TETRA TECH

Project:	**Goat Mill Road**	Location Details	Status
Location:	**Merthyr Tydfil**	Easting: 306172.44 Northing: 206791.38	FINAL
Client:	**Merthyr Tydfil County Borough Council**	Level: 279.41mAOD Depth: 0.60m	Pit Number **TP705**
		Logger: EM Type: TP	Sheet 1 of 1
		Ordnance Survey Great Britain National Grid	

Hole Information		Groundwater				Scale: 1:25
Pit Dimensions	Orientation: 263°	Strike (m)	Rose To (m)	After (mins)	Remarks	Checked By: JC + DD
0.80m / 2.55m	Shoring: None					Approved By: NB
	Stability: Stable					Start Date: 17/03/2026
	Plant: JCB 3CX					Finish Date: 17/03/2026

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing: Depth (m)	Ref	Tests / Results
MADE GROUND: Dark brownish grey clayey silty gravelly SAND with medium cobble content. Gravel is angular to subrounded fine to coarse of siltstone and mudstone. Cobbles are subangular to subrounded of siltstone and mudstone with frequent rootlets. Sand is fine to coarse. MGR		0.20	279.21			0.00 - 0.20 0.10 0.10 0.20 - 0.60	B D ES B	PID 0.20m, 0.0ppm
MADE GROUND: Grey silty sandy GRAVEL with medium cobble content. Gravel is very angular to subrounded fine to coarse of siltstone and mudstone. Cobbles are angular to subangular of siltstone. Sand is fine to coarse. MGR		0.60	278.81			0.50 0.50	D ES	PID 0.50m, 0.0ppm
EOH at 0.60m - Target depth achieved								

Observations / Remarks

1. Location cleared with GPR and CAT 4+ by Safe Dig Ltd.
2, Position re-scanned every 300mm by TT engineer to 1.20m bgl or refusal.
3. ES= Environmental Sample, B=Bulk Disturbed Sample, D= Small Disturbed Sample
4. Location reinstated as instructed by WSP.

Hodge House, 114-116 St Mary Street, Cardiff, CF10 1DY

029 2082 9200

Project Number

784-B077402

TETRA TECH

Project: **Goat Mill Road**

Location: **Merthyr Tydfil**

Client: **Merthyr Tydfil County Borough Council**

Location Details

Easting: 306180.13 Northing: 206670.64

Level: 278.70mAOD Depth: 0.60m

Logger: EM Type: TP

Ordnance Survey Great Britain National Grid

Status: FINAL

Pit Number: **TP706**

Sheet 1 of 1

Hole Information

Pit Dimensions: 2.40m x 0.60m

Orientation: 5°

Shoring: None

Stability: Stable

Plant: JCB 3CX

Groundwater

Strike (m)	Rose To (m)	After (mins)	Remarks

Scale: 1:25

Checked By: JC + DD

Approved By: NB

Start Date: 17/03/2026

Finish Date: 17/03/2026

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing: Depth (m)	Ref	Tests / Results
MADE GROUND: Dark brownish grey clayey silty gravelly SAND with low cobble content. Gravel is angular to subrounded fine to coarse of siltstone and mudstone. Cobbles are subangular to subrounded of mudstone and siltstone with frequent rootlets. Sand is fine to coarse. MGR		0.20	278.50			0.00 - 0.20 0.10 0.10 0.20 - 0.60	B D ES B	PID 0.10m, 0.0ppm
MADE GROUND: Grey silty sandy GRAVEL with high cobble content. Gravel is very angular to subangular fine to coarse of siltstone and mudstone. Cobbles are subangular of siltstone and mudstone. Sand is fine to coarse. MGR		0.60	278.10			0.50 0.50	D ES	PID 0.50m, 0.0ppm
EOH at 0.60m - Target depth achieved								

Observations / Remarks

1. Location cleared with GPR and CAT 4+ by Safe Dig Ltd.
2, Position re-scanned every 300mm by TT engineer to 1.20m bgl or refusal.
3. ES= Environmental Sample, B=Bulk Disturbed Sample, D= Small Disturbed Sample
4. Location reinstated as instructed by WSP.

Hodge House, 114-116 St Mary Street, Cardiff, CF10 1DY

029 2082 9200

Project Number

784-B077402

TETRA TECH	Project: **Goat Mill Road** Location: **Merthyr Tydfil** Client: **Merthyr Tydfil County Borough Council**	Location Details Easting: 306101.57 Northing: 206811.50 Level: 278.82mAOD Depth: 1.10m Logger: EM Type: TP Ordnance Survey Great Britain National Grid	Status FINAL	Pit Number **TP801** Sheet 1 of 1

Hole Information		Groundwater				
Pit Dimensions	Orientation: 270°	Strike (m)	Rose To (m)	After (mins)	Remarks	Scale: 1:25
0.90m / 2.70m	Shoring: None					Checked By: JC + DD
	Stability: Stable					Approved By: NB
	Plant: JCB 14T 360					Start Date: 26/03/2026
						Finish Date: 26/03/2026

Strata Description	Legend	Depth (m)	Reduced Level (mAOD)	Water Level (m)	Backfill	Samples and Testing: Depth (m)	Ref	Tests / Results
MADE GROUND: Grey slightly silty sandy angular to subangular fine to coarse GRAVEL of mudstone and mudstone lithorelicts. Sand is fine to coarse. MGR						0.10 0.10 - 0.30 0.50 - 0.80 0.50 - 0.80 1.00 - 1.10	ES D B D D3	
EOH at 1.10m - Target depth achieved		1.10	277.71					

Observations / Remarks

1. Location cleared with GPR and CAT 4+ by Safe Dig Ltd.
2, Position re-scanned every 300mm by TT engineer to 1.20m bgl or refusal.
3. ES= Environmental Sample, B=Bulk Disturbed Sample, D= Small Disturbed Sample
4. Location reinstated as instructed by WSP.

Hodge House, 114-116 St Mary Street, Cardiff, CF10 1DY

029 2082 9200

Project Number

784-B077402

APPENDIX C: GEOTECHNCIAL LABORATORY RESULTS

Laboratory Report

Contract Number: 85490

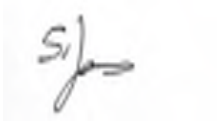
Client Ref: **B077420**
Client PO:

Client: **Tetra Tech**

Contract Title: **Goat Mill Road**
For the attention of: **James Craddock**

Date Received: **20-03-2026**
Date Completed: **27-07-2026**
Report Date: **27-07-2026**

This report has been checked and approved by:



Shaun Jones
Laboratory manager

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - * UKAS	8
4 Point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	8
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	20
Direct Shear by Large Shear Box 300mm Peak with 3 confining pressures includes remoulding BS EN ISO 17892-10 - * UKAS	3
BRE Suite D Brownfield Site (pyrite present) **includes pH, water & acid soluble sulphate, total sulphur, magnesium, chloride and nitrate** Sub-contracted Test#	20

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:
Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician) - Jason Jenkins (Business Development Manager)
Luke Williams (Senior Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

GEO Site & Testing Services Ltd
Unit 3-4 Heol Aur, Dafen Ind Est, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784 040 Fax: 01554 784 040 info@gstl.co.uk https://gstl.co.uk

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX** **BS 1377-2:2022 Clause 5.2** **BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit** **BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content**	
Contract Number	85490	
Project Name	Goat Mill Road	
Date Tested	16/07/2026	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
BH202	2	B	0.50	-	0.70	Grey fine to coarse gravelly silty CLAY
BH204	6	B	4.00	-	4.30	Grey fine to medium gravelly silty sandy CLAY
BH301	1	D	1.95	-	2.20	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL
BH302	3	B	1.20	-	2.50	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL
BH302	5	B	3.00	-	4.00	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL
BH303	2	B	0.30	-	1.00	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL
BH305	5	B	3.00	-	3.30	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL
BH306	3	B	1.20	-	1.40	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL
				-		
				-		
				-		
				-		
				-		
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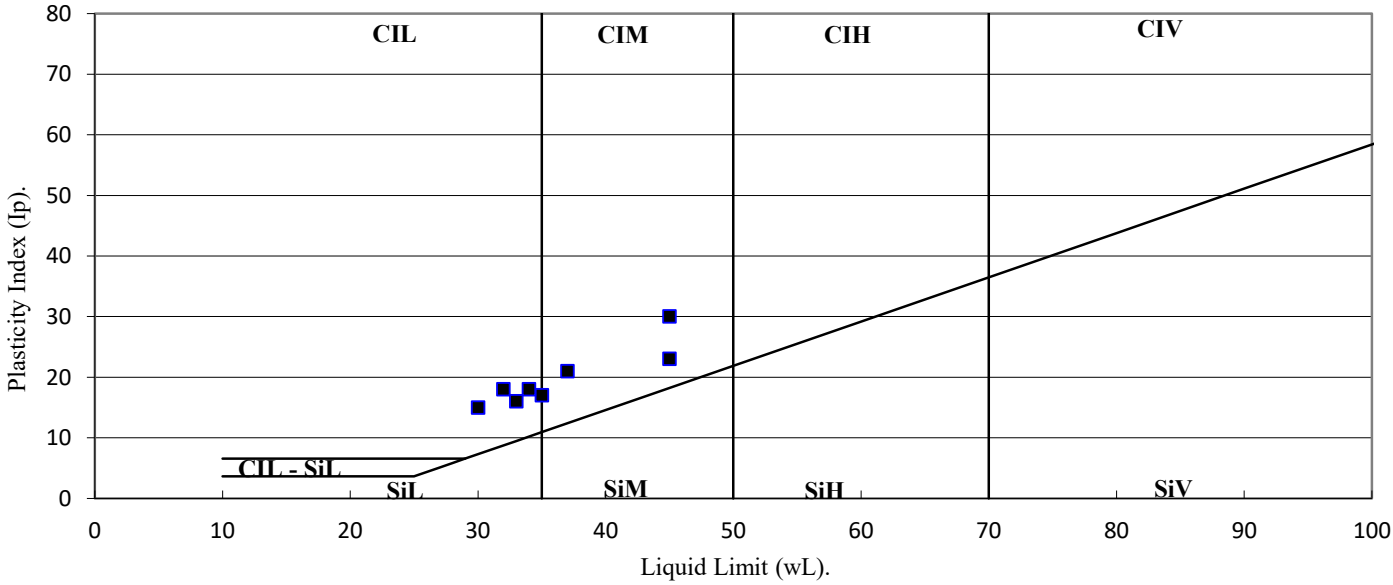
Operator
Liam. D

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX BS 1377-2:2022 Clause 5.2 BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content	
Contract Number	85490	
Project Name	Goat Mill Road	
Date Tested	16/07/2026	
Test Comments	80g/30° Fall cone used with increasing water content	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Water Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
BH202	2	B	0.50	-	0.70	17.4	45	15	30	59	CI Intermediate Plasticity
BH204	6	B	4.00	-	4.30	25.4	45	22	23	74	CI Intermediate Plasticity
BH301	1	D	1.95	-	2.20	15.7	35	18	17	34	CL/I Low/Inter. Plasticity
BH302	3	B	1.20	-	2.50	14.6	33	17	16	23	CL Low Plasticity
BH302	5	B	3.00	-	4.00	13.8	30	15	15	33	CL Low Plasticity
BH303	2	B	0.30	-	1.00	13.1	34	16	18	34	CL Low Plasticity
BH305	5	B	3.00	-	3.30	16.4	32	14	18	36	CL Low Plasticity
BH306	3	B	1.20	-	1.40	12.8	37	16	21	24	CI Intermediate Plasticity
				-							
				-							
				-							
				-							
				-							
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SYMBOLS : NP = Non Plastic **NB: All liquid limits are 4 point and wet sieved**

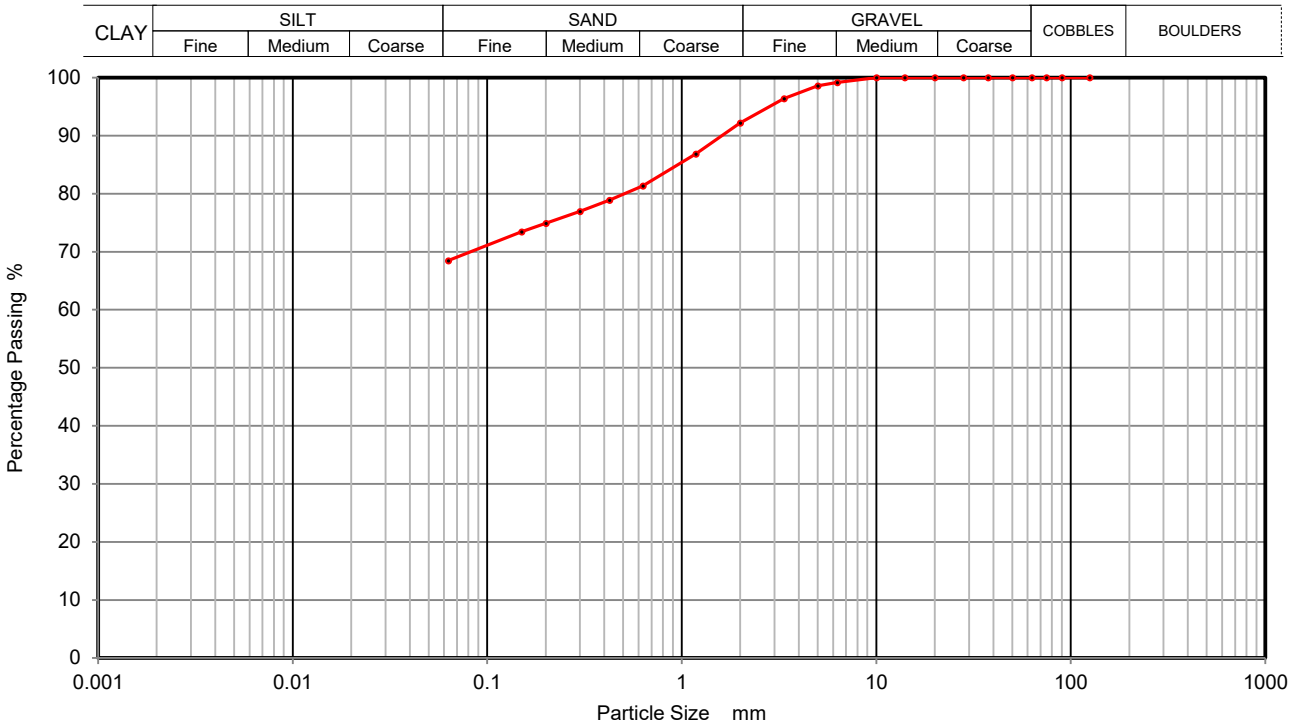
PLASTICITY CHART
BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Liam. D

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH201A**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey gravelly fine to coarse sandy silty/CLAY	Depth Top	**0.80**
		Depth Base	**1.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	96		
2	92		
1.18	87		
0.63	81		
0.425	79		
0.30	77		
0.20	75		
0.15	73		
0.063	68		

Sample Proportions	% dry mass
Cobbles	0
Gravel	8
Sand	24
Silt and Clay	68

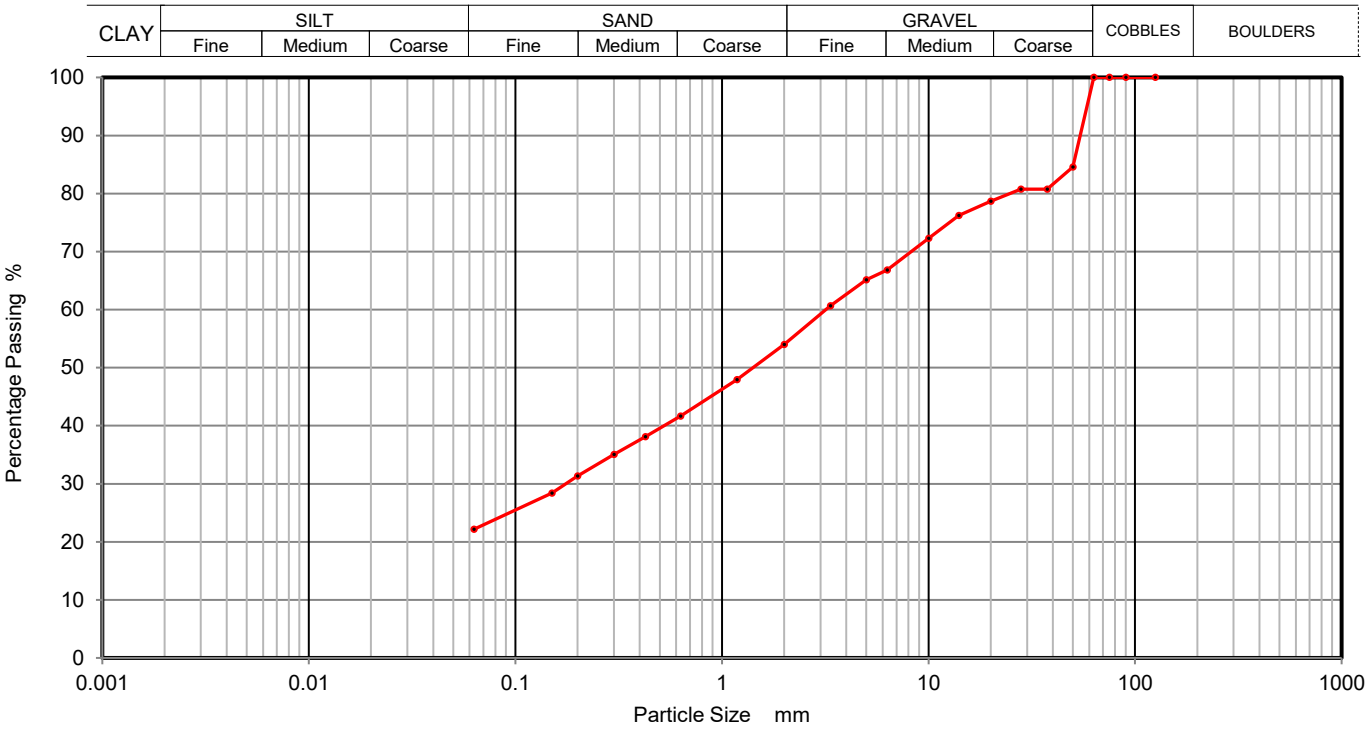
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

	PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	85490
		Borehole/Pit No.	BH203
Project Name	Goat Mill Road	Sample No.	1
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.00
		Depth Base	0.50
Date Tested	10/07/2026	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	85		
37.5	81		
28	81		
20	79		
14	76		
10	72		
6.3	67		
5	65		
3.35	61		
2	54		
1.18	48		
0.63	42		
0.425	38		
0.30	35		
0.20	31		
0.15	28		
0.063	22		

Sample Proportions	% dry mass
Cobbles	0
Gravel	46
Sand	32
Silt and Clay	22

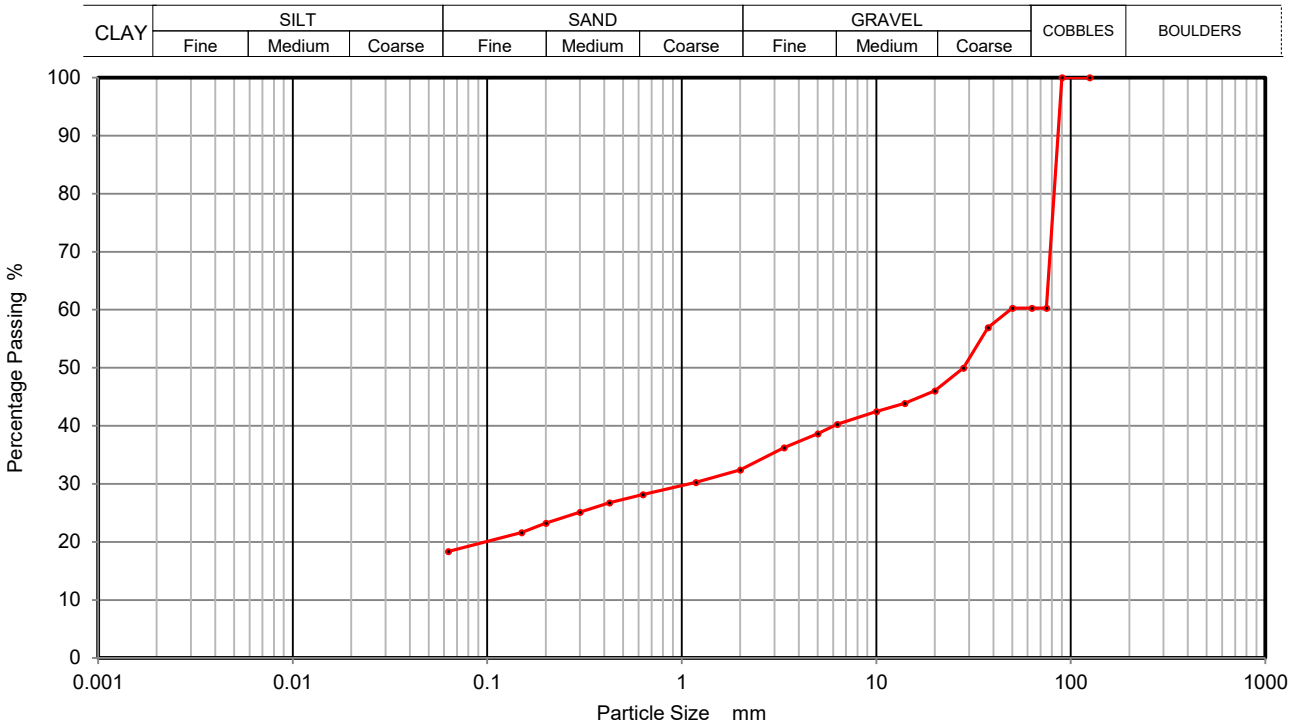
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH203**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.50**
		Depth Base	**1.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	60		
63	60		
50	60		
37.5	57		
28	50		
20	46		
14	44		
10	42		
6.3	40		
5	39		
3.35	36		
2	32		
1.18	30		
0.63	28		
0.425	27		
0.30	25		
0.20	23		
0.15	22		
0.063	18		

Sample Proportions	% dry mass
Cobbles	40
Gravel	28
Sand	14
Silt and Clay	18

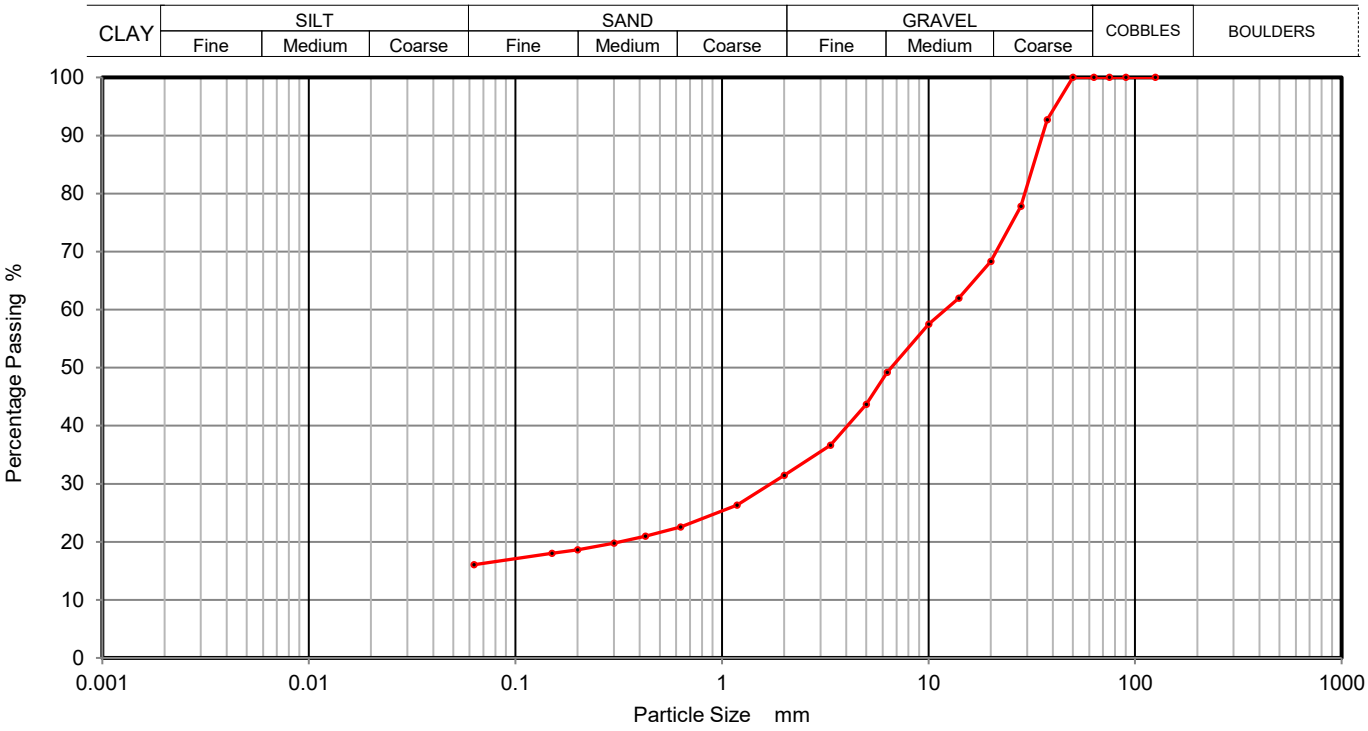
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH204**
Project Name	**Goat Mill Road**	Sample No.	**4**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**2.00**
		Depth Base	**2.30**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	93		
28	78		
20	68		
14	62		
10	57		
6.3	49		
5	44		
3.35	37		
2	31		
1.18	26		
0.63	23		
0.425	21		
0.30	20		
0.20	19		
0.15	18		
0.063	16		

Sample Proportions	% dry mass
Cobbles	0
Gravel	69
Sand	15
Silt and Clay	16

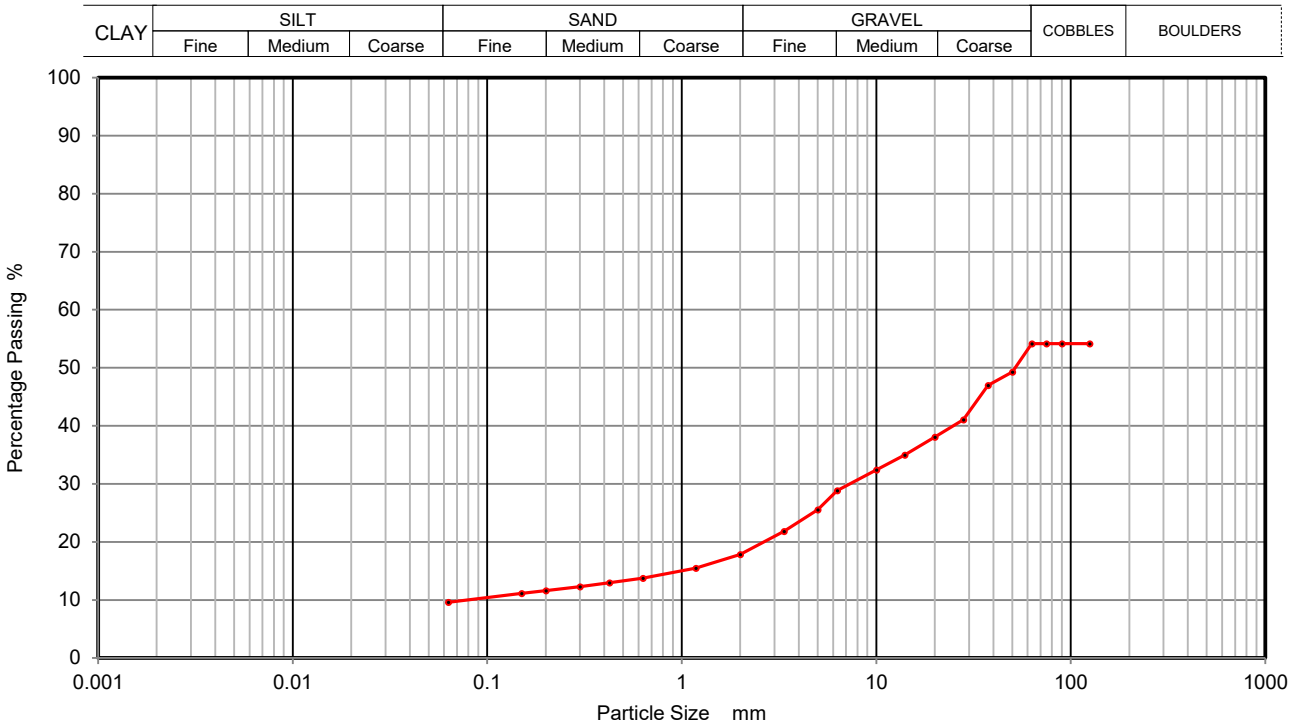
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH205A**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.50**
		Depth Base	**1.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	54		
90	54		
75	54		
63	54		
50	49		
37.5	47		
28	41		
20	38		
14	35		
10	32		
6.3	29		
5	26		
3.35	22		
2	18		
1.18	15		
0.63	14		
0.425	13		
0.30	12		
0.20	12		
0.15	11		
0.063	10		

Sample Proportions	% dry mass
Cobbles	46
Gravel	36
Sand	8
Silt and Clay	10

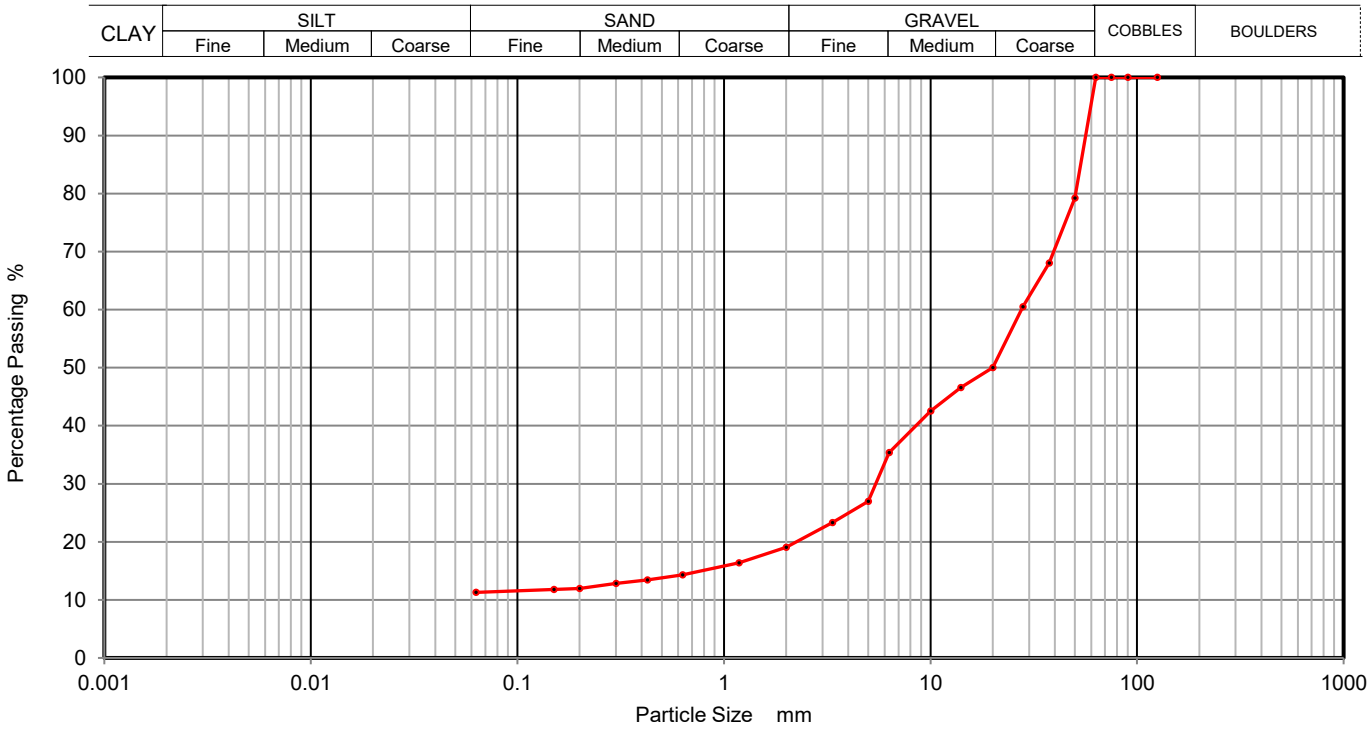
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH301**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL	Depth Top	**0.30**
		Depth Base	**0.50**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	79		
37.5	68		
28	60		
20	50		
14	47		
10	43		
6.3	35		
5	27		
3.35	23		
2	19		
1.18	16		
0.63	14		
0.425	13		
0.30	13		
0.20	12		
0.15	12		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	81
Sand	8
Silt and Clay	11

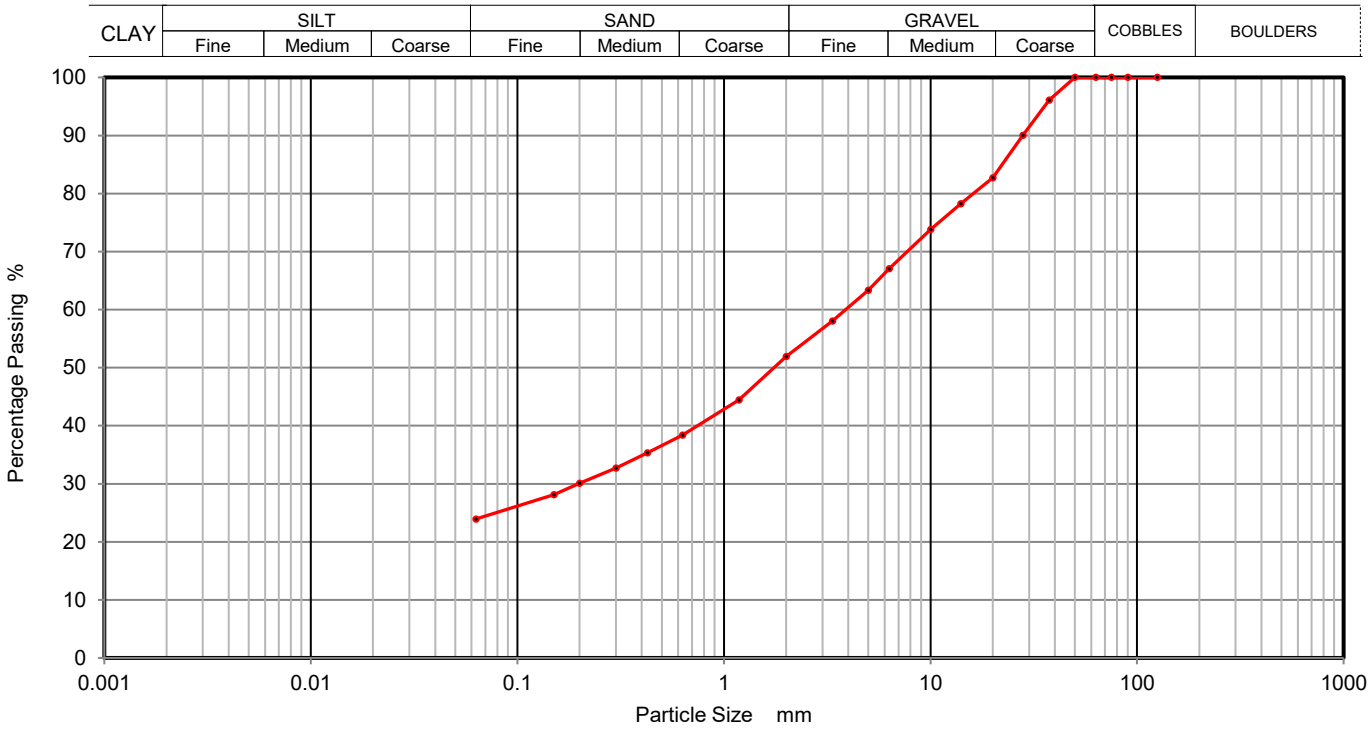
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH301**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**1.20**
		Depth Base	**2.00**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	90		
20	83		
14	78		
10	74		
6.3	67		
5	63		
3.35	58		
2	52		
1.18	44		
0.63	38		
0.425	35		
0.30	33		
0.20	30		
0.15	28		
0.063	24		

Sample Proportions	% dry mass
Cobbles	0
Gravel	48
Sand	28
Silt and Clay	24

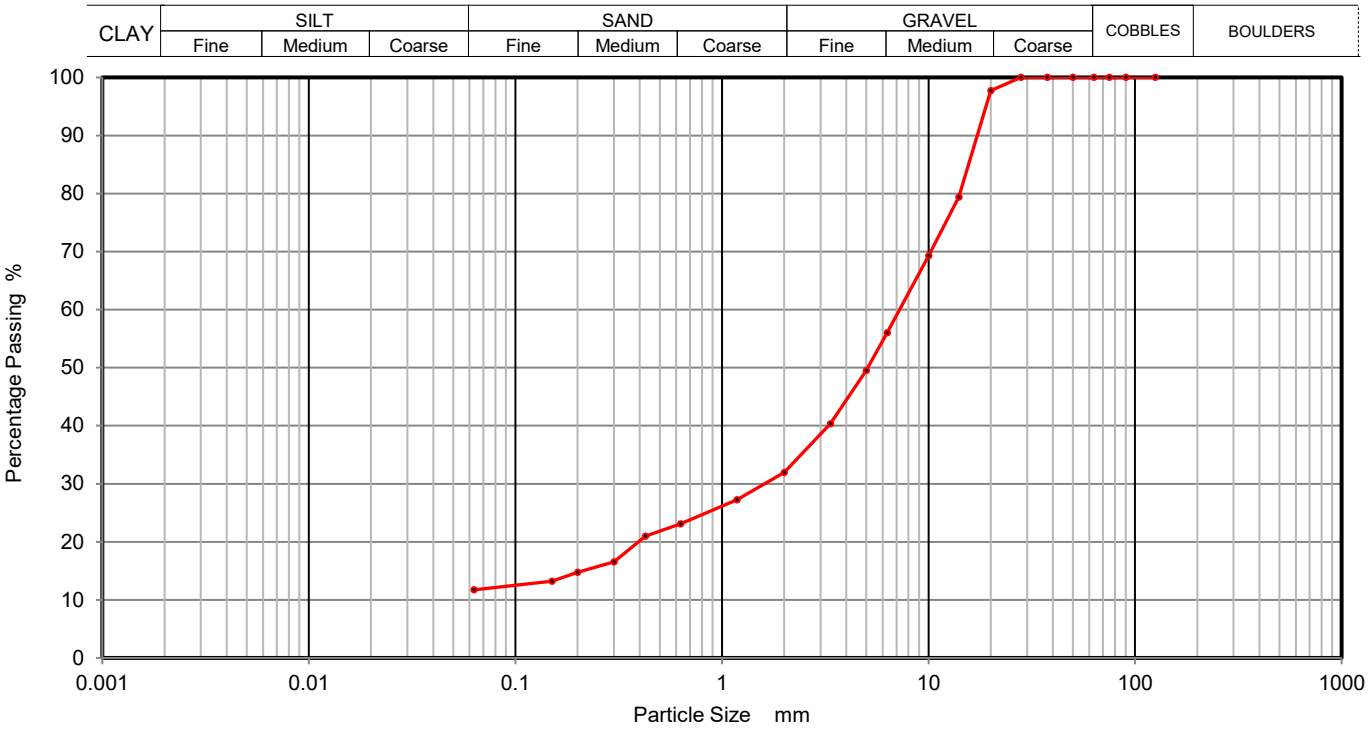
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH302**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.50**
		Depth Base	**1.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	79		
10	69		
6.3	56		
5	49		
3.35	40		
2	32		
1.18	27		
0.63	23		
0.425	21		
0.30	17		
0.20	15		
0.15	13		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	68
Sand	20
Silt and Clay	12

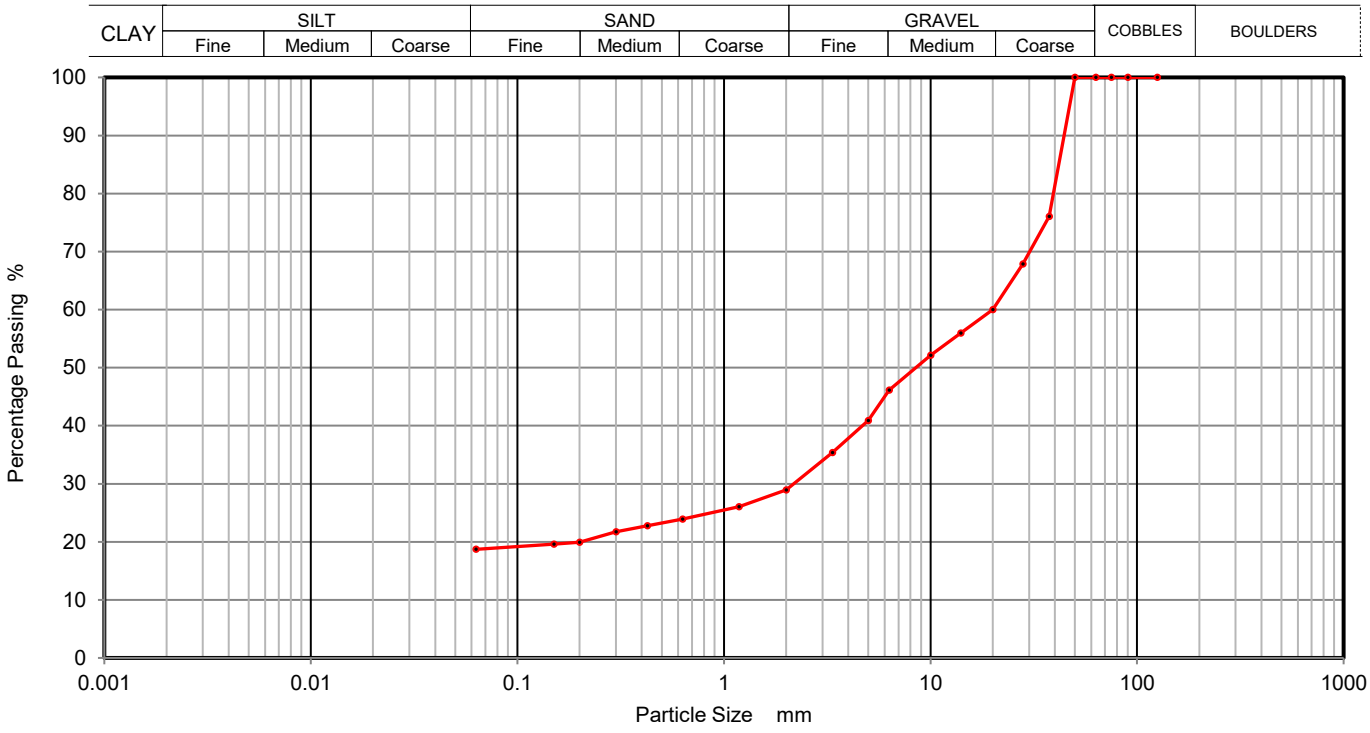
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH302**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**1.20**
		Depth Base	**2.50**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	76		
28	68		
20	60		
14	56		
10	52		
6.3	46		
5	41		
3.35	35		
2	29		
1.18	26		
0.63	24		
0.425	23		
0.30	22		
0.20	20		
0.15	20		
0.063	19		

Sample Proportions	% dry mass
Cobbles	0
Gravel	71
Sand	10
Silt and Clay	19

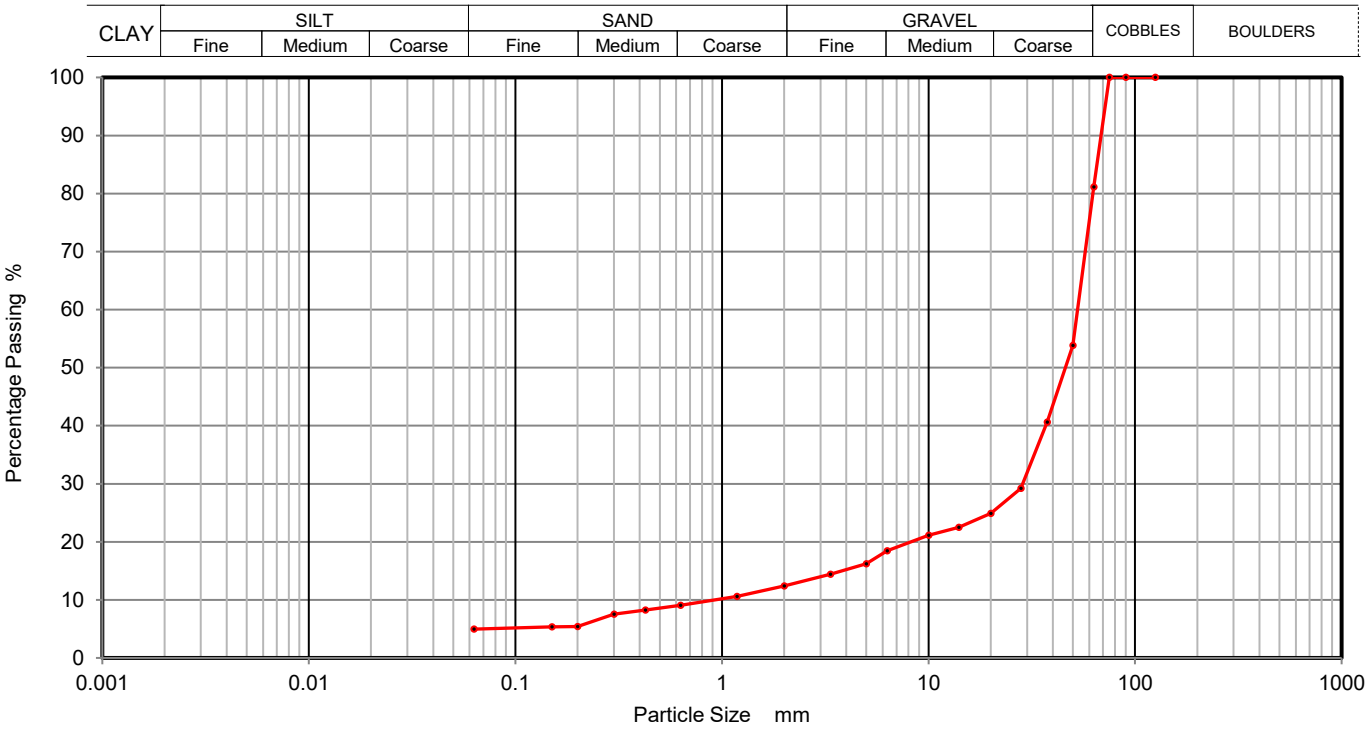
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey.J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH302**
Project Name	**Goat Mill Road**	Sample No.	**4**
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**2.00**
		Depth Base	**3.00**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	81		
50	54		
37.5	41		
28	29		
20	25		
14	22		
10	21		
6.3	18		
5	16		
3.35	14		
2	12		
1.18	11		
0.63	9		
0.425	8		
0.30	8		
0.20	5		
0.15	5		
0.063	5		

Sample Proportions	% dry mass
Cobbles	19
Gravel	69
Sand	7
Silt and Clay	5

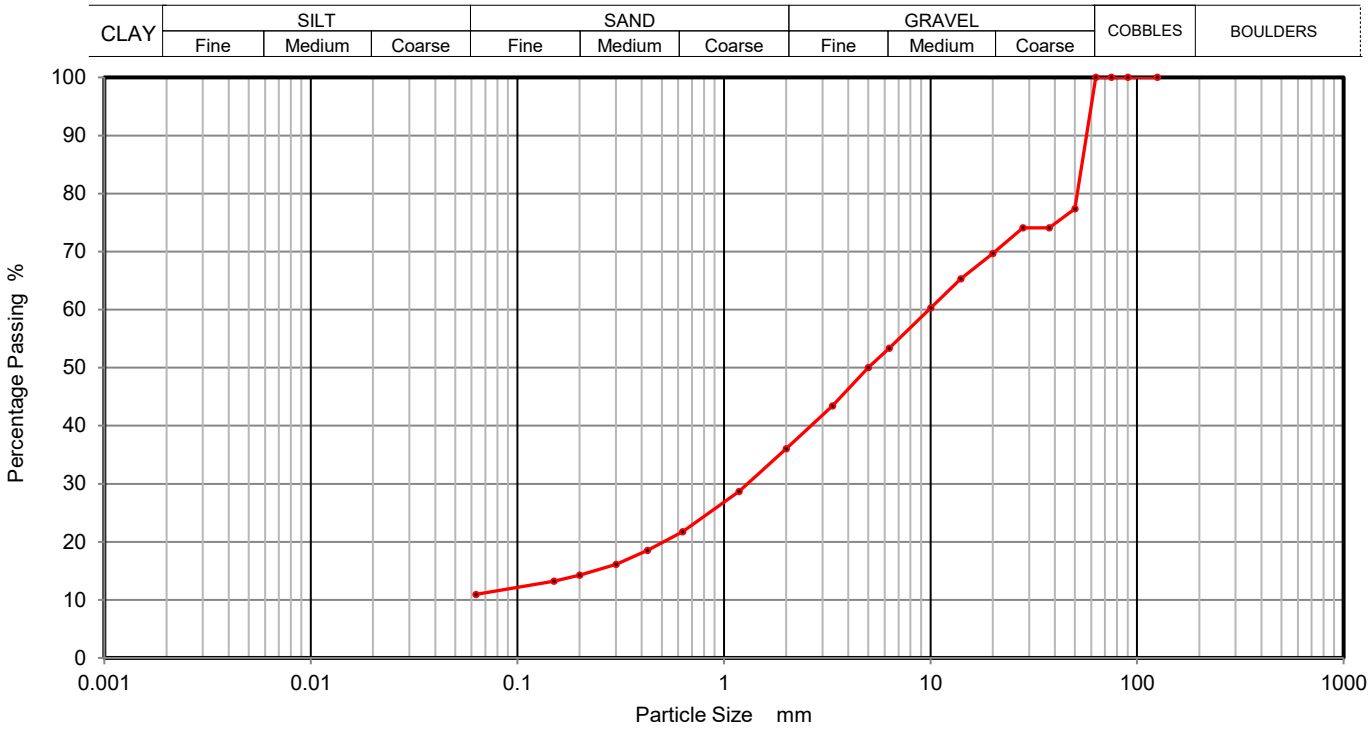
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH302**
Project Name	**Goat Mill Road**	Sample No.	**6**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**4.00**
		Depth Base	**5.00**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	77		
37.5	74		
28	74		
20	70		
14	65		
10	60		
6.3	53		
5	50		
3.35	43		
2	36		
1.18	29		
0.63	22		
0.425	19		
0.30	16		
0.20	14		
0.15	13		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	64
Sand	25
Silt and Clay	11

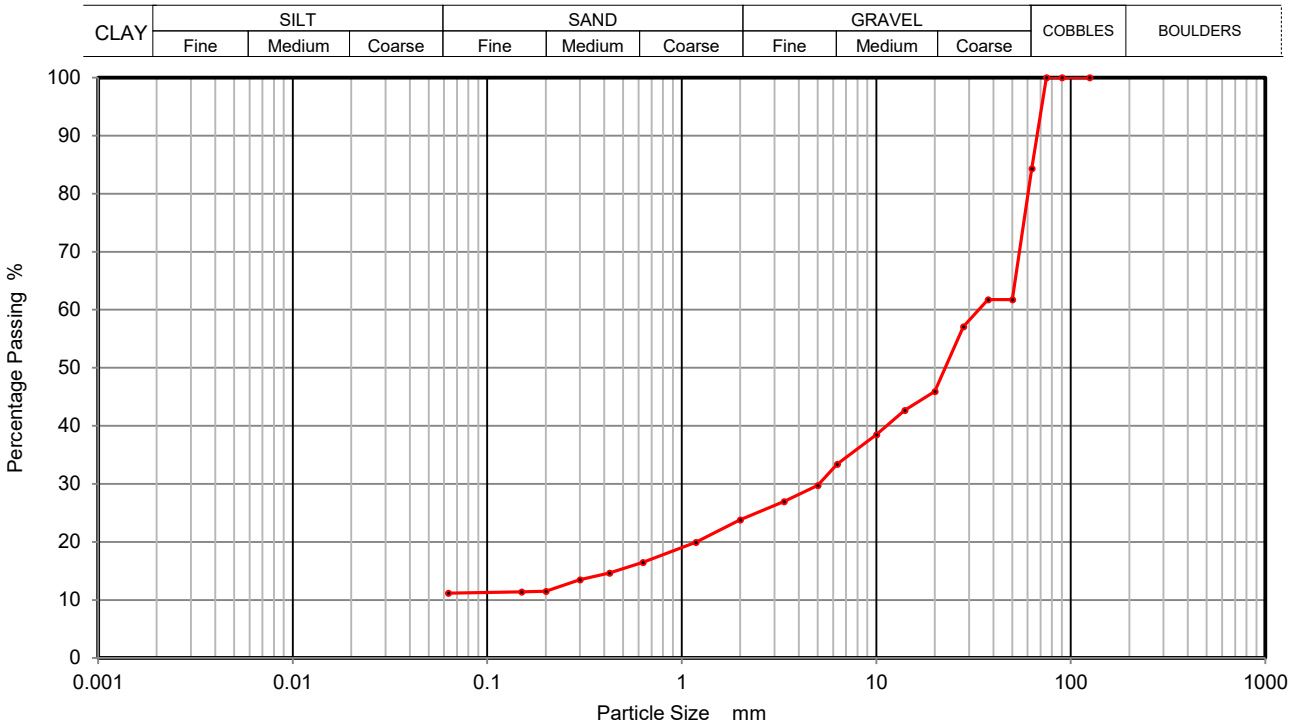
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH303**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.00**
		Depth Base	**0.30**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	84		
50	62		
37.5	62		
28	57		
20	46		
14	43		
10	38		
6.3	33		
5	30		
3.35	27		
2	24		
1.18	20		
0.63	16		
0.425	15		
0.30	14		
0.20	11		
0.15	11		
0.063	11		

Sample Proportions	% dry mass
Cobbles	16
Gravel	60
Sand	13
Silt and Clay	11

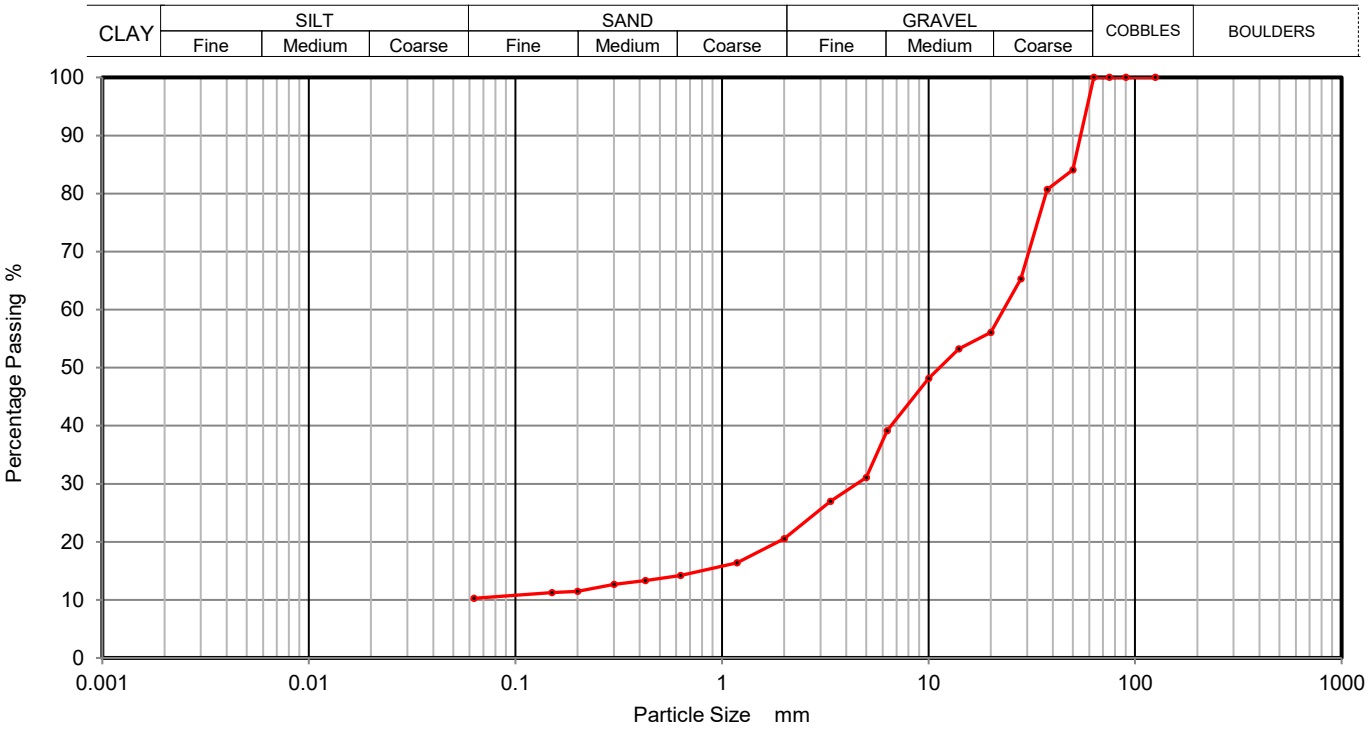
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey.J

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH304**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.50**
		Depth Base	**0.90**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	84		
37.5	81		
28	65		
20	56		
14	53		
10	48		
6.3	39		
5	31		
3.35	27		
2	21		
1.18	16		
0.63	14		
0.425	13		
0.30	13		
0.20	11		
0.15	11		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	79
Sand	11
Silt and Clay	10

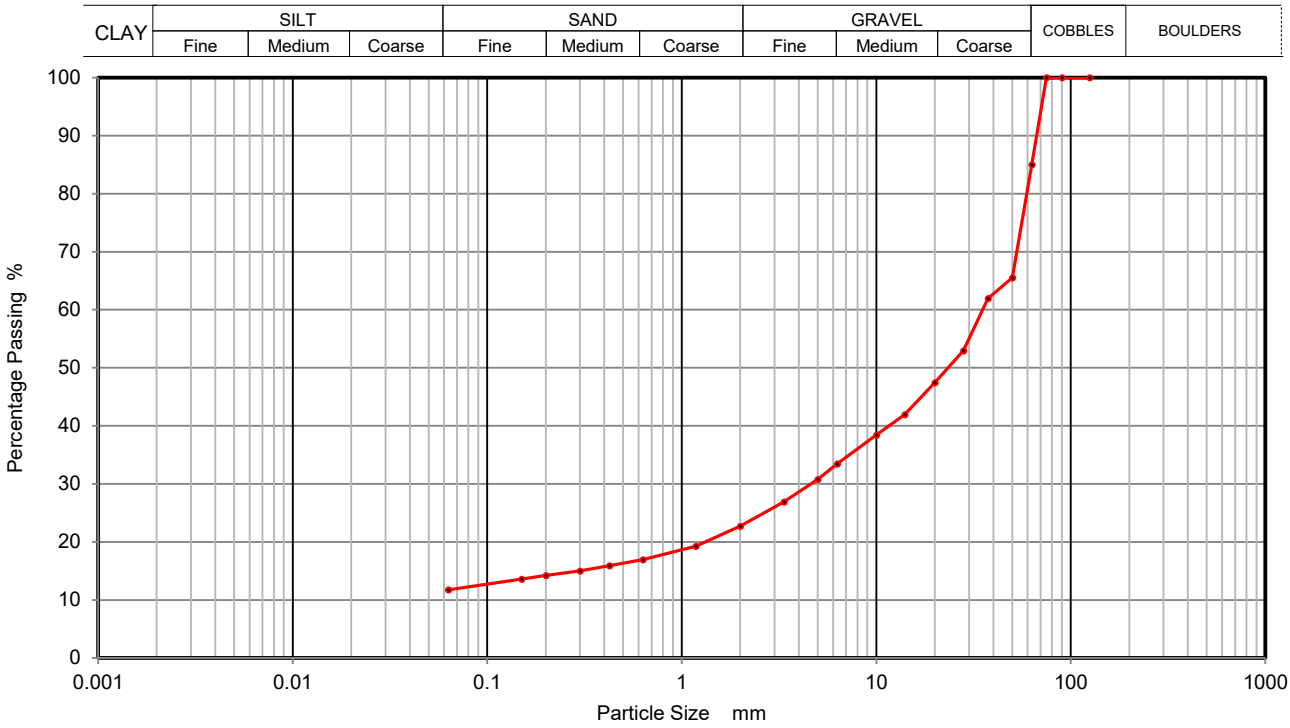
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH305**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.50**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	85		
50	66		
37.5	62		
28	53		
20	47		
14	42		
10	38		
6.3	33		
5	31		
3.35	27		
2	23		
1.18	19		
0.63	17		
0.425	16		
0.30	15		
0.20	14		
0.15	14		
0.063	12		

Sample Proportions	% dry mass
Cobbles	15
Gravel	62
Sand	11
Silt and Clay	12

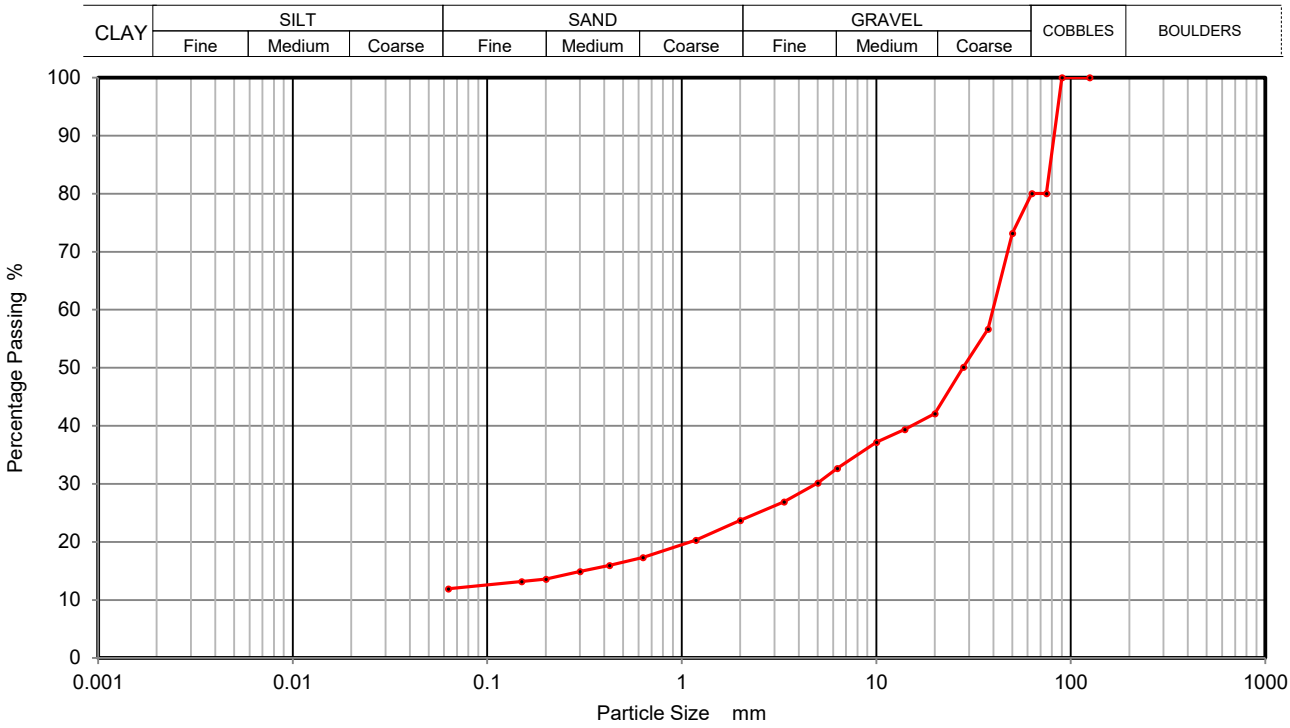
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH305**
Project Name	**Goat Mill Road**	Sample No.	**4**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	**2.00**
		Depth Base	**2.30**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	80		
63	80		
50	73		
37.5	57		
28	50		
20	42		
14	39		
10	37		
6.3	33		
5	30		
3.35	27		
2	24		
1.18	20		
0.63	17		
0.425	16		
0.30	15		
0.20	14		
0.15	13		
0.063	12		

Sample Proportions	% dry mass
Cobbles	20
Gravel	56
Sand	12
Silt and Clay	12

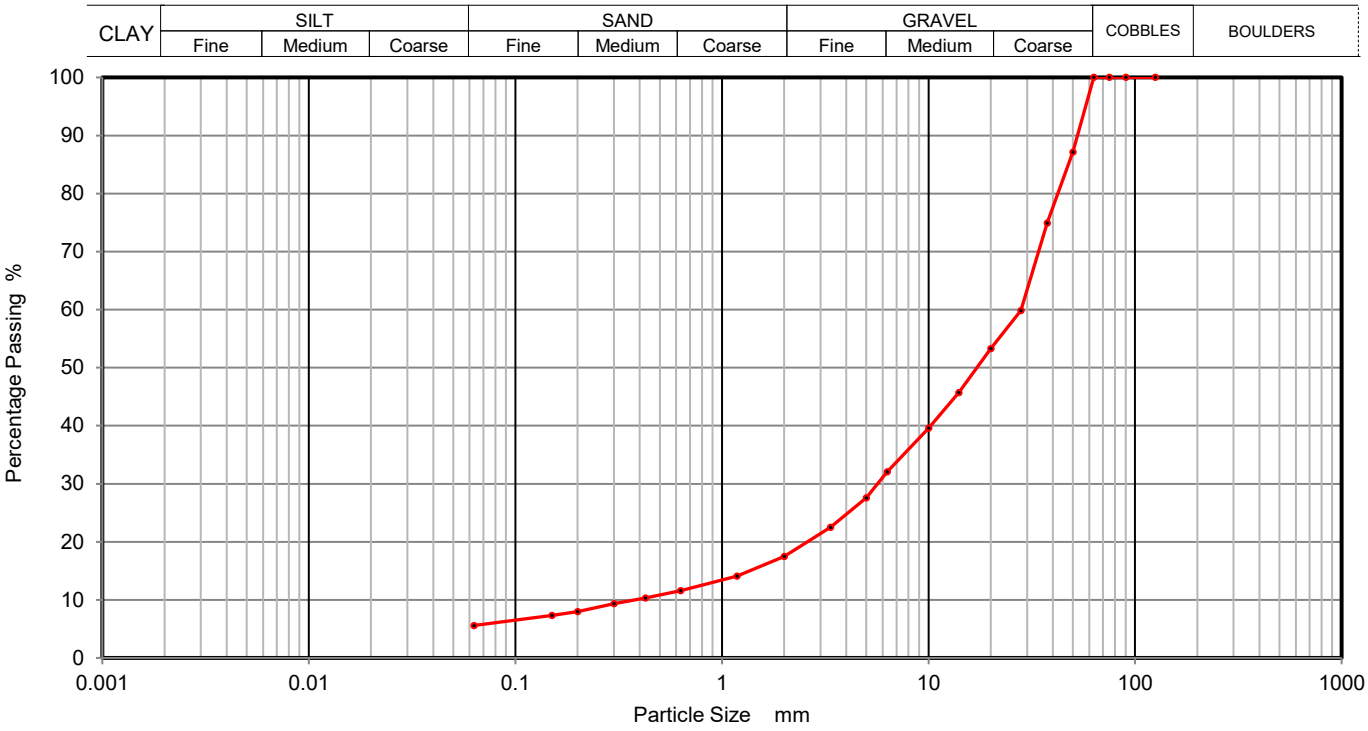
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey.J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH306**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.20**
		Depth Base	**0.50**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	87		
37.5	75		
28	60		
20	53		
14	46		
10	40		
6.3	32		
5	28		
3.35	22		
2	17		
1.18	14		
0.63	12		
0.425	10		
0.30	9		
0.20	8		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	83
Sand	11
Silt and Clay	6

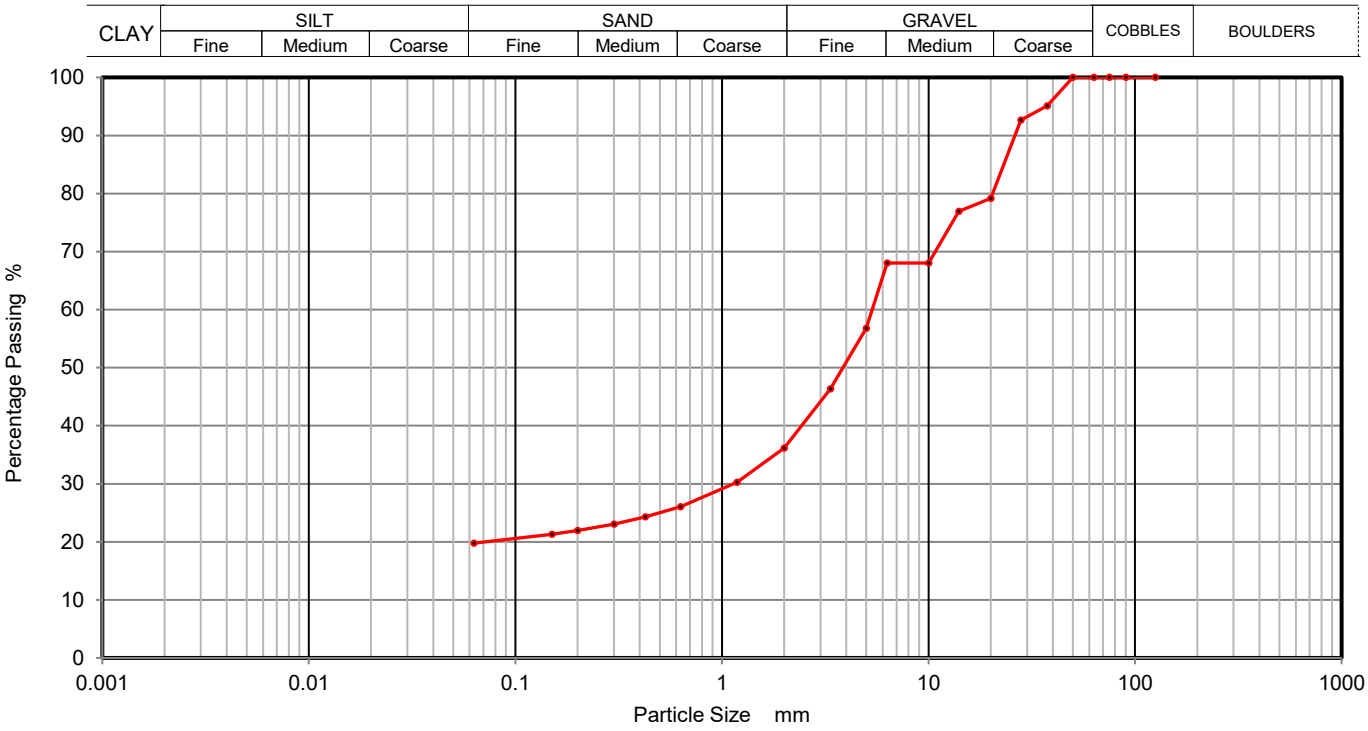
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH306**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**1.20**
		Depth Base	**1.40**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	95		
28	93		
20	79		
14	77		
10	68		
6.3	68		
5	57		
3.35	46		
2	36		
1.18	30		
0.63	26		
0.425	24		
0.30	23		
0.20	22		
0.15	21		
0.063	20		

Sample Proportions	% dry mass
Cobbles	0
Gravel	64
Sand	16
Silt and Clay	20

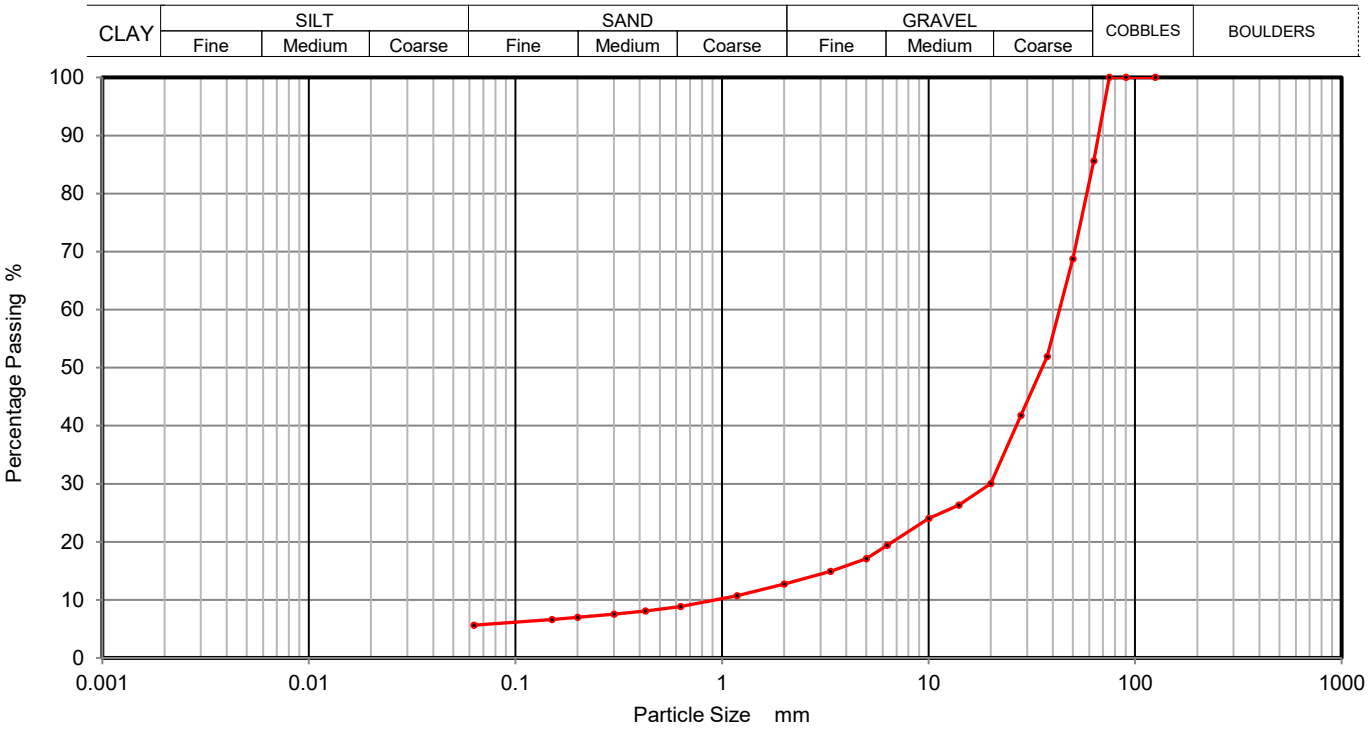
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH307**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.50**
		Depth Base	**1.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	86		
50	69		
37.5	52		
28	42		
20	30		
14	26		
10	24		
6.3	19		
5	17		
3.35	15		
2	13		
1.18	11		
0.63	9		
0.425	8		
0.30	8		
0.20	7		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	14
Gravel	73
Sand	7
Silt and Clay	6

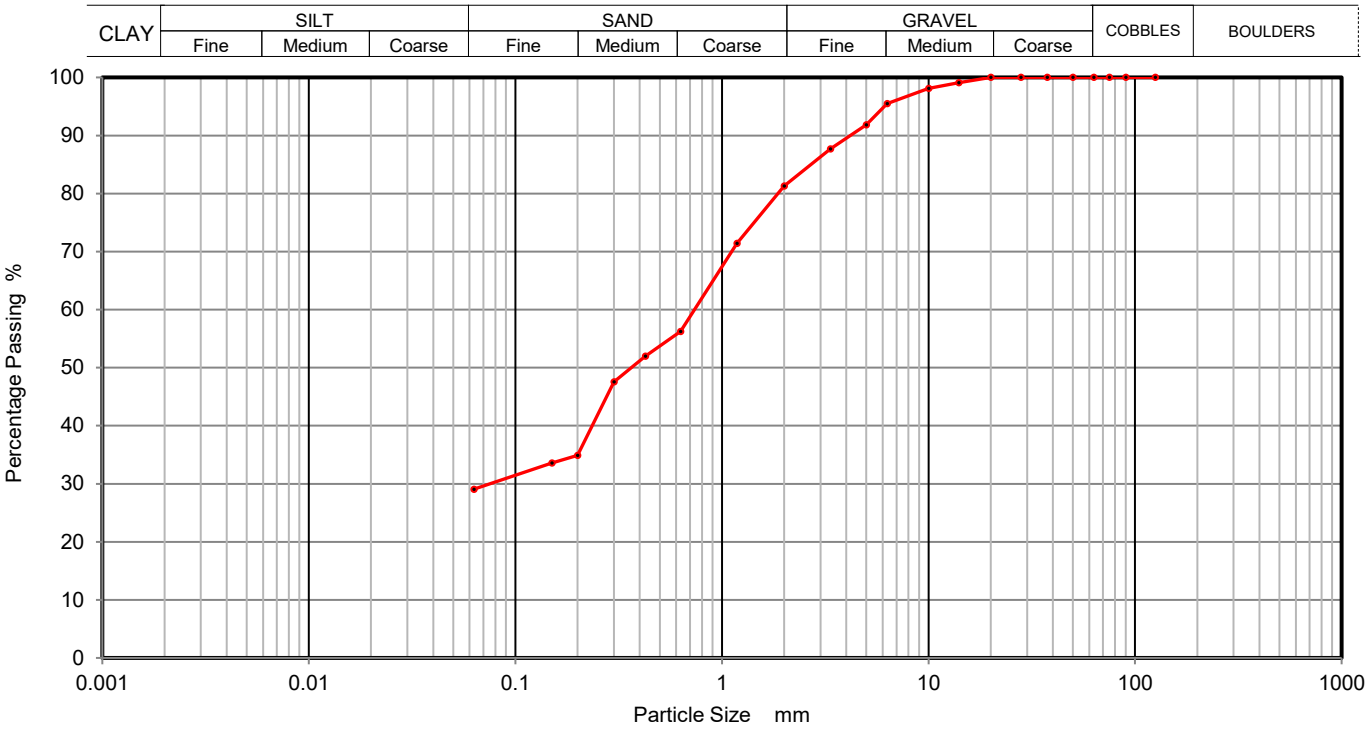
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH307**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Grey fine to coarse gravelly silty/clayey fine ot coarse SAND	Depth Top	**1.20**
		Depth Base	**2.20**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	98		
6.3	95		
5	92		
3.35	88		
2	81		
1.18	71		
0.63	56		
0.425	52		
0.30	48		
0.20	35		
0.15	34		
0.063	29		

Sample Proportions	% dry mass
Cobbles	0
Gravel	19
Sand	52
Silt and Clay	29

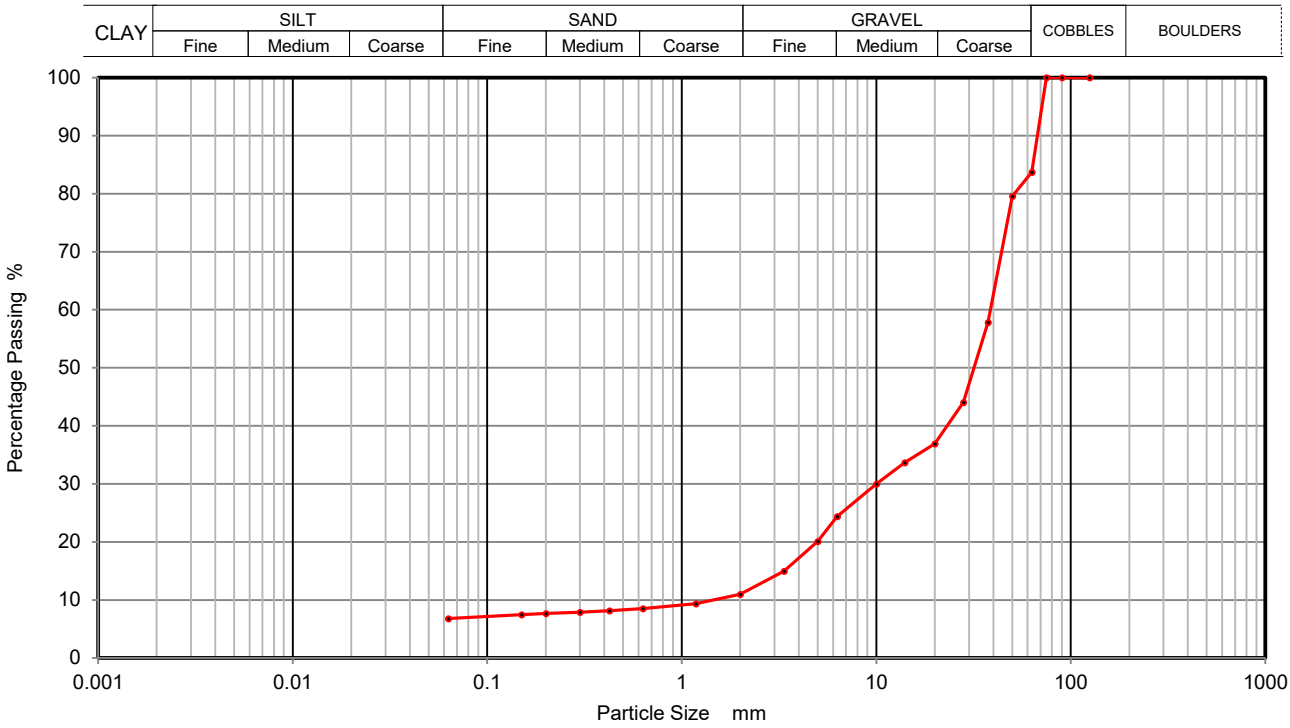
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey.J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**85490**
		Borehole/Pit No.	**BH308**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.00**
		Depth Base	**0.90**
Date Tested	10/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	84		
50	80		
37.5	58		
28	44		
20	37		
14	34		
10	30		
6.3	24		
5	20		
3.35	15		
2	11		
1.18	9		
0.63	8		
0.425	8		
0.30	8		
0.20	8		
0.15	7		
0.063	7		

Sample Proportions	% dry mass
Cobbles	16
Gravel	73
Sand	4
Silt and Clay	7

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Aidan.H

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole Number:	BH202	Depth from (m):	0.5,1.2,1.4
Sample Number :	2,3,4	Depth to (m):	0.7,1.4,1.7

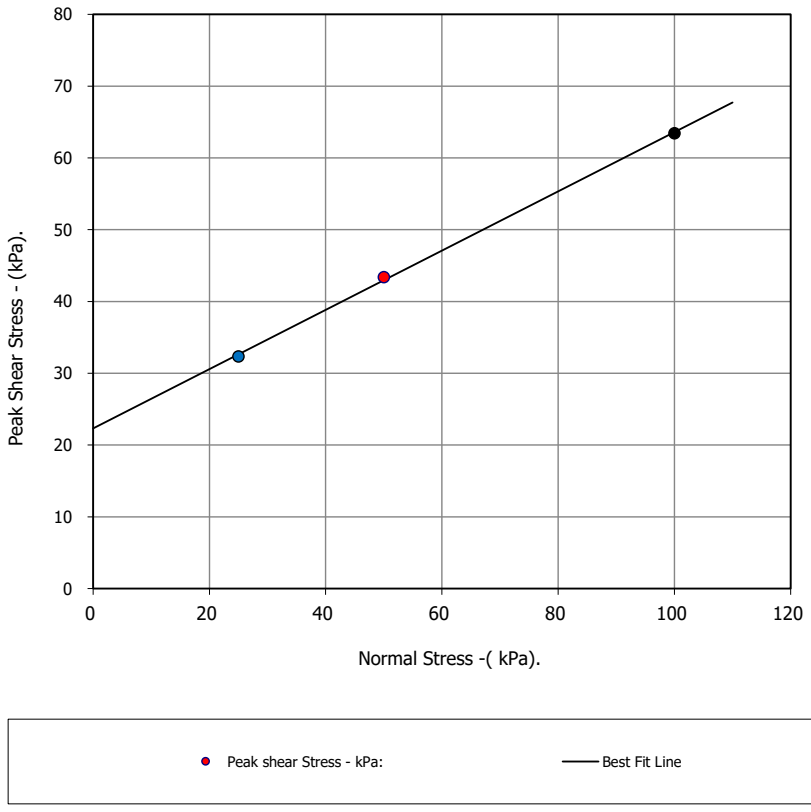
Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	

Sample Description:
Grey fine to coarse gravel silty CLAY

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	151.5	150.5	151.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	17.5	17.5	17.5
Bulk Density - Mg/m3:	2.05	2.06	2.05
Dry Density - Mg/m3:	1.75	1.75	1.75
Voids Ratio:	0.5160	0.5154	0.5174
Degree of Saturation - %:	90.11	90.21	89.86
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	144.44	139.52	138.11
Shear			
Rate of Horizontal Displacement (mm/min)	0.162	0.100	0.385
Horizontal Displacement at Peak Shear Stress (mm)	65.24	64.79	62.99
Peak shear Stress - kPa:	32	43	63
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**22.5**
Effective Cohesion - kPa:	**22**

FAILURE CONDITIONS



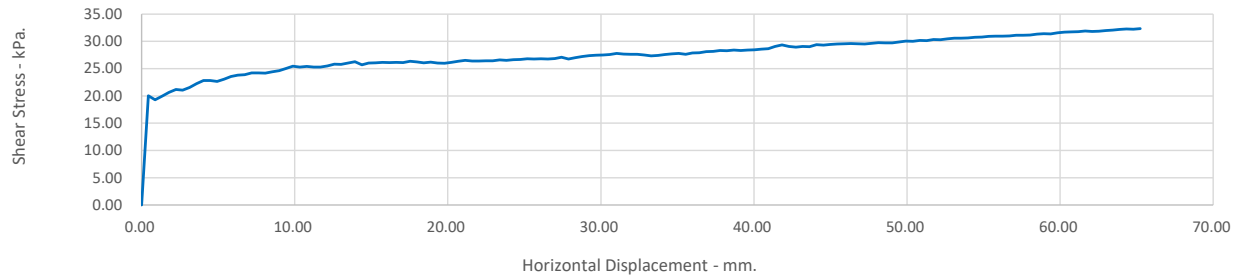
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **85490** Client Ref Number: **B077420**

Test Report: LARGE DIRECT SHEARBOX TEST.

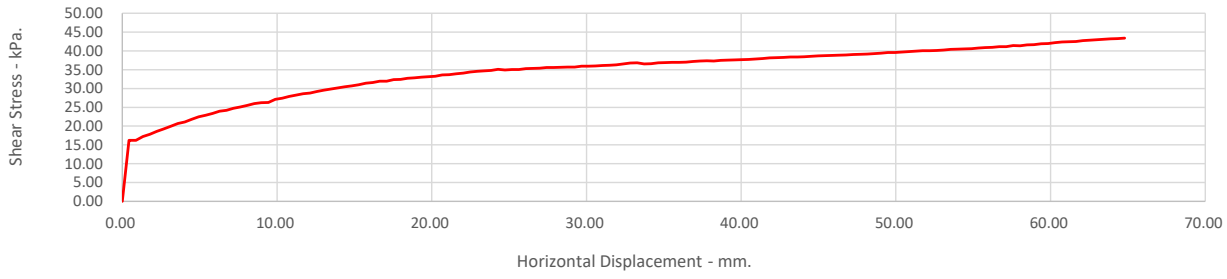
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH202 Depth (m): 0.5,1.2,1.4

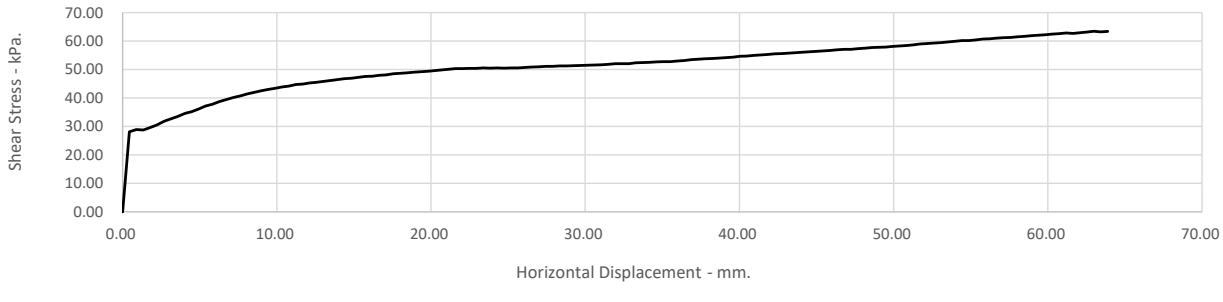
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

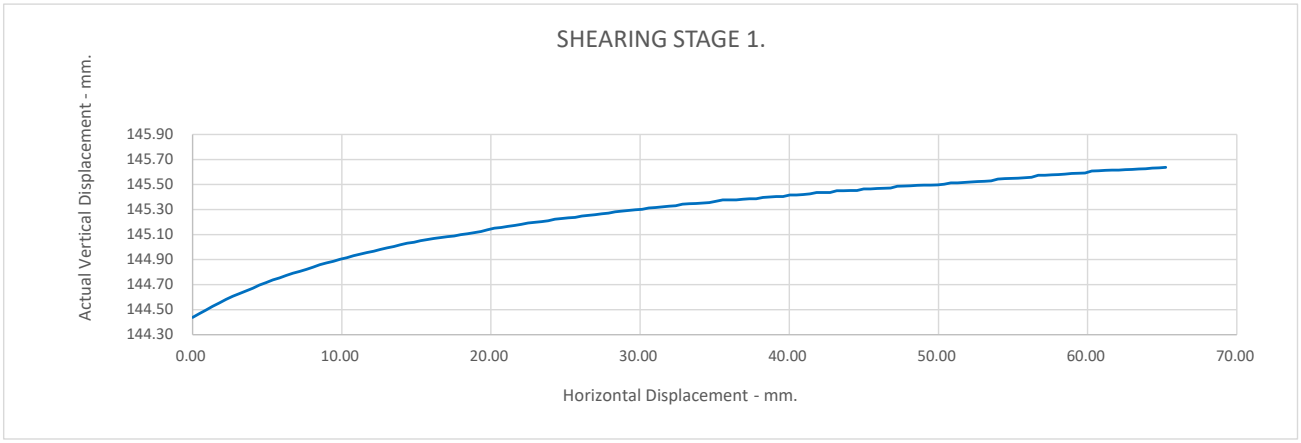
Contract No.: **85490**

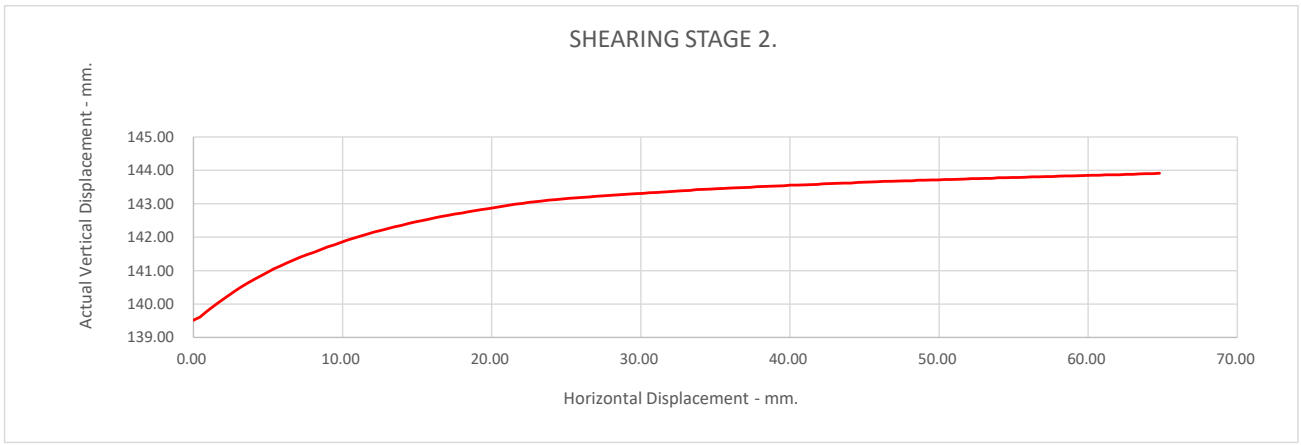
Client Ref Number: **B077420**

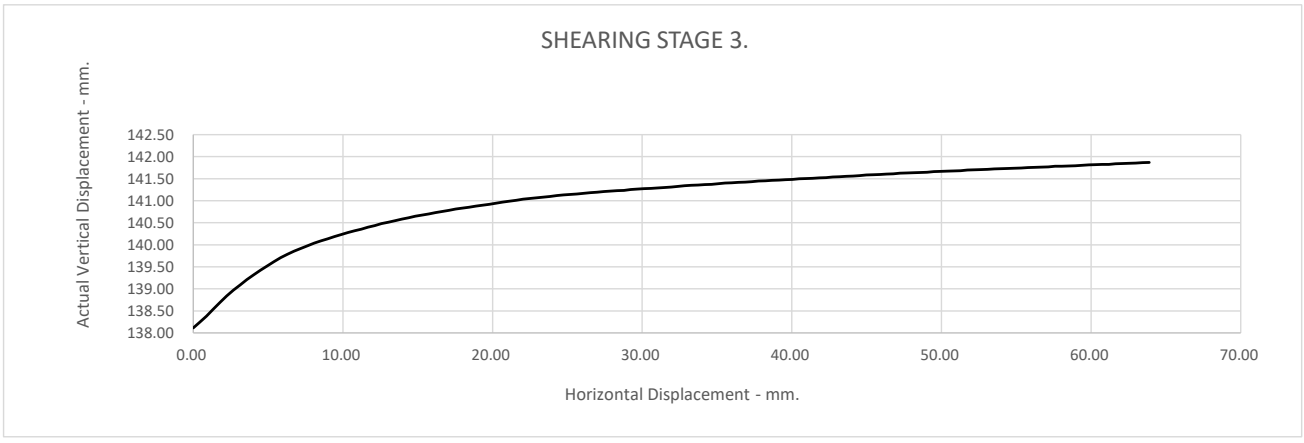
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH202 Depth (m): 0.5,1.2,1.4







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

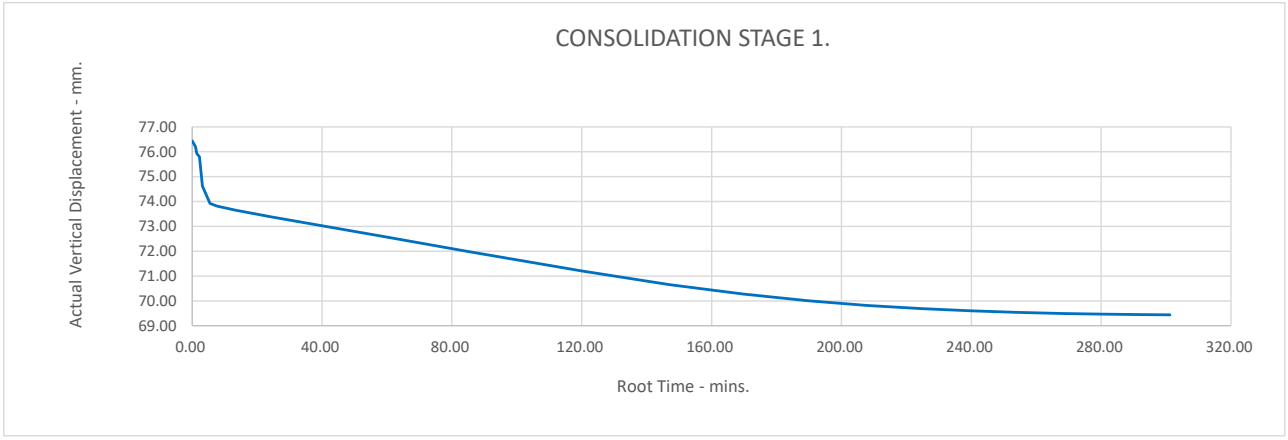
Contract No.: **85490**

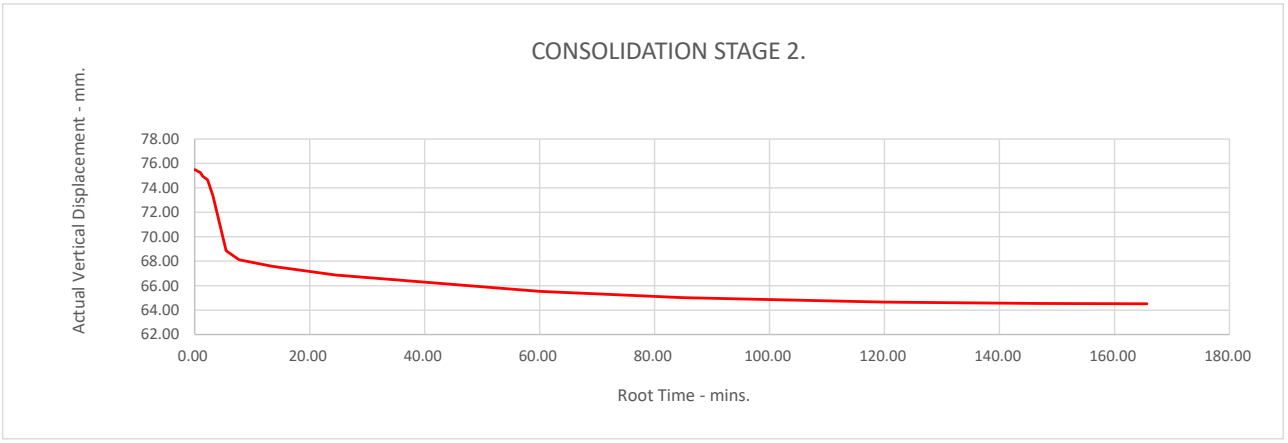
Client Ref Number: **B077420**

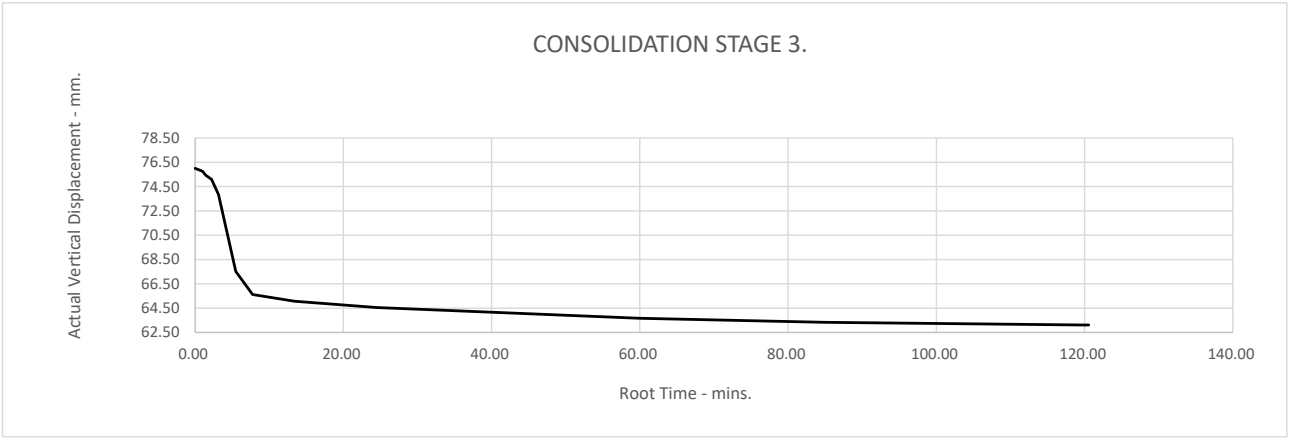
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH202 Depth (m): 0.5,1.2,1.4







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **85490**

Client Ref Number: **B077420**

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole Number:	BH301	Depth from (m):	2,3,4,5
Sample Number :	4,5,6,7	Depth to (m):	3,4,5,6.5

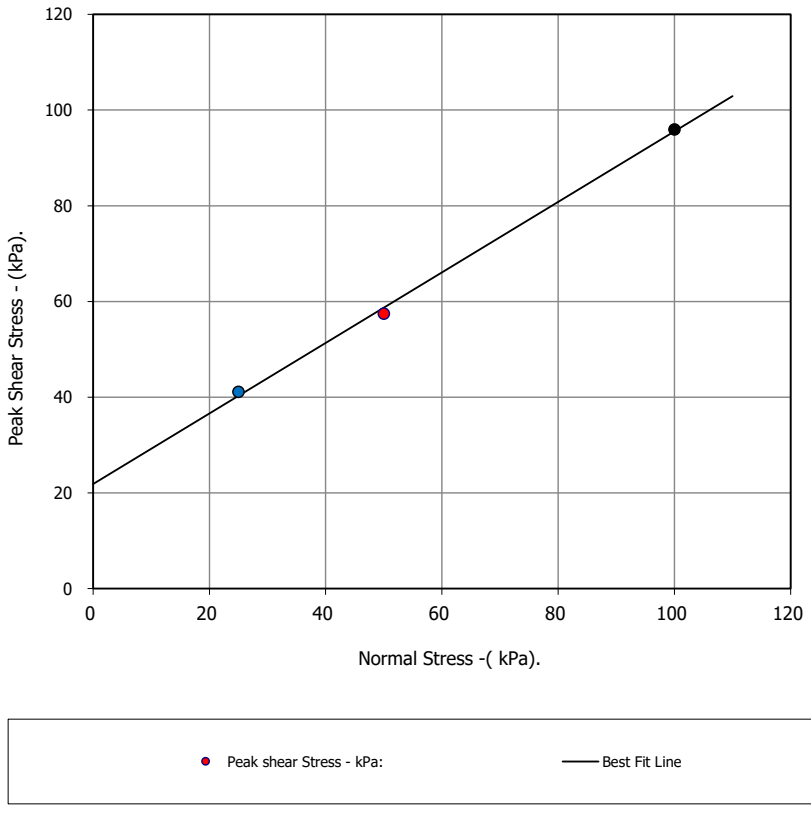
Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	

Sample Description:
Greyish brown fine to coarse gravel silty CLAY. Cobbles

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	151.0	151.0	151.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	15.6	15.6	15.6
Bulk Density - Mg/m3:	2.18	2.18	2.18
Dry Density - Mg/m3:	1.88	1.88	1.88
Voids Ratio:	0.4063	0.4062	0.4068
Degree of Saturation - %:	101.58	101.60	101.47
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	147.39	146.03	145.09
Shear			
Rate of Horizontal Displacement (mm/min)	0.100	0.093	0.385
Horizontal Displacement at Peak Shear Stress (mm)	56.04	64.34	60.29
Peak shear Stress - kPa:	41	57	96
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**36.5**
Effective Cohesion - kPa:	**22**

FAILURE CONDITIONS



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **85490**

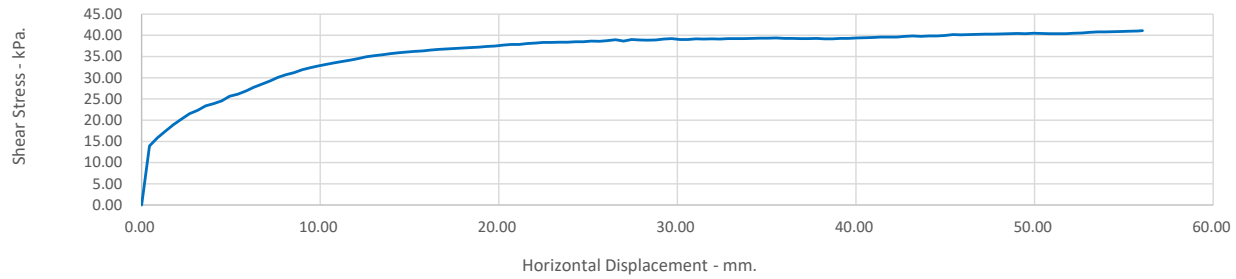
Client Ref Number: **B077420**

Test Report: LARGE DIRECT SHEARBOX TEST.

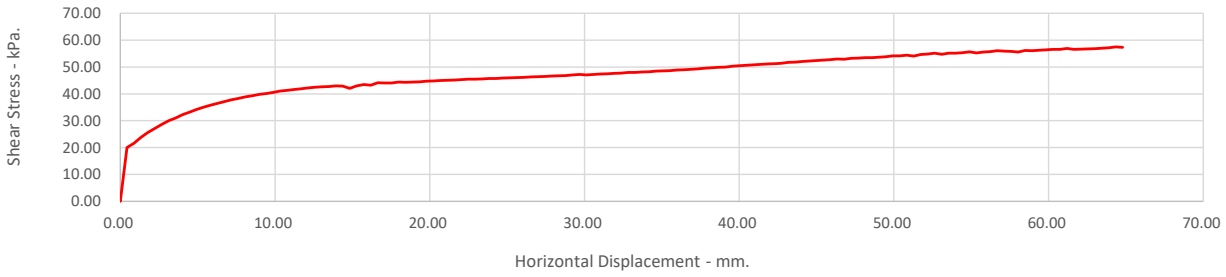
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH301 Depth (m): 2,3,4,5

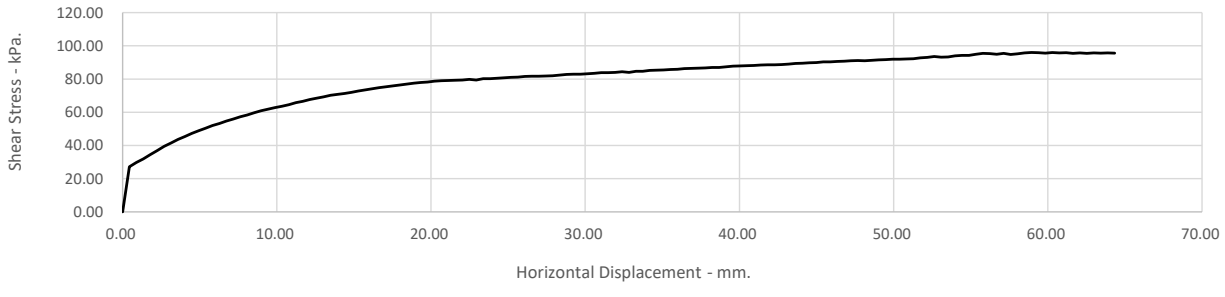
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.

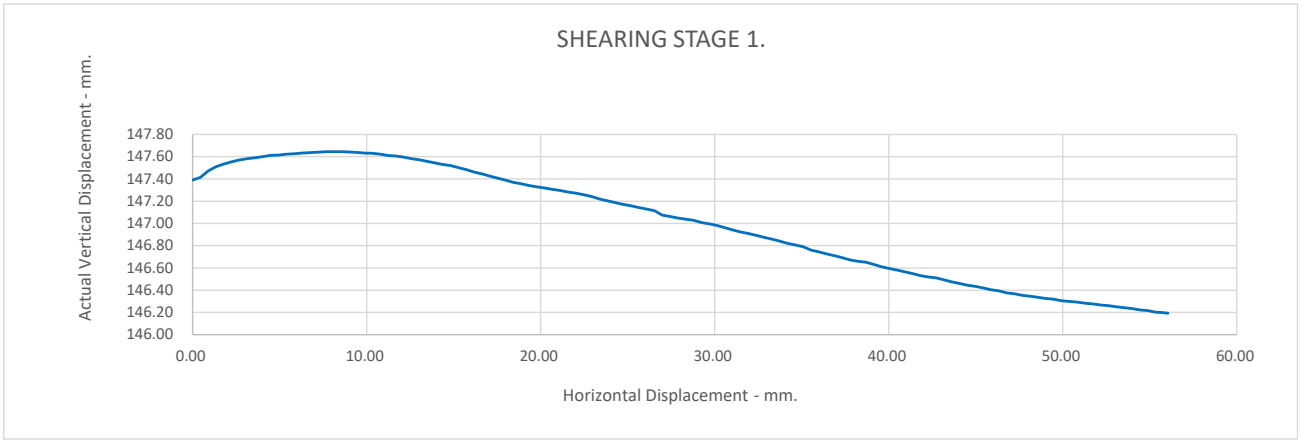


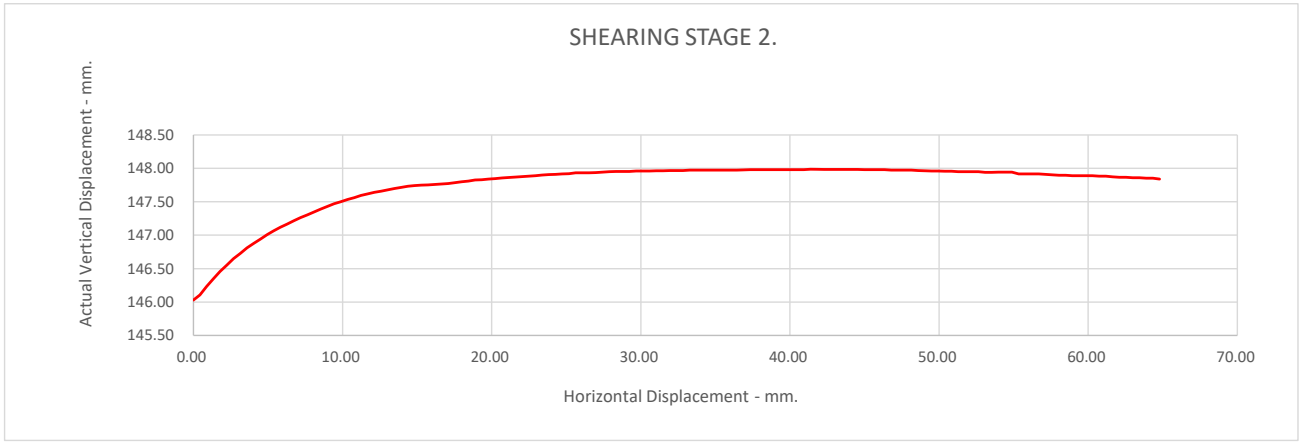
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **85490** Client Ref Number: **B077420**

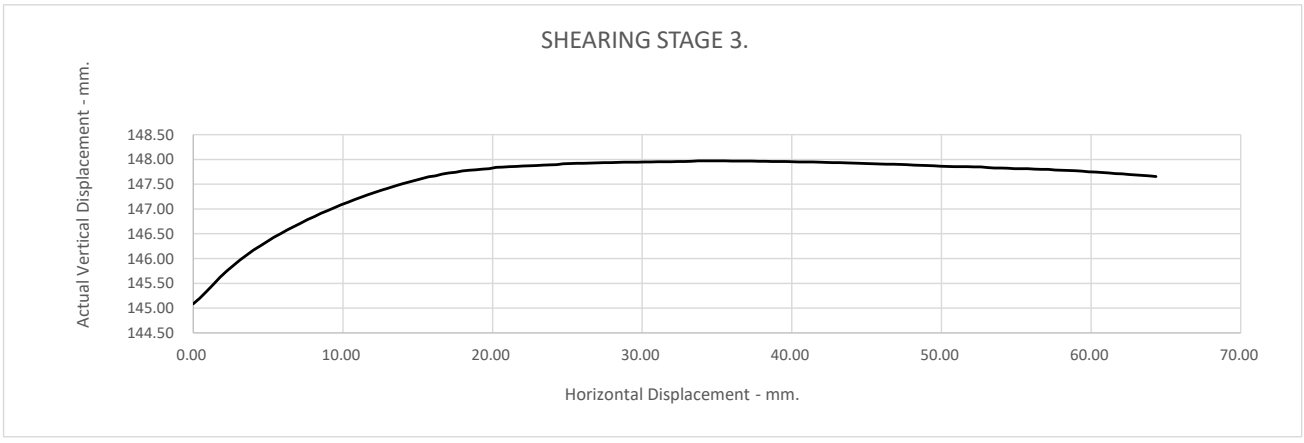
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH301 Depth (m): 2,3,4,5







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

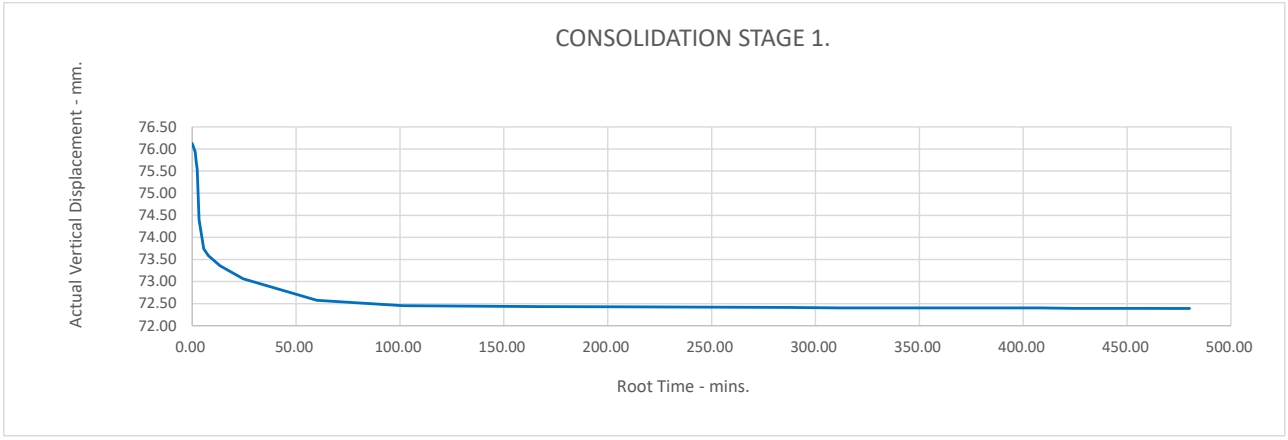
Contract No.: **85490**

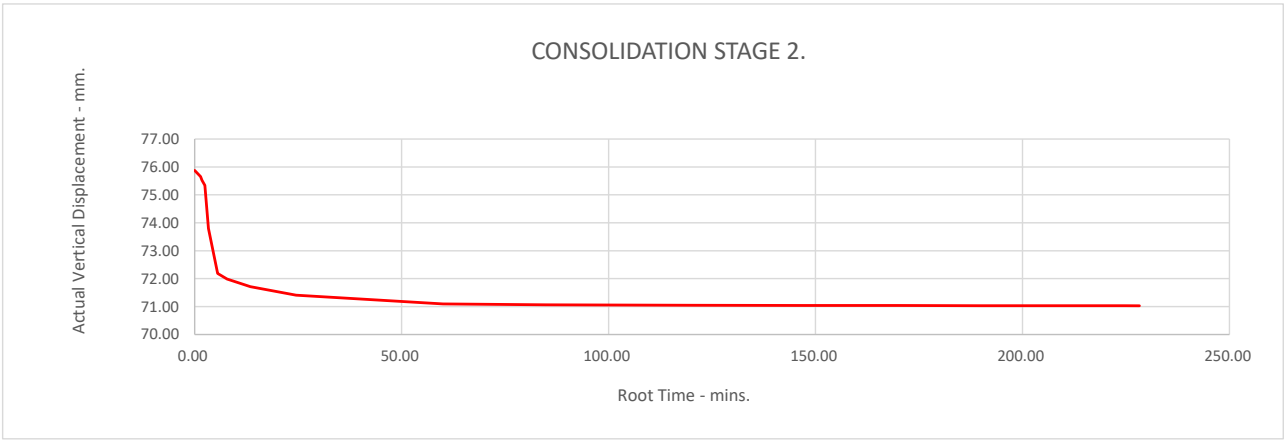
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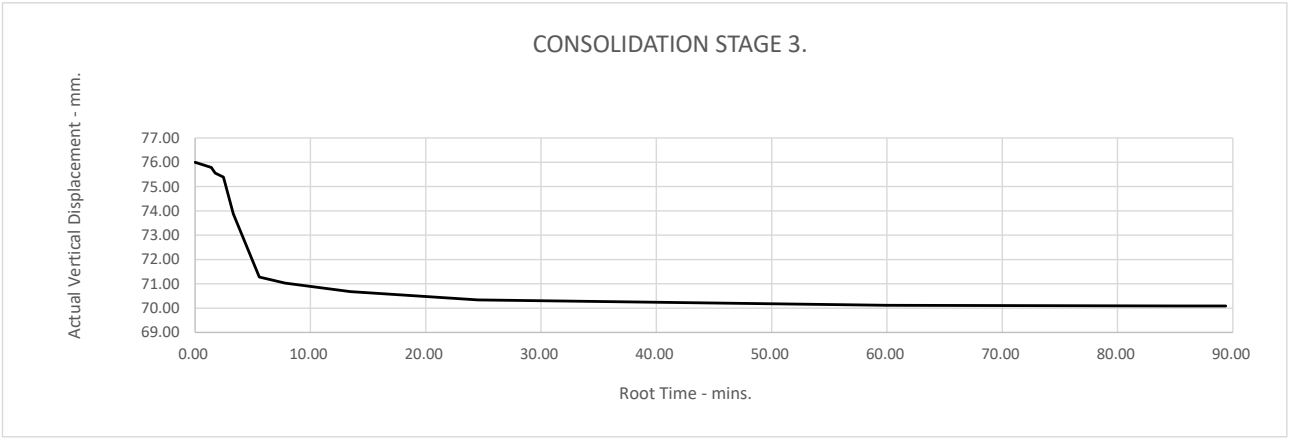
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH301 Depth (m): 2,3,4,5







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **85490** Client Ref Number: **B077420**

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole Number:	BH303	Depth from (m):	1,2
Sample Number :	3,4	Depth to (m):	2,3

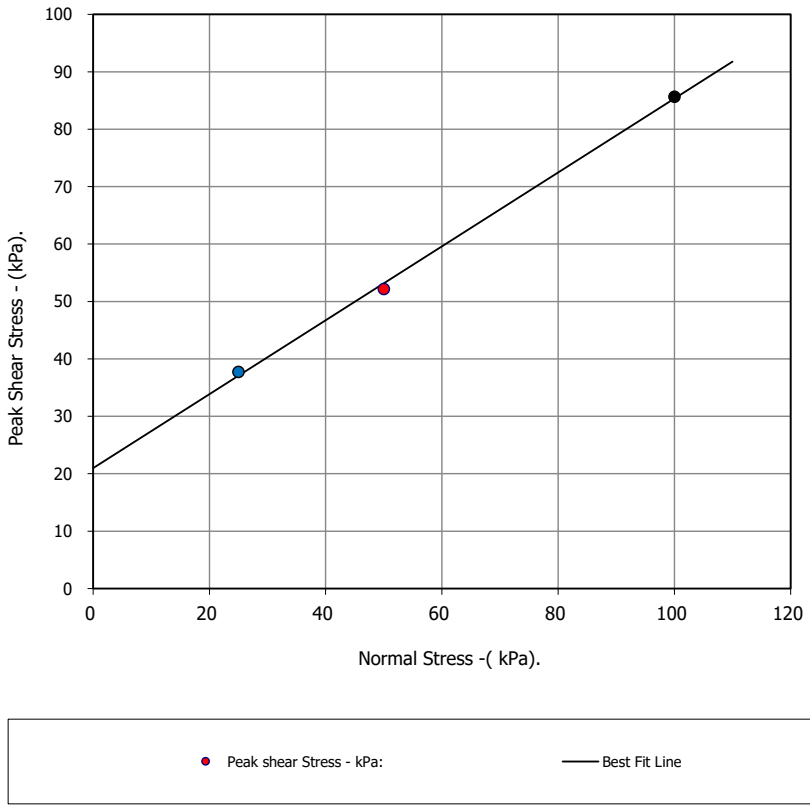
Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	

Sample Description:
Grey fine to coarse gravel silty CLAY

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	151.0	150.5	151.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	13.4	13.4	13.4
Bulk Density - Mg/m3:	2.08	2.08	2.07
Dry Density - Mg/m3:	1.83	1.83	1.83
Voids Ratio:	0.4464	0.4487	0.4502
Degree of Saturation - %:	79.81	79.40	79.13
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	146.16	143.04	141.21
Shear			
Rate of Horizontal Displacement (mm/min)	0.342	0.308	0.440
Horizontal Displacement at Peak Shear Stress (mm)	53.09	64.34	63.44
Peak shear Stress - kPa:	38	52	86
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**33**
Effective Cohesion - kPa:	**21**

FAILURE CONDITIONS



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **85490**

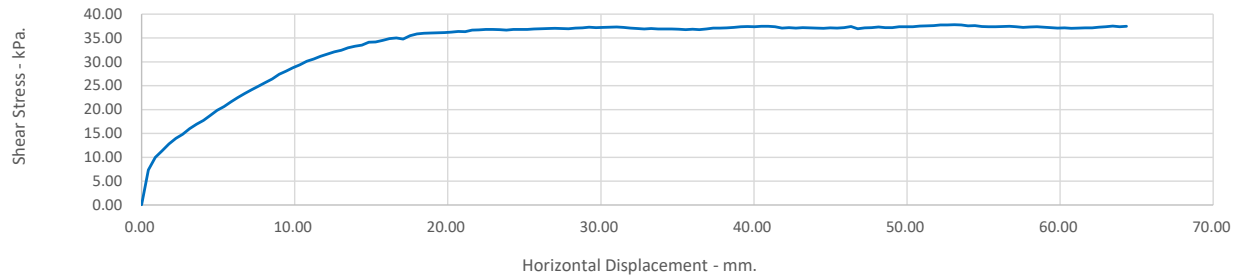
Client Ref Number: **B077420**

Test Report: LARGE DIRECT SHEARBOX TEST.

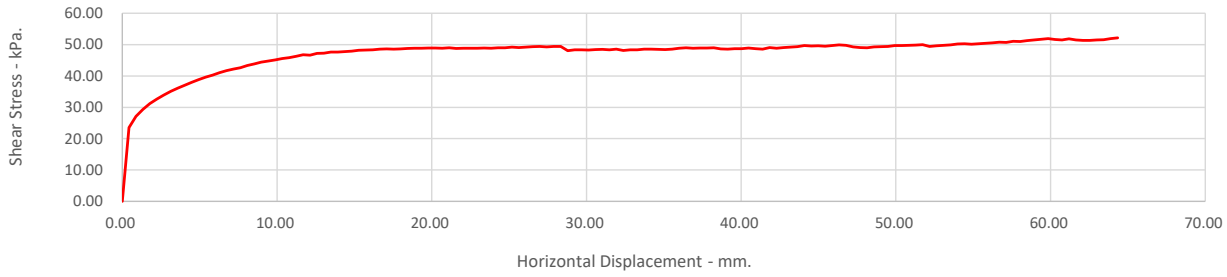
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH303 Depth (m): 1,2

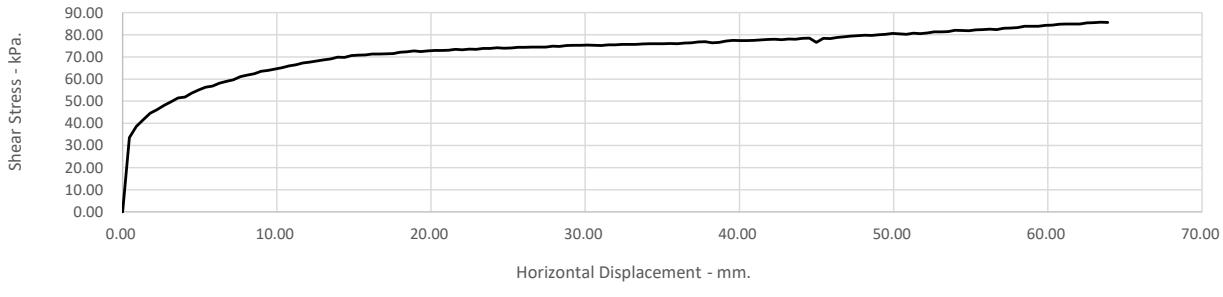
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

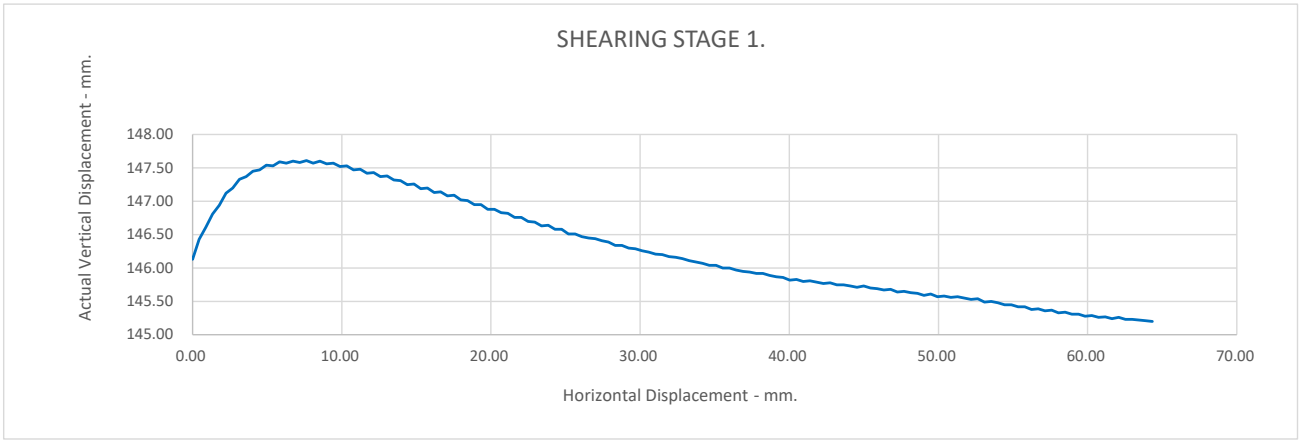
Contract No.: **85490**

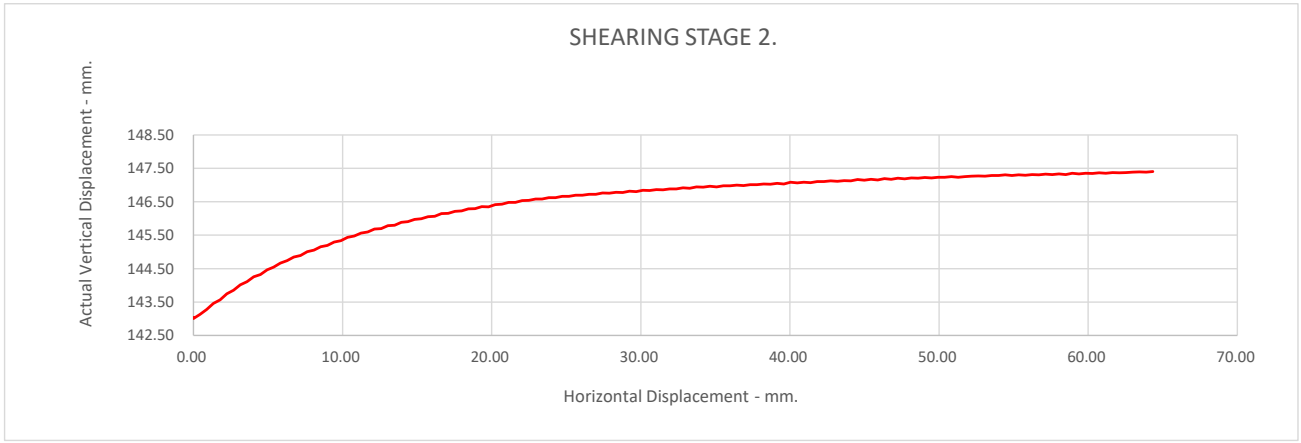
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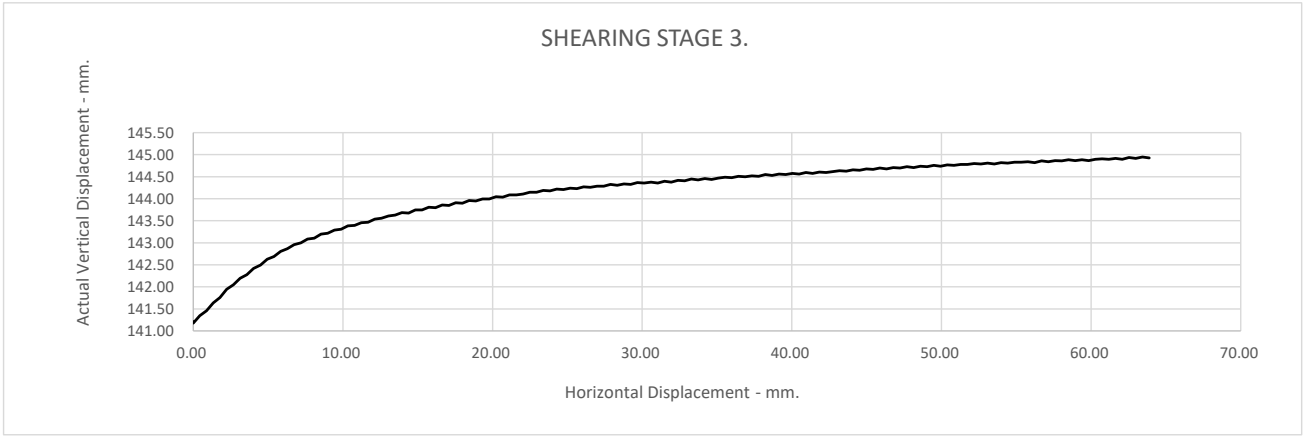
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH303 Depth (m): 1,2







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

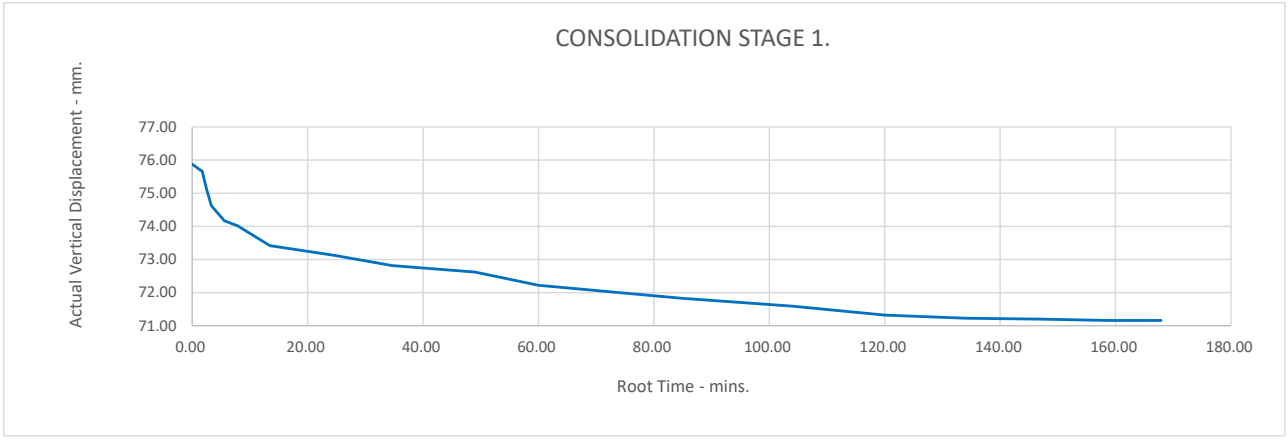
Contract No.: **85490**

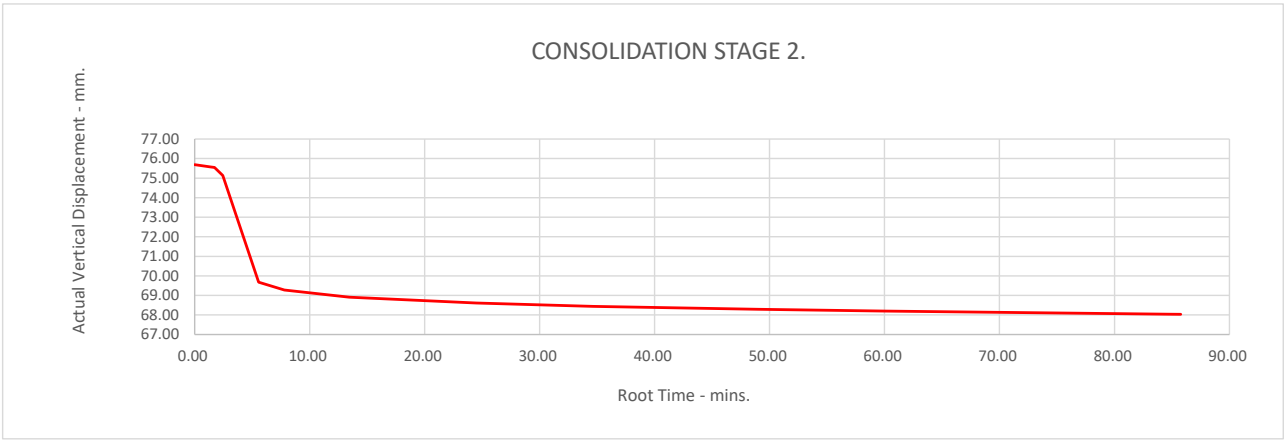
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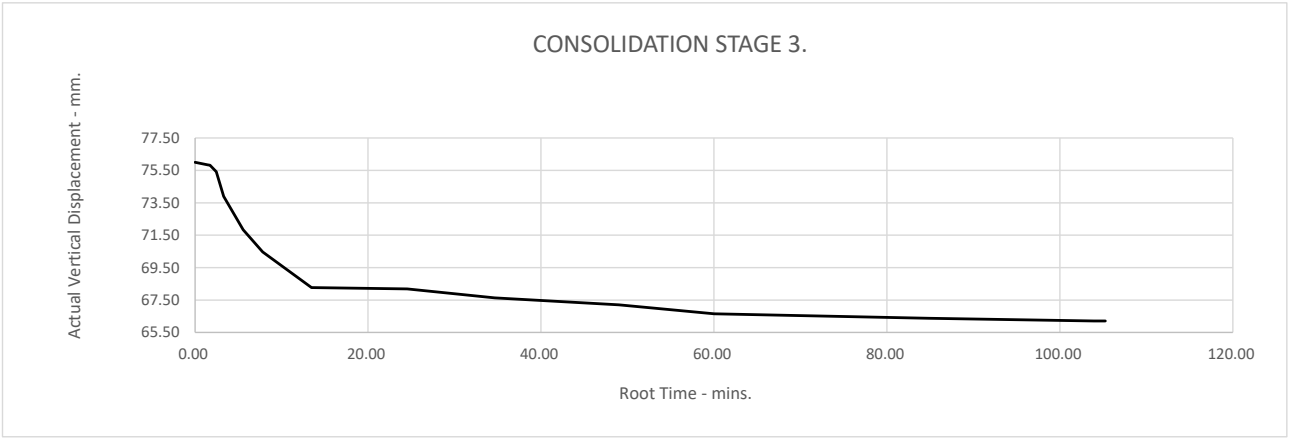
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: BH303 Depth (m): 1,2







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **85490**

Client Ref Number: **B077420**

Analytical Test Report	**E26/09124/GSL/26-29558**	**Tested on Behalf of**
Clients Project Reference	GOAT MILL ROAD GMR	GSTL
Clients Order Number	85490	Unit 3-4 Heol Aur
Sample(s) Analysed	20	Dafen Ind Estate
Sample(s) received / instructed	06/07/2026 / 06/07/2026	Dafen
Sample(s) Tested	07/07/2026 to 15/07/2026	
Report issued	17/07/2026	SA14 8QN
Report issue number	1	

Signed



Emily Blissett
Report Manager

Notes:

General

This report shall not be reproduced except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826351	826352	826353
Client Sample ID					BH201A	BH203	BH203
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					1	1	2
Depth - Top (m)					30	0	0.5
Depth - Bottom (m)					0.8	0.5	1.2
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	92	130	96
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	0.10	0.10
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.04	0.12	0.19
pH	PHSBRE	pH units	1	M	7.7	8.3	8.5
Chloride	ANIONSSBRE	mg/L	0.1	N	3.7	3.0	14
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	7.4	7.6	3.0

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826354	826355	826356
Client Sample ID					BH204	BH204	BH301
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					4	6	1
Depth - Top (m)					2	4	0.3
Depth - Bottom (m)					2.3	4.3	0.5
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	17	65	150
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	0.02	0.08
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.07	0.03	0.12
pH	PHSBRE	pH units	1	M	8.7	7.8	9.3
Chloride	ANIONSSBRE	mg/L	0.1	N	1.4	1.8	20
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	13	6.5	17

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826357	826359	826360
Client Sample ID					BH301	BH301	BH302
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					2	4	2
Depth - Top (m)					0.9	2	0.3
Depth - Bottom (m)					1.2	3	1.2
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Other	Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	180	280	46
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.09	0.28	0.03
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.18	0.16	0.06
pH	PHSBRE	pH units	1	M	9.0	8.8	9.1
Chloride	ANIONSSBRE	mg/L	0.1	N	12	14	5.5
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	22	< 1.5	2.1

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826361	826362	826364
Client Sample ID					BH302	BH302	BH304
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					4	6	1
Depth - Top (m)					2	4	0.2
Depth - Bottom (m)					3	5	0.5
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Other	Other	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	130	420	72
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.58	0.77	0.06
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.79	0.72	0.15
pH	PHSBRE	pH units	1	M	9.3	9.8	9.0
Chloride	ANIONSSBRE	mg/L	0.1	N	210	81	10
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	1.5	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	< 1.5	< 1.5	9.5

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826365	826366	826367
Client Sample ID					BH304	BH305	BH306
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					3	2	2
Depth - Top (m)					1.2	0.5	0.5
Depth - Bottom (m)					2.2	0.9	0.8
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Other	Other	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	39	42	310
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	0.04	0.68
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.03	0.11	0.54
pH	PHSBRE	pH units	1	M	9.3	7.9	8.5
Chloride	ANIONSSBRE	mg/L	0.1	N	2.4	5.8	84
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	3.1
Magnesium	1377MGICPB	mg/L	1.5	N	13	7.4	< 1.5

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analytical Test Results - BRE Associated Analysis

Lab Reference					826368	826369	826370
Client Sample ID					BH307	BH307	BH308
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					1	3	1
Depth - Top (m)					0.2	1.2	0
Depth - Bottom (m)					0.5	2.2	0.9
Date of Sampling					-	-	-
Time of Sampling					-	-	-
Sample Matrix					Other	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	110	530	79
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.13	1.22	0.08
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.11	0.82	0.16
pH	PHSBRE	pH units	1	M	8.8	10.0	8.2
Chloride	ANIONSSBRE	mg/L	0.1	N	15	97	8.4
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	1.5	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	3.6	< 1.5	7.0

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
826351	BH201A	-	SOIL	-	Grey silty clay with rare organic matter	-	-	100
826352	BH203	-	SOIL	-	Grey slightly gravelly slightly sandy silty clay with rare organic matter	-	-	100
826353	BH203	-	SOIL	-	Brownish grey slightly gravelly slightly sandy silty clay with rare organic matter	-	-	100
826354	BH204	-	SOIL	-	Grey gravelly silty clay	-	-	100
826355	BH204	-	SOIL	-	Grey silty clay	-	-	100
826356	BH301	-	SOIL	-	Brownish grey silty slightly clayey crushed rock	-	-	100
826357	BH301	-	SOIL	-	Brownish grey silty slightly clayey crushed rock	-	-	100
826359	BH301	-	SOIL	-	Brownish grey slightly gravelly slightly sandy silty clay	-	-	90
826360	BH302	-	SOIL	-	Brownish grey silty slightly clayey crushed rock	-	-	100
826361	BH302	-	SOIL	-	Dark grey silty crushed rock	-	-	100
826362	BH302	-	SOIL	-	Dark grey silty sandy crushed rock	-	-	100
826364	BH304	-	SOIL	-	Dark grey silty clayey crushed rock	-	-	100
826365	BH304	-	SOIL	-	Brownish grey clayey crushed rock	-	-	100
826366	BH305	-	SOIL	-	Brownish grey clayey crushed rock with rare organic matter	-	-	100
826367	BH306	-	SOIL	-	Made Ground- brownish grey slightly sandy slightly clayey crushed rock with occasional concrete bric	-	-	100
826368	BH307	-	SOIL	-	Dark brown silty clayey crushed rock	-	-	100
826369	BH307	-	SOIL	-	Dark brown slightly sandy clayey crushed rock	-	-	100
826370	BH308	-	SOIL	-	Dark grey gravelly slightly sandy silty clay	-	-	100

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Site addresses where testing is performed: Leicester - 7-11 Harding Street, Leicester, LE1 4DH

Poole - Unit D11, Admiralty Park, Station Road, Holton Heath, Poole, BH16 6HX & Unit 14B, Blackhill Road West, Holton Heath Trading Park, Poole, Dorset, BH16 6LE

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Site	Test Details
1377MGICPB	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Leicester	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.
1377TS-EBR	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Leicester	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
ANIONSSBRE	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Leicester	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
ASSO4SBRE	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Leicester	Determination of total sulphate in soils by acid extraction followed by ICP analysis
PHSBRE	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Leicester	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Leicester	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
826351	BH201A					A
826352	BH203					A
826353	BH203					A
826354	BH204					A
826355	BH204					A
826356	BH301					A
826357	BH301					A
826359	BH301					A
826360	BH302					A
826361	BH302					A
826362	BH302					A
826364	BH304					A
826365	BH304					A
826366	BH305					A
826367	BH306					A
826368	BH307					A
826369	BH307					A
826370	BH308					A

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Additional Method Notes

Method	Notes
TRL 447 Suite	1. Sample preparation was in accordance with TRL 447 Appendix C. 2. Testing was carried out in accordance with methods 1, 2 and 4 of TRL 447 2001 (Updated 2005). 3. Oxidisable sulphides and total potential sulphate have been calculated in accordance with TRL 447, Appendix C Test 4. Values are reported against a dry mass of sample passing a 2mm test sieve after oven drying, where required material retained on the 2mm test sieve was recombined with the test portion prior to analysis.
BS1377 Acid Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, acid soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Loss on Ignition	Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
BS1377 Organic Matter Content	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 4. 3. The reported % organic content is the average organic matter content present in the soil fraction passing the 2mm test sieve to the nearest 0.1% of the original oven dry mass of soil. 4. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12
BS1377 Sulphate (acid soluble)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.9 & 7.5. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Total Dissolved Solids	Determination of TDS in accordance with BS 1377: Part 3
BS1377 Total Sulphur	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.
BS1377 Water Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, Clause 7.2, water soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Sulphate (water soluble) (ICP-OES)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.3 & 7.5. 3. pH of the water extract was not recorded. 4. Some information required by BS 1377 has not been reported. This information is available on request.
EN1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur by HTC (Cl. 11.2)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.2 Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur (Cl. 11.1)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Chloride	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 7 (Reference Method). Analysis subcontracted to a UKAS accredited laboratory

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

Additional Method Notes

Method	Notes
EN1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10. Analysis subcontracted to a UKAS accredited laboratory
Oxidisable Sulphides Calculation (HTC)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Oxidisable Sulphides Calculation (Grav)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Total Potential Sulphate (Calc from 1744 Total S)	Derived from the Total sulphur concentration determined in accordance with EN1744.
BS1881 Alkali (Na2O + K2O)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 12.3. 2. A concrete density of 2300kg/m3 was used in the calculation of equivalent sodium oxide content per m3 of concrete. 3. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 4. Quality control samples are tested with each batch of samples.
BS1881 Calcium Oxide Content (EDTA Titration)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.4. 2. Cement content (%m/m) has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 64.5% by mass of Calcium Oxide. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch and therefore the results are from a single analysis only.
BS1881 Cement Content (ICP method)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.5 by ICP. 2. Cement content has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch
Chloride in Concrete by Aquakem (Acid Soluble)	1. Testing was in accordance with in house method statement MS - CL - Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
Moisture Content of Grout Mortar & Concrete	1. Testing was in accordance with in house method statement MS Moisture Content of Grout, Mortar and Concrete
MS - Sulphate in Hardened Concrete by ICP	1. Testing undertaken in accordance with in house method statement MS - Sulphate in hardened concrete by ICP. 2. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 3. Quality control samples are tested with each batch of samples.
BS1881 Water Cement Ratio	1 Testing was in accordance with BS 1881: Part 124: 2015+A1:2021. 2. Cement content was determined in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 6.5 by ICP. 3. Samples of the original constituents of the mix was/was not submitted. 4. Original water/cement ratio has been calculated in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 9.6. 5. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015+A1:2021.

E26/09124/GSL/26-29558

GOAT MILL ROAD GMR

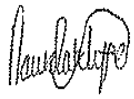
Additional Method Notes

Method	Notes
BS4551 Mix Proportion	1.Sample preparation was in accordance with BS4551 2005 + A2:2013 Clause 7. 4.5. 2. Testing was in accordance with BS 4551: Part 2: 2005 + A2:2013 Clause 7.5.3 and 7.5.3.4. 3. Cement content has been calculated assuming the presence in the mix of Ordinary Portland Cement containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively.
BS6463-102 Neutralizing Value	Testing was undertaken in accordance with an in house method statement based on BS6463-102
BS3882:2015 Specification for topsoil	Testing was undertaken in accordance with the methodologies within BS3882:2015
BS8601:2013 Specification for subsoil	Testing was undertaken in accordance with the methodologies within BS8601:2013
Depth of Carbonation (BS EN 14630:2006)	1. Testing was carried out in accordance with BS EN 14630:2006 Depth of Carbonation. 2. Testing was carried out in the laboratory. 3. Indicator Solution Used– 1g of Phenolphthalein powder dissolved in a solution of 50ml of Methylated Spirits and 100ml of deionised water
HAC	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.
pH Value of Concrete	1. Testing was in accordance with in house method statement MS – pH Value of Hardened Concrete, Grout and Water from voids
Sub - EN1744 Sulphide	Analysis was in accordance with BS EN 1744-1 : 2009 + A1 : 2012, clause 13 and subcontracted to a UKAS accredited laboratory for this test

ENVIRONMENTAL CHEMISTRY TESTING LABORATORIES
A PHENNA GROUP COMPANY

Analytical Test Report	**E26/09623/GSL/26-31343**	**Tested on Behalf of**
Clients Project Reference	Goat Mill Road	GSTL
Clients Order Number	85490	Unit 3-4 Heol Aur
Sample(s) Analysed	1	Dafen Ind Estate
Sample(s) received / instructed	16/07/2026 / 16/07/2026	Dafen
Sample(s) Tested	17/07/2026 to 23/07/2026	
Report issued	23/07/2026	SA14 8QN
Report issue number	1	

Signed



David Ratcliffe
Managing Director

Notes:

General

This report shall not be reproduced except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

E26/09623/GSL/26-31343

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference	836385
Client Sample ID	-
Client Sample Location	BH301
Client Sample Type	D
Client Sample Number	1
Depth - Top (m)	1
Depth - Bottom (m)	2
Date of Sampling	-
Time of Sampling	-
Sample Matrix	Clay

Determinant	Code	Units	LOD	Accreditation	
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	190
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.15
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.17
pH	PHSBRE	pH units	1	M	8.9
Chloride	ANIONSSBRE	mg/L	0.1	N	18
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.0
Magnesium	1377MGICPB	mg/L	1.5	N	< 1.5
Ammonium (NH4)	ANIONSSBRE	mg/L	1	N	1.3

E26/09623/GSL/26-31343

Goat Mill Road

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
836385	-	BH301	SOIL	-	Dark grey silty clay	-	-	100

E26/09623/GSL/26-31343

Goat Mill Road

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Site addresses where testing is performed: Leicester - 7-11 Harding Street, Leicester, LE1 4DH

Poole - Unit D11, Admiralty Park, Station Road, Holton Heath, Poole, BH16 6HX & Unit 14B, Blackhill Road West, Holton Heath Trading Park, Poole, Dorset, BH16 6LE

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Site	Test Details
1377MGICPB	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Leicester	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.
1377TS-EBR	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Leicester	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
ANIONSSBRE	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Leicester	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
ASSO4SBRE	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Leicester	Determination of total sulphate in soils by acid extraction followed by ICP analysis
PHSBRE	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Leicester	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Leicester	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

E26/09623/GSL/26-31343

Goat Mill Road

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836385		BH301				A

E26/09623/GSL/26-31343

Goat Mill Road

Additional Method Notes

Method	Notes
TRL 447 Suite	1. Sample preparation was in accordance with TRL 447 Appendix C. 2. Testing was carried out in accordance with methods 1, 2 and 4 of TRL 447 2001 (Updated 2005). 3. Oxidisable sulphides and total potential sulphate have been calculated in accordance with TRL 447, Appendix C Test 4. Values are reported against a dry mass of sample passing a 2mm test sieve after oven drying, where required material retained on the 2mm test sieve was recombined with the test portion prior to analysis.
BS1377 Acid Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, acid soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Loss on Ignition	Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
BS1377 Organic Matter Content	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 4. 3. The reported % organic content is the average organic matter content present in the soil fraction passing the 2mm test sieve to the nearest 0.1% of the original oven dry mass of soil. 4. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12
BS1377 Sulphate (acid soluble)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.9 & 7.5. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Total Dissolved Solids	Determination of TDS in accordance with BS 1377: Part 3
BS1377 Total Sulphur	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.
BS1377 Water Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, Clause 7.2, water soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Sulphate (water soluble) (ICP-OES)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.3 & 7.5. 3. pH of the water extract was not recorded. 4. Some information required by BS 1377 has not been reported. This information is available on request.
EN1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur by HTC (Cl. 11.2)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.2 Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur (Cl. 11.1)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Chloride	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 7 (Reference Method). Analysis subcontracted to a UKAS accredited laboratory

E26/09623/GSL/26-31343

Goat Mill Road

Additional Method Notes

Method	Notes
EN1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10. Analysis subcontracted to a UKAS accredited laboratory
Oxidisable Sulphides Calculation (HTC)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Oxidisable Sulphides Calculation (Grav)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Total Potential Sulphate (Calc from 1744 Total S)	Derived from the Total sulphur concentration determined in accordance with EN1744.
BS1881 Alkali (Na2O + K2O)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 12.3. 2. A concrete density of 2300kg/m3 was used in the calculation of equivalent sodium oxide content per m3 of concrete. 3. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 4. Quality control samples are tested with each batch of samples.
BS1881 Calcium Oxide Content (EDTA Titration)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.4. 2. Cement content (%m/m) has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 64.5% by mass of Calcium Oxide. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch and therefore the results are from a single analysis only.
BS1881 Cement Content (ICP method)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.5 by ICP. 2. Cement content has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch
Chloride in Concrete by Aquakem (Acid Soluble)	1. Testing was in accordance with in house method statement MS - CL - Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
Moisture Content of Grout Mortar & Concrete	1. Testing was in accordance with in house method statement MS Moisture Content of Grout, Mortar and Concrete
MS - Sulphate in Hardened Concrete by ICP	1. Testing undertaken in accordance with in house method statement MS - Sulphate in hardened concrete by ICP. 2. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 3. Quality control samples are tested with each batch of samples.
BS1881 Water Cement Ratio	1 Testing was in accordance with BS 1881: Part 124: 2015+A1:2021. 2. Cement content was determined in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 6.5 by ICP. 3. Samples of the original constituents of the mix was/was not submitted. 4. Original water/cement ratio has been calculated in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 9.6. 5. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015+A1:2021.

E26/09623/GSL/26-31343

Goat Mill Road

Additional Method Notes

Method	Notes
BS4551 Mix Proportion	1.Sample preparation was in accordance with BS4551 2005 + A2:2013 Clause 7. 4.5. 2. Testing was in accordance with BS 4551: Part 2: 2005 + A2:2013 Clause 7.5.3 and 7.5.3.4. 3. Cement content has been calculated assuming the presence in the mix of Ordinary Portland Cement containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively.
BS6463-102 Neutralizing Value	Testing was undertaken in accordance with an in house method statement based on BS6463-102
BS3882:2015 Specification for topsoil	Testing was undertaken in accordance with the methodologies within BS3882:2015
BS8601:2013 Specification for subsoil	Testing was undertaken in accordance with the methodologies within BS8601:2013
Depth of Carbonation (BS EN 14630:2006)	1. Testing was carried out in accordance with BS EN 14630:2006 Depth of Carbonation. 2. Testing was carried out in the laboratory. 3. Indicator Solution Used– 1g of Phenolphthalein powder dissolved in a solution of 50ml of Methylated Spirits and 100ml of deionised water
HAC	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.
pH Value of Concrete	1. Testing was in accordance with in house method statement MS – pH Value of Hardened Concrete, Grout and Water from voids
Sub - EN1744 Sulphide	Analysis was in accordance with BS EN 1744-1 : 2009 + A1 : 2012, clause 13 and subcontracted to a UKAS accredited laboratory for this test

Laboratory Report

Contract Number: 87849

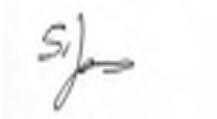
Client Ref: **784-B077402**
Client PO: **7023390**

Client: **Tetra Tech**

Contract Title: **Goat Mill Road**
For the attention of: **James Craddock**

Date Received: **10-07-2026**
Date Completed: **07-08-2026**
Report Date: **07-08-2026**

This report has been checked and approved by:



Shaun Jones
Laboratory manager

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - * UKAS	9
4 Point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	9
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	40
CBR: Remoulded Specimen and tested at top only BS 1377-2:2022 Clause 15 - * UKAS	4
Soaking or Curing CBR specimens BS 1377-2:2022 Clause 15.3 - @ Non Accredited Test	16
BRE Suite D Brownfield Site (pyrite present) **includes pH, water & acid soluble sulphate, total sulphur, magnesium, chloride and nitrate** Sub-contracted Test#	35
Direct Shear by Large Shear Box 300mm Peak with 3 confining pressures includes remoulding BS EN ISO 17892-10 - * UKAS	4

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

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Approved Signatories:
Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician) - Jason Jenkins (Business Development Manager)
Luke Williams (Senior Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

GEO Site & Testing Services Ltd
Unit 3-4 Heol Aur, Dafen Ind Est, Llanelli, Carmarthenshire SA14 8QN
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GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX BS 1377-2:2022 Clause 5.2 BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content	
Contract Number	87849	
Project Name	Goat Mill Road	
Date Tested	24/07/2026	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
TP501		D	0.50	-		Brown fine to coarse gravelly silty CLAY
TP502		D	1.50	-		Brown fine to coarse gravelly sandy silty CLAY
TP506		B	0.25	-	0.70	Brown fine to coarse gravelly silty CLAY
TP601A		D	0.50	-	0.80	Brown fine to coarse gravelly silty CLAY
TP602		D	1.50	-		Brown slightly clayey fine to coarse gravelly SILT
TP604A	1	B	0.50	-	0.90	Brown fine to coarse gravelly sandy silty CLAY
TP608		B	0.00	-	0.55	Brown fine to coarse gravelly silty CLAY
TP609		B	0.15	-	1.15	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles
TP614		D	1.50	-	7.40	Brown slightly clayey fine to coarse gravelly SILT
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
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				-		
				-		

Operator
Clayton. J

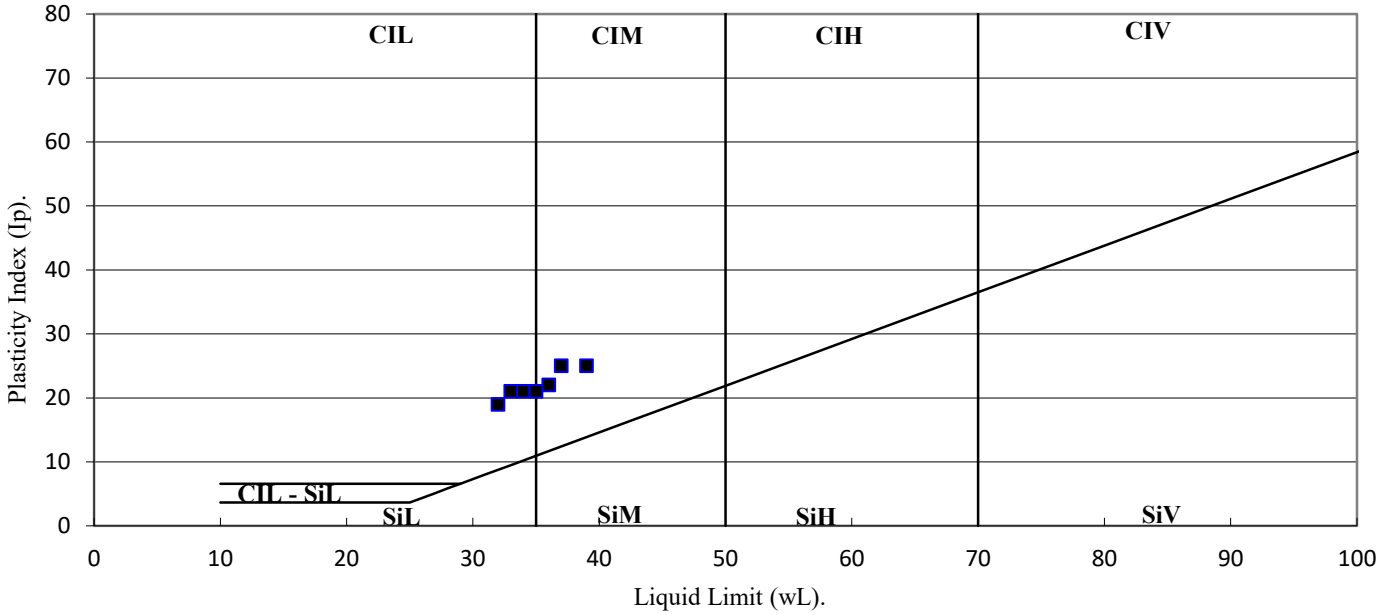
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX BS 1377-2:2022 Clause 5.2 BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content	
Contract Number	87849	
Project Name	Goat Mill Road	
Date Tested	24/07/2026	
Test Comments	80g/30° Fall cone used with increasing water content	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Water Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
TP501		D	0.50	-		9.1	37	12	25	83	CI Intermediate Plasticity
TP502		D	1.50	-		9.8	34	13	21	68	CL Low Plasticity
TP506		B	0.25	-	0.70	11.4	39	14	25	69	CI Intermediate Plasticity
TP601A		D	0.50	-	0.80	8.2	33	12	21	72	CL Low Plasticity
TP602		D	1.50	-		4.1		NP		22	
TP604A	1	B	0.50	-	0.90	12.8	36	14	22	89	CI Intermediate Plasticity
TP608		B	0.00	-	0.55	10.4	35	14	21	57	CL/I Low/Inter. Plasticity
TP609		B	0.15	-	1.15	10.4	32	13	19	13	CL Low Plasticity
TP614		D	1.50	-	7.40	7.4		NP		52	
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							
				-							

SYMBOLS : NP = Non Plastic **NB: All liquid limits are 4 point and wet sieved**

PLASTICITY CHART

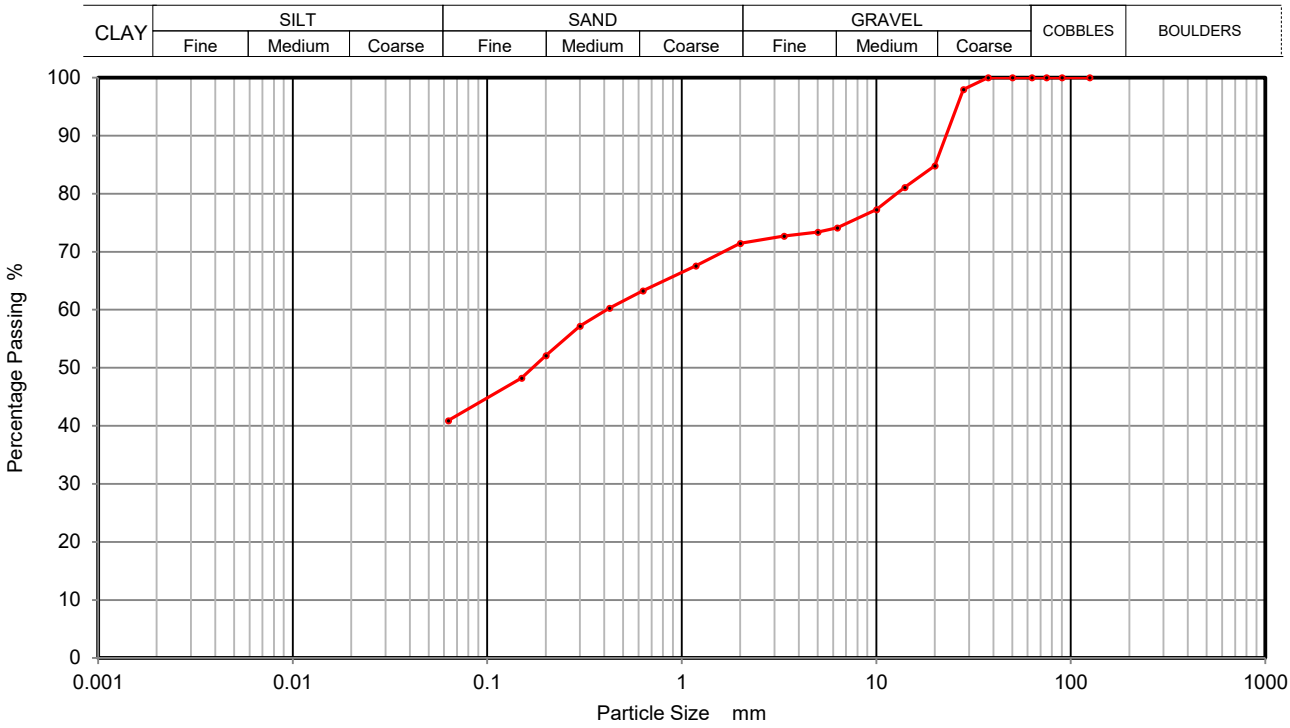
BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Clayton. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP501**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Brown fine to coarse gravelly fine to coarse sandy SILT/CLAY	Depth Top	**1.20**
		Depth Base	**1.80**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	98		
20	85		
14	81		
10	77		
6.3	74		
5	73		
3.35	73		
2	71		
1.18	68		
0.63	63		
0.425	60		
0.30	57		
0.20	52		
0.15	48		
0.063	41		

Sample Proportions	% dry mass
Cobbles	0
Gravel	29
Sand	30
Silt and Clay	41

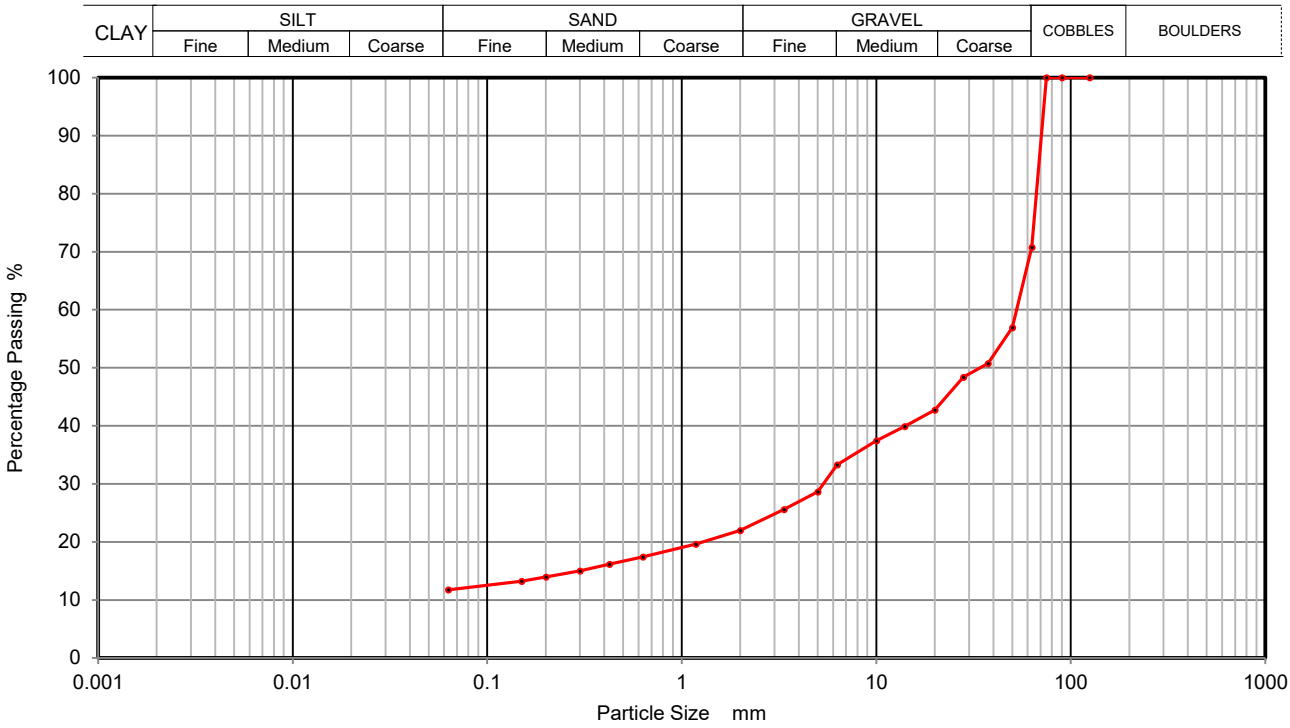
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP502**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**1.40**
		Depth Base	**2.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	71		
50	57		
37.5	51		
28	48		
20	43		
14	40		
10	37		
6.3	33		
5	29		
3.35	26		
2	22		
1.18	20		
0.63	17		
0.425	16		
0.30	15		
0.20	14		
0.15	13		
0.063	12		

Sample Proportions	% dry mass
Cobbles	29
Gravel	49
Sand	10
Silt and Clay	12

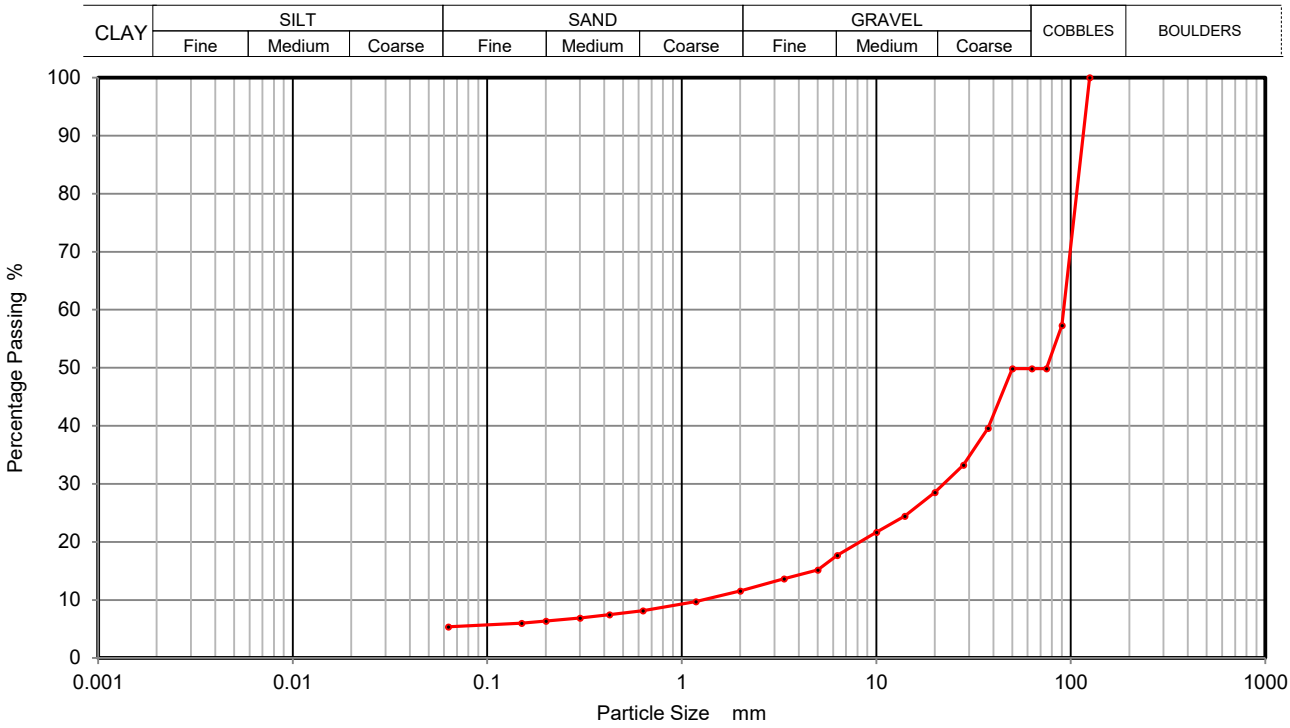
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP502**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**1.20**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	57		
75	50		
63	50		
50	50		
37.5	40		
28	33		
20	29		
14	24		
10	22		
6.3	18		
5	15		
3.35	14		
2	12		
1.18	10		
0.63	8		
0.425	7		
0.30	7		
0.20	6		
0.15	6		
0.063	5		

Sample Proportions	% dry mass
Cobbles	50
Gravel	38
Sand	7
Silt and Clay	5

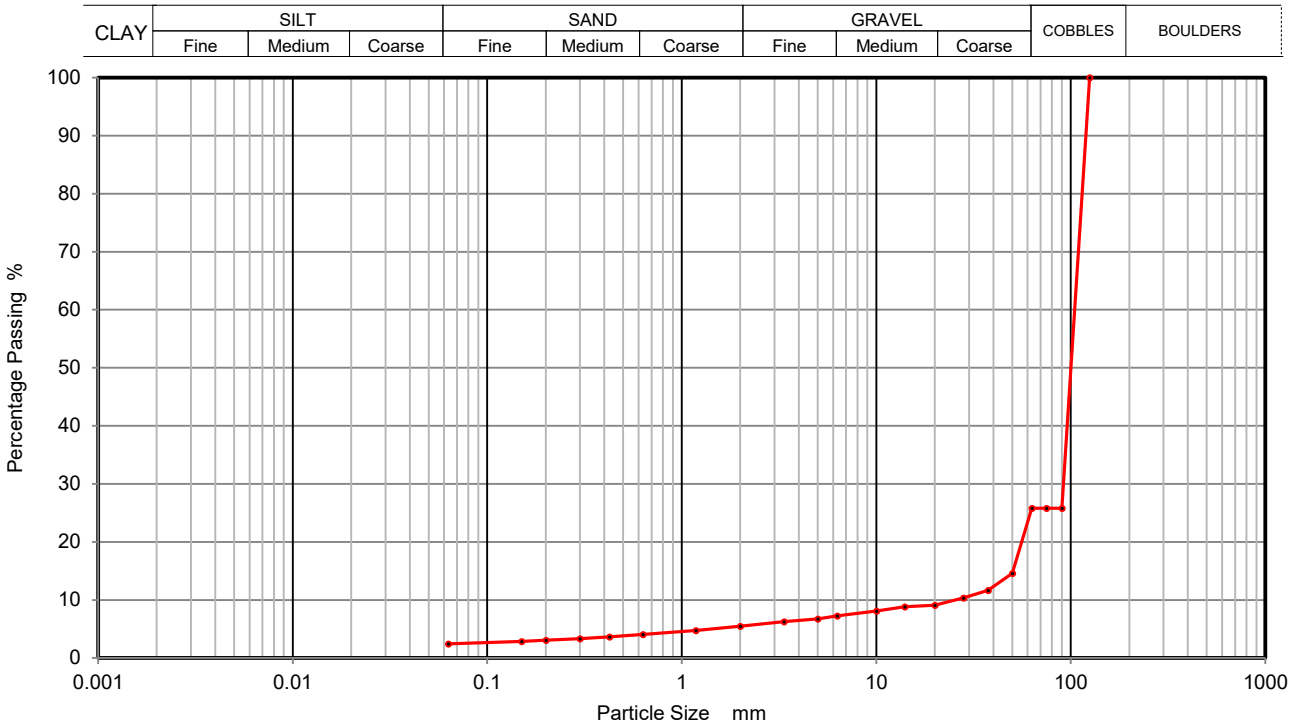
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP504**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.00**
		Depth Base	**0.70**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	26		
75	26		
63	26		
50	15		
37.5	12		
28	10		
20	9		
14	9		
10	8		
6.3	7		
5	7		
3.35	6		
2	5		
1.18	5		
0.63	4		
0.425	4		
0.30	3		
0.20	3		
0.15	3		
0.063	2		

Sample Proportions	% dry mass
Cobbles	74
Gravel	21
Sand	3
Silt and Clay	2

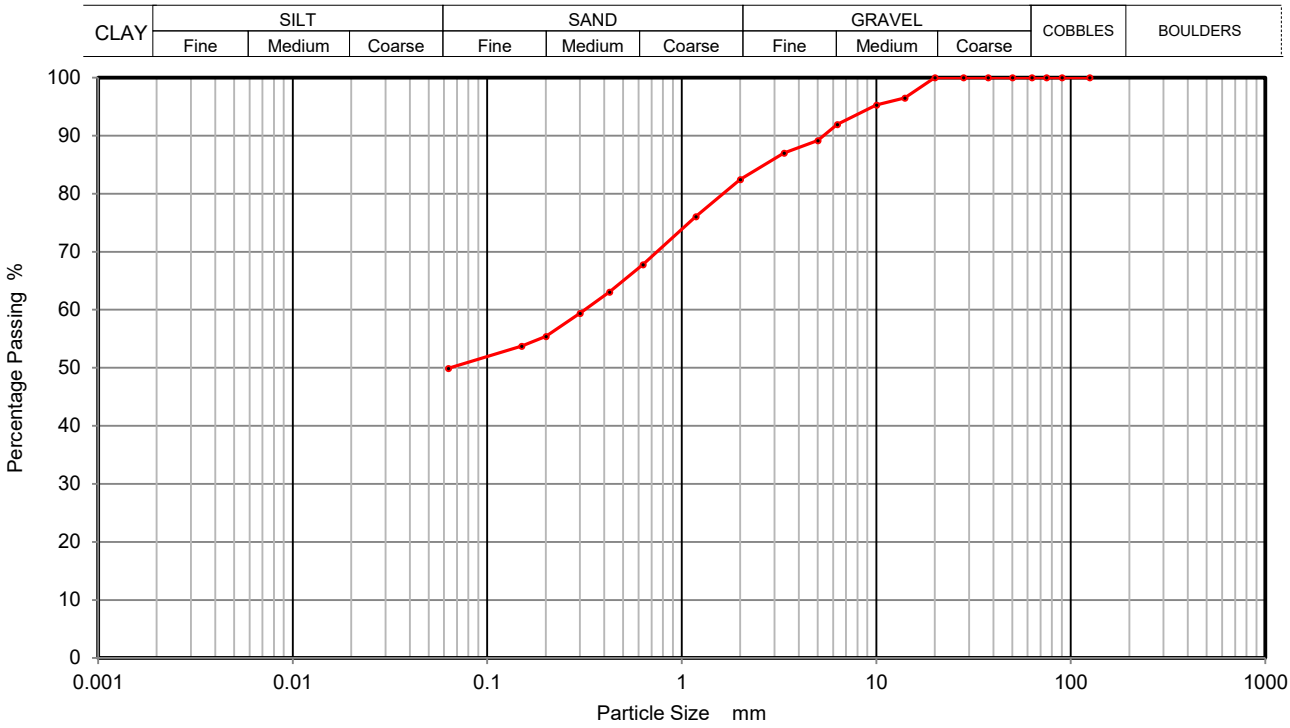
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP505**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to medium gravelly fine to coarse sandy SILT/CLAY (rootlets)	Depth Top	**0.15**
		Depth Base	**1.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	97		
10	95		
6.3	92		
5	89		
3.35	87		
2	82		
1.18	76		
0.63	68		
0.425	63		
0.30	59		
0.20	55		
0.15	54		
0.063	50		

Sample Proportions	% dry mass
Cobbles	0
Gravel	18
Sand	32
Silt and Clay	50

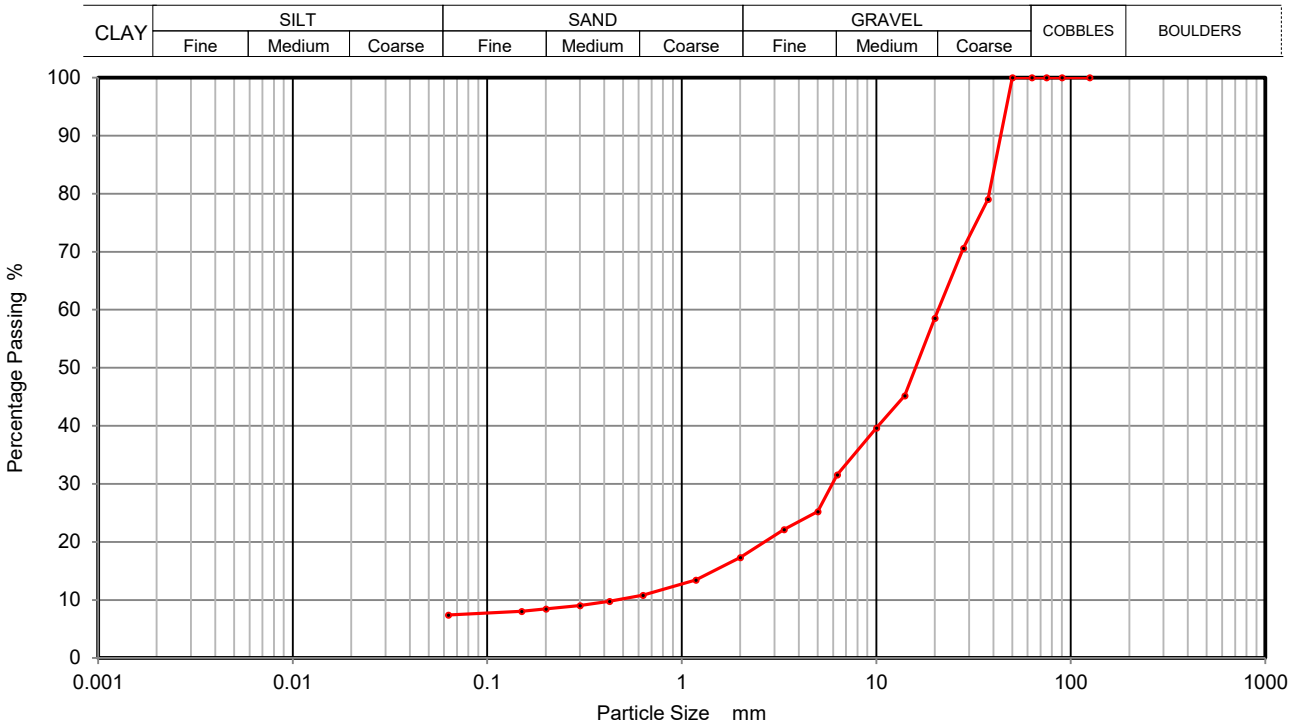
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP506**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.70**
		Depth Base	**2.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	79		
28	71		
20	59		
14	45		
10	40		
6.3	32		
5	25		
3.35	22		
2	17		
1.18	13		
0.63	11		
0.425	10		
0.30	9		
0.20	8		
0.15	8		
0.063	7		

Sample Proportions	% dry mass
Cobbles	0
Gravel	83
Sand	10
Silt and Clay	7

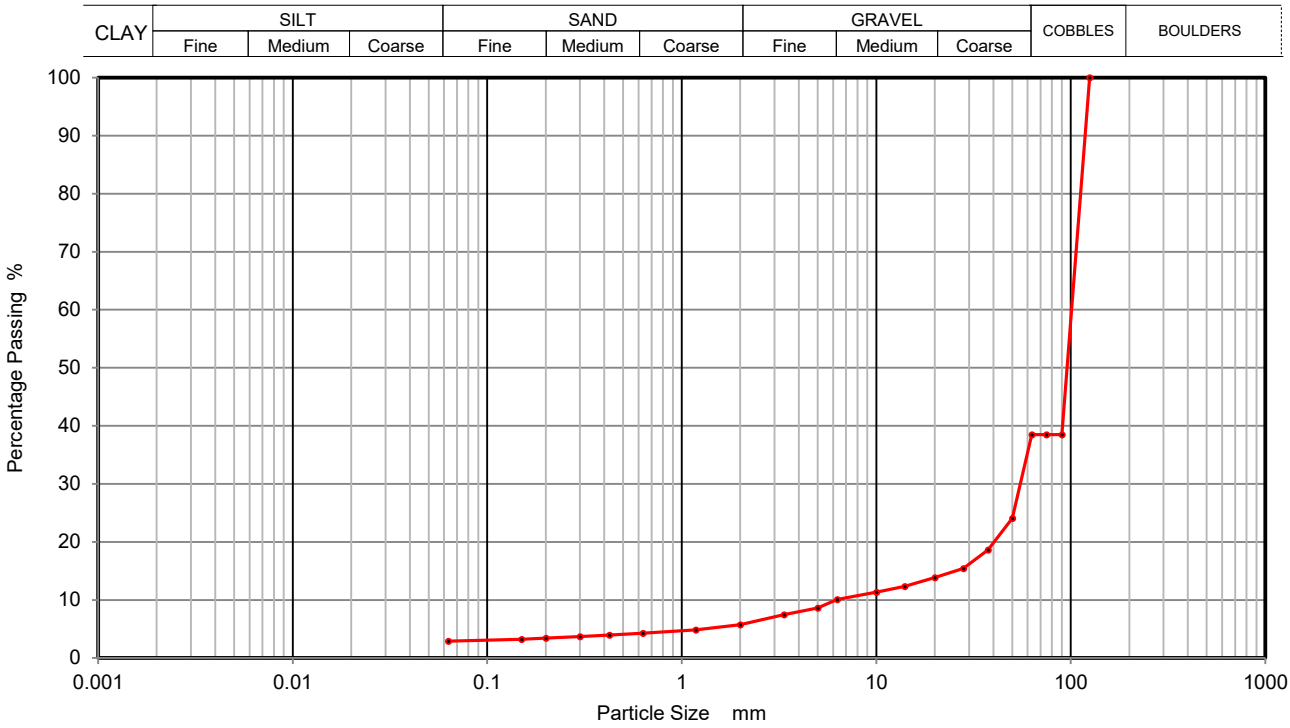
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP508**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.15**
		Depth Base	**1.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	38		
75	38		
63	38		
50	24		
37.5	19		
28	15		
20	14		
14	12		
10	11		
6.3	10		
5	9		
3.35	7		
2	6		
1.18	5		
0.63	4		
0.425	4		
0.30	4		
0.20	3		
0.15	3		
0.063	3		

Sample Proportions	% dry mass
Cobbles	62
Gravel	32
Sand	3
Silt and Clay	3

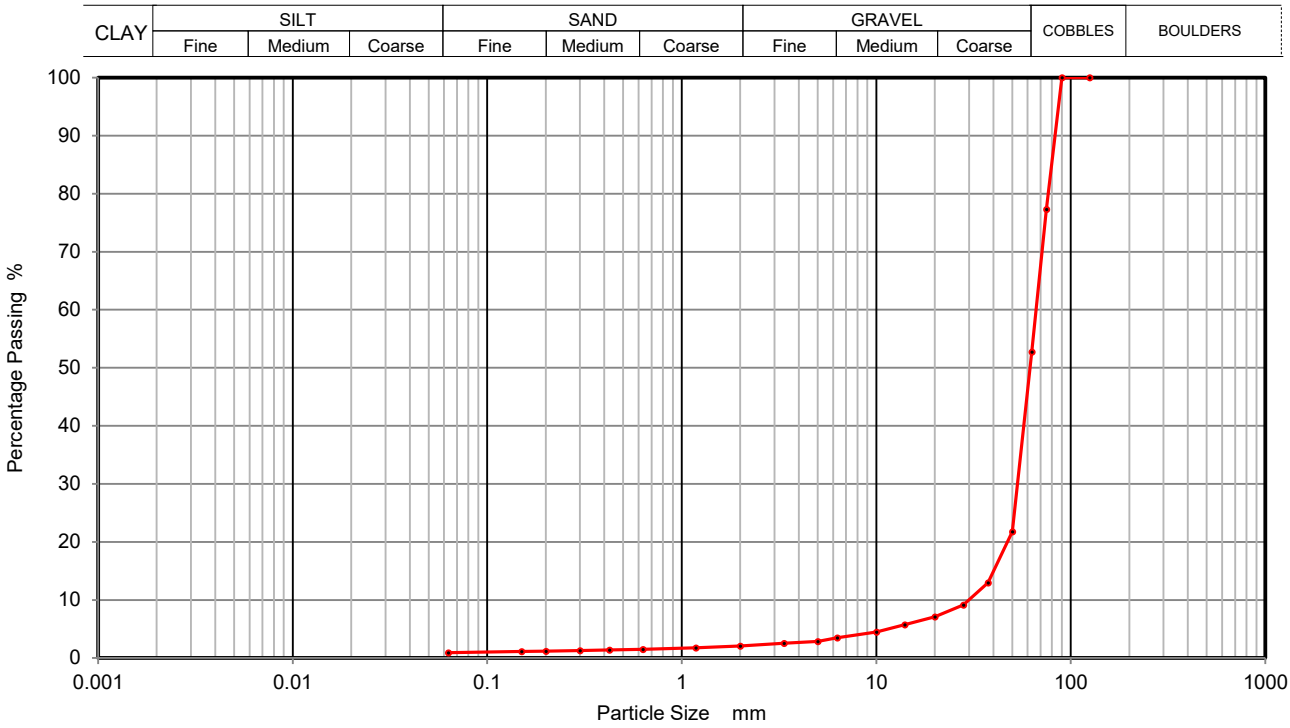
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP509**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.05**
		Depth Base	**0.60**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	77		
63	53		
50	22		
37.5	13		
28	9		
20	7		
14	6		
10	4		
6.3	3		
5	3		
3.35	3		
2	2		
1.18	2		
0.63	2		
0.425	1		
0.30	1		
0.20	1		
0.15	1		
0.063	1		

Sample Proportions	% dry mass
Cobbles	47
Gravel	51
Sand	1
Silt and Clay	1

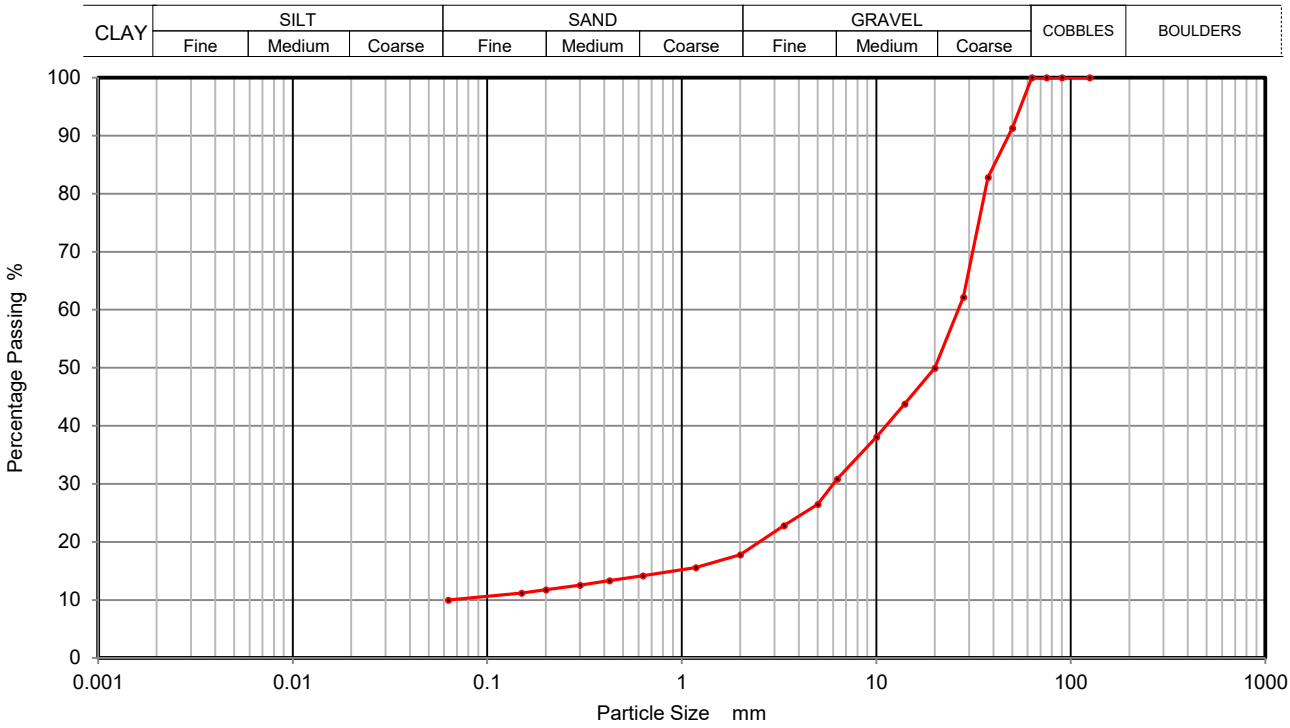
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

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Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP511**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL	Depth Top	**1.25**
		Depth Base	**2.10**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	91		
37.5	83		
28	62		
20	50		
14	44		
10	38		
6.3	31		
5	26		
3.35	23		
2	18		
1.18	16		
0.63	14		
0.425	13		
0.30	13		
0.20	12		
0.15	11		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	82
Sand	8
Silt and Clay	10

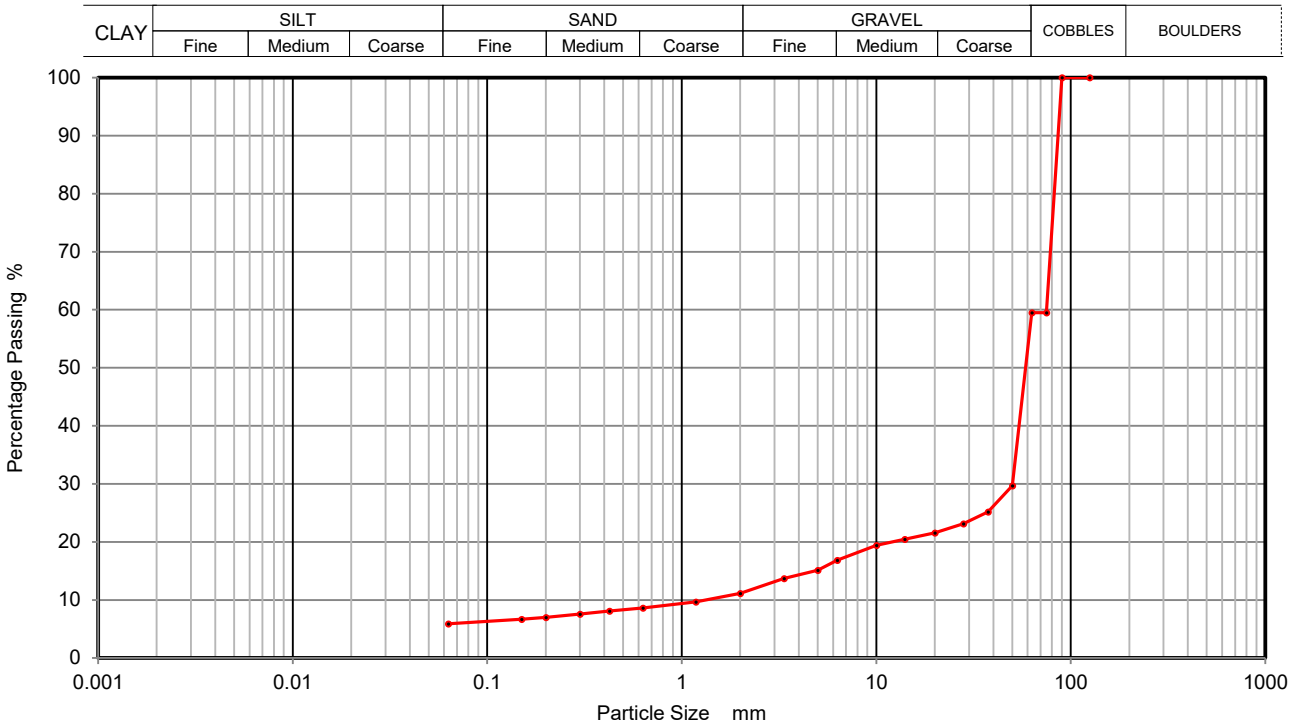
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP512**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles (made ground)	Depth Top	**0.20**
		Depth Base	**1.20**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	60		
63	60		
50	30		
37.5	25		
28	23		
20	22		
14	20		
10	19		
6.3	17		
5	15		
3.35	14		
2	11		
1.18	10		
0.63	9		
0.425	8		
0.30	8		
0.20	7		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	40
Gravel	49
Sand	5
Silt and Clay	6

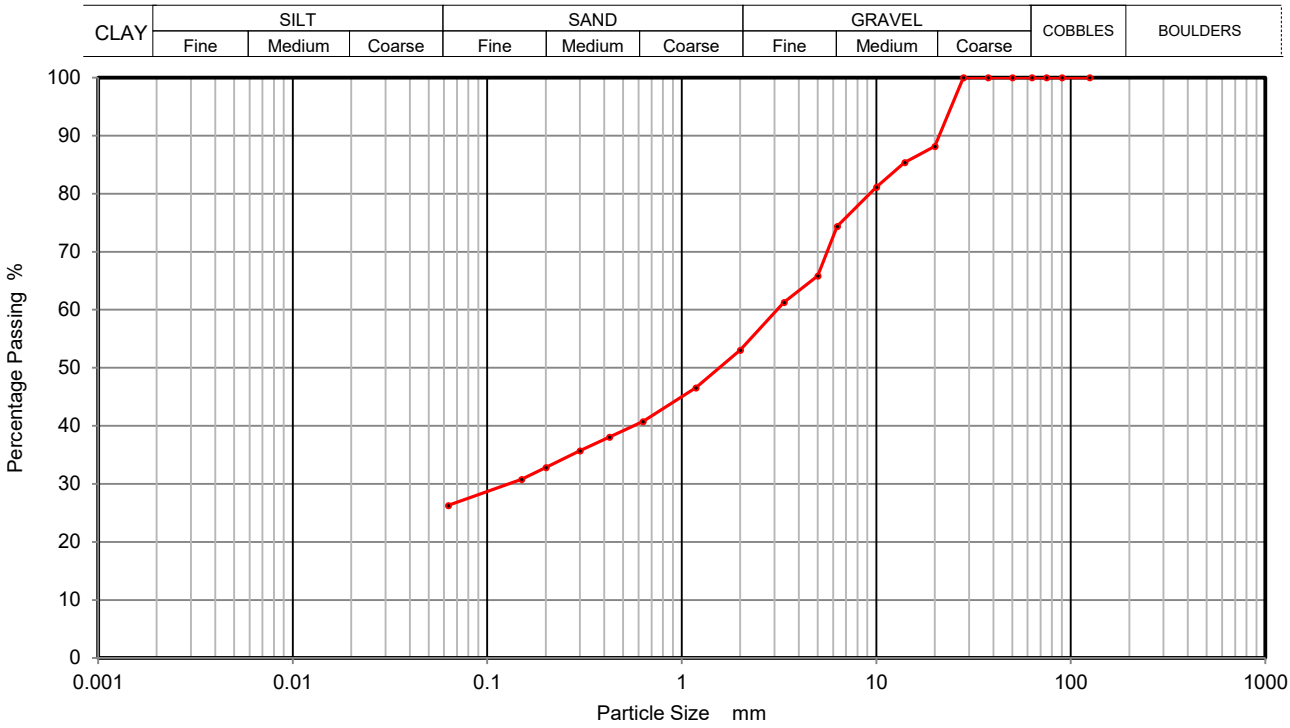
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

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Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP512**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**1.20**
		Depth Base	**1.80**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	88		
14	85		
10	81		
6.3	74		
5	66		
3.35	61		
2	53		
1.18	47		
0.63	41		
0.425	38		
0.30	36		
0.20	33		
0.15	31		
0.063	26		

Sample Proportions	% dry mass
Cobbles	0
Gravel	47
Sand	27
Silt and Clay	26

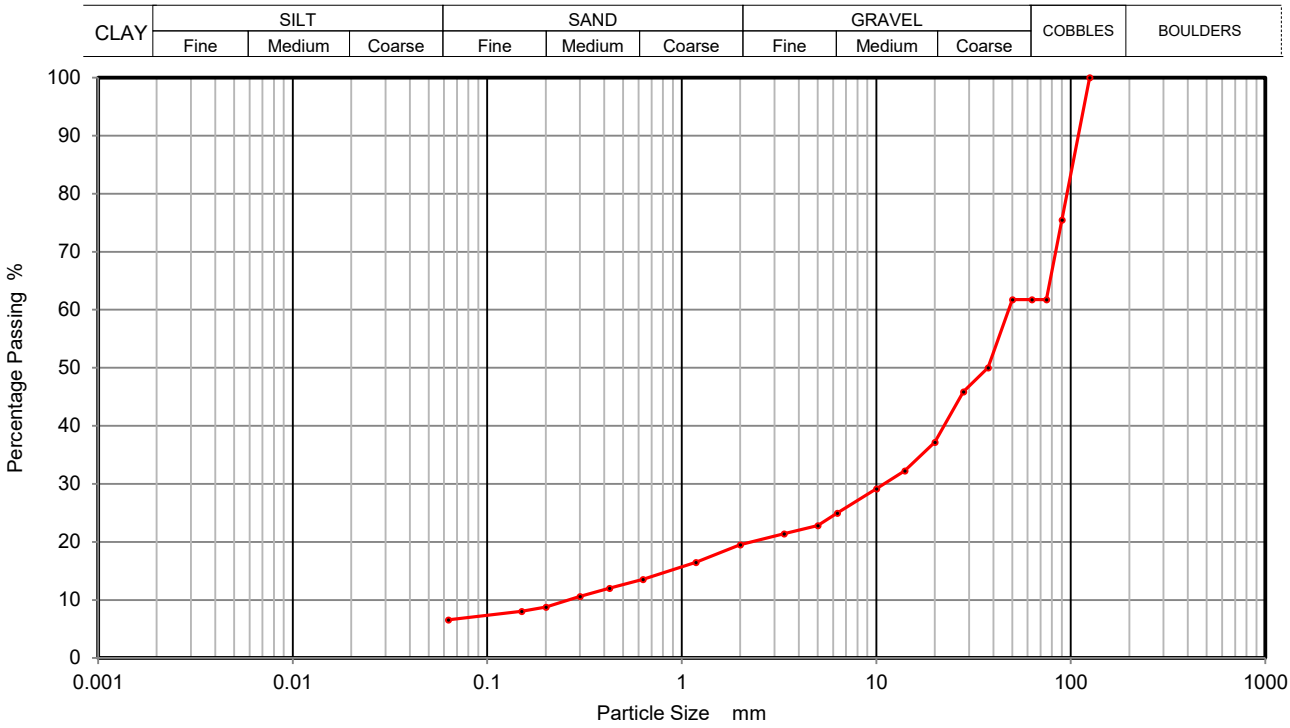
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP513**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.15**
		Depth Base	**1.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	75		
75	62		
63	62		
50	62		
37.5	50		
28	46		
20	37		
14	32		
10	29		
6.3	25		
5	23		
3.35	21		
2	20		
1.18	16		
0.63	14		
0.425	12		
0.30	11		
0.20	9		
0.15	8		
0.063	7		

Sample Proportions	% dry mass
Cobbles	38
Gravel	42
Sand	13
Silt and Clay	7

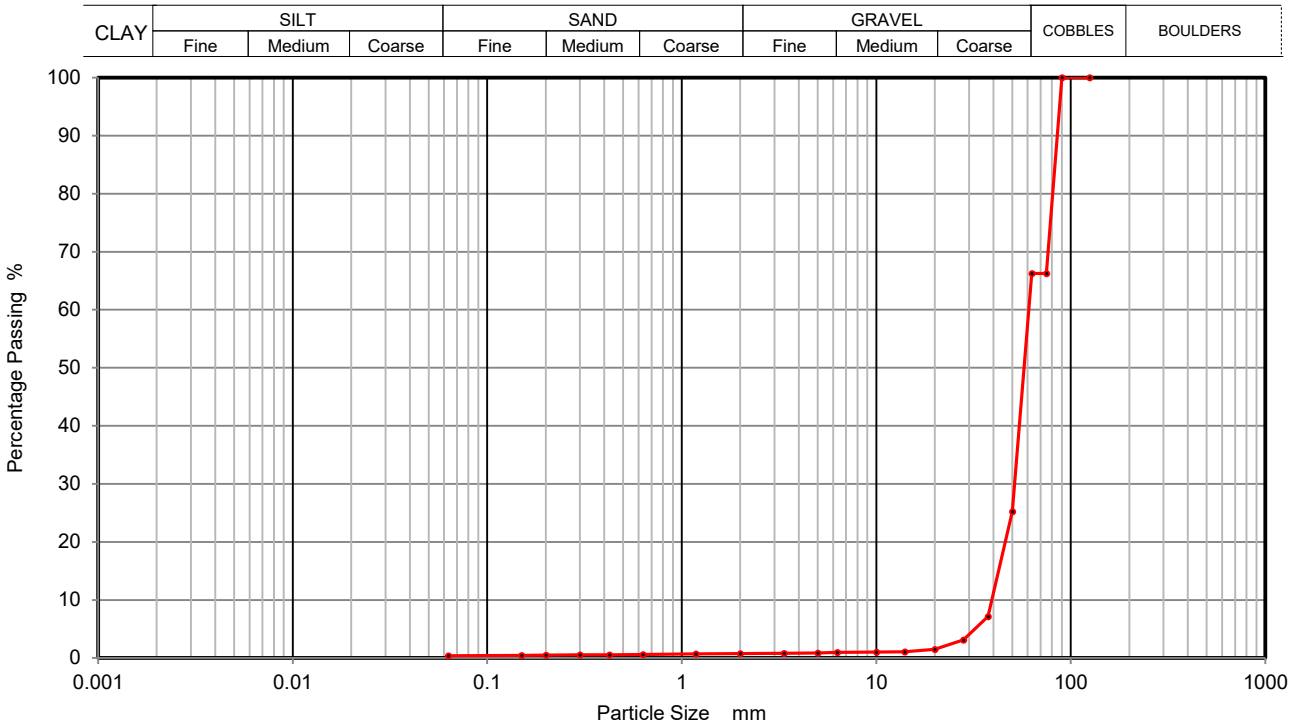
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP514**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy fine to coarse GRAVEL with cobbles (made ground)	Depth Top	**0.90**
		Depth Base	**2.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	66		
63	66		
50	25		
37.5	7		
28	3		
20	1		
14	1		
10	1		
6.3	1		
5	1		
3.35	1		
2	1		
1.18	1		
0.63	1		
0.425	1		
0.30	1		
0.20	0		
0.15	0		
0.063	0		

Sample Proportions	% dry mass
Cobbles	34
Gravel	65
Sand	1
Silt and Clay	0

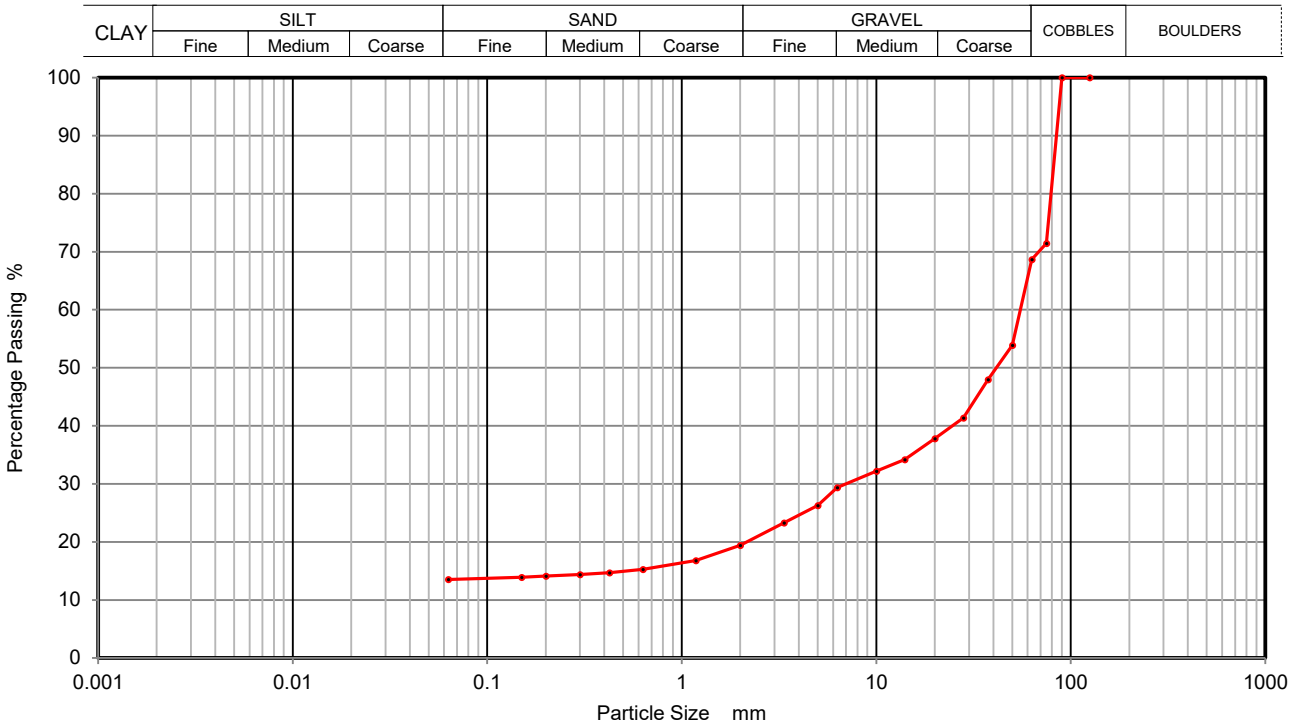
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP514**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.90**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	71		
63	69		
50	54		
37.5	48		
28	41		
20	38		
14	34		
10	32		
6.3	29		
5	26		
3.35	23		
2	19		
1.18	17		
0.63	15		
0.425	15		
0.30	14		
0.20	14		
0.15	14		
0.063	14		

Sample Proportions	% dry mass
Cobbles	31
Gravel	50
Sand	5
Silt and Clay	14

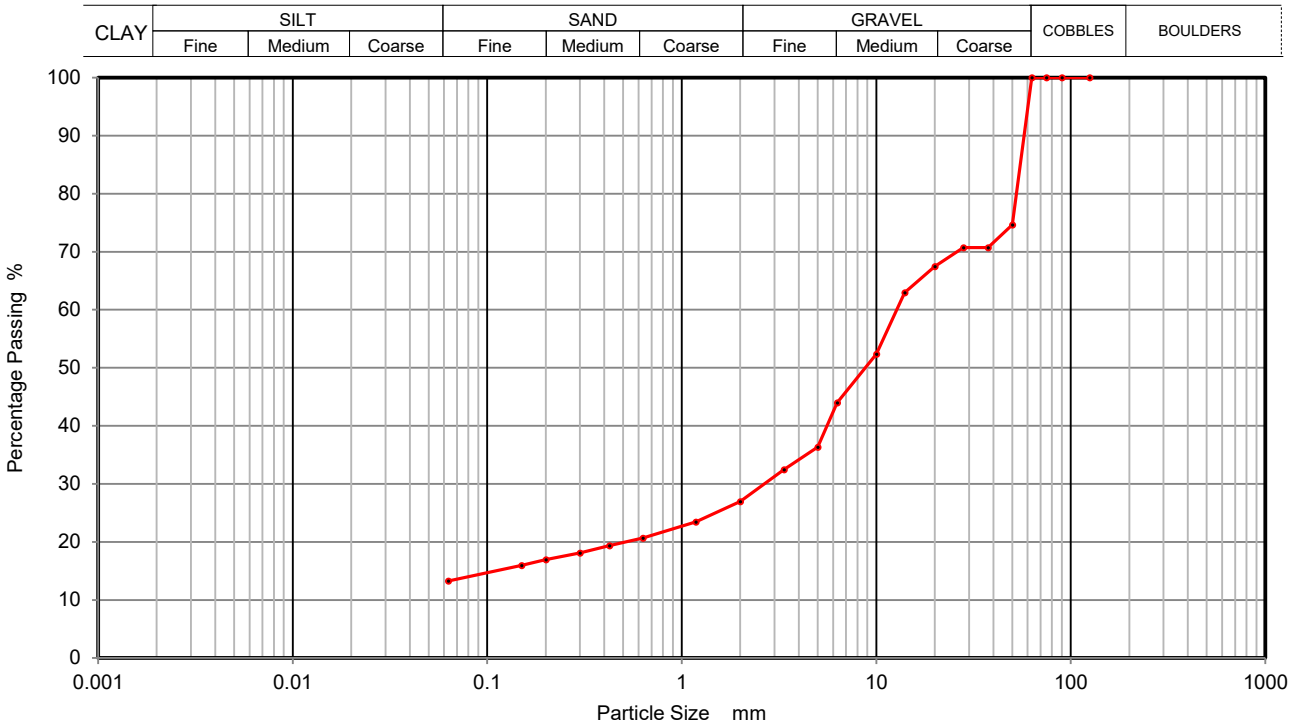
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP515**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.00**
		Depth Base	**0.80**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	75		
37.5	71		
28	71		
20	67		
14	63		
10	52		
6.3	44		
5	36		
3.35	32		
2	27		
1.18	23		
0.63	21		
0.425	19		
0.30	18		
0.20	17		
0.15	16		
0.063	13		

Sample Proportions	% dry mass
Cobbles	0
Gravel	73
Sand	14
Silt and Clay	13

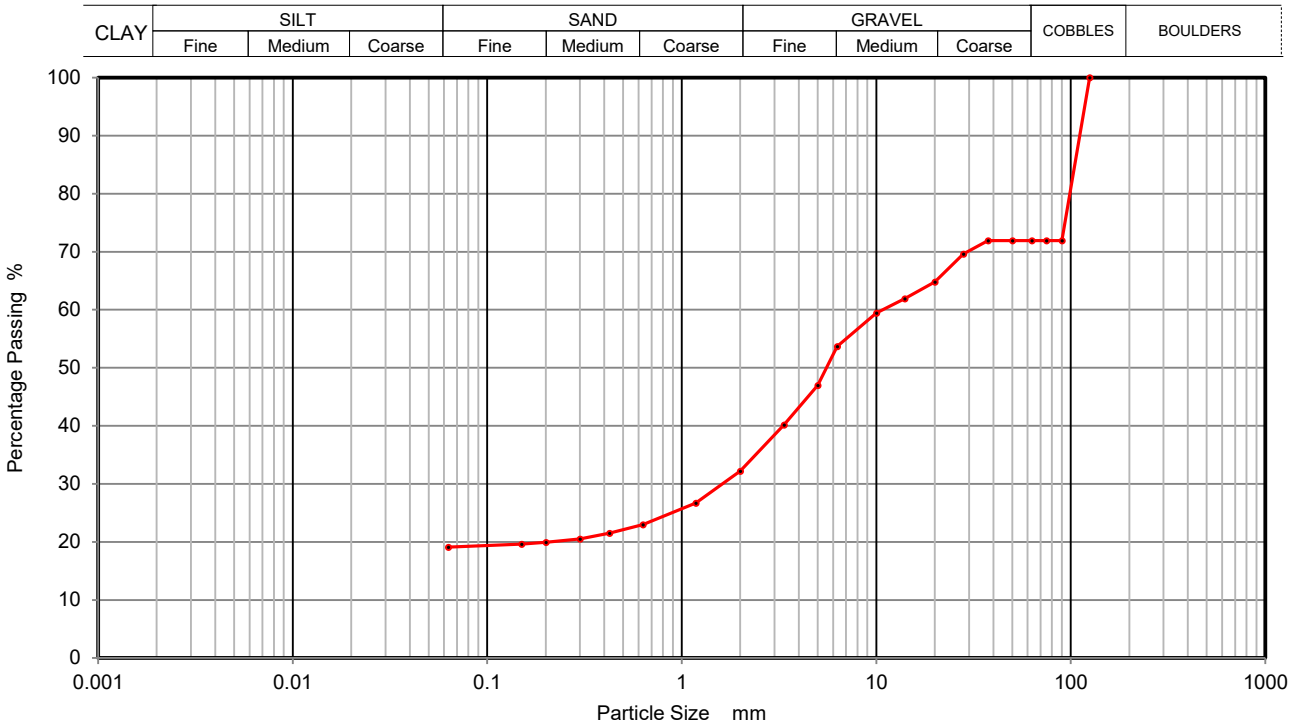
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP601A**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.50**
		Depth Base	**0.80**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	72		
75	72		
63	72		
50	72		
37.5	72		
28	70		
20	65		
14	62		
10	59		
6.3	54		
5	47		
3.35	40		
2	32		
1.18	27		
0.63	23		
0.425	22		
0.30	21		
0.20	20		
0.15	20		
0.063	19		

Sample Proportions	% dry mass
Cobbles	28
Gravel	40
Sand	13
Silt and Clay	19

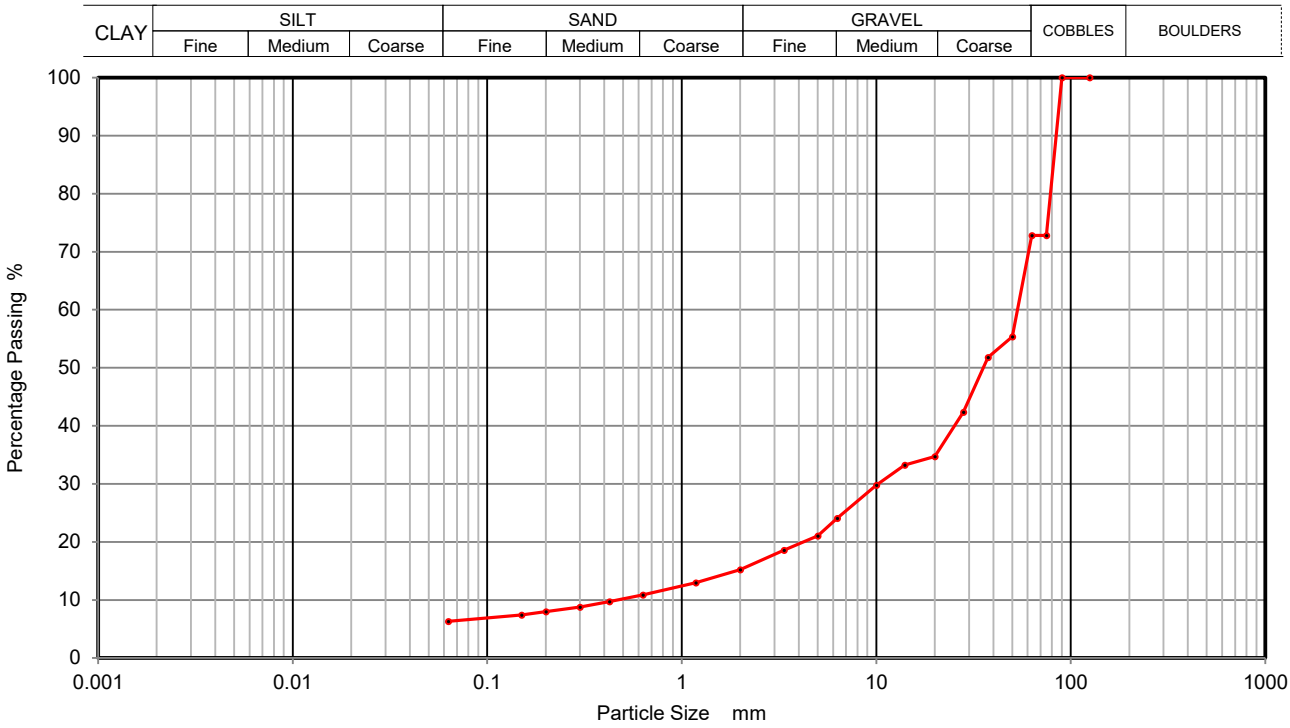
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP602**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**1.70**
		Depth Base	**2.70**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	73		
63	73		
50	55		
37.5	52		
28	42		
20	35		
14	33		
10	30		
6.3	24		
5	21		
3.35	19		
2	15		
1.18	13		
0.63	11		
0.425	10		
0.30	9		
0.20	8		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	27
Gravel	58
Sand	9
Silt and Clay	6

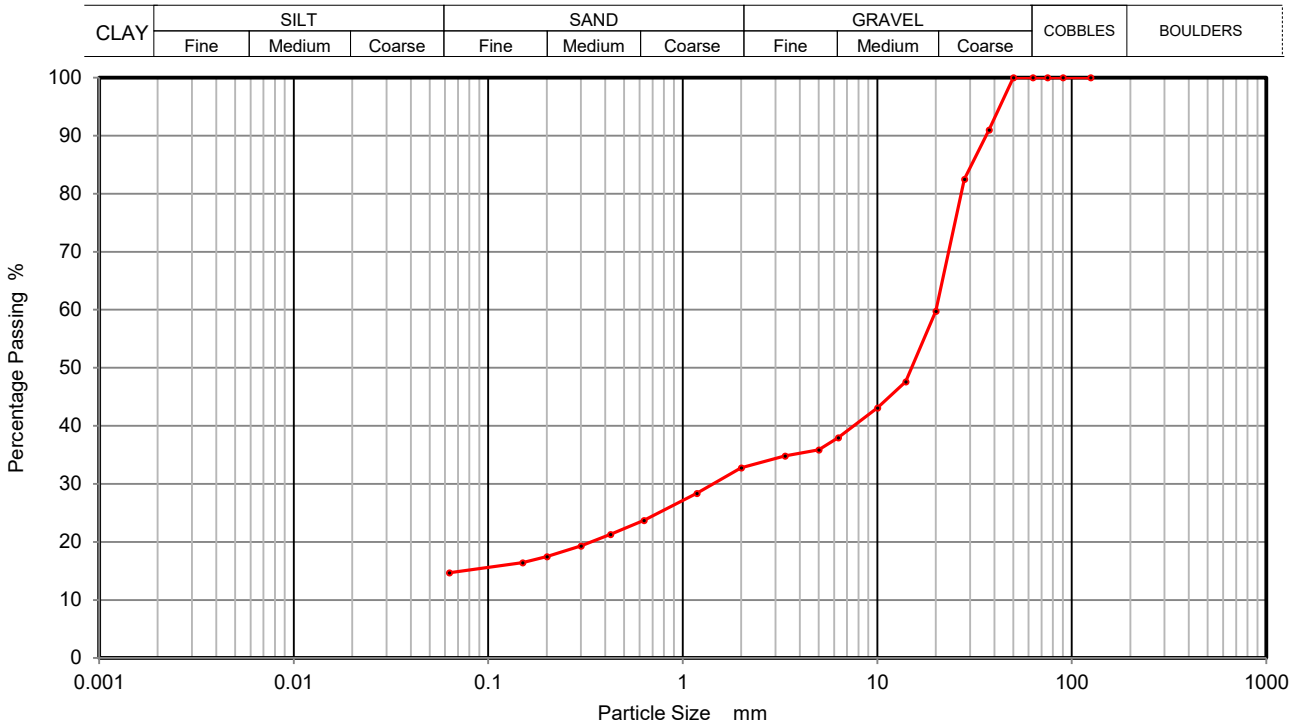
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP602**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.20**
		Depth Base	**1.20**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	91		
28	83		
20	60		
14	48		
10	43		
6.3	38		
5	36		
3.35	35		
2	33		
1.18	28		
0.63	24		
0.425	21		
0.30	19		
0.20	17		
0.15	16		
0.063	15		

Sample Proportions	% dry mass
Cobbles	0
Gravel	67
Sand	18
Silt and Clay	15

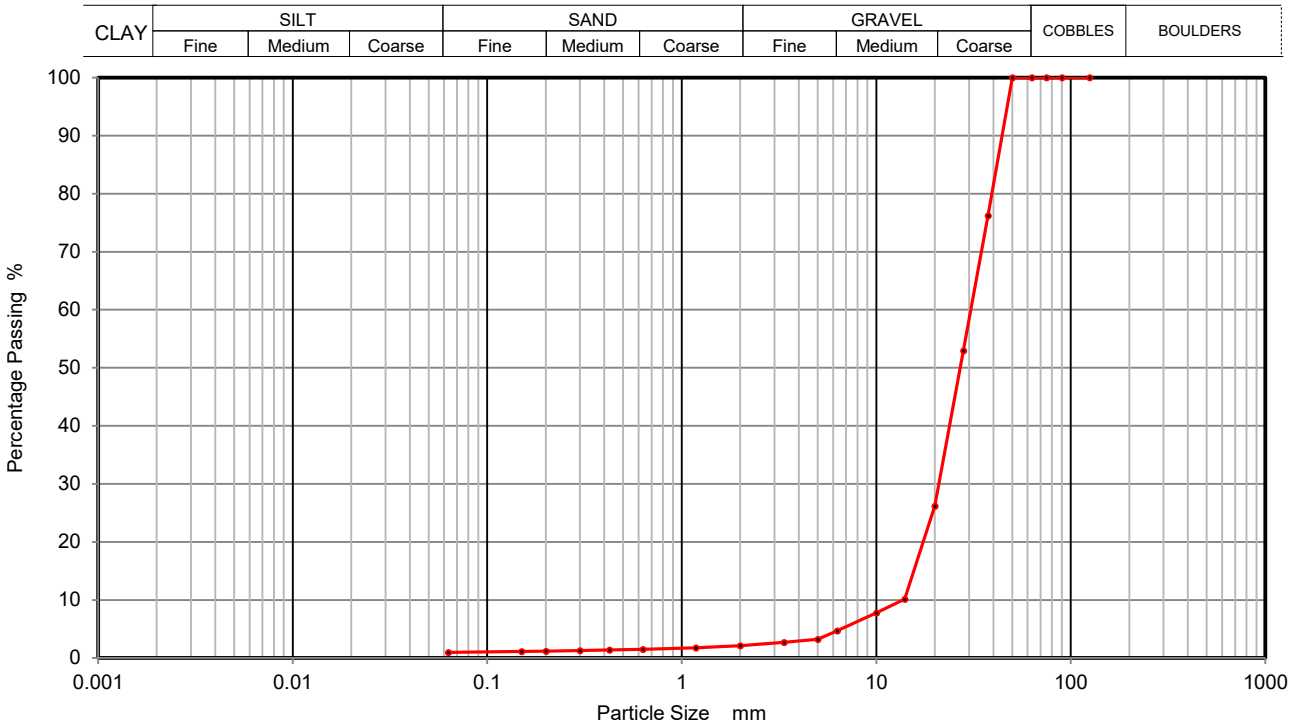
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP603**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL	Depth Top	**2.30**
		Depth Base	**3.30**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	76		
28	53		
20	26		
14	10		
10	8		
6.3	5		
5	3		
3.35	3		
2	2		
1.18	2		
0.63	1		
0.425	1		
0.30	1		
0.20	1		
0.15	1		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	98
Sand	1
Silt and Clay	1

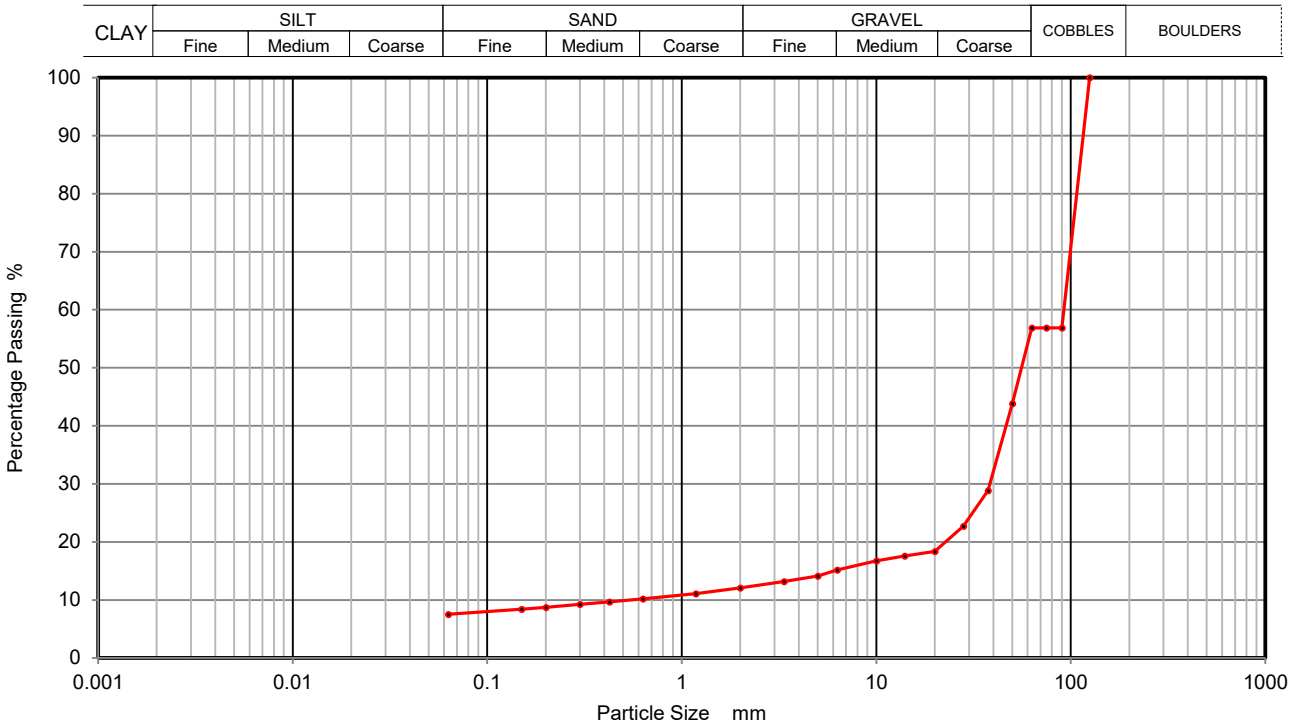
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP603**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles (made ground)	Depth Top	**0.50**
		Depth Base	**1.50**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	57		
75	57		
63	57		
50	44		
37.5	29		
28	23		
20	18		
14	18		
10	17		
6.3	15		
5	14		
3.35	13		
2	12		
1.18	11		
0.63	10		
0.425	10		
0.30	9		
0.20	9		
0.15	8		
0.063	8		

Sample Proportions	% dry mass
Cobbles	43
Gravel	45
Sand	4
Silt and Clay	8

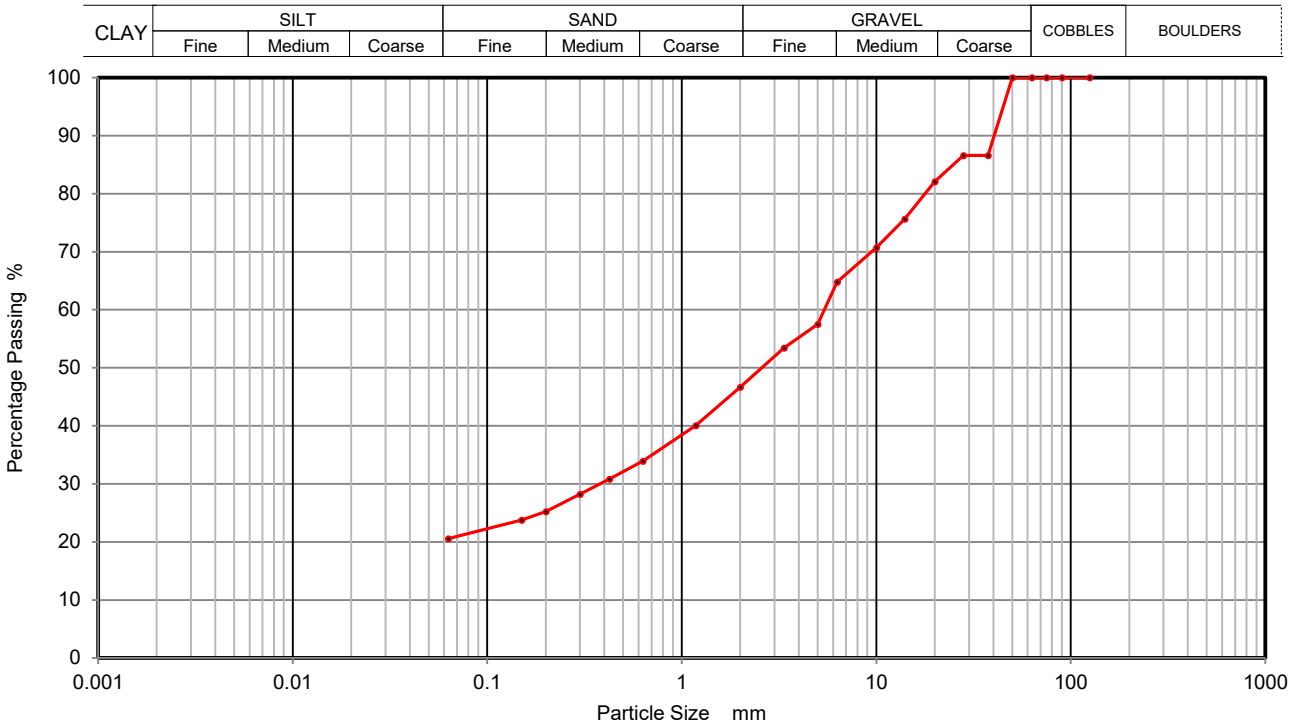
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP604**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles (ashfill)	Depth Top	**0.90**
		Depth Base	**1.90**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	87		
28	87		
20	82		
14	76		
10	71		
6.3	65		
5	58		
3.35	53		
2	47		
1.18	40		
0.63	34		
0.425	31		
0.30	28		
0.20	25		
0.15	24		
0.063	21		

Sample Proportions	% dry mass
Cobbles	0
Gravel	53
Sand	26
Silt and Clay	21

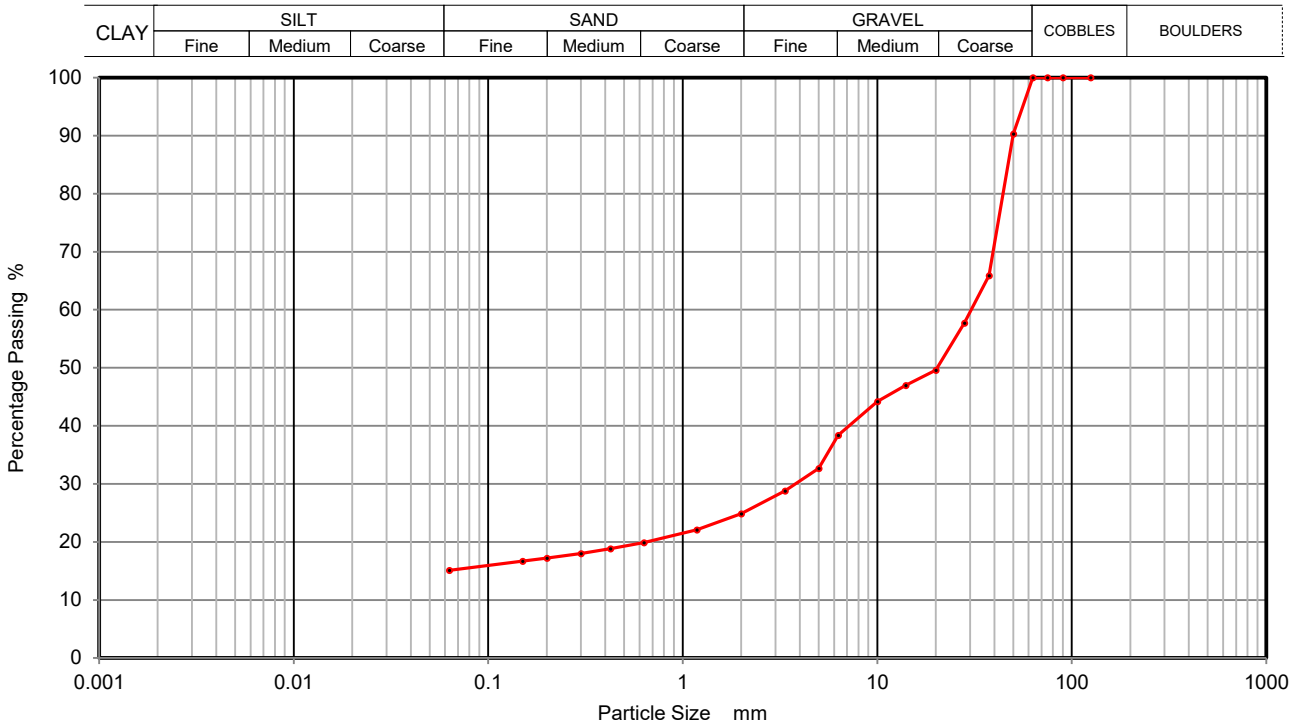
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP604**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**0.15**
		Depth Base	**0.90**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	90		
37.5	66		
28	58		
20	50		
14	47		
10	44		
6.3	38		
5	33		
3.35	29		
2	25		
1.18	22		
0.63	20		
0.425	19		
0.30	18		
0.20	17		
0.15	17		
0.063	15		

Sample Proportions	% dry mass
Cobbles	0
Gravel	75
Sand	10
Silt and Clay	15

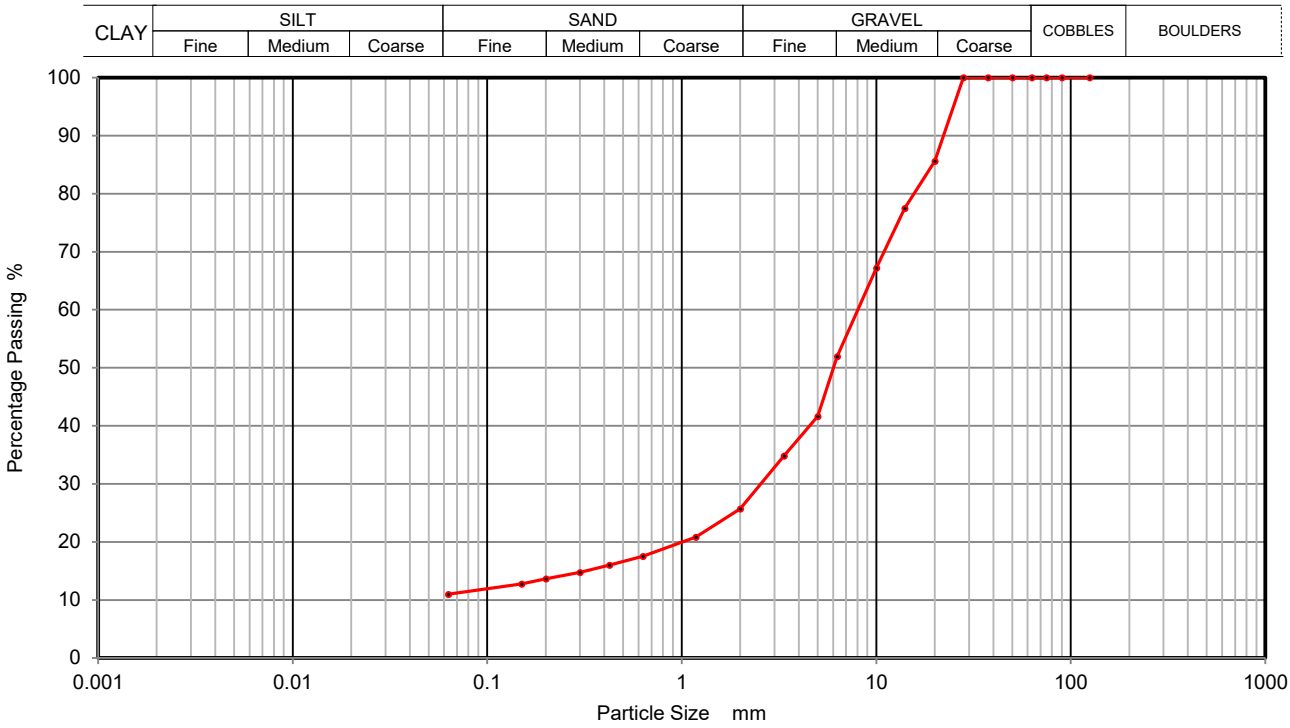
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP605**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**1.00**
		Depth Base	**2.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	86		
14	77		
10	67		
6.3	52		
5	42		
3.35	35		
2	26		
1.18	21		
0.63	18		
0.425	16		
0.30	15		
0.20	14		
0.15	13		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	74
Sand	15
Silt and Clay	11

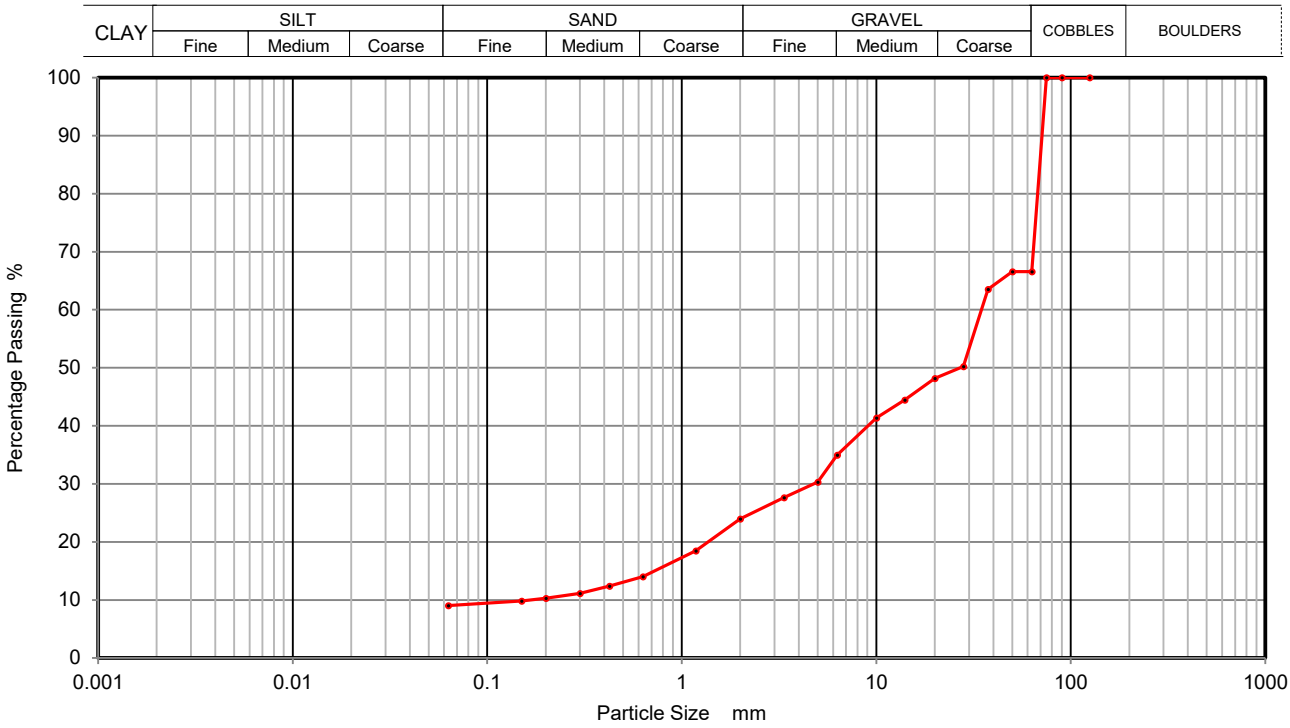
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP606**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.15**
		Depth Base	**1.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	67		
50	67		
37.5	64		
28	50		
20	48		
14	44		
10	41		
6.3	35		
5	30		
3.35	28		
2	24		
1.18	18		
0.63	14		
0.425	12		
0.30	11		
0.20	10		
0.15	10		
0.063	9		

Sample Proportions	% dry mass
Cobbles	33
Gravel	43
Sand	15
Silt and Clay	9

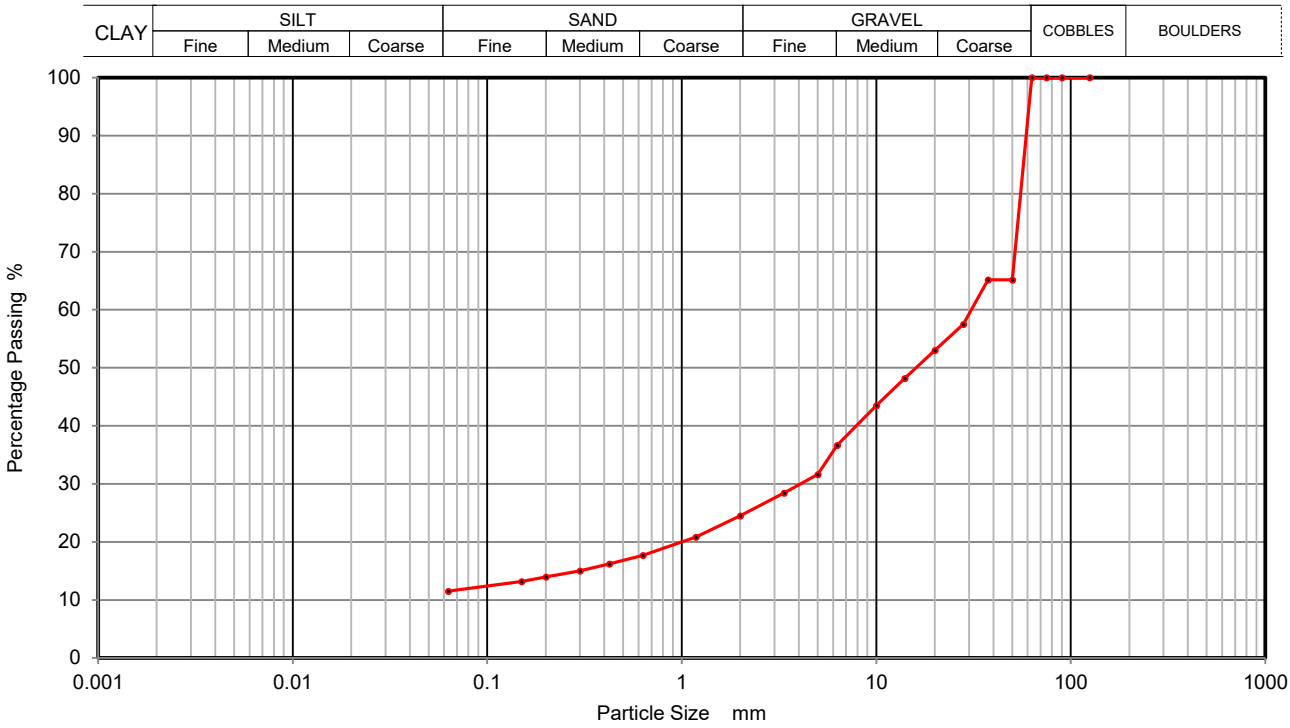
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP607**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.30**
		Depth Base	**1.30**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	65		
37.5	65		
28	57		
20	53		
14	48		
10	44		
6.3	37		
5	32		
3.35	28		
2	24		
1.18	21		
0.63	18		
0.425	16		
0.30	15		
0.20	14		
0.15	13		
0.063	12		

Sample Proportions	% dry mass
Cobbles	0
Gravel	76
Sand	12
Silt and Clay	12

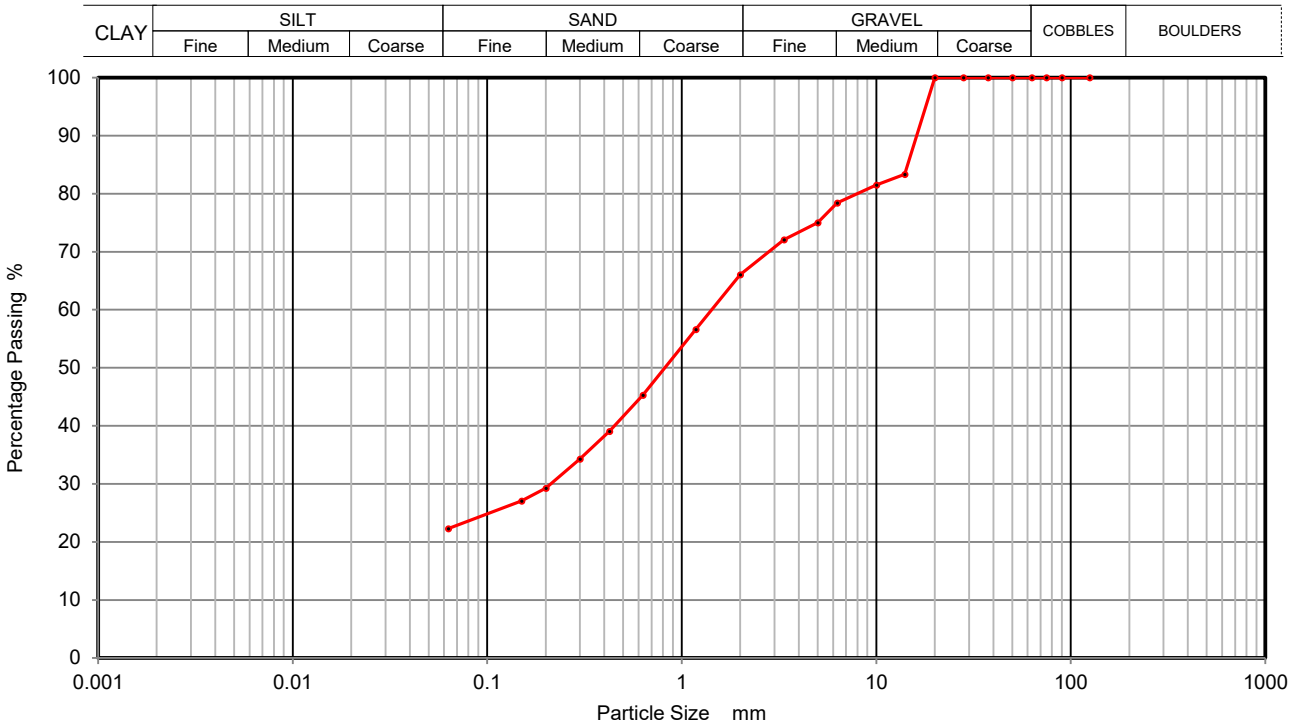
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP607**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to medium gravelly fine to coarse SAND	Depth Top	**0.00**
		Depth Base	**0.30**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	83		
10	81		
6.3	78		
5	75		
3.35	72		
2	66		
1.18	57		
0.63	45		
0.425	39		
0.30	34		
0.20	29		
0.15	27		
0.063	22		

Sample Proportions	% dry mass
Cobbles	0
Gravel	34
Sand	44
Silt and Clay	22

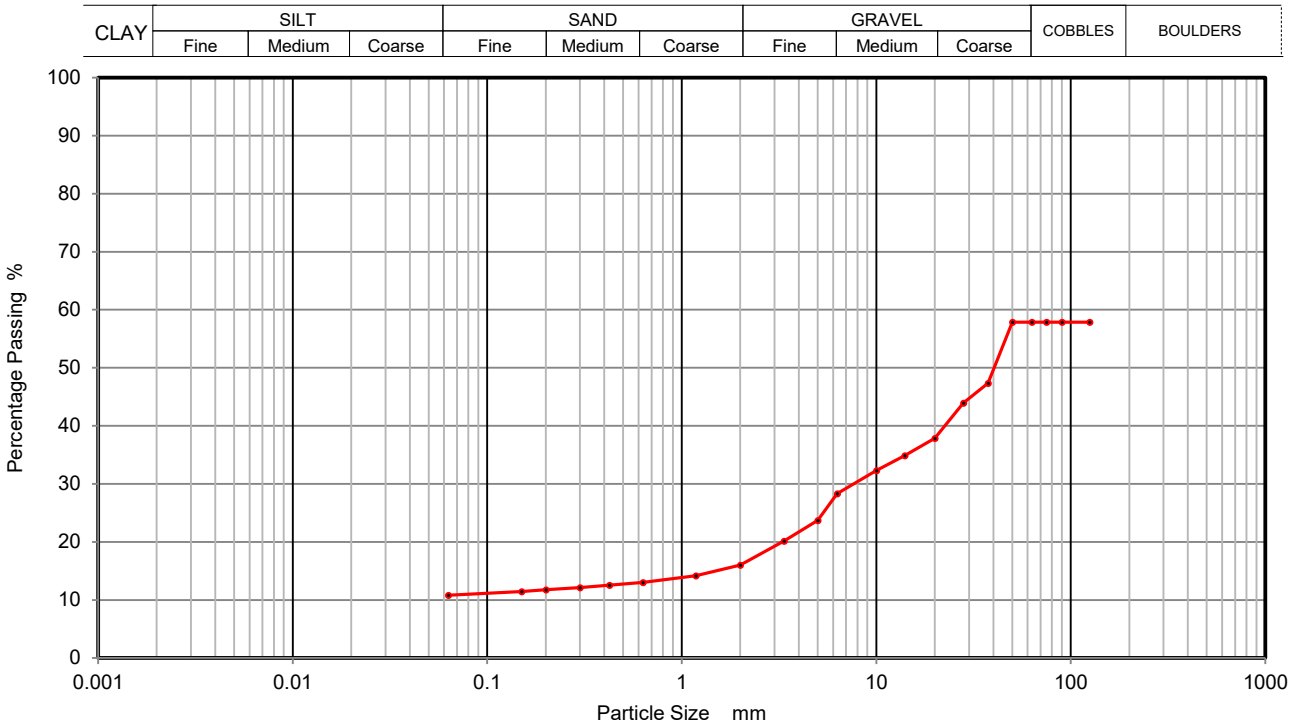
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP609**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.15**
		Depth Base	**1.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	58		
90	58		
75	58		
63	58		
50	58		
37.5	47		
28	44		
20	38		
14	35		
10	32		
6.3	28		
5	24		
3.35	20		
2	16		
1.18	14		
0.63	13		
0.425	13		
0.30	12		
0.20	12		
0.15	11		
0.063	11		

Sample Proportions	% dry mass
Cobbles	42
Gravel	42
Sand	5
Silt and Clay	11

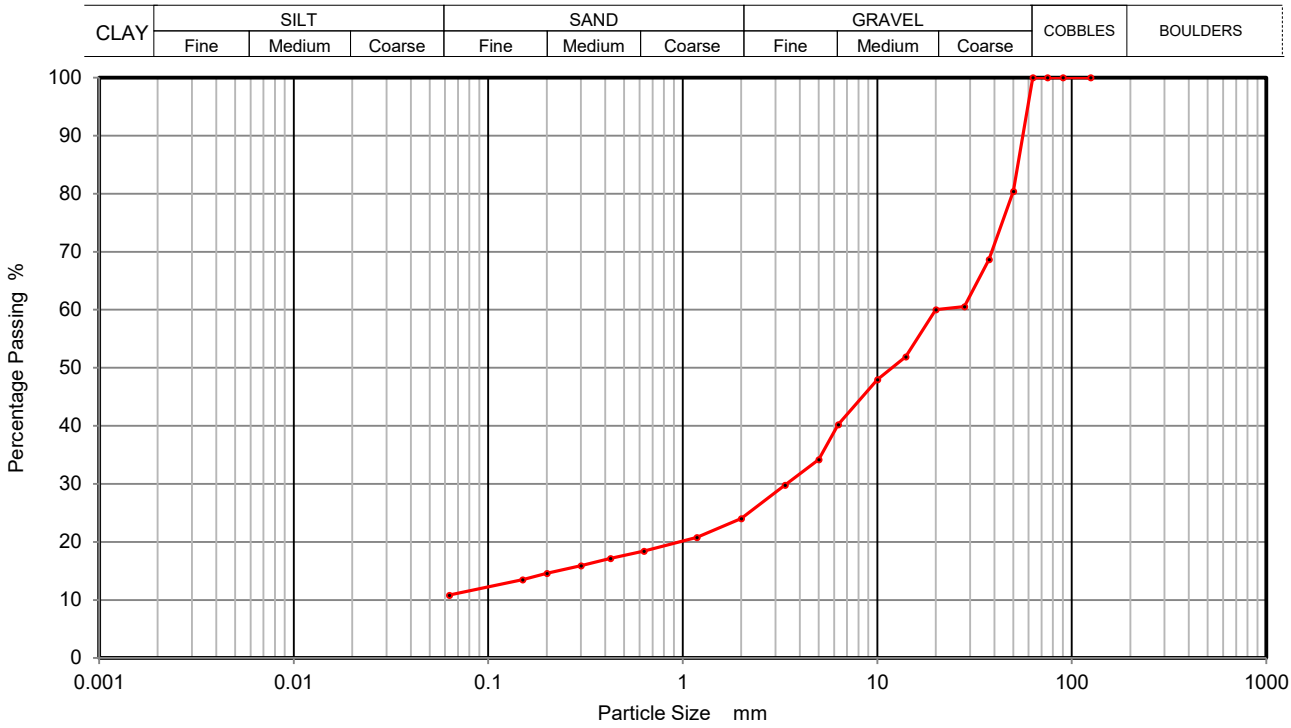
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP610**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.25**
		Depth Base	**1.25**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	80		
37.5	69		
28	61		
20	60		
14	52		
10	48		
6.3	40		
5	34		
3.35	30		
2	24		
1.18	21		
0.63	18		
0.425	17		
0.30	16		
0.20	15		
0.15	14		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	76
Sand	13
Silt and Clay	11

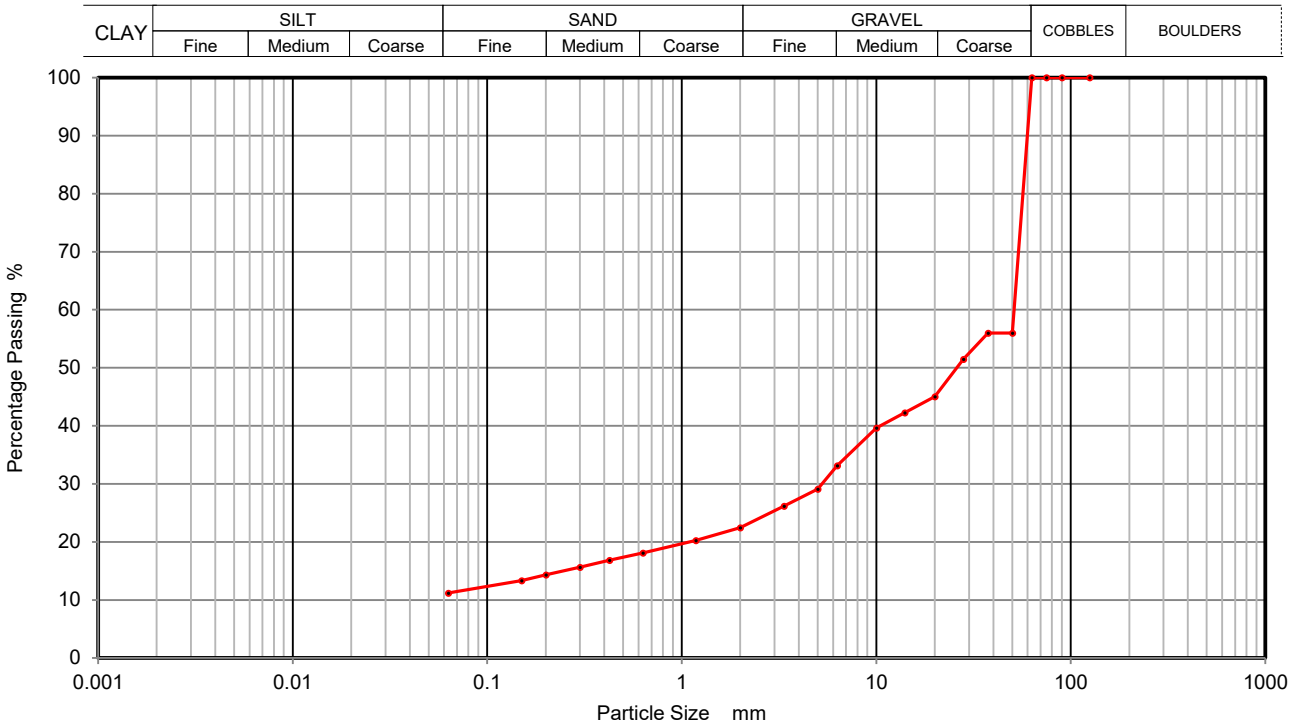
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP611**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL (made ground)	Depth Top	**1.15**
		Depth Base	**2.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	56		
37.5	56		
28	51		
20	45		
14	42		
10	40		
6.3	33		
5	29		
3.35	26		
2	22		
1.18	20		
0.63	18		
0.425	17		
0.30	16		
0.20	14		
0.15	13		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	78
Sand	11
Silt and Clay	11

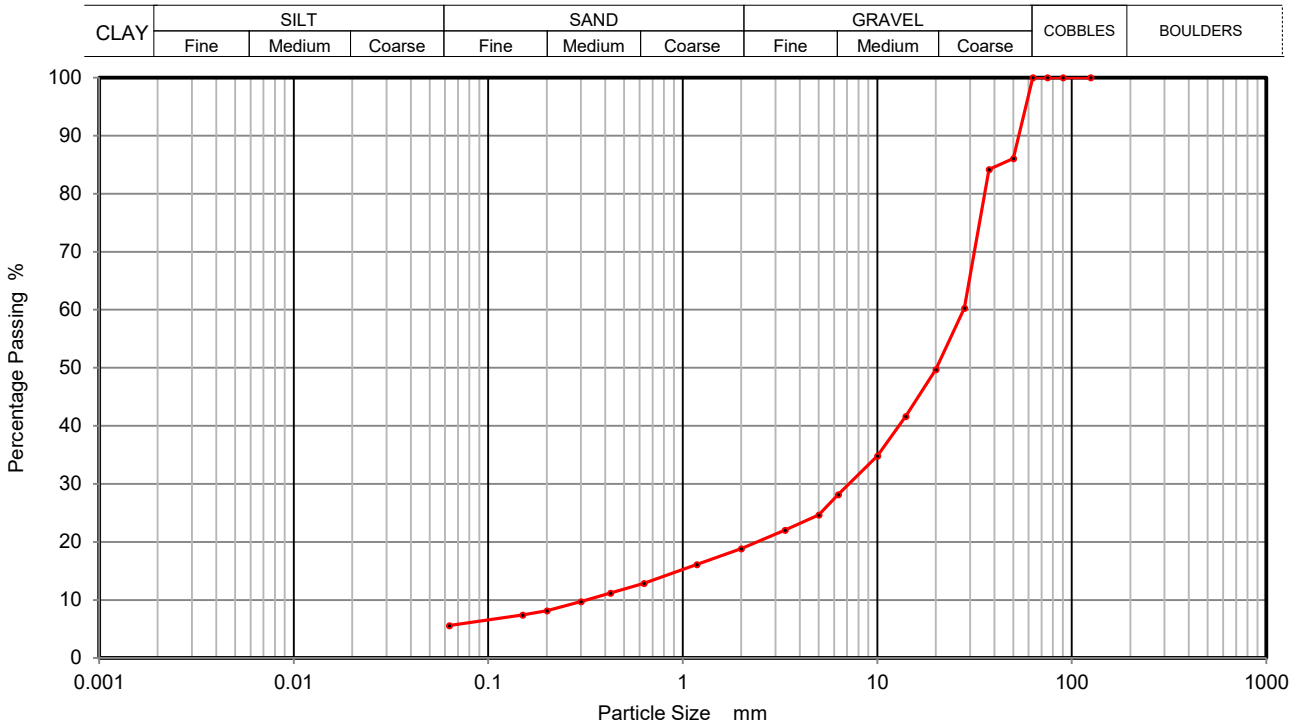
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP612**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**0.20**
		Depth Base	**1.10**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	86		
37.5	84		
28	60		
20	50		
14	42		
10	35		
6.3	28		
5	25		
3.35	22		
2	19		
1.18	16		
0.63	13		
0.425	11		
0.30	10		
0.20	8		
0.15	7		
0.063	6		

Sample Proportions	% dry mass
Cobbles	0
Gravel	81
Sand	13
Silt and Clay	6

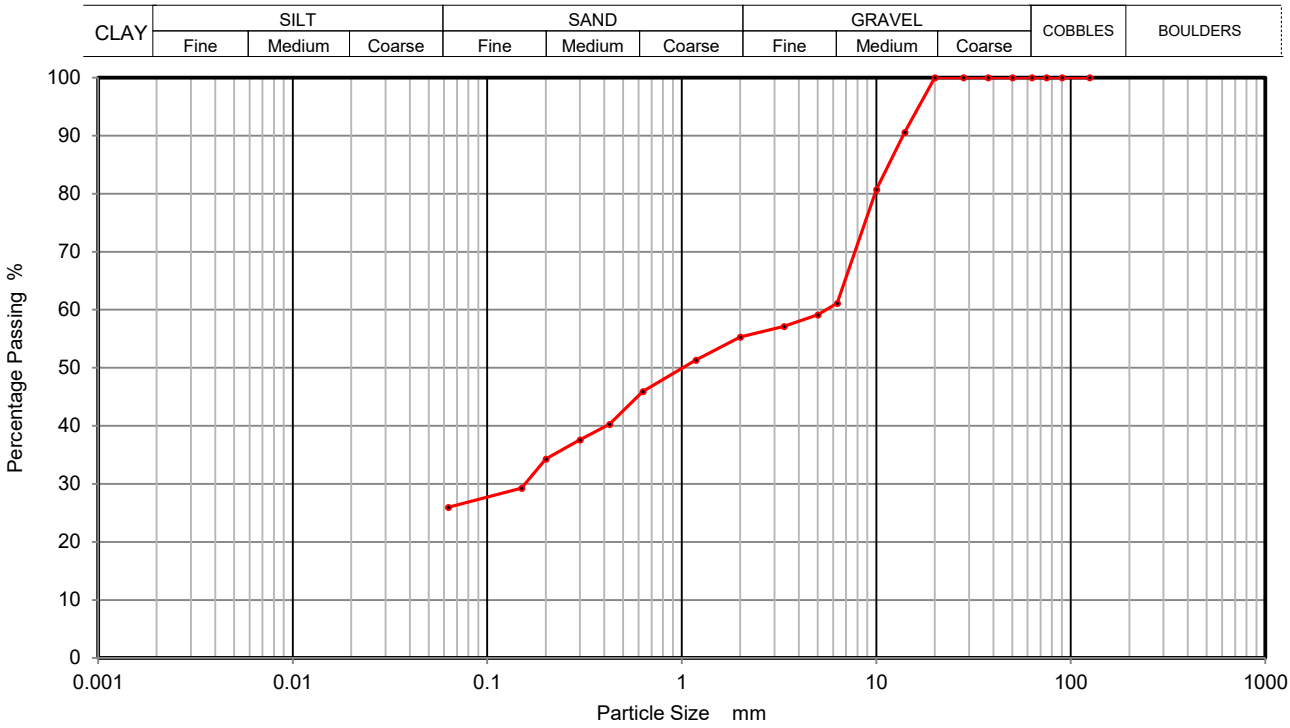
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP613**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey fine to coarse sandy fine to medium GRAVEL	Depth Top	**0.10**
		Depth Base	**0.30**
Date Tested	28/07/2026	Sample Type	**D**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	91		
10	81		
6.3	61		
5	59		
3.35	57		
2	55		
1.18	51		
0.63	46		
0.425	40		
0.30	38		
0.20	34		
0.15	29		
0.063	26		

Sample Proportions	% dry mass
Cobbles	0
Gravel	45
Sand	29
Silt and Clay	26

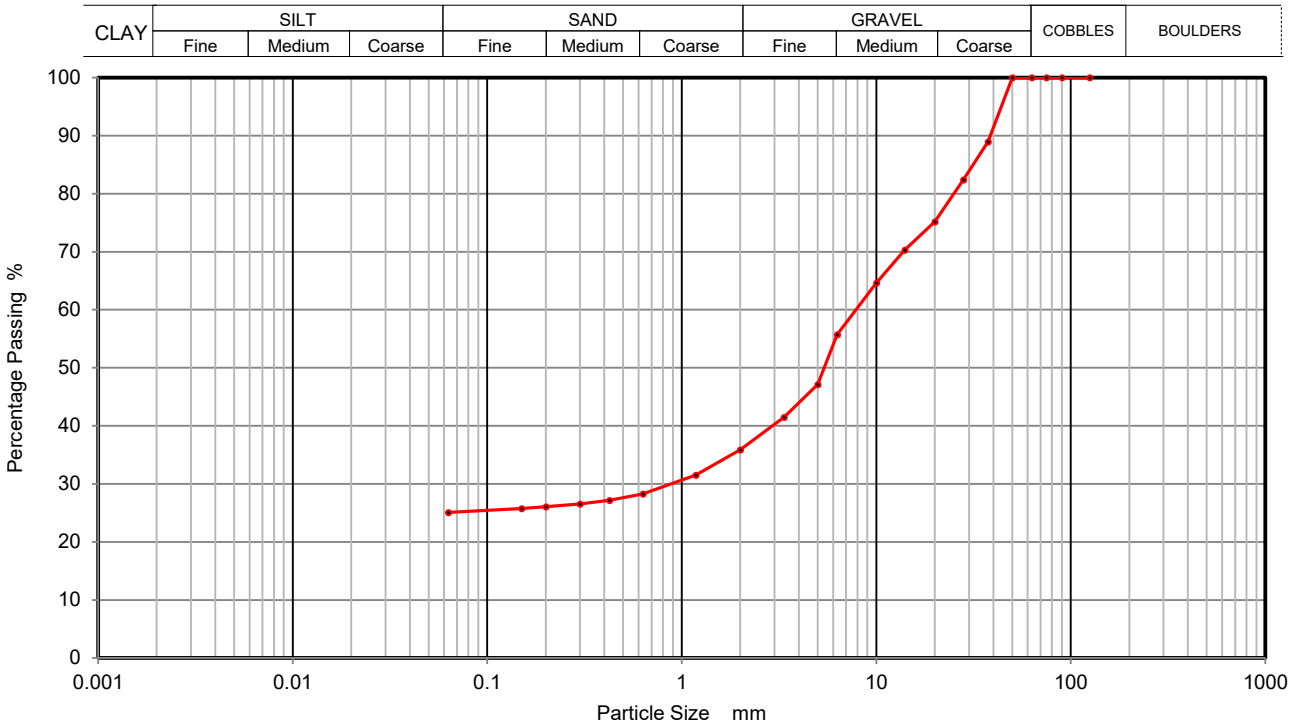
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP614**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**0.15**
		Depth Base	**1.15**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	89		
28	82		
20	75		
14	70		
10	65		
6.3	56		
5	47		
3.35	41		
2	36		
1.18	31		
0.63	28		
0.425	27		
0.30	27		
0.20	26		
0.15	26		
0.063	25		

Sample Proportions	% dry mass
Cobbles	0
Gravel	64
Sand	11
Silt and Clay	25

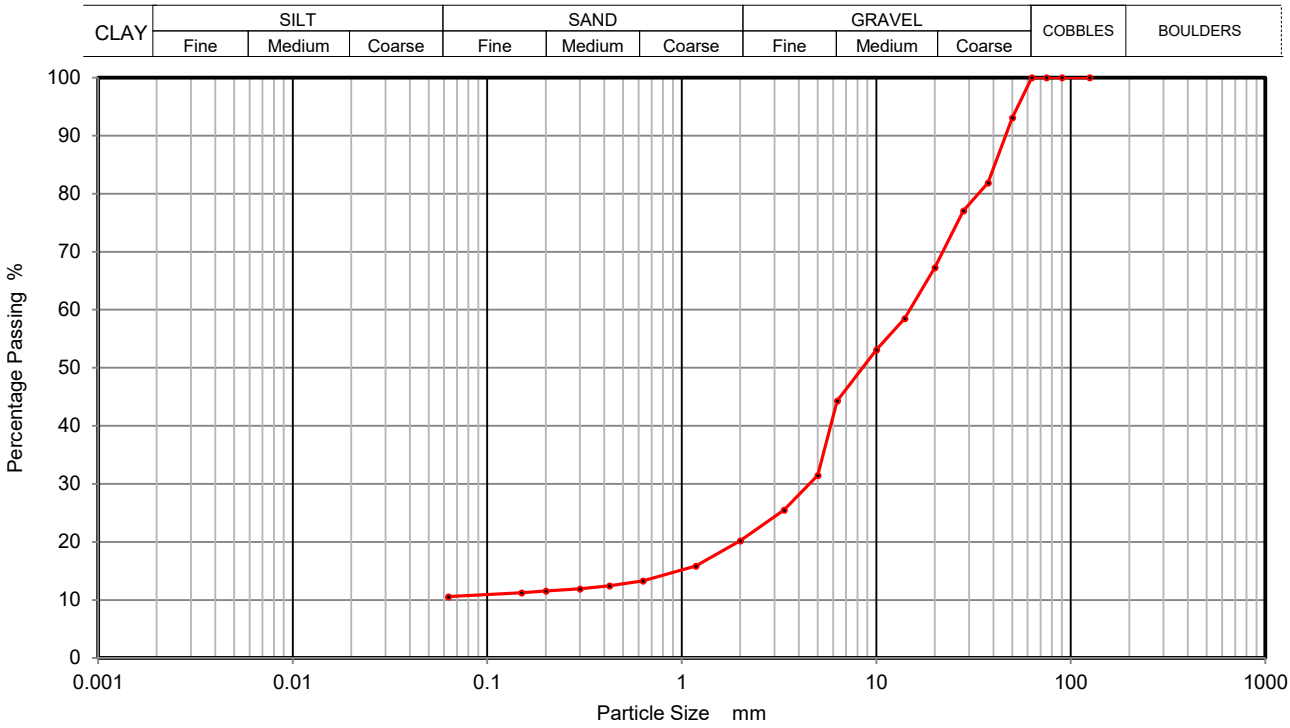
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP615**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL	Depth Top	**1.50**
		Depth Base	**2.00**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	93		
37.5	82		
28	77		
20	67		
14	59		
10	53		
6.3	44		
5	31		
3.35	26		
2	20		
1.18	16		
0.63	13		
0.425	12		
0.30	12		
0.20	12		
0.15	11		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	80
Sand	9
Silt and Clay	11

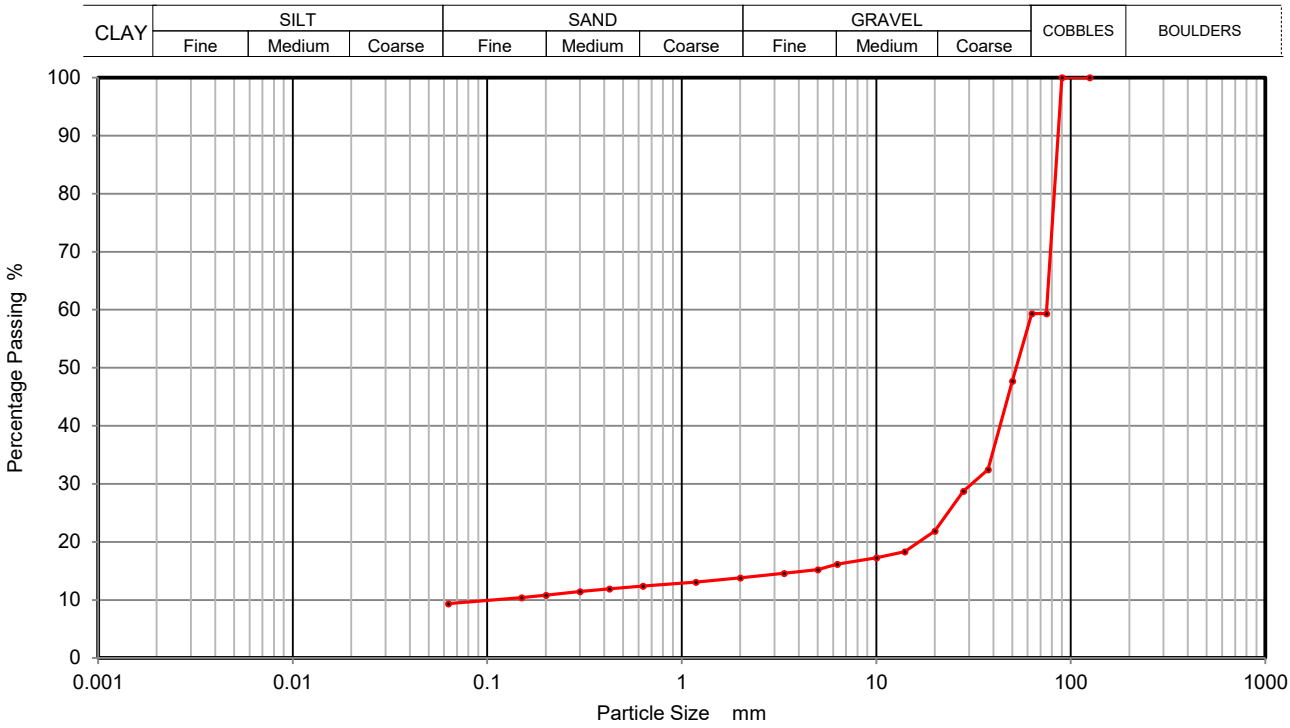
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP701**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.60**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	59		
63	59		
50	48		
37.5	32		
28	29		
20	22		
14	18		
10	17		
6.3	16		
5	15		
3.35	15		
2	14		
1.18	13		
0.63	12		
0.425	12		
0.30	11		
0.20	11		
0.15	10		
0.063	9		

Sample Proportions	% dry mass
Cobbles	41
Gravel	45
Sand	5
Silt and Clay	9

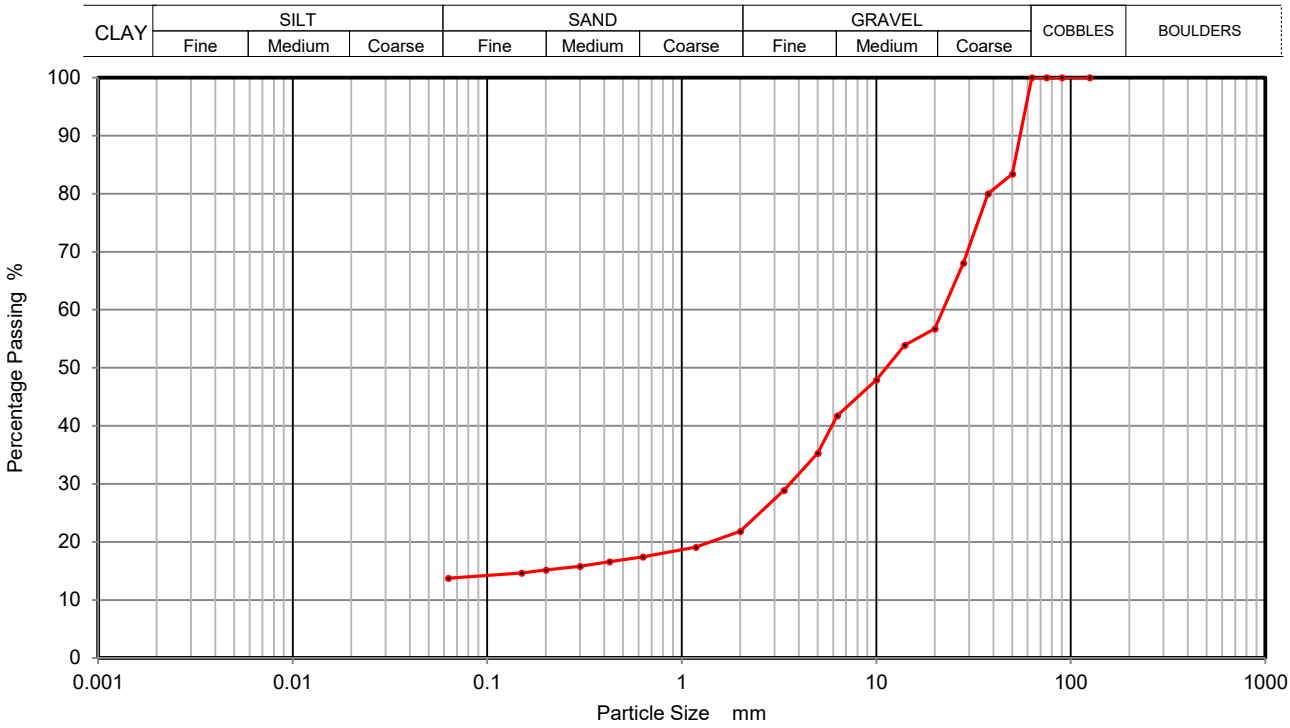
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP702**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL	Depth Top	**0.20**
		Depth Base	**0.70**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	83		
37.5	80		
28	68		
20	57		
14	54		
10	48		
6.3	42		
5	35		
3.35	29		
2	22		
1.18	19		
0.63	17		
0.425	17		
0.30	16		
0.20	15		
0.15	15		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	78
Sand	8
Silt and Clay	14

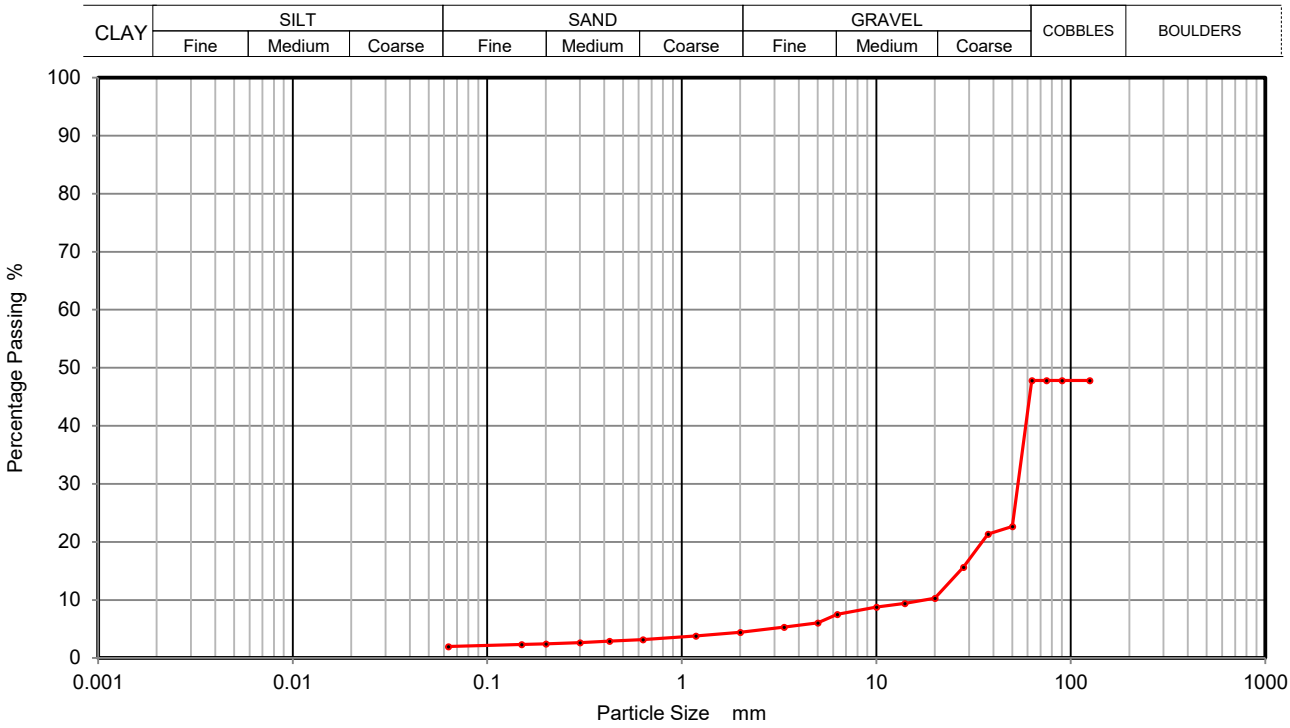
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP703**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.60**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	48		
90	48		
75	48		
63	48		
50	23		
37.5	21		
28	16		
20	10		
14	9		
10	9		
6.3	7		
5	6		
3.35	5		
2	4		
1.18	4		
0.63	3		
0.425	3		
0.30	3		
0.20	2		
0.15	2		
0.063	2		

Sample Proportions	% dry mass
Cobbles	52
Gravel	44
Sand	2
Silt and Clay	2

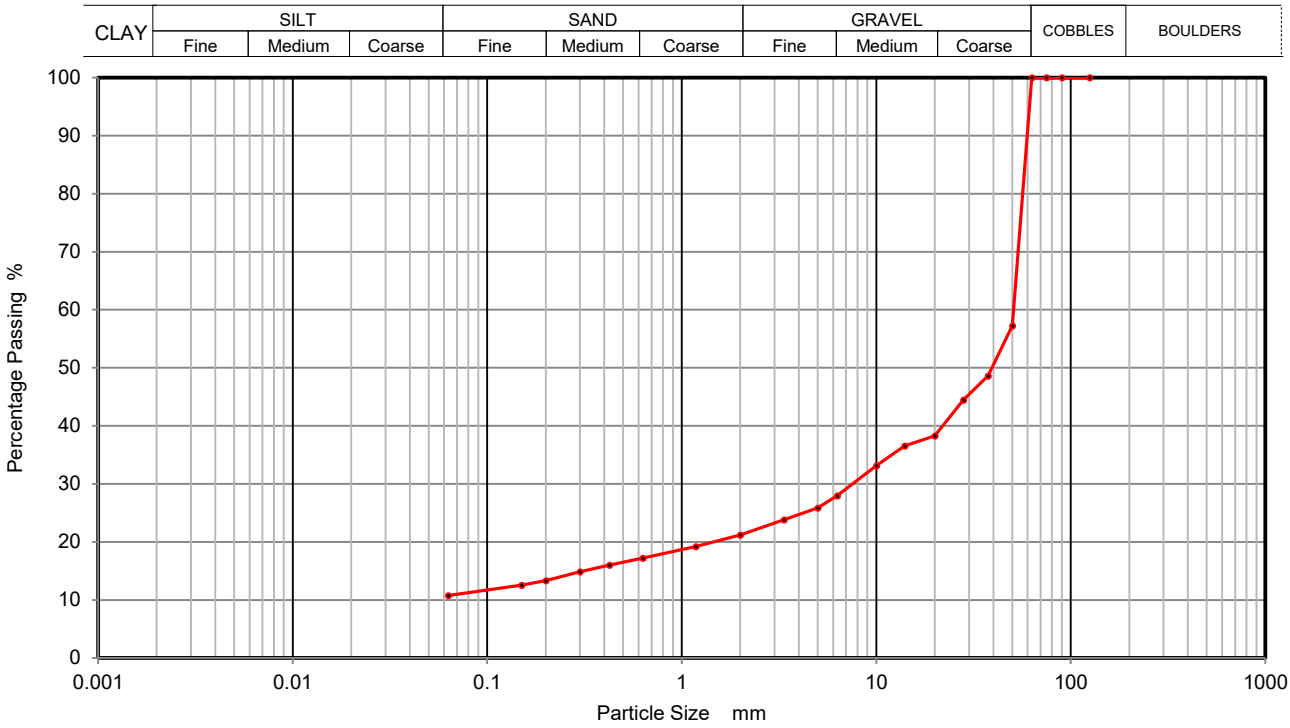
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP704**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL (made ground)	Depth Top	**0.20**
		Depth Base	**0.50**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	57		
37.5	49		
28	44		
20	38		
14	37		
10	33		
6.3	28		
5	26		
3.35	24		
2	21		
1.18	19		
0.63	17		
0.425	16		
0.30	15		
0.20	13		
0.15	13		
0.063	11		

Sample Proportions	% dry mass
Cobbles	0
Gravel	79
Sand	10
Silt and Clay	11

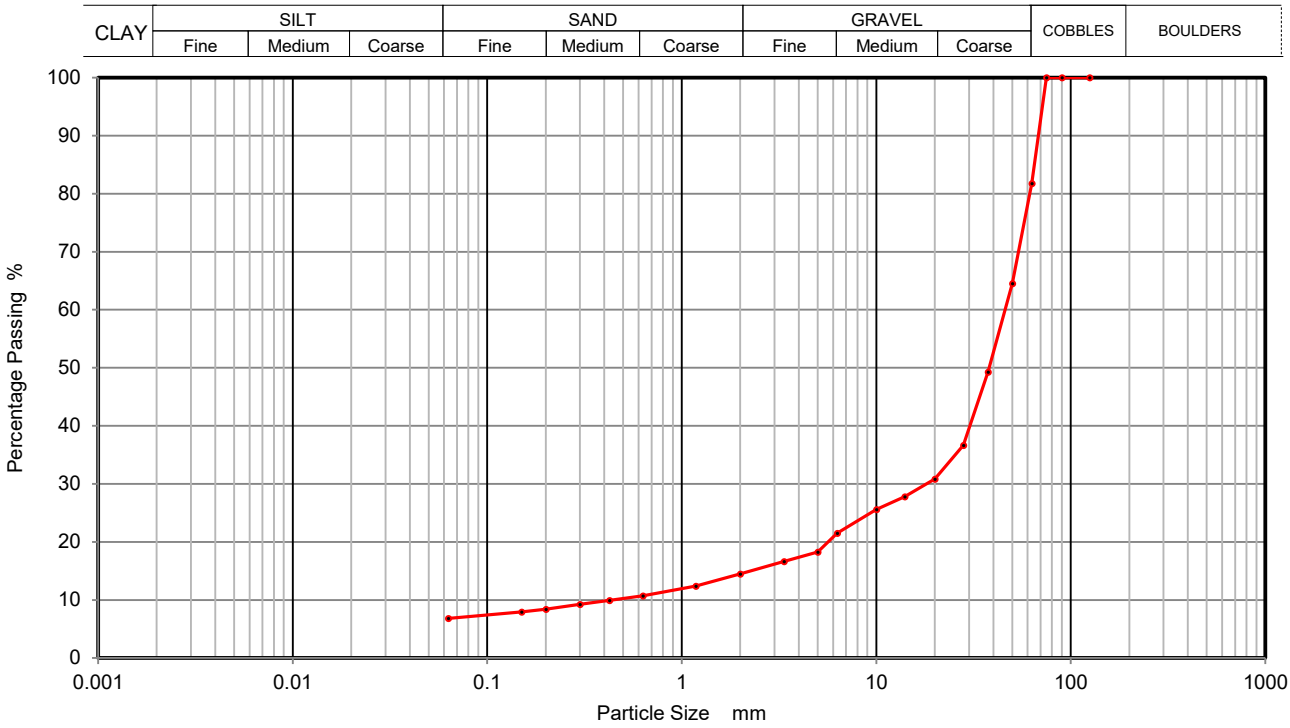
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP705**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.60**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	82		
50	65		
37.5	49		
28	37		
20	31		
14	28		
10	26		
6.3	22		
5	18		
3.35	17		
2	14		
1.18	12		
0.63	11		
0.425	10		
0.30	9		
0.20	8		
0.15	8		
0.063	7		

Sample Proportions	% dry mass
Cobbles	18
Gravel	68
Sand	7
Silt and Clay	7

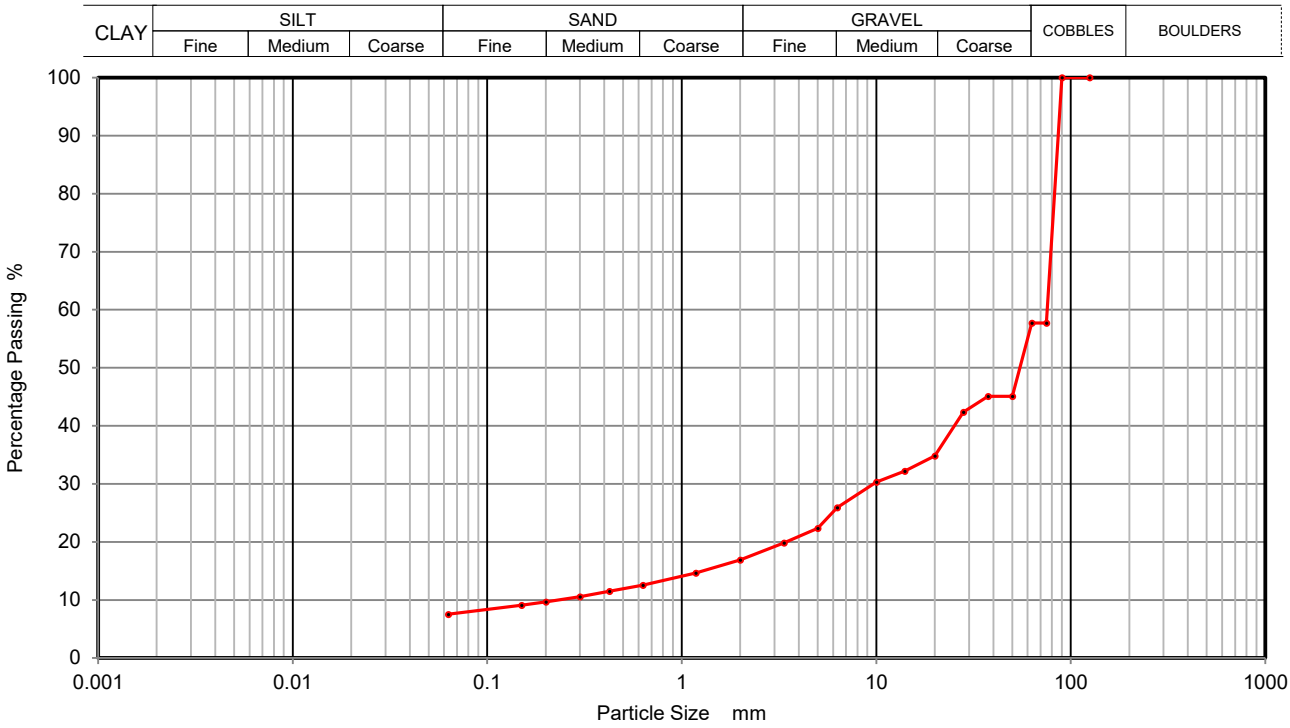
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP706**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.20**
		Depth Base	**0.60**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	58		
63	58		
50	45		
37.5	45		
28	42		
20	35		
14	32		
10	30		
6.3	26		
5	22		
3.35	20		
2	17		
1.18	15		
0.63	13		
0.425	11		
0.30	11		
0.20	10		
0.15	9		
0.063	8		

Sample Proportions	% dry mass
Cobbles	42
Gravel	41
Sand	9
Silt and Clay	8

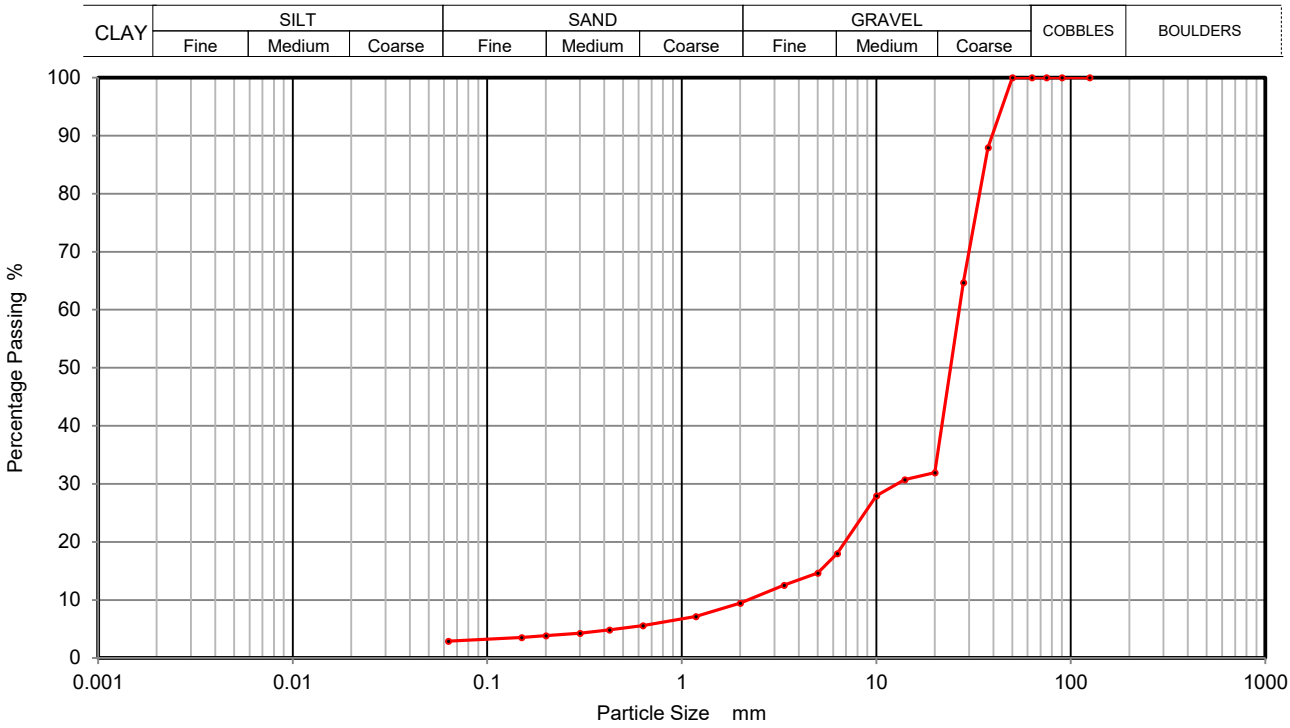
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87849**
		Borehole/Pit No.	**TP801**
Project Name	**Goat Mill Road**	Sample No.	
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL	Depth Top	**0.50**
		Depth Base	**0.80**
Date Tested	28/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	88		
28	65		
20	32		
14	31		
10	28		
6.3	18		
5	15		
3.35	13		
2	9		
1.18	7		
0.63	6		
0.425	5		
0.30	4		
0.20	4		
0.15	4		
0.063	3		

Sample Proportions	% dry mass
Cobbles	0
Gravel	91
Sand	6
Silt and Clay	3

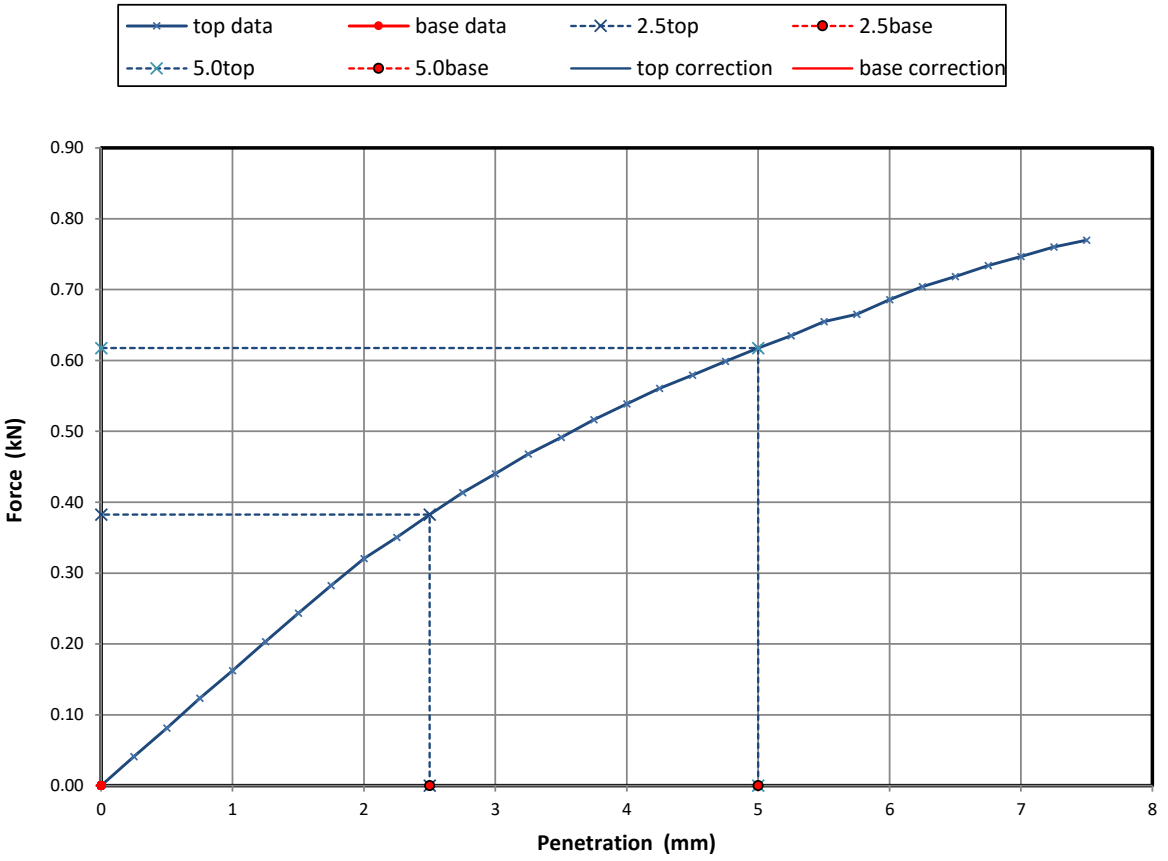
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Corey. J

GSTL	**Determination of California Bearing Ratio (CBR)** **BS 1377-2:2022 Clause 15**	Contract Number	87849
		Borehole/Pit No.	TP602
Project Name	Goat Mill Road	Sample No.	
Soil Description	Grey silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	0.20
Compaction Method	4.5 Kg Rammer	Depth Base	1.20
Material Retained on 20mm Sieve Removed (%)	65	Sample Type	B
Date Tested	18/07/2026		



Initial Sample Conditions	
Water Content (%)	7.9
Water Content Top (%)	9.1
Water Content Base (%)	
Bulk Density (Mg/m3)	2.12
Dry Density (Mg/m3)	1.96

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	4
Amount of Swelling recorded (mm)	1.72
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	1.96

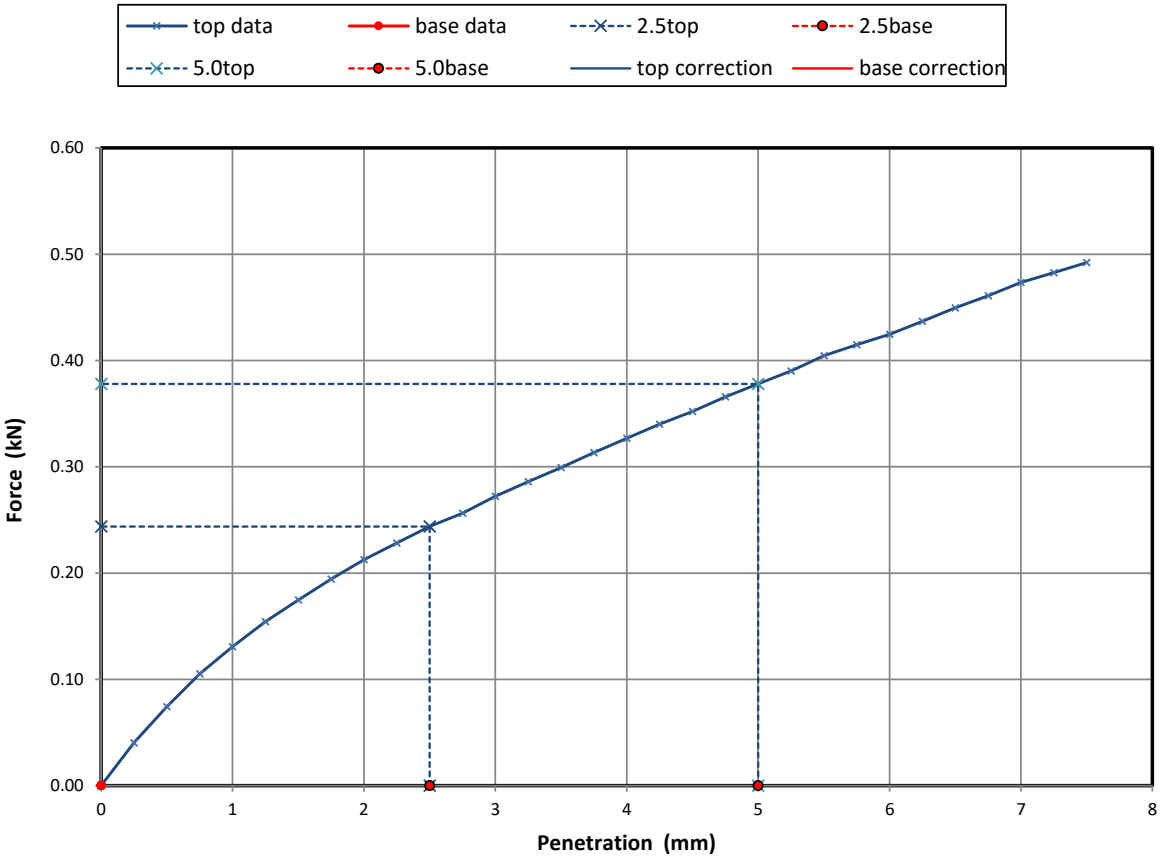
Curve Correction Applied	
Top	Base
No	**No**

CBR Test Values				
2.5mm Top	2.9		2.5mm Base	
5mm Top	3.1		5mm Base	
CBR Value %	**3.1**		**CBR Value %**	

Remarks

Operator
Ben. J

GSTL	**Determination of California Bearing Ratio (CBR)** **BS 1377-2:2022 Clause 15**	Contract Number	87849
		Borehole/Pit No.	TP604
Project Name	Goat Mill Road	Sample No.	
Soil Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	0.15
Compaction Method	4.5 Kg Rammer	Depth Base	0.90
Material Retained on 20mm Sieve Removed (%)	50	Sample Type	B
Date Tested	18/07/2026		



Initial Sample Conditions	
Water Content (%)	16.8
Water Content Top (%)	17.4
Water Content Base (%)	
Bulk Density (Mg/m3)	2.15
Dry Density (Mg/m3)	1.84

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	4
Amount of Swelling recorded (mm)	1.54
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	1.84

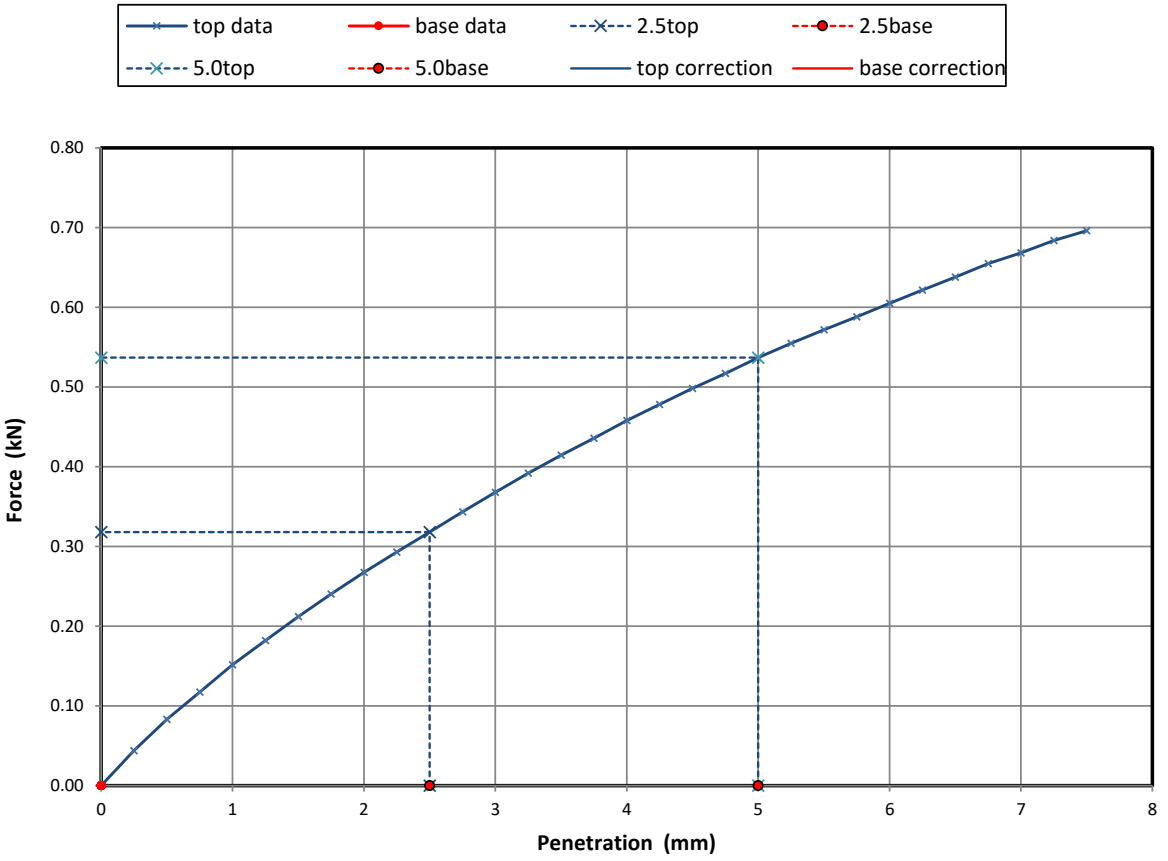
Curve Correction Applied	
Top	Base
No	**No**

CBR Test Values				
2.5mm Top	1.8		2.5mm Base	
5mm Top	1.9		5mm Base	
CBR Value %	**1.9**		**CBR Value %**	

Remarks

Operator
Ben. J

GSTL	**Determination of California Bearing Ratio (CBR)** **BS 1377-2:2022 Clause 15**	Contract Number	87849
		Borehole/Pit No.	TP611
Project Name	Goat Mill Road	Sample No.	
Soil Description	Grey fine coarse silty CLAY	Depth Top	0.15
Compaction Method	4.5 Kg Rammer	Depth Base	1.15
Material Retained on 20mm Sieve Removed (%)	6	Sample Type	B
Date Tested	18/07/2026		



Initial Sample Conditions	
Water Content (%)	10.4
Water Content Top (%)	17.4
Water Content Base (%)	
Bulk Density (Mg/m3)	2.14
Dry Density (Mg/m3)	1.94

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	4
Amount of Swelling recorded (mm)	1.68
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	1.94

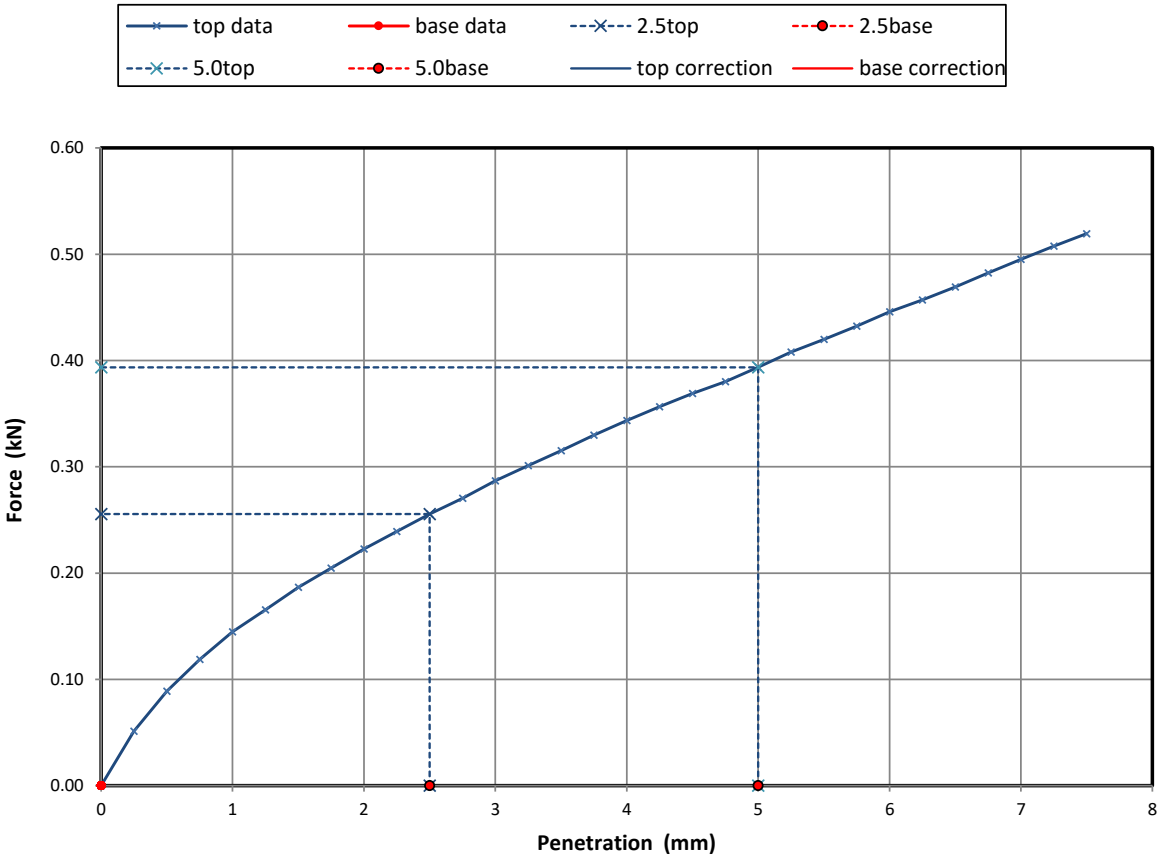
Curve Correction Applied	
Top	Base
No	**No**

CBR Test Values				
2.5mm Top	2.4		2.5mm Base	
5mm Top	2.7		5mm Base	
CBR Value %	**2.7**		**CBR Value %**	

Remarks

Operator
Ben. J

GSTL	**Determination of California Bearing Ratio (CBR)** **BS 1377-2:2022 Clause 15**	Contract Number	87849
		Borehole/Pit No.	TP614
Project Name	Goat Mill Road	Sample No.	
Soil Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	0.15
Compaction Method	4.5 Kg Rammer	Depth Base	1.15
Material Retained on 20mm Sieve Removed (%)	25	Sample Type	B
Date Tested	18/07/2026		



Initial Sample Conditions	
Water Content (%)	13.8
Water Content Top (%)	14.3
Water Content Base (%)	
Bulk Density (Mg/m3)	2.16
Dry Density (Mg/m3)	1.90

Specified Testing Parameters	
Surcharge Applied (Kg)	2
Soaking Time (Days)	4
Amount of Swelling recorded (mm)	1.56
Final Sample Conditions After Soaking	
Dry Density (Mg/m3)	1.90

Curve Correction Applied	
Top	Base
No	**No**

CBR Test Values				
2.5mm Top	1.9		2.5mm Base	
5mm Top	2.0		5mm Base	
CBR Value %	**2.0**		**CBR Value %**	

Remarks

Operator
Ben. J

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

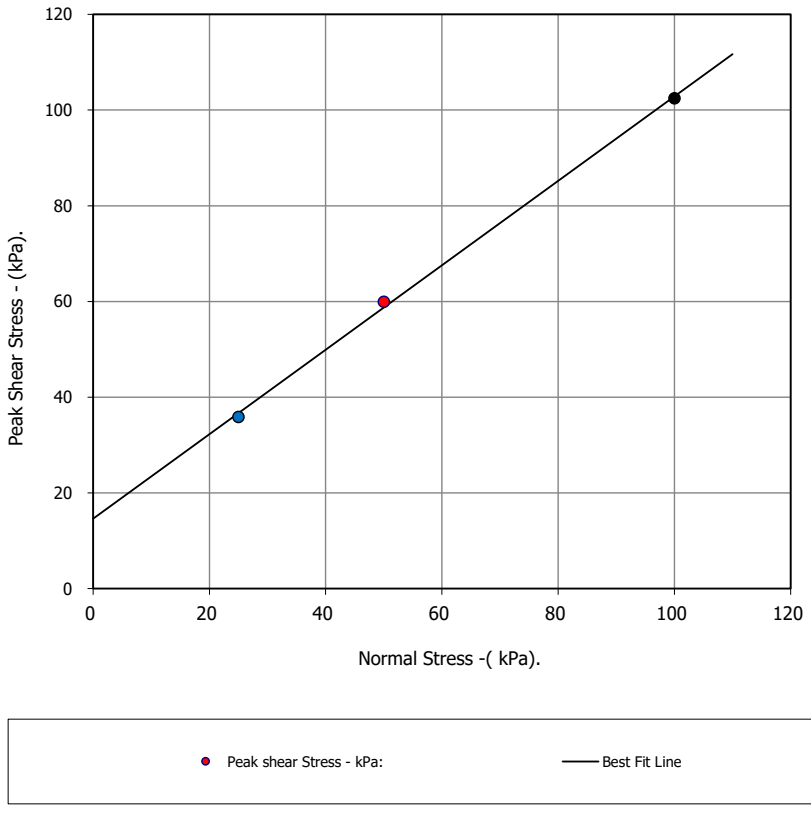
Borehole Number:	TP601A	Depth from (m):	0.50
Sample Number :		Depth to (m):	0.80

Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	
Sample Description: **Grey fine to coarse gravel sandy silty CLAY**			

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	150.5	151.0	150.5
Length - mm:	300.0	300.0	300.0
Water Content - %:	11.2	11.2	11.2
Bulk Density - Mg/m3:	2.00	2.00	2.00
Dry Density - Mg/m3:	1.80	1.80	1.80
Voids Ratio:	0.4747	0.4730	0.4719
Degree of Saturation - %:	62.61	62.83	62.97
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	148.11	146.74	145.38
Shear			
Rate of Horizontal Displacement (mm/min)	0.513	0.513	0.615
Horizontal Displacement at Peak Shear Stress (mm)	33.74	40.94	46.34
Peak shear Stress - kPa:	36	60	102
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**41.5**
Effective Cohesion - kPa:	**15**

FAILURE CONDITIONS



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

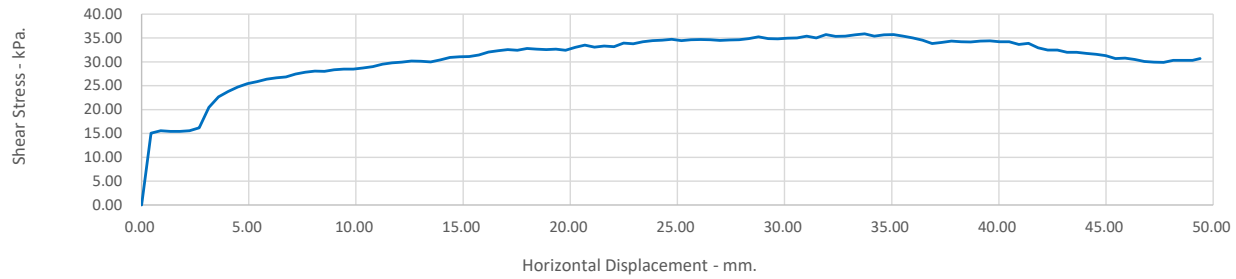
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Test Report: LARGE DIRECT SHEARBOX TEST.

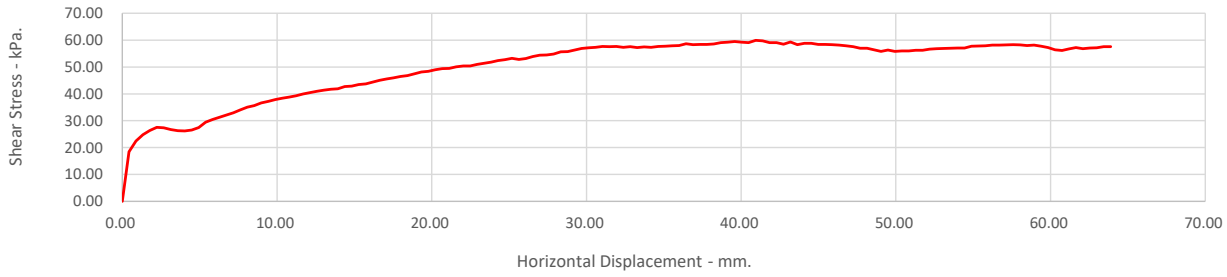
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP601A Depth (m): 0.50

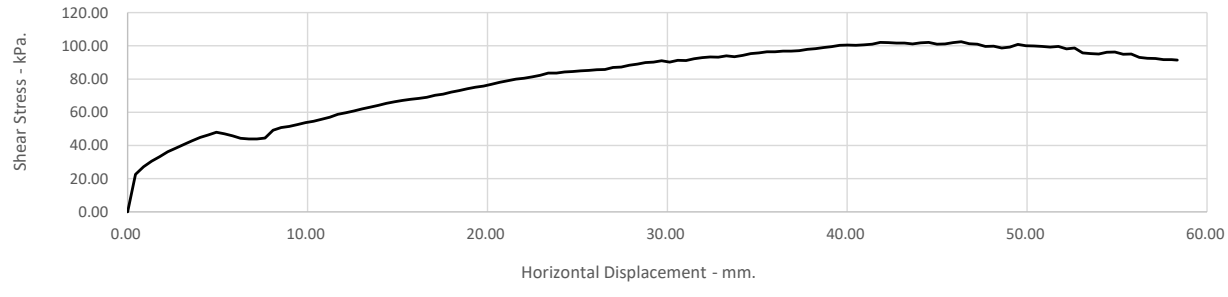
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.

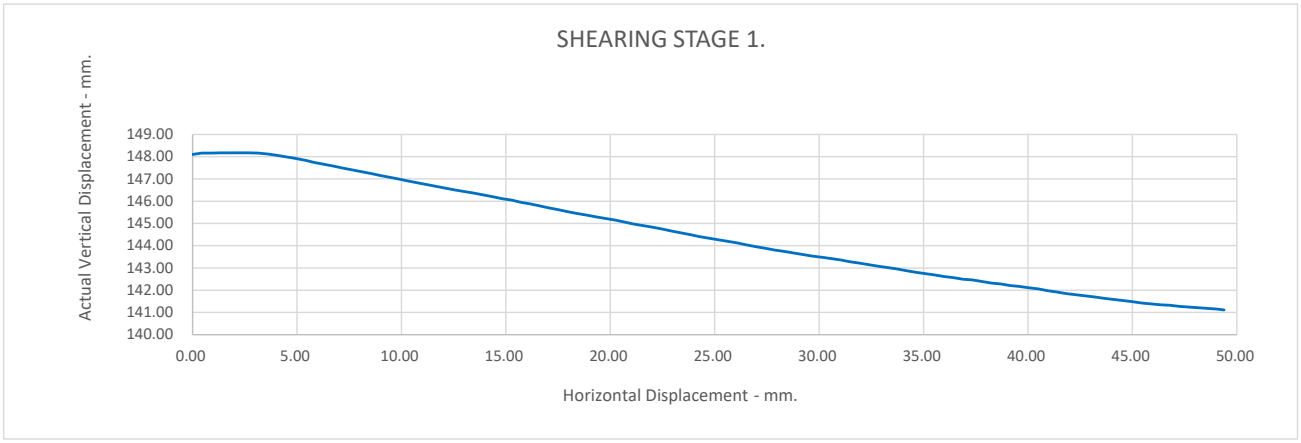


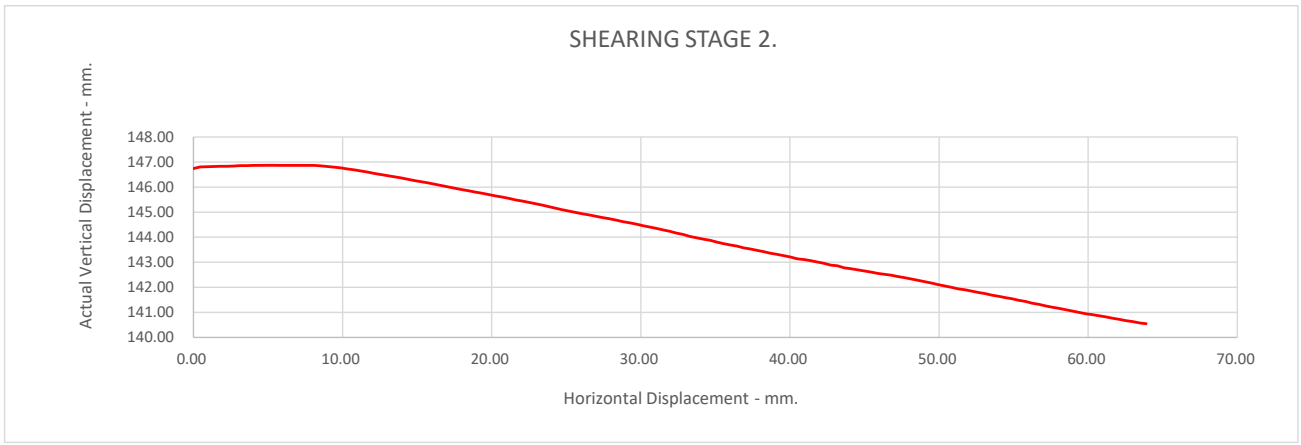
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **87849** Client Ref Number: **784-B077402**

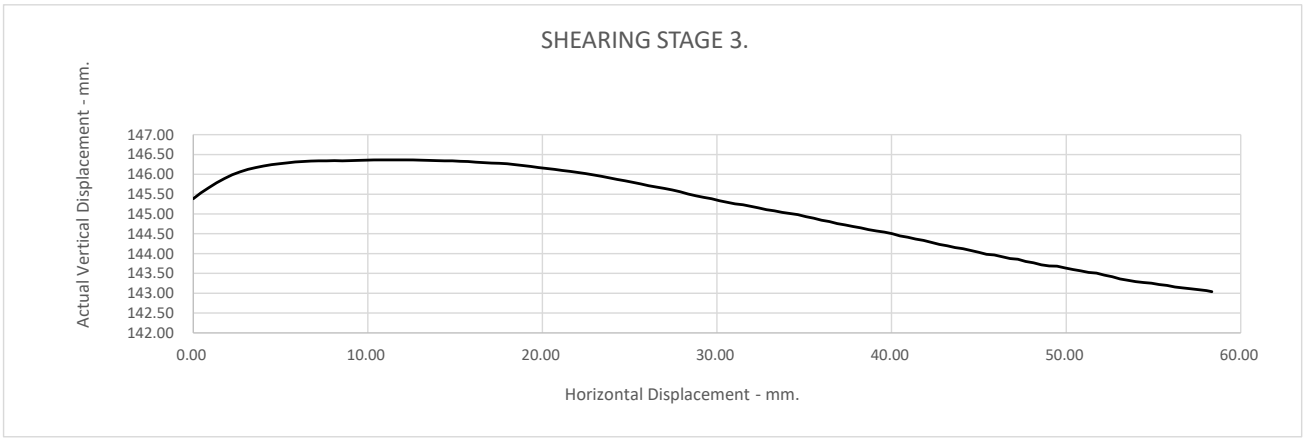
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP601A Depth (m): 0.50







GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

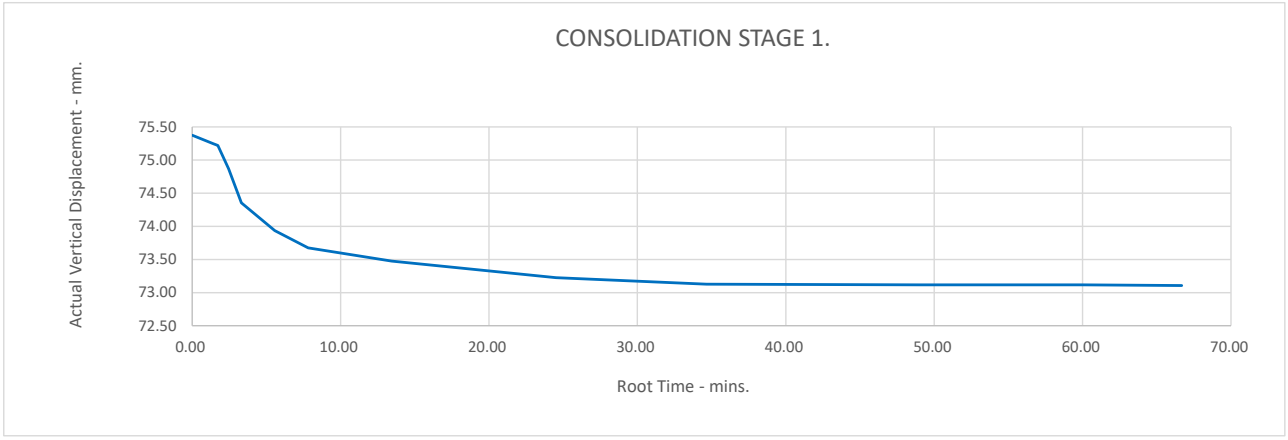
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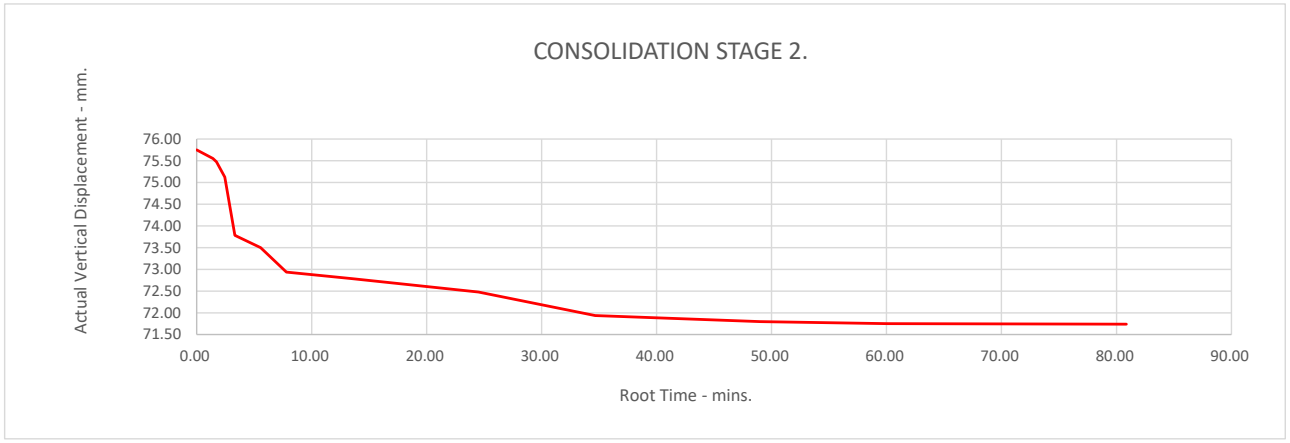
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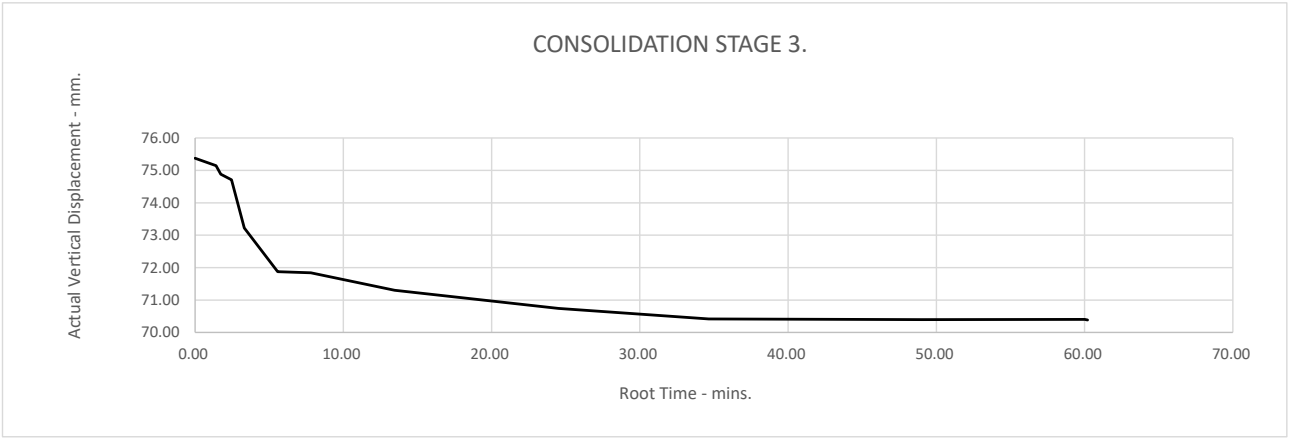
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP601A Depth (m): 0.50







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

Client Ref Number: **784-B077402**

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

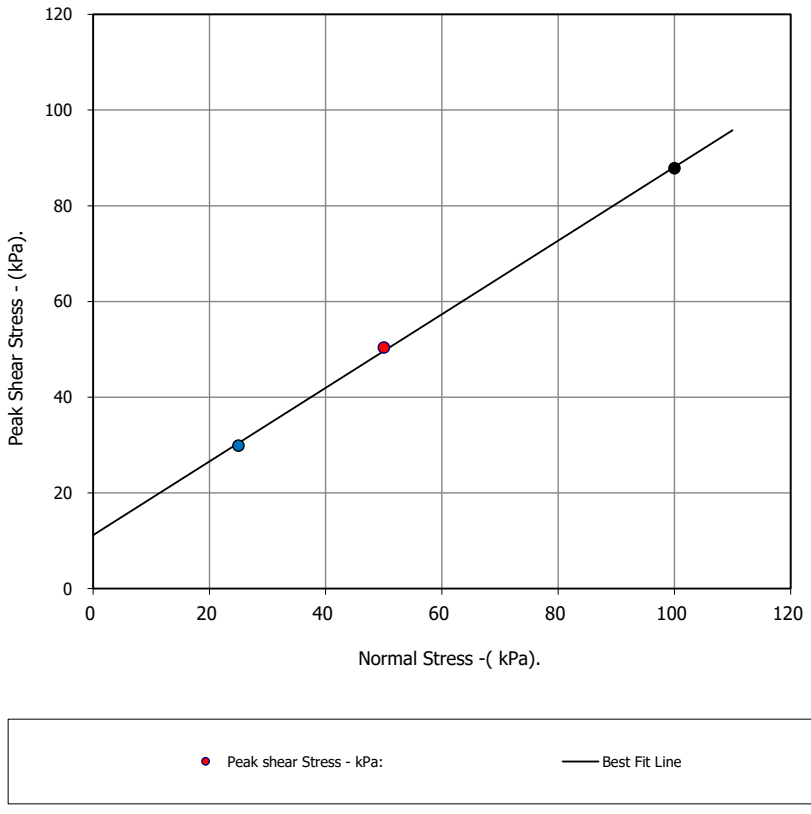
Borehole Number:	TP604A	Depth from (m):	0.50
Sample Number :		Depth to (m):	0.90

Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	
Sample Description: **Grey fine to coarse gravel sandy silty CLAY**			

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	150.5	151.0	150.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	10.7	10.7	10.7
Bulk Density - Mg/m3:	1.94	1.94	1.94
Dry Density - Mg/m3:	1.76	1.76	1.75
Voids Ratio:	0.5100	0.5093	0.5101
Degree of Saturation - %:	55.69	55.77	55.68
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	147.98	146.89	144.09
Shear			
Rate of Horizontal Displacement (mm/min)	0.134	0.118	0.385
Horizontal Displacement at Peak Shear Stress (mm)	34.19	34.19	49.49
Peak shear Stress - kPa:	30	50	88
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**37.5**
Effective Cohesion - kPa:	**11**

FAILURE CONDITIONS



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

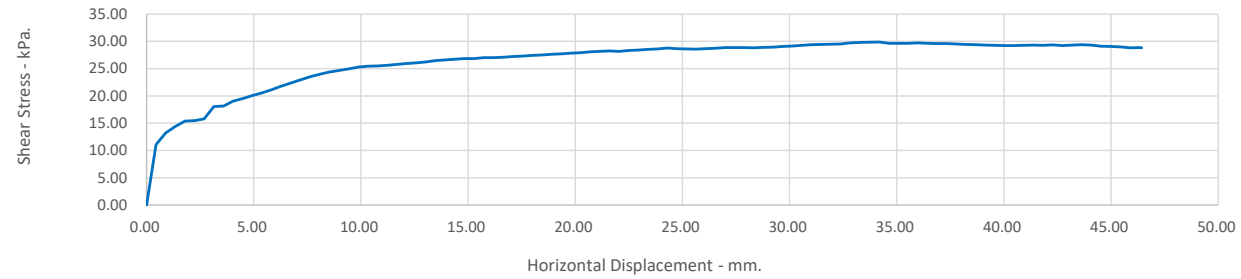
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Test Report: LARGE DIRECT SHEARBOX TEST.

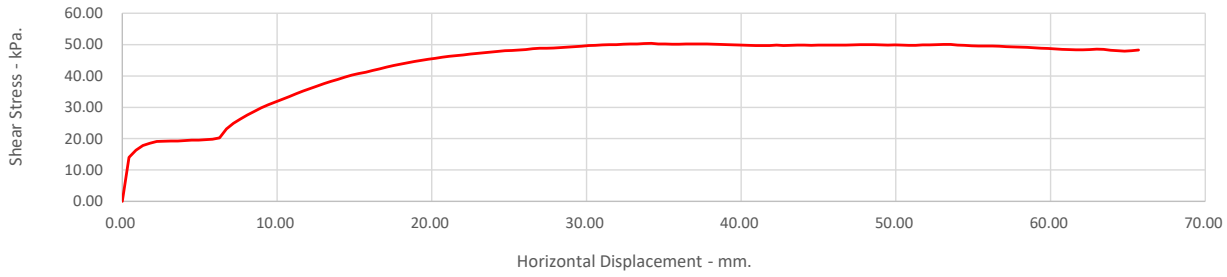
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP604A Depth (m): 0.50

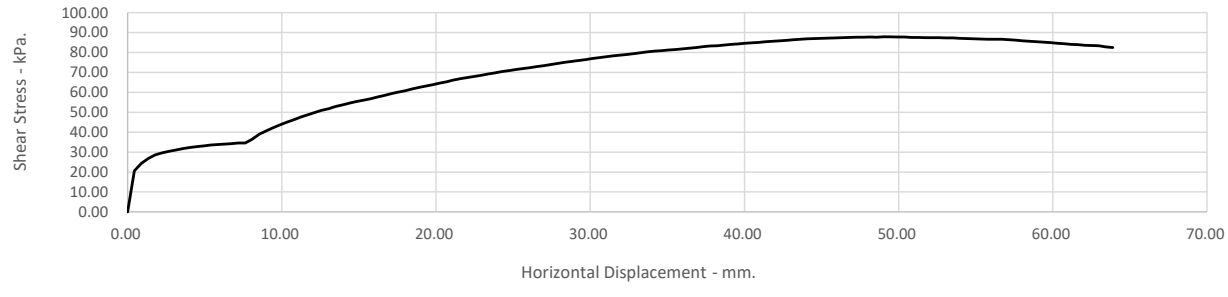
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

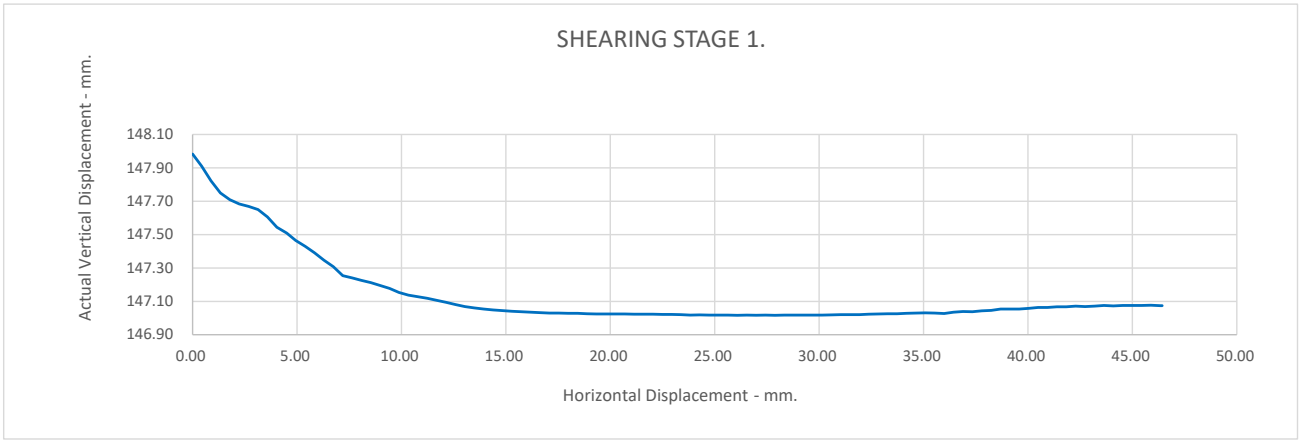
Contract No.: **87849**

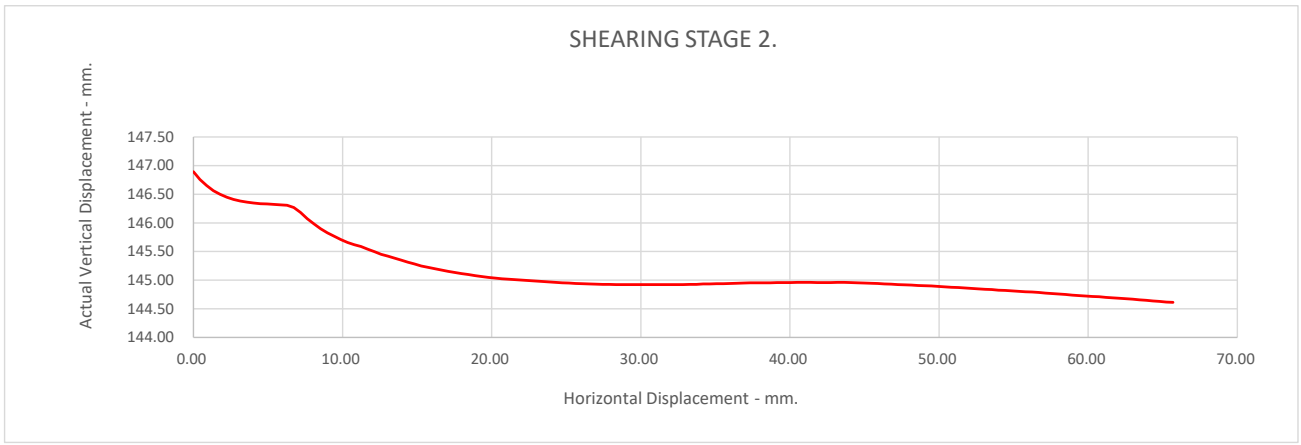
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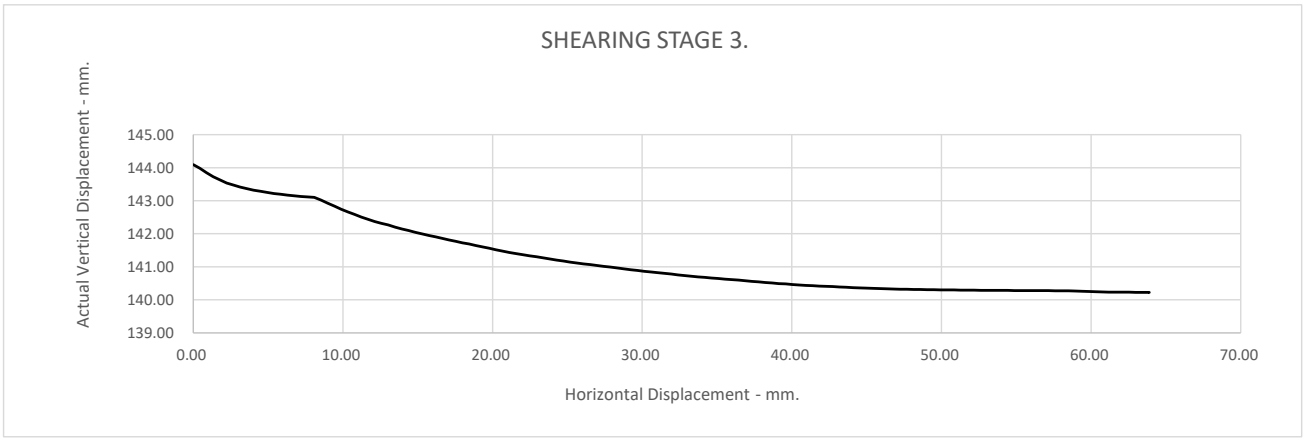
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP604A Depth (m): 0.50







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

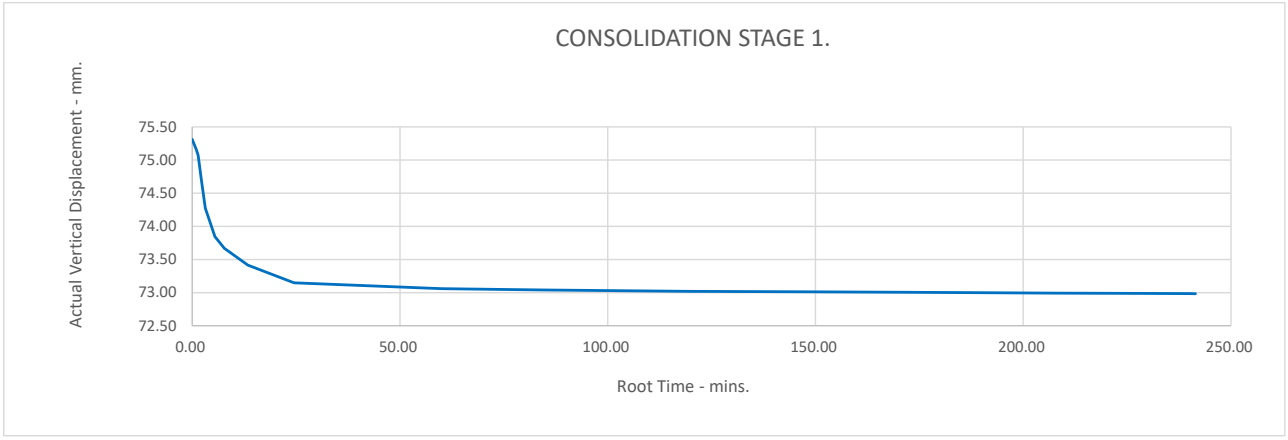
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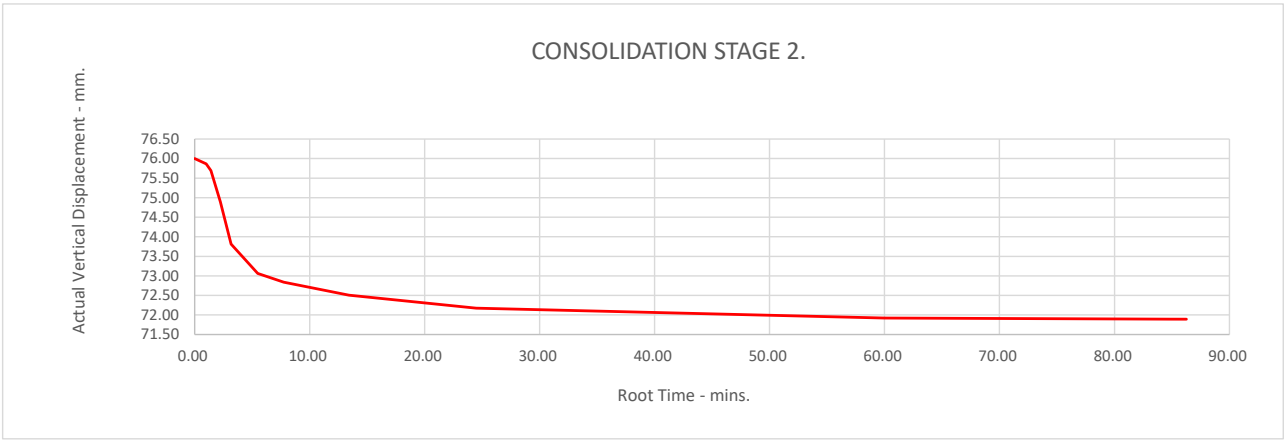
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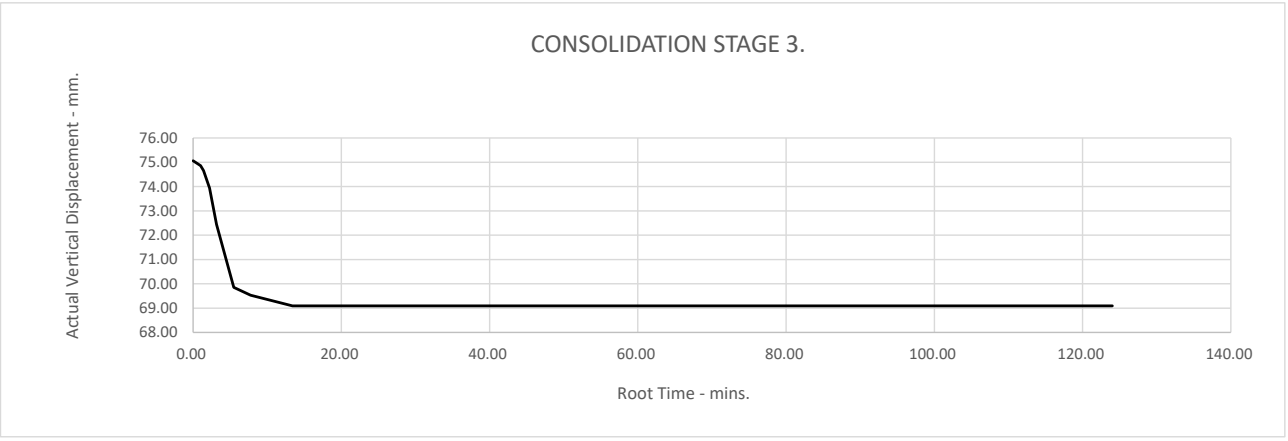
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP604A Depth (m): 0.50







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **87849** Client Ref Number: **784-B077402**

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

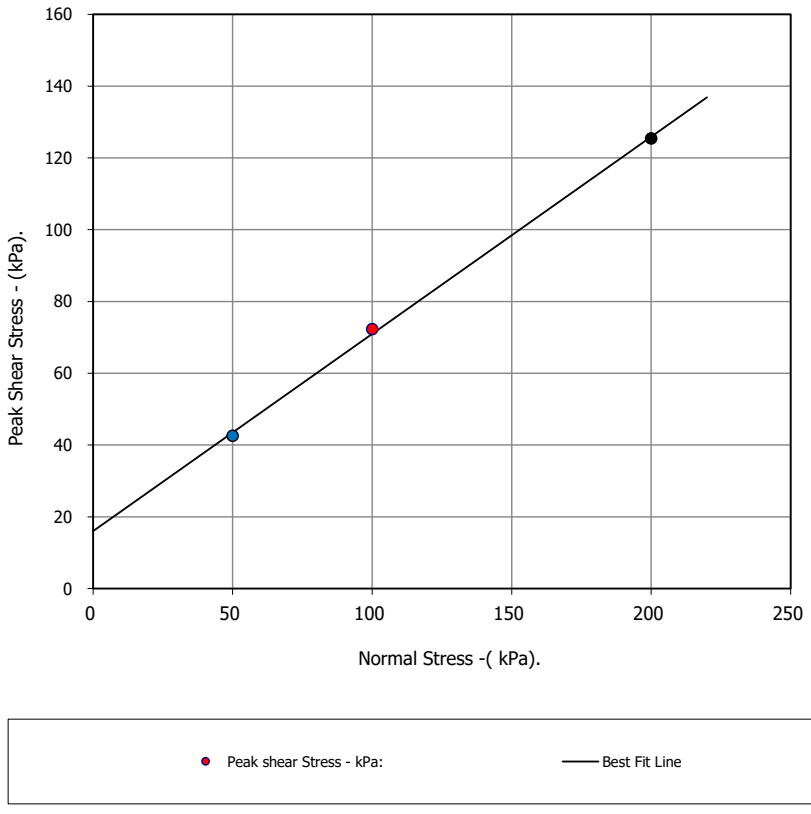
Borehole Number:	TP613	Depth from (m):	0.70
Sample Number :		Depth to (m):	1.00

Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	
Sample Description: **Grey sandy silty clayey fine to coarse GRAVEL. Cobbles**			

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	151.0	151.0	150.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	11.1	11.1	11.1
Bulk Density - Mg/m3:	1.97	1.97	1.97
Dry Density - Mg/m3:	1.77	1.78	1.78
Voids Ratio:	0.4966	0.4923	0.4916
Degree of Saturation - %:	59.37	59.88	59.97
Normal Pressure- kPa	50	100	200
Consolidation			
Consolidated Height - mm:	147.74	145.94	144.65
Shear			
Rate of Horizontal Displacement (mm/min)	0.237	0.615	0.440
Horizontal Displacement at Peak Shear Stress (mm)	62.54	58.04	62.54
Peak shear Stress - kPa:	43	72	125
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**29**
Effective Cohesion - kPa:	**16**

FAILURE CONDITIONS



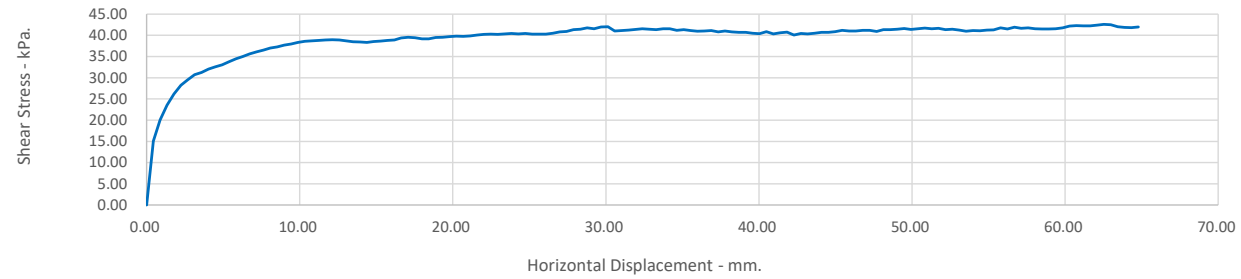
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**Goat Mill Road**	Contract No.: **87849** Client Ref Number: **784-B077402**

Test Report: LARGE DIRECT SHEARBOX TEST.

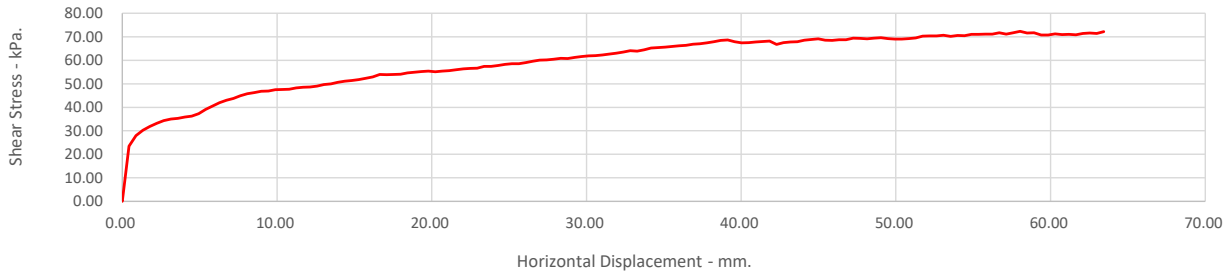
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP613 Depth (m): 0.70

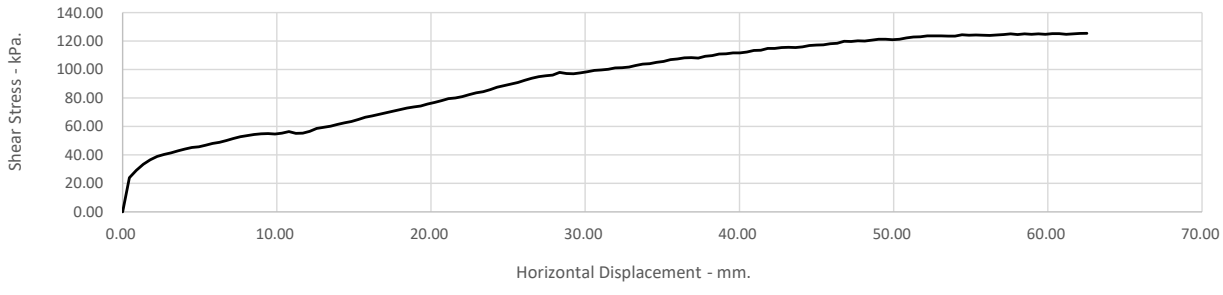
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

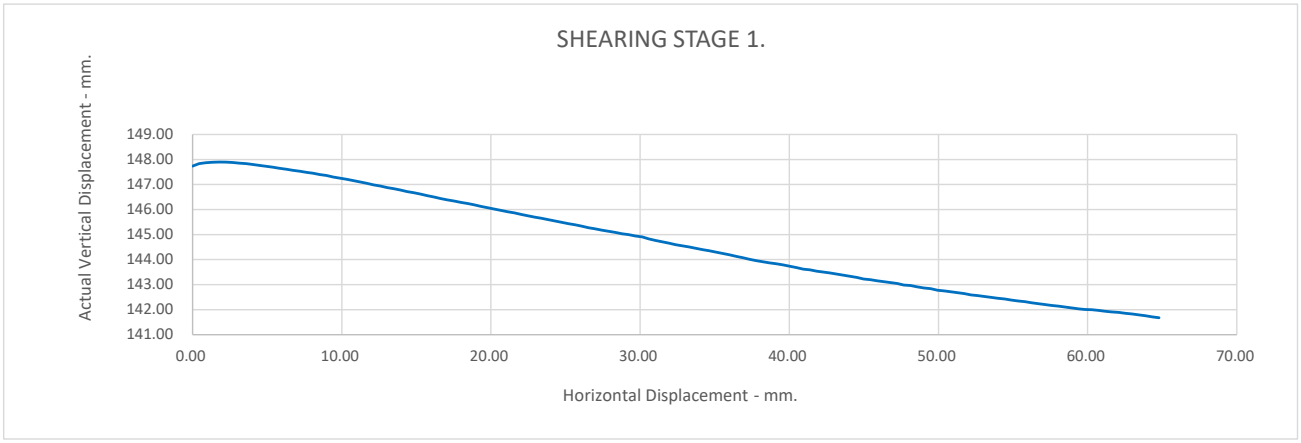
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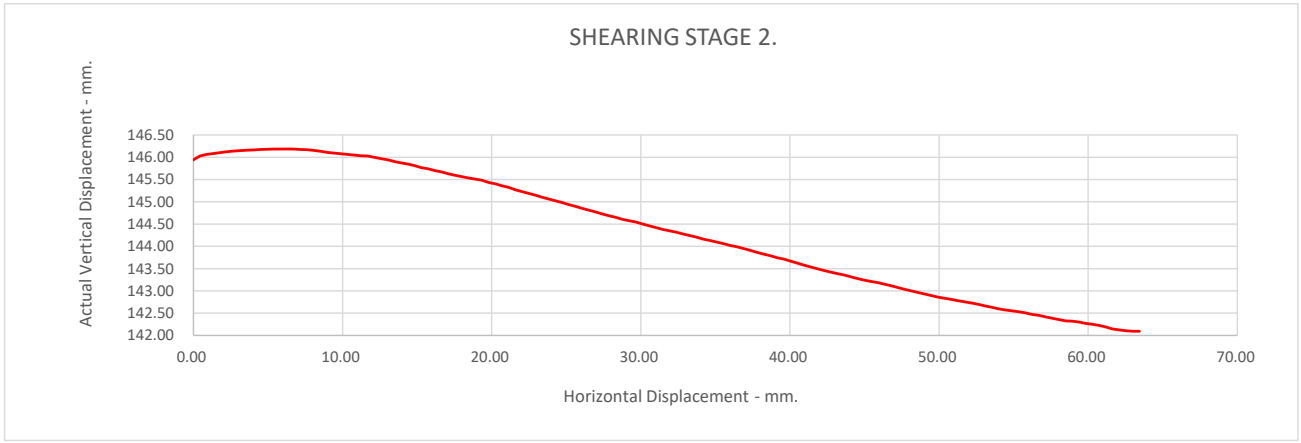
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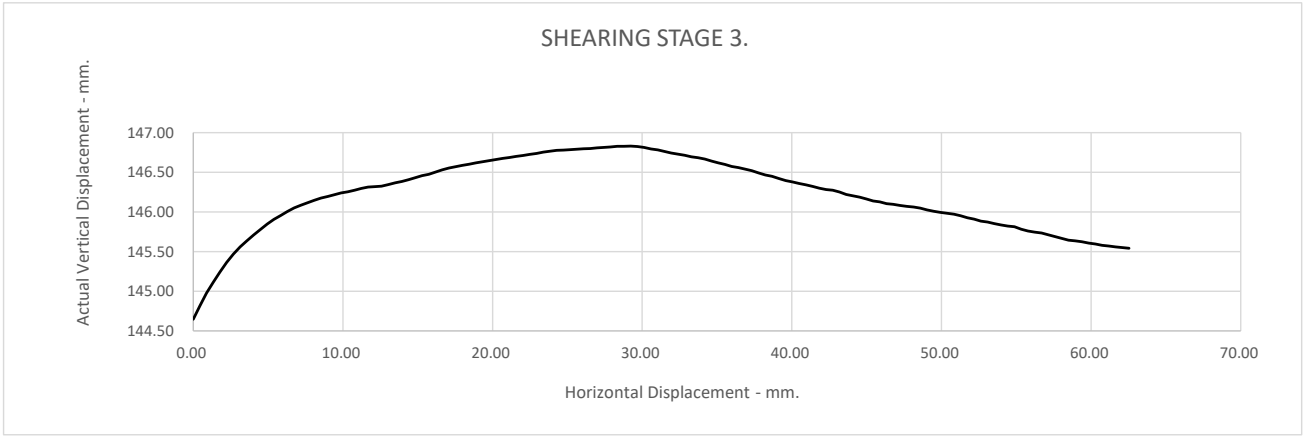
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP613 Depth (m): 0.70







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

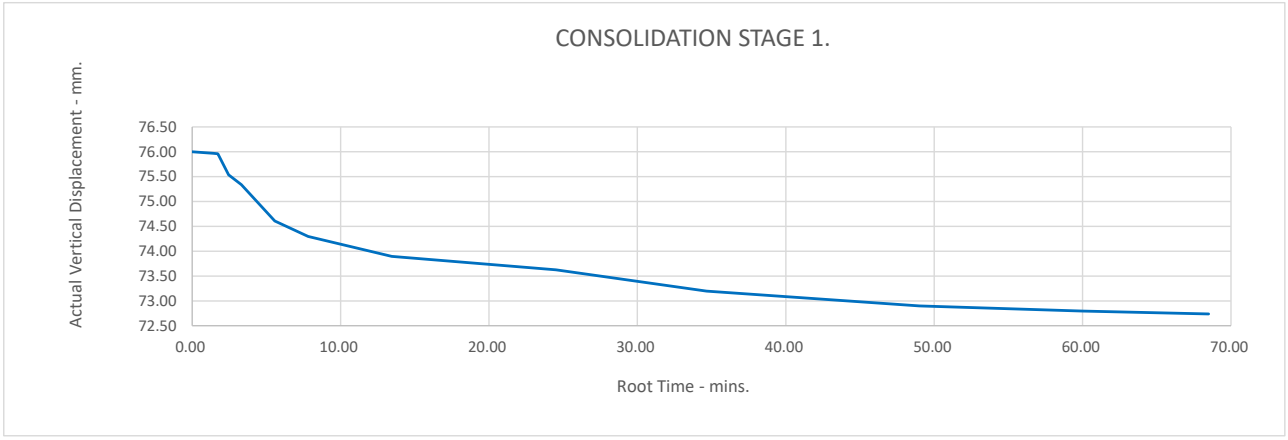
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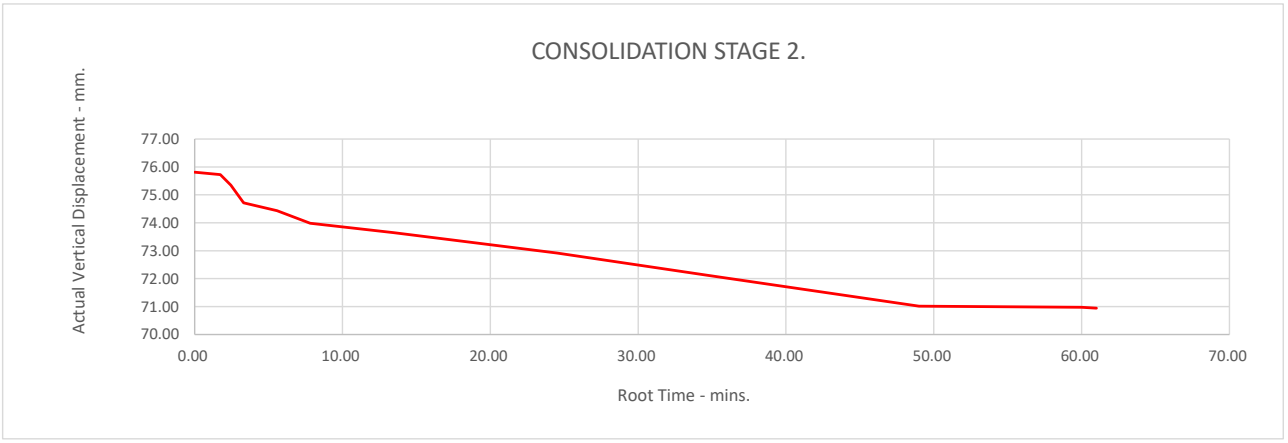
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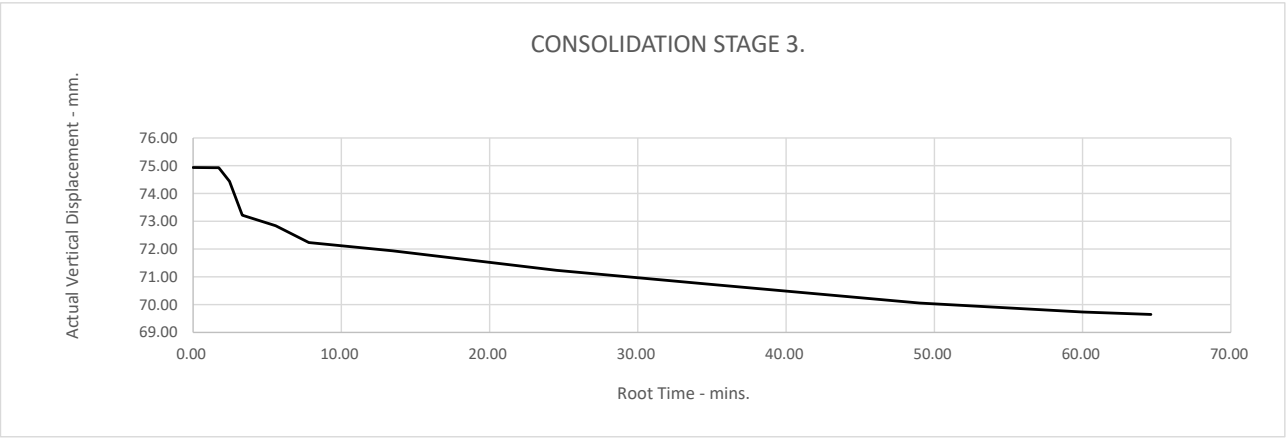
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP613 Depth (m): 0.70







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

Client Ref Number: **784-B077402**

Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

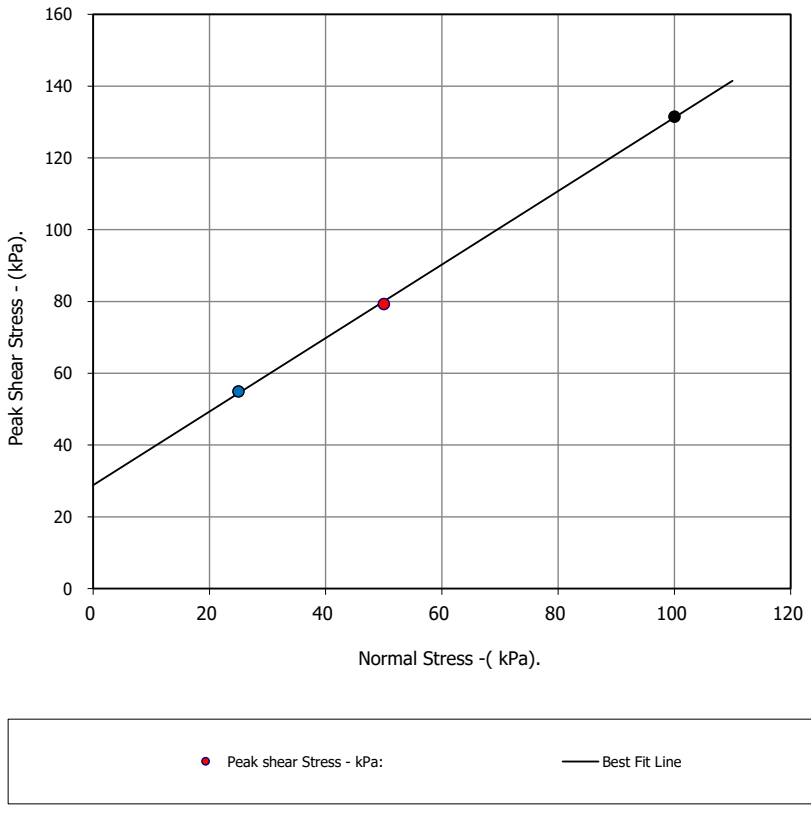
Borehole Number:	TP615	Depth from (m):	1.50
Sample Number :		Depth to (m):	2.00

Sample Type:	B		
Particle Density - Mg/m3:	2.65	Assumed	
Specimen Tested:	At natural water content, Remoulded (2.5kg compaction) Material above 20mm removed. Sample submerged		
Voids or Holes in Specimen Filled:	No	Orientation of The test specimen: N/A	
Sample Description: **Grey sandy silty clayey fine to coarse GRAVEL**			

STAGE	**1**	**2**	**3**
Initial Conditions			
Height - mm:	150.0	150.0	150.0
Length - mm:	300.0	300.0	300.0
Water Content - %:	7.9	7.9	7.9
Bulk Density - Mg/m3:	2.00	2.00	2.00
Dry Density - Mg/m3:	1.86	1.86	1.86
Voids Ratio:	0.4267	0.4266	0.4260
Degree of Saturation - %:	48.86	48.89	48.95
Normal Pressure- kPa	25	50	100
Consolidation			
Consolidated Height - mm:	147.95	146.92	146.25
Shear			
Rate of Horizontal Displacement (mm/min)	0.342	0.440	0.440
Horizontal Displacement at Peak Shear Stress (mm)	16.19	63.89	63.89
Peak shear Stress - kPa:	55	79	131
Failure Criterion Adopted:	At Peak Horizontal Shear Stress		

PEAK	
Angle of Shearing Resistance:(θ)	**45.5**
Effective Cohesion - kPa:	**29**

FAILURE CONDITIONS



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

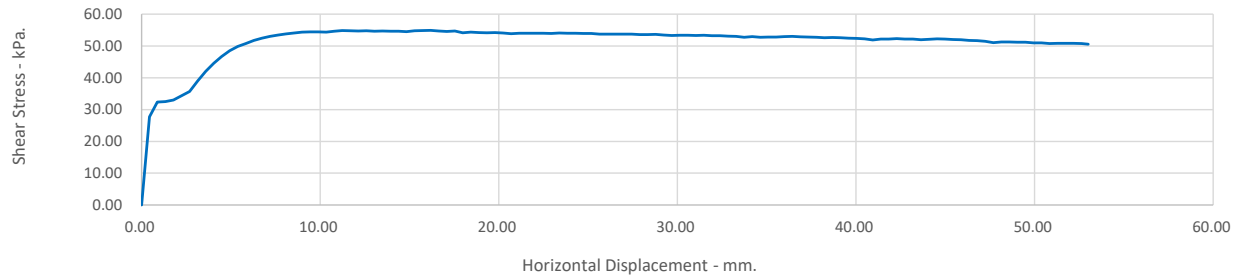
Client Ref Number: **784-B077402**

Test Report: LARGE DIRECT SHEARBOX TEST.

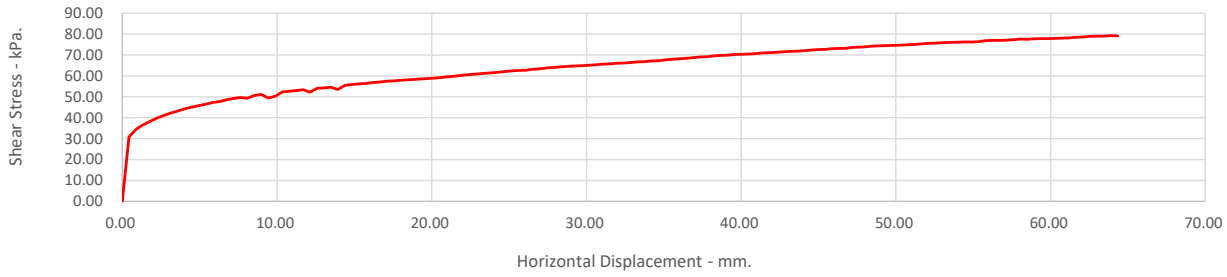
BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP615 Depth (m): 1.50

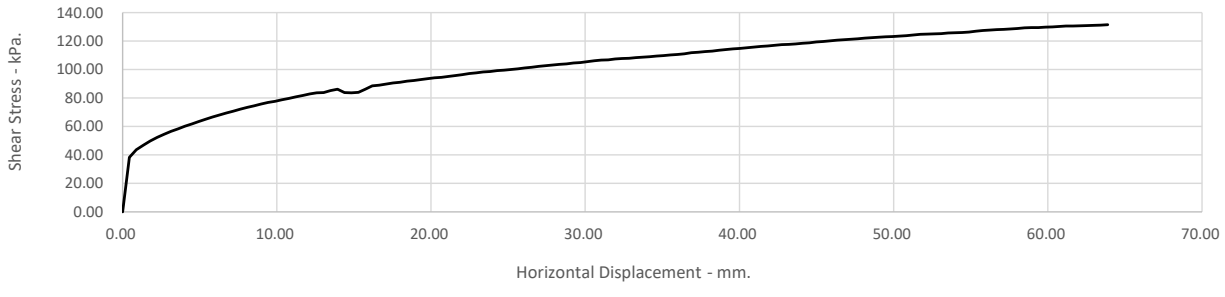
SHEARING STAGE 1.



SHEARING STAGE 2.



SHEARING STAGE 3.



GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

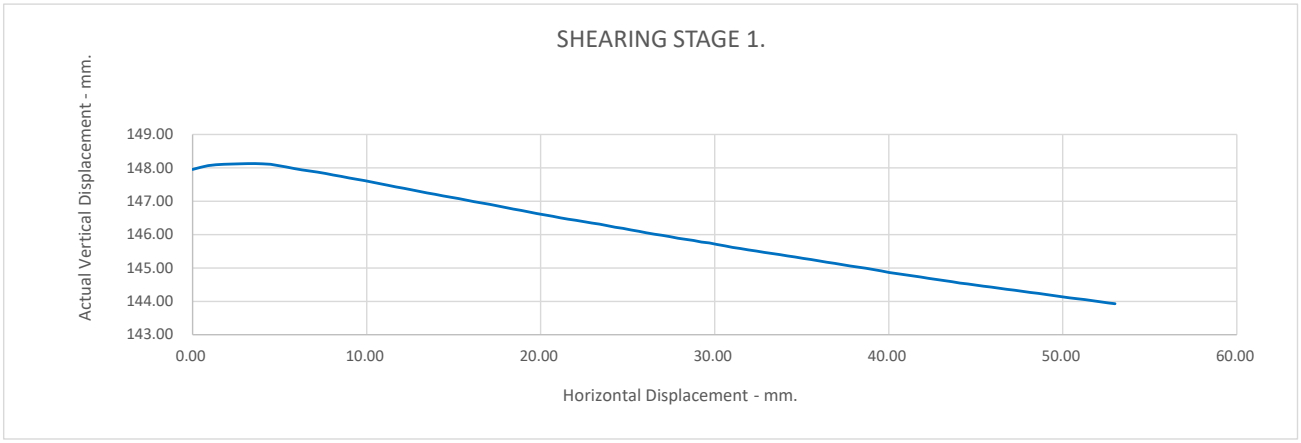
Contract No.: **87849**

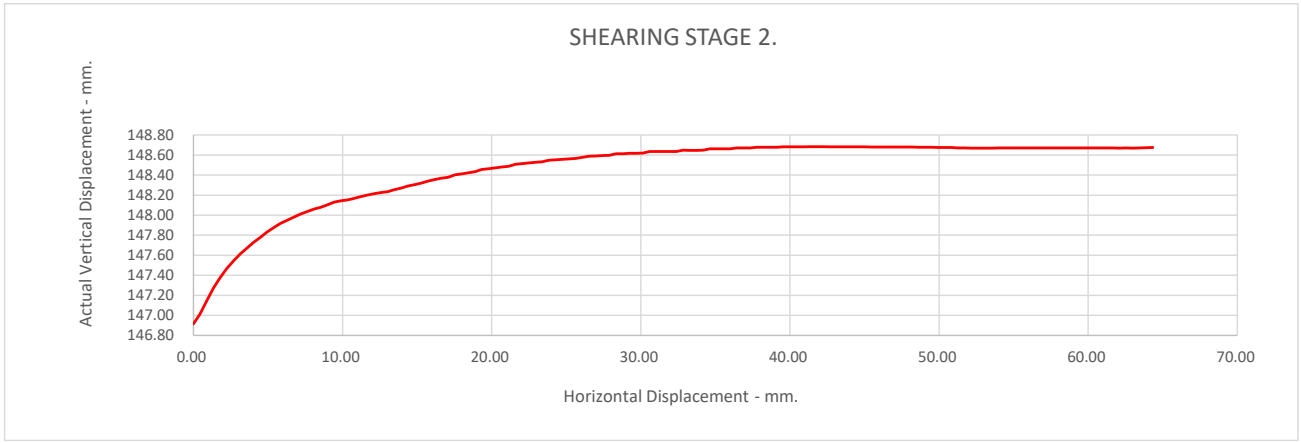
Client Ref Number: **784-B077402**

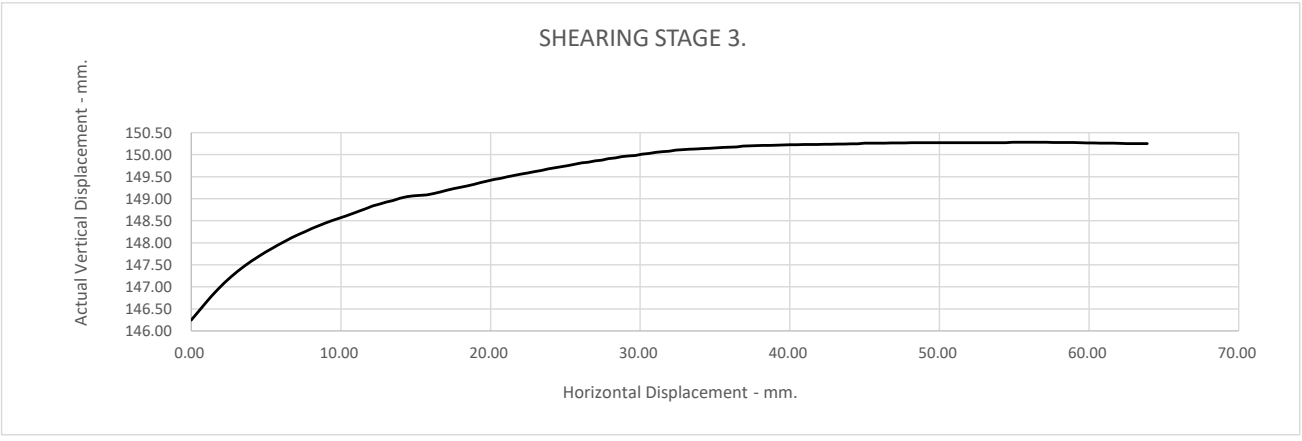
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP615 Depth (m): 1.50







GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

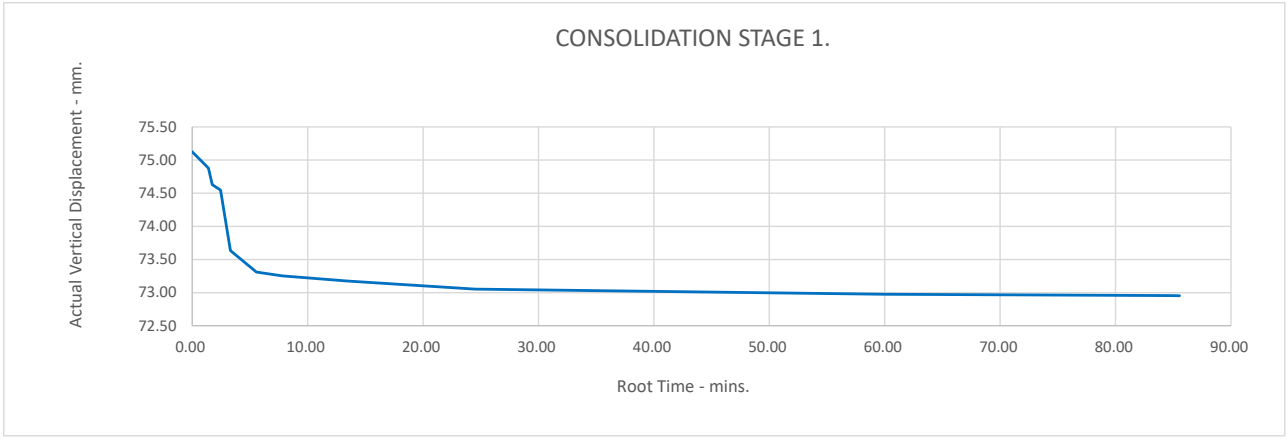
Contract No.: **87849**

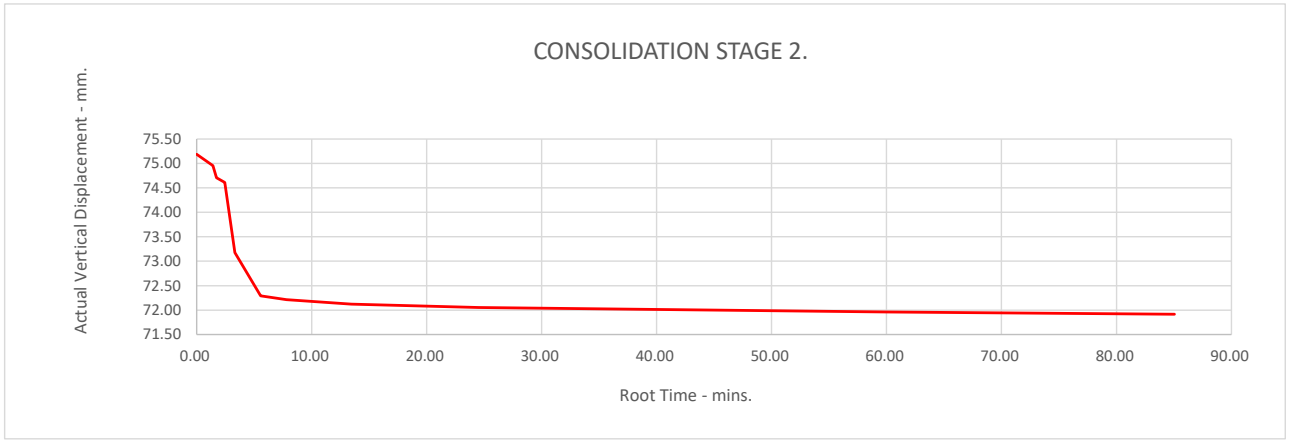
Client Ref Number: **784-B077402**

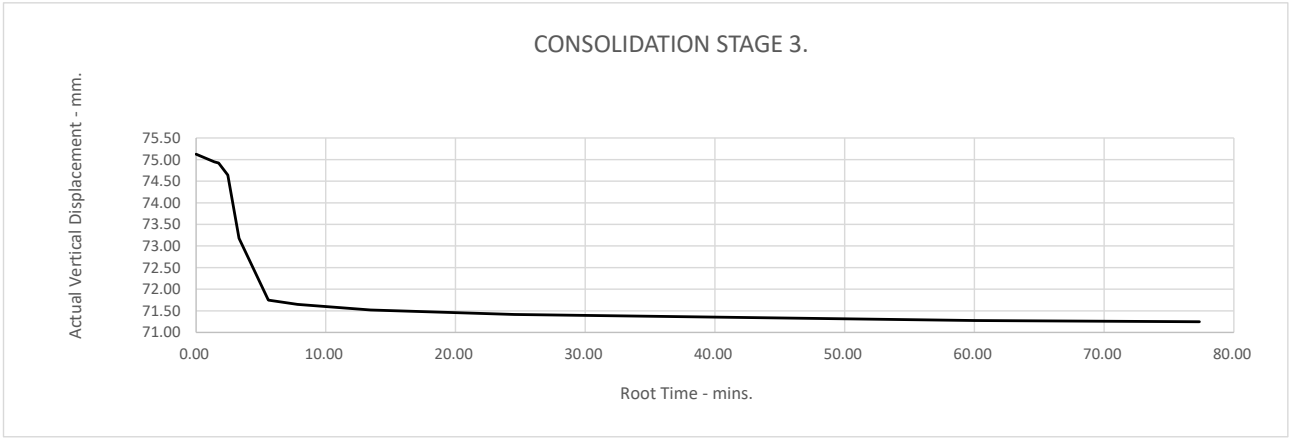
Test Report: LARGE DIRECT SHEARBOX TEST.

BS 1377-2:2022 Clause 25.3 & BS EN ISO 17892-10:2018 Clause 8.1

Borehole/Sample Number: TP615 Depth (m): 1.50







GSTL GEOTECHNICAL SITE & TESTING LABORATORIES

Goat Mill Road

Contract No.: **87849**

Client Ref Number: **784-B077402**

Analytical Test Report	**E26/09650/GSL/26-31400**	**Tested on Behalf of**
Clients Project Reference	Goat mill road	GSTL
Clients Order Number	87849	Unit 3-4 Heol Aur
Sample(s) Analysed	35	Dafen Ind Estate
Sample(s) received / instructed	17/07/2026 / 17/07/2026	Dafen
Sample(s) Tested	17/07/2026 to 27/07/2026	
Report issued	28/07/2026	SA14 8QN
Report issue number	1	

Signed



Emily Blissett
Report Manager

Notes:

General

This report shall not be reproduced except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836575	836576	836577
Client Sample ID					TP501	TP502	TP503
Client Sample Location					-	-	-
Client Sample Type					B	B	B
Client Sample Number					-	-	-
Depth - Top (m)					0.2	1.4	0.15
Depth - Bottom (m)					1.2	2	0.5
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	25	22	93
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	0.03	0.59
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.03	0.03	0.38
pH	PHSBRE	pH units	1	M	8.9	9.1	7.8
Chloride	ANIONSSBRE	mg/L	0.1	N	3.1	1.9	33
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.2	1.1	6.1
Magnesium	1377MGICPB	mg/L	1.5	N	< 1.5	< 1.5	18

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836578	836579	836580
Client Sample ID					TP506	TP507	TP508
Client Sample Location					-	-	-
Client Sample Type					D	B	D
Client Sample Number					-	-	-
Depth - Top (m)					1.6	0.3	1.1
Depth - Bottom (m)					1.6	0.45	1.1
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Other	Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	15	250	28
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	0.49	0.03
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.03	0.50	0.04
pH	PHSBRE	pH units	1	M	8.6	7.6	9.1
Chloride	ANIONSSBRE	mg/L	0.1	N	2.2	10	1.5
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.2	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	5.0	14	5.9

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836581	836582	836583
Client Sample ID					TP510	TP511	TP512
Client Sample Location					-	-	-
Client Sample Type					D	B	D
Client Sample Number					-	-	-
Depth - Top (m)					1	0.25	1.1
Depth - Bottom (m)					1	1.25	1.1
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	90	110	190
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.07	0.21	0.13
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.14	0.23	0.11
pH	PHSBRE	pH units	1	M	8.4	5.3	6.8
Chloride	ANIONSSBRE	mg/L	0.1	N	9.0	3.0	48
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	10	1.4	2.3
Magnesium	1377MGICPB	mg/L	1.5	N	8.2	7.8	15

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836584	836585	836586
Client Sample ID					TP513	TP514	TP514
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0.5	0.5	1.5
Depth - Bottom (m)					0.5	0.5	1.5
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	400	58	240
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	1.06	0.22	2.80
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.48	0.26	0.89
pH	PHSBRE	pH units	1	M	10.3	8.4	9.3
Chloride	ANIONSSBRE	mg/L	0.1	N	21	11	82
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	3.2	47	2.7
Magnesium	1377MGICPB	mg/L	1.5	N	< 1.5	7.2	< 1.5

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836587	836588	836589
Client Sample ID					TP515	TP602	TP602
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0.6	0.5	1.5
Depth - Bottom (m)					0.6	0.5	1.5
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	230	200	300
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.15	0.78	0.96
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.26	0.60	0.56
pH	PHSBRE	pH units	1	M	8.9	9.2	9.4
Chloride	ANIONSSBRE	mg/L	0.1	N	4.4	50	34
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.6	5.3	8.4
Magnesium	1377MGICPB	mg/L	1.5	N	7.4	< 1.5	< 1.5

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836590	836591	836592
Client Sample ID					TP602	TP603	TP604
Client Sample Location					-	-	-
Client Sample Type					D	D	B
Client Sample Number					-	-	-
Depth - Top (m)					1.7	0.5	1.2
Depth - Bottom (m)					2.2	0.5	1.2
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	330	1300	640
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.10	0.42	0.20
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.07	0.49	0.17
pH	PHSBRE	pH units	1	M	8.9	7.8	7.7
Chloride	ANIONSSBRE	mg/L	0.1	N	2.6	2.8	1.2
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	2.3	1.3	1.1
Magnesium	1377MGICPB	mg/L	1.5	N	32	30	16

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836593	836594	836595
Client Sample ID					TP605	TP607	TP607
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0.5	0.2	2.2
Depth - Bottom (m)					0.5	0.2	2.2
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	12	42	41
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.01	0.07	0.04
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.03	0.10	0.16
pH	PHSBRE	pH units	1	M	7.7	9.2	8.9
Chloride	ANIONSSBRE	mg/L	0.1	N	2.4	33	5.3
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	3.1	8.9	1.6
Magnesium	1377MGICPB	mg/L	1.5	N	9.4	18	12

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836596	836597	836598
Client Sample ID					TP60	TP609	TP610
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0	0.5	0.5
Depth - Bottom (m)					0.55	0.5	0.5
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	43	1500	96
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.04	0.64	0.14
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.06	0.43	0.19
pH	PHSBRE	pH units	1	M	7.6	8.7	7.3
Chloride	ANIONSSBRE	mg/L	0.1	N	1.8	6.1	52
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.7	2.3	13
Magnesium	1377MGICPB	mg/L	1.5	N	13	24	< 15.00

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836599	836600	836601
Client Sample ID					TP611	TP612	TP613
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					2.2	1.1	0.7
Depth - Bottom (m)					2.2	1.1	1
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	55	1600	320
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.12	1.32	0.95
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.11	1.71	0.68
pH	PHSBRE	pH units	1	M	6.5	2.8	9.5
Chloride	ANIONSSBRE	mg/L	0.1	N	21	2.2	89
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	11	1.8	4.4
Magnesium	1377MGICPB	mg/L	1.5	N	< 15.00	23	< 1.5

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836602	836603	836604
Client Sample ID					TP614	TP614	TP615
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0.1	2.2	0.1
Depth - Bottom (m)					0.1	2.2	0.3
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Other	Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	57	51	73
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.03	0.04	0.04
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.06	0.07	0.09
pH	PHSBRE	pH units	1	M	8.5	9.3	8.3
Chloride	ANIONSSBRE	mg/L	0.1	N	8.1	4.4	2.5
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	2.1	3.2	1.1
Magnesium	1377MGICPB	mg/L	1.5	N	9.6	13	17

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836605	836606	836607
Client Sample ID					TP701	TP704	TP706
Client Sample Location					-	-	-
Client Sample Type					D	D	D
Client Sample Number					-	-	-
Depth - Top (m)					0.5	0.5	0.5
Depth - Bottom (m)					0.5	0.5	0.5
Date of Sampling					08/06/2026	08/06/2026	08/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Clay	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	1500	100	99
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	1.29	0.11	0.05
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.63	0.10	0.05
pH	PHSBRE	pH units	1	M	8.9	9.6	8.0
Chloride	ANIONSSBRE	mg/L	0.1	N	18	15	2.6
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.2	2.2	1.9
Magnesium	1377MGICPB	mg/L	1.5	N	25	6.2	20

E26/09650/GSL/26-31400

Goat mill road

Analytical Test Results - BRE Associated Analysis

Lab Reference					836608	836609
Client Sample ID					TP801	TP601A
Client Sample Location					-	-
Client Sample Type					D	D
Client Sample Number					-	-
Depth - Top (m)					0.5	0.1
Depth - Bottom (m)					0.8	0.3
Date of Sampling					08/06/2026	08/06/2026
Time of Sampling					-	-
Sample Matrix					Clay	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**		
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	61	860
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.09	0.27
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.16	0.77
pH	PHSBRE	pH units	1	M	9.2	8.8
Chloride	ANIONSSBRE	mg/L	0.1	N	2.6	6.0
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	1.3	2.6
Magnesium	1377MGICPB	mg/L	1.5	N	4.7	48

ENVIRONMENTAL CHEMISTRY TESTING LABORATORIES
A PHENNA GROUP COMPANY

E26/09650/GSL/26-31400

Goat mill road

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
836575	TP501	-	SOIL	-	Brown gravelly silty clay	-	-	83
836576	TP502	-	SOIL	-	Greyish brown gravelly slightly sandy silty clay	-	-	42
836577	TP503	-	SOIL	-	Dark brown slightly gravelly silty clay with frequent organic matter rootlets	-	-	64
836578	TP506	-	SOIL	-	Greyish brown silty mudstone	-	-	100
836579	TP507	-	SOIL	-	Dark grey gravelly slightly sandy silty clay with rare rootlets	-	-	66
836580	TP508	-	SOIL	-	Grey silty sandy crushed rock	-	-	100
836581	TP510	-	SOIL	-	Dark grey slightly gravelly slightly sandy silty clay with frequent organic matter rootlets	-	-	81
836582	TP511	-	SOIL	-	Dark grey gravelly slightly sandy silty clay with rare rootlets	-	-	83
836583	TP512	-	SOIL	-	Brown silty clay with occasional organic matter rootlets	-	-	100
836584	TP513	-	SOIL	-	Dark grey gravelly slightly clayey silty sand with rare rootlets bituminous material	-	-	55
836585	TP514	-	SOIL	-	Brownish grey slightly gravelly silty clay with rare rootlets	-	-	55
836586	TP514	-	SOIL	-	Made Ground- dark grey slightly clayey sandy crushed rock with occasional slag	-	-	100
836587	TP515	-	SOIL	-	Dark grey gravelly silty clay with occasional organic matter	-	-	48
836588	TP602	-	SOIL	-	Made Ground- dark grey slightly sandy clayey crushed rock with occasional slag	-	-	270
836589	TP602	-	SOIL	-	Dark grey gravelly slightly sandy silty clay with rare organic matter rootlets	-	-	63
836590	TP602	-	SOIL	-	Grey gravelly silty clay	-	-	58
836591	TP603	-	SOIL	-	Dark grey gravelly silty clay with rare organic matter	-	-	62
836592	TP604	-	SOIL	-	Dark grey gravelly silty clay with rare organic matter	-	-	76
836593	TP605	-	SOIL	-	Dark grey gravelly silty clay with rare organic matter rootlets	-	-	83
836594	TP607	-	SOIL	-	Dark grey clayey crushed rock with rare rootlets	-	-	100
836595	TP607	-	SOIL	-	Dark grey gravelly slightly sandy silty clay	-	-	70
836596	TP60	-	SOIL	-	Dark brown slightly gravelly silty clay with frequent organic matter rootlets	-	-	74

E26/09650/GSL/26-31400

Goat mill road

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
836597	TP609	-	SOIL	-	Grey clayey crushed rock with rare rootlets	-	-	100
836598	TP610	-	SOIL	-	Dark brown silty clay with occasional organic matter rootlets	-	-	100
836599	TP611	-	SOIL	-	Brown silty clay with frequent organic matter rootlets	-	-	100
836600	TP612	-	SOIL	-	Grey gravelly slightly sandy silty clay	-	-	75
836601	TP613	-	SOIL	-	Made Ground- dark grey gravelly slightly sandy silty clay with occasional concrete slag	-	-	63
836602	TP614	-	SOIL	-	Grey clayey crushed rock	-	-	100
836603	TP614	-	SOIL	-	Grey gravelly silty clay	-	-	62
836604	TP615	-	SOIL	-	Grey clayey crushed rock with rare rootlets	-	-	100
836605	TP701	-	SOIL	-	Greyish brown gravelly slightly sandy silty clay with rare rootlets	-	-	48
836606	TP704	-	SOIL	-	Greyish brown gravelly slightly sandy silty clay	-	-	72
836607	TP706	-	SOIL	-	Dark grey gravelly slightly sandy silty clay	-	-	84
836608	TP801	-	SOIL	-	Dark grey gravelly slightly sandy silty clay	-	-	77
836609	TP601A	-	SOIL	-	Dark grey clayey mudstone	-	-	100

E26/09650/GSL/26-31400

Goat mill road

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Site addresses where testing is performed: Leicester - 7-11 Harding Street, Leicester, LE1 4DH

Poole - Unit D11, Admiralty Park, Station Road, Holton Heath, Poole, BH16 6HX & Unit 14B, Blackhill Road West, Holton Heath Trading Park, Poole, Dorset, BH16 6LE

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Site	Test Details
1377MGICPB	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Leicester	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.
1377TS-EBR	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Leicester	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
ANIONSSBRE	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Leicester	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
ASSO4SBRE	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Leicester	Determination of total sulphate in soils by acid extraction followed by ICP analysis
PHSBRE	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Leicester	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Leicester	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

E26/09650/GSL/26-31400

Goat mill road

Sample Deviations

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Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836575	TP501				MS - CL - Anions by Aquakem (2:1Extract)	RX
836575	TP501				BS1377 Total Sulphur Content by HTC	RX
836575	TP501				MS - CL - pH in Soils	RX
836576	TP502				MS - CL - Anions by Aquakem (2:1Extract)	RX
836576	TP502				BS1377 Total Sulphur Content by HTC	RX
836576	TP502				MS - CL - pH in Soils	RX
836577	TP503				MS - CL - Anions by Aquakem (2:1Extract)	RX
836577	TP503				BS1377 Total Sulphur Content by HTC	RX
836577	TP503				MS - CL - pH in Soils	RX
836578	TP506				MS - CL - Anions by Aquakem (2:1Extract)	RX
836578	TP506				BS1377 Total Sulphur Content by HTC	RX
836578	TP506				MS - CL - pH in Soils	RX
836579	TP507				MS - CL - Anions by Aquakem (2:1Extract)	RX
836579	TP507				BS1377 Total Sulphur Content by HTC	RX
836579	TP507				MS - CL - pH in Soils	RX
836580	TP508				MS - CL - Anions by Aquakem (2:1Extract)	RX
836580	TP508				BS1377 Total Sulphur Content by HTC	RX
836580	TP508				MS - CL - pH in Soils	RX
836581	TP510				MS - CL - Anions by Aquakem (2:1Extract)	RX
836581	TP510				BS1377 Total Sulphur Content by HTC	RX
836581	TP510				MS - CL - pH in Soils	RX
836582	TP511				MS - CL - Anions by Aquakem (2:1Extract)	RX
836582	TP511				BS1377 Total Sulphur Content by HTC	RX
836582	TP511				MS - CL - pH in Soils	RX
836583	TP512				MS - CL - Anions by Aquakem (2:1Extract)	RX

E26/09650/GSL/26-31400

Goat mill road

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Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836583	TP512				BS1377 Total Sulphur Content by HTC	RX
836583	TP512				MS - CL - pH in Soils	RX
836584	TP513				MS - CL - Anions by Aquakem (2:1Extract)	RX
836584	TP513				BS1377 Total Sulphur Content by HTC	RX
836584	TP513				MS - CL - pH in Soils	RX
836585	TP514				MS - CL - Anions by Aquakem (2:1Extract)	RX
836585	TP514				BS1377 Total Sulphur Content by HTC	RX
836585	TP514				MS - CL - pH in Soils	RX
836586	TP514				MS - CL - Anions by Aquakem (2:1Extract)	RX
836586	TP514				BS1377 Total Sulphur Content by HTC	RX
836586	TP514				MS - CL - pH in Soils	RX
836587	TP515				MS - CL - Anions by Aquakem (2:1Extract)	RX
836587	TP515				BS1377 Total Sulphur Content by HTC	RX
836587	TP515				MS - CL - pH in Soils	RX
836588	TP602				MS - CL - Anions by Aquakem (2:1Extract)	RX
836588	TP602				BS1377 Total Sulphur Content by HTC	RX
836588	TP602				MS - CL - pH in Soils	RX
836589	TP602				MS - CL - Anions by Aquakem (2:1Extract)	RX
836589	TP602				BS1377 Total Sulphur Content by HTC	RX
836589	TP602				MS - CL - pH in Soils	RX
836590	TP602				MS - CL - Anions by Aquakem (2:1Extract)	RX
836590	TP602				BS1377 Total Sulphur Content by HTC	RX
836590	TP602				MS - CL - pH in Soils	RX
836591	TP603				MS - CL - Anions by Aquakem (2:1Extract)	RX
836591	TP603				BS1377 Total Sulphur Content by HTC	RX

E26/09650/GSL/26-31400

Goat mill road

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Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836591	TP603				MS - CL - pH in Soils	RX
836592	TP604				MS - CL - Anions by Aquakem (2:1Extract)	RX
836592	TP604				BS1377 Total Sulphur Content by HTC	RX
836592	TP604				MS - CL - pH in Soils	RX
836593	TP605				MS - CL - Anions by Aquakem (2:1Extract)	RX
836593	TP605				BS1377 Total Sulphur Content by HTC	RX
836593	TP605				MS - CL - pH in Soils	RX
836594	TP607				MS - CL - Anions by Aquakem (2:1Extract)	RX
836594	TP607				BS1377 Total Sulphur Content by HTC	RX
836594	TP607				MS - CL - pH in Soils	RX
836595	TP607				MS - CL - Anions by Aquakem (2:1Extract)	RX
836595	TP607				BS1377 Total Sulphur Content by HTC	RX
836595	TP607				MS - CL - pH in Soils	RX
836596	TP60				MS - CL - Anions by Aquakem (2:1Extract)	RX
836596	TP60				BS1377 Total Sulphur Content by HTC	RX
836596	TP60				MS - CL - pH in Soils	RX
836597	TP609				MS - CL - Anions by Aquakem (2:1Extract)	RX
836597	TP609				BS1377 Total Sulphur Content by HTC	RX
836597	TP609				MS - CL - pH in Soils	RX
836598	TP610				MS - CL - Anions by Aquakem (2:1Extract)	RX
836598	TP610				BS1377 Total Sulphur Content by HTC	RX
836598	TP610				MS - CL - pH in Soils	RX
836599	TP611				MS - CL - Anions by Aquakem (2:1Extract)	RX
836599	TP611				BS1377 Total Sulphur Content by HTC	RX
836599	TP611				MS - CL - pH in Soils	RX

E26/09650/GSL/26-31400

Goat mill road

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Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836600	TP612				MS - CL - Anions by Aquakem (2:1Extract)	RX
836600	TP612				BS1377 Total Sulphur Content by HTC	RX
836600	TP612				MS - CL - pH in Soils	RX
836601	TP613				MS - CL - Anions by Aquakem (2:1Extract)	RX
836601	TP613				BS1377 Total Sulphur Content by HTC	RX
836601	TP613				MS - CL - pH in Soils	RX
836602	TP614				MS - CL - Anions by Aquakem (2:1Extract)	RX
836602	TP614				BS1377 Total Sulphur Content by HTC	RX
836602	TP614				MS - CL - pH in Soils	RX
836603	TP614				MS - CL - Anions by Aquakem (2:1Extract)	RX
836603	TP614				BS1377 Total Sulphur Content by HTC	RX
836603	TP614				MS - CL - pH in Soils	RX
836604	TP615				MS - CL - Anions by Aquakem (2:1Extract)	RX
836604	TP615				BS1377 Total Sulphur Content by HTC	RX
836604	TP615				MS - CL - pH in Soils	RX
836605	TP701				MS - CL - Anions by Aquakem (2:1Extract)	RX
836605	TP701				BS1377 Total Sulphur Content by HTC	RX
836605	TP701				MS - CL - pH in Soils	RX
836606	TP704				MS - CL - Anions by Aquakem (2:1Extract)	RX
836606	TP704				BS1377 Total Sulphur Content by HTC	RX
836606	TP704				MS - CL - pH in Soils	RX
836607	TP706				MS - CL - Anions by Aquakem (2:1Extract)	RX
836607	TP706				BS1377 Total Sulphur Content by HTC	RX
836607	TP706				MS - CL - pH in Soils	RX
836608	TP801				MS - CL - Anions by Aquakem (2:1Extract)	RX

E26/09650/GSL/26-31400

Goat mill road

Sample Deviations

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T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
836608	TP801				BS1377 Total Sulphur Content by HTC	RX
836608	TP801				MS - CL - pH in Soils	RX
836609	TP601A				MS - CL - Anions by Aquakem (2:1Extract)	RX
836609	TP601A				BS1377 Total Sulphur Content by HTC	RX
836609	TP601A				MS - CL - pH in Soils	RX

E26/09650/GSL/26-31400

Goat mill road

Additional Method Notes

Method	Notes
TRL 447 Suite	1. Sample preparation was in accordance with TRL 447 Appendix C. 2. Testing was carried out in accordance with methods 1, 2 and 4 of TRL 447 2001 (Updated 2005). 3. Oxidisable sulphides and total potential sulphate have been calculated in accordance with TRL 447, Appendix C Test 4. Values are reported against a dry mass of sample passing a 2mm test sieve after oven drying, where required material retained on the 2mm test sieve was recombined with the test portion prior to analysis.
BS1377 Acid Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, acid soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Loss on Ignition	Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
BS1377 Organic Matter Content	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 4. 3. The reported % organic content is the average organic matter content present in the soil fraction passing the 2mm test sieve to the nearest 0.1% of the original oven dry mass of soil. 4. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12
BS1377 Sulphate (acid soluble)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.9 & 7.5. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Total Dissolved Solids	Determination of TDS in accordance with BS 1377: Part 3
BS1377 Total Sulphur	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.
BS1377 Water Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, Clause 7.2, water soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Sulphate (water soluble) (ICP-OES)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.3 & 7.5. 3. pH of the water extract was not recorded. 4. Some information required by BS 1377 has not been reported. This information is available on request.
EN1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur by HTC (Cl. 11.2)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.2 Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur (Cl. 11.1)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Chloride	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 7 (Reference Method). Analysis subcontracted to a UKAS accredited laboratory

E26/09650/GSL/26-31400

Goat mill road

Additional Method Notes

Method	Notes
EN1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10. Analysis subcontracted to a UKAS accredited laboratory
Oxidisable Sulphides Calculation (HTC)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Oxidisable Sulphides Calculation (Grav)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Total Potential Sulphate (Calc from 1744 Total S)	Derived from the Total sulphur concentration determined in accordance with EN1744.
BS1881 Alkali (Na2O + K2O)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 12.3. 2. A concrete density of 2300kg/m3 was used in the calculation of equivalent sodium oxide content per m3 of concrete. 3. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 4. Quality control samples are tested with each batch of samples.
BS1881 Calcium Oxide Content (EDTA Titration)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.4. 2. Cement content (%m/m) has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 64.5% by mass of Calcium Oxide. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch and therefore the results are from a single analysis only.
BS1881 Cement Content (ICP method)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.5 by ICP. 2. Cement content has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch
Chloride in Concrete by Aquakem (Acid Soluble)	1. Testing was in accordance with in house method statement MS - CL - Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
Moisture Content of Grout Mortar & Concrete	1. Testing was in accordance with in house method statement MS Moisture Content of Grout, Mortar and Concrete
MS - Sulphate in Hardened Concrete by ICP	1. Testing undertaken in accordance with in house method statement MS - Sulphate in hardened concrete by ICP. 2. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 3. Quality control samples are tested with each batch of samples.
BS1881 Water Cement Ratio	1 Testing was in accordance with BS 1881: Part 124: 2015+A1:2021. 2. Cement content was determined in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 6.5 by ICP. 3. Samples of the original constituents of the mix was/was not submitted. 4. Original water/cement ratio has been calculated in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 9.6. 5. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015+A1:2021.

E26/09650/GSL/26-31400

Goat mill road

Additional Method Notes

Method	Notes
BS4551 Mix Proportion	1.Sample preparation was in accordance with BS4551 2005 + A2:2013 Clause 7. 4.5. 2. Testing was in accordance with BS 4551: Part 2: 2005 + A2:2013 Clause 7.5.3 and 7.5.3.4. 3. Cement content has been calculated assuming the presence in the mix of Ordinary Portland Cement containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively.
BS6463-102 Neutralizing Value	Testing was undertaken in accordance with an in house method statement based on BS6463-102
BS3882:2015 Specification for topsoil	Testing was undertaken in accordance with the methodologies within BS3882:2015
BS8601:2013 Specification for subsoil	Testing was undertaken in accordance with the methodologies within BS8601:2013
Depth of Carbonation (BS EN 14630:2006)	1. Testing was carried out in accordance with BS EN 14630:2006 Depth of Carbonation. 2. Testing was carried out in the laboratory. 3. Indicator Solution Used– 1g of Phenolphthalein powder dissolved in a solution of 50ml of Methylated Spirits and 100ml of deionised water
HAC	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.
pH Value of Concrete	1. Testing was in accordance with in house method statement MS – pH Value of Hardened Concrete, Grout and Water from voids
Sub - EN1744 Sulphide	Analysis was in accordance with BS EN 1744-1 : 2009 + A1 : 2012, clause 13 and subcontracted to a UKAS accredited laboratory for this test

Laboratory Report

Contract Number: 87922

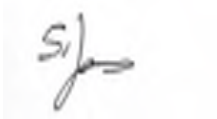
Client Ref: **784-B077402**
Client PO: **7023390**

Client: **Tetra Tech**

Contract Title: **Goat Mill Road**
For the attention of: **James Craddock**

Date Received: **15-07-2026**
Date Completed: **10-08-2026**
Report Date: **10-08-2026**

This report has been checked and approved by:



Shaun Jones
Laboratory manager

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - * UKAS	10
4 Point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	10
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	14
Uniaxial Compressive Strength of Rock inc sample prep 54-165mm diameter cores ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006 - @ Non Accredited Test	5
BRE Suite D Brownfield Site (pyrite present) **includes pH, water & acid soluble sulphate, total sulphur, magnesium, chloride and nitrate** Sub-contracted Test#	17
Determination of Point Load Value Axial or Diametrical including WC ***Please note GSTL is not accredited for the water content of rock*** ISRM Suggested Method for Point Load Strength - * UKAS	39

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
 # - denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:
Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician) - Jason Jenkins (Business Development Manager)
Luke Williams (Senior Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (HR & HSE Manager)

GEO Site & Testing Services Ltd
Unit 3-4 Heol Aur, Dafen Ind Est, Llanelli, Carmarthenshire SA14 8QN
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GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX** **BS 1377-2:2022 Clause 5.2** **BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit** **BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content**	
Contract Number	87922	
Project Name	Goat Mill Road	
Date Tested	30/07/2026	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
BH101	1	B	0.20	-	0.50	Grey/ brown silty fine to medium gravelly CLAY
BH102	1	D	1.00	-		Grey/ brown silty fine gravelly CLAY
BH102	4	B	6.00	-	10.00	Grey sandy silty/clayey fine to coarse GRAVEL (tar)
BH102	4	D	13.00	-		Grey silty fine to coarse GRAVEL (shale)
BH103	2	B	0.55	-	2.50	Brown fine to coarse sandy fine to coarse gravelly SILT/ CLAY
BH104	1	B	0.00	-	1.30	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles
BH105	1	B	2.50	-	3.50	Brown fine to coarse sandy silty/ clayey fine to coarse GRAVEL
BH105	3	B	6.70	-	7.50	Grey fine to medium gravelly silty/ clayey fine to coarse SAND
BH111	1	B	0.30	-	3.10	Grey silty/ clayey fine to coarse sandy fine to coarse GRAVEL
BH115	3	B	1.50	-	2.50	Grey/ brown sandy silty fine to coarse GRAVEL
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

Operator
Luke. T

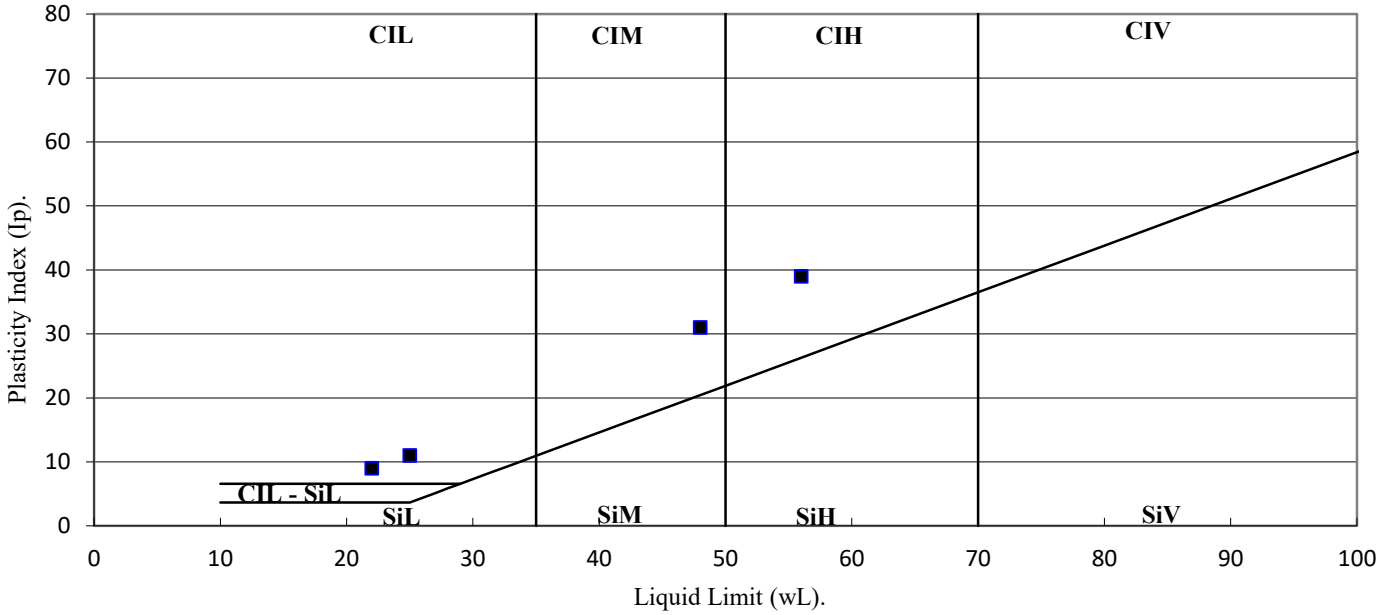
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	WATER CONTENT, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX BS 1377-2:2022 Clause 5.2 BS EN ISO 17892-12:2018+A2:2022 4 Point Liquid Limit BS EN ISO 17892-1:2014+A1:2022 Determination of Water Content	
Contract Number	87922	
Project Name	Goat Mill Road	
Date Tested	30/07/2026	
Test Comments	80g/30° Fall cone used with increasing water content	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Water Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
BH101	1	B	0.20	-	0.50	14.9	56	17	39	97	CH High Plasticity
BH102	1	D	1.00	-		10.3	48	17	31	99	CI Intermediate Plasticity
BH102	4	B	6.00	-	10.00	1.5		NP		30	
BH102	4	D	13.00	-		2.6		NP		4	
BH103	2	B	0.55	-	2.50	3.7	22	13	9	54	CL Low Plasticity
BH104	1	B	0.00	-	1.30	15.1		NP		14	
BH105	1	B	2.50	-	3.50	2.6	25	14	11	53	CL Low Plasticity
BH105	3	B	6.70	-	7.50	4.1		NP		49	
BH111	1	B	0.30	-	3.10	5.1		NP		12	
BH115	3	B	1.50	-	2.50	5.5		NP		11	
				-							
				-							
				-							
				-							
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				-							
				-							

SYMBOLS : NP = Non Plastic **NB: All liquid limits are 4 point and wet sieved**

PLASTICITY CHART

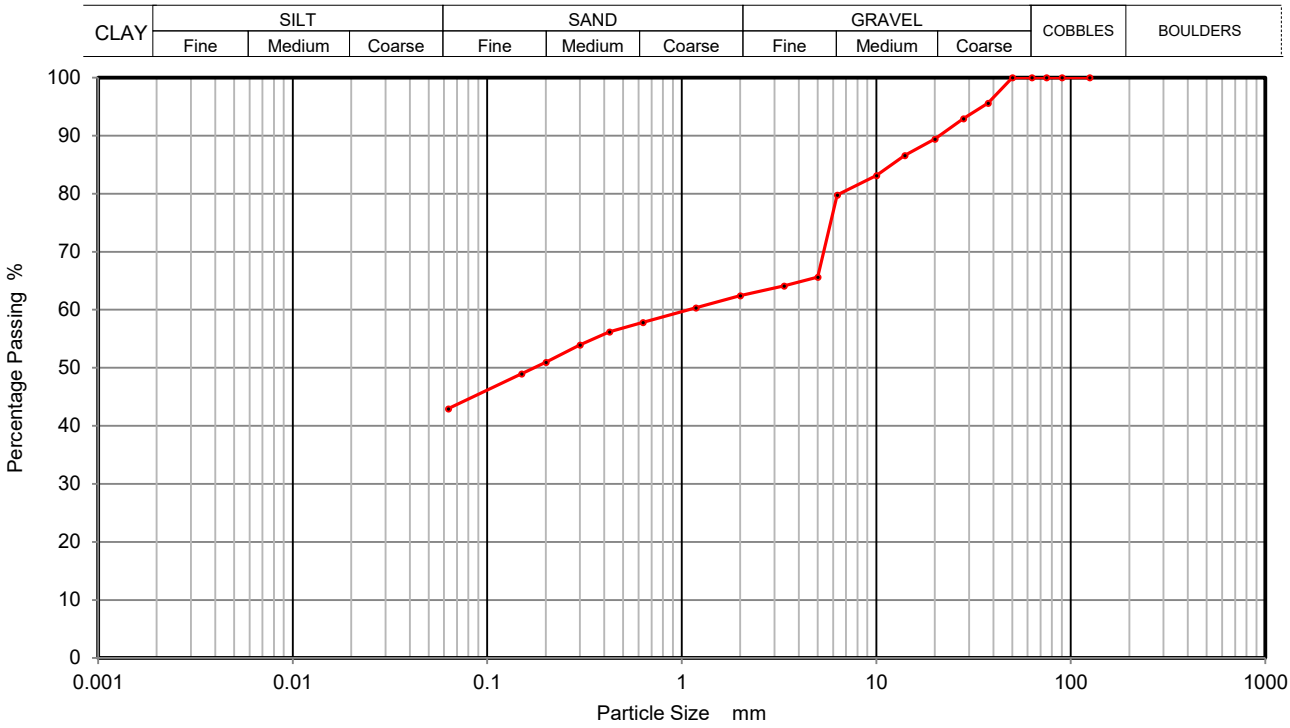
BS EN ISO 14688-2:2018 Clause 4.4



***For sample descriptions please see sample descriptions sheet**

Operator
Luke. T

	PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	87922
		Borehole/Pit No.	BH101
Project Name	Goat Mill Road	Sample No.	2
Sample Description	Brown fine to coarse sandy fine to coarse gravelly SILT/ CLAY	Depth Top	0.50
		Depth Base	0.90
Date Tested	29/07/2026	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	96		
28	93		
20	89		
14	87		
10	83		
6.3	80		
5	66		
3.35	64		
2	62		
1.18	60		
0.63	58		
0.425	56		
0.30	54		
0.20	51		
0.15	49		
0.063	43		

Sample Proportions	% dry mass
Cobbles	0
Gravel	38
Sand	19
Silt and Clay	43

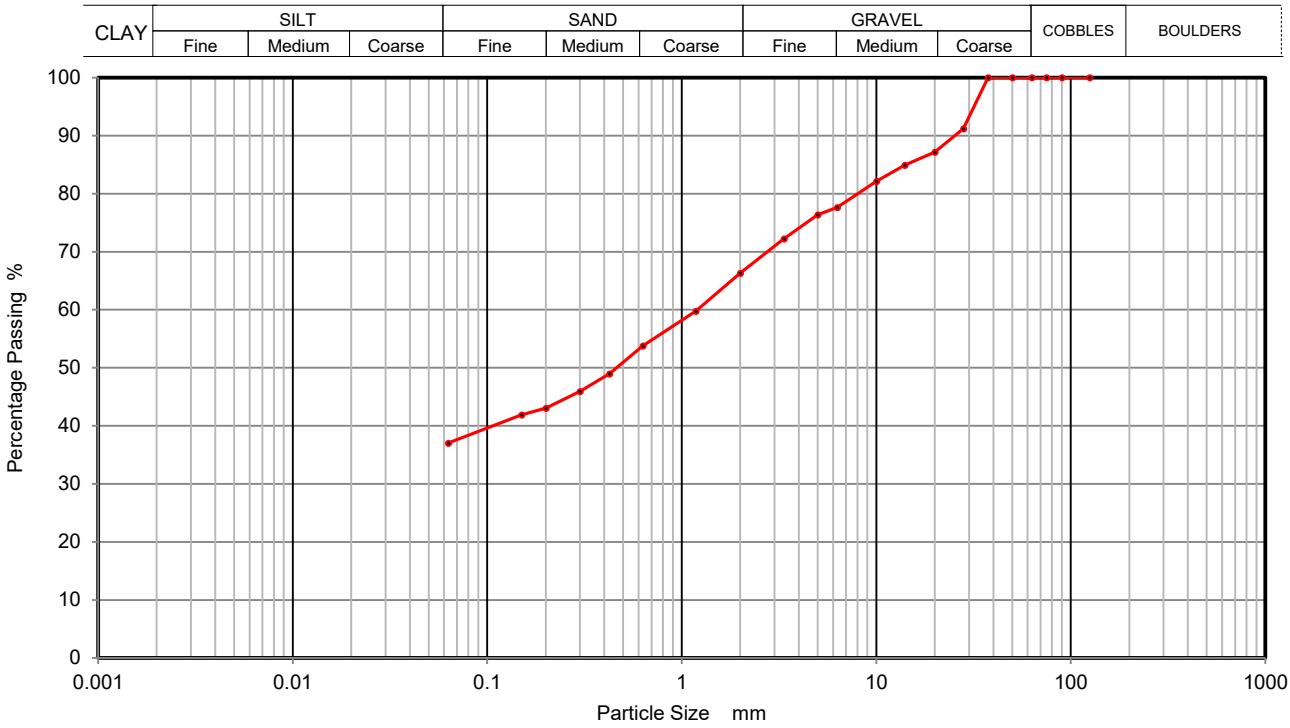
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH102**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey fine to coarse sandy fine to coarse gravelly SILT/ CLAY	Depth Top	**0.00**
		Depth Base	**1.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	91		
20	87		
14	85		
10	82		
6.3	78		
5	76		
3.35	72		
2	66		
1.18	60		
0.63	54		
0.425	49		
0.30	46		
0.20	43		
0.15	42		
0.063	37		

Sample Proportions	% dry mass
Cobbles	0
Gravel	34
Sand	29
Silt and Clay	37

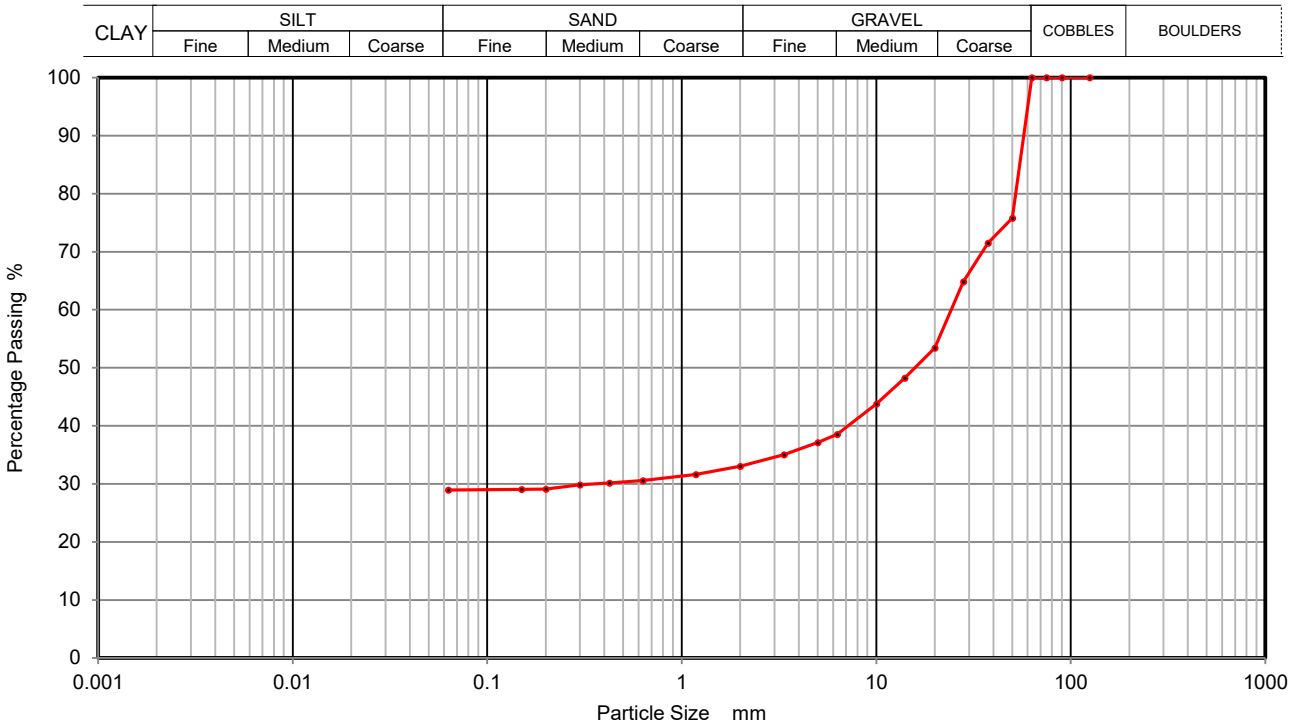
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH102**
Project Name	**Goat Mill Road**	Sample No.	**4**
Sample Description	Grey sandy silty/clayey fine to coarse GRAVEL (tar)	Depth Top	**6.00**
		Depth Base	**10.00**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	76		
37.5	71		
28	65		
20	53		
14	48		
10	44		
6.3	39		
5	37		
3.35	35		
2	33		
1.18	32		
0.63	31		
0.425	30		
0.30	30		
0.20	29		
0.15	29		
0.063	29		

Sample Proportions	% dry mass
Cobbles	0
Gravel	67
Sand	4
Silt and Clay	29

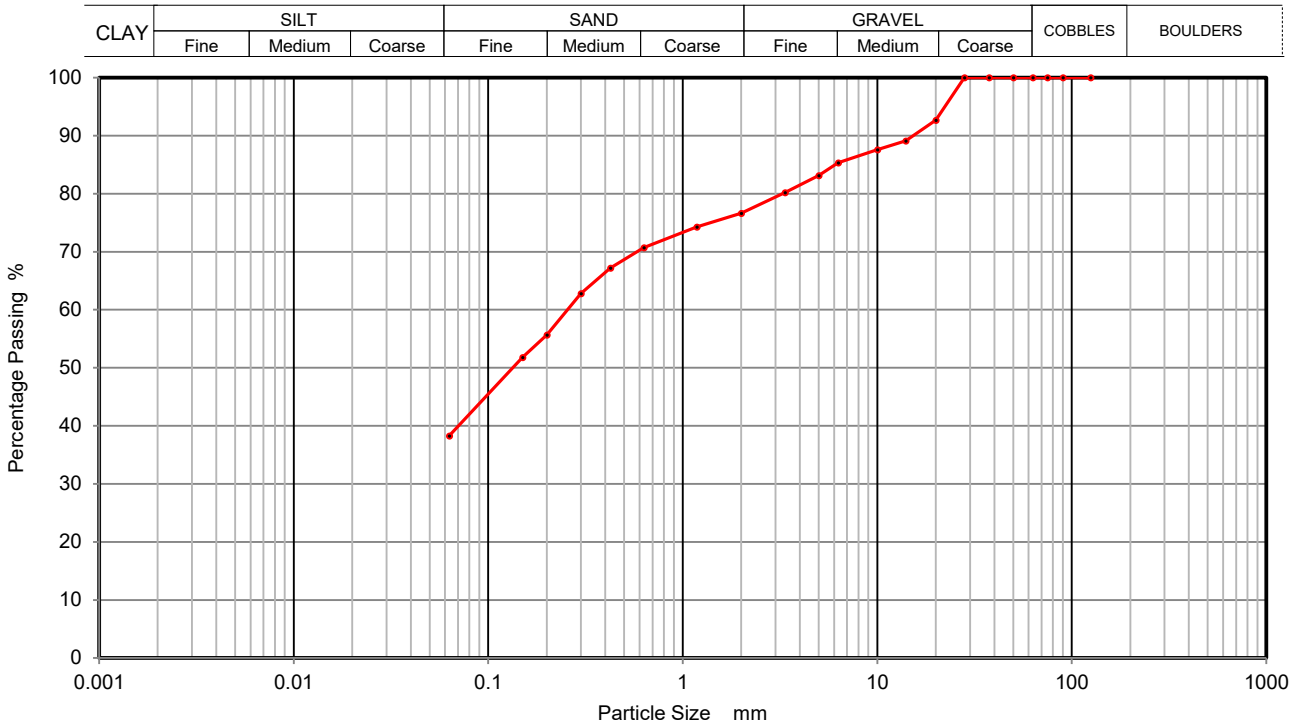
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH103**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Brown fine to coarse gravelly fine to coarse sandy SILT/ CLAY	Depth Top	**0.20**
		Depth Base	**0.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	93		
14	89		
10	88		
6.3	85		
5	83		
3.35	80		
2	77		
1.18	74		
0.63	71		
0.425	67		
0.30	63		
0.20	56		
0.15	52		
0.063	38		

Sample Proportions	% dry mass
Cobbles	0
Gravel	23
Sand	39
Silt and Clay	38

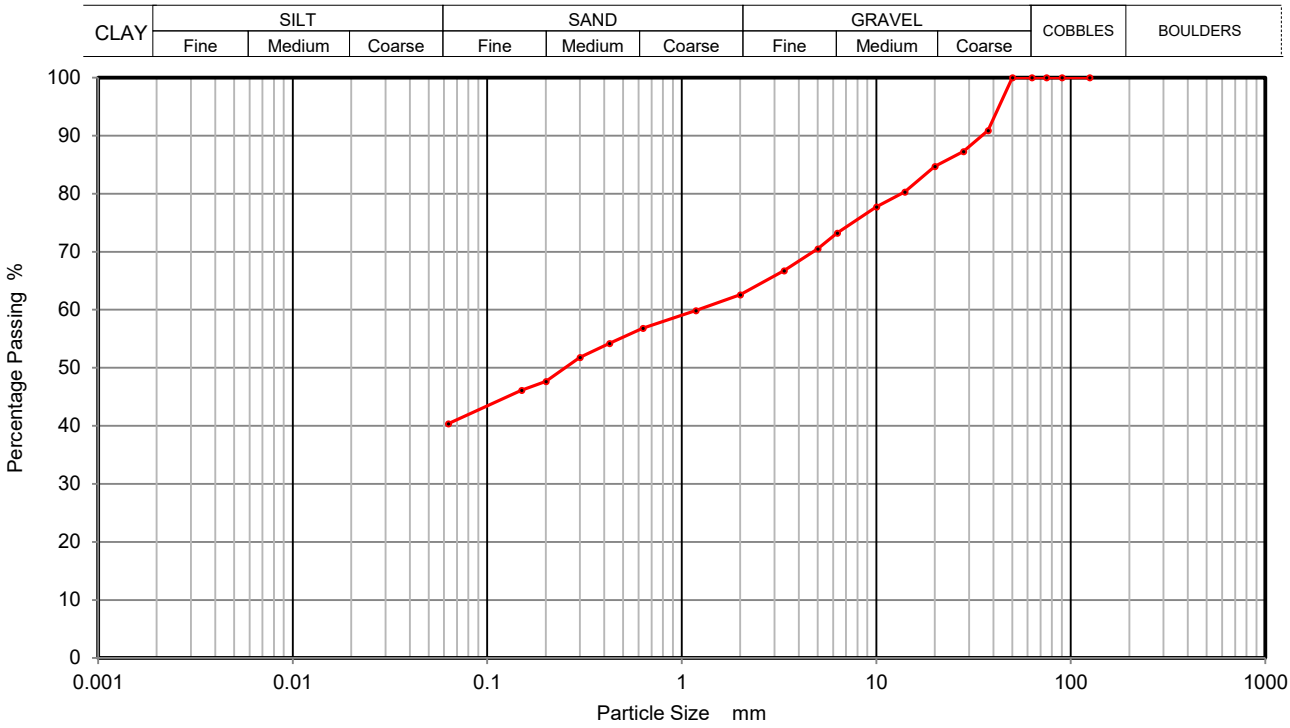
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH103**
Project Name	**Goat Mill Road**	Sample No.	**2**
Sample Description	Brown fine to coarse sandy fine to coarse gravelly SILT/ CLAY	Depth Top	**0.55**
		Depth Base	**2.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	91		
28	87		
20	85		
14	80		
10	78		
6.3	73		
5	70		
3.35	67		
2	63		
1.18	60		
0.63	57		
0.425	54		
0.30	52		
0.20	48		
0.15	46		
0.063	40		

Sample Proportions	% dry mass
Cobbles	0
Gravel	37
Sand	23
Silt and Clay	40

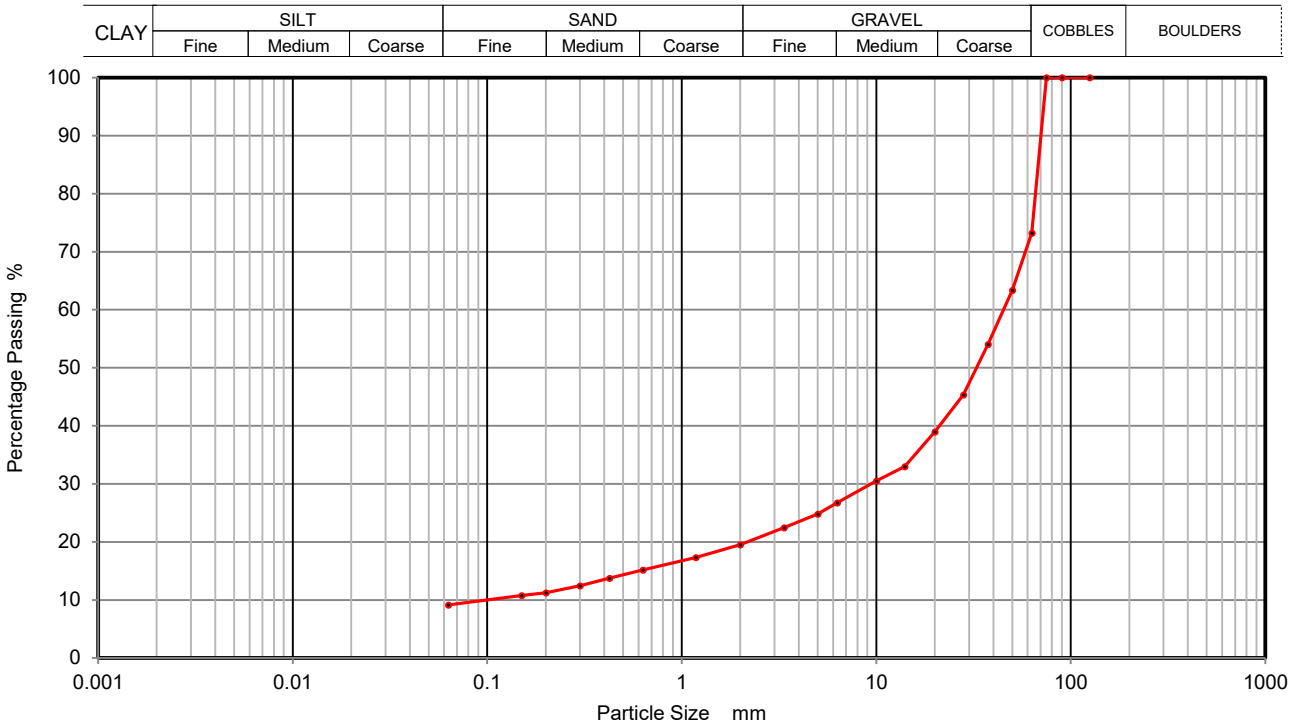
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH104**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.00**
		Depth Base	**1.30**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	73		
50	63		
37.5	54		
28	45		
20	39		
14	33		
10	31		
6.3	27		
5	25		
3.35	22		
2	20		
1.18	17		
0.63	15		
0.425	14		
0.30	12		
0.20	11		
0.15	11		
0.063	9		

Sample Proportions	% dry mass
Cobbles	27
Gravel	53
Sand	11
Silt and Clay	9

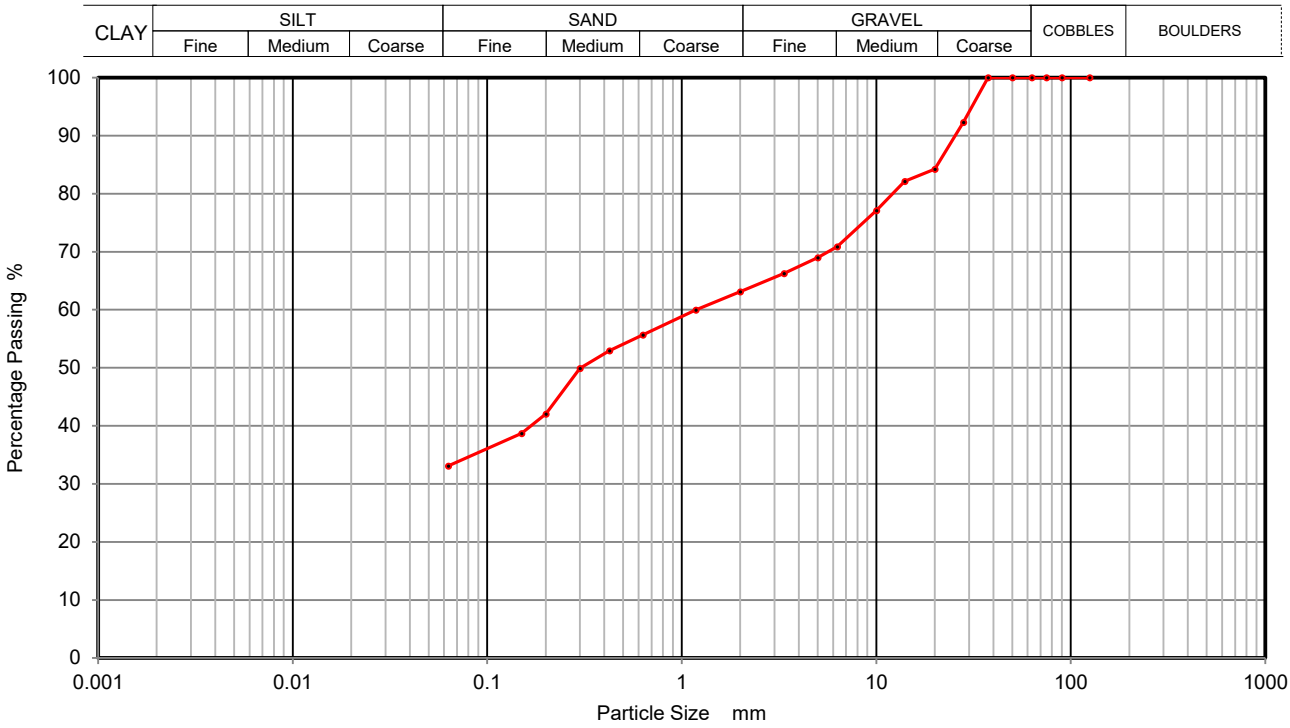
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH105**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Brown fine to coarse sandy silty/ clayey fine to coarse GRAVEL	Depth Top	**2.50**
		Depth Base	**3.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	92		
20	84		
14	82		
10	77		
6.3	71		
5	69		
3.35	66		
2	63		
1.18	60		
0.63	56		
0.425	53		
0.30	50		
0.20	42		
0.15	39		
0.063	33		

Sample Proportions	% dry mass
Cobbles	0
Gravel	37
Sand	30
Silt and Clay	33

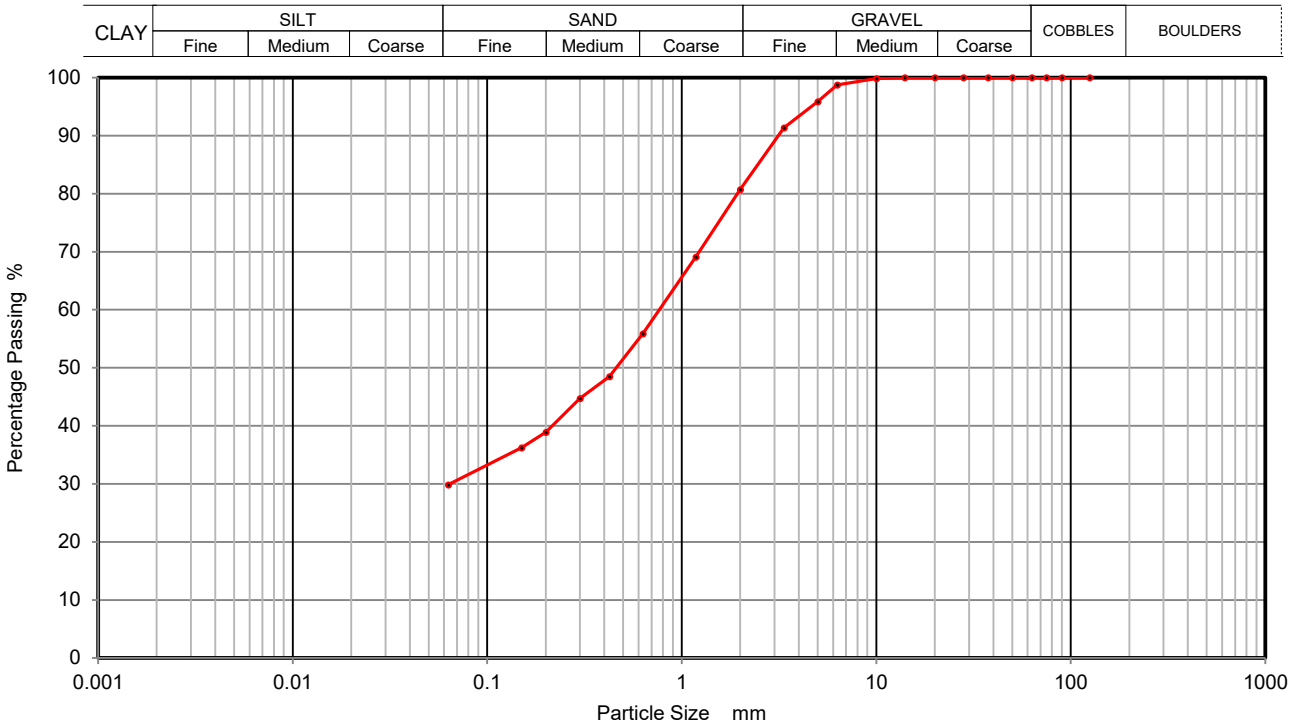
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH105**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Grey fine to medium gravelly silty/ clayey fine to coarse SAND	Depth Top	**6.70**
		Depth Base	**7.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	96		
3.35	91		
2	81		
1.18	69		
0.63	56		
0.425	49		
0.30	45		
0.20	39		
0.15	36		
0.063	30		

Sample Proportions	% dry mass
Cobbles	0
Gravel	19
Sand	51
Silt and Clay	30

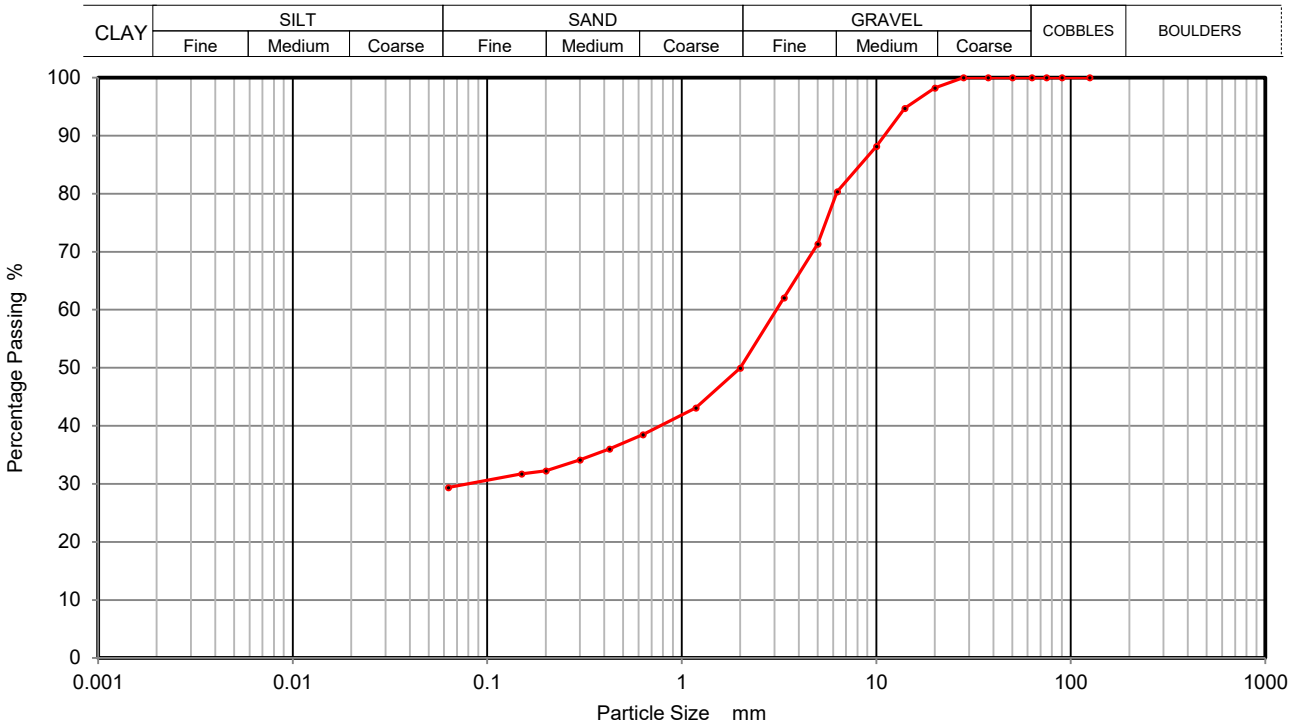
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH106**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	**0.80**
		Depth Base	**2.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	95		
10	88		
6.3	80		
5	71		
3.35	62		
2	50		
1.18	43		
0.63	38		
0.425	36		
0.30	34		
0.20	32		
0.15	32		
0.063	29		

Sample Proportions	% dry mass
Cobbles	0
Gravel	50
Sand	21
Silt and Clay	29

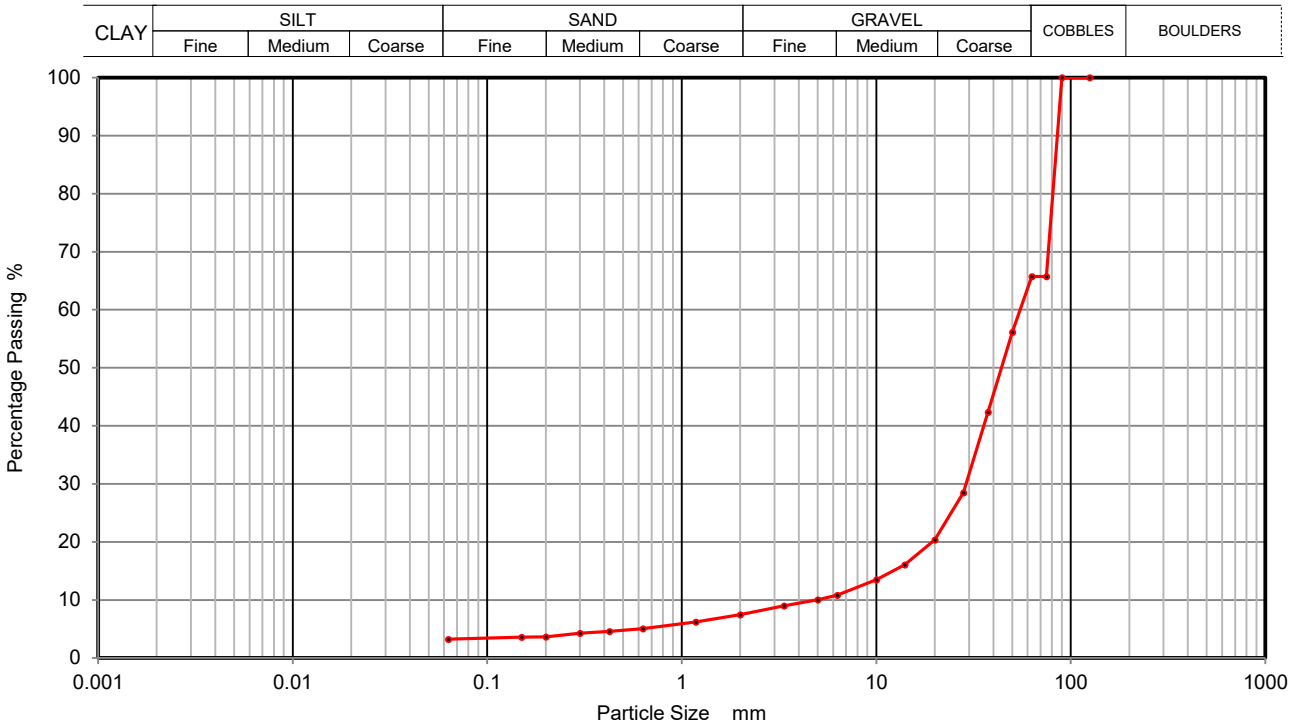
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH107**
Project Name	**Goat Mill Road**	Sample No.	**3**
Sample Description	Brown silty/clayey sandy fine to coarse GRAVEL with cobbles	Depth Top	**0.35**
		Depth Base	**0.95**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	66		
63	66		
50	56		
37.5	42		
28	28		
20	20		
14	16		
10	14		
6.3	11		
5	10		
3.35	9		
2	7		
1.18	6		
0.63	5		
0.425	5		
0.30	4		
0.20	4		
0.15	4		
0.063	3		

Sample Proportions	% dry mass
Cobbles	34
Gravel	59
Sand	4
Silt and Clay	3

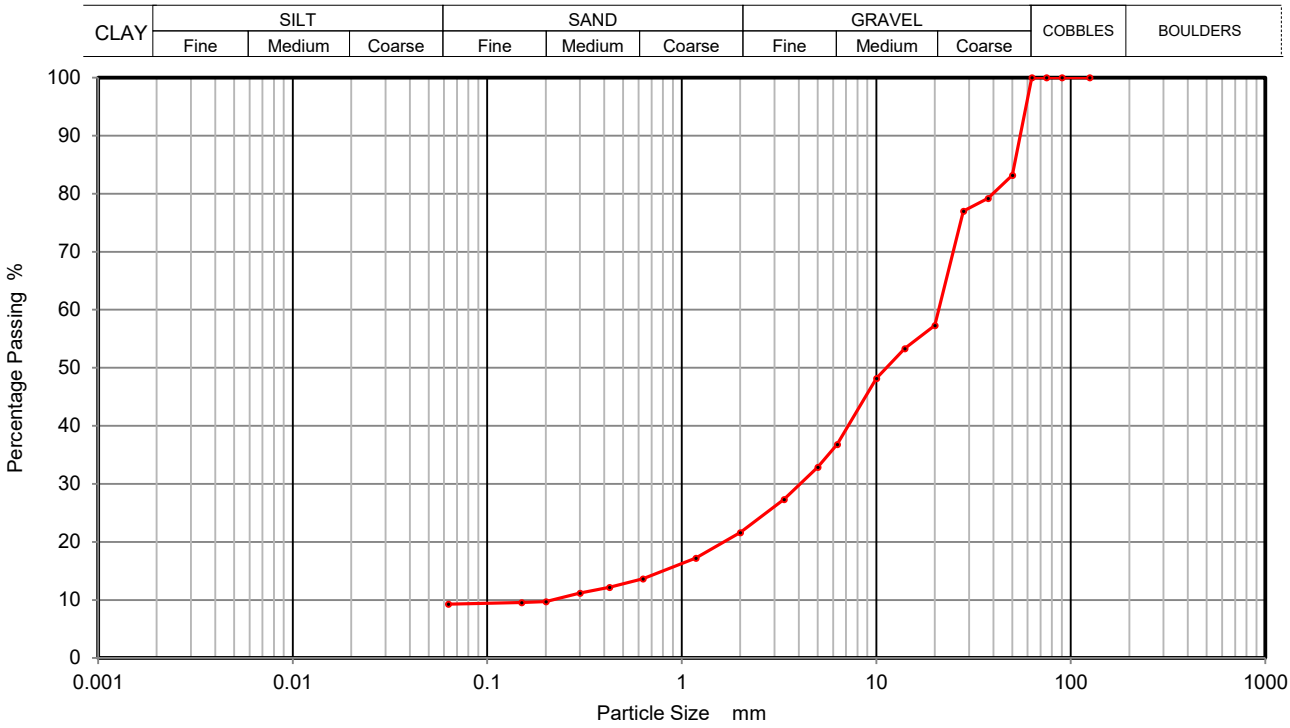
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

	PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	87922
		Borehole/Pit No.	BH111
Project Name	Goat Mill Road	Sample No.	1
Sample Description	Grey silty/ clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.30
		Depth Base	3.10
Date Tested	29/07/2026	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	83		
37.5	79		
28	77		
20	57		
14	53		
10	48		
6.3	37		
5	33		
3.35	27		
2	22		
1.18	17		
0.63	14		
0.425	12		
0.30	11		
0.20	10		
0.15	10		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	78
Sand	13
Silt and Clay	9

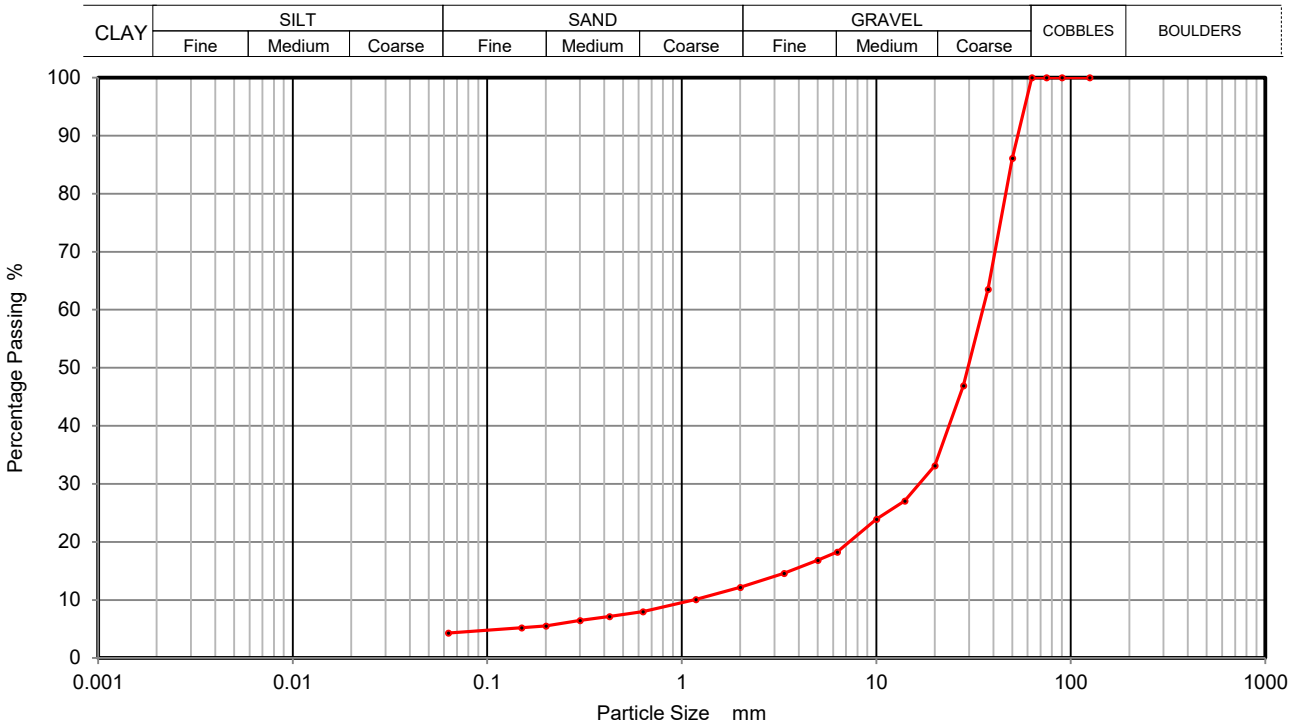
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH115**
Project Name	**Goat Mill Road**	Sample No.	**1**
Sample Description	Grey silty/clayey sandy fine to coarse GRAVEL	Depth Top	**0.20**
		Depth Base	**0.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	86		
37.5	64		
28	47		
20	33		
14	27		
10	24		
6.3	18		
5	17		
3.35	15		
2	12		
1.18	10		
0.63	8		
0.425	7		
0.30	6		
0.20	6		
0.15	5		
0.063	4		

Sample Proportions	% dry mass
Cobbles	0
Gravel	88
Sand	8
Silt and Clay	4

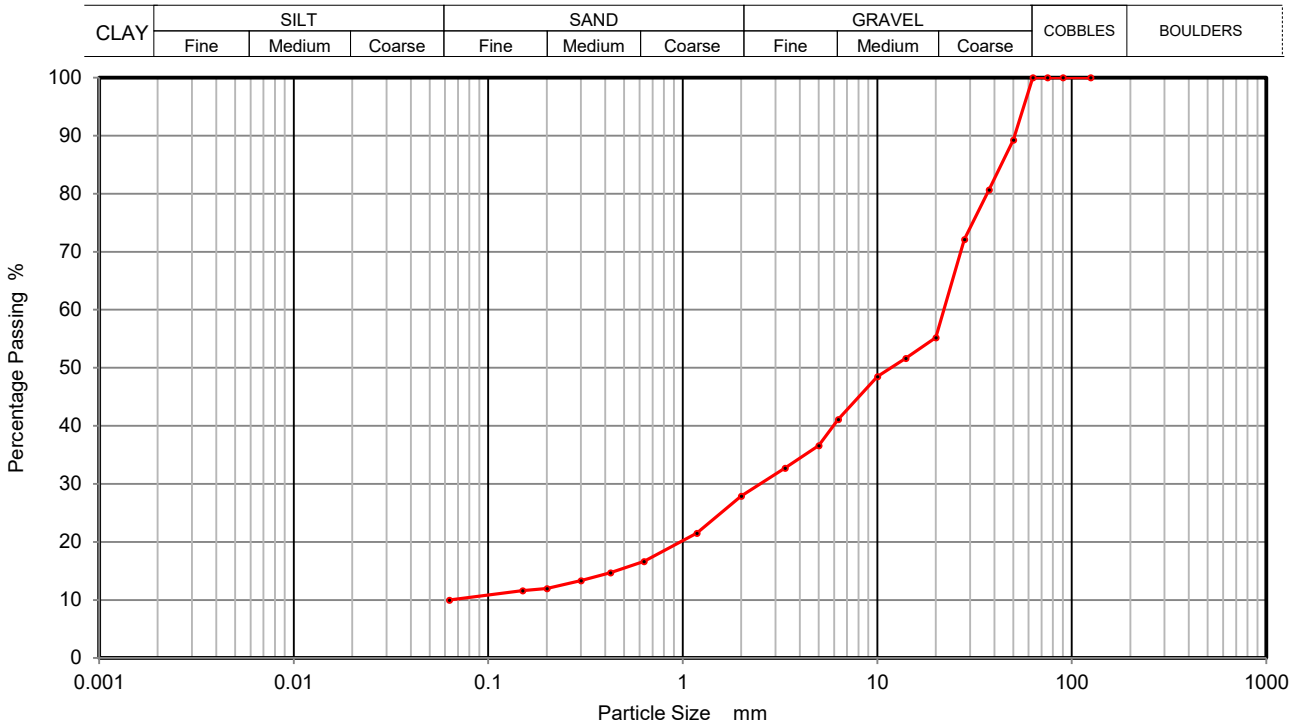
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377-2:2022 Clause 10 &** **BS EN ISO 17892-4:2016** **Wet Sieve, Clause 5.2**	Contract Number	**87922**
		Borehole/Pit No.	**BH111**
Project Name	**Goat Mill Road**	Sample No.	**4**
Sample Description	Grey silty/clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	**2.50**
		Depth Base	**4.50**
Date Tested	29/07/2026	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	89		
37.5	81		
28	72		
20	55		
14	52		
10	48		
6.3	41		
5	37		
3.35	33		
2	28		
1.18	21		
0.63	17		
0.425	15		
0.30	13		
0.20	12		
0.15	12		
0.063	10		

Sample Proportions	% dry mass
Cobbles	0
Gravel	72
Sand	18
Silt and Clay	10

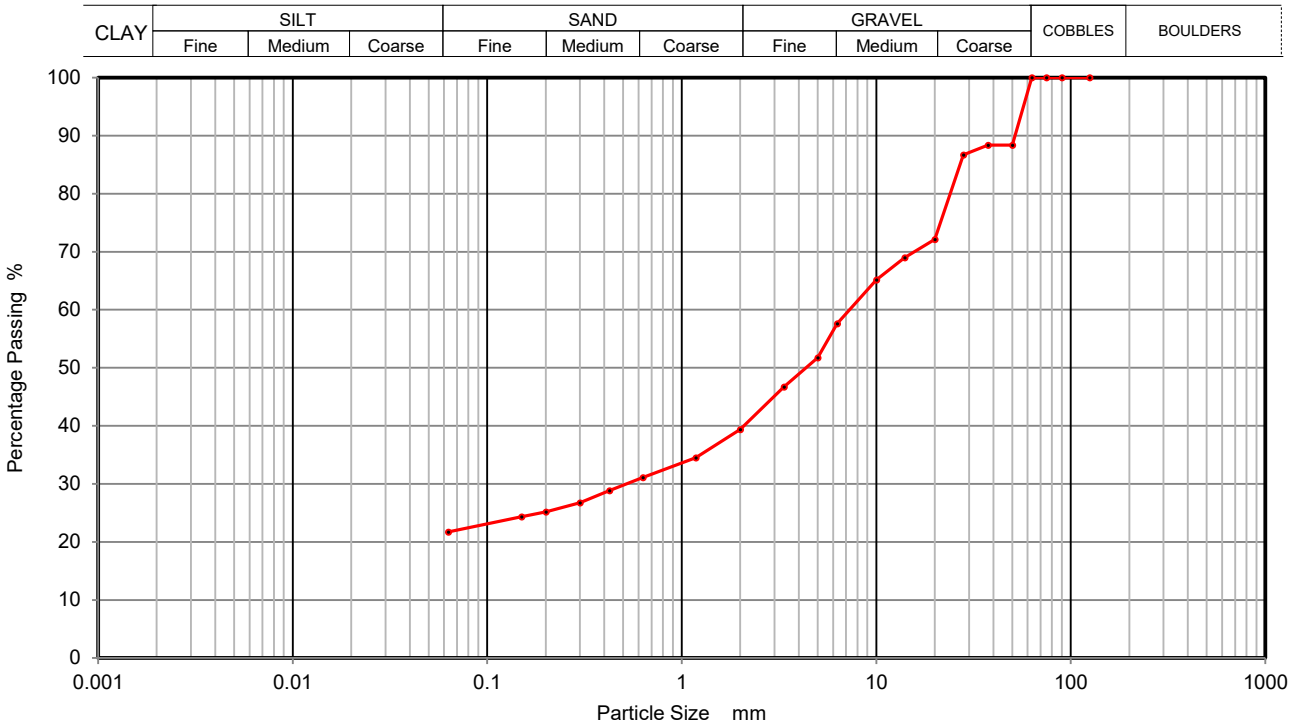
Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

	PARTICLE SIZE DISTRIBUTION BS 1377-2:2022 Clause 10 & BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	87922
		Borehole/Pit No.	BH116
Project Name	Goat Mill Road	Sample No.	3
Sample Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL	Depth Top	1.20
		Depth Base	1.95
Date Tested	29/07/2026	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	88		
37.5	88		
28	87		
20	72		
14	69		
10	65		
6.3	58		
5	52		
3.35	47		
2	39		
1.18	34		
0.63	31		
0.425	29		
0.30	27		
0.20	25		
0.15	24		
0.063	22		

Sample Proportions	% dry mass
Cobbles	0
Gravel	61
Sand	17
Silt and Clay	22

Grading Analysis	
Uniformity Coefficient	N/A

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
Ben. J

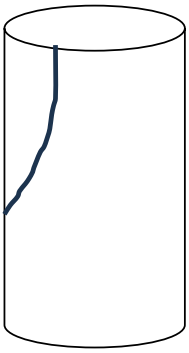
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**UNIAXIAL COMPRESSIVE STRENGTH** **ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006**	Contract Number:	87922
		Borehole Number:	BH105
Project Name	Goat Mill Road	Sample Number:	3
Sample Preparation	Cutting and Grinding	Top Depth (m):	19.70
Storage Conditions	As received	Base Depth (m):	19.90
Sample Description	Silt Stone	Sample Specific Depth (m)	19.70
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		102.00
Height - mm:		205.40
Water Content - %:		1.6
Sample Mass - g:		4328.3
Bulk Density - Mg/m3:		2.58
Dry Density - Mg/m3:		2.54
Height Ratio:	** Sample does not comply with H:D ratio*	2.0
Degree of Saturation - %:		33
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	00:56
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.24
Strain at Failure - kN:	111.50
Unconfined Compressive Strength - Mpa:	13.60
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

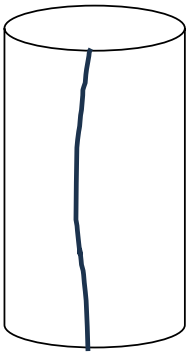
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**UNIAXIAL COMPRESSIVE STRENGTH** **ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006**	Contract Number:	87922
		Borehole Number:	BH106
Project Name	Goat Mill Road	Sample Number:	4
Sample Preparation	Cutting and Grinding	Top Depth (m):	17.30
Storage Conditions	As received	Base Depth (m):	17.60
Sample Description	Silt Stone	Sample Specific Depth (m)	17.30
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		101.90
Height - mm:		220.00
Water Content - %:		1.4
Sample Mass - g:		5019.3
Bulk Density - Mg/m3:		2.80
Dry Density - Mg/m3:		2.76
Height Ratio:	** Sample does not comply with H:D ratio*	2.2
Degree of Saturation - %:		79
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	01:32
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.26
Strain at Failure - kN:	198.30
Unconfined Compressive Strength - Mpa:	24.30
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

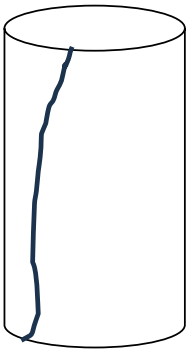
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**UNIAXIAL COMPRESSIVE STRENGTH** **ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006**	Contract Number:	87922
		Borehole Number:	BH107
Project Name	Goat Mill Road	Sample Number:	2
Sample Preparation	Cutting and Grinding	Top Depth (m):	11.80
Storage Conditions	As received	Base Depth (m):	12.10
Sample Description	Silt Stone	Sample Specific Depth (m)	11.80
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		101.90
Height - mm:		220.00
Water Content - %:		2.7
Sample Mass - g:		4983.4
Bulk Density - Mg/m3:		2.78
Dry Density - Mg/m3:		2.70
Height Ratio:	** Sample does not comply with H:D ratio*	2.2
Degree of Saturation - %:		108
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	01:19
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.20
Strain at Failure - kN:	126.30
Unconfined Compressive Strength - Mpa:	15.50
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

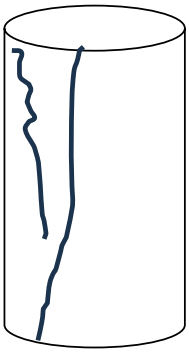
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	UNIAXIAL COMPRESSIVE STRENGTH ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006	Contract Number:	87922
		Borehole Number:	BH107
Project Name	Goat Mill Road	Sample Number:	8
Sample Preparation	Cutting and Grinding	Top Depth (m):	23.40
Storage Conditions	As received	Base Depth (m):	23.70
Sample Description	Silt Stone	Sample Specific Depth (m)	23.40
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		101.90
Height - mm:		220.00
Water Content - %:		2.8
Sample Mass - g:		5031.4
Bulk Density - Mg/m3:		2.80
Dry Density - Mg/m3:		2.73
Height Ratio:	** Sample does not comply with H:D ratio*	2.2
Degree of Saturation - %:		128
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	01:36
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.17
Strain at Failure - kN:	136.40
Unconfined Compressive Strength - Mpa:	16.70
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

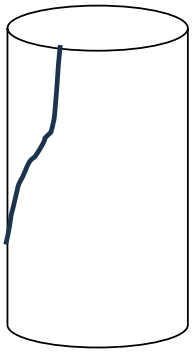
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	UNIAXIAL COMPRESSIVE STRENGTH ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006	Contract Number:	87922
		Borehole Number:	BH109
Project Name	Goat Mill Road	Sample Number:	3
Sample Preparation	Cutting and Grinding	Top Depth (m):	3.75
Storage Conditions	As received	Base Depth (m):	4.00
Sample Description	Silt Stone	Sample Specific Depth (m)	3.75
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		101.90
Height - mm:		220.20
Water Content - %:		2.4
Sample Mass - g:		4993.7
Bulk Density - Mg/m3:		2.78
Dry Density - Mg/m3:		2.72
Height Ratio:	** Sample does not comply with H:D ratio*	2.2
Degree of Saturation - %:		102
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	01:29
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.12
Strain at Failure - kN:	83.60
Unconfined Compressive Strength - Mpa:	10.30
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

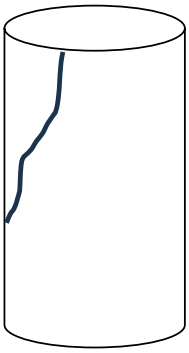
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	**UNIAXIAL COMPRESSIVE STRENGTH** **ISRM Suggested Methods - Rock Characterization Testing and Monitoring 1974 - 2006**	Contract Number:	87922
		Borehole Number:	BH116
Project Name	Goat Mill Road	Sample Number:	2
Sample Preparation	Cutting and Grinding	Top Depth (m):	5.50
Storage Conditions	As received	Base Depth (m):	5.70
Sample Description	Silt Stone	Sample Specific Depth (m)	5.50
Sample Date	15/07/2026	Sample Type:	C
Date of Receipt	00/01/1900		

Specimen Details/Conditions		
Diameter - mm:		102.00
Height - mm:		199.00
Water Content - %:		2.6
Sample Mass - g:		4198.9
Bulk Density - Mg/m3:		2.58
Dry Density - Mg/m3:		2.52
Height Ratio:	** Sample does not comply with H:D ratio*	2.0
Degree of Saturation - %:		49
Assumed Specific Gravity for Degree of Saturation:		2.90

Test Result	
Load Frame/Machine:	CT340
Date of test:	04/08/2026
Test Duration - mins:	00:58
Orientation:	Perpendicular
Stress Rate - MPa/s:	0.12
Strain at Failure - kN:	56.30
Unconfined Compressive Strength - Mpa:	6.89
Mode of Failure:	Single Shear

Remarks:

Failure Sketch:



Operator
Emyr. A

Point Load Test

The complete ISRM suggested methods for rock characterization, testing and monitoring 1974-2006 Determining Point Load Strength

Contract Number	87922
Project Name	Goat Mill Road
Sample Type	Core
Date Tested	Emyr. A

*Please note that GSTL is not accredited for the water content of rock

Hole Reference	Depth (m) Top		Base	Specific Depth	Sample No	Test Type d / a / b / i	Test Type I //	Width	Platen Separation	Failure Load	Equivalent Diameter	Point Load	Size Factor	Point Load Index	Moisture Content	Description	Angle Between Plane of Anisotropy & Core Axis	Type of Anisotropy (Bedding or Cleavage)
BH101B	19.80	-	20.00	19.80	3	d	//		102	0.41		0.04	1.38	0.05	1.6	SILTSTONE		
BH101B	19.80	-	20.00	19.90	3	d	//		102	0.61		0.06	1.38	0.08	1.0	SILTSTONE		
BH102	24.65	-	24.90	24.65	4	d	//		101	2.52		0.25	1.37	0.34	1.6	SILTSTONE		
BH102	24.65	-	24.90	24.72	4	d	//		101	4.85		0.48	1.37	0.65	0.7	SILTSTONE		
BH102	24.65	-	24.90	24.80	4	d	//		101	2.03		0.20	1.37	0.27	4.4	SILTSTONE		
BH103	11.90	-	12.05	11.90	1	a	//	101	52	4.21	81.77	0.63	1.25	0.79	0.5	SILTSTONE		
BH103	11.90	-	12.05	11.95	1	d	//		101	1.44		0.14	1.37	0.19	0.7	SILTSTONE		
BH103	16.60	-	16.75	16.60	3	d	//		101	0.73		0.07	1.37	0.10	1.4	SILTSTONE		
BH103	18.00	-	18.20	18.00	4	d	//		101	0.95		0.09	1.37	0.13	2.3	SILTSTONE		
BH103	18.00	-	18.20	18.10	4	d	//		101	0.92		0.09	1.37	0.12	3.2	SILTSTONE		
BH104	13.75	-	13.85	13.75	2	d	//		101	0.95		0.09	1.37	0.13	3.1	SILTSTONE		
BH105	13.30	-	13.40	13.30	1	d	//		101	4.16		0.41	1.37	0.56	2.5	SILTSTONE		
BH105	18.30	-	18.40	18.30	2	d	//		101	5.28		0.52	1.37	0.71	2.4	SILTSTONE		
BH106	9.70	-	9.80	9.70	1	d	//		102	1.04		0.10	1.38	0.14	1.7	SILTSTONE		
BH106	15.15	-	15.45	15.16	3	d	//		102	1.14		0.11	1.38	0.15	3.7	SILTSTONE		
BH106	15.15	-	15.40	15.25	3	d	//		102	1.02		0.10	1.38	0.13	2.8	SILTSTONE		
BH106	13.15	-	15.40	15.35	3	d	//		51	1.43		0.55	1.01	0.55	2.7	SILTSTONE		
BH107	16.30	-	16.40	16.30	5	d	//		102	3.75		0.36	1.38	0.50	0.9	SILTSTONE		
BH108	8.50	-	8.60	8.50	2	d	//		102	0.58		0.06	1.38	0.08	1.5	SILTSTONE		
BH108	14.70	-	14.80	14.70	4	d	//		102	0.89		0.09	1.38	0.12	1.8	SILTSTONE		
BH109	17.30	-	17.40	17.30	11	d	//		102	1.59		0.15	1.38	0.21	2.6	SILTSTONE		
BH109	21.00	-	21.10	21.00	13	d	//		102	0.59		0.06	1.38	0.08	2.8	SILTSTONE		
BH110	7.00	-	7.25	7.00	1	d	//		102	4.24		0.41	1.38	0.56	2.2	SILTSTONE		
BH110	7.00	-	7.25	7.10	1	d	//		102	4.02		0.39	1.38	0.53	1.2	SILTSTONE		
BH110	7.00	-	7.25	7.20	1	a	//	102	49	3.90	79.77	0.61	1.23	0.76	10.8	SILTSTONE		
BH111	3.10	-	3.20	3.10	1	d	//		102	2.18		0.21	1.38	0.29	4.0	SILTSTONE		
BH111	11.00	-	11.60	11.40	6	d	//		102	0.75		0.07	1.38	0.10	1.8	SILTSTONE		
BH111	11.40	-	11.60	11.50	6	d	//		102	0.83		0.08	1.38	0.11	3.8	SILTSTONE		
BH112	10.10	-	10.25	10.10	3	i	//	83	79	1.68	91.37	0.20	1.31	0.26	1.5	SILTSTONE		
BH112	16.30	-	16.40	16.30	6	d	//		102	0.99		0.10	1.38	0.13	1.3	SILTSTONE		
BH113	3.80	-	4.00	3.80	1	d	//		102	0.62		0.06	1.38	0.08	2.7	SILTSTONE		
BH113	3.80	-	4.00	3.90	1	d	//		102	0.59		0.06	1.38	0.08	2.4	SILTSTONE		
BH113	10.10	-	10.20	10.10	4	d	//		102	0.56		0.05	1.38	0.07	2.0	SILTSTONE		
BH114	3.70	-	3.90	3.70	1	d	//		102	0.97		0.09	1.38	0.13	1.9	SILTSTONE		
BH114	3.70	-	3.90	3.80	1	d	//		102	1.02		0.10	1.38	0.14	1.6	SILTSTONE		
BH114	23.85	-	24.05	23.85	11	d	//		102	1.11		0.11	1.38	0.15	2.2	SILTSTONE		
BH114	23.85	-	24.05	23.95	11	d	//		102	0.98		0.09	1.38	0.13	1.8	SILTSTONE		
BH115	13.40	-	13.50	13.40	5	d	//		102	1.35		0.13	1.38	0.18	4.0	SILTSTONE		
BH116	3.60	-	3.70	3.60	1	d	//		102	1.22		0.12	1.38	0.16	3.9	SILTSTONE		

Key	Reported As
Width	(W) mm
Platen Separation	(D) mm
Failure Load	(P) kN
Equivalent Diameter	(De) mm
Point Load	(Is) MPa
Size Factor	(F)
Point Load Index	(Is(50)) MPa
Moisture Content	%
Description	SC
Perpendicular	I
Parallel to planes of weakness	//

Operator
46237

Analytical Test Report	**E26/10259/GSL/26-33733**	**Tested on Behalf of**
Clients Project Reference	Goat Mill Road	GSTL
Clients Order Number	87922	Unit 3-4 Heol Aur
Sample(s) Analysed	17	Dafen Ind Estate
Sample(s) received / instructed	30/07/2026 / 30/07/2026	Dafen
Sample(s) Tested	31/07/2026 to 07/08/2026	
Report issued	07/08/2026	SA14 8QN
Report issue number	1	

Signed



Emily Blissett
Report Manager

Notes:

General

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Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848093	848094	848095
Client Sample ID					BH102	BH102	BH103
Client Sample Location					-	-	-
Client Sample Type					B	B	D
Client Sample Number					1	5	1
Depth - Top (m)					0	10	2
Depth - Bottom (m)					1.5	12	2
Date of Sampling					11/06/2026	11/06/2026	11/06/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Sand	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	230	75	110
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.14	0.07	0.04
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.20	0.05	0.03
pH	PHSBRE	pH units	1	M	8.3	8.6	6.3
Chloride	ANIONSSBRE	mg/L	0.1	N	6.3	4.8	1.9
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	13	4.1	1.9

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848096	848097	848098
Client Sample ID					BH104	BH104	BH105
Client Sample Location					-	-	-
Client Sample Type					D	B	D
Client Sample Number					1	3	1
Depth - Top (m)					0.5	7.5	3
Depth - Bottom (m)					0.5	9	3
Date of Sampling					11/06/2026	11/06/2026	11/06/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Sand	Sand
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	56	73	10
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.07	0.05	0.01
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.09	0.06	0.02
pH	PHSBRE	pH units	1	M	8.5	8.7	8.5
Chloride	ANIONSSBRE	mg/L	0.1	N	4.4	7.5	3.8
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	4.6	3.9	< 1.5

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848099	848100	848101
Client Sample ID					BH105	BH106	BH108
Client Sample Location					-	-	-
Client Sample Type					D	D	B
Client Sample Number					5	1	2
Depth - Top (m)					7.2	1.5	2.5
Depth - Bottom (m)					7.2	1.5	6
Date of Sampling					11/06/2026	11/06/2026	11/06/2026
Time of Sampling					-	-	-
Sample Matrix					Sand	Sand	Other
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	170	54	17
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.06	0.16	0.02
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.20	0.26	0.03
pH	PHSBRE	pH units	1	M	8.0	8.5	8.0
Chloride	ANIONSSBRE	mg/L	0.1	N	2.4	3.7	3.2
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	< 1.0
Magnesium	1377MGICPB	mg/L	1.5	N	7.6	4.6	8.6

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848102	848103	848104
Client Sample ID					BH110	BH111	BH112
Client Sample Location					-	-	-
Client Sample Type					D	C	B
Client Sample Number					1	9	1
Depth - Top (m)					1.6	15.7	1.5
Depth - Bottom (m)					1.6	15.8	2.5
Date of Sampling					11/06/2026	11/06/2026	11/06/2026
Time of Sampling					-	-	-
Sample Matrix					Clay	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	30	16	18
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	< 0.01	0.01
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.05	0.03	0.02
pH	PHSBRE	pH units	1	M	7.4	9.0	8.5
Chloride	ANIONSSBRE	mg/L	0.1	N	1.4	1.1	1.8
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	1.5
Magnesium	1377MGICPB	mg/L	1.5	N	9.5	< 15.00	7.9

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848105	848106	848107
Client Sample ID					BH113	BH114	BH115
Client Sample Location					-	-	-
Client Sample Type					C	C	B
Client Sample Number					7	9	4
Depth - Top (m)					18.2	18.1	2.5
Depth - Bottom (m)					18.3	18.2	4.5
Date of Sampling					11/06/2026	11/06/2026	11/06/2026
Time of Sampling					-	-	-
Sample Matrix					Other	Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**			
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	90	27	70
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.02	< 0.01	0.04
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.03	0.02	0.10
pH	PHSBRE	pH units	1	M	7.9	7.5	7.3
Chloride	ANIONSSBRE	mg/L	0.1	N	1.0	1.1	4.1
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	< 1.0	1.9
Magnesium	1377MGICPB	mg/L	1.5	N	8.2	12	8.8

E26/10259/GSL/26-33733

Goat Mill Road

Analytical Test Results - BRE Associated Analysis

Lab Reference					848108	848109
Client Sample ID					BH115	BH116
Client Sample Location					-	-
Client Sample Type					C	B
Client Sample Number					9	3
Depth - Top (m)					22.55	1.2
Depth - Bottom (m)					22.75	1.95
Date of Sampling					11/06/2026	11/06/2026
Time of Sampling					-	-
Sample Matrix					Other	Clay
Determinant	**Code**	**Units**	**LOD**	**Accreditation**		
Water Soluble Sulphate (as SO4)	ANIONSSBRE	mg/L	10	N	31	53
Acid Soluble Sulphate	ASSO4SBRE	%	0.01	N	0.01	0.03
Total Sulphur Content (as S)	1377TS-EBR	%	0.01	U	0.02	0.06
pH	PHSBRE	pH units	1	M	7.6	7.7
Chloride	ANIONSSBRE	mg/L	0.1	N	1.0	3.5
Nitrate as NO3	ANIONSSBRE	mg/L	1	N	< 1.0	2.1
Magnesium	1377MGICPB	mg/L	1.5	N	13	7.4

E26/10259/GSL/26-33733

Goat Mill Road

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
848093	BH102	-	SOIL	-	Dark brown slightly gravelly slightly clayey silty sand	-	-	100
848094	BH102	-	SOIL	-	Grey gravelly silty sand	-	-	88
848095	BH103	-	SOIL	-	Light brown silty clay	-	-	100
848096	BH104	-	SOIL	-	Greyish brown gravelly silty sand	-	-	100
848097	BH104	-	SOIL	-	Grey gravelly silty sand	-	-	100
848098	BH105	-	SOIL	-	Light brown gravelly silty sand	-	-	88
848099	BH105	-	SOIL	-	Grey gravelly silty sand	-	-	72
848100	BH106	-	SOIL	-	Made Ground- brown gravelly silty sand with rare concrete slag organic matter	-	-	91
848101	BH108	-	SOIL	-	Light greyish brown silty crushed rock	-	-	100
848102	BH110	-	SOIL	-	Greyish brown slightly gravelly silty clay	-	-	100
848103	BH111	-	SOIL	-	Grey crushed rock	-	-	100
848104	BH112	-	SOIL	-	Greyish brown slightly gravelly silty clay	-	-	100
848105	BH113	-	SOIL	-	Grey crushed rock	-	-	100
848106	BH114	-	SOIL	-	Grey crushed rock	-	-	100
848107	BH115	-	SOIL	-	Dark brownish grey gravelly sandy silty clay	-	-	79
848108	BH115	-	SOIL	-	Grey crushed rock	-	-	100
848109	BH116	-	SOIL	-	Dark brown gravelly sandy silty clay	-	-	100

E26/10259/GSL/26-33733

Goat Mill Road

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
848103	BH111	-	SOIL	-	WS Magnesium - Lower reporting limit raised due to sample matrix interference.

E26/10259/GSL/26-33733

Goat Mill Road

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Site addresses where testing is performed: Leicester - 7-11 Harding Street, Leicester, LE1 4DH

Poole - Unit D11, Admiralty Park, Station Road, Holton Heath, Poole, BH16 6HX & Unit 14B, Blackhill Road West, Holton Heath Trading Park, Poole, Dorset, BH16 6LE

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Site	Test Details
1377MGICPB	BS1377 WS Magnesium (ICP)	Oven dried	Passing 2mm test sieve	Leicester	Water Soluble Magnesium testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 10.
1377TS-EBR	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Leicester	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)
ANIONSSBRE	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Leicester	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
ASSO4SBRE	MS - CL - Acid Soluble Sulphate	Oven Dried	Passing 2mm test sieve	Leicester	Determination of total sulphate in soils by acid extraction followed by ICP analysis
PHSBRE	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Leicester	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Leicester	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

E26/10259/GSL/26-33733

Goat Mill Road

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
848093	BH102				MS - CL - Anions by Aquakem (2:1Extract)	RX
848093	BH102				BS1377 Total Sulphur Content by HTC	RX
848093	BH102				MS - CL - pH in Soils	RX
848094	BH102				MS - CL - Anions by Aquakem (2:1Extract)	RX
848094	BH102				BS1377 Total Sulphur Content by HTC	RX
848094	BH102				MS - CL - pH in Soils	RX
848095	BH103				MS - CL - Anions by Aquakem (2:1Extract)	RX
848095	BH103				BS1377 Total Sulphur Content by HTC	RX
848095	BH103				MS - CL - pH in Soils	RX
848096	BH104				MS - CL - Anions by Aquakem (2:1Extract)	RX
848096	BH104				BS1377 Total Sulphur Content by HTC	RX
848096	BH104				MS - CL - pH in Soils	RX
848097	BH104				MS - CL - Anions by Aquakem (2:1Extract)	RX
848097	BH104				BS1377 Total Sulphur Content by HTC	RX
848097	BH104				MS - CL - pH in Soils	RX
848098	BH105				MS - CL - Anions by Aquakem (2:1Extract)	RX
848098	BH105				BS1377 Total Sulphur Content by HTC	RX
848098	BH105				MS - CL - pH in Soils	RX
848099	BH105				MS - CL - Anions by Aquakem (2:1Extract)	RX
848099	BH105				BS1377 Total Sulphur Content by HTC	RX
848099	BH105				MS - CL - pH in Soils	RX
848100	BH106				MS - CL - Anions by Aquakem (2:1Extract)	RX
848100	BH106				BS1377 Total Sulphur Content by HTC	RX
848100	BH106				MS - CL - pH in Soils	RX
848101	BH108				MS - CL - Anions by Aquakem (2:1Extract)	RX

E26/10259/GSL/26-33733

Goat Mill Road

Sample Deviations

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T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
848101	BH108				BS1377 Total Sulphur Content by HTC	RX
848101	BH108				MS - CL - pH in Soils	RX
848102	BH110				MS - CL - Anions by Aquakem (2:1Extract)	RX
848102	BH110				BS1377 Total Sulphur Content by HTC	RX
848102	BH110				MS - CL - pH in Soils	RX
848103	BH111				MS - CL - Anions by Aquakem (2:1Extract)	RX
848103	BH111				BS1377 Total Sulphur Content by HTC	RX
848103	BH111				MS - CL - pH in Soils	RX
848104	BH112				MS - CL - Anions by Aquakem (2:1Extract)	RX
848104	BH112				BS1377 Total Sulphur Content by HTC	RX
848104	BH112				MS - CL - pH in Soils	RX
848105	BH113				MS - CL - Anions by Aquakem (2:1Extract)	RX
848105	BH113				BS1377 Total Sulphur Content by HTC	RX
848105	BH113				MS - CL - pH in Soils	RX
848106	BH114				MS - CL - Anions by Aquakem (2:1Extract)	RX
848106	BH114				BS1377 Total Sulphur Content by HTC	RX
848106	BH114				MS - CL - pH in Soils	RX
848107	BH115				MS - CL - Anions by Aquakem (2:1Extract)	RX
848107	BH115				BS1377 Total Sulphur Content by HTC	RX
848107	BH115				MS - CL - pH in Soils	RX
848108	BH115				MS - CL - Anions by Aquakem (2:1Extract)	RX
848108	BH115				BS1377 Total Sulphur Content by HTC	RX
848108	BH115				MS - CL - pH in Soils	RX
848109	BH116				MS - CL - Anions by Aquakem (2:1Extract)	RX
848109	BH116				BS1377 Total Sulphur Content by HTC	RX

E26/10259/GSL/26-33733

Goat Mill Road

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received outside standard identified timescales for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
848109	BH116				MS - CL - pH in Soils	RX

E26/10259/GSL/26-33733

Goat Mill Road

Additional Method Notes

Method	Notes
TRL 447 Suite	1. Sample preparation was in accordance with TRL 447 Appendix C. 2. Testing was carried out in accordance with methods 1, 2 and 4 of TRL 447 2001 (Updated 2005). 3. Oxidisable sulphides and total potential sulphate have been calculated in accordance with TRL 447, Appendix C Test 4. Values are reported against a dry mass of sample passing a 2mm test sieve after oven drying, where required material retained on the 2mm test sieve was recombined with the test portion prior to analysis.
BS1377 Acid Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, acid soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Loss on Ignition	Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 6. Determination of the mass loss on ignition. Some information required by BS1377: 2016: Part 1 has not been reported. This information is available on request.
BS1377 Organic Matter Content	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377: Part 3: 2018 + A1: 2021 Clause 4. 3. The reported % organic content is the average organic matter content present in the soil fraction passing the 2mm test sieve to the nearest 0.1% of the original oven dry mass of soil. 4. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 pH Value	pH testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021 Clause 12
BS1377 Sulphate (acid soluble)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.9 & 7.5. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Total Dissolved Solids	Determination of TDS in accordance with BS 1377: Part 3
BS1377 Total Sulphur	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016.
BS1377 Water Soluble Chloride	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016 2. Testing was in accordance with BS 1377 : Part 3 : 2018 + A1: 2021, Clause 7.2, water soluble method. 3. Some information required by BS 1377 has not been reported. This information is available on request.
BS1377 Sulphate (water soluble) (ICP-OES)	1. Sample preparation was in accordance with BS 1377 : Part 1 : 2016. 2. Sulphate testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.3 & 7.5. 3. pH of the water extract was not recorded. 4. Some information required by BS 1377 has not been reported. This information is available on request.
EN1744 Acid Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 12. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur by HTC (Cl. 11.2)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11.2 Analysis subcontracted to a UKAS accredited laboratory
EN1744 Total Sulphur (Cl. 11.1)	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 11. Analysis subcontracted to a UKAS accredited laboratory
EN1744 Water Soluble Chloride	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 7 (Reference Method). Analysis subcontracted to a UKAS accredited laboratory

E26/10259/GSL/26-33733

Goat Mill Road

Additional Method Notes

Method	Notes
EN1744 Water Soluble Sulphate	Testing was in accordance with BS EN 1744-1:2009 + A1:2012 clause 10. Analysis subcontracted to a UKAS accredited laboratory
Oxidisable Sulphides Calculation (HTC)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Oxidisable Sulphides Calculation (Grav)	Calculated in accordance with TRL 447 using results determined in accordance with EN1744
Total Potential Sulphate (Calc from 1744 Total S)	Derived from the Total sulphur concentration determined in accordance with EN1744.
BS1881 Alkali (Na2O + K2O)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 12.3. 2. A concrete density of 2300kg/m3 was used in the calculation of equivalent sodium oxide content per m3 of concrete. 3. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 4. Quality control samples are tested with each batch of samples.
BS1881 Calcium Oxide Content (EDTA Titration)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.4. 2. Cement content (%m/m) has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 64.5% by mass of Calcium Oxide. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch and therefore the results are from a single analysis only.
BS1881 Cement Content (ICP method)	1. Testing was in accordance with BS 1881: Part 124: 2015 Clause 6.5 by ICP. 2. Cement content has been calculated assuming the presence in the concrete of Ordinary Portland Cement, containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively. 3. Samples of the original constituents of the mix were not submitted. 4. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 5. Quality control samples are tested with each batch of samples. 6. Samples were identified as being part of a batch
Chloride in Concrete by Aquakem (Acid Soluble)	1. Testing was in accordance with in house method statement MS - CL - Chloride in Hardened concrete by Aquakem. 2. Samples were not passed over the 125micron BS Test Sieve before testing. 3 Quality control samples are tested with each batch of samples.
Moisture Content of Grout Mortar & Concrete	1. Testing was in accordance with in house method statement MS Moisture Content of Grout, Mortar and Concrete
MS - Sulphate in Hardened Concrete by ICP	1. Testing undertaken in accordance with in house method statement MS - Sulphate in hardened concrete by ICP. 2. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015. 3. Quality control samples are tested with each batch of samples.
BS1881 Water Cement Ratio	1 Testing was in accordance with BS 1881: Part 124: 2015+A1:2021. 2. Cement content was determined in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 6.5 by ICP. 3. Samples of the original constituents of the mix was/was not submitted. 4. Original water/cement ratio has been calculated in accordance with BS 1881: Part 124: 2015+A1:2021 Clause 9.6. 5. Samples received were smaller than required by Clause 4.1 of BS 1881 : Part 124 :2015+A1:2021.

E26/10259/GSL/26-33733

Goat Mill Road

Additional Method Notes

Method	Notes
BS4551 Mix Proportion	1.Sample preparation was in accordance with BS4551 2005 + A2:2013 Clause 7. 4.5. 2. Testing was in accordance with BS 4551: Part 2: 2005 + A2:2013 Clause 7.5.3 and 7.5.3.4. 3. Cement content has been calculated assuming the presence in the mix of Ordinary Portland Cement containing 20.2% and 64.5% by mass of soluble silica and calcium oxide respectively.
BS6463-102 Neutralizing Value	Testing was undertaken in accordance with an in house method statement based on BS6463-102
BS3882:2015 Specification for topsoil	Testing was undertaken in accordance with the methodologies within BS3882:2015
BS8601:2013 Specification for subsoil	Testing was undertaken in accordance with the methodologies within BS8601:2013
Depth of Carbonation (BS EN 14630:2006)	1. Testing was carried out in accordance with BS EN 14630:2006 Depth of Carbonation. 2. Testing was carried out in the laboratory. 3. Indicator Solution Used– 1g of Phenolphthalein powder dissolved in a solution of 50ml of Methylated Spirits and 100ml of deionised water
HAC	1. Testing was in accordance with BRE Information Sheet IS 15/74. 2. Contaminated samples may give a false result. 3. Samples taken from extensively carbonated concrete containing Portland Cement may give a false positive result. 4. If conclusive identification of the presence of High Alumina Cement is required this result should be confirmed by a more definitive test.
pH Value of Concrete	1. Testing was in accordance with in house method statement MS – pH Value of Hardened Concrete, Grout and Water from voids
Sub - EN1744 Sulphide	Analysis was in accordance with BS EN 1744-1 : 2009 + A1 : 2012, clause 13 and subcontracted to a UKAS accredited laboratory for this test

APPENDIX D: ENVIRONMENTAL LABORATORY RESULTS