Laboratory Report

UKAS TESTING 2788

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES
A PHENNA GROUP COMPANY

Contract Number: 77672

Client Ref: **9222**
Client PO: **13309**

Date Received: **26-03-2025**
Date Completed: **24-04-2025**
Report Date: **24-04-2025**

Client: **Earth Science Partnership**

Contract Title: **9222 - Sandfields Business Park**
For the attention of: **Aaron Case**

This report has been checked and approved by:

B. Evans

Brendan Evans
Senior Office Administrator

Description	Qty
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	11
Sedimentation by Pipette Method BS EN ISO 17892-4 : 5.4 - @ Non Accredited Test	2
Determination of the Swelling Potential of Fill Material (Slag Expansion Test 7 day test) BR 481 - Part B - Appendix B - @ Non Accredited Test	2

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 (Senior Office Administrator) - Darren Bourne (Quality Senior Technician) - Paul Evans (Director)
Richard John (Quality/Technical Manager) - Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager)
Wayne Honey (HR & HSE Manager)

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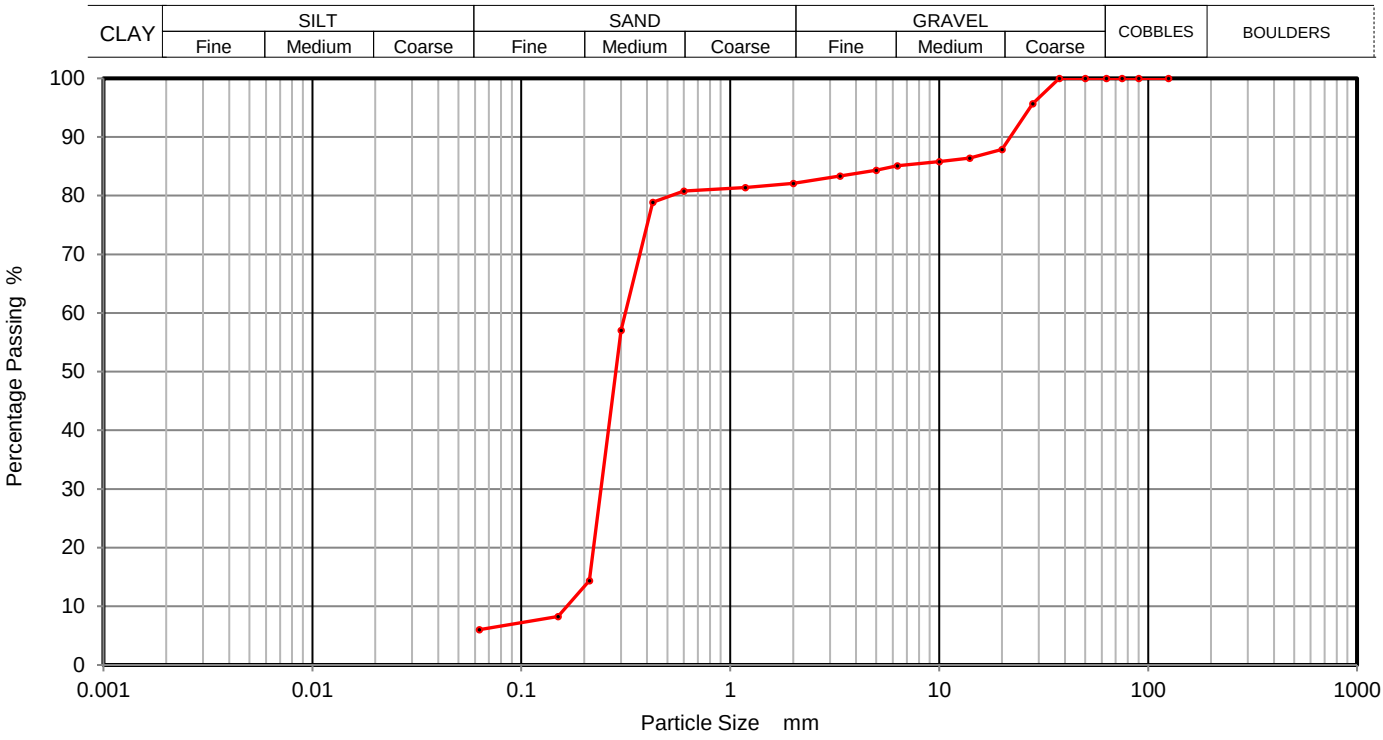
GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP101A
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey fine to coarse gravelly fine to coarse SAND	Depth Top	2.00
		Depth Base	
Date Tested	09/04/2025	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	96		
20	88		
14	86		
10	86		
6.3	85		
5	84		
3.35	83		
2	82		
1.18	81		
0.63	81		
0.425	79		
0.30	57		
0.20	14		
0.15	8		
0.063	6		

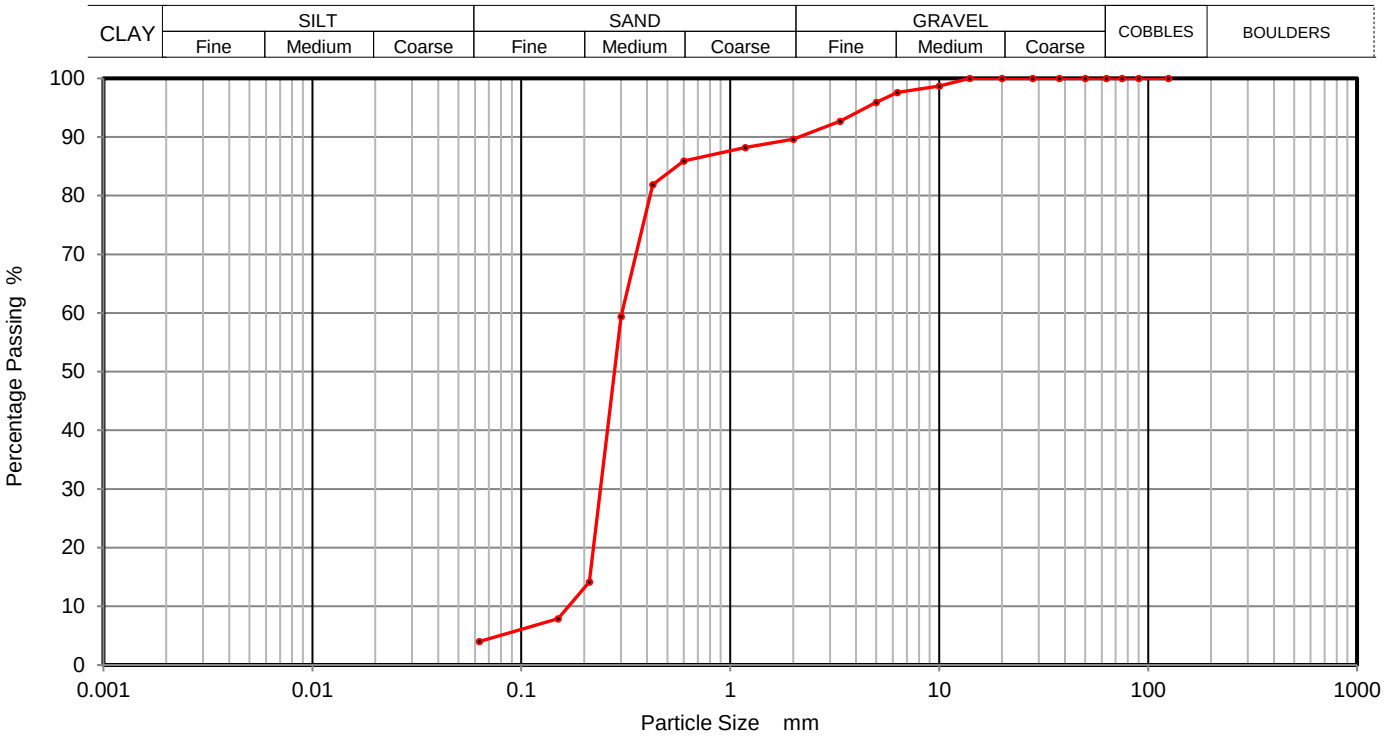
Sample Proportions	% dry mass
Cobbles	0
Gravel	18
Sand	76
Silt and Clay	6

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP101A
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey fine to medium gravelly fine to coarse SAND	Depth Top	4.00
		Depth Base	
Date Tested	09/04/2025	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	99		
6.3	98		
5	96		
3.35	93		
2	90		
1.18	88		
0.63	86		
0.425	82		
0.30	59		
0.20	14		
0.15	8		
0.063	4		

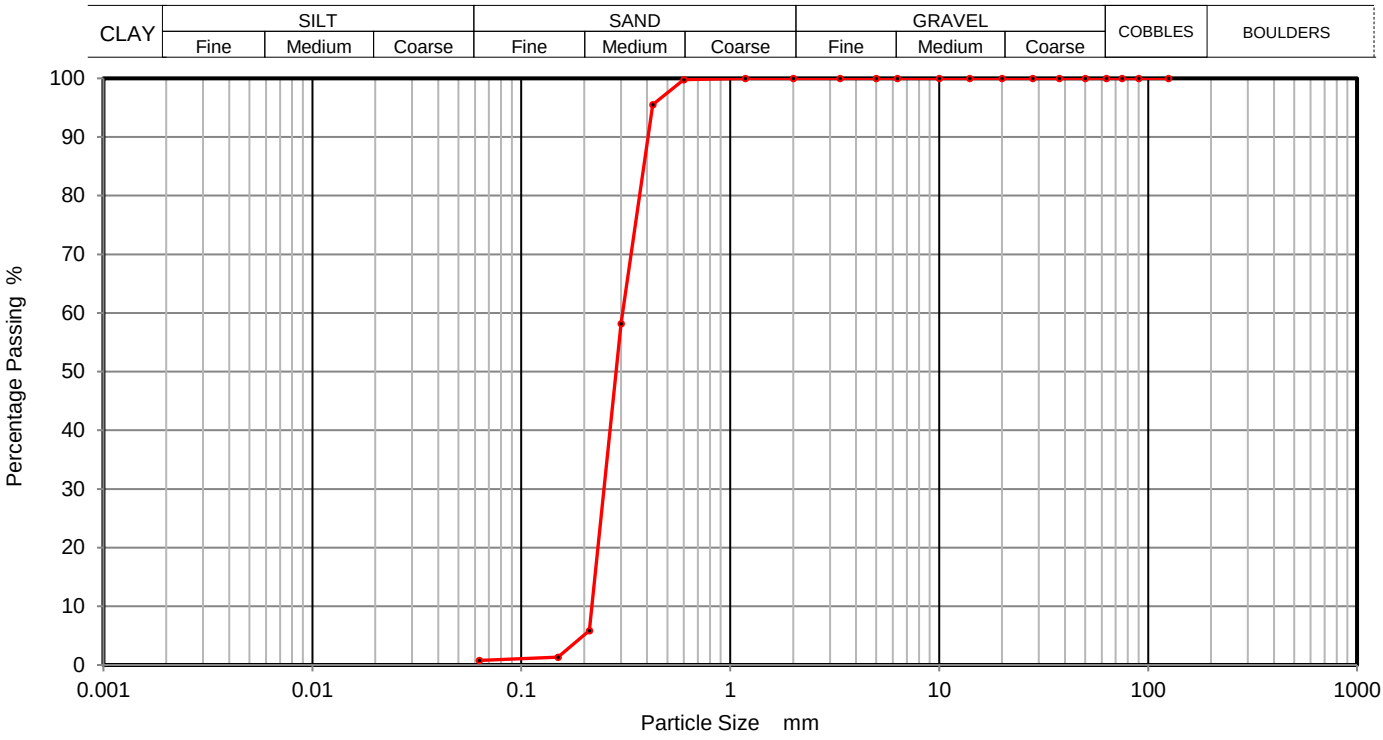
Sample Proportions	% dry mass
Cobbles	0
Gravel	10
Sand	86
Silt and Clay	4

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP101A
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey fine to coarse SAND	Depth Top	10.00
		Depth Base	
Date Tested	09/04/2025	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	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.63	100		
0.425	96		
0.30	58		
0.20	6		
0.15	1		
0.063	1		

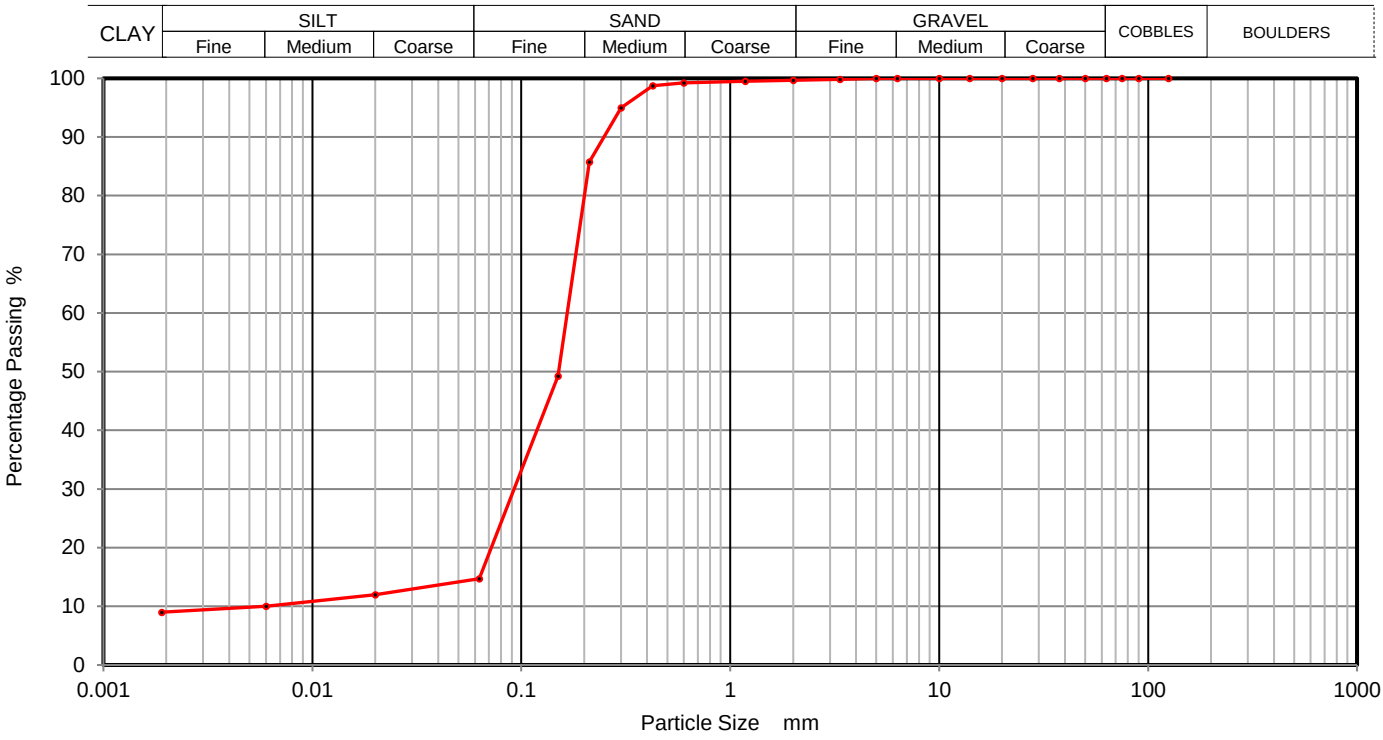
Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	99
Silt and Clay	1

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve & Pipette Analysis, Clause 5.2 & 5.4	Contract Number	77672
		Borehole/Pit No.	CP101A
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Grey slightly silty clayey fine to coarse SAND	Depth Top	20.00
		Depth Base	
Date Tested	09/04/2025	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	12
90	100	0.0060	10
75	100	0.0020	9
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.63	99		
0.425	99		
0.30	95		
0.20	86		
0.15	49		
0.063	15		

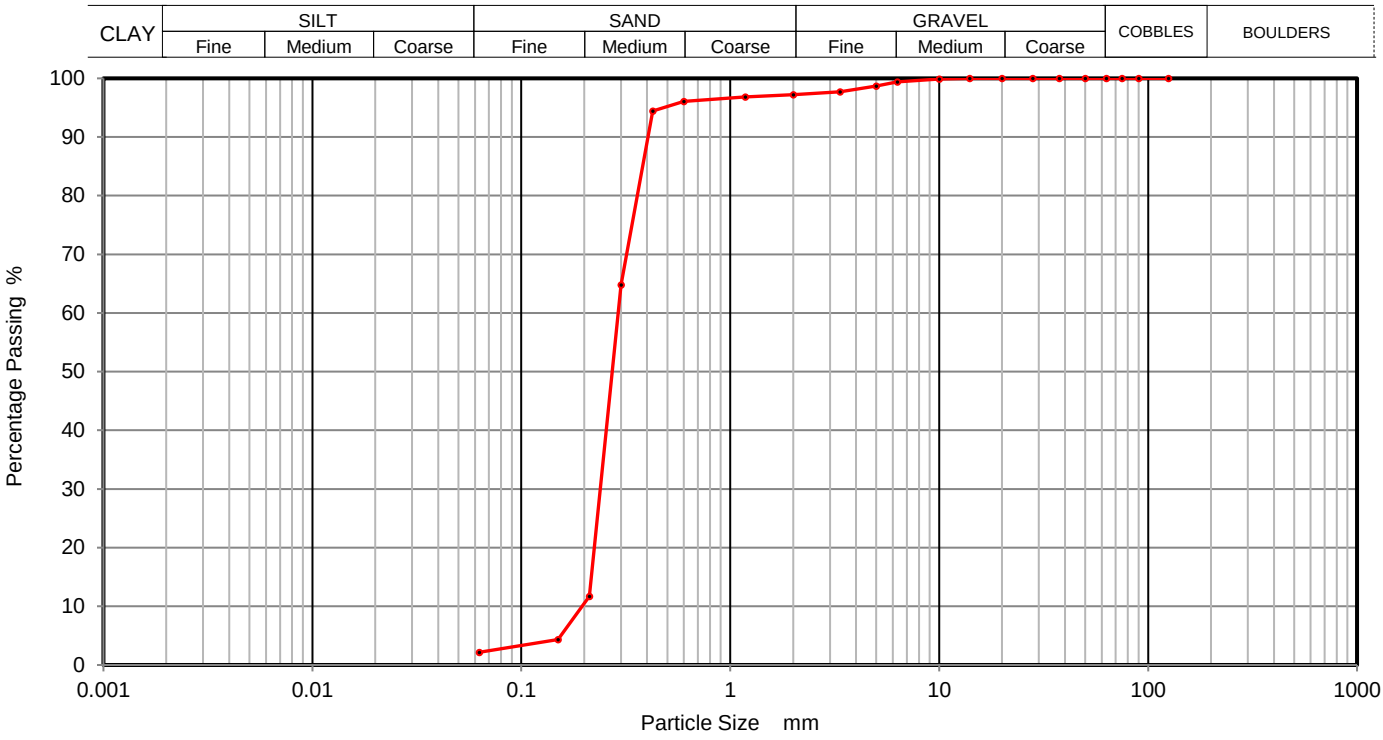
Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	85
Silt	6
Clay	9

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP102
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey slightly gravelly fine to coarse SAND	Depth Top	3.00
		Depth Base	
Date Tested	09/04/2025	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	98		
2	97		
1.18	97		
0.63	96		
0.425	94		
0.30	65		
0.20	12		
0.15	4		
0.063	2		

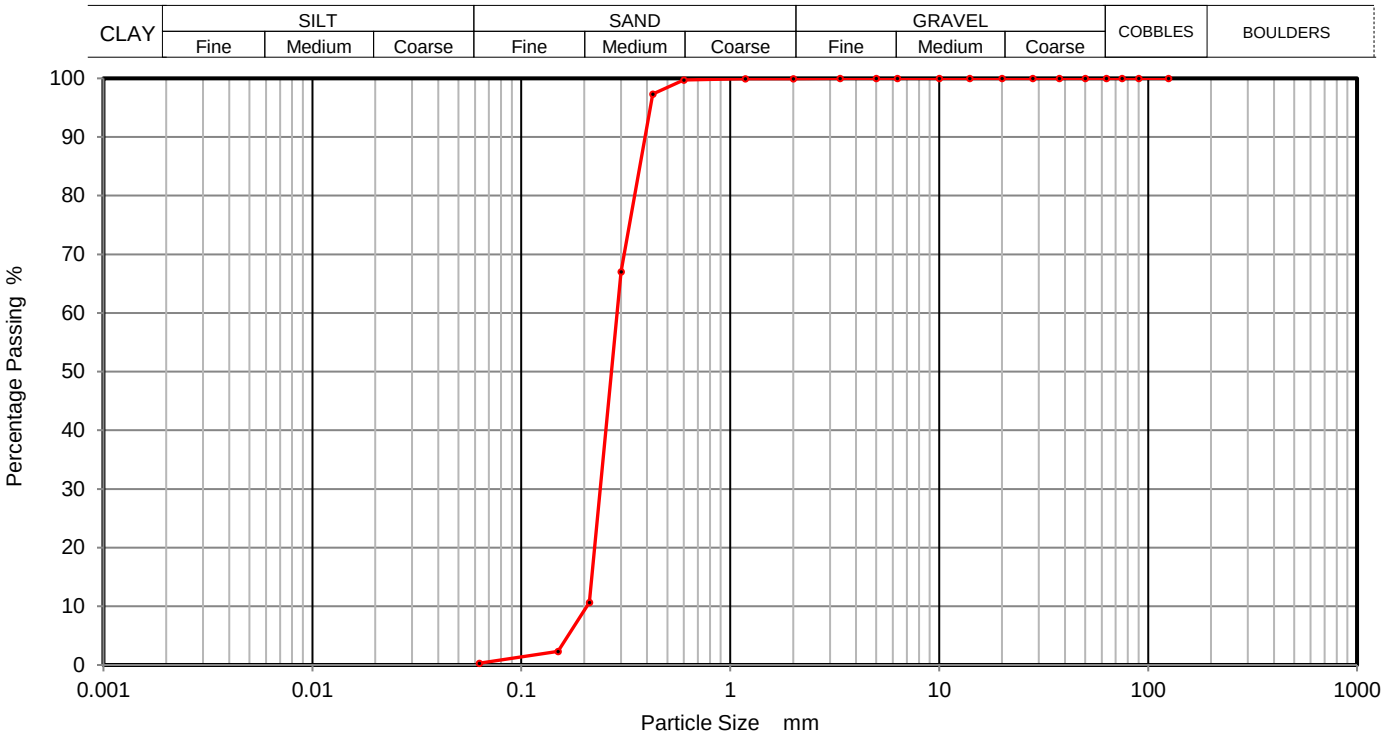
Sample Proportions	% dry mass
Cobbles	0
Gravel	3
Sand	95
Silt and Clay	2

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP102
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown fine to coarse SAND	Depth Top	9.00
		Depth Base	
Date Tested	09/04/2025	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	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.63	100		
0.425	97		
0.30	67		
0.20	11		
0.15	2		
0.063	0		

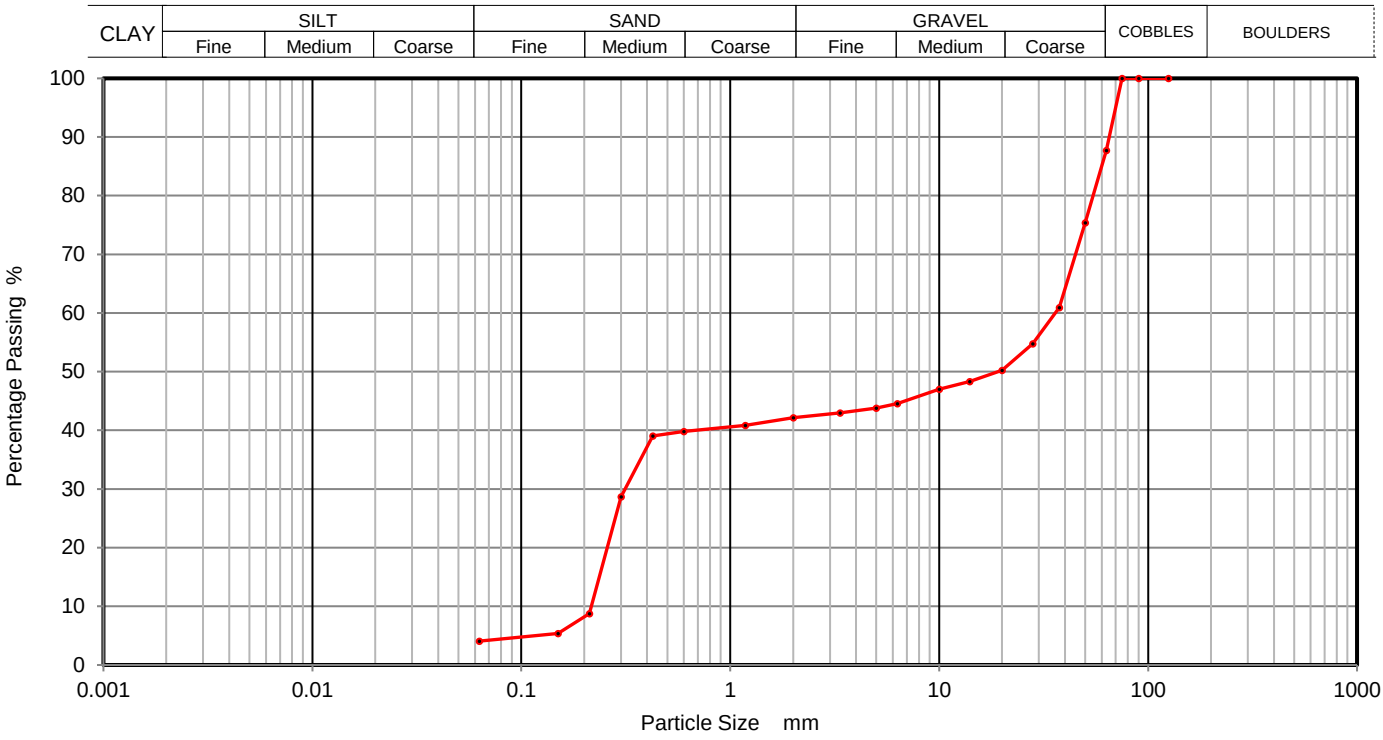
Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	100
Silt and Clay	0

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP103
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey fine to coarse sandy fine to coarse GRAVEL with cobbles	Depth Top	2.00
		Depth Base	
Date Tested	09/04/2025	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	88		
50	75		
37.5	61		
28	55		
20	50		
14	48		
10	47		
6.3	45		
5	44		
3.35	43		
2	42		
1.18	41		
0.63	40		
0.425	39		
0.30	29		
0.20	9		
0.15	5		
0.063	4		

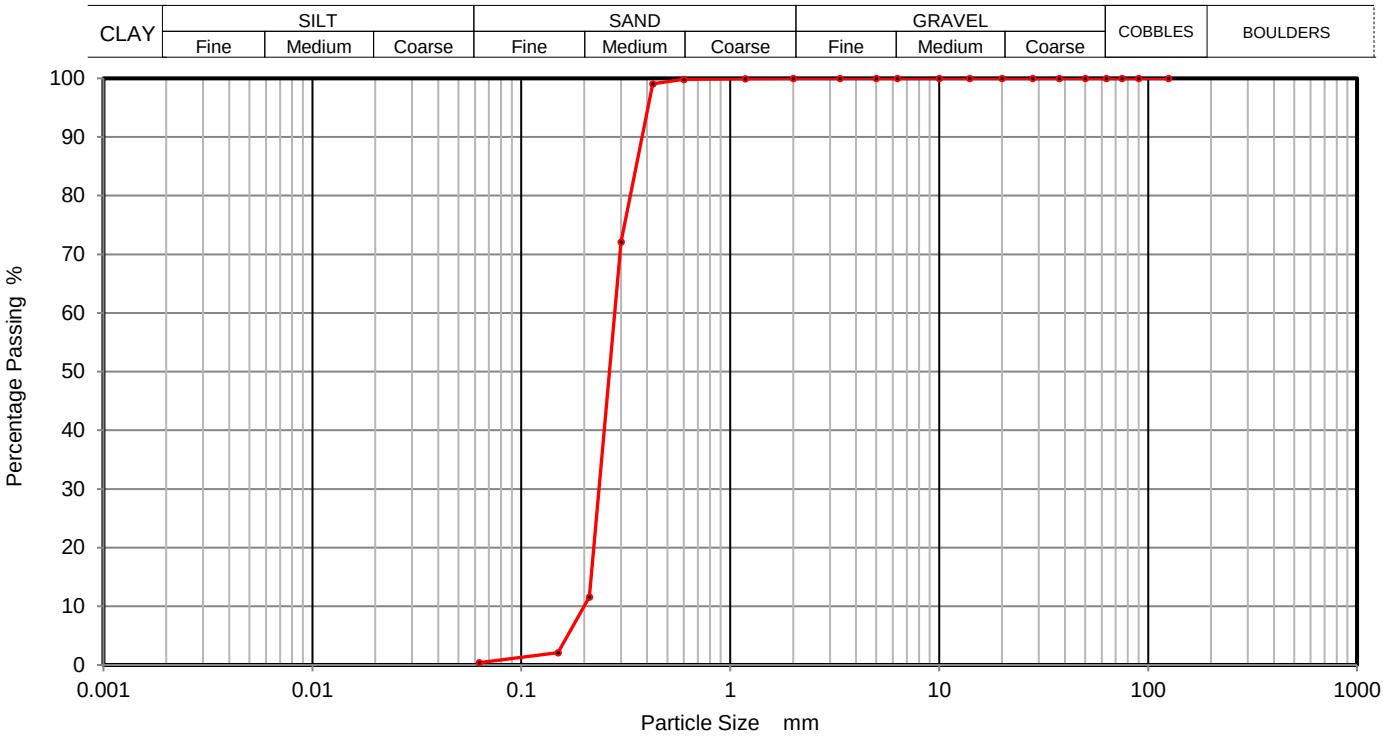
Sample Proportions	% dry mass
Cobbles	12
Gravel	46
Sand	38
Silt and Clay	4

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP103
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown fine to coarse SAND (shell fragments)	Depth Top	6.00
		Depth Base	
Date Tested	09/04/2025	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	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.63	100		
0.425	99		
0.30	72		
0.20	12		
0.15	2		
0.063	0		

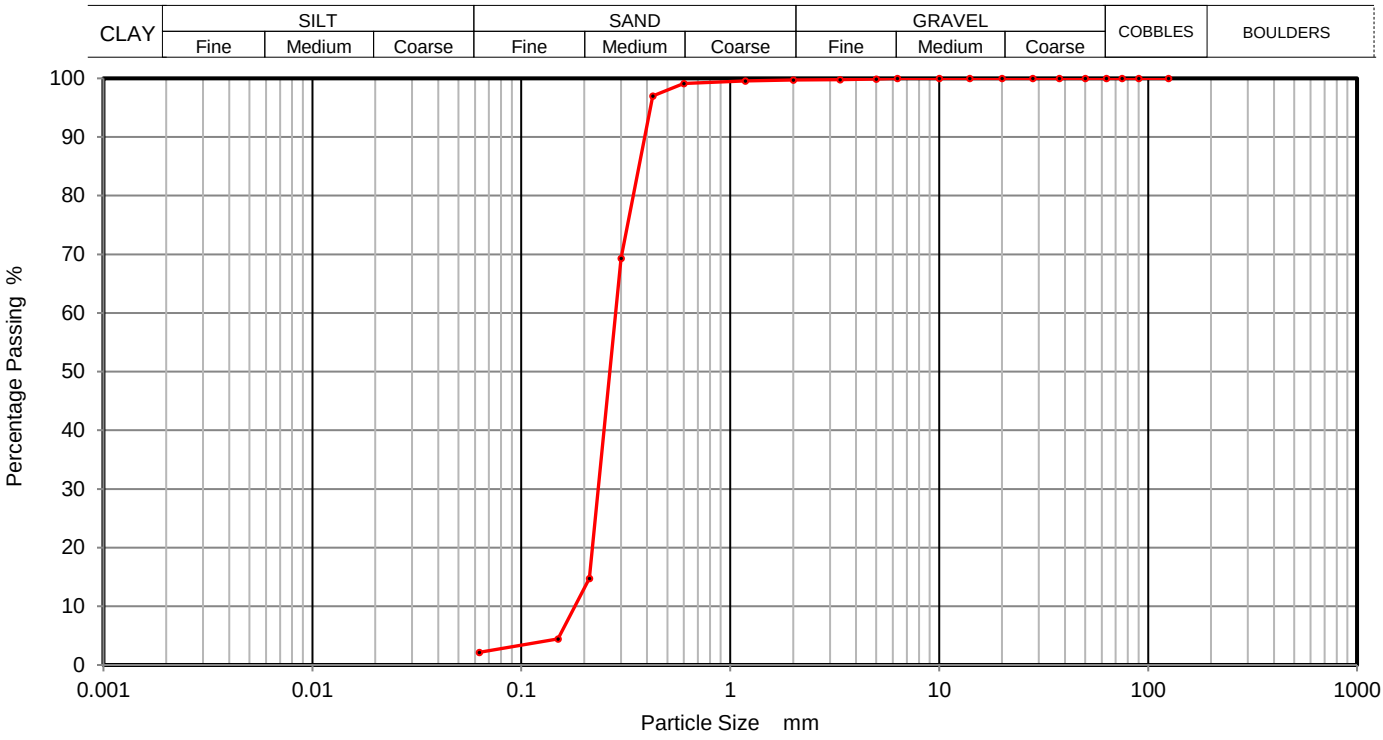
Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	100
Silt and Clay	0

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	CP103
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey fine to coarse SAND (shell fragments)	Depth Top	18.00
		Depth Base	
Date Tested	09/04/2025	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	100		
5	100		
3.35	100		
2	100		
1.18	100		
0.63	99		
0.425	97		
0.30	69		
0.20	15		
0.15	4		
0.063	2		

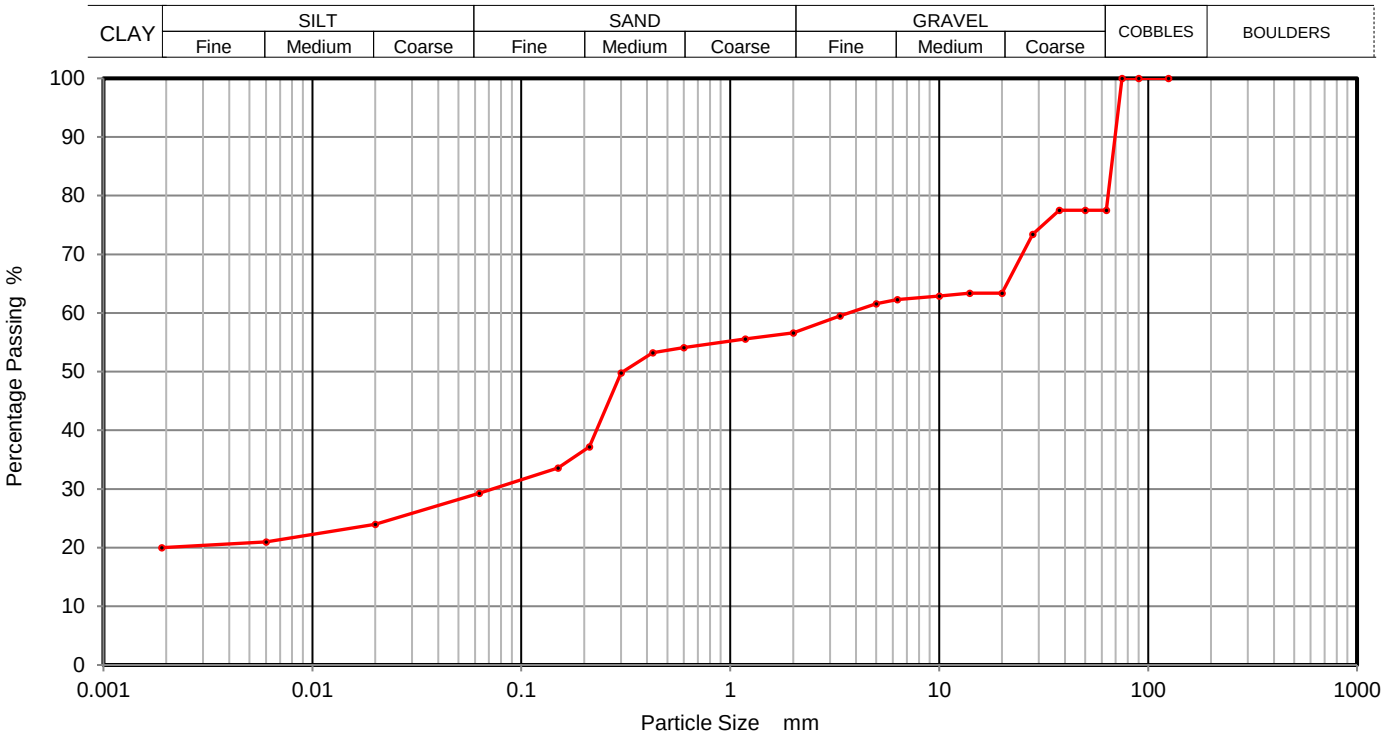
Sample Proportions	% dry mass
Cobbles	0
Gravel	0
Sand	98
Silt and Clay	2

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve & Pipette Analysis, Clause 5.2 & 5.4	Contract Number	77672
		Borehole/Pit No.	TP101
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty claey fine to coarse gravelly fine to corse SAND with cobbles	Depth Top	1.90
		Depth Base	2.20
Date Tested	09/04/2025	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	24
90	100	0.0060	21
75	100	0.0020	20
63	78		
50	78		
37.5	78		
28	73		
20	63		
14	63		
10	63		
6.3	62		
5	62		
3.35	60		
2	57		
1.18	56		
0.63	54		
0.425	53		
0.30	50		
0.20	37		
0.15	34		
0.063	29		

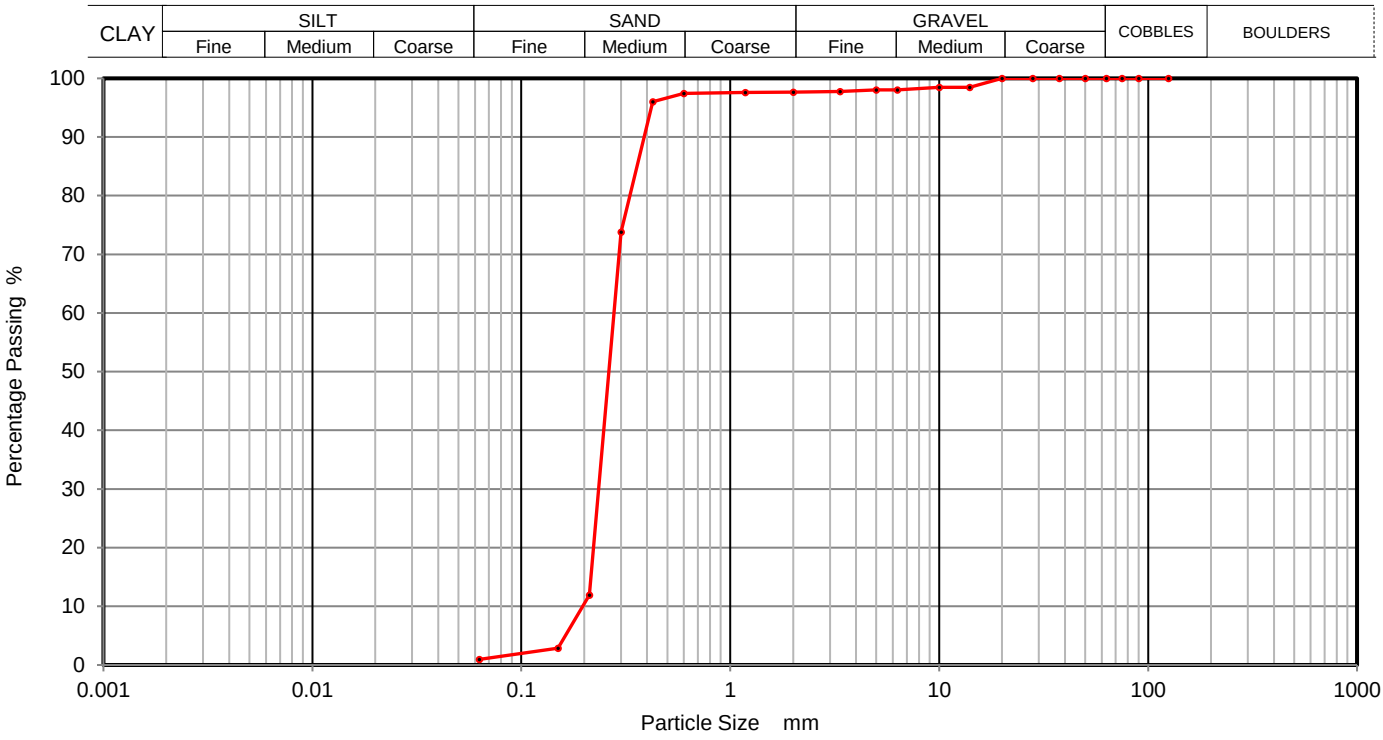
Sample Proportions	% dry mass
Cobbles	22
Gravel	21
Sand	28
Silt	9
Clay	20

Remarks

Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

GSTL GEOTECHNICAL SITE & TESTING LABORATORIES	PARTICLE SIZE DISTRIBUTION BS EN ISO 17892-4:2016 Wet Sieve, Clause 5.2	Contract Number	77672
		Borehole/Pit No.	TP102
Project Name	9222 - Sandfields Business Park	Sample No.	
Sample Description	Brown slightly silty/ clayey slightly gravelly fine to coarse SAND	Depth Top	1.60
		Depth Base	1.90
Date Tested	09/04/2025	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	98		
10	98		
6.3	98		
5	98		
3.35	98		
2	98		
1.18	98		
0.63	97		
0.425	96		
0.30	74		
0.20	12		
0.15	3		
0.063	1		

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	97
Silt and Clay	1

Remarks

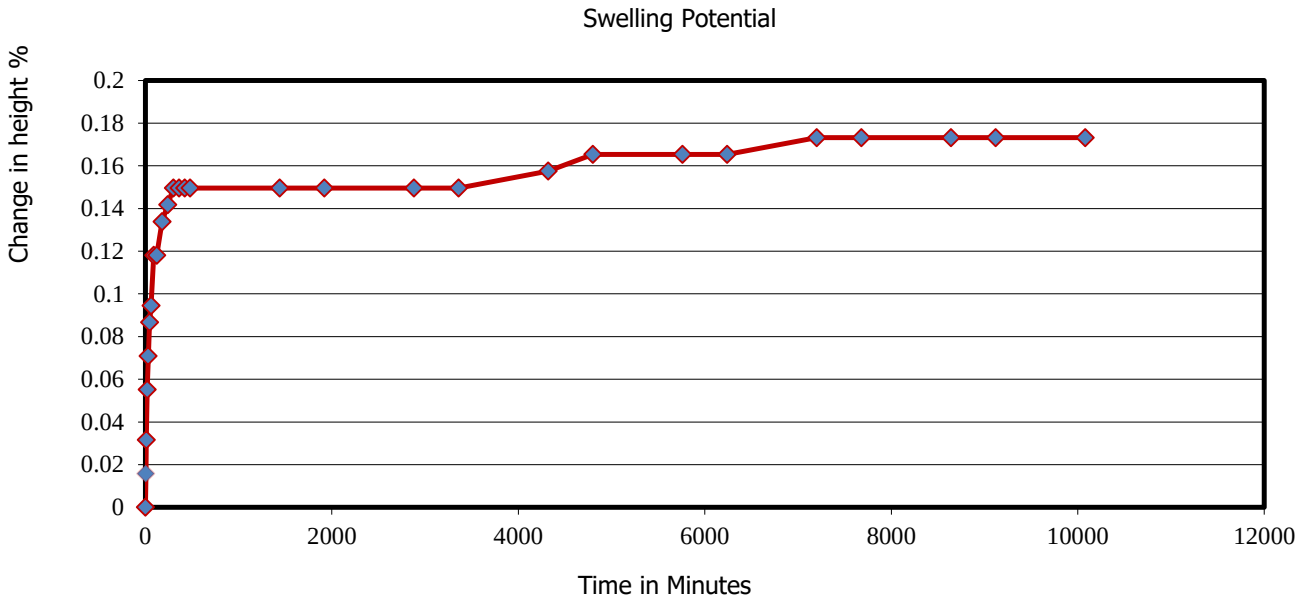
Preparation and testing in accordance with BS17892 unless noted below

Operator
David. E

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Earth Science Partnership
Client ref:	9222
Project Name:	9222 - Sandfields Business Park
Contract Number:	77672
Date Test Started:	27/03/25
BH/TP:	CP101A
Sample Number:	0
Depth (m) :	1.20
Sample Type:	B
Operator:	Darcy E
Description:	Grey silty clayey sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.22
Moisture Content - %:	9.5	Moisture Content - %:	11
Bulk Density - Mg/m3:	2.14	Bulk Density - Mg/m3:	2.12
Dry Density - Mg/m3:	1.95	Dry Density - Mg/m3:	1.95
Test Temperature C°:	90		



Swelling after 168 Hours -%
0.17

For and behalf of GEO Site & Testing Services Ltd

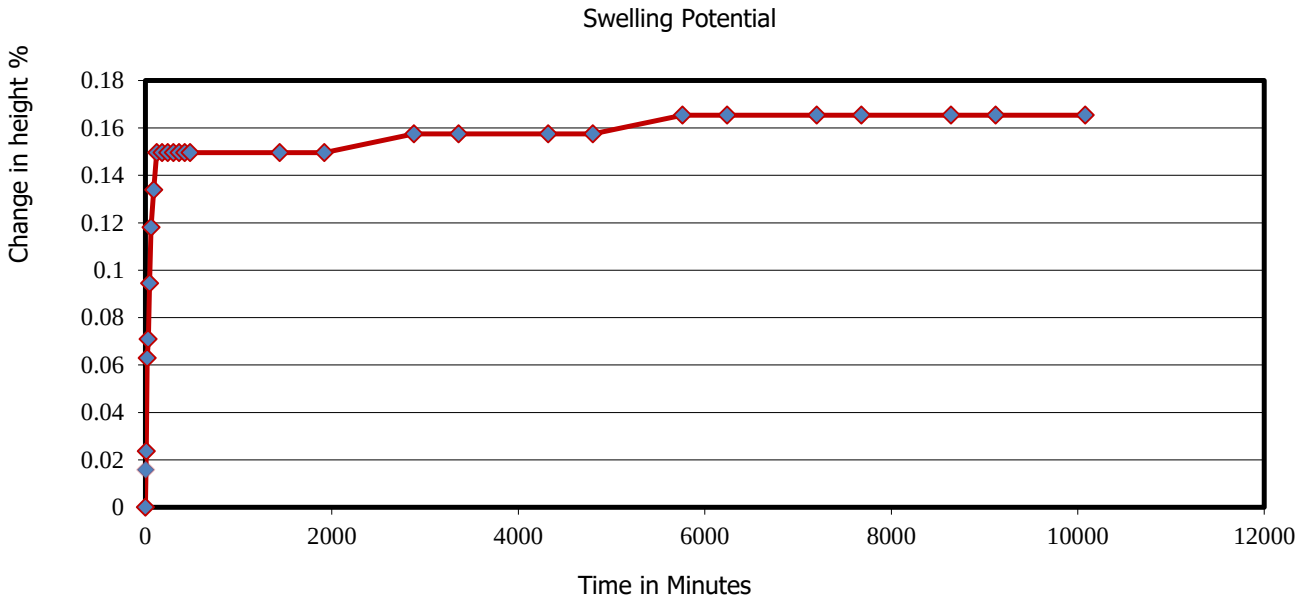
Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES

Test Report: **Determination of the Swelling Potential of Fill Material. Rapid Assessment, In house Method**

Client:	Earth Science Partnership
Client ref:	9222
Project Name:	9222 - Sandfields Business Park
Contract Number:	77672
Date Test Started:	27/03/25
BH/TP:	CP103
Sample Number:	0
Depth (m) :	1.20
Sample Type:	B
Operator:	Darcy E
Description:	Grey silty clayey sandy fine to coarse GRAVEL

INITIAL CONDITIONS.		**FINAL CONDITIONS.**	
Initial Height - mm:	127.00	Final Height - mm:	127.21
Moisture Content - %:	10.0	Moisture Content - %:	12
Bulk Density - Mg/m3:	2.15	Bulk Density - Mg/m3:	2.12
Dry Density - Mg/m3:	1.95	Dry Density - Mg/m3:	1.95
Test Temperature C°:	90		



Swelling after 168 Hours -%
0.17

For and behalf of GEO Site & Testing Services Ltd

Remarks:

GSTL
GEOTECHNICAL SITE & TESTING LABORATORIES