5.9
ICPSOIL	Boron as B	10 mg/kg	N^		<10	<10	<10	<10	14
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		26.1	32.0	24.3	25.2	31.2
ICPMSS	Copper as Cu	1.6 mg/kg	M^		13.3	14.2	13.1	13.4	15.9
ICPMSS	Lead as Pb	0.7 mg/kg	M^		15.4	25.2	8.4	9.8	10.3
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		19.9	23.4	22.7	22.5	28.9
ICPMSS	Zinc as Zn	16 mg/kg	M^		41.1	52.9	34.7	37.3	41.1
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<11	<13	<11	<11	<11
	Toluene (HS_1D_AR)	10 µg/kg	M^		<11	<13	<11	<11	<11
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<11	<13	<11	<11	<11* B
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<22	<25	<22	<23	<23
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<11* B	<13* B	<11* B	<11* B	<11
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.220	<0.254	<0.222	<0.227	<0.226
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.220	<0.254	<0.222	<0.227	<0.226
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.220	<0.254	<0.222	<0.227	<0.226
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.220* B	<0.254* B	<0.222* B	<0.227* B	<0.226* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.011	<0.013	<0.011	<0.011	<0.011
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.011	<0.013	<0.011	<0.011	<0.011
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.044* B	<0.051* B	<0.045* B	<0.045* B	<0.045* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<22.0	<25.4	<22.2	<22.7	<22.6
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.41	<5.08	<4.45	<4.54	<4.52
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.41	<5.08	<4.45	<4.54	<4.52
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.41	<5.08	<4.45	<4.54	<4.52
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<11.0	<12.7	<11.1	<11.3	<11.3
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<6.61	<7.62	<6.67	<6.80	<6.79
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<22.0	31.9	<22.2	<22.7	<22.6
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.41	<5.08	<4.45	<4.54	<4.52
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.41* B	<5.08* B	<4.45* B	4.60* B	<4.52* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.41	<5.08	<4.45	4.57	<4.52
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		<11.0	22.3	<11.1	<11.3	<11.3
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<6.61	<7.62	<6.67	<6.80	<6.79
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.09	<0.10	<0.09	<0.09	<0.09
	Anthracene	0.08 mg/kg	U^		<0.09	<0.10	<0.09	<0.09	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Chrysene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Fluorene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Pyrene	0.08 mg/kg	M^		<0.09	<0.10	<0.09	<0.09	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.41	<1.63	<1.42	<1.45	<1.45
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<3	<4	<4	<3	<3
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<3	<4	<4	<3	<3
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-016	24112027-017	24112027-018	24112027-019	24112027-020
				Sampling Date:					
				Customer ID:	TP12-0-ES-1.20	TP13-0-ES-0.50	TP13-0-ES-1.50	TP13-0-ES-2.50	TP14-0-ES-0.50
	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<2	<3	<2	<2	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<2	<3	<2	<2	<2
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<3	<4	<4	<3	<3
	cis 1,2-Dichloroethene	5 µg/kg	M^		<5	<6	<6	<5	<5
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
VOCHSAS	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<2	<3	<2	<2	<2
	Hexachlorobutadiene	2 µg/kg	N^		<2	<3	<2	<2	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<4	<5	<5	<4	<4
	MTBE	1 µg/kg	M^		<1	<1	<1	<1	<1
	Naphthalene	5 µg/kg	M^		<5	<6	<6	<5	<5
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<2	<3	<2	<2	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<3	<4	<4	<3	<3
	Toluene	5 µg/kg	M^		<5	<6	<6	<5	<5
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-021	24112027-022	24112027-023	24112027-024	24112027-025
				Sampling Date:					
				Customer ID:	TP14-0-ES-1.50	TP14-0-ES-2.50	TP15-0-ES-0.50	TP16-0-ES-0.50	TP17-0-ES-0.50
CLANDPREP	Total Moisture at 35°C	0.1 %	N		10.8	11.1	9.2	21.0	15.0
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		NAIIS	NAIIS	NAIIS	NAIIS	CH
SUB002	Asbestos Stage 2	0.001 %	N						<0.001
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		7.0	6.9	8.8	7.5	7.4
WSLM59	Soil Organic Matter	0.04 % m/m	U^		0.16	0.16	0.16	3.56	0.27
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	<0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	<20	<20	<20	57
ICPMSS	Arsenic as As	0.3 mg/kg	M^		5.5	5.5	6.4	8.4	7.3
ICPSOIL	Boron as B	10 mg/kg	N^		11	11	11	<10	14
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	<0.2	<0.2	<0.2	0.3
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		30.0	29.0	27.8	33.8	39.5
ICPMSS	Copper as Cu	1.6 mg/kg	M^		15.8	14.4	14.1	15.7	17.3
ICPMSS	Lead as Pb	0.7 mg/kg	M^		9.8	9.3	9.5	33.1	11.5
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		28.5	28.1	29.1	25.3	40.2
ICPMSS	Zinc as Zn	16 mg/kg	M^		40.4	40.2	42.1	57.5	57.1
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<11	<11	<11	<13	<12
	Toluene (HS_1D_AR)	10 µg/kg	M^		<11	<11	<11	<13	<12
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<11* B	<11* B	<11* B	<13* B	<12* B
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<22	<23	<22	<25	<24
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<11	<11	<11	<13	<12
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.224	<0.225	<0.220	<0.253	<0.235
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.224	<0.225	<0.220	<0.253	<0.235
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.224	<0.225	<0.220	<0.253	<0.235
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.224* B	<0.225* B	<0.220* B	<0.253* B	<0.235* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.011	<0.011	<0.011	<0.013	<0.012
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.011	<0.011	<0.011	<0.013	<0.012
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.045* B	<0.045* B	<0.044* B	<0.051* B	<0.048* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<22.4	<22.5	<22.0	26.0	<23.5
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.48	<4.50	<4.41	<5.06	<4.71
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.48	<4.50	<4.41	12.4	<4.71
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.48	<4.50	<4.41	<5.06	<4.71
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<11.2	<11.2	<11.0	<12.7	<11.8
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<6.73	<6.75	<6.61	<7.59	<7.06
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<22.4	<22.5	25.7	<25.3	28.8
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.48	<4.50	<4.41	<5.06	<4.71
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		6.35* B	<4.50* B	8.18* B	<5.06* B	<4.71* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.48	<4.50	5.57	<5.06	<4.71
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		<11.2	<11.2	<11.0	16.1	15.1
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<6.73	<6.75	<6.61	<7.59	<7.06
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.09	<0.09	<0.09	<0.10	<0.09
	Anthracene	0.08 mg/kg	U^		<0.09	<0.09	<0.09	<0.10	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Chrysene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Fluorene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Pyrene	0.08 mg/kg	M^		<0.09	<0.09	<0.09	<0.10	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.43	<1.44	<1.41	<1.62	<1.51
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1* B	<1* B	<1* B	<1 C	<1
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1 C	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1 C	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<3	<3	<4	<4 C	<3
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<3	<3	<4	<4 C	<3
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1	<1	<1	<1 C	<1
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1 C	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1 C	<1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-021	24112027-022	24112027-023	24112027-024	24112027-025
				Sampling Date:					
				Customer ID:	TP14-0-ES-1.50	TP14-0-ES-2.50	TP15-0-ES-0.50	TP16-0-ES-0.50	TP17-0-ES-0.50
VOCHSAS	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	2,2-Dichloropropane	2 µg/kg	M^		<2	<2	<2	<2 c	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Chloroethane	2 µg/kg	M^		<2	<2	<2	<2 c	<2
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Chloromethane	3 µg/kg	U^		<3	<3	<4	<4 c	<3
	cis 1,2-Dichloroethene	5 µg/kg	M^		<5	<6	<6	<6 c	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Dibromochloromethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1 c	<1
	Ethylbenzene	2 µg/kg	M^		<2	<2	<2	<2 c	<2
	Hexachlorobutadiene	2 µg/kg	N^		<2	<2	<2	<2 c	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	m and p-Xylene	4 µg/kg	M^		<4	<5	<5	<5 c	<5
	MTBE	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Naphthalene	5 µg/kg	M^		<5	<6	<6	<6 c	<6
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1 c	<1
	o-Xylene	2 µg/kg	M^		<2	<2	<2	<2 c	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Tetrachloroethene	3 µg/kg	M^		<3	<3	<4	<4 c	<3
	Toluene	5 µg/kg	M^		<5	<6	<6	<6 c	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1 c	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1 c	<1
	Vinyl Chloride	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B,C	<1* B

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-026	24112027-027	24112027-028	24112027-029	24112027-030
				Sampling Date:					
				Customer ID:	TP18-0-ES-0.50	TP19-0-ES-0.50	TP20-0-ES-1.20	TP22-0-ES-1.60	WS01-0-ES-0.80
CLANDPREP	Total Moisture at 35°C	0.1 %	N		17.4	19.2	13.1	10.3	15.7
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Clay	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Gravel	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		NAIIS	NAIIS	NAIIS	NAIIS	NAIIS
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		7.0	6.9	7.1	6.9	6.8
WSLM59	Soil Organic Matter	0.04 % m/m	U^		1.40	1.14	0.18	0.22	0.58
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.6	<0.6	<0.6	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	<0.6	<0.6	<0.6	<0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	73	<20	54	<20
ICPMSS	Arsenic as As	0.3 mg/kg	M^		8.7	12.2	10.9	7.3	7.5
ICPSOIL	Boron as B	10 mg/kg	N^		<10	<10	<10	11	<10
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		28.1	27.1	18.7	36.0	31.4
ICPMSS	Copper as Cu	1.6 mg/kg	M^		9.1	8.6	8.5	12.7	12.2
ICPMSS	Lead as Pb	0.7 mg/kg	M^		17.3	13.3	6.2	11.2	11.3
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		20.6	19.7	13.6	32.5	25.6
ICPMSS	Zinc as Zn	16 mg/kg	M^		44.5	37.7	26.2	51.7	43.5
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<11	<12
	Toluene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<11	<12
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<12* B	<12* B	<12* B	<11* B	<12* B
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<24	<25	<23	<22	<24
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<12	<12	<12	<11	<12
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.242	<0.248	<0.230	<0.223	<0.237
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242	<0.248	<0.230	<0.223	<0.237
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242	<0.248	<0.230	<0.223	<0.237
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242* B	<0.248* B	<0.230* B	<0.223* B	<0.237* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.011	<0.012
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.012	<0.012	<0.011	<0.012
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.048* B	<0.05* B	<0.047* B	<0.045* B	<0.048* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<24.2	<24.8	<23.0	<22.3	<23.7
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<4.95	<4.60	<4.46	<4.74
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<4.95	<4.60	<4.46	<4.74
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<4.95	<4.60	<4.46	<4.74
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<12.1	<12.4	<11.5	<11.1	<11.9
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<7.26	<7.43	<6.90	<6.69	<7.12
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<24.2	26.9	<23.0	<22.3	<23.7
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84	<4.95	<4.60	<4.46	<4.74
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84* B	<4.95* B	<4.60* B	<4.46* B	<4.74* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84	<4.95	<4.60	<4.46	<4.74
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		12.7	18.6	<11.5	<11.1	<11.9
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<7.26	<7.43	<6.90	<6.69	<7.12
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.10	<0.10	<0.09	<0.09	<0.09
	Anthracene	0.08 mg/kg	U^		<0.10	<0.10	<0.09	<0.09	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Chrysene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Fluorene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Pyrene	0.08 mg/kg	M^		<0.10	<0.10	<0.09	<0.09	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.55	<1.58	<1.47	<1.43	<1.52
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<3	<4	<3	<3	<4
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<3	<4	<3	<3	<4
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1	<1	<1	<1	<1
	1,2-Dibromoethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-026	24112027-027	24112027-028	24112027-029	24112027-030
				Sampling Date:					
				Customer ID:	TP18-0-ES-0.50	TP19-0-ES-0.50	TP20-0-ES-1.20	TP22-0-ES-1.60	WS01-0-ES-0.80
VOCHSAS	1,3-Dichloropropane	1 µg/kg	M^		<1	<1	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<2	<2	<2	<2	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chlorobenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<2	<2	<2	<2	<2
	Chloroform	1 µg/kg	M^		<1	<1	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<3	<4	<3	<3	<4
	cis 1,2-Dichloroethene	5 µg/kg	M^		<6	<6	<6	<6	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dibromomethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<1	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<2	<2	<2	<2	<2
	Hexachlorobutadiene	2 µg/kg	N^		<2	<2	<2	<2	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<4	<5	<5	<5	<5
	MTBE	1 µg/kg	M^		<1	<1	<1	<1	<1
	Naphthalene	5 µg/kg	M^		<6	<6	<6	<6	<6
	n-Butylbenzene	1 µg/kg	U^		<1	<1	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<2	<2	<2	<2	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<1	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<3	<4	<3	<3	<4
	Toluene	5 µg/kg	M^		<6	<6	<6	<6	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<1	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<1	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<1	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<1	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1* B	<1* B	<1* B	<1* B	<1* B

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-031	24112027-032	24112027-033	24112027-034	24112027-035
				Sampling Date:					
				Customer ID:	WS02-0-ES-0.80	WS03-0-ES-0.80	WS04-0-ES-0.80	WS05-0-ES-0.80	WS06-0-ES-0.80
CLANDPREP	Total Moisture at 35°C	0.1 %	N		17.4	29.8	16.2	14.2	14.9
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		Gravel	Gravel	Gravel	Gravel	Gravel
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
SUB002	Asbestos Identification	-	N		NAIIS	NAIIS	NAIIS	NAIIS	CH
SUB002	Asbestos Stage 2	0.001 %	N						<0.001
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		6.7	6.3	6.5	6.7	6.6
WSLM59	Soil Organic Matter	0.04 % m/m	U^		0.59	3.73	0.78	0.46	0.46
SFAPI	Total Cyanide	0.5 mg/kg	M^		<0.6	<0.7	<0.6	<0.6	<0.6
SFAPI	Phenol Index	0.5 mg/kg	U^		<0.6	0.8	<0.6	<0.6	<0.6
ICPWSS	Water Soluble Sulphate as SO4 by Mass	20 mg/kg	M^		<20	123	<20	65	57
ICPMSS	Arsenic as As	0.3 mg/kg	M^		5.6	5.7	6.0	4.1	4.5
ICPSOIL	Boron as B	10 mg/kg	N^		<10	<10	<10	<10	12
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		<0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		31.9	30.3	30.1	34.5	42.2
ICPMSS	Copper as Cu	1.6 mg/kg	M^		10.1	15.6	16.0	20.8	13.4
ICPMSS	Lead as Pb	0.7 mg/kg	M^		10.1	9.9	10.4	12.2	14.3
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^		24.6	29.3	28.0	30.6	33.2
ICPMSS	Zinc as Zn	16 mg/kg	M^		61.0	43.2	41.8	54.4	51.2
BTEXHSA	Benzene (HS_1D_AR)	10 µg/kg	M^		<12	<14	<12	<12	<12
	Toluene (HS_1D_AR)	10 µg/kg	M^		<12	<14	<12	<12	<12
	Ethylbenzene (HS_1D_AR)	10 µg/kg	M^		<12* B	<14* B	<12* B	<12* B	<12* B
	m/p-Xylene (HS_1D_AR)	20 µg/kg	M^		<24	<29	<24	<23	<24
	o-Xylene (HS_1D_AR)	10 µg/kg	M^		<12	<14	<12	<12	<12
GROHSA/BTEXHSA	Total GRO C5-C10 (HS_1D_Total)	0.2 mg/kg	M^		<0.242	<0.285	<0.239	<0.233	<0.235
	C5-C6 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242	<0.285	<0.239	<0.233	<0.235
	>C6-C8 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242	<0.285	<0.239	<0.233	<0.235
	>C8-C10 Aliphatic (HS_1D_AL)	0.2 mg/kg	M^		<0.242* B	<0.285* B	<0.239* B	<0.233* B	<0.235* B
	C5-C7 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.014	<0.012	<0.012	<0.012
	>C7-C8 Aromatic (HS_1D_AR)	0.01 mg/kg	M^		<0.012	<0.014	<0.012	<0.012	<0.012
	>C8-C10 Aromatic (HS_1D_AR)	0.04 mg/kg	M^		<0.048* B	<0.057* B	<0.048* B	<0.047* B	<0.048* B
TPHFIDUS (Aliphatic)	Total TPH >C8-C40 (Aliphatic) (EH_CU_1D_AL)	20 mg/kg	U^		<24.2	<28.5	<23.9	<23.3	<23.5
	>C10-C12 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<5.70	<4.77	<4.66	<4.70
	>C12-C16 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<5.70	<4.77	<4.66	<4.70
	>C16-C21 (Aliphatic) (EH_CU_1D_AL)	4 mg/kg	U^		<4.84	<5.70	<4.77	<4.66	<4.70
	>C21-C35 (Aliphatic) (EH_CU_1D_AL)	10 mg/kg	U^		<12.1	<14.2	<11.9	<11.7	<11.8
	>C35-C44 (Aliphatic) (EH_CU_1D_AL)	6 mg/kg	N^		<7.26	<8.55	<7.16	<6.99	<7.05
TPHFIDUS (Aromatic)	Total TPH >C8-C40 (Aromatic) (EH_CU_1D_AR)	20 mg/kg	U^		<24.2	36.9	<23.9	<23.3	<23.5
	>C10-C12 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84	<5.70	<4.77	<4.66	<4.70
	>C12-C16 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84* B	<5.70* B	<4.77* B	<4.66* B	<4.70* B
	>C16-C21 (Aromatic) (EH_CU_1D_AR)	4 mg/kg	U^		<4.84	<5.70	<4.77	<4.66	<4.70
	>C21-C35 (Aromatic) (EH_CU_1D_AR)	10 mg/kg	U^		<12.1	25.3	<11.9	<11.7	<11.8
	>C35-C44 (Aromatic) (EH_CU_1D_AR)	6 mg/kg	N^		<7.26	<8.55	<7.16	<6.99	<7.05
PAHMSUS	Acenaphthene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Acenaphthylene	0.08 mg/kg	U^		<0.10	<0.11	<0.10	<0.09	<0.09
	Anthracene	0.08 mg/kg	U^		<0.10	<0.11	<0.10	<0.09	<0.09
	Benzo[a]anthracene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Benzo[a]pyrene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Benzo[b]fluoranthene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Benzo[g,h,i]perylene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Benzo[k]fluoranthene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Chrysene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Dibenzo[a,h]anthracene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Fluoranthene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Fluorene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Indeno[1,2,3-cd]pyrene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Naphthalene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Phenanthrene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Pyrene	0.08 mg/kg	M^		<0.10	<0.11	<0.10	<0.09	<0.09
	Total PAH 16	1.28 mg/kg	U^		<1.55	<1.82	<1.53	<1.49	<1.50
VOCHSAS	1,1,1,2-Tetrachloroethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,1,1-Trichloroethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,1,2,2-Tetrachloroethane	1 µg/kg	N^		<1	<2	<1	<1	<1
	1,1,2-Trichloroethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,1-Dichloroethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,1-Dichloroethene	1 µg/kg	U^		<1	<2	<1	<1	<1
	1,1-Dichloropropene	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2,3-Trichlorobenzene	3 µg/kg	M^		<4	<5	<4	<4	<3
	1,2,3-Trichloropropane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2,4-Trichlorobenzene	3 µg/kg	N^		<4	<5	<4	<4	<3
	1,2,4-Trimethylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2-Dibromo-3-chloropropane	1 µg/kg	U^		<1	<2	<1	<1	<1
	1,2-Dibromoethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2-Dichlorobenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2-Dichloroethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,2-Dichloropropane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,3,5-Trimethylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1

Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	24112027-031	24112027-032	24112027-033	24112027-034	24112027-035
				Sampling Date:					
				Customer ID:	WS02-0-ES-0.80	WS03-0-ES-0.80	WS04-0-ES-0.80	WS05-0-ES-0.80	WS06-0-ES-0.80
VOCHSAS	1,3-Dichlorobenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,3-Dichloropropane	1 µg/kg	M^		<1	<2	<1	<1	<1
	1,4-Dichlorobenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	2,2-Dichloropropane	2 µg/kg	M^		<3	<3	<3	<2	<2
	2-Chlorotoluene	1 µg/kg	M^		<1	<2	<1	<1	<1
	4-Chlorotoluene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Benzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Bromobenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Bromochloromethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Bromodichloromethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Bromoform	1 µg/kg	M^		<1	<2	<1	<1	<1
	Bromomethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Carbon Tetrachloride	1 µg/kg	M^		<1	<2	<1	<1	<1
	Chlorobenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Chloroethane	2 µg/kg	M^		<3	<3	<3	<2	<2
	Chloroform	1 µg/kg	M^		<1	<2	<1	<1	<1
	Chloromethane	3 µg/kg	U^		<4	<5	<4	<4	<3
	cis 1,2-Dichloroethene	5 µg/kg	M^		<6	<8	<6	<6	<6
	cis 1,3-Dichloropropene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Dibromochloromethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Dibromomethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Dichlorodifluoromethane	1 µg/kg	N^		<1	<2	<1	<1	<1
	Ethylbenzene	2 µg/kg	M^		<3	<3	<3	<2	<2
	Hexachlorobutadiene	2 µg/kg	N^		<3	<3	<3	<2	<2
	iso-Propylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	m and p-Xylene	4 µg/kg	M^		<5	<6	<5	<5	<4
	MTBE	1 µg/kg	M^		<1	<2	<1	<1	<1
	Naphthalene	5 µg/kg	M^		<6	<8	<6	<6	<6
	n-Butylbenzene	1 µg/kg	U^		<1	<2	<1	<1	<1
	o-Xylene	2 µg/kg	M^		<3	<3	<3	<2	<2
	p-Isopropyltoluene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Propylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	sec-Butylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Styrene	1 µg/kg	M^		<1	<2	<1	<1	<1
	tert-Butylbenzene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Tetrachloroethene	3 µg/kg	M^		<4	<5	<4	<4	<3
	Toluene	5 µg/kg	M^		<6	<8	<6	<6	<6
	trans 1,2-Dichloroethene	1 µg/kg	M^		<1	<2	<1	<1	<1
	trans 1,3-Dichloropropene	1 µg/kg	M^		<1	<2	<1	<1	<1
	Trichloroethene	1 µg/kg	U^		<1	<2	<1	<1	<1
	Trichlorofluoromethane	1 µg/kg	M^		<1	<2	<1	<1	<1
	Vinyl Chloride	1 µg/kg	M^		<1* B	<2* B	<1* B	<1* B	<1* B

ASBESTOS ANALYSIS RESULTS

SOCOTEC Asbestos Limited Certificate of Analysis for Asbestos in Soils, Sediments and Aggregates

Detection limit of Method SCI-ASB-020 is 0.001%

Sampling has been carried out by a third party

Client:		Page 1 of 2	
Address:		Report No:	ANO-0503-30474
For the attention of:		Report Date:	22/11/2024
Site Address:		Project Number:	24112027

Sample Number	Sample Date	Sample Location & Matrix	Test Date	Total Sample Dry Weight (g)	Weight of <10mm Fraction (g)	Asbestos(g) in >10mm	Asbestos(g) in < 10mm	% Asbestos by weight of Total Dried Sample	Moisture Content	Asbestos Fibre Types Identified

Keys			
	NAACR = Not Analysed at Clients Request	NAIIS = No Asbestos Identified in Sample (Identification Only)	
	* visible to naked eye	NADIS = No Asbestos Detected in Sample (ID & Quant Only)	

ASBESTOS ANALYSIS RESULTS

SOCOTEC Asbestos Limited Certificate of Analysis for Asbestos in Soils, Sediments and Aggregates

Detection limit of Method SCI-ASB-020 is 0.001%

Sampling has been carried out by a third party

Client:		**Page 2 of 2**	
Address:		**Report No:**	**ANO-0503-30474**
For the attention of:		**Report Date:**	**22/11/2024**
Site Address:		**Project Number:**	**24112027**

Sample Number	Sample Date	Sample Location & Matrix	Test Date	Total Sample Dry Weight (g)	Weight of <10mm Fraction (g)	Asbestos(g) in >10mm	Asbestos(g) in < 10mm	% Asbestos by weight of Total Dried Sample	Moisture Content	Asbestos Fibre Types Identified

Keys

NAACR = Not Analysed at Clients Request

NAIIS = No Asbestos Identified in Sample (Identification Only)

* visible to naked eye

NADIS = No Asbestos Detected in Sample (ID & Quant Only)

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Deviating Sample Report

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
BH01-0-ES-0.20	24112027-001	**BTEXHSA**					✓	✓
BH01-0-ES-0.20	24112027-001	**CLANDPREP**					✓	✓
BH01-0-ES-0.20	24112027-001	**GROHSA/BTEXHSA**					✓	✓
BH01-0-ES-0.20	24112027-001	**ICPMSS**					✓	✓
BH01-0-ES-0.20	24112027-001	**ICPSOIL**					✓	✓
BH01-0-ES-0.20	24112027-001	**ICPWSS**					✓	✓
BH01-0-ES-0.20	24112027-001	**PAHMSUS**					✓	✓
BH01-0-ES-0.20	24112027-001	**PHSOIL**					✓	✓
BH01-0-ES-0.20	24112027-001	**SFAPI**					✓	✓
BH01-0-ES-0.20	24112027-001	**SUB002**					✓	
BH01-0-ES-0.20	24112027-001	**TPHFIDUS (Aliphatic)**					✓	✓
BH01-0-ES-0.20	24112027-001	**TPHFIDUS (Aromatic)**					✓	✓
BH01-0-ES-0.20	24112027-001	**VOCHSAS**					✓	✓
BH01-0-ES-0.20	24112027-001	**WSLM59**					✓	✓
BH01-0-ES-0.80	24112027-002	**BTEXHSA**					✓	✓
BH01-0-ES-0.80	24112027-002	**CLANDPREP**					✓	✓
BH01-0-ES-0.80	24112027-002	**GROHSA/BTEXHSA**					✓	✓
BH01-0-ES-0.80	24112027-002	**ICPMSS**					✓	✓
BH01-0-ES-0.80	24112027-002	**ICPSOIL**					✓	✓
BH01-0-ES-0.80	24112027-002	**ICPWSS**					✓	✓
BH01-0-ES-0.80	24112027-002	**PAHMSUS**					✓	✓
BH01-0-ES-0.80	24112027-002	**PHSOIL**					✓	✓
BH01-0-ES-0.80	24112027-002	**SFAPI**					✓	✓
BH01-0-ES-0.80	24112027-002	**SUB002**					✓	
BH01-0-ES-0.80	24112027-002	**TPHFIDUS (Aliphatic)**					✓	✓
BH01-0-ES-0.80	24112027-002	**TPHFIDUS (Aromatic)**					✓	✓
BH01-0-ES-0.80	24112027-002	**VOCHSAS**					✓	✓
BH01-0-ES-0.80	24112027-002	**WSLM59**					✓	✓
BH01-0-ES-3.20	24112027-003	**BTEXHSA**					✓	✓
BH01-0-ES-3.20	24112027-003	**CLANDPREP**					✓	✓
BH01-0-ES-3.20	24112027-003	**GROHSA/BTEXHSA**					✓	✓
BH01-0-ES-3.20	24112027-003	**ICPMSS**					✓	✓
BH01-0-ES-3.20	24112027-003	**ICPSOIL**					✓	✓
BH01-0-ES-3.20	24112027-003	**ICPWSS**					✓	✓

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
BH01-0-ES-3.20	24112027-003	**PAHMSUS**					✓	✓
BH01-0-ES-3.20	24112027-003	**PHSOIL**					✓	✓
BH01-0-ES-3.20	24112027-003	**SFAPI**					✓	✓
BH01-0-ES-3.20	24112027-003	**SUB002**					✓	
BH01-0-ES-3.20	24112027-003	**TPHFIDUS (Aliphatic)**					✓	✓
BH01-0-ES-3.20	24112027-003	**TPHFIDUS (Aromatic)**					✓	✓
BH01-0-ES-3.20	24112027-003	**VOCHSAS**					✓	✓
BH01-0-ES-3.20	24112027-003	**WSLM59**					✓	✓
BH02-0-ES-0.20	24112027-004	**BTEXHSA**					✓	✓
BH02-0-ES-0.20	24112027-004	**CLANDPREP**					✓	✓
BH02-0-ES-0.20	24112027-004	**GROHSA/BTEXHSA**					✓	✓
BH02-0-ES-0.20	24112027-004	**ICPMSS**					✓	✓
BH02-0-ES-0.20	24112027-004	**ICPSOIL**					✓	✓
BH02-0-ES-0.20	24112027-004	**ICPWSS**					✓	✓
BH02-0-ES-0.20	24112027-004	**PAHMSUS**					✓	✓
BH02-0-ES-0.20	24112027-004	**PHSOIL**					✓	✓
BH02-0-ES-0.20	24112027-004	**SFAPI**					✓	✓
BH02-0-ES-0.20	24112027-004	**SUB002**					✓	
BH02-0-ES-0.20	24112027-004	**TPHFIDUS (Aliphatic)**					✓	✓
BH02-0-ES-0.20	24112027-004	**TPHFIDUS (Aromatic)**					✓	✓
BH02-0-ES-0.20	24112027-004	**VOCHSAS**					✓	✓
BH02-0-ES-0.20	24112027-004	**WSLM59**					✓	✓
TP1-0-ES-0.20	24112027-005	**BTEXHSA**					✓	✓
TP1-0-ES-0.20	24112027-005	**CLANDPREP**					✓	✓
TP1-0-ES-0.20	24112027-005	**GROHSA/BTEXHSA**					✓	✓
TP1-0-ES-0.20	24112027-005	**ICPMSS**					✓	✓
TP1-0-ES-0.20	24112027-005	**ICPSOIL**					✓	✓
TP1-0-ES-0.20	24112027-005	**ICPWSS**					✓	✓
TP1-0-ES-0.20	24112027-005	**PAHMSUS**					✓	✓
TP1-0-ES-0.20	24112027-005	**PHSOIL**					✓	✓
TP1-0-ES-0.20	24112027-005	**SFAPI**					✓	✓
TP1-0-ES-0.20	24112027-005	**SUB002**					✓	
TP1-0-ES-0.20	24112027-005	**TPHFIDUS (Aliphatic)**					✓	✓
TP1-0-ES-0.20	24112027-005	**TPHFIDUS (Aromatic)**					✓	✓
TP1-0-ES-0.20	24112027-005	**VOCHSAS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP1-0-ES-0.20	24112027-005	**WSLM59**					✓	✓
TP2-0-ES-0.50	24112027-006	**BTEXHSA**					✓	✓
TP2-0-ES-0.50	24112027-006	**CLANDPREP**					✓	✓
TP2-0-ES-0.50	24112027-006	**GROHSA/BTEXHSA**					✓	✓
TP2-0-ES-0.50	24112027-006	**ICPMSS**					✓	✓
TP2-0-ES-0.50	24112027-006	**ICPSOIL**					✓	✓
TP2-0-ES-0.50	24112027-006	**ICPWSS**					✓	✓
TP2-0-ES-0.50	24112027-006	**PAHMSUS**					✓	✓
TP2-0-ES-0.50	24112027-006	**PHSOIL**					✓	✓
TP2-0-ES-0.50	24112027-006	**SFAPI**					✓	✓
TP2-0-ES-0.50	24112027-006	**SUB002**					✓	
TP2-0-ES-0.50	24112027-006	**TPHFIDUS (Aliphatic)**					✓	✓
TP2-0-ES-0.50	24112027-006	**TPHFIDUS (Aromatic)**					✓	✓
TP2-0-ES-0.50	24112027-006	**VOCHSAS**					✓	✓
TP2-0-ES-0.50	24112027-006	**WSLM59**					✓	✓
TP3-0-ES-0.50	24112027-007	**BTEXHSA**					✓	✓
TP3-0-ES-0.50	24112027-007	**CLANDPREP**					✓	✓
TP3-0-ES-0.50	24112027-007	**GROHSA/BTEXHSA**					✓	✓
TP3-0-ES-0.50	24112027-007	**ICPMSS**					✓	✓
TP3-0-ES-0.50	24112027-007	**ICPSOIL**					✓	✓
TP3-0-ES-0.50	24112027-007	**ICPWSS**					✓	✓
TP3-0-ES-0.50	24112027-007	**PAHMSUS**					✓	✓
TP3-0-ES-0.50	24112027-007	**PHSOIL**					✓	✓
TP3-0-ES-0.50	24112027-007	**SFAPI**					✓	✓
TP3-0-ES-0.50	24112027-007	**SUB002**					✓	
TP3-0-ES-0.50	24112027-007	**TPHFIDUS (Aliphatic)**					✓	✓
TP3-0-ES-0.50	24112027-007	**TPHFIDUS (Aromatic)**					✓	✓
TP3-0-ES-0.50	24112027-007	**VOCHSAS**					✓	✓
TP3-0-ES-0.50	24112027-007	**WSLM59**					✓	✓
TP4-0-ES-0.50	24112027-008	**BTEXHSA**					✓	✓
TP4-0-ES-0.50	24112027-008	**CLANDPREP**					✓	✓
TP4-0-ES-0.50	24112027-008	**GROHSA/BTEXHSA**					✓	✓
TP4-0-ES-0.50	24112027-008	**ICPMSS**					✓	✓
TP4-0-ES-0.50	24112027-008	**ICPSOIL**					✓	✓
TP4-0-ES-0.50	24112027-008	**ICPWSS**					✓	✓

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP4-0-ES-0.50	24112027-008	**PAHMSUS**					✓	✓
TP4-0-ES-0.50	24112027-008	**PHSOIL**					✓	✓
TP4-0-ES-0.50	24112027-008	**SFAPI**					✓	✓
TP4-0-ES-0.50	24112027-008	**SUB002**					✓	
TP4-0-ES-0.50	24112027-008	**TPHFIDUS (Aliphatic)**					✓	✓
TP4-0-ES-0.50	24112027-008	**TPHFIDUS (Aromatic)**					✓	✓
TP4-0-ES-0.50	24112027-008	**VOCHSAS**					✓	✓
TP4-0-ES-0.50	24112027-008	**WSLM59**					✓	✓
TP5-0-ES-0.60	24112027-009	**BTEXHSA**					✓	✓
TP5-0-ES-0.60	24112027-009	**CLANDPREP**					✓	✓
TP5-0-ES-0.60	24112027-009	**GROHSA/BTEXHSA**					✓	✓
TP5-0-ES-0.60	24112027-009	**ICPMSS**					✓	✓
TP5-0-ES-0.60	24112027-009	**ICPSOIL**					✓	✓
TP5-0-ES-0.60	24112027-009	**ICPWSS**					✓	✓
TP5-0-ES-0.60	24112027-009	**PAHMSUS**					✓	✓
TP5-0-ES-0.60	24112027-009	**PHSOIL**					✓	✓
TP5-0-ES-0.60	24112027-009	**SFAPI**					✓	✓
TP5-0-ES-0.60	24112027-009	**SUB002**					✓	
TP5-0-ES-0.60	24112027-009	**TPHFIDUS (Aliphatic)**					✓	✓
TP5-0-ES-0.60	24112027-009	**TPHFIDUS (Aromatic)**					✓	✓
TP5-0-ES-0.60	24112027-009	**VOCHSAS**					✓	✓
TP5-0-ES-0.60	24112027-009	**WSLM59**					✓	✓
TP6-0-ES-1.00	24112027-010	**BTEXHSA**					✓	✓
TP6-0-ES-1.00	24112027-010	**CLANDPREP**					✓	✓
TP6-0-ES-1.00	24112027-010	**GROHSA/BTEXHSA**					✓	✓
TP6-0-ES-1.00	24112027-010	**ICPMSS**					✓	✓
TP6-0-ES-1.00	24112027-010	**ICPSOIL**					✓	✓
TP6-0-ES-1.00	24112027-010	**ICPWSS**					✓	✓
TP6-0-ES-1.00	24112027-010	**PAHMSUS**					✓	✓
TP6-0-ES-1.00	24112027-010	**PHSOIL**					✓	✓
TP6-0-ES-1.00	24112027-010	**SFAPI**					✓	✓
TP6-0-ES-1.00	24112027-010	**SUB002**					✓	
TP6-0-ES-1.00	24112027-010	**TPHFIDUS (Aliphatic)**					✓	✓
TP6-0-ES-1.00	24112027-010	**TPHFIDUS (Aromatic)**					✓	✓
TP6-0-ES-1.00	24112027-010	**VOCHSAS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP6-0-ES-1.00	24112027-010	**WSLM59**					✓	✓
TP7-0-ES-0.50	24112027-011	**BTEXHSA**					✓	✓
TP7-0-ES-0.50	24112027-011	**CLANDPREP**					✓	✓
TP7-0-ES-0.50	24112027-011	**GROHSA/BTEXHSA**					✓	✓
TP7-0-ES-0.50	24112027-011	**ICPMSS**					✓	✓
TP7-0-ES-0.50	24112027-011	**ICPSOIL**					✓	✓
TP7-0-ES-0.50	24112027-011	**ICPWSS**					✓	✓
TP7-0-ES-0.50	24112027-011	**PAHMSUS**					✓	✓
TP7-0-ES-0.50	24112027-011	**PHSOIL**					✓	✓
TP7-0-ES-0.50	24112027-011	**SFAPI**					✓	✓
TP7-0-ES-0.50	24112027-011	**SUB002**					✓	
TP7-0-ES-0.50	24112027-011	**TPHFIDUS (Aliphatic)**					✓	✓
TP7-0-ES-0.50	24112027-011	**TPHFIDUS (Aromatic)**					✓	✓
TP7-0-ES-0.50	24112027-011	**VOCHSAS**					✓	✓
TP7-0-ES-0.50	24112027-011	**WSLM59**					✓	✓
TP8-0-ES-0.20	24112027-012	**BTEXHSA**					✓	✓
TP8-0-ES-0.20	24112027-012	**CLANDPREP**					✓	✓
TP8-0-ES-0.20	24112027-012	**GROHSA/BTEXHSA**					✓	✓
TP8-0-ES-0.20	24112027-012	**ICPMSS**					✓	✓
TP8-0-ES-0.20	24112027-012	**ICPSOIL**					✓	✓
TP8-0-ES-0.20	24112027-012	**ICPWSS**					✓	✓
TP8-0-ES-0.20	24112027-012	**PAHMSUS**					✓	✓
TP8-0-ES-0.20	24112027-012	**PHSOIL**					✓	✓
TP8-0-ES-0.20	24112027-012	**SFAPI**					✓	✓
TP8-0-ES-0.20	24112027-012	**SUB002**					✓	
TP8-0-ES-0.20	24112027-012	**TPHFIDUS (Aliphatic)**					✓	✓
TP8-0-ES-0.20	24112027-012	**TPHFIDUS (Aromatic)**					✓	✓
TP8-0-ES-0.20	24112027-012	**VOCHSAS**					✓	✓
TP8-0-ES-0.20	24112027-012	**WSLM59**					✓	✓
TP9-0-ES-1.20	24112027-013	**BTEXHSA**					✓	✓
TP9-0-ES-1.20	24112027-013	**CLANDPREP**					✓	✓
TP9-0-ES-1.20	24112027-013	**GROHSA/BTEXHSA**					✓	✓
TP9-0-ES-1.20	24112027-013	**ICPMSS**					✓	✓
TP9-0-ES-1.20	24112027-013	**ICPSOIL**					✓	✓
TP9-0-ES-1.20	24112027-013	**ICPWSS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP9-0-ES-1.20	24112027-013	**PAHMSUS**					✓	✓
TP9-0-ES-1.20	24112027-013	**PHSOIL**					✓	✓
TP9-0-ES-1.20	24112027-013	**SFAPI**					✓	✓
TP9-0-ES-1.20	24112027-013	**SUB002**					✓	
TP9-0-ES-1.20	24112027-013	**TPHFIDUS (Aliphatic)**					✓	✓
TP9-0-ES-1.20	24112027-013	**TPHFIDUS (Aromatic)**					✓	✓
TP9-0-ES-1.20	24112027-013	**VOCHSAS**					✓	✓
TP9-0-ES-1.20	24112027-013	**WSLM59**					✓	✓
TP10-0-ES-0.50	24112027-014	**BTEXHSA**					✓	✓
TP10-0-ES-0.50	24112027-014	**CLANDPREP**					✓	✓
TP10-0-ES-0.50	24112027-014	**GROHSA/BTEXHSA**					✓	✓
TP10-0-ES-0.50	24112027-014	**ICPMSS**					✓	✓
TP10-0-ES-0.50	24112027-014	**ICPSOIL**					✓	✓
TP10-0-ES-0.50	24112027-014	**ICPWSS**					✓	✓
TP10-0-ES-0.50	24112027-014	**PAHMSUS**					✓	✓
TP10-0-ES-0.50	24112027-014	**PHSOIL**					✓	✓
TP10-0-ES-0.50	24112027-014	**SFAPI**					✓	✓
TP10-0-ES-0.50	24112027-014	**SUB002**					✓	
TP10-0-ES-0.50	24112027-014	**TPHFIDUS (Aliphatic)**					✓	✓
TP10-0-ES-0.50	24112027-014	**TPHFIDUS (Aromatic)**					✓	✓
TP10-0-ES-0.50	24112027-014	**VOCHSAS**					✓	✓
TP10-0-ES-0.50	24112027-014	**WSLM59**					✓	✓
TP11-0-ES-0.50	24112027-015	**BTEXHSA**					✓	✓
TP11-0-ES-0.50	24112027-015	**CLANDPREP**					✓	✓
TP11-0-ES-0.50	24112027-015	**GROHSA/BTEXHSA**					✓	✓
TP11-0-ES-0.50	24112027-015	**ICPMSS**					✓	✓
TP11-0-ES-0.50	24112027-015	**ICPSOIL**					✓	✓
TP11-0-ES-0.50	24112027-015	**ICPWSS**					✓	✓
TP11-0-ES-0.50	24112027-015	**PAHMSUS**					✓	✓
TP11-0-ES-0.50	24112027-015	**PHSOIL**					✓	✓
TP11-0-ES-0.50	24112027-015	**SFAPI**					✓	✓
TP11-0-ES-0.50	24112027-015	**SUB002**					✓	
TP11-0-ES-0.50	24112027-015	**TPHFIDUS (Aliphatic)**					✓	✓
TP11-0-ES-0.50	24112027-015	**TPHFIDUS (Aromatic)**					✓	✓
TP11-0-ES-0.50	24112027-015	**VOCHSAS**					✓	✓

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP11-0-ES-0.50	24112027-015	**WSLM59**					✓	✓
TP12-0-ES-1.20	24112027-016	**BTEXHSA**					✓	✓
TP12-0-ES-1.20	24112027-016	**CLANDPREP**					✓	✓
TP12-0-ES-1.20	24112027-016	**GROHSA/BTEXHSA**					✓	✓
TP12-0-ES-1.20	24112027-016	**ICPMSS**					✓	✓
TP12-0-ES-1.20	24112027-016	**ICPSOIL**					✓	✓
TP12-0-ES-1.20	24112027-016	**ICPWSS**					✓	✓
TP12-0-ES-1.20	24112027-016	**PAHMSUS**					✓	✓
TP12-0-ES-1.20	24112027-016	**PHSOIL**					✓	✓
TP12-0-ES-1.20	24112027-016	**SFAPI**					✓	✓
TP12-0-ES-1.20	24112027-016	**SUB002**					✓	
TP12-0-ES-1.20	24112027-016	**TPHFIDUS (Aliphatic)**					✓	✓
TP12-0-ES-1.20	24112027-016	**TPHFIDUS (Aromatic)**					✓	✓
TP12-0-ES-1.20	24112027-016	**VOCHSAS**					✓	✓
TP12-0-ES-1.20	24112027-016	**WSLM59**					✓	✓
TP13-0-ES-0.50	24112027-017	**BTEXHSA**					✓	✓
TP13-0-ES-0.50	24112027-017	**CLANDPREP**					✓	✓
TP13-0-ES-0.50	24112027-017	**GROHSA/BTEXHSA**					✓	✓
TP13-0-ES-0.50	24112027-017	**ICPMSS**					✓	✓
TP13-0-ES-0.50	24112027-017	**ICPSOIL**					✓	✓
TP13-0-ES-0.50	24112027-017	**ICPWSS**					✓	✓
TP13-0-ES-0.50	24112027-017	**PAHMSUS**					✓	✓
TP13-0-ES-0.50	24112027-017	**PHSOIL**					✓	✓
TP13-0-ES-0.50	24112027-017	**SFAPI**					✓	✓
TP13-0-ES-0.50	24112027-017	**SUB002**					✓	
TP13-0-ES-0.50	24112027-017	**TPHFIDUS (Aliphatic)**					✓	✓
TP13-0-ES-0.50	24112027-017	**TPHFIDUS (Aromatic)**					✓	✓
TP13-0-ES-0.50	24112027-017	**VOCHSAS**					✓	✓
TP13-0-ES-0.50	24112027-017	**WSLM59**					✓	✓
TP13-0-ES-1.50	24112027-018	**BTEXHSA**					✓	✓
TP13-0-ES-1.50	24112027-018	**CLANDPREP**					✓	✓
TP13-0-ES-1.50	24112027-018	**GROHSA/BTEXHSA**					✓	✓
TP13-0-ES-1.50	24112027-018	**ICPMSS**					✓	✓
TP13-0-ES-1.50	24112027-018	**ICPSOIL**					✓	✓
TP13-0-ES-1.50	24112027-018	**ICPWSS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP13-0-ES-1.50	24112027-018	PAHMSUS					✓	✓
TP13-0-ES-1.50	24112027-018	PHSOIL					✓	✓
TP13-0-ES-1.50	24112027-018	SFAPI					✓	✓
TP13-0-ES-1.50	24112027-018	SUB002					✓	
TP13-0-ES-1.50	24112027-018	TPHFIDUS (Aliphatic)					✓	✓
TP13-0-ES-1.50	24112027-018	TPHFIDUS (Aromatic)					✓	✓
TP13-0-ES-1.50	24112027-018	VOCHSAS					✓	✓
TP13-0-ES-1.50	24112027-018	WSLM59					✓	✓
TP13-0-ES-2.50	24112027-019	BTEXHSA					✓	✓
TP13-0-ES-2.50	24112027-019	CLANDPREP					✓	✓
TP13-0-ES-2.50	24112027-019	GROHSA/BTEXHSA					✓	✓
TP13-0-ES-2.50	24112027-019	ICPMSS					✓	✓
TP13-0-ES-2.50	24112027-019	ICPSOIL					✓	✓
TP13-0-ES-2.50	24112027-019	ICPWSS					✓	✓
TP13-0-ES-2.50	24112027-019	PAHMSUS					✓	✓
TP13-0-ES-2.50	24112027-019	PHSOIL					✓	✓
TP13-0-ES-2.50	24112027-019	SFAPI					✓	✓
TP13-0-ES-2.50	24112027-019	SUB002					✓	
TP13-0-ES-2.50	24112027-019	TPHFIDUS (Aliphatic)					✓	✓
TP13-0-ES-2.50	24112027-019	TPHFIDUS (Aromatic)					✓	✓
TP13-0-ES-2.50	24112027-019	VOCHSAS					✓	✓
TP13-0-ES-2.50	24112027-019	WSLM59					✓	✓
TP14-0-ES-0.50	24112027-020	BTEXHSA					✓	✓
TP14-0-ES-0.50	24112027-020	CLANDPREP					✓	✓
TP14-0-ES-0.50	24112027-020	GROHSA/BTEXHSA					✓	✓
TP14-0-ES-0.50	24112027-020	ICPMSS					✓	✓
TP14-0-ES-0.50	24112027-020	ICPSOIL					✓	✓
TP14-0-ES-0.50	24112027-020	ICPWSS					✓	✓
TP14-0-ES-0.50	24112027-020	PAHMSUS					✓	✓
TP14-0-ES-0.50	24112027-020	PHSOIL					✓	✓
TP14-0-ES-0.50	24112027-020	SFAPI					✓	✓
TP14-0-ES-0.50	24112027-020	SUB002					✓	
TP14-0-ES-0.50	24112027-020	TPHFIDUS (Aliphatic)					✓	✓
TP14-0-ES-0.50	24112027-020	TPHFIDUS (Aromatic)					✓	✓
TP14-0-ES-0.50	24112027-020	VOCHSAS					✓	✓

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP14-0-ES-0.50	24112027-020	**WSLM59**					✓	✓
TP14-0-ES-1.50	24112027-021	**BTEXHSA**					✓	✓
TP14-0-ES-1.50	24112027-021	**CLANDPREP**					✓	✓
TP14-0-ES-1.50	24112027-021	**GROHSA/BTEXHSA**					✓	✓
TP14-0-ES-1.50	24112027-021	**ICPMSS**					✓	✓
TP14-0-ES-1.50	24112027-021	**ICPSOIL**					✓	✓
TP14-0-ES-1.50	24112027-021	**ICPWSS**					✓	✓
TP14-0-ES-1.50	24112027-021	**PAHMSUS**					✓	✓
TP14-0-ES-1.50	24112027-021	**PHSOIL**					✓	✓
TP14-0-ES-1.50	24112027-021	**SFAPI**					✓	✓
TP14-0-ES-1.50	24112027-021	**SUB002**					✓	
TP14-0-ES-1.50	24112027-021	**TPHFIDUS (Aliphatic)**					✓	✓
TP14-0-ES-1.50	24112027-021	**TPHFIDUS (Aromatic)**					✓	✓
TP14-0-ES-1.50	24112027-021	**VOCHSAS**					✓	✓
TP14-0-ES-1.50	24112027-021	**WSLM59**					✓	✓
TP14-0-ES-2.50	24112027-022	**BTEXHSA**					✓	✓
TP14-0-ES-2.50	24112027-022	**CLANDPREP**					✓	✓
TP14-0-ES-2.50	24112027-022	**GROHSA/BTEXHSA**					✓	✓
TP14-0-ES-2.50	24112027-022	**ICPMSS**					✓	✓
TP14-0-ES-2.50	24112027-022	**ICPSOIL**					✓	✓
TP14-0-ES-2.50	24112027-022	**ICPWSS**					✓	✓
TP14-0-ES-2.50	24112027-022	**PAHMSUS**					✓	✓
TP14-0-ES-2.50	24112027-022	**PHSOIL**					✓	✓
TP14-0-ES-2.50	24112027-022	**SFAPI**					✓	✓
TP14-0-ES-2.50	24112027-022	**SUB002**					✓	
TP14-0-ES-2.50	24112027-022	**TPHFIDUS (Aliphatic)**					✓	✓
TP14-0-ES-2.50	24112027-022	**TPHFIDUS (Aromatic)**					✓	✓
TP14-0-ES-2.50	24112027-022	**VOCHSAS**					✓	✓
TP14-0-ES-2.50	24112027-022	**WSLM59**					✓	✓
TP15-0-ES-0.50	24112027-023	**BTEXHSA**					✓	✓
TP15-0-ES-0.50	24112027-023	**CLANDPREP**					✓	✓
TP15-0-ES-0.50	24112027-023	**GROHSA/BTEXHSA**					✓	✓
TP15-0-ES-0.50	24112027-023	**ICPMSS**					✓	✓
TP15-0-ES-0.50	24112027-023	**ICPSOIL**					✓	✓
TP15-0-ES-0.50	24112027-023	**ICPWSS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP15-0-ES-0.50	24112027-023	**PAHMSUS**					✓	✓
TP15-0-ES-0.50	24112027-023	**PHSOIL**					✓	✓
TP15-0-ES-0.50	24112027-023	**SFAPI**					✓	✓
TP15-0-ES-0.50	24112027-023	**SUB002**					✓	
TP15-0-ES-0.50	24112027-023	**TPHFIDUS (Aliphatic)**					✓	✓
TP15-0-ES-0.50	24112027-023	**TPHFIDUS (Aromatic)**					✓	✓
TP15-0-ES-0.50	24112027-023	**VOCHSAS**					✓	✓
TP15-0-ES-0.50	24112027-023	**WSLM59**					✓	✓
TP16-0-ES-0.50	24112027-024	**BTEXHSA**					✓	✓
TP16-0-ES-0.50	24112027-024	**CLANDPREP**					✓	✓
TP16-0-ES-0.50	24112027-024	**GROHSA/BTEXHSA**					✓	✓
TP16-0-ES-0.50	24112027-024	**ICPMSS**					✓	✓
TP16-0-ES-0.50	24112027-024	**ICPSOIL**					✓	✓
TP16-0-ES-0.50	24112027-024	**ICPWSS**					✓	✓
TP16-0-ES-0.50	24112027-024	**PAHMSUS**					✓	✓
TP16-0-ES-0.50	24112027-024	**PHSOIL**					✓	✓
TP16-0-ES-0.50	24112027-024	**SFAPI**					✓	✓
TP16-0-ES-0.50	24112027-024	**SUB002**					✓	
TP16-0-ES-0.50	24112027-024	**TPHFIDUS (Aliphatic)**					✓	✓
TP16-0-ES-0.50	24112027-024	**TPHFIDUS (Aromatic)**					✓	✓
TP16-0-ES-0.50	24112027-024	**VOCHSAS**					✓	✓
TP16-0-ES-0.50	24112027-024	**WSLM59**					✓	✓
TP17-0-ES-0.50	24112027-025	**BTEXHSA**					✓	✓
TP17-0-ES-0.50	24112027-025	**CLANDPREP**					✓	✓
TP17-0-ES-0.50	24112027-025	**GROHSA/BTEXHSA**					✓	✓
TP17-0-ES-0.50	24112027-025	**ICPMSS**					✓	✓
TP17-0-ES-0.50	24112027-025	**ICPSOIL**					✓	✓
TP17-0-ES-0.50	24112027-025	**ICPWSS**					✓	✓
TP17-0-ES-0.50	24112027-025	**PAHMSUS**					✓	✓
TP17-0-ES-0.50	24112027-025	**PHSOIL**					✓	✓
TP17-0-ES-0.50	24112027-025	**SFAPI**					✓	✓
TP17-0-ES-0.50	24112027-025	**SUB002**					✓	
TP17-0-ES-0.50	24112027-025	**TPHFIDUS (Aliphatic)**					✓	✓
TP17-0-ES-0.50	24112027-025	**TPHFIDUS (Aromatic)**					✓	✓
TP17-0-ES-0.50	24112027-025	**VOCHSAS**					✓	✓

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP17-0-ES-0.50	24112027-025	**WSLM59**					✓	✓
TP18-0-ES-0.50	24112027-026	**BTEXHSA**					✓	✓
TP18-0-ES-0.50	24112027-026	**CLANDPREP**					✓	✓
TP18-0-ES-0.50	24112027-026	**GROHSA/BTEXHSA**					✓	✓
TP18-0-ES-0.50	24112027-026	**ICPMSS**					✓	✓
TP18-0-ES-0.50	24112027-026	**ICPSOIL**					✓	✓
TP18-0-ES-0.50	24112027-026	**ICPWSS**					✓	✓
TP18-0-ES-0.50	24112027-026	**PAHMSUS**					✓	✓
TP18-0-ES-0.50	24112027-026	**PHSOIL**					✓	✓
TP18-0-ES-0.50	24112027-026	**SFAPI**					✓	✓
TP18-0-ES-0.50	24112027-026	**SUB002**					✓	
TP18-0-ES-0.50	24112027-026	**TPHFIDUS (Aliphatic)**					✓	✓
TP18-0-ES-0.50	24112027-026	**TPHFIDUS (Aromatic)**					✓	✓
TP18-0-ES-0.50	24112027-026	**VOCHSAS**					✓	✓
TP18-0-ES-0.50	24112027-026	**WSLM59**					✓	✓
TP19-0-ES-0.50	24112027-027	**BTEXHSA**					✓	✓
TP19-0-ES-0.50	24112027-027	**CLANDPREP**					✓	✓
TP19-0-ES-0.50	24112027-027	**GROHSA/BTEXHSA**					✓	✓
TP19-0-ES-0.50	24112027-027	**ICPMSS**					✓	✓
TP19-0-ES-0.50	24112027-027	**ICPSOIL**					✓	✓
TP19-0-ES-0.50	24112027-027	**ICPWSS**					✓	✓
TP19-0-ES-0.50	24112027-027	**PAHMSUS**					✓	✓
TP19-0-ES-0.50	24112027-027	**PHSOIL**					✓	✓
TP19-0-ES-0.50	24112027-027	**SFAPI**					✓	✓
TP19-0-ES-0.50	24112027-027	**SUB002**					✓	
TP19-0-ES-0.50	24112027-027	**TPHFIDUS (Aliphatic)**					✓	✓
TP19-0-ES-0.50	24112027-027	**TPHFIDUS (Aromatic)**					✓	✓
TP19-0-ES-0.50	24112027-027	**VOCHSAS**					✓	✓
TP19-0-ES-0.50	24112027-027	**WSLM59**					✓	✓
TP20-0-ES-1.20	24112027-028	**BTEXHSA**					✓	✓
TP20-0-ES-1.20	24112027-028	**CLANDPREP**					✓	✓
TP20-0-ES-1.20	24112027-028	**GROHSA/BTEXHSA**					✓	✓
TP20-0-ES-1.20	24112027-028	**ICPMSS**					✓	✓
TP20-0-ES-1.20	24112027-028	**ICPSOIL**					✓	✓
TP20-0-ES-1.20	24112027-028	**ICPWSS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
TP20-0-ES-1.20	24112027-028	PAHMSUS					✓	✓
TP20-0-ES-1.20	24112027-028	PHSOIL					✓	✓
TP20-0-ES-1.20	24112027-028	SFAPI					✓	✓
TP20-0-ES-1.20	24112027-028	SUB002					✓	
TP20-0-ES-1.20	24112027-028	TPHFIDUS (Aliphatic)					✓	✓
TP20-0-ES-1.20	24112027-028	TPHFIDUS (Aromatic)					✓	✓
TP20-0-ES-1.20	24112027-028	VOCHSAS					✓	✓
TP20-0-ES-1.20	24112027-028	WSLM59					✓	✓
TP22-0-ES-1.60	24112027-029	BTEXHSA					✓	✓
TP22-0-ES-1.60	24112027-029	CLANDPREP					✓	✓
TP22-0-ES-1.60	24112027-029	GROHSA/BTEXHSA					✓	✓
TP22-0-ES-1.60	24112027-029	ICPMSS					✓	✓
TP22-0-ES-1.60	24112027-029	ICPSOIL					✓	✓
TP22-0-ES-1.60	24112027-029	ICPWSS					✓	✓
TP22-0-ES-1.60	24112027-029	PAHMSUS					✓	✓
TP22-0-ES-1.60	24112027-029	PHSOIL					✓	✓
TP22-0-ES-1.60	24112027-029	SFAPI					✓	✓
TP22-0-ES-1.60	24112027-029	SUB002					✓	
TP22-0-ES-1.60	24112027-029	TPHFIDUS (Aliphatic)					✓	✓
TP22-0-ES-1.60	24112027-029	TPHFIDUS (Aromatic)					✓	✓
TP22-0-ES-1.60	24112027-029	VOCHSAS					✓	✓
TP22-0-ES-1.60	24112027-029	WSLM59					✓	✓
WS01-0-ES-0.80	24112027-030	BTEXHSA					✓	✓
WS01-0-ES-0.80	24112027-030	CLANDPREP					✓	✓
WS01-0-ES-0.80	24112027-030	GROHSA/BTEXHSA					✓	✓
WS01-0-ES-0.80	24112027-030	ICPMSS					✓	✓
WS01-0-ES-0.80	24112027-030	ICPSOIL					✓	✓
WS01-0-ES-0.80	24112027-030	ICPWSS					✓	✓
WS01-0-ES-0.80	24112027-030	PAHMSUS					✓	✓
WS01-0-ES-0.80	24112027-030	PHSOIL					✓	✓
WS01-0-ES-0.80	24112027-030	SFAPI					✓	✓
WS01-0-ES-0.80	24112027-030	SUB002					✓	
WS01-0-ES-0.80	24112027-030	TPHFIDUS (Aliphatic)					✓	✓
WS01-0-ES-0.80	24112027-030	TPHFIDUS (Aromatic)					✓	✓
WS01-0-ES-0.80	24112027-030	VOCHSAS					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS01-0-ES-0.80	24112027-030	**WSLM59**					✓	✓
WS02-0-ES-0.80	24112027-031	**BTEXHSA**					✓	✓
WS02-0-ES-0.80	24112027-031	**CLANDPREP**					✓	✓
WS02-0-ES-0.80	24112027-031	**GROHSA/BTEXHSA**					✓	✓
WS02-0-ES-0.80	24112027-031	**ICPMSS**					✓	✓
WS02-0-ES-0.80	24112027-031	**ICPSOIL**					✓	✓
WS02-0-ES-0.80	24112027-031	**ICPWSS**					✓	✓
WS02-0-ES-0.80	24112027-031	**PAHMSUS**					✓	✓
WS02-0-ES-0.80	24112027-031	**PHSOIL**					✓	✓
WS02-0-ES-0.80	24112027-031	**SFAPI**					✓	✓
WS02-0-ES-0.80	24112027-031	**SUB002**					✓	
WS02-0-ES-0.80	24112027-031	**TPHFIDUS (Aliphatic)**					✓	✓
WS02-0-ES-0.80	24112027-031	**TPHFIDUS (Aromatic)**					✓	✓
WS02-0-ES-0.80	24112027-031	**VOCHSAS**					✓	✓
WS02-0-ES-0.80	24112027-031	**WSLM59**					✓	✓
WS03-0-ES-0.80	24112027-032	**BTEXHSA**					✓	✓
WS03-0-ES-0.80	24112027-032	**CLANDPREP**					✓	✓
WS03-0-ES-0.80	24112027-032	**GROHSA/BTEXHSA**					✓	✓
WS03-0-ES-0.80	24112027-032	**ICPMSS**					✓	✓
WS03-0-ES-0.80	24112027-032	**ICPSOIL**					✓	✓
WS03-0-ES-0.80	24112027-032	**ICPWSS**					✓	✓
WS03-0-ES-0.80	24112027-032	**PAHMSUS**					✓	✓
WS03-0-ES-0.80	24112027-032	**PHSOIL**					✓	✓
WS03-0-ES-0.80	24112027-032	**SFAPI**					✓	✓
WS03-0-ES-0.80	24112027-032	**SUB002**					✓	
WS03-0-ES-0.80	24112027-032	**TPHFIDUS (Aliphatic)**					✓	✓
WS03-0-ES-0.80	24112027-032	**TPHFIDUS (Aromatic)**					✓	✓
WS03-0-ES-0.80	24112027-032	**VOCHSAS**					✓	✓
WS03-0-ES-0.80	24112027-032	**WSLM59**					✓	✓
WS04-0-ES-0.80	24112027-033	**BTEXHSA**					✓	✓
WS04-0-ES-0.80	24112027-033	**CLANDPREP**					✓	✓
WS04-0-ES-0.80	24112027-033	**GROHSA/BTEXHSA**					✓	✓
WS04-0-ES-0.80	24112027-033	**ICPMSS**					✓	✓
WS04-0-ES-0.80	24112027-033	**ICPSOIL**					✓	✓
WS04-0-ES-0.80	24112027-033	**ICPWSS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS04-0-ES-0.80	24112027-033	**PAHMSUS**					✓	✓
WS04-0-ES-0.80	24112027-033	**PHSOIL**					✓	✓
WS04-0-ES-0.80	24112027-033	**SFAPI**					✓	✓
WS04-0-ES-0.80	24112027-033	**SUB002**					✓	
WS04-0-ES-0.80	24112027-033	**TPHFIDUS (Aliphatic)**					✓	✓
WS04-0-ES-0.80	24112027-033	**TPHFIDUS (Aromatic)**					✓	✓
WS04-0-ES-0.80	24112027-033	**VOCHSAS**					✓	✓
WS04-0-ES-0.80	24112027-033	**WSLM59**					✓	✓
WS05-0-ES-0.80	24112027-034	**BTEXHSA**					✓	✓
WS05-0-ES-0.80	24112027-034	**CLANDPREP**					✓	✓
WS05-0-ES-0.80	24112027-034	**GROHSA/BTEXHSA**					✓	✓
WS05-0-ES-0.80	24112027-034	**ICPMSS**					✓	✓
WS05-0-ES-0.80	24112027-034	**ICPSOIL**					✓	✓
WS05-0-ES-0.80	24112027-034	**ICPWSS**					✓	✓
WS05-0-ES-0.80	24112027-034	**PAHMSUS**					✓	✓
WS05-0-ES-0.80	24112027-034	**PHSOIL**					✓	✓
WS05-0-ES-0.80	24112027-034	**SFAPI**					✓	✓
WS05-0-ES-0.80	24112027-034	**SUB002**					✓	
WS05-0-ES-0.80	24112027-034	**TPHFIDUS (Aliphatic)**					✓	✓
WS05-0-ES-0.80	24112027-034	**TPHFIDUS (Aromatic)**					✓	✓
WS05-0-ES-0.80	24112027-034	**VOCHSAS**					✓	✓
WS05-0-ES-0.80	24112027-034	**WSLM59**					✓	✓
WS06-0-ES-0.80	24112027-035	**BTEXHSA**					✓	✓
WS06-0-ES-0.80	24112027-035	**CLANDPREP**					✓	✓
WS06-0-ES-0.80	24112027-035	**GROHSA/BTEXHSA**					✓	✓
WS06-0-ES-0.80	24112027-035	**ICPMSS**					✓	✓
WS06-0-ES-0.80	24112027-035	**ICPSOIL**					✓	✓
WS06-0-ES-0.80	24112027-035	**ICPWSS**					✓	✓
WS06-0-ES-0.80	24112027-035	**PAHMSUS**					✓	✓
WS06-0-ES-0.80	24112027-035	**PHSOIL**					✓	✓
WS06-0-ES-0.80	24112027-035	**SFAPI**					✓	✓
WS06-0-ES-0.80	24112027-035	**SUB002**					✓	
WS06-0-ES-0.80	24112027-035	**TPHFIDUS (Aliphatic)**					✓	✓
WS06-0-ES-0.80	24112027-035	**TPHFIDUS (Aromatic)**					✓	✓
WS06-0-ES-0.80	24112027-035	**VOCHSAS**					✓	✓

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
WS06-0-ES-0.80	24112027-035	**WSLM59**					✓	✓

Analysis Method

Method Code	Method Description	Analysis Method
BTEXHSA	BTEX by GCFID	As Received
CLANDPREP	CLand Prep and Dry Weight Correction to 35°C	As Received
CLANDPREP	Solid Material Description	As Received
GROHSA/BTEXHSA	GRO CWG UK (C5-C10) Ali/Aro Split	As Received
ICPMSS	Arsenic in Solids by ICPMS	Air Dried & Ground
ICPMSS	Cadmium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Chromium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Copper in Solids by ICPMS	Air Dried & Ground
ICPMSS	Lead in Solids by ICPMS	Air Dried & Ground
ICPMSS	Mercury in Solids by ICPMS	Air Dried & Ground
ICPMSS	Nickel in Solids by ICPMS	Air Dried & Ground
ICPMSS	Zinc in Solids by ICPMS	Air Dried & Ground
ICPSOIL	Boron in Solids by ICPOES	Air Dried & Ground
ICPWSS	Sulphate as SO4 (Water Soluble)	Air Dried & Ground
PAHMSUS	16 PAHs by GCMS	As Received
PHSOIL	pH (2.5:1)	As Received
SFAPI	Cyanide (Total) by SFA	As Received
SFAPI	Phenol Index (Total) by SFA	As Received
SUB002	Asbestos Stage 1 (with Stage 2 Trigger)	
SUB002	Asbestos Stage 2: Quantification	
TPHFIDUS (Aliphatic)	TPH (CWG UK) Aliphatic Split with Carbon Banding	As Received
TPHFIDUS (Aromatic)	TPH (CWG UK) Aromatic Split with Carbon Banding	As Received
VOCHSAS	VOCs (Target List) by GCMS	As Received
WSLM59	SOM: Soil Organic Matter (%) (Calc)	Air Dried & Ground

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Project Number: 24112027

Client: Igne
Date Issued: 25/11/2024
Project Name: 26762 - Cambushinnie 400KV Substation 1

Additional Information

This report refers to samples as received. SOCOTEC UK Ltd takes no responsibility for accuracy or competence of sampling by others.

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 35 ° C.

All Air Dried and Ground Samples (ADG) are oven dried at less than 35° C.

This report shall not be reproduced except in full, without written approval of the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any results marked with * are not covered by our scope of UKAS accreditation. If applicable, further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis
NA = Sample is not amenable for the required analysis
ND = Results cannot be determined

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the subcontracted lab for information regarding any deviancies for this analysis.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis

APPENDIX E
ARCHAEOLOGICAL CLERK OF WORKS REPORT

GUARD archaeology

Cambushinnie Road, Near Braco, Perthshire
Data Structure Report
Project 6660

www.guard-archaeology.co.uk

Cambushinnie Road, Near Braco, Perthshire
Data Structure Report

On behalf of:	Igne
NGR:	NN 83653 09087
Project Number:	6660
Report by:	Christina Mollie Dogherty
Illustrations:	Jennifer Simonson & Alan Hunter Blair
Project Manager:	Iraia Arabaolaza

DRAFT	Iraia Arabaolaza	**FINAL**	
19/11/24	Project Manager		
			

This document has been prepared in accordance with GUARD Archaeology Limited standard operating procedures.

GUARD Archaeology Limited
52 Elderpark Workspace
100 Elderpark Street
Glasgow
G51 3TR

Tel: 0141 445 8800
Fax: 0141 445 3222
email: info@guard-archaeology.co.uk

www.guard-archaeology.co.uk

Contents

List of Figures

List of Plates

Figure 1
Site Location Plan

0 500 m

Executive Summary

1.1 Archaeological monitoring and recording was carried out by GUARD Archaeology Limited, on behalf of Igne on an area proposed for the development of a haul road near Braco, Perthshire. The development route amounted to approximately 1.2 kilometres across agricultural land and woodland. No significant archaeological features were encountered during the monitoring. The work was undertaken between 14th and 25th October 2024.

Introduction

2.1 This report sets out the results of archaeological monitoring and recording undertaken by GUARD Archaeology, on behalf of Igne on a site proposed for the development of a haul road near Braco, Perthshire. The work was undertaken to meet the relevant condition for Planning Reference Number: 24/00012/PAN.

Site Location, Topography and Geology

3.1 The ground investigation work traverses an area of land roughly 1.2 km long to the south of Braco on an east/west alignment and runs from the west side of the A822 (NGR: NN 83653 09087), opposite the Ardoch House South Lodge, westwards traversing the Keir Burn then passing to the north of Keirallan and Glassick and terminating close to the Gamekeepers Cottage to the north-west of Easter Feddal (NGR: NN 82480 09232). The trial pits were located in agricultural fields and areas of woodland at c. 107 m OD (Figure 1).

3.2 The bedrock below the development consists of Dunblane Sandstone Member - Sandstone. Sedimentary bedrock formed between 419.2 and 393.3 million years ago during the Devonian period. While the superficial deposits consist of alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period. (BGS Geological Survey, Geology Viewer).

Archaeological Background

4.1 A review of desk-based sources undertaken in advance of the test pitting revealed no known archaeological sites within the development area.

4.2 Grinnan Hill Fort, a Scheduled Monument (SM3088), lies 250 m to the north of the site. It is described as enclosed by a triple line of defence partly ramparted and trenched, but a later field bank and field override and obliterate the defences on the north-east sector of the fort (HER ID MPK698). To the south of Grinnan Hill Fort a village of unassigned period is recorded (HER ID MPK5266). An enclosure and mound described by Crawford as 'Ancient remains of unknown age, probably post-Roman, consisting of an earthen circle, 35 yards (32 m) across a rectangular enclosure about 130 ft (39.6 m) by 100 ft (30.5 m), both on the east side of the (Roman) road, and a mound on the west, midway between the circle and the lodge' is located 285 m to the east of the site (HER ID MPK668). The Roman Road referred to by Crawford extends along the east side of and parallel to the A822 and is orientated in a north/ south direction. This section of the road formed part of the Camelon - Ardoch - Strageath - Cargill Roman Road which linked the Antonine Wall with the fort at Ardoch (Braco). The Scheduled Monument Ardoch Roman Fort (SM1601; HER ID MPK665) is located around 800 m north of the site and is one of the best preserved. The remains comprise a rectangular area of around 2 hectares, surrounded by a rampart and up to five ditches. It was occupied by the Roman army on several occasions. Aerial photographs have revealed cropmarks in the vicinity of the fort, representing up to six temporary marching camps and another probable fort.

4.3 Stray finds from around the site include; a bronze flat axe, 5.7" (145 mm) long (Canmore ID 25265), a 'cushion' mace-head of a fine-grained stone now having a polished surface of uniform brown colour (Canmore ID 25264). Two Late Bronze Age Class V spearheads (Canmore ID 25259) were found in the same area as the axe and the mace, 75 m to the north-east of Glassick,

around 130 m to the south of the development site. A Roman coin, a very worn denarius (not closely identifiable), and a copper-alloy headstud brooch, were found during metal detecting to the west of the Roman fort complex. Both items are now in the possession of the Perth Museum and Art Gallery (Hunter 2019). In 1825 an early medieval long cist (Canmore ID 25231) containing human remains was found to the immediate south of the Ardoch Roman Fort, this is one of the sites of stone coffins surveyed in connection with the Ardoch Fort, these are only collectively referred to in the Object Name Books of the Ordnance Survey (ONB 1863).

4.4 There has been and still are a number of historic buildings in the area around the site. Middle Fedal, alternatively known as Fedal Castle (Canmore ID 122450) originated in the medieval period; it was drastically renovated in Victorian times and was subsequently demolished in 1953. Braco castle (Canmore ID 25398) located 2 km to the north of the site, forms part of an inventoried garden and designed landscape (GDL00067). Ardoch House South Lodge (Canmore ID 316866) was built in the nineteenth century and is located opposite the east end of the site, on the east side of the A822.

4.5 Roy's Military Survey of Scotland of 1745-1755 shows the site as unenclosed agricultural land. The earthworks of Grinnan Hill Fort and Ardoch Roman Fort are depicted with buildings close to the south end of the fort. Ardoch House and grounds lie to the south and east of the fort. A further cluster of buildings are depicted to the south of Ardoch Fort and east of Grinnan Hill Fort, on the east side of the road. 'Nether Fedall' and 'West Fedall' are depicted as small clusters of buildings along with other unnamed buildings close by. The proposed development area cannot be accurately identified judging solely by the surrounding place-names. The earliest cartographic source to show the site in any detail is the first edition 1866 Ordnance Survey map which shows the field boundaries almost exactly as they exist today.

4.6 Previous archaeological investigations in the area have taken place at Mid Lane, Braco. An archaeological evaluation in advance of development encountered a stone culvert with water flowing to the south-west but little else of interest (Cachart 2001). A further archaeological evaluation on the site of a proposed new primary school building at Feddal Rd, Braco; only modern utilities and field drains were found (Bowler 2023).

4.7 The assessment has indicated that there is a potential for buried and unknown archaeological remains to survive within the development area.

4.8 A walkover survey of the site was undertaken on Monday 23rd September 2024 in dry but overcast conditions. The fields comprise pasture, a turnip crop, a Christmas tree plantation and an area of semi-mature woodland towards the western site boundary. The entire corridor was inspected and the locations of all 22 trial pits were visited. Flood alleviation bunds were visible on both sides of the Keir Burn. A short earth and stone bank, aligned roughly east/west was visible on the south side of a deep broad gully with a burn extending east/west at its base at NN 82920 09208. Part of the south side of the earth and stone bank was denuded, exposing a possible rubble-built core of stone. No upstanding archaeological sites were visible at any of the trial pit locations. The possible earth and stone bank will not be directly affected by access routes during the SI works.

Aims and Objectives

5.1 The aim of the archaeological works was to:

- identify and report the extent and nature of known archaeological features within the development area;
- identify and report as yet unknown archaeological features and deposits within the development area.

5.2 The objectives were therefore to:

- conduct archaeological monitoring and recording across the development area that was to be impacted by ground-breaking works, excluding services and their buffer zones to establish and report on the presence or absence of any archaeological remains, and their character, date and extent if surviving; and

- submit a report to data structure level for agreement of Perth and Kinross Heritage Trust (PKHT hereafter), acting on behalf of the Planning Authority, on completion of the archaeological fieldwork, which includes an outline of the scope of any further analysis and/or excavation works should any significant archaeology be encountered.

Methodology

6.1 All work was conducted in line with a Method Statement (Appendix D) agreed in advance with PKHT and the following standards and guidance of the Chartered Institute for Archaeologists (CIfA), of which GUARD Archaeology is a Registered Organisation:

- Code of conduct (2022);

- Standard for archaeological monitoring and recording (2023);

- Universal guidance for archaeological monitoring and recording (2023);

- Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2020);

- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2020);

6.2 Topsoil was stripped using a mechanical excavator, fitted with a flat-bladed ditching bucket, under close archaeological supervision. The topsoil was removed to the surface of the subsoil or the first significant archaeological horizon. The test pits were in general approximately 2 m to 3 m long by 1.8 m wide.

6.3 All on-site recording, written, drawn and photographic, was to the standards normally pertaining in archaeological fieldwork. Weather conditions for the evaluation were mixed with dry, sunny days and occasional rain.

6.4 No significant features were encountered during the works that would have required sampling.

Results

7.1 The results should be read with reference to the records in Appendices A and B and Figure 1.

7.2 During the course of the monitoring & recording no features of archaeological significance were encountered. A total of 22 test pits and three soak away pits were excavated, the results of which are set out in Appendix A. For the majority of the area the test pits revealed a topsoil consisting of a dark greyish brown to dark to mid reddish brown sandy clay between 0.1 m and 0.87 m thick (001).

7.3 The topsoil lay directly over natural subsoil which changed across the site. Test pits 1-2, 4- 6, 9, 16, 18 and 22 revealed a dark to mid greyish brown silty clay (002) while Test pits 10, 11, 13, 17, 19 and 21 revealed a mid orange brown silty clay (003). No significant archaeology was uncovered during the monitoring works.

Plate 1: General view of the site from SSE

Plate 2: Post-excavation shot of TP 09

Plate 3: Post-excavation shot of TP 10

Plate 4: West facing section of TP 04

Discussion

8.1 The monitoring & recording identified nothing of archaeological significance. The area where the test pits were located had a variety of functions, as pasture, turnip crop, Christmas tree plantation as well as semi-mature woodland. The majority of test pits were located in flat grass covered fields.

Conclusions

9.1 The monitoring & recording work encountered no archaeology. It is therefore advised that no further archaeological work is likely to be required by PKHT in the areas tested.

9.2 GUARD Archaeology would stress that any final decisions on the nature and extent of any future archaeological work rest with the planning authority.

9.3 A summary of the project results will be submitted to Discovery and Excavation in Scotland. A copy of this is included in Appendix C. The archive for the project, including a copy of the report, will be submitted to the National Historic Records for Scotland (NHRE) within six months of the completion of all fieldwork.

9.4 The online OASIS form at http://ads.ahds.ac.uk/project/oasis/ for this project (OASIS Reference: guardarc1-529251) will be completed within 3 months. Once the Data Structure Report has become a public document by submission to or incorporation into the SMR, the PKHT will validate the OASIS form thus placing the information into the public domain on the OASIS website.

Acknowledgements

10.1 GUARD Archaeology would like to thank Igne for their assistance. Plant and drivers were supplied by Igne. Technical support was from Aileen Maule. A survey of trench locations was conducted by Igne. The illustrations were produced by Jennifer Simonson & Alan Hunter Blair. The report was desk top published by Jennifer Simonson. The project was managed for GUARD Archaeology by Iraia Arabaolaza.

Cambushinnie Road, Near Braco, Perthshire
Data Structure Report

Section 2: Appendices

www.guard-archaeology.co.uk

Appendices

Appendix A: List of Test Pits

Tr No	Length (m)	Width (m)	Depth (m)	Topsoil/Overburden	Subsoil
1	2.2	1.8	-	Dark greyish brown sandy clay. 0.40 m thick	Mid greyish brown silty clay with very frequent gravel of sub-angular and sub-rounded stone inclusions
2	2	1.8		Dark greyish brown sandy clay. 0.40 m thick	Mid greyish brown silty clay with very frequent gravel of sub-angular and sub-rounded stone inclusions
3				CANCELLED	
4	2.3	1.8		Dark greyish brown sandy clay. 0.87 m thick	Mid greyish brown silty clay with gravel inclusions
4 Soakaway	2.3	1.8		Dark greyish brown sandy clay. 0.55 m thick	Mid greyish brown silty clay with very frequent gravel of sub-angular and sub-rounded stone inclusions
5	2.4	1.8		Dark greyish brown sandy clay. 0.65 m thick	Mid greyish brown silty clay with gravel inclusions
6	3.8	1.8		Dark reddish brown sandy clay. 0.10 m thick	Dark greyish brown silty clay with frequent sub-rounded stones
7	2	1.8		Mid reddish brown sandy clay. 0.15 m thick	Dark reddish brown silty clay with frequent sub-rounded stones
7 Soakaway	1.5	0.6	1.3	Dark reddish brown sandy clay. 0.10 m thick	Dark reddish brown silty clay with frequent sub-rounded stones
8	2.4	1.8		Mid reddish brown sandy clay. 0.22 m thick	Mid brownish grey silty clay
9	2.9	1.8		Mid reddish brown sandy clay. 0.42 m thick	Mid brownish grey silty clay
9 Soakaway	3.2	1.8		Mid reddish brown sandy clay. 0.50 m thick	Mid brownish grey silty clay
10	2.2	1.8		Dark reddish brown sandy clay. 0.45 m thick	Mid orange brown silty clay
11	3	1.8		Dark reddish brown sandy clay. 0.34 m thick	Mid orange brown silty clay
12	2.5	1.8		Dark greyish brown sandy clay. 0.44 m thick	Light reddish brown silty clay
13	2.3	1.8		Dark greyish brown sandy clay. 0.30 m thick	Mid orange brown silty clay
14	3.5	1		Dark blackish brown silt sand. 0.44 m thick	Mid pinkish brown silty sand
15	1.2	1.8	-	Dark greyish brown sandy clay. 0.50 m thick	Mid pinkish brown clayey sand and sub-angular stones
16	2.4	1.8		Dark blackish brown silt sand. 0.50 m thick	Mid greyish brown silty clay
17	1.2	1.8		Dark greyish brown silty sand, slightly gravelly. 0.70 m thick	Mid orange brown silty clay
18	3.1	1.8		Dark greyish brown sandy clay. 0.32 m thick	Mid greyish brown sandy silt with gravel inclusions
19	3.1	1.8		Dark greyish brown sandy clay. 0.30 m thick	Mid orange brown silty clay
20	1.5	1.8		Dark greyish brown sandy clay. 0.42 m thick	Mid brownish grey silty clay
21	2.3	1.8		Dark greyish brown sandy clay. 0.36 m thick	Mid brownish orange silty clay
22	2.1	1.8		Dark greyish brown sandy clay. 0.70 m thick	Mid greyish brown silty clay with gravel inclusions

Appendix B: List of Photographs

Frame	Area	Context No.	Subject	Taken from
1	-	-	ID SHOT	-
2	-	-	Pre-excavation view of area	W
3	-	-	Pre-excavation view of area	NE
4	-	-	Pre-excavation view of area	SE
5	-	-	Pre-excavation view of area	S
6	-	TP 06	Pre- excavation view	SE
7	-	TP 06	Mid-excavation view	SE
8	-	TP 06	Post-excavation view	SE
9	-	TP 06	Northeast facing section	NE
10	-	TP 07	Soakaway pre-excavation view	SW
11	-	TP 07	Soakaway post-excavation view	SW
12	-	TP 07	Pre-excavation view of area	SW
13	-	TP 07	Post-excavation view	SW
14	-	TP 07	Southwest facing section	SW
15	-	TP 09	Pre-excavation view of area	S
16	-	TP 09	Soakaway pre-excavation view	SW
17	-	TP 09	Soakaway post-excavation view	W
18	-	TP 09	South facing section	S
19	-	TP 09	Post-excavation view	SW
20	-	TP 08	Post-excavation view	SW
21	-	TP 08	Northeast facing section	NE
22	-	TP 09	Post-excavation view	SW
23	-	TP 09	Northeast facing section	NE
24	-	TP 20	Pre-excavation view	SE
25	-	TP 20	Post-excavation view	SE
26	-	TP 20	East facing section	E
27	-	TP 12	Pre-excavation view	S
28	-	TP 12	Post-excavation view	S
29	-	TP 12	East facing section	E
30	-	TP 11	Pre-excavation view	W
31	-	TP 11	Post-excavation view	W
32	-	TP 11	South facing section	S
33	-	TP 10	Pre-excavation view	W
34	-	TP 10	Post-excavation view	W
35	-	TP 10	South facing section	S
36	-	TP 21	Pre-excavation view	SW
37	-	TP 21	Post-excavation view	W
38	-	TP 21	South facing section	S
39	-	TP 18	Pre-excavation view	W
40	-	TP 18	Post-excavation view	S
41	-	TP 18	West facing section	W
42	-	TP 19	Pre-excavation view	W
43	-	TP 19	Post-excavation view	S
44	-	TP 19	East facing section	E
45	-	TP 05	Pre-excavation view	SW
46	-	TP 05	Post-excavation view	SE
47	-	TP 05	Northeast facing section	NE
48	-	TP 22	Pre-excavation view	SW
49	-	TP 22	Post-excavation view	SW
50	-	TP 22	Southeast facing section	SE
51	-	TP 04	Pre-excavation view	SW
52	-	TP 04	Post-excavation view	S
53	-	TP 04	West facing section	W
54	-	TP 04	Soakaway pre-excavation view	SW

Frame	Area	Context No.	Subject	Taken from
55	-	TP 04	Soakaway post-excavation view	S
56	-	TP 04	Soakaway east facing section	E
57	-	TP 02	Pre-excavation view	SW
58	-	TP 02	Post-excavation view	S
59	-	TP 02	East facing section	E
60	-	TP 01	Pre-excavation view	SW
61	-	TP 01	Post-excavation view	S
62	-	TP 01	East facing section	E
63	-	TP 13	Pre-excavation view	SW
64	-	TP 13	Post-excavation view	W
65	-	TP 13	South facing section	S
66	-	TP 17	Pre-excavation view	SW
67	-	TP 17	Post-excavation view	SW
68	-	TP 17	Northeast facing section	NE
69	-	TP 17	Base of TP 17 flooding	SW
70	-	TP 16	Pre-excavation view	SW
71	-	TP 16	Post-excavation view	W
72	-	TP 16	South facing section	S
73	-	TP 15	Pre-excavation view	W
74	-	TP 15	Post-excavation view	SW
75	-	TP 15	Northwest facing section	NW
76	-	TP 14	Pre-excavation view	W
77	-	TP 14	Post-excavation view	S
78	-	TP 14	East facing section	E

Appendix C: Discovery and Excavation Scotland Entry

LOCAL AUTHORITY:	Perth and Kinross
PROJECT TITLE/SITE NAME:	Cambushinnie Road, Near Braco, Perthshire
PROJECT CODE:	6660
PARISH:	Ardoch
NAME OF CONTRIBUTOR:	Christina Mollie Dogherty
NAME OF ORGANISATION:	GUARD Archaeology Ltd
TYPE(S) OF PROJECT:	Monitoring & recording
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NN 83653 09087
START DATE (this season)	14th October 2024
END DATE (this season)	25th October 2024
PREVIOUS WORK (incl. *DES* ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	Archaeological monitoring and recording was carried out by GUARD Archaeology Limited, on behalf of Igne on an area proposed for the development of a haul road near Braco. A total of 22 test pits were monitored on the development area amounted to approximately 1.2 km of agricultural land. No significant archaeological features were encountered during fieldwork.
PROPOSED FUTURE WORK:	No
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Igne
ADDRESS OF MAIN CONTRIBUTOR:	GUARD Archaeology Ltd, 52 Elderpark Workspace, 100 Elderpark Street, Glasgow G51 3TR
EMAIL ADDRESS:	maureen.kilpatrick@guard.archaeology.co.uk
ARCHIVE LOCATION (intended/ deposited)	NRHE

Appendix D: Method Statement

CAMBUSHINNIE ROAD, NEAR BRACO, PERTHSHIRE

ARCHAEOLOGICAL MONITORING & RECORDING

METHOD STATEMENT

PROJECT 6660

by

Alan Hunter Blair

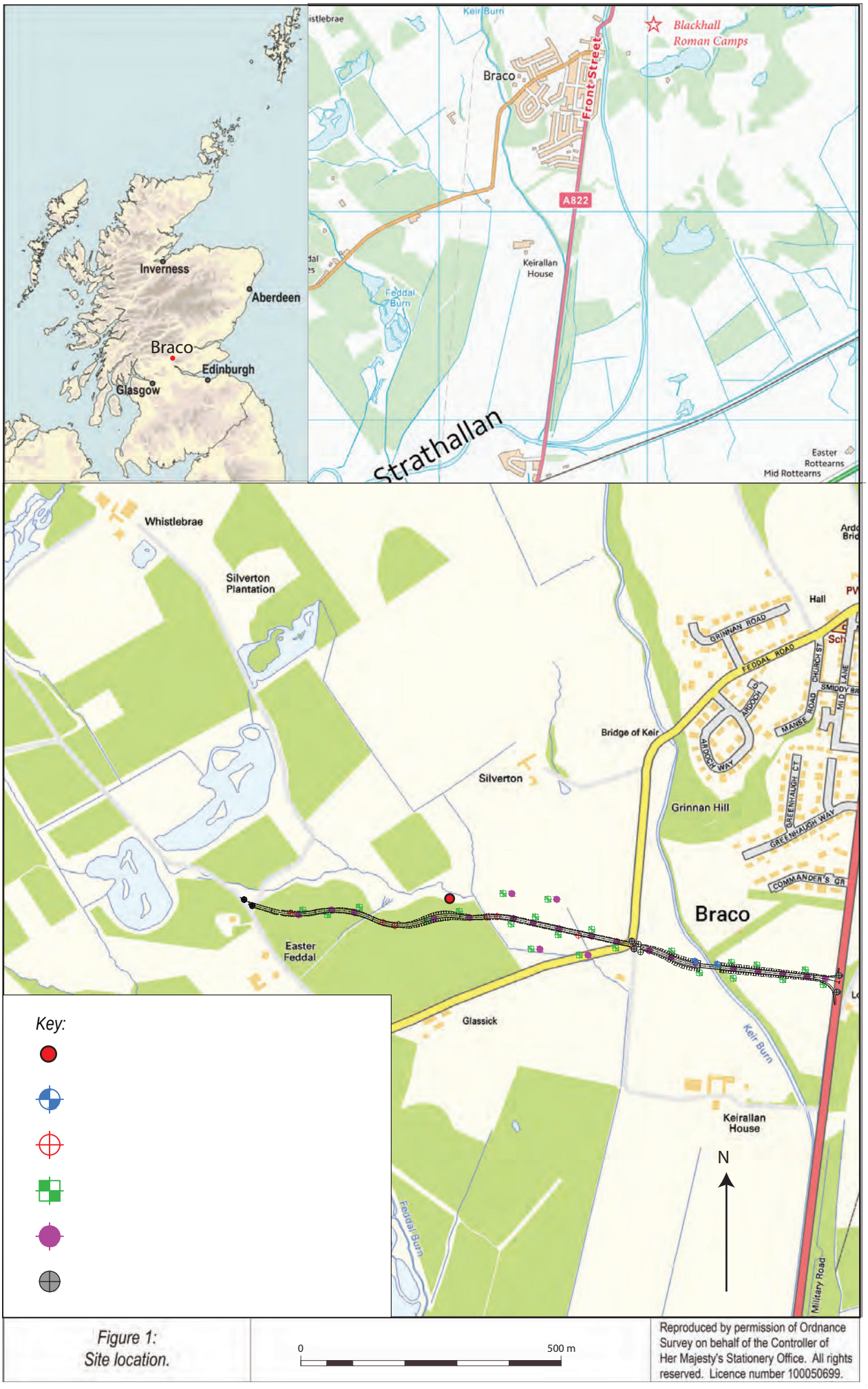


Figure 1: Site location.

0 500 m

Executive Summary

1.1 This document sets out a Method Statement (MS hereafter) for the required archaeological monitoring and recording during trial pitting works at Cambushinnie Road, Braco Perthshire. This document will require to be agreed by Perth and Kinross Heritage Trust (PKHT hereafter), prior to the commencement of archaeological fieldwork.

Introduction

2.1 This MS sets out the scope and methodology for the archaeological monitoring and recording during the ground investigations for a proposed development of a haul road near Braco, Perthshire. In accordance with the recommendation from PKHT, archaeological monitoring and recording during trial pitting works associated with the development will be undertaken.

2.2 This MS outlines the programme of archaeological works that may be needed to mitigate the effects of the development. It details the methodology to be employed in implementing the Stage 1 archaeological works. The mitigation methodology to be employed during Stage 2 excavation and Stage 3 post excavation analysis, publication and public outreach, if required, will be specified in addenda to this document. These addenda, if required, will be submitted for the approval of PKHT prior to the commencement of any archaeological work. All phases of work will be funded by the developer as required by the Planning Authority.

Site Location

3.1 The ground investigation work traverses an area of land roughly 1.2 km long to the south of Braco on an east/west alignment and runs from the west side of the A822 (NGR: NN 83653 09087), opposite the Ardoch House South Lodge, westwards traversing the Keir Burn then passing to the north of Keirallan and Glassick and terminating close to the Gamekeepers Cottage to the northwest of Easter Feddal (NGR: NN 82480 09232). The trial pits are located in agricultural fields and areas of woodland at 107 m OD (Figure 1).

3.2 The bedrock below the development consists of Dunblane Sandstone Member - Sandstone. Sedimentary bedrock formed between 419.2 and 393.3 million years ago during the Devonian period. While the superficial deposits consist of alluvium - Clay, silt, sand and gravel. Sedimentary superficial deposit formed between 11.8 thousand years ago and the present during the Quaternary period. (BGS Geological Survey, Geology Viewer).

Archaeological Background

4.1 There are no known archaeological sites within the development area.

4.2 Grinnan Hill Fort a Scheduled Monument (SM3088) lies 250 m to the north of the site. It is described as enclosed by a triple line of defence partly ramparted and trenched but a later field bank and field override and obliterate the defences on the north-east sector (HER ID MPK698). To the south of Grinnan Hill Fort a village of unassigned period recorded (HER ID MPK5266). An enclosure and mound described by Crawford as 'Ancient remains of unknown age, probably post-Roman, consisting of an earthen circle, 35 yards across a rectangular enclosure about 130 ft by 100 ft, both on the east side of the (Roman) road, and a mound on the west, midway between the circle and the lodge' is located 285 m to the east of the site (HER ID MPK668). The Roman Road referred to by Crawford runs along the east side of and parallel to the A822 and is orientated in a north to south direction. This section of the road formed part of the Camelon - Ardoch - Strageath - Cargill Roman Road which linked the Antonine Wall with the fort at Ardoch (Braco). The Scheduled Monument Ardoch Roman Fort (SM1601) (HER ID MPK665) is located around 800 m north of the site and is one of the best preserved. The remains comprise a rectangular area of around two hectares, surrounded by a rampart and up to five ditches in places. It was occupied by the Roman army on several occasions. Aerial photographs have revealed cropmarks in the vicinity of the fort, representing up to six temporary marching camps and another probable fort.

3 Stray finds from around the site include; a bronze flat axe, 5.7” long (Canmore ID 25265), a 'cushion' mace-head of a fine-grained stone now having a polished surface of uniform brown colour (Canmore ID 25264). It was found 'many years ago' and was formerly in the possession of the donor's grandfather, Mr Bayne, a builder in the Braco area. Two Late Bronze Age Class V spearheads (Canmore ID 25259) were found in the same area as the axe and the mace, 75 m to the north-east of Glassick, around 130 m to the south of the development site. Unsurprisingly a Roman coin, a very worn denarius (not closely identifiable) and a copper-alloy headstud brooch were found during metal detecting to the west of the Roman fort complex. These are likely to relate to activity there, both items are now in possession of the Perth Museum and Art Gallery (Hunter 2019). In 1825 an early medieval long cist (Canmore ID 25231) containing human remains was found to the immediate south of the Ardoch Roman Fort, this is one of the sites of stone coffins surveyed in connection with the Ardoch Fort, these are only collectively referred to in the Object Name Books of the Ordnance Survey (ONB 1863).

4 There has been and still are a number of historic buildings in the area around the site. Middle Fedal, alternatively know as Fedal Castle (Canmore ID 122450) originated in the medieval period it was drastically renovated in Victorian times and subsequently demolished in 1953. Braco castle (Canmore ID 25398) located 2 km to the north of the site, forms part of an inventoried garden and designed landscape (GDL00067). Ardoch House South Lodge (Canmore ID 316866) was built in the nineteenth century and is located opposite the east end of the site, on the east side of the A822.

5 Roy’s Military Survey of Scotland of 1745-1755 shows the site as unenclosed agricultural land. The earthworks of Grinnan Hill Fort and Ardoch Roman Fort are depicted with buildings close to the south end of the fort. Ardoch House and grounds lie to the south and east of the fort. A further cluster of buildings are depicted to the south of Ardoch Fort and east of Grinnan Hill Fort, on the east side of the road. ‘Nether Fedall’ and ‘West Fedall’ are depicted as small clusters of buildings along with other unnamed buildings close by. The proposed development area cannot be accurately identified judging solely by the surrounding place-names. The earliest cartographic source to show the site in any detail is the first edition 1866 Ordnance Survey map which shows the field boundaries almost exactly as they exist today.

Figure 2:
Excerpt from Roy’s 1747-55 Military Survey of Scotland with approximate position of the trial pits on site.
Reproduced with permission of the Trustees of the National Library of Scotland.

Figure 3:
Excerpt from Ordnance Survey map of Perthshire sheet CXVII (1866) with approximate position of trial pits on site.
Reproduced with permission of the Trustees of the National Library of Scotland.

4.6 Previous archaeological investigations in the area have taken place at Mid Lane, Braco. An archaeological evaluation in advance of development encountered a stone culvert with water flowing to the south-west but little else of interest (Cachart 2001). A further archaeological evaluation on the site of a proposed new primary school building at Feddal Rd, Braco comprised 16 trenches placed across the site. Only modern utilities and field drains were found (Bowler 2023).

4.7 The assessment has indicated that there is a potential for buried and unknown archaeological remains to survive within the development area.

4.8 A walkover survey of the site was undertaken on Monday 23rd September 2024 in dry but overcast conditions. The fields comprise pasture, a turnip crop, a Christmas tree plantation and an area of semi-mature woodland towards the western site boundary. The entire corridor was inspected and the location of all 22 trial pits was visited. Flood alleviation bunds were visible on both sides of the Keir Burn. A short earth and stone bank, aligned roughly east to west was visible on the south side of a deep broad gully with a burn running east to west at its base at NN 82920 09208. Part of the south side of the earth and stone bank was denuded, exposing a possible rubble-built core of stone. No upstanding archaeological sites were visible at any of the trial pit locations. The possible earth and stone bank will not be directly affected by access routes during the SI works.

Aims, Objectives and Scope

5.1 The aim of the archaeological monitoring and recording is to identify and report on:

- the presence or absence of any archaeological remains within the development area, and
- the character, extent and significance of any archaeological deposits encountered.

5.2 The objectives are therefore to:

- conduct archaeological monitoring and recording during trial pitting within the development route to establish the presence or absence of any archaeological remains, and their character, date and extent if surviving;
- submit a report to data structure level for agreement of PKHT on completion of the archaeological fieldwork, which includes an outline of the scope of any further excavation works should any significant archaeology be encountered.

Plate 1:

View of the field on the east side of the Keir Burn, from the east.

Plate 2:

View of the field on the west side of the Keir Burn from the west.

Plate 3:

View towards the west end of the site.

Plate 4:

Earth and stone bank at NN 82920 09208, from the south-west.

Plate 5:

Rubble walling forming core of earth and stone bank, from the south.

Methodology

6.1 All work will be conducted in line with this Method Statement which will be agreed PKHT ahead of the works commencing, and the following standards and guidance of the Chartered Institute for Archaeologists (CIfA), of which GUARD Archaeology is a Registered Organisation:

- Code of conduct (2022);
- Standard for archaeological monitoring and recording (2023);
- Universal guidance for archaeological monitoring and recording (2023);
- Standard and guidance for the collection, documentation, conservation and research of archaeological materials (2020);
- Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (2020);

Archaeological Monitoring and Recording

6.2 All trial pits associated with the development will be monitored by the Archaeological Clerk of Works (ACoW).

6.2 The topsoil or overburden will be removed in spits to the first archaeological horizon or, where none is found, to the natural subsoil. Trial pits will be excavated using a back-acting machine, equipped with a flat (toothless) bucket, under the constant supervision of a GUARD Archaeologist. Any archaeological features encountered will be cleaned by hand by the on-site Archaeologist to determine their character and extent.

6.3 Any significant archaeological features encountered will be dealt with by the on-site Archaeologist. Should negative-cut features be encountered, and where micro-siting is not feasible, a representative sample will be 25-50% excavated to determine their significance, date and function. A full record of excavated features will be made using a single context recording system using pro forma sheets, drawings and photographs. All archaeological features will be photographed and recorded at an appropriate scale. Sections will be drawn at 1:10 and plans at 1:20.

6.4 All archaeological finds will be dealt with by the on-site Archaeologist. Finds and animal bone will be collected as bulk samples by context. Significant small finds will be three dimensionally located prior to collection. All finds will be processed to MAP2 type standards and subject to appropriate specialist assessment. If necessary, conservation of finds will be appraised to allow for specialist study.

6.5 All excavated feature fills and horizons will be sampled as appropriate, using bulk soil samples, for palaeo-environmental evidence. Sampling will be selective in the interest of saving valuable time and resources, especially when dealing with large quantities of potentially repetitive evidence. Any sampling should be clearly documented, justified and its implications for analysis recognised. General rules regarding sampling are set out in Table 1 below; where a site's scale or complexity warrants it, a separate sampling strategy will accompany this MS. All samples will be retained in storage until a decision has been made regarding the requirement for post-excavation analysis, prior to any superfluous samples then being discarded.

Table 1: Feature General Sampling Strategy

Feature/Deposit Type	Percentage/Quantity to be Sampled
Pits/posts not containing artefacts	Up to 50%
Pits/posts/spreads containing artefacts	Up to 100%
Cremations	100%
Burial cists	100%
Floor deposits/occupation layers	Up to 100% on grid basis & kubienas as agreed
Large pits >1m diameter	Up to 50% bulk, column samples & monolith/kubienas as agreed
Linear feature/ditch	Up to 10% bulk (min 40 Litres), column samples & monoliths/kubienas as agreed
Waterlogged/carbonised wood	100%

6.6 A representative section will be recorded denoting depth of topsoil, any stratigraphy present and the nature of the soil. This information will be logged in the day book together with a sketch drawn to scale and a photographic record of deposits.

6.7 Should human remains be revealed by the excavation, the local police, the client and PKHT will be informed immediately. Any human remains will be accurately recorded, but left *in situ*, pending the agreement of the police, the client and PKHT on an appropriate mitigation strategy.

6.8 Should significant archaeological remains be encountered during the monitoring and recording, requiring more than the limited sample excavation outlined above, the remains will be largely left *in*

situ pending the agreement of the client and PKHT on a MS addenda for an appropriate scope of excavation (Stage 2) and Post-excavation design including scope of finds analysis, conservation & publication (Stage 3).

6.9 Should significant archaeological remains be encountered within any of the monitored areas, the area of investigation may be expanded if micro-siting is not feasible, in consultation with the client and PKHT, with the aim of defining the full extent of the archaeological features.

6.10 PKHT will be the final judge of significance regarding any findings and may well insist on full excavation for any features to be destroyed by the proposals.

Report Preparation and Contents

7.1 A report detailing the results of the archaeological fieldwork will be submitted to the client within two to four weeks of completion of fieldwork and, subject to client approval, then submitted to PKHT. The report will take the form of a Data Structure Report (DSR) and will contain an analysis of the results of the archaeological monitoring and recording. The report will include a full descriptive text that will characterise the date and extent of any archaeological deposits. It will also include plans at an appropriate scale showing the distribution of any features from the archaeological monitoring and recording, and will include archiving lists of all finds, samples, field drawings and photographs.

7.2 If appropriate, the report will also include any addenda to this MS for further archaeological fieldwork, should significant archaeology have been encountered.

7.3 The report will include the following:

- executive summary;
- a site location plan to at least 1:10,000 scale with at least an 8-figure central grid reference;
- OASIS reference number; unique site code;
- planning application reference number;
- contractor's details including date work carried out;
- nature and extent of the proposed development, including developer/client details;
- description of the site history, location and geology;
- methodology (including note of samples taken or otherwise, what was sampled and why)
- a site plan showing all ground investigation work monitored, to a suitable scale and tied into the national grid so that test pits and features can be correctly orientated;
- discussion of the results of fieldwork;
- context & feature descriptions;
- features, number and class of artefacts, spot dating & scientific dating of significant finds presented in tabular format;
- plans and section drawings of the features drawn at a suitable scale;
- initial assessment of relevant finds/samples if appropriate;
- conclusions regarding the need for, and scope of, any further archaeological work such as excavation (Stage 2) and Post-excavation finds analysis, conservation & publication (Stage 3);
- bibliography.

7.4 At least two copies of the report will be prepared for the client and a further digital PDF copy sent to PKHT.

7.5 The DSR is to be submitted to the client within two to four weeks of fieldwork completion, any Post-Excavation Research Design (PERD) within three months of agreement to the DSR and any final publication within a year of agreement to the PERD.

Copyright

8.1 The copyright for any report resulting from the archaeological work undertaken as part of the project will be deemed the intellectual property of GUARD Archaeology Ltd.

Publication and Outreach

9.1 A summary of the project results will be submitted to *Discovery and Excavation in Scotland*. In the event of minor archaeological remains being encountered during the archaeological fieldwork, it is proposed that a comprehensive report submitted to *Discovery and Excavation in Scotland*, will form the Stage 1 publication of the site. A copy of this will be included in the Data Structure Report.

9.2 In accordance with the Association of Local Government Archaeological Officers (ALGAO) Scotland Guidance (Mann 2023); in the event of significant archaeological remains or finds encountered, opportunities to deliver public outreach activities will be explored, in order to deliver public benefit and social value from the works. This could include a visit to local schools, a talk delivered to local historical/archaeological societies and/or posters/leaflets detailing the works for local libraries and schools, all of which would be detailed in any resultant PERD.

Archive

10.1 The archive for the project, including a copy of the report, will be submitted to the National Record of the Historic Environment (NRHE) for Scotland within three months of completion of all relevant work.

10.2 The online OASIS form at http://ads.ahds.ac.uk/project/oasis/ will be completed within 3 months of completion of the work. Once the Data Structure Report has become a public document by submission to or incorporation into the HER, PKHT will validate the OASIS form thus placing the information into the public domain on the OASIS website.

Finds Disposal

11.1 The arrangement for the final disposal of any finds made in connection with the archaeological work, will be deposited in keeping with Scottish legal requirements as set out in the Treasure Trove Code of Practice published by the Scottish Government in January 2016. The laws relating to Treasure Trove and *Bona Vacantia* in Scotland apply to all finds where the original owner cannot be identified. This includes all material recovered during archaeological fieldwork. Accordingly, all assemblages recovered from archaeological fieldwork are claimed automatically by the Crown and must be reported to the Scottish Archaeological Finds Allocation Panel through its secretariat, the Treasure Trove Unit. In the event of the discovery of small finds, a filled-out copy of the form "Declaration of an Archaeological Assemblage from Fieldwork" and two copies of the pertinent Data Structure Report will be submitted to the Panel at the conclusion of the fieldwork. The Panel will then be responsible for recommending to the King's and Lord Treasurer's Remembrancer which museum should be allocated the finds. All artefacts will be temporarily stored by GUARD until a decision has been made by the panel.

Personnel and Liaison

12.1 The GUARD team will comprise the following qualified and experienced GUARD archaeologists:

- Project Manager: Iraia Arabaolaza
- ACoW (on-site Archaeologists): Alan Hunter Blair
- Finds and Environmental Support and Conservation: Aileen Maule
- Illustrator: Gillian Sneddon
- Quality Assurance: Dr Ronan Toolis

12.2 The GUARD Project Manager will be the point of contact for the archaeological works. A full CV for individuals concerned can be made available on request.

Monitoring

13.1 The proposed start for the archaeological fieldwork, is TBC. PKHT usually require 14 days' notice of the commencement of fieldwork. PKHT will be informed of the site mobile phone number prior to the start date so that monitoring visits can be arranged.

Health & Safety and Insurance

14.1 GUARD Archaeology Limited adheres to the guidelines and standards prescribed for archaeological fieldwork set down in the (now Chartered) Institute for Archaeologists approved Health and Safety in Field Archaeology document. It is standard GUARD Archaeology policy, prior to any fieldwork project commencing, to conduct a risk assessment and to prepare a project safety plan, the prescriptions of which will be strictly followed for the duration of all archaeological fieldwork. Copies of the resultant project safety plan and of GUARD Archaeology Limited's Fieldwork Safety Policy Statement may be viewed upon request.

14.2 GUARD Archaeology Ltd also possesses all necessary insurance cover, proofs of which may be supplied upon request.

Sources Consulted

Bowler, D. (2023) Braco Primary School, Evaluation, in Jennifer Thoms, Discovery Excav Scot, New, vol. 23, 2022. Cathedral Communications Ltd, Wiltshire, England. Page(s): 134

Cachart, R. (2001) 'Mid Lane, Braco, Perth and Kinross (Ardoch parish), evaluation', Discovery Excav Scot, vol. 2, 2001. Page(s): 74-75

Coles, J M. (1962a) 'Scottish Late Bronze Age metalwork: typology, distributions and chronology', Proc Soc Antiq Scot, vol. 93, 1959-60. Page(s): 80

Hunter, F. (2019) Braco, metal detector find, in Paula Milburn, Discovery Excav Scot, New, vol. 19, 2018. Cathedral Communications Ltd, Wiltshire, England. Page(s): 159

Mann, B 2023 *ALGAO Scotland 'Delivery of Public Benefit and Social Value Guidance for Archaeology in the Planning Process' report.*

Ordnance Survey (Name Book. (1848-1878) Object Name Books of the Ordnance Survey (6 inch and 1/2500 scale). Page(s): Book No. 6, 53-4

https://www.pkht.org.uk/pkher/

https://pastmap.org.uk/map

British Geological Survey, Geology Viewer. *https://www.bgs.ac.uk/map-viewers/bgs-geology-viewer/* *[accessed 17/09/24].*

GUARD Archaeology Limited
52 Elderpark Workspace
100 Elderpark Street
Glasgow
G51 3TR

Tel: 0141 445 8800
Fax: 0141 445 3222
email: info@guard-archaeology.co.uk

www.guard-archaeology.co.uk