The Sizewell C Project

6.14 Environmental Statement Addendum
Volume 3: Environmental Statement Addendum Appendices
Chapter 2 Main Development Site Appendix 2.13.A
Phase 2 Geo-Environmental Interpretative Report Part 9 of 25

Revision: 2.0

Applicable Regulation: Regulation 5(2)(a)

PINS Reference Number: EN010012

January 2021

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP11**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**15.06.15** End: **18.06.15**	**17.37**	**E:645573.7 N:265147.7**	**3** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
18.00-18.50	37	B				Orangish brown slightly clayey slightly gravelly to gravelly coarse SAND. Gravel is angular fine to medium of shell fragments and occasional rounded to angular fine to medium flint, quartzite and iron coated mudstone and sandstone. Occasional whole shell. *(stratum copied from 15.00m from previous sheet)*		
18.80	38	D						
19.00-19.50	39	B						
19.80	40	D					20.00	
						Cable percussion borehole terminated at 20.00m depth.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP12**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**10.06.15** End: **15.06.15**	**17.79**	**E:645316.6 N:265025.8**	**1** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.50	1	B				TOPSOIL: Orangish brown slightly clayey gravelly fine to medium SAND. Gravel is angular to rounded fine to coarse of flint and quartzite.	(0.65)	
							0.65	
0.70-1.00	2	B				Brownish orange slightly clayey slightly gravelly medium SAND with pockets of orange clay. Gravel is angular to rounded fine to coarse of flint and quartzite.	1.00	
1.10-1.50	3	B				Firm brownish orange slightly gravelly slightly sandy locally sandy CLAY. Gravel is angular to subrounded fine to coarse of flint, chalk and quartzite.		
1.80	4	D						
2.00-2.50	5	B					(2.50)	
2.80	6	D						
3.00-3.50	7	B						
							3.50	
3.60-4.00	8	B				Light brownish orange slightly clayey slightly gravelly fine to medium SAND with pockets of orange clay. Gravel is subangular to subrounded fine to medium of chalk and flint.	(0.60)	
							4.10	
4.20-4.50	9	B				Light brownish orange slightly clayey locally clayey occasionally to slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to medium of flint and quartzite and occasional chalk.		
4.80	10	D						
5.00-5.80	11	B						
5.80	12	D				. . . below 5.80m, sand is medium and buff coloured.	(3.80)	
6.00-6.50	13	B						
						. . . below 6.50m, sand is coarse.		
6.80	14	D						
7.00-7.50	15	B				. . . at 7.00m, occasional thick laminations of soft grey and brown clay.		
							7.90	
7.80	16	D				Orange slightly clayey coarse SAND and GRAVEL with medium cobble content. Gravel is angular to rounded medium to coarse of flint and quartzite. Cobbles are subangular of flint.		
8.00-8.50	17	B						
8.80	18	D					(2.10)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
12/06/15	08:00	10.50	11.10		10.40
15/06/15	08:00	12.00	13.30		Dry

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
9.50	10.50	02:00
10.50	12.80	04:00

General Remarks

1. Location GPR and UXO cleared.
2. Hand dug inspection pit to 1.20m.
3. Water added to assist drilling.
4. No groundwater encountered.
5. Borehole backfilled with bentonite on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP12**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**10.06.15** End: **15.06.15**	**17.79**	**E:645316.6 N:265025.8**	**2** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
9.00-9.50	19	B				Orange slightly clayey coarse SAND and GRAVEL with medium cobble content. Gravel is angular to rounded medium to coarse of flint and quartzite. Cobbles are subangular of flint. *(stratum copied from 7.90m from previous sheet)*		
9.80	20	D					10.00	
10.00-10.50	21	B				Light buff medium SAND.		
10.80	22	D						
11.00-11.50	23	B						
11.80	24	D				. . . 11.80m, occasional pockets of soft brown clay.		
12.00-12.50	25	B						
12.80	26	D						
13.00-13.50	27	B				. . . from 13.00m, sand becomes medium to coarse.	(6.50)	
13.80	28	D						
14.00-14.50	29	B						
14.80	30	D						
15.00-15.50	31	B				. . . below 15.00m, pockets and lenses of soft grey and brown clay. Sand is orangish buff in colour.		
15.80	32	D						
16.00-16.40	33	B						
16.50-17.00	34	B				Soft brown slightly sandy silty CLAY with thin to thick laminations of grey and orange silt, clay and sand.	16.50	
17.20	35	D						
17.50-18.00	36	B						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	AGS

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP12**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**10.06.15** End: **15.06.15**	**17.79**	**E:645316.6 N:265025.8**	**3** of **3**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
18.20	37	D				Soft brown slightly sandy silty CLAY with thin to thick laminations of grey and orange silt, clay and sand. *(stratum copied from 16.50m from previous sheet)*	(3.50)	
18.50-19.00	38	B						
19.20	39	D						
19.50-20.00	40	B						
							20.00	
						Cable percussion borehole terminated at 20.00m depth.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP13**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **24.06.15**	**12.07**	**E:646008.7 N:265383.7**	**1** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.40	1	B				TOPSOIL: Brown slightly clayey slightly gravelly medium SAND. Gravel is angular to rounded medium of flint and quartzite.	0.40	
0.50-0.90	2	B				Orangish buff slightly clayey gravelly medium to coarse SAND. Gravel is angular to subrounded fine to coarse of flint and quartzite. . . . 0.50m-1.80m, colour is orangish brown.	(2.40)	
1.00-1.50	3	B						
1.80	4	D					2.80	
2.00-2.50	5	B						
2.80	6	D				Orangish buff slightly clayey gravelly coarse SAND. Gravel is angular to subrounded fine to coarse of flint and quartzite.	3.00	
3.00-3.50	7	B				Orange slightly clayey slightly gravelly medium to coarse SAND. Gravel is angular to rounded fine to coarse of flint and quartzite. . . . 3.00m-4.00m, pockets and lenses of soft grey and brown clay.	(3.60)	
3.80	8	D						
4.00-4.50	9	B						
4.80	10	D					6.60	
5.00-5.50	11	B				. . . from 5.00m, frequent medium rounded brown iron coated nodules of mudstone .		
5.80	12	D						
6.00-6.50	15	B						
6.80	16	D				Orangish brown slightly clayey locally clayey slightly graavelly locally gravelly medium to coarse SAND. Gravel is angular fine to medium of shell fragments and angular to rounded fine to medium of flint and occasional quartzite. Occasional whole shells <20mm.		
7.00-7.75	17	B						
7.80	18	D						
8.00-8.50	19	B						
8.80	20	D						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
22/06/15	09:00	2.00	3.00		Dry
23/06/15	09:00	11.20	12.00		10.20
23/06/15		12.70	12.50		12.70

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
9.50	12.00	04:30
12.00	12.70	01:00
19.00	20.00	01:30

General Remarks

1. Location GPR and UXO cleared.
2. Hand dug inspection pit to 1.20m.
3. Water added to assist drilling.
4. Groundwater encountered at 12.70m rising to 11.00m after 20 minutes.
5. Standpipe installed on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP13**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **24.06.15**	**12.07**	**E:646008.7 N:265383.7**	**2** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
9.00-9.50	21	B				Orangish brown slightly clayey locally clayey slightly graavelly locally gravelly medium to coarse SAND. Gravel is angular fine to medium of shell fragments and angular to rounded fine to medium of flint and occasional quartzite. Occasional whole shells <20mm. *(stratum copied from 6.60m from previous sheet)*		
9.80	22	D						
10.00-10.50	23	B						
10.80	24	D		▽				
11.00-11.50	25	B				. . . between 11.00m-12.00m, pockets of soft grey and brown clay.		
11.80	26	D						
12.00-12.50	27	B		▼				
12.80	28	D				. . . between 12.80m-17.00m, rounded medium iron coated mudstone nodules.		
13.00-13.50	29	B					(13.40)	
13.80	30	D						
14.00-14.50	31	B						
14.80	32	D						
15.00-15.50	33	B						
15.80	34	D						
16.00-16.50	35	B						
16.80	36	D						
17.00-17.50	37	B						
17.80	38	D						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP13**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**18.06.15** End: **24.06.15**	**12.07**	**E:646008.7 N:265383.7**	**3** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
18.00-18.50	39	B				Orangish brown slightly clayey locally clayey slightly graavelly locally gravelly medium to coarse SAND. Gravel is angular fine to medium of shell fragments and angular to rounded fine to medium of flint and occasional quartzite. Occasional whole shells <20mm. *(stratum copied from 6.60m from previous sheet)*		
18.80	40	D						
19.00-19.50	41	B						
19.80	42	D					20.00	

Boring Progress and Water Observations						Chiselling / Slow Progress			General Remarks
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth	From	To	Duration (hh:mm)	

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP14**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **29.06.15**	**13.93**	**E:646038.3 N:265266.9**	**1** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
0.00-0.40	1	B				TOPSOIL. Light yellowish brown slightly clayey slightly gravelly fine to medum SAND. Gravel is angular to rounded fine to coarse flint and quartzite.	0.40	
0.50-1.00	2	B				Yellowish orange slightly clayey fine to medum SAND.		
1.30	3	D						
1.50-2.00	4	B				. . . below 1.50m, colour is buff.		
						. . . below 2.00m, occasional gravel of angular fine to medium flint.	(3.50)	
2.30	5	D						
2.50-3.00	6	B						
3.00	7	B						
3.80	8	D					3.90	
4.00-4.50	9	B				Buff slightly clayey slightly gravelly coarse SAND. Gravel is angular to subangular fine to medium flint.		
4.80	10	D						
5.00-5.50	11	B		1			(3.10)	
5.80	12	D						
6.00-6.50	13	B				. . . below 6.00m, colour is orange with pockets of silty sand.		
6.80	14	D		1			7.00	
7.00-7.50	15	B				Orange silty fine SAND.		
7.80	16	D					(2.00)	
8.00-8.50	17	B				. . . below 8.00m, becomes buff in colour.		
8.80	18	D					9.00	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
24/06/15		7.00	6.80		7.00
24/06/15	17:15	10.50	10.50		10.00
26/06/15	08:00	11.50	12.50		Dry
29/06/15	09:30	12.00	12.50		11.90
29/06/15		14.50	14.50		14.50

Chiselling / Slow Progress		
From	To	Duration (hh:mm)
6.00	7.00	02:00
10.50	12.50	04:00
12.50	13.40	02:15

General Remarks

1. Location GPR and UXO cleared.
2. Hand dug inspection pit to 1.20m.
3. Water added to assist drilling.
4. Groundwater encountered at 7.00m rising to 5.70m after 20 minutes and 14.50m rising to 11.60m after 20 minutes.
5. Standpipe installed on completion.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP14**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **29.06.15**	**13.93**	**E:646038.3 N:265266.9**	**2** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
9.00-9.50	19	B				Orangish buff clayey slightly gravelly medium SAND. Gravel is rounded to angular fine to medium flint and quartzite.	(1.50)	
9.80	20	D						
10.00-10.50	21	B				. . . below 10.00m, sand is medium to coarse.	10.50	
10.80	22	D				Orangish buff slightly clayey gravelly medium to coarse SAND. Gravel is angular fine to medium shell fragments and occasional angular to rounded fine to medium flint and quartzite. Occasional whole shell <10mm.		
11.00-11.50	23	B		5		. . . at 11.50m, occasional gravel of flat angular iron coated mudstone.		
11.80	24	D						
12.00-12.50	25	B				. . . below 12.00m, colour is buff and sand is coarse becomes gravelly.		
12.80	26	D						
13.00-13.50	27	B				. . . 13.00m-15.00m, lenses of soft grey and brown laminated clay.		
13.80	28	D						
14.00-14.50	29	B		5				
14.80	30	D						
15.00-15.50	31	B					(9.50)	
15.80	32	D						
16.00-16.50	33	B				. . . at 16.00m, thick lense/thin bed orange brown and grey laminated silt and clay.		
16.80	34	D						
17.00-17.50	35	B				. . . 17.00m-19.00m, gravel of flat rounded medium iron coated mudstone.		
17.80	36	D						

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	

STRUCTURAL SOILS

DRAFT BOREHOLE LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**CPB BP14**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **29.06.15**	**13.93**	**E:646038.3 N:265266.9**	**3** of **3**

Samples and In-situ Tests				Water	Backfill & Instrumentation	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
18.00-18.50	37	B				Orangish buff slightly clayey gravelly medium to coarse SAND. Gravel is angular fine to medium shell fragments and occasional angular to rounded fine to medium flint and quartzite. Occasional whole shell <10mm. *(stratum copied from 10.50m from previous sheet)*		
18.80	38	D						
19.00-19.50	39	B						
19.80	40	D					20.00	
						Cable percussion borehole terminated at 20.00m depth.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

Chiselling / Slow Progress		
From	To	Duration (hh:mm)

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Cable percussion	**Dando 2000**	**DJ**	**SHaynes**	AGS

STRUCTURAL SOILS

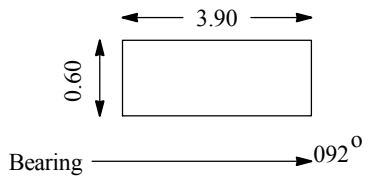
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP1**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**12.39**	**E:645574.5 N:265404.7**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey slightly gravelly medium SAND. Gravel is angular to subrounded medium to coarse of flint, quartzite and chalk.	(0.65) 0.65	
0.70	1	B				Orange and grey locally black clayey slightly gravelly medium SAND. Locally weakly ferrus cemented. Gravel is angular to subrounded fine to coarse of flint and quartzite.	(0.85) 1.50	
1.70	2	B				Orange slightly clayey fine to medium SAND with large lenses of soft grey sandy clay with plant material. . . . at 2.00m, lense of subrounded to subangular fine to coarse gravel of flint and quartzite.	(1.00) 2.50	
2.70	3	B				Yellow clayey slightly gravelly SAND with occasional pockets and lenses of soft grey clay. Gravel is rounded to subrounded fine to medium of flint and quartzite.		
3.00	4	B				. . . below 3.00m, colour of sand is white.	(1.00) 3.50	
3.50	5	B				Trial pit terminated at 3.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces remained stable during excavation.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP1**
Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**12.39**	**E:645574.5 N:265404.7**	**2** of **2**

TP BP1 - 3.50m

TP BP1 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

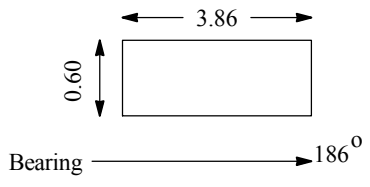
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP2**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**11.95**	**E:646011.6 N:265394.3**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey slightly gravelly medium SAND. Gravel is angular to rounded fine to coarse of flint and quartzite.	(0.50)	
0.50	1	B					0.50	
						Orangish brown slightly clayey slightly gravelly medium SAND. Gravel is angular to rounded fine to coarse of flint and quartzite.	(0.50)	
1.00	2	B					1.00	
						Orange locally dark orange clayey slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to medium of flint and quartzite.	(1.00)	
2.00	3	B					2.00	
						Orange slightly clayey locally clayey slightly gravelly locally gravelly coarse SAND with low cobble content. Gravel is subangular to subrounded fine to coarse of flint and quartzite. Cobbles are subangular flint.		
2.50	4	B				. . . at 2.00m, occasional gravel of medium to coarse tabular iron coated mudstone.	(1.50)	
						. . . at 3.00m, pockets of orange sandy clay.		
3.50	5	B					3.50	
						Trial pit terminated at 3.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces remained stable during excavation.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP2**
Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**11.95**	**E:646011.6 N:265394.3**	**2** of **2**

TP BP2 - 3.50m

TP BP2 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

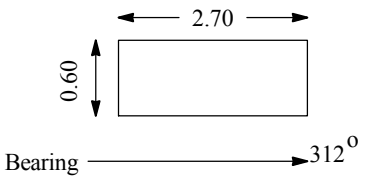
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **15.07.15**	**15.37**	**E:645318.4 N:265294.0**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown clayey slightly gravelly medium SAND. Gravel is angualar to subrounded fine to coarse of flint and quartzite.	(0.45) 0.45	
0.70	1	B				Firm to stiff orange slightly sandy slightly gravelly CLAY. Gravel is rounded to angular fine to coarse of flint, quartzite and chalk.	(1.65) 2.10	
1.50	2	B						
						Yellow clayey fine to medum SAND.	(1.10) 3.20	
2.50	3	B						
3.00	4	B						
						Trial pit terminated at 3.20m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces remained stable during excavation.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP3**
Contract Ref:	Start: **15.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **15.07.15**	**15.37**	**E:645318.4 N:265294.0**	**2** of **2**

TP BP3 - 3.20m

TP BP3 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

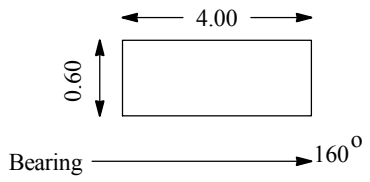
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP5**

Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**13.46**	**E:646030.9 N:265299.4**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subangular medium to coarse of flint and quartzite.	(0.45) 0.45	
0.50	1	B				Orange slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subrounded fine to coarse of flint and quartzite. . . . at 0.70m, subrounded flint cobble.	(0.45) 0.90	
1.00	2	B				Yellow slightly gravelly medium SAND. Gravel is subangular to subrounded fine to medium of flint and quartzite.	(0.80) 1.70	
1.70	3	B				Yellowish Buff slightly gravelly to gravelly coarse SAND. Gravel is angular to subrounded fine to coarse of flint and quartzite. . . . 2.00m-2.50m, partial collapse of face B.	(0.80) 2.50	
						. . . below 2.50m, full collapse of face B. Trial pit terminated at 2.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces unstable during excavation.
5. Trial pit backfilled with arisings and compacted layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP5**
Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**13.46**	**E:646030.9 N:265299.4**	**2** of **2**

TP BP5 - 2.50m

TP BP5 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

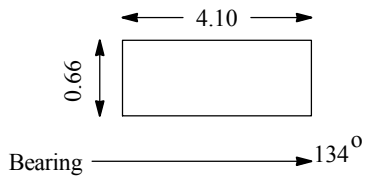
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP6**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**14.07.15** End: **14.07.15**	**16.75**	**E:645429.5 N:265206.5**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly to locally clayey slightly gravelly fine to medium SAND. Gravel is angular to rounded fine to coarse of flint and quartzite.	(0.40) 0.40	
0.50	1	B				Orangish buff locally orange clayey slightly gravelly fine to medium SAND with pockets and lenses of orange sandy clay. Gravel is rounded to angular fine to coarse of flint and quartzite.	(1.00) 1.40	
1.50	2	B				Firm orange locally grey slightly sandy slightly gravelly CLAY. Gravel is angular to rounded fine to coarse of flint, quartzite and chalk.	(1.00) 2.40	
2.50	3	B				Yellow and orange clayey fine to medium SAND.	(0.30) 2.70	
2.70	4	B				Yellow slightly clayey fine to medium SAND. . . . 2.90m-3.20m, partial collapse of lower faces.	(0.80) 3.50	
3.20	5	B				Trial pit terminated at 3.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Faces unstable during excavation.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP6**
Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**16.75**	**E:645429.5 N:265206.5**	**2** of **2**

TP BP6 - 3.50m

TP BP6 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

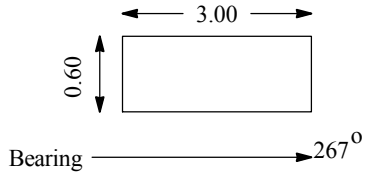
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP7**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**16.07.15**	**16.86**	**E:645580.1 N:265211.0**	**1** of **2**
	End: **16.07.15**			

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subangular fine to coarse of flint and quartzite.	(0.50)	
							0.50	
0.60	1	B				Orange clayey gravelly medium SAND. Gravel is angular to subangular medium to coarse of flint and quartzite.	(0.30)	
0.80	2	B					0.80	
						Firm orange sandy slightly gravelly CLAY. Gravel is rounbded to subangular fine to medium occasionally coarse of flint, quartzite and chalk.		
1.50	3	B						
							(2.20)	
						. . . below 2.00m, colour becomes light orangish brown.		
2.50	4	B						
							3.00	
						Whitish yellow slightly clayey fine SAND.	(0.40)	
3.20	5	B						
							3.40	
						Trial pit terminated at 3.40m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Faces of trial pit stable during excavation.
5. Trial pit backfilled with arisings and compaced in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP7**
Contract Ref:	Start: **16.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **16.07.15**	**16.86**	**E:645580.1 N:265211.0**	**2** of **2**

TP BP7 - 3.40m

TP BP7 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

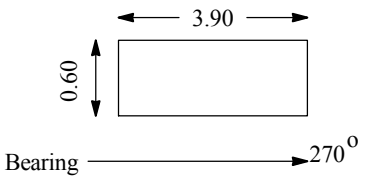
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**BP8**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**14.07.15** End: **14.07.15**	**14.46**	**E:646055.4 N:265236.3**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey slightly gravelly medium SAND. Gravel is angular to subangular medium to coarse of flint.	(0.45) 0.45	
0.50	1	B				Buff slightly clayey locally clayey slightly gravelly fine to medium SAND with pockets and lenses of soft to firm buff and orange sandy clay. Gravel is angular to rounded fine to coarse of flint, quartzite and chalk.	(1.05) 1.50	
1.00	2	B						
1.50	3	B				Yellow clayey fine to medium SAND with occasional pockets of soft orange sandy clay.	(1.30) 2.80	
2.00	4	B				. . . below 2.50m, colour becomes whitish yellow.		
						Whitish yellow slightly gravelly fine to medium SAND. Gravel is rounded fine to medium of quartzite.	(0.40) 3.20	
3.00	5	B						
3.20	6	B				Trial pit terminated at 3.20m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. No groundwater encountered.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces remained stable during excavation.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**BP8**
Contract Ref:	Start: **14.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **14.07.15**	**14.46**	**E:646055.4 N:265236.3**	**2** of **2**

TP BP8 - 3.20m

TP BP8 - SPOIL

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

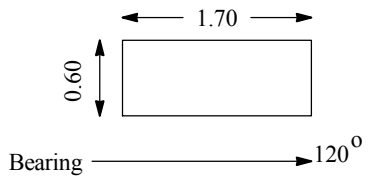
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**WMZ18**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**15.07.15** End: **15.07.15**	**10.88**	**E:645639.6 N:265638.0**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Grey slightly clayey slightly gravelly fine to medium SAND. Gravel is subrounded to subangular medium to coarse of flint, quartzite and sandstone.	(0.50) 0.50	
0.50	1	B				Brown locally black slightly clayey medium to coarse SAND with medium cobble content. Cobbles are subangular to subrounded sandstone with heavy iron staining.	(1.00) 1.50	
1.50	2	B				Yellow slightly clayey to clayey thinly laminated fine to medium SAND.	(2.00) 3.50	
2.50	3	B						
3.00	4	B						
						Trial pit terminated at 3.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. Soakaway test performed at 3.50m.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces remained stable during excavation and collapsed during soakway test.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**WMZ18**
Contract Ref:	Start: **15.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **15.07.15**	**10.88**	**E:645639.6 N:265638.0**	**2** of **2**

TP WMZ18 - 3.50m

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

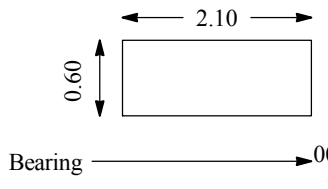
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**WMZ19**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**16.07.15** End: **16.07.15**	**12.22**	**E:645240.9 N:263713.4**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Brown slightly clayey gravelly medium to coarse SAND. Gravel is angular to rounded fine to coarse of flint, quartzite and chalk.	(0.55) 0.55	
0.70	1	B				Orange and yellow locally brown slightly clayey slightly gravelly fine to medium SAND. Gravel is subangular to rounded fine to medium of flint and quartzite.	(0.65) 1.20	
1.50	2	B				Yellow clayey slightly gravelly medium to coarse SAND. Gravel is rounded to subangular fine to coarse of flint and quartzite.	(0.80) 2.00	
2.00	3	B				. . . below 1.90m, gravels of flat tubular iron coated sandstone and mudstone. Yellow medium to coasre SAND and GRAVEL with medium cobble content. Gravel is angular to subangular medium to coarse of flint and quartzite. Cobbles are subangular to subrounded flint.	(0.40) 2.40	
2.50	4	B				Yellow slightly clayey slightly gravelly fine to medium SAND. Gravel is rounded to subangular medium to coarse of flint and quartzite.	(1.10)	
3.00	5	B				. . . 3.10m-3.50m, partial collapse of lower faces.	3.50	
						Trial pit terminated at 3.50m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. Soakaway test performed at 3.50m.
3. Easy to excavate with JCB 3CX.
4. Trial pit faces unstable during excavation and soakaway test.
5. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**WMZ19**
Contract Ref:	Start: **16.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **16.07.15**	**12.22**	**E:645240.9 N:263713.4**	**2** of **2**

TP WMZ19 - 3.50m

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

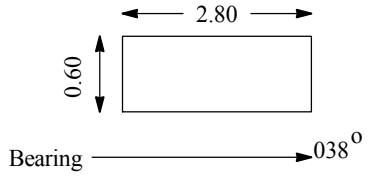
DRAFT
TRIAL PIT LOG

Contract:	Client:	Trial Pit:
SZC 2015 Onshore GI	**NNB GenCo**	**WMZ20**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**15.07.15** End: **15.07.15**	**2.29**	**E:647095.4 N:264944.3**	**1** of **2**

Samples and In-situ Tests				Water	Backfill	Description of Strata	Depth (Thickness)	Material Graphic Legend
Depth	No	Type	Results					
						TOPSOIL: Light brown slightly clayey gravelly fine to medium SAND. Gravel is rounded to subangular medium to coarse of flint and quartzite.	(0.70)	
0.70	1	B				Orange clayey fine to meduim SAND.	0.70	
						. . . at 1.10m, soakaway test undertaken.	(0.50)	
1.20	2	B				Firm orange thinly to thickly laminated slightly silty slightly sandy CLAY. Laminations are brown and grey clay.	1.20	
							(0.90)	
2.10	3	B		≈		Orange yellow and grey clayey fine to medium SAND with occasional pockets of clay and nodules of mudstone.	2.10	
						. . . at 2.20m, slightly moderate groundwater seepage.	2.30	
						Trial pit terminated at 2.30m depth.		

Plan (Not to Scale)



General Remarks

1. Location GPR and UXO cleared.
2. Soakaway test performed at 1.10m.
3. Trial pit continued after soakaway test.
4. Slightly moderate groundwater seepage encountered at 2.20m.
5. Easy to excavate with JCB 3CX.
6. Trial pit remained stable during excavation.
7. Trial pit backfilled with arisings and compacted in layers.

All dimensions in metres | Scale: **1:25**

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
TRIAL PIT LOG

Contract:		Client:		Trial Pit:
SZC 2015 Onshore GI		**NNB GenCo**		**WMZ20**
Contract Ref:	Start: **15.07.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **15.07.15**	**2.29**	**E:647095.4 N:264944.3**	**2** of **2**

TP WMZ20 - 1.10M

Method Used:	Plant Used:	Logged By:	Checked By:
Machine dug	**JCB-3CX**	**SHaynes**	

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**1** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
										Dark brown silty SAND. Sand is fine to medium.	(1.50) 1.50	
										Light brown occasionally grey silty SAND with rare medium sand sized pockets of grey clay. Sand is fine to coarse. . . . 1.97m-2.10m, dark brown. . . . 2.90m-3.00m, very stiff brown slightly sandy clay. . . . below 3.40m, light grey slightly gravelly. Gravel is subrounded fine to medium quartzite and flint.	(3.00) 4.50	
										Orangish brown silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to medium quartzite and flint. . . . below 5.50m, sand is fine to medium. . . . at 7.70m, pocket of grey slightly sandy clay. . . . 8.75m-8.85m, grey clay.	(6.28)	

1.20-1.50m Sonic run

1.50-3.00m Sonic run

3.00-4.50m Sonic run

4.50-6.00m Sonic run

6.00-7.50m Sonic run

7.50-9.00m Sonic run

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
11/09/15	11:00	9.00	9.00	114	-
11/09/15	12:45	15.00	15.00	114	11.00
14/09/15	13:00	15.00	15.00	114	11.10
14/09/15	14:15	16.50	16.50	114	8.10
15/09/15	08:45	16.50	16.50	114	8.14
15/09/15	18:15	31.50	31.50	114	0.00
16/09/15	08:30	31.50	31.50	114	8.60
16/09/15	17:45	51.00	51.00	114	6.10

General Remarks

1. Hand dug inspection pit to 1.20m.
2. 114.30mm diameter rotary-vibratory core barrell used in conjunction with semi-rigid U86 plastic liner.
3. Water added to aid drilling process.
4. Installed with 50mm standpipe piezometer on completion. Response Zone between 35.50 and 45.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**2** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				9.00-10.50m Sonic run						Orangish brown silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to medium quartzite and flint. *(stratum copied from 4.50m from previous sheet)* . . . below 9.00m, fine to coarse.		
				10.50-12.00m Sonic run						. . . 10.60m-10.78m, brown sandy clay. Sand is fine to coarse.	10.78	
										Brown silty clayey SAND. Sand is fine to coarse. . . . 11.44m-11.50m, brown clay. . . . 11.62m-11.80m, very thinly bedded. . . . 11.86m-11.95m, brown clay with some mudstone gravel. . . . 12.00m-12.47m, AZCL.	(2.62)	
				12.00-13.50m Sonic run						. . . 12.47m-13.40m, thinly bedded orangish brown and light grey.	13.40	
				13.50-15.00m Sonic run						Orangish brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse. . . . at 14.20m, 2no. subangular coarse mudstone gravels. . . . at 14.85m, 1no. subangular mudstone gravel.	(3.36)	
				15.00-16.50m Sonic run						. . . 16.55m-16.76m, brown fine sand with much silt and occasional subangular medium mudstone gravels.	16.76	
				16.50-18.00m Sonic run						Brown, dark brown and orangish brown thinly laminated silty SAND. Sand is fine to coarse. . . . at 17.34m, occasional coarse sand sized shell fragments.	(1.29)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
17/09/15	08:30	51.00	51.00	114	8.14

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**10.09.15** End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**3** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				18.00-19.50m Sonic run						Light orangish brown silty SAND. Sand is fine to medium.	18.05	
				19.50-21.00m Sonic run						. . . 20.70m-21.00m, with brown staining.	(4.95)	
				21.00-22.50m Sonic run							23.00	
				22.50-24.00m Sonic run						Brown, orangish brown and light grey thinly laminated silty SAND. Sand is fine to medium.	(2.34)	
				24.00-25.50m Sonic run						. . . below 24.24m, frequent coarse sand sized shell fragments.	25.34	
				25.50-27.00m Sonic run						Reddish brown silty SAND. Sand is fine to medium.	(1.76)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**4** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				27.00-28.50m Sonic run						Grey to dark grey silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse.	27.10	
				28.50-30.00m Sonic run						. . . 27.30m-27.40m, clayey.		
				30.00-31.50m Sonic run								
				31.50-33.00m Sonic run						. . . 31.50m-32.30m, high shell content.		
				33.00-34.50m Sonic run								
				34.50-36.00m Sonic run						. . . 34.50m-35.80m, light grey.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**10.09.15** End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**5** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				36.00-37.50m Sonic run						Grey to dark grey silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse. *(stratum copied from 27.10m from previous sheet)*	(18.03)	
				37.50-39.00m Sonic run								
				39.00-40.50m Sonic run								
				40.50-42.00m Sonic run								
				42.00-43.50m Sonic run						. . . below 42.00m, high shell content.		
				43.50-45.00m Sonic run						. . . below 43.50m, shells are coarse sand to fine sand sized.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP3**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**6** of **23**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				45.00-46.50m Sonic run						Stiff dark grey silty CLAY.	45.13	
										. . . below 45.45m, brown.		
				46.50-48.00m Sonic run						. . . 47.10m-47.23m, 47.64m-47.70m, grey with subangular coarse gravels of mudstone.	(5.87)	
				48.00-49.50m Sonic run						. . . 49.58m-49.90m, non intact, very wet clay band.		
				49.50-51.00m Sonic run						. . . 50.24m-50.55m, grey with subangular fine to coarse mudstone gravels. . . . at 50.60m, 1no. subangular coarse mudstone gravel.	51.00	
										Borehole terminated at 51.00m depth.		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**7** of **23**

Core Box 1

Core Box 2

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**8** of **23**

Core Box 3

Core Box 4

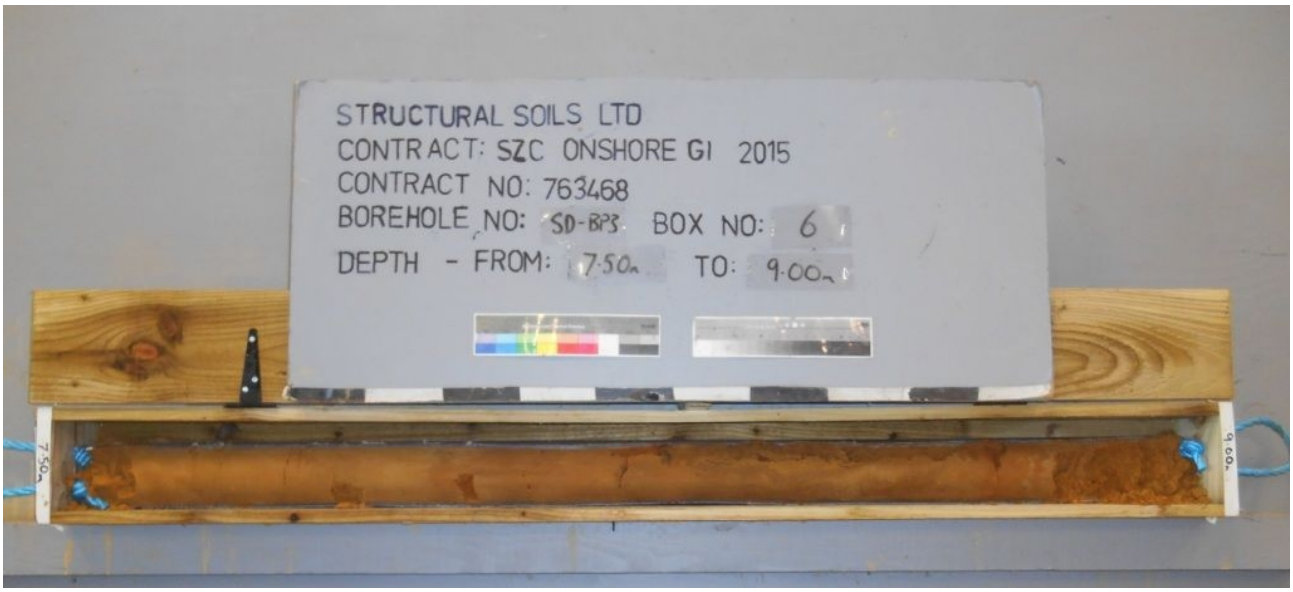
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**9** of **23**

Core Box 5



Core Box 6

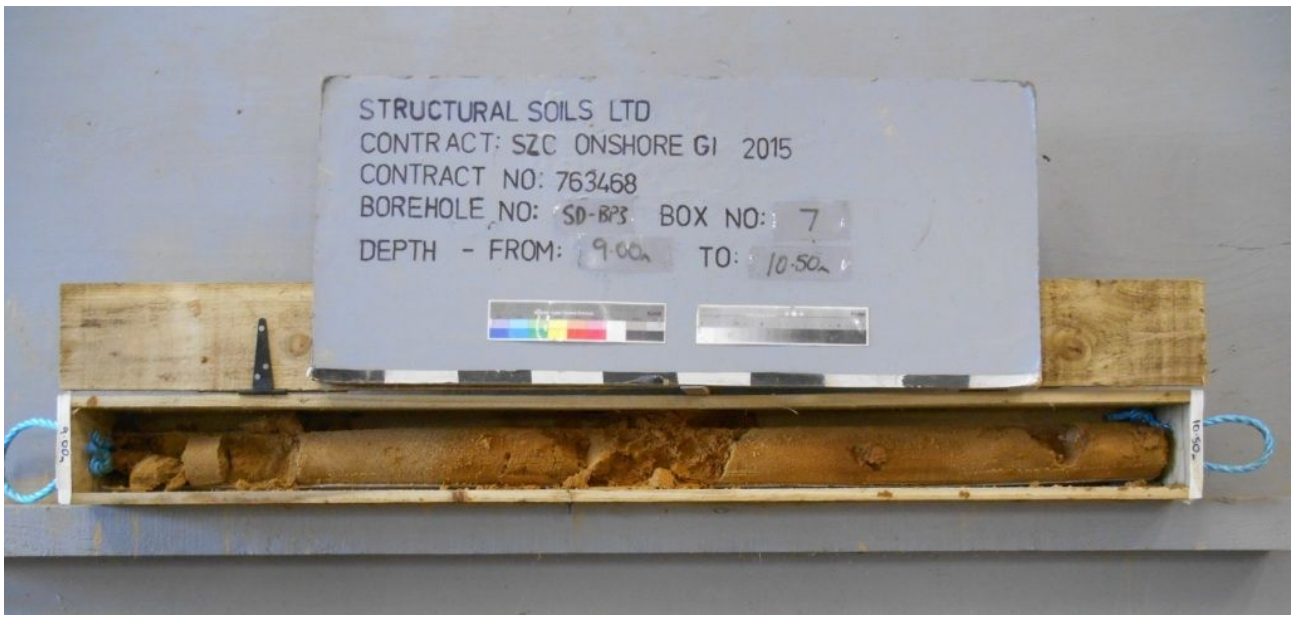
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

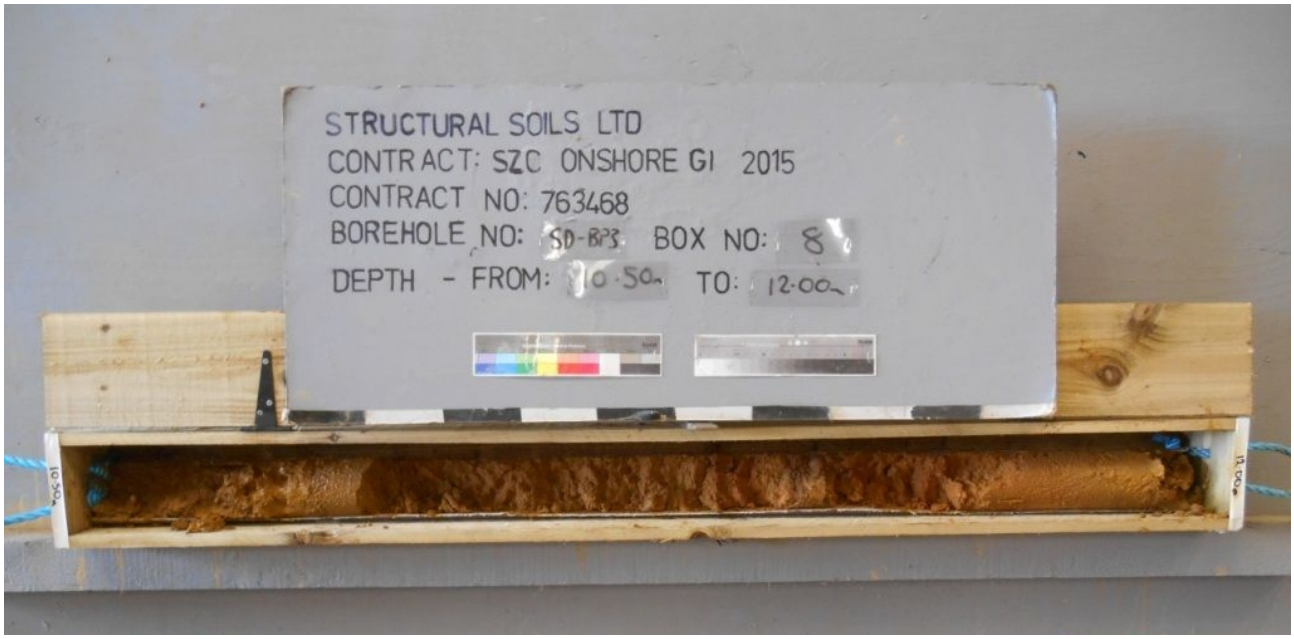
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**10** of **23**

Core Box 7





Core Box 8

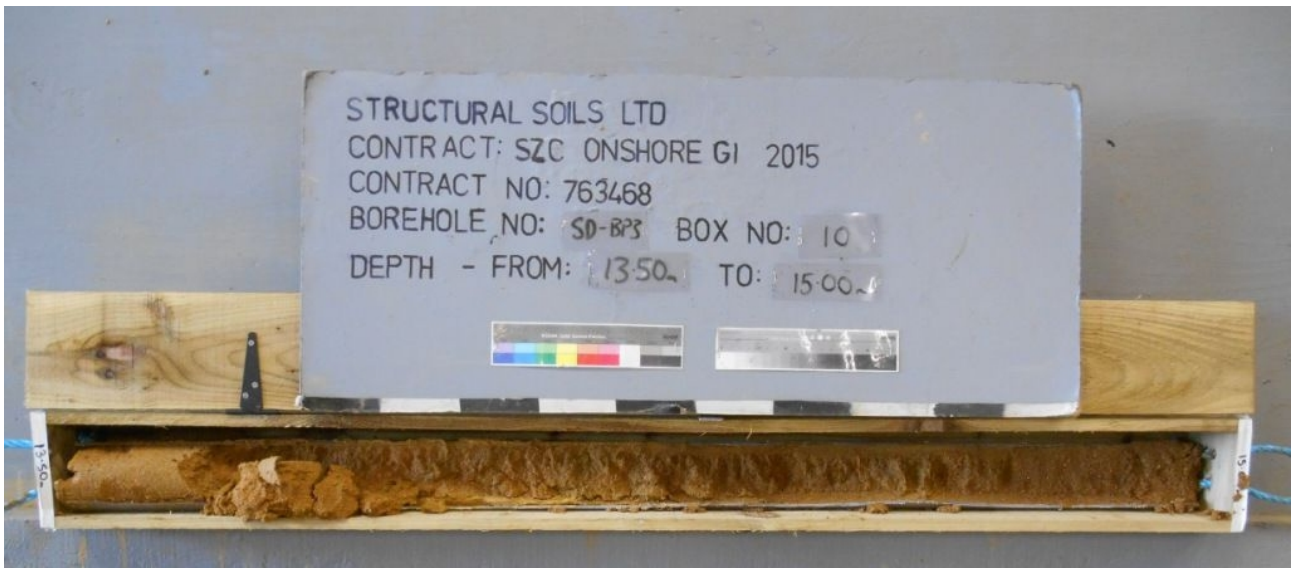
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**11** of **23**

Core Box 9



Core Box 10

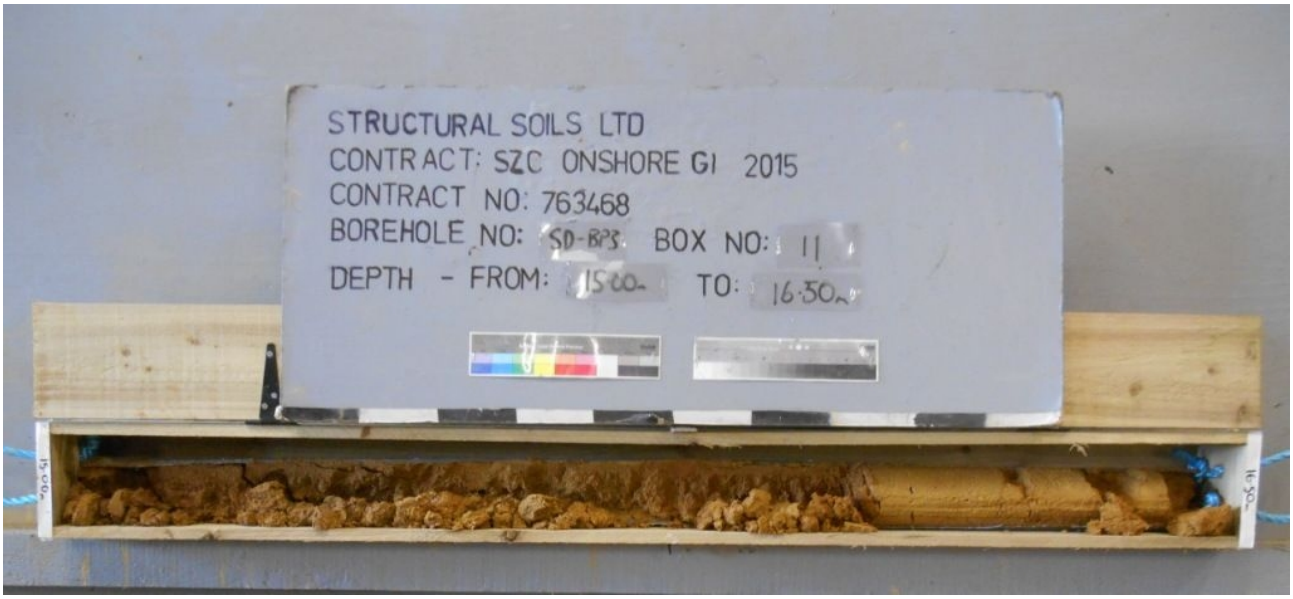
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**12** of **23**

Core Box 11



Core Box 12

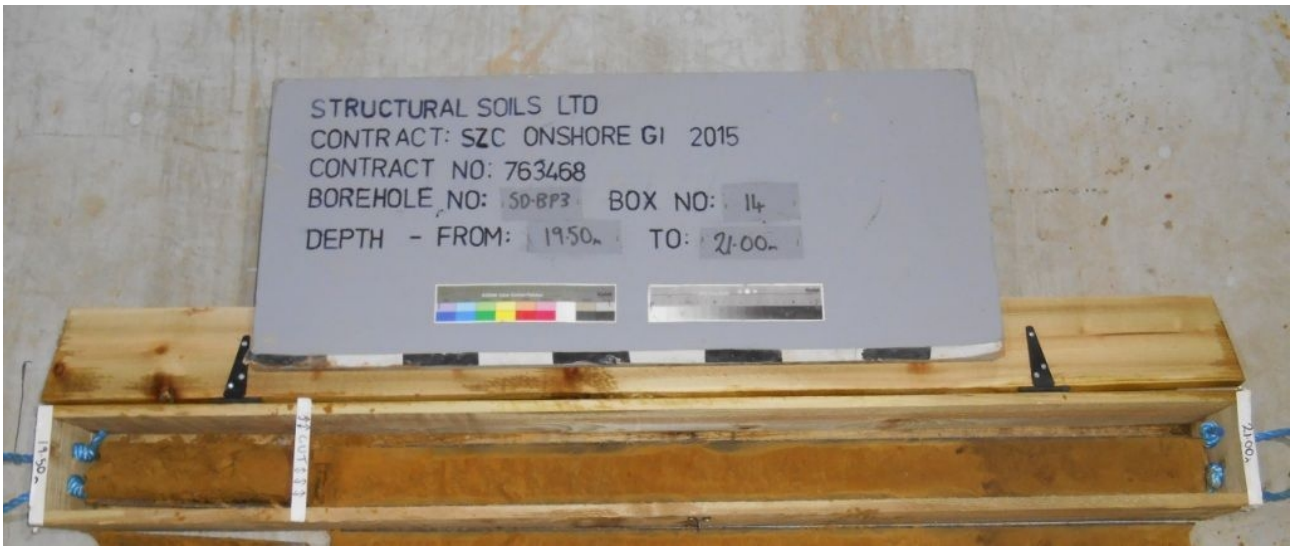
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**13** of **23**

Core Box 13



Core Box 14

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**14** of **23**

Core Box 15

Core Box 16

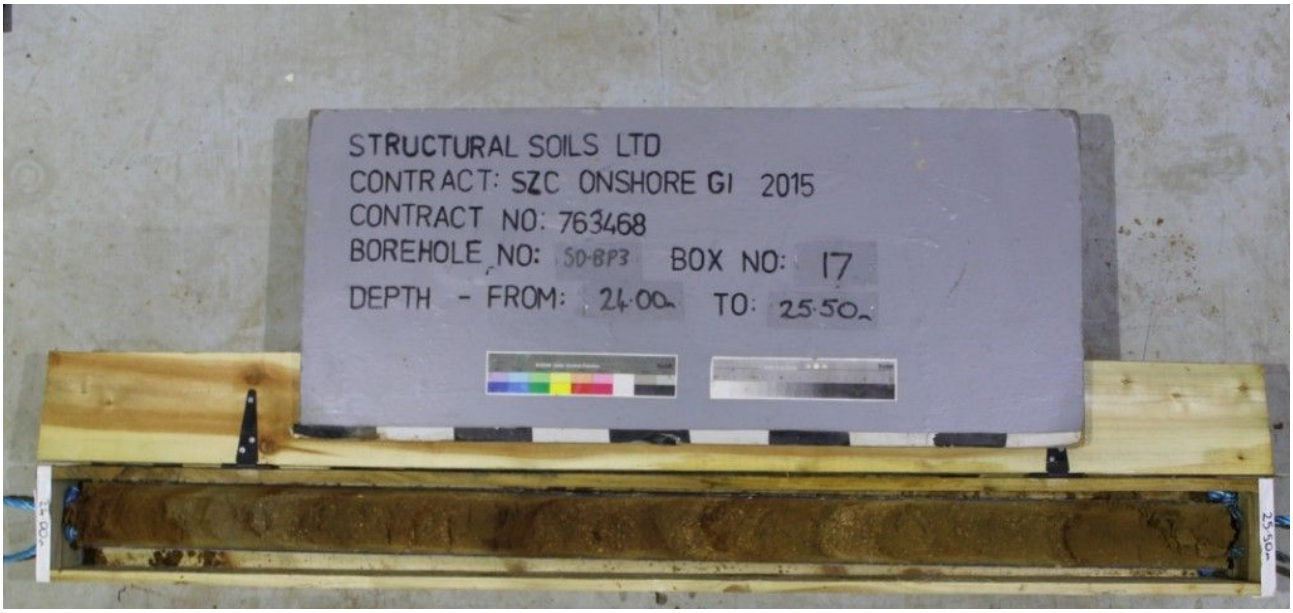
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

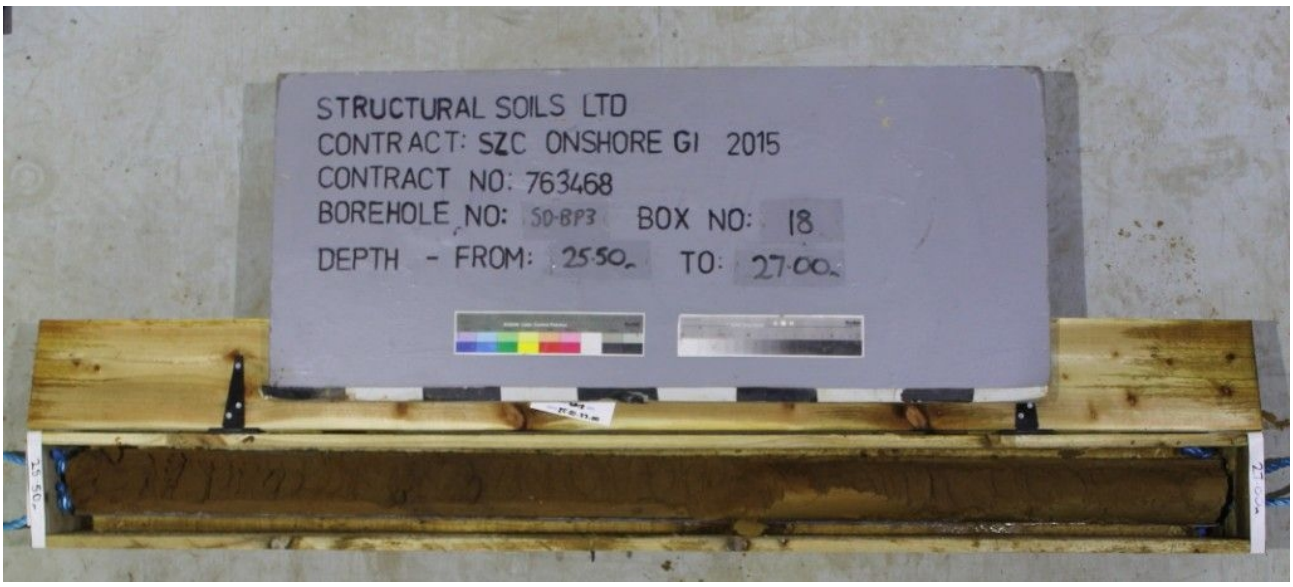
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**15** of **23**

Core Box 17





Core Box 18

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**16** of **23**

Core Box 19

Core Box 20

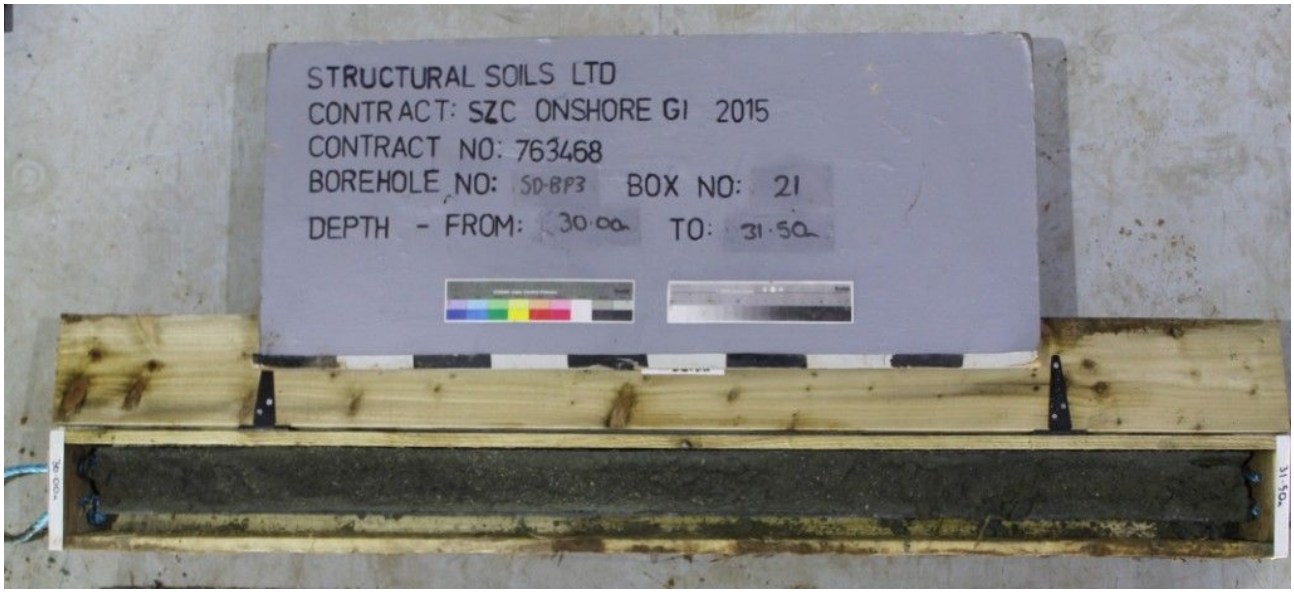
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**17** of **23**

Core Box 21



Core Box 22

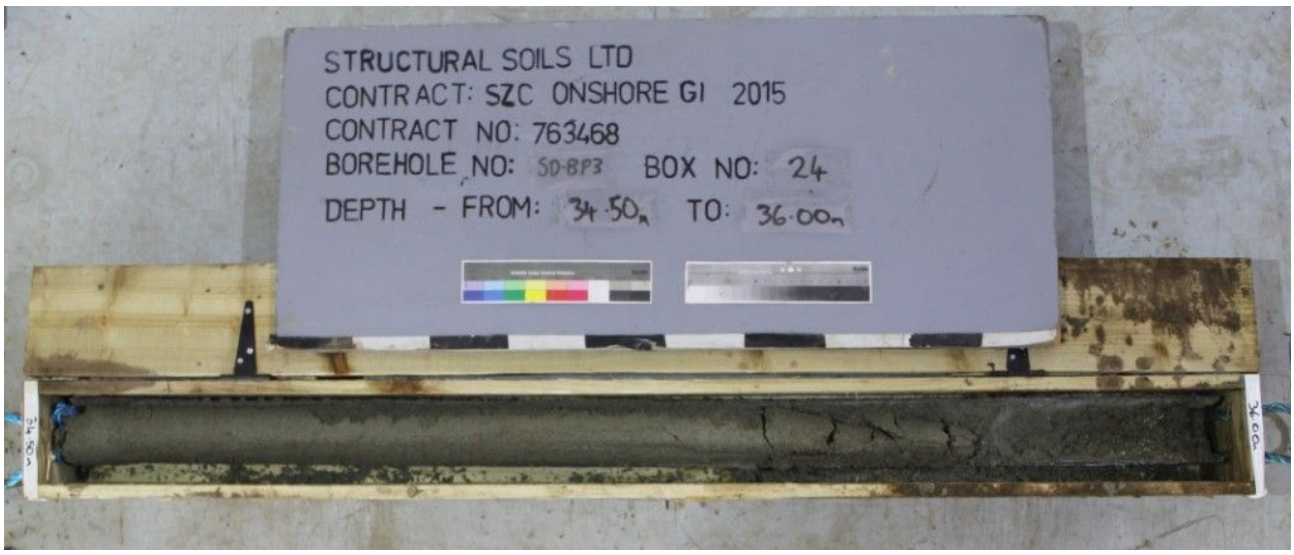
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**18** of **23**

Core Box 23



Core Box 24

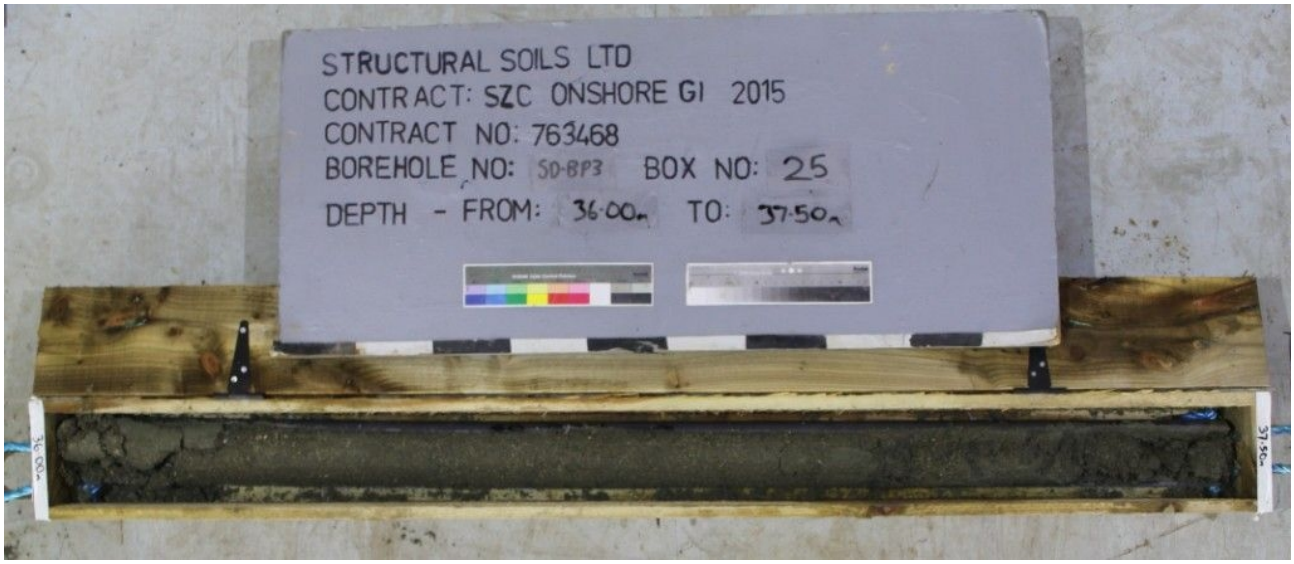
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

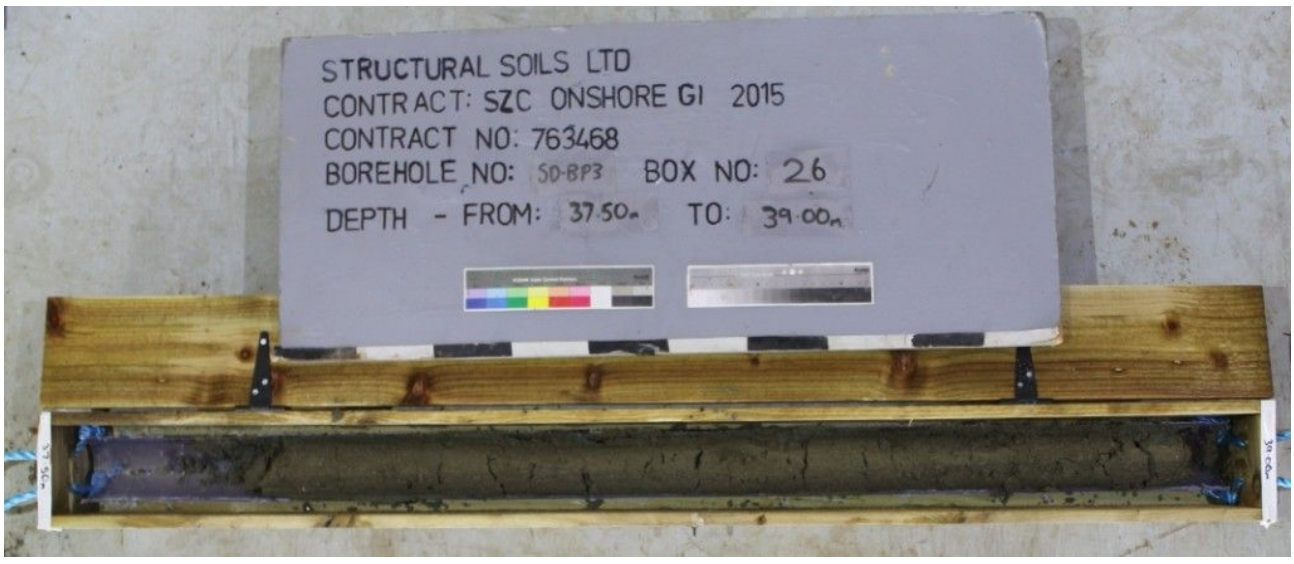
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**19** of **23**

Core Box 25





Core Box 26

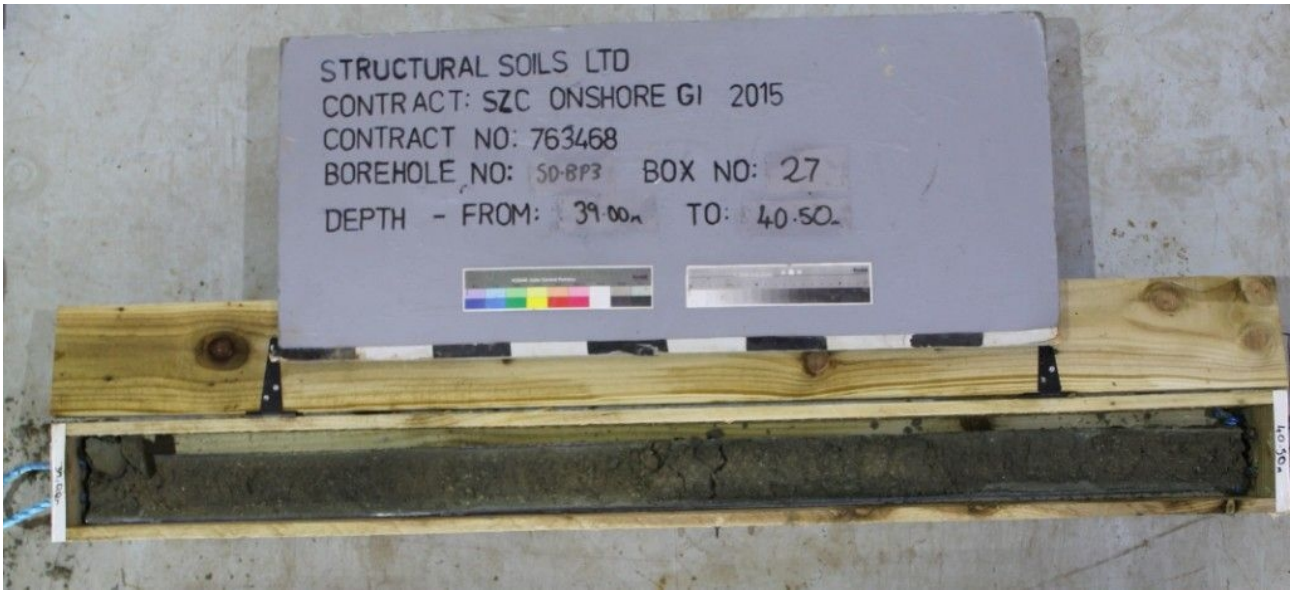
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

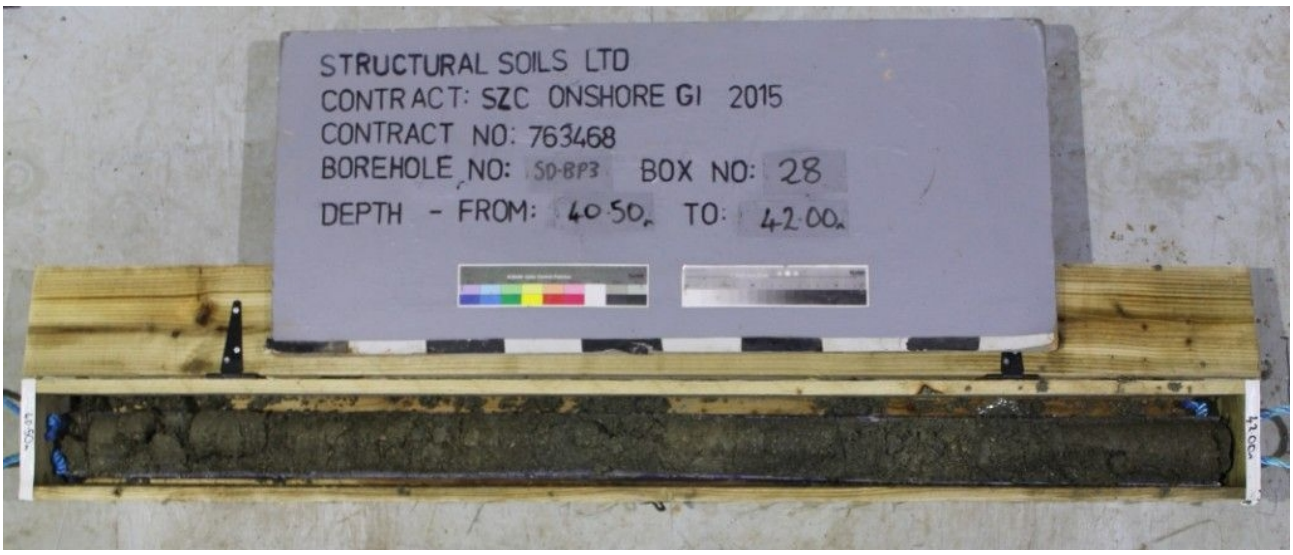
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**20** of **23**

Core Box 27





Core Box 28

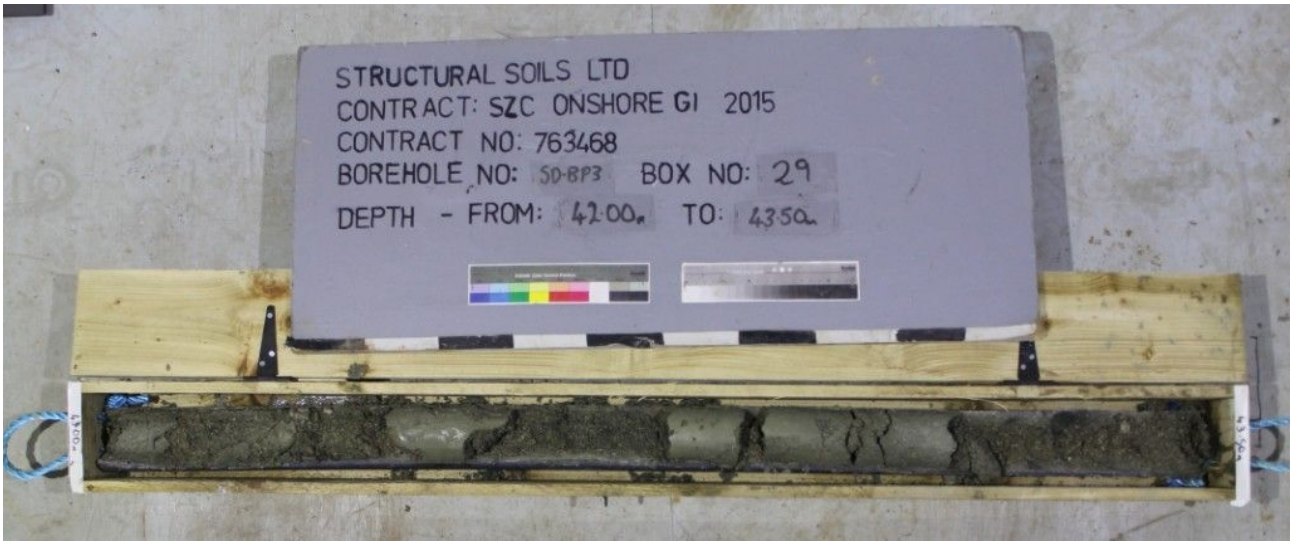
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

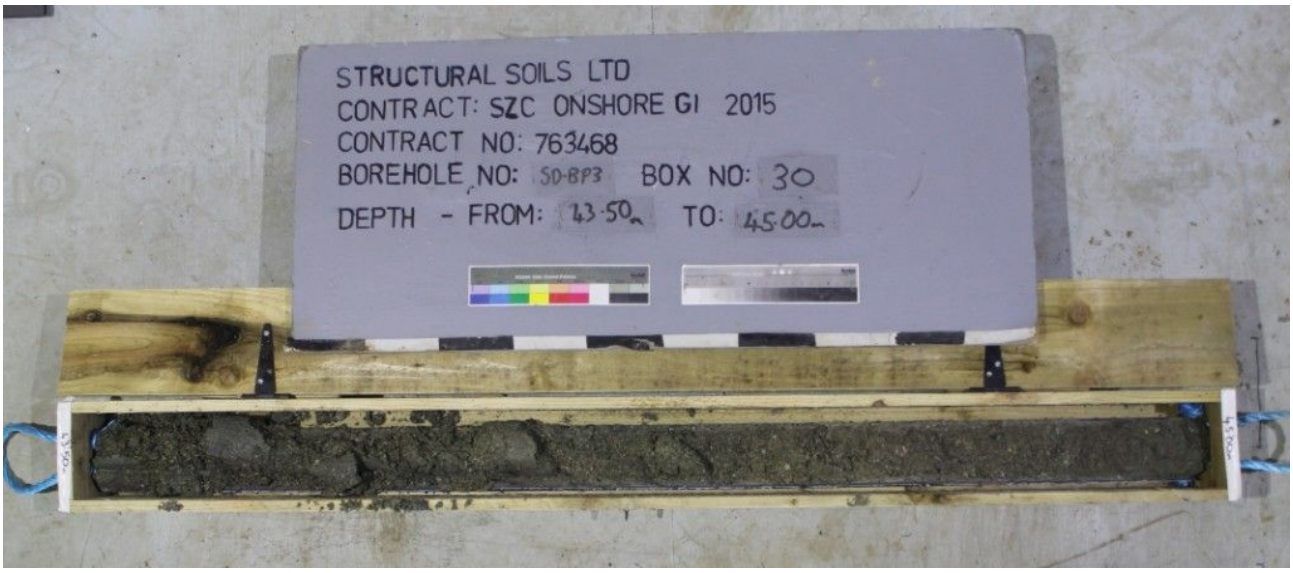
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**21** of **23**

Core Box 29





Core Box 30

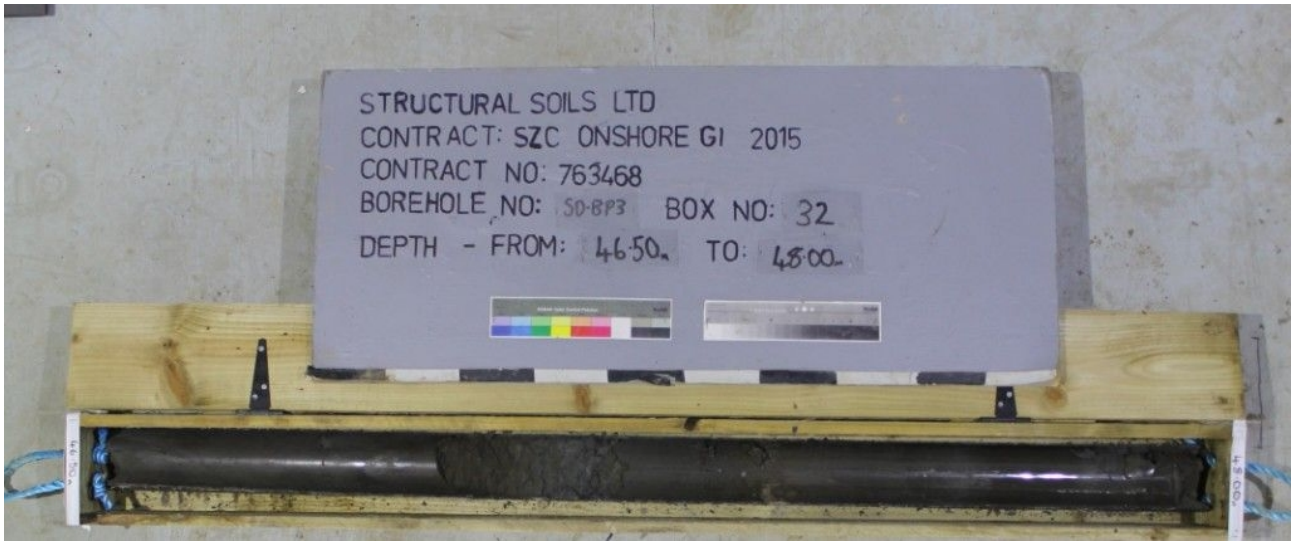
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**22** of **23**

Core Box 31



Core Box 32

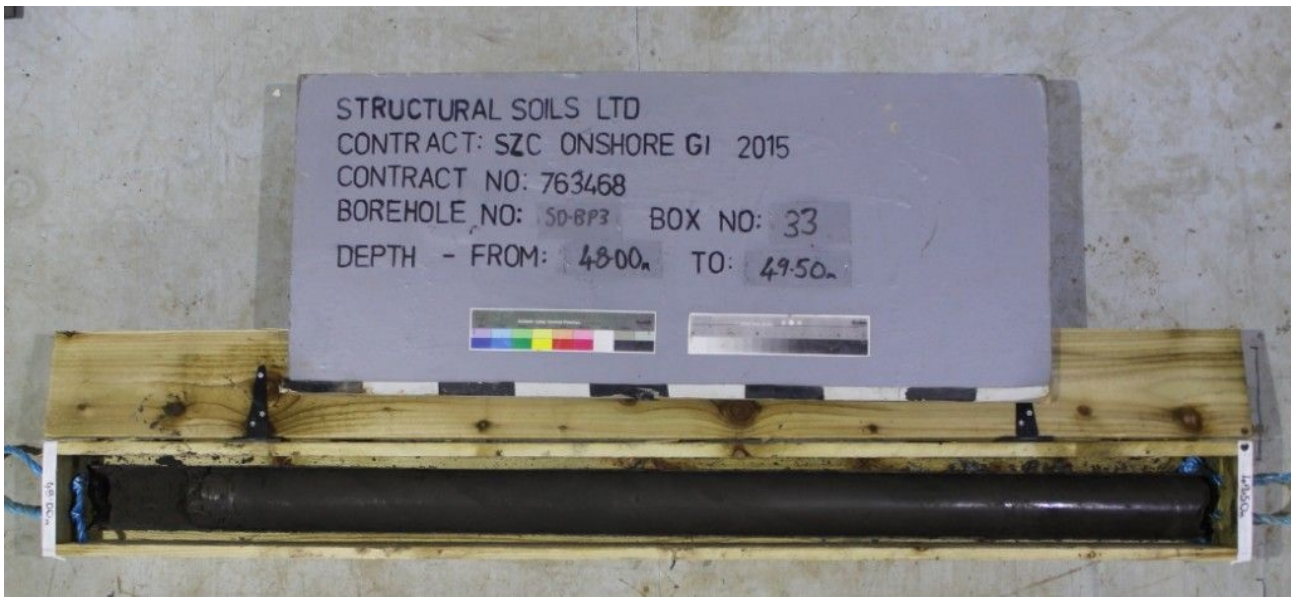
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

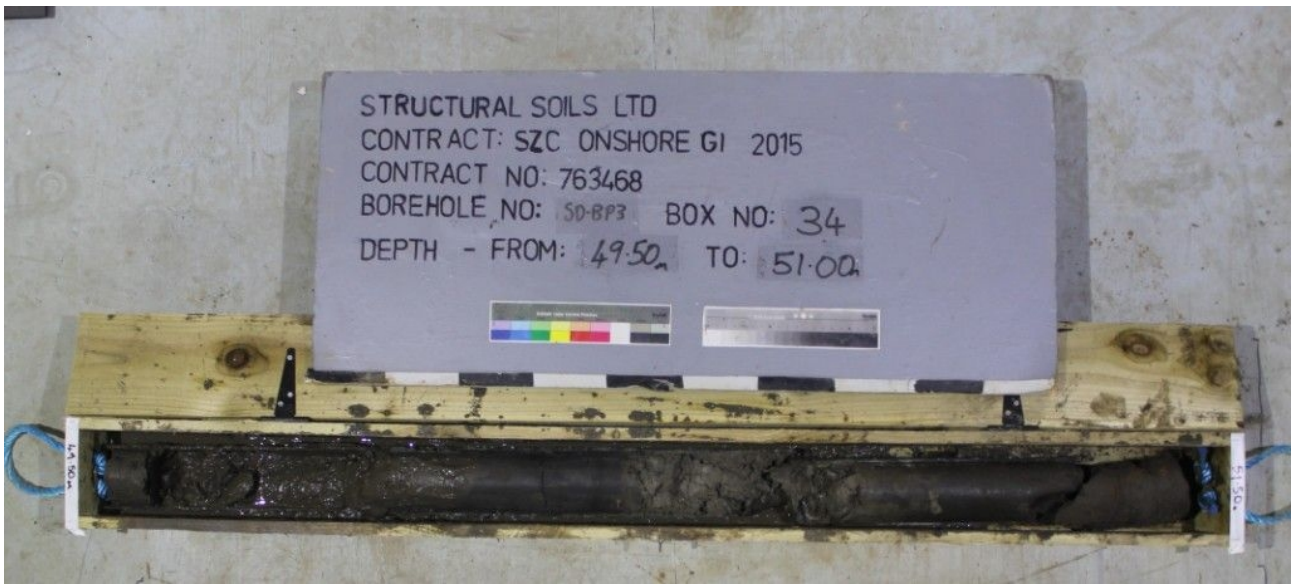
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP3**
Contract Ref:	Start: **10.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **17.09.15**	**12.39**	**E:645574.5 N:265404.7**	**23** of **23**

Core Box 33





Core Box 34

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP5**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
0.50	1	B								Light brown/buff silty SAND. Sand is fine to medium.		
1.00	2	B										
				1.20-1.50m Sonic run								
				1.50-3.00m Sonic run						. . . 2.00m-2.10m, reddish brown slightly clayey.	(3.64)	
											3.64	
				3.00-4.50m Sonic run						Buff silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to coarse flint and quartzite.	(0.86)	
											4.50	
				4.50-6.00m Sonic run						Brown reddish brown silty SAND with thin laminations. Sand is fine to medium.	(1.90)	
											6.40	
				6.00-7.50m Sonic run						Brown mottled grey silty sandy CLAY. Sand is fine to medium.	6.80	
										Buff silty fine SAND interbedded with orangish brown silty fine to medium sand. Bedding is medium spaced.		
				7.50-9.00m Sonic run							(3.70)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
18/09/15	12:00	19.50	19.50	114	7.30
21/09/15	12:30	19.50	19.50	114	12.90
21/09/15	14:15	25.50	25.50	114	-

General Remarks

1. Hand dug inspection pit to 1.20m.
2. 114.30mm diameter rotary-vibratory core barrell used in conjunction with semi-rigid U86 plastic liner.
3. Water added to aid drilling process.
4. Installed with 50mm standpipe piezometer on completion. Response Zone between 8.00 and 25.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP5**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				9.00-10.50m Sonic run						Buff silty fine SAND interbedded with orangish brown silty fine to medium sand. Bedding is medium spaced. *(stratum copied from 6.80m from previous sheet)* . . . below 9.00m, slightly gravelly. Gravel is subrounded fine to coarse quartzite and flint.	10.50	
				10.50-12.00m Sonic run						Reddish brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse.	10.90	
										Reddish brown thinly laminated brown silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to medium quartzite and flint.	11.25	
										Light brown with orange brown staining silty SAND. Sand is fine to medium.	(0.90)	
				12.00-13.50m Sonic run						. . . at 12.10m, clayey band.	12.15	
										Reddish brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse.	(0.65)	
										. . . 12.75m-12.80m, brown sandy gravelly clay. Gravel is subangular fine mudstone.	12.80	
										Brown silty clayey SAND with rare coarse sand sized shell fragments. Sand is fine to coarse. . . . 13.12m-13.40m, at 13.50m, clay absent.		
				13.50-15.00m Sonic run						. . . 13.70m-14.90m, with dark brown, grey and reddish brown staining.	(2.20)	
										Brown silty SAND with rare pockets of very stiff brown clay. Sand is fine to medium.	15.00	
				15.00-16.50m Sonic run						. . . 16.40m-16.50m, 16.60m-17.16m, fine to coarse. . . . at 16.70m, band of clay. . . . 16.83m-17.16m, occasional coarse sand sized shell fragments.		
				16.50-18.00m Sonic run								

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP5**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				18.00-19.50m Sonic run						Brown silty SAND with rare pockets of very stiff brown clay. Sand is fine to medium. *(stratum copied from 15.00m from previous sheet)* . . . below 18.00m, frequent shell fragments and occasional pockets of reddish fine to coarse shelly sand.	(7.50) 22.50	
				19.50-21.00m Sonic run								
				21.00-22.50m Sonic run								
				22.50-24.00m Sonic run						Grey silty clayey SAND with rare coarse sand sized shell fragments. Sand is fine to coarse.	(1.65) 24.15	
				24.00-25.50m Sonic run						Orangish brown silty SAND. Sand is fine to medium.	(1.35) 25.50	
										Borehole terminated at 25.50m depth.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

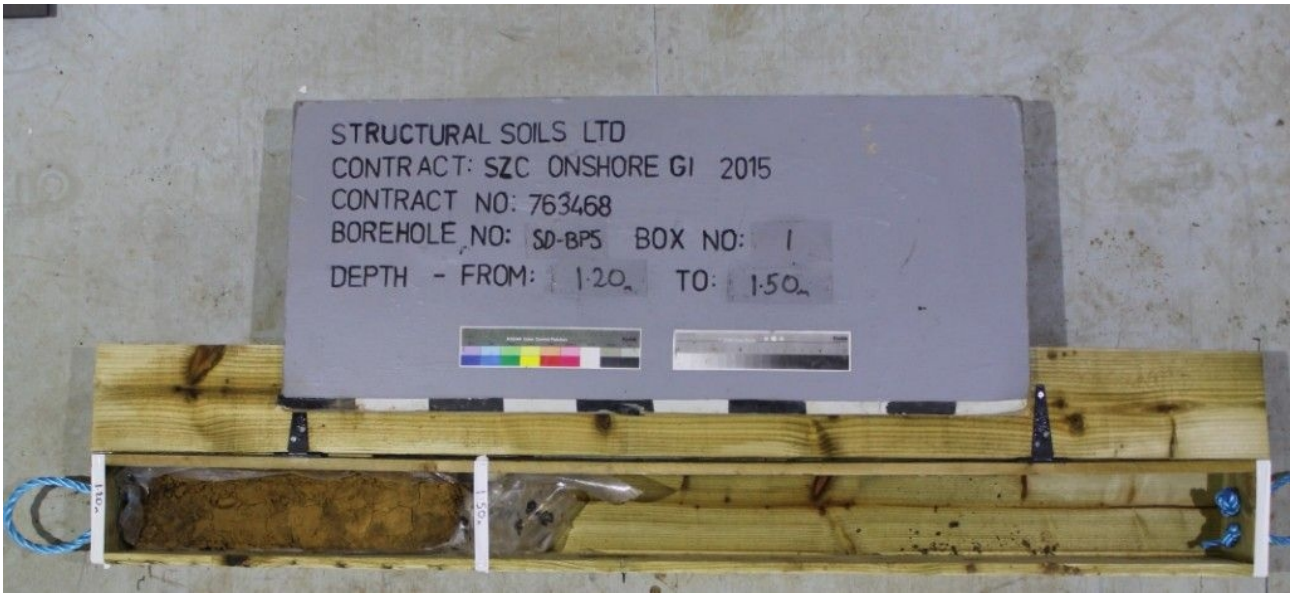
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

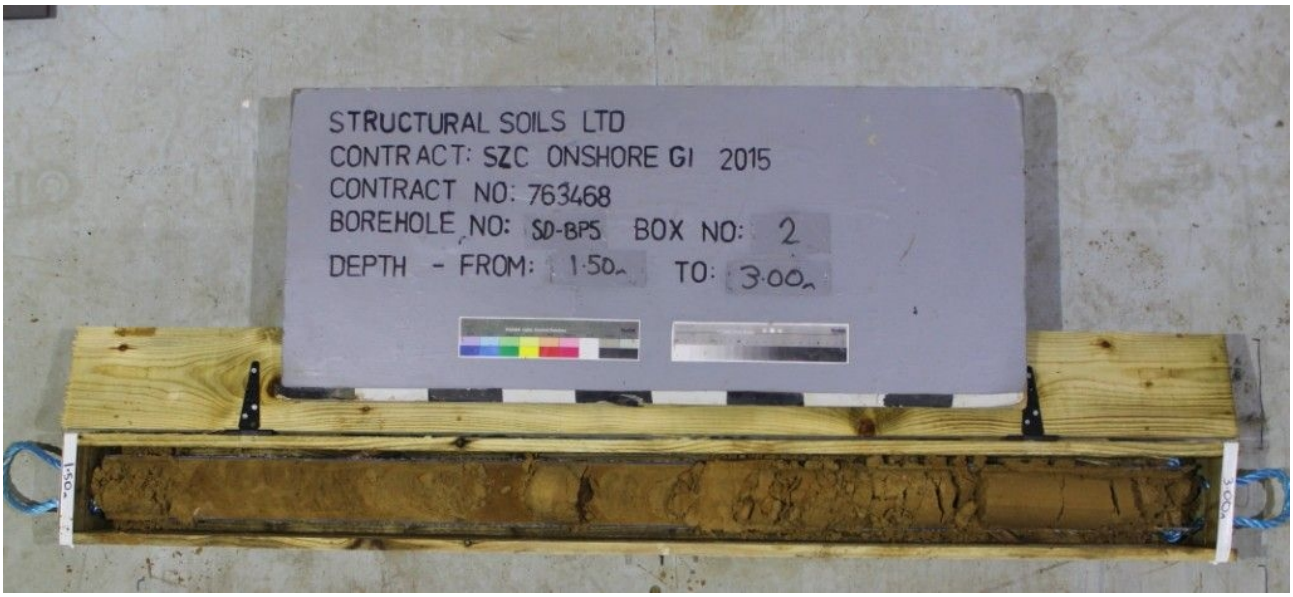
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**4** of **12**

Core Box 1





Core Box 2

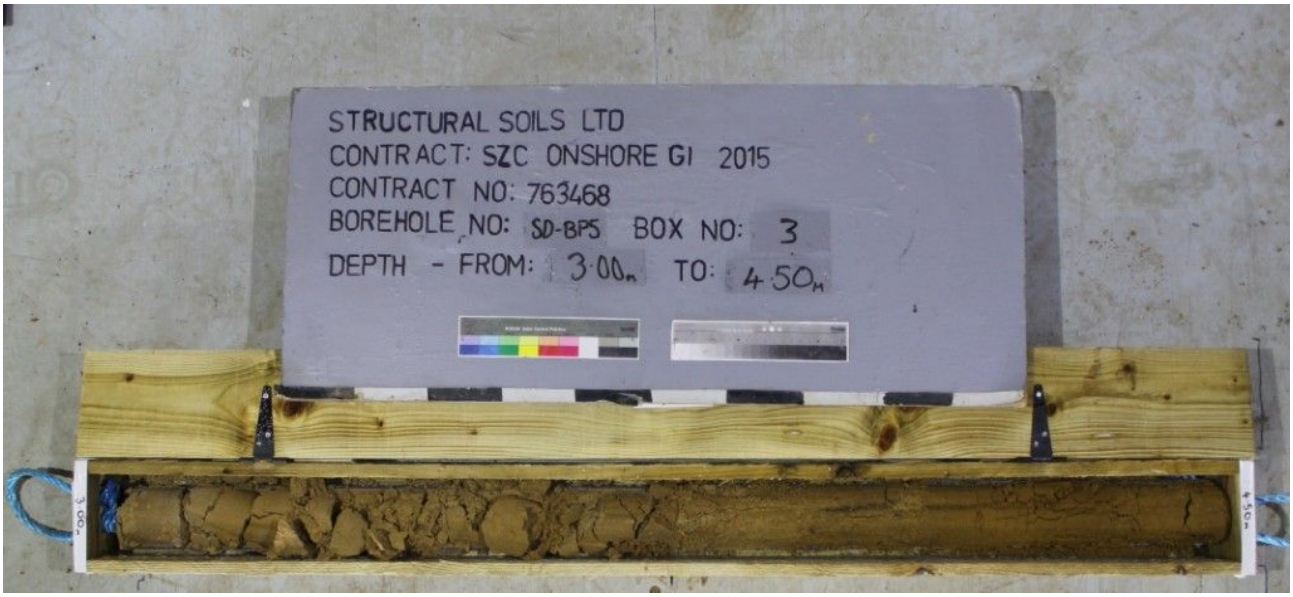
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

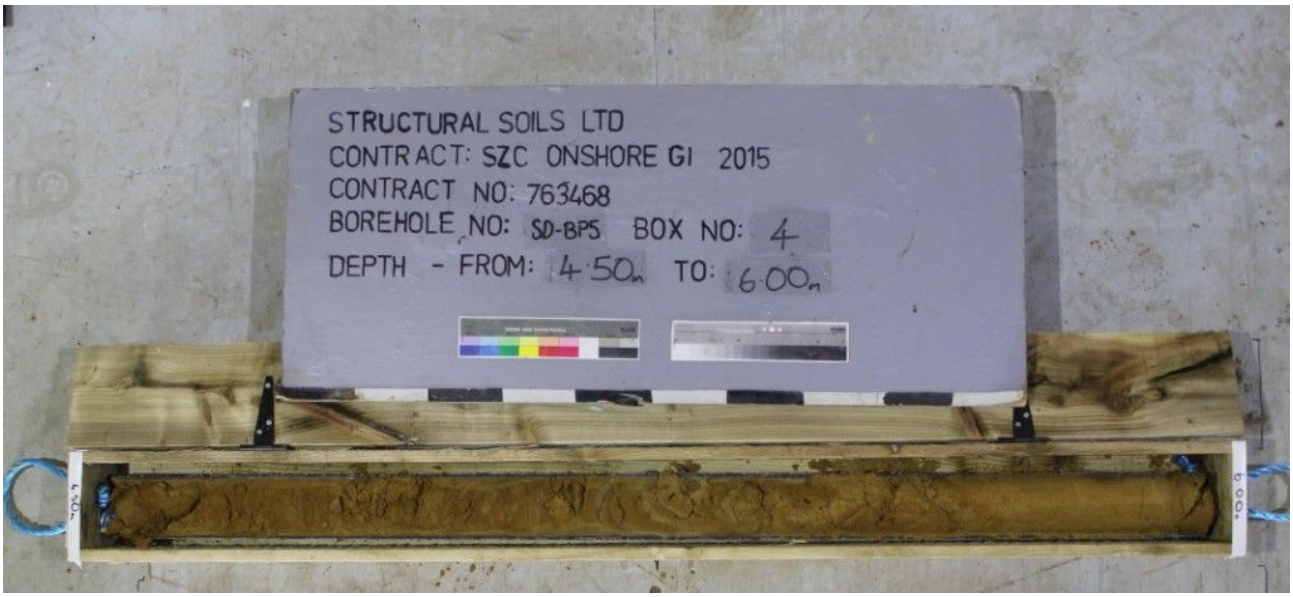
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**5** of **12**

Core Box 3





Core Box 4

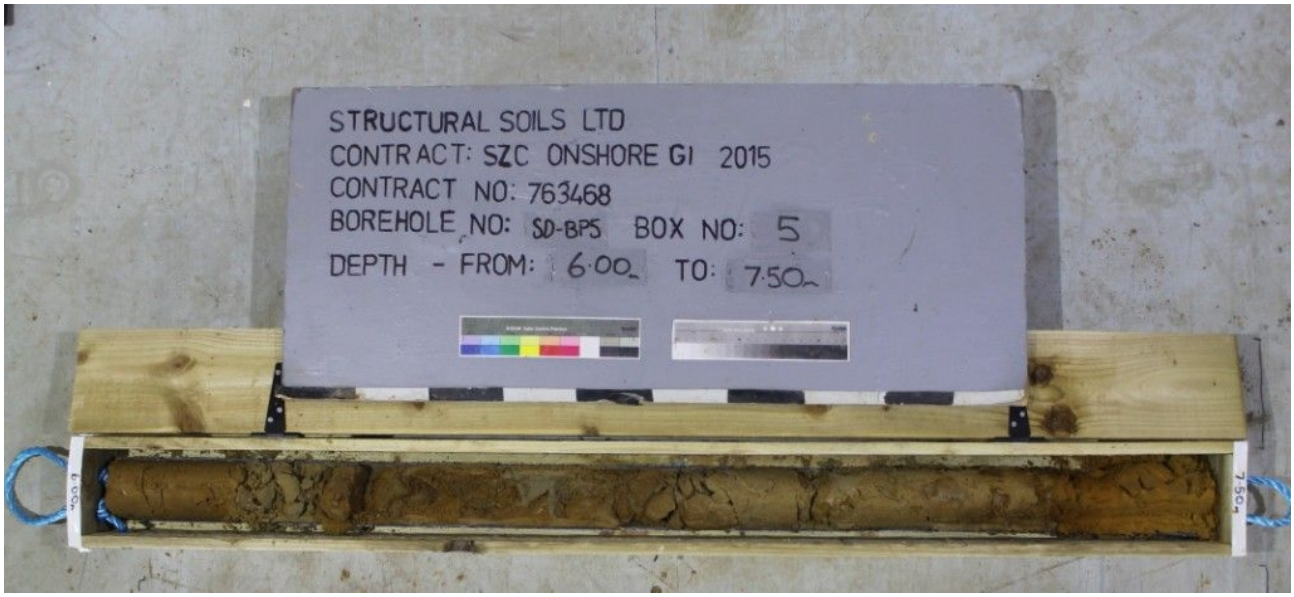
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

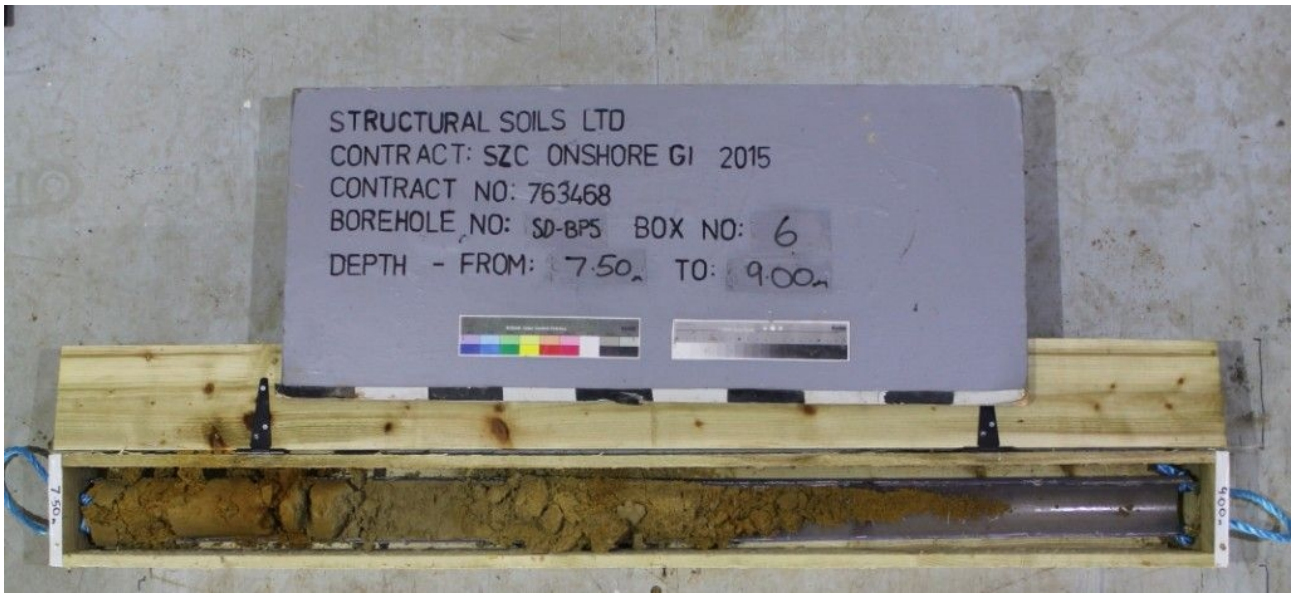
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**6** of **12**

Core Box 5





Core Box 6

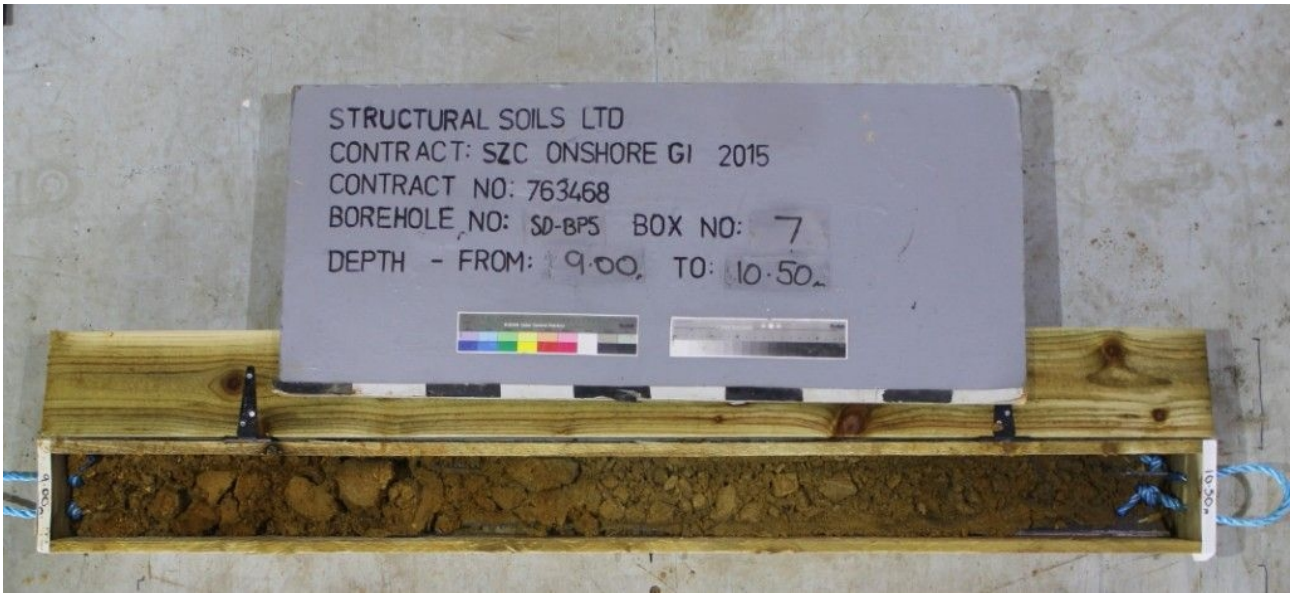
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**7** of **12**

Core Box 7



Core Box 8

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**8** of **12**

Core Box 9

Core Box 10

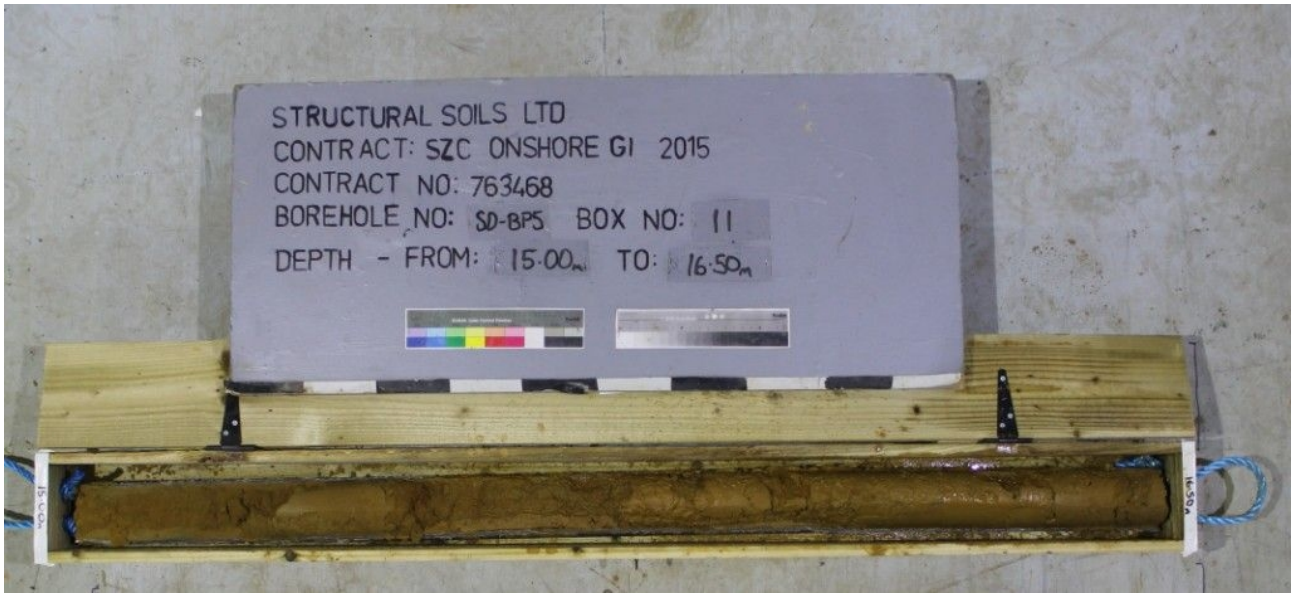
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

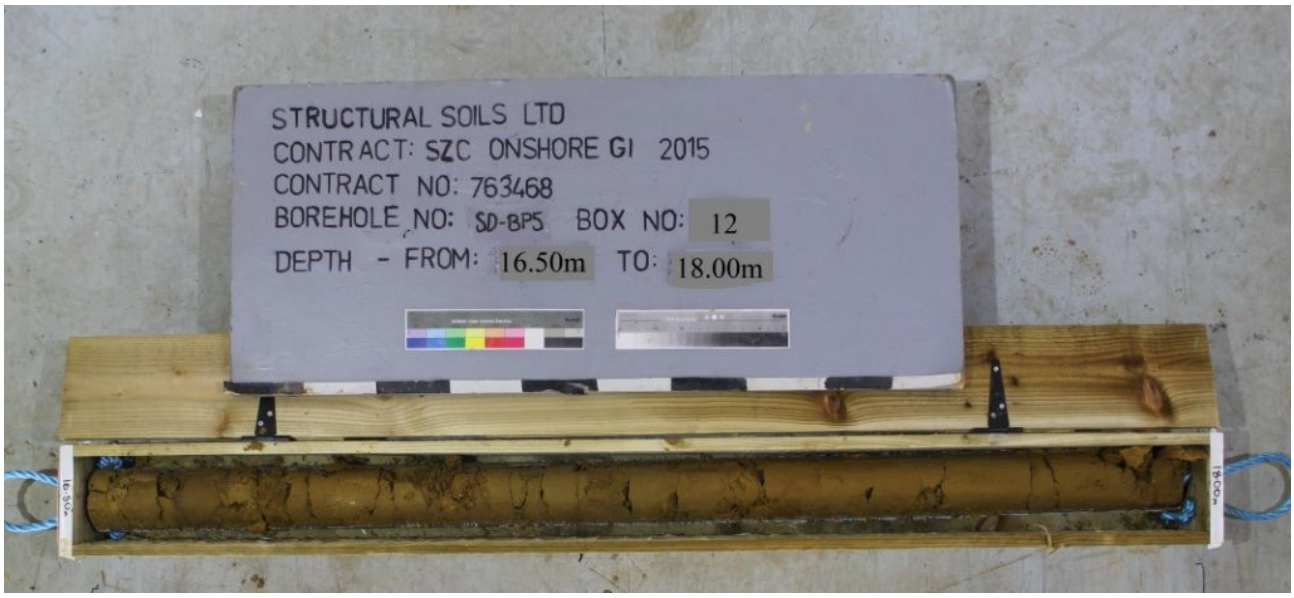
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**9** of **12**

Core Box 11





Core Box 12

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**10** of **12**

Core Box 13

Core Box 14

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**11** of **12**

Core Box 15

Core Box 16

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP5**
Contract Ref:	Start: **17.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **21.09.15**	**14.14**	**E:645928.7 N:265295.9**	**12** of **12**

Core Box 17

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP6**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
0.30-0.50	1	B								Brown slightly clayey slightly gravelly fine to medium SAND. Gravel is angular to subrounded medium to coarse flint and quartzite.	0.30	
0.50-1.00	2	B								Yellow slightly clayey SAND. Sand is fine to medium.	(1.46)	
											1.76	
										Buff silty SAND. Sand is fine to medium.	(1.24)	
											3.00	
										Brown interbedded with buff silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to coarse quartzite and flint. Frequent coarse sand sized shell fragments. Bedding is medium spaced.	(1.70)	
											4.70	
										Brown thickly laminated with reddish brown silty SAND. Sand is fine to medium. Rare bands of brown clay. . . . 5.00m-5.20m, fine to coarse with frequent coarse sand sized shell fragments.	(2.90)	
											7.60	
										Reddish brown thickly laminated with grey silty SAND. Sand is fine to medium. . . . at 8.20m, reddish brown clay.	(0.85)	
											8.45	
										Light brown with orangish brown silty SAND. Sand is fine to coarse. Rare subrounded fine gravel of quartzite and flint.	(0.55)	
											9.00	

1.20-1.50m Sonic run

1.50-3.00m Sonic run

3.00-4.50m Sonic run

4.50-6.00m Sonic run

6.00-7.50m Sonic run

7.50-9.00m Sonic run

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
09/09/15	18:00	16.50	16.50	114	7.40
10/09/15	08:00	16.50	16.50	114	8.10
10/09/15	12:45	25.50	25.50	114	-

General Remarks

1. Hand dug inspection pit to 1.20m.
2. 114.30mm diameter rotary-vibratory core barrell used in conjunction with semi-rigid U86 plastic liner.
3. Water added to aid drilling process.
4. Installed with 50mm standpipe piezometer on completion. Response Zone between 8.00 and 25.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP6**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instru-mentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				9.00-10.50m Sonic run						Reddish brown silty slightly gravelly SAND. Sand is fine to medium. Gravel is subrounded fine to medium quartzite and flint.	(2.30) 11.30	
				10.50-12.00m Sonic run						Brown silty SAND. Sand is fine to coarse.	(0.70) 12.00	
				12.00-13.50m Sonic run						Brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse. . . . below 12.90m, with reddish brown staining.	(1.50) 13.50	
				13.50-15.00m Sonic run						Reddish brown interbedded with brown silty SAND. Sand is fine to medium. Bedding is very thinly spaced. . . . 13.90m-14.23m, cobble sized pockets of grey clay. . . . at 14.55m, coarse gravel sized pocket of grey clay.	(2.80)	
				15.00-16.50m Sonic run						. . . 14.60m-14.80m, with coarse gravel size pockets of grey and brown clay. Sand is brown. . . . 15.10m-15.24m, with gravel sized pockets of brown clay. . . . at 15.40m, occasional coarse sand sized shell fragments. . . . 15.70m-15.85m, stiff brown clay. . . . 15.85m-16.10m, frequent coarse sand sized shell fragments.	16.30	
				16.50-18.00m Sonic run						. . . 15.90m-15.96m, grey clay with orangish brown staining. Light brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse. . . . 17.00m-17.40m, at 18.00m, brown.	(1.30) 17.60	
										Description on next sheet		

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP6**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				18.00-19.50m Sonic run						Brown thickly laminated with reddish brown silty SAND. Sand is fine to coarse. Frequent coarse sand sized shell fragments. *(stratum copied from 17.60m from previous sheet)*		
				19.50-21.00m Sonic run						. . . 19.50m-19.70m, slightly gravelly. Gravel is rounded fine to medium quartzite and flint.	(4.90)	
				21.00-22.50m Sonic run						. . . at 20.48m, with thin beds of reddish brown silty sand. . . . at 20.76m, brown clay. . . . 21.60m-21.67m, dark brown. . . . below 21.80m, grey.	22.50	
				22.50-24.00m Sonic run						Reddish brown thinly laminated with reddish brown silty SAND with frequent coarse sand sized shell fragments. Sand is fine to coarse.	(3.00)	
				24.00-25.50m Sonic run						. . . at 25.06m, 25.40m-25.45m, grey clay.	25.50	
										Borehole terminated at 25.50m depth.		

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

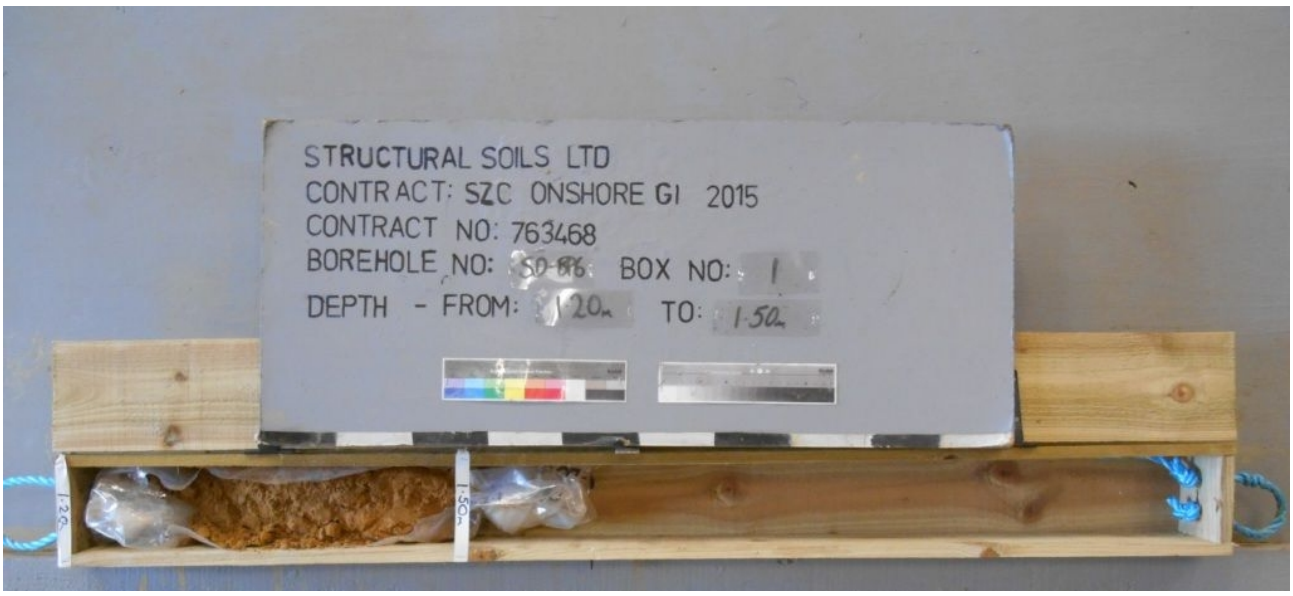
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

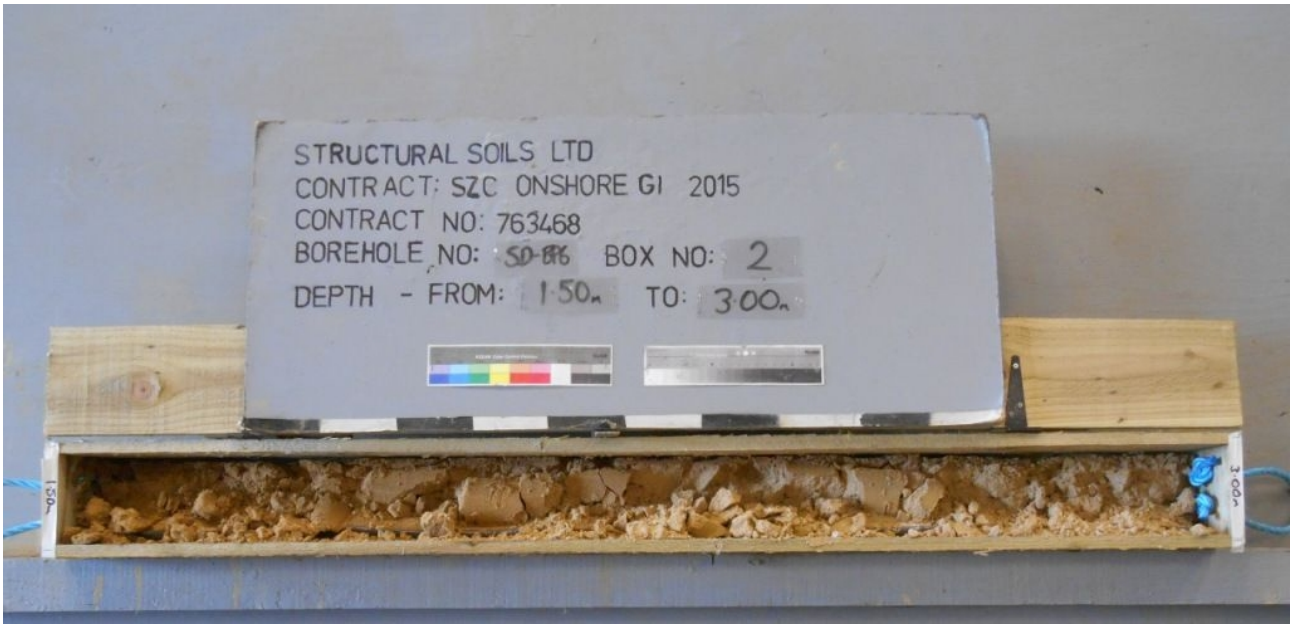
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**4** of **12**

Core Box 1





Core Box 2

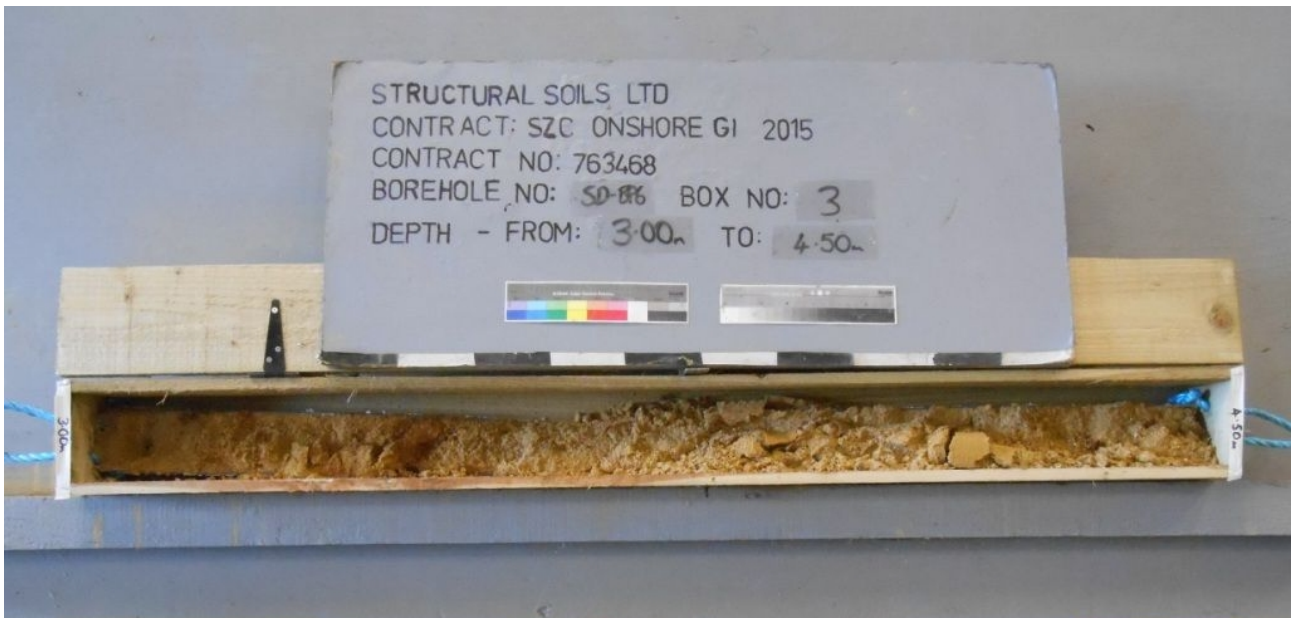
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**5** of **12**

Core Box 3



Core Box 4

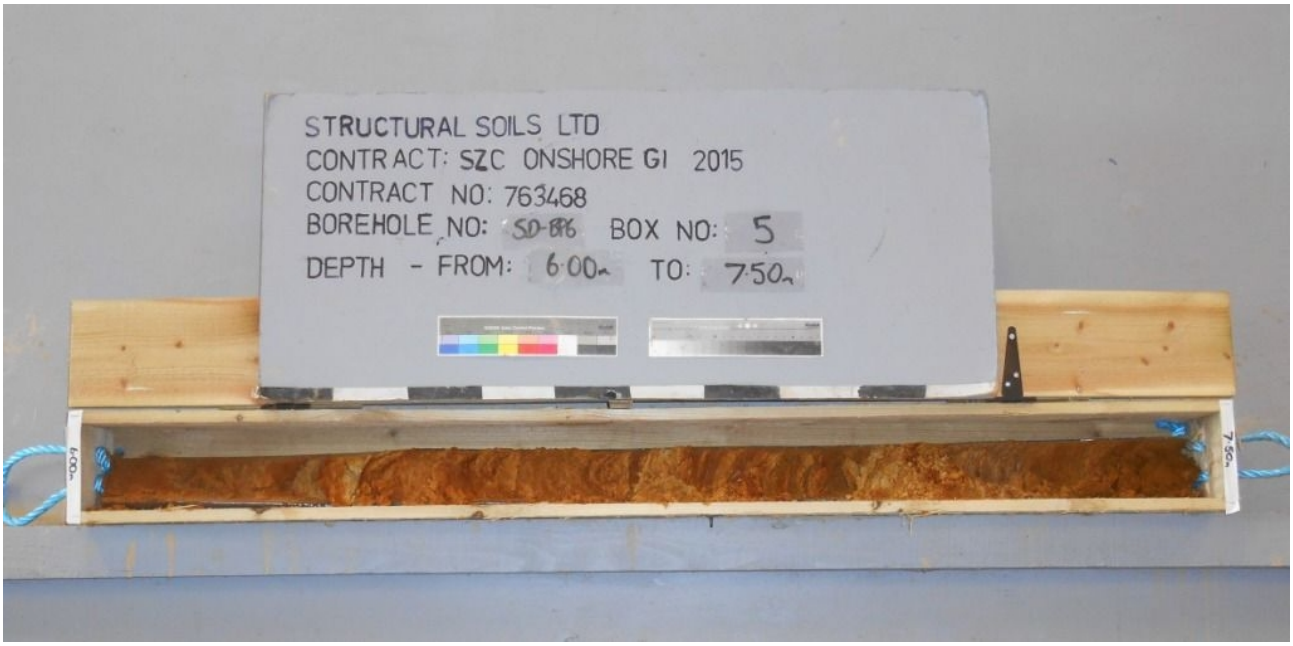
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

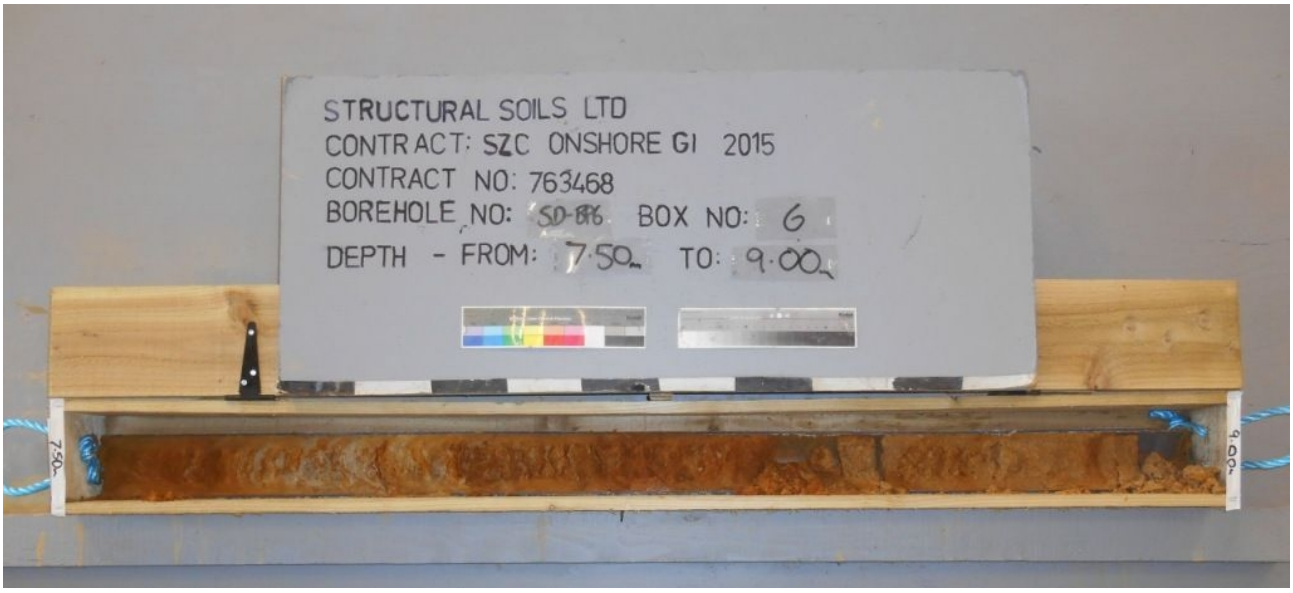
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**6** of **12**

Core Box 5





Core Box 6

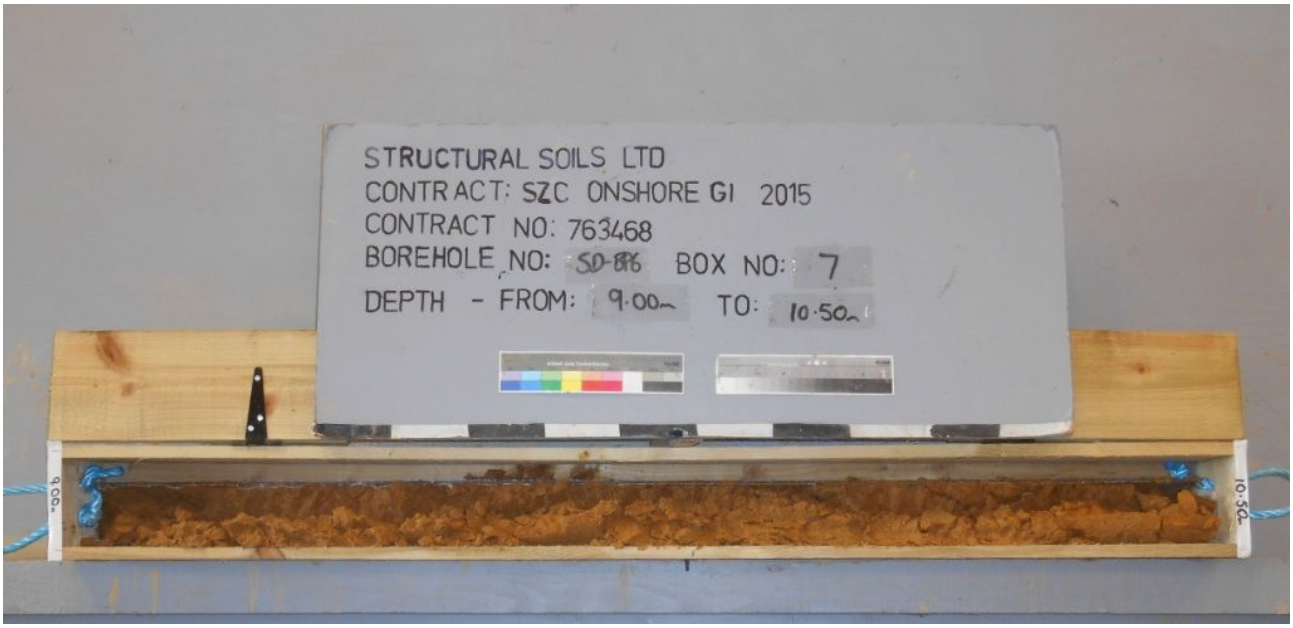
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

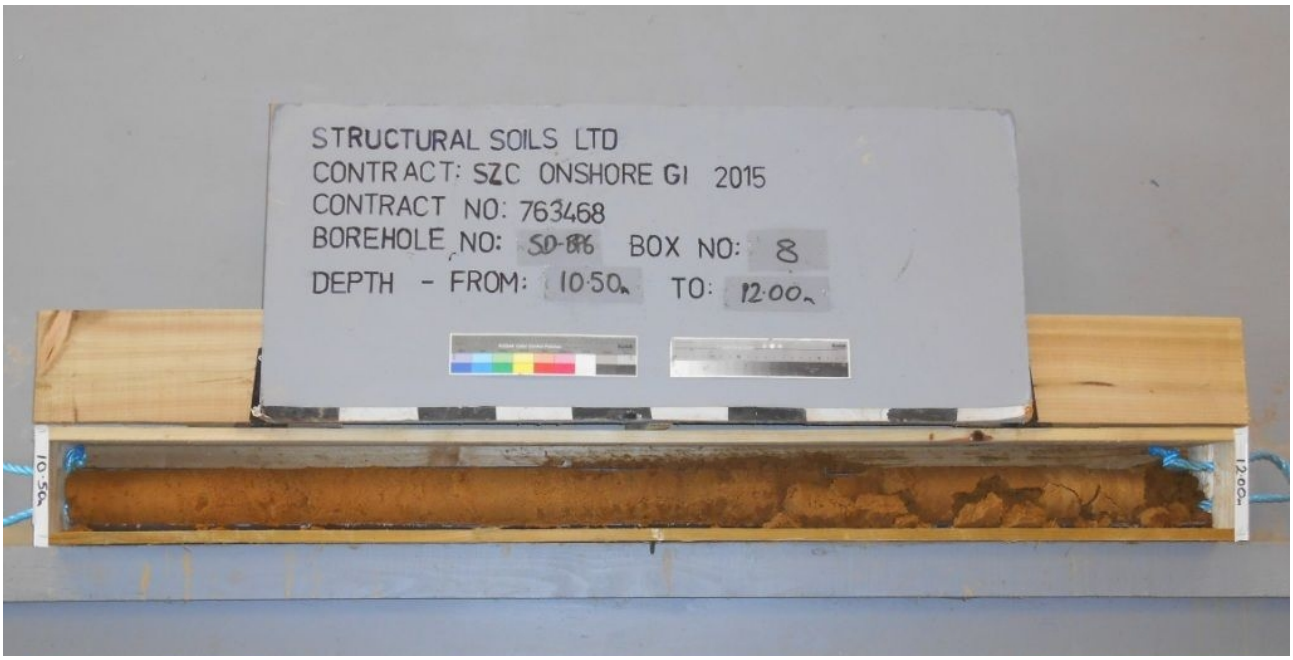
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**7** of **12**

Core Box 7





Core Box 8

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**8** of **12**

Core Box 9

Core Box 10

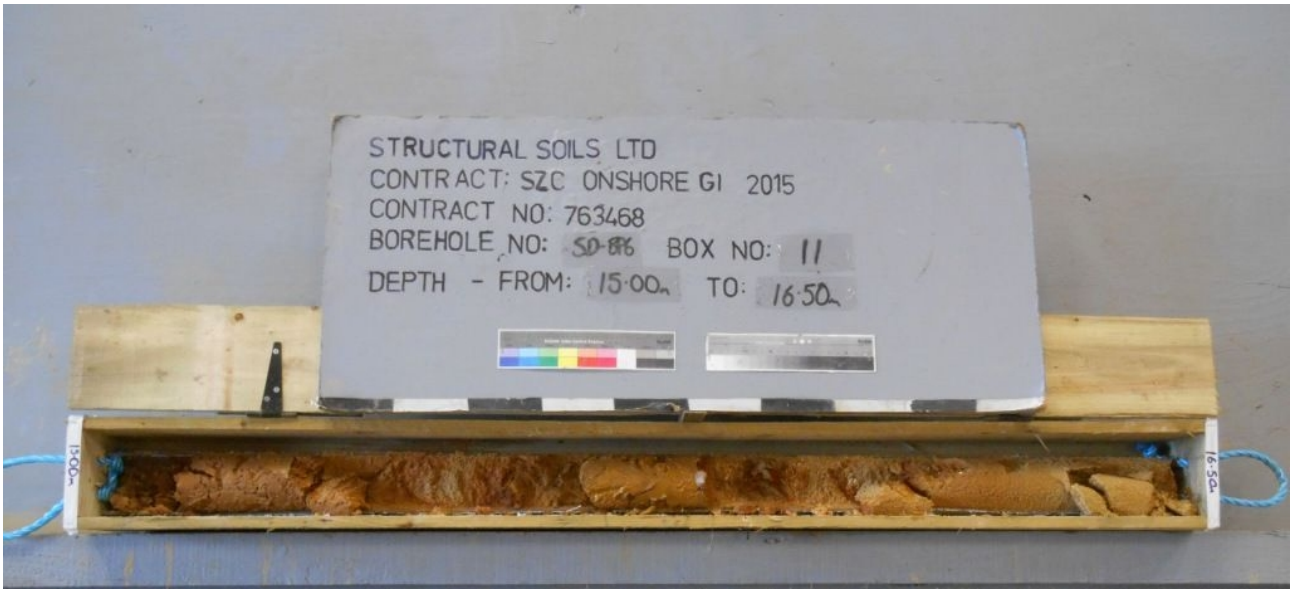
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**9** of **12**

Core Box 11



Core Box 12

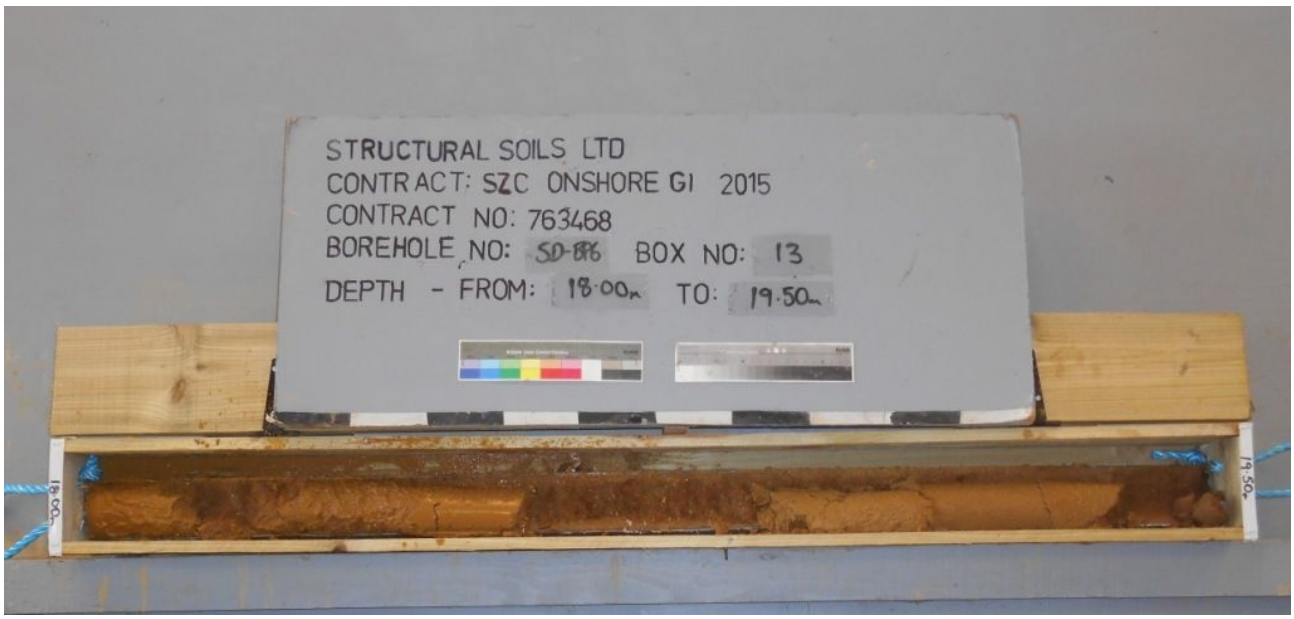
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

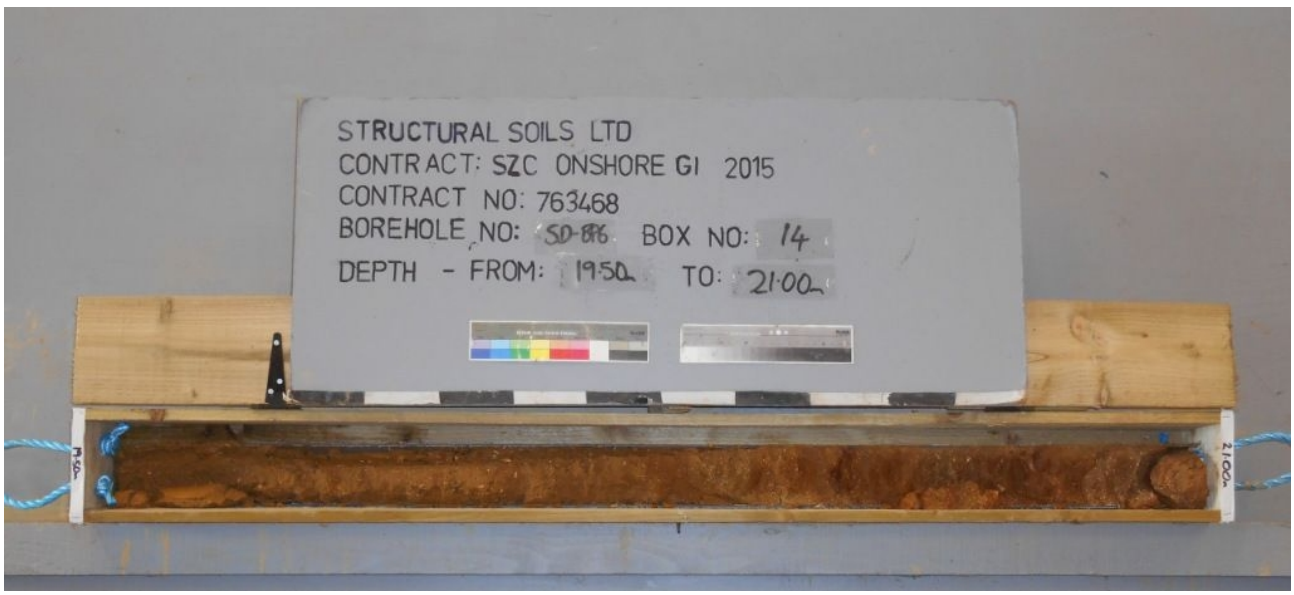
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**10** of **12**

Core Box 13





Core Box 14

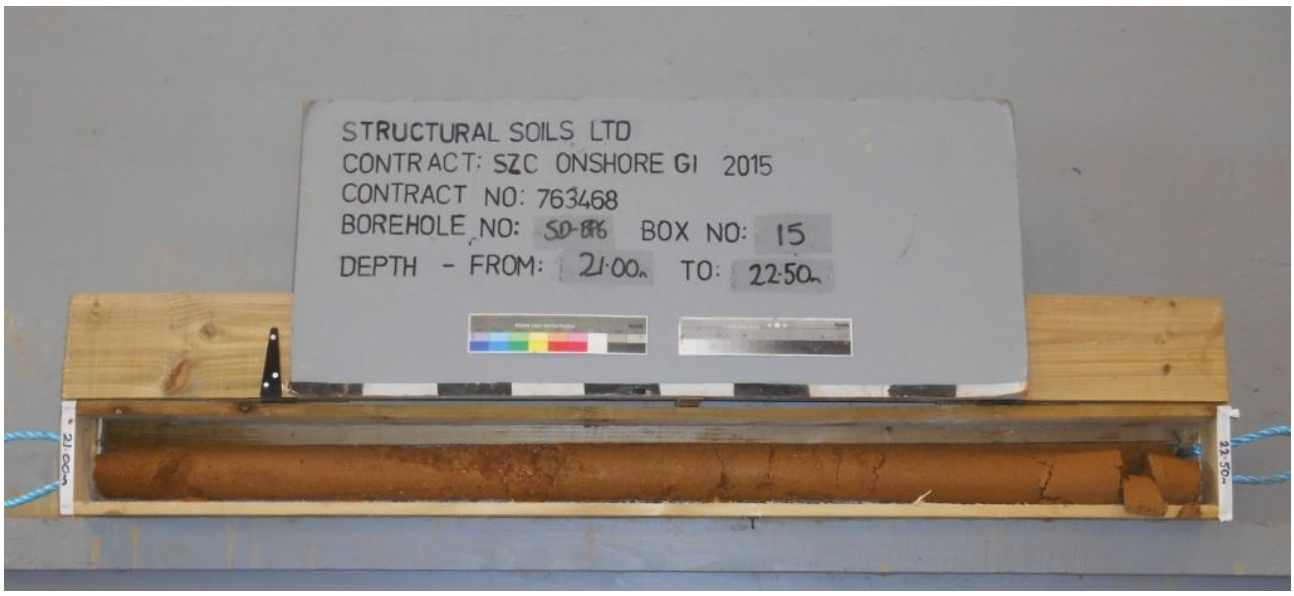
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

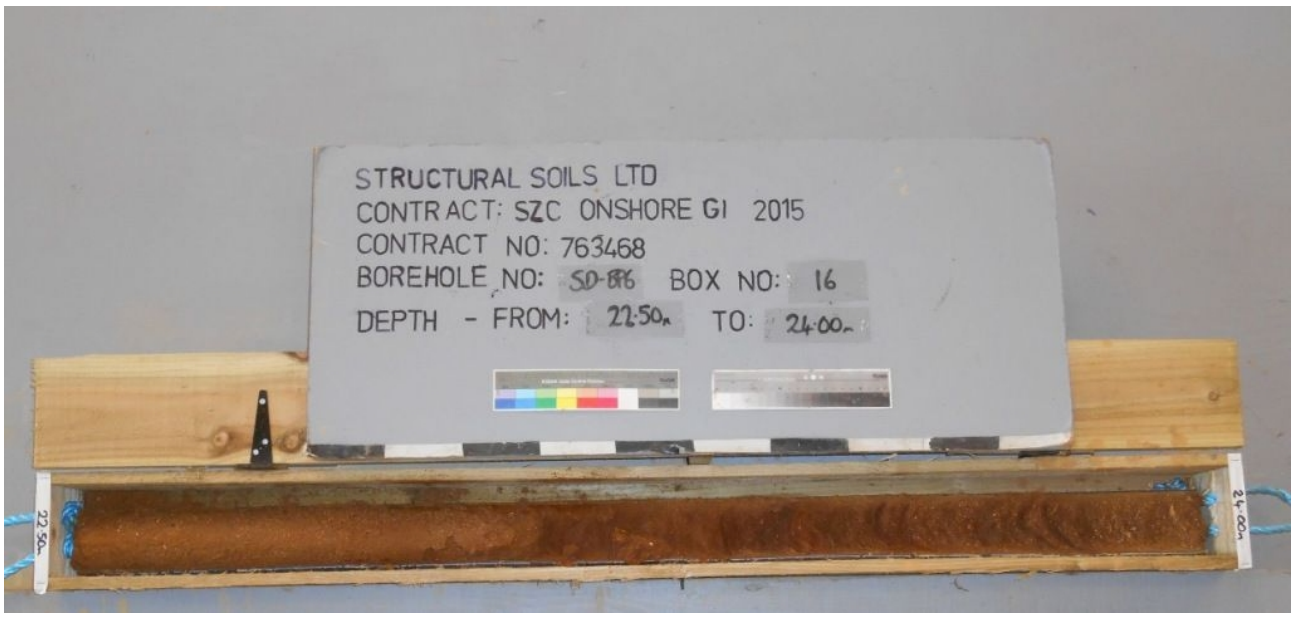
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**11** of **12**

Core Box 15





Core Box 16

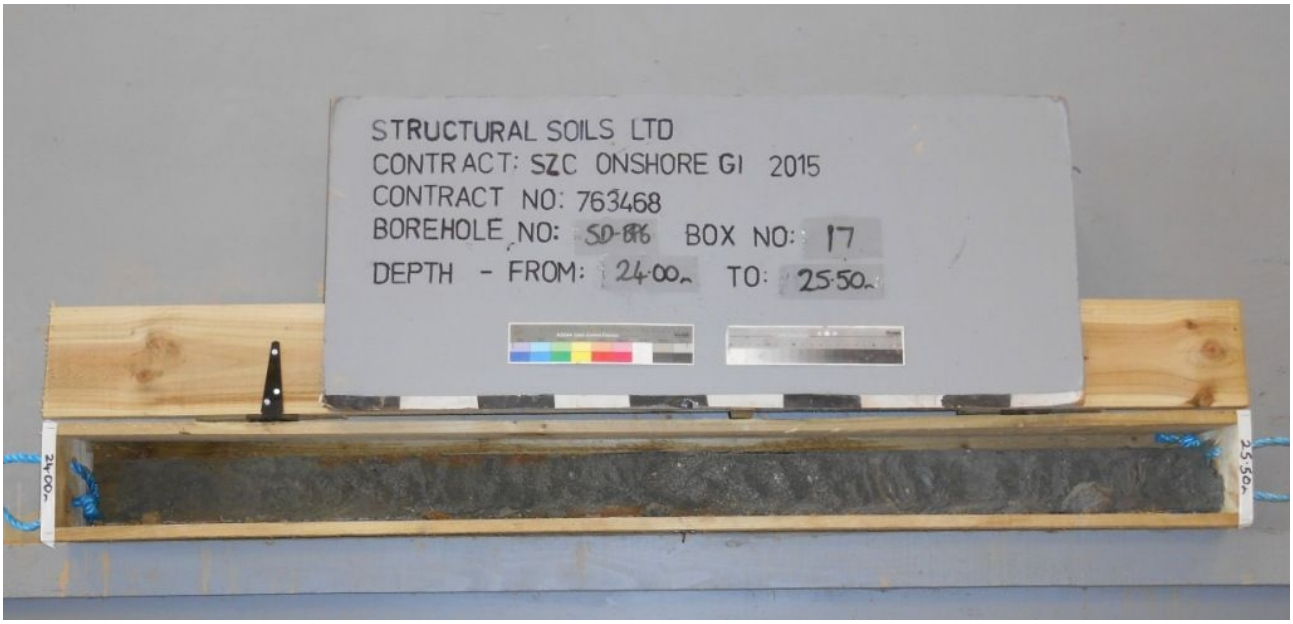
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP6**
Contract Ref:	Start: **09.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **10.09.15**	**15.47**	**E:645586.3 N:265285.6**	**12** of **12**

Core Box 17



Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP7**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
0.00-0.60	1	B								Scrub over reddish brown clayey sandy TOPSOIL.	0.10	
										Reddish brown silty slightly gravelly SAND. Sand is fine to medium. Gravel is subrounded fine to coarse possible quartzite. Occasional cobbles. Cobbles are subrounded quartzite and flint.	(0.50)	
0.60-1.20	2	B									0.60	
										Yellowish brown silty slightly gravelly SAND. Sand is fine to medium with occasional coarse sands. Gravel is subrounded fine to medium quartzite and flint.	(0.70)	
											1.30	
										Firm reddish brown silty sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is subrounded fine to coarse flint and quartzite .	(1.55)	
										. . . below 1.50m, stiff.		
											2.85	
										Soft light greyish brown sandy slightly gravelly CLAY. Sand is fine. Gravel is subangular fine to medium quartzite and flint.	3.00	
										Light brown silty SAND. Sand is fine. Occasional cobble sized pockets of reddish brown sand.		
											(3.10)	
										. . . 4.90m-5.10m, orangish brown pocket.		
										. . . below 5.85m, very silty to clayey fine to medium.	6.10	
										Light brown gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to coarse quartzite and sandstone.	(0.90)	
											7.00	
										Stiff brown very sandy CLAY. Sand is fine to coarse.	7.10	
										Brown silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to medium quartzite and flint. Occasional pockets of brown sandy slightly gravelly clay. Gravel is subrounded fine quartzite and flint.	(1.10)	
											8.20	
										Orangish brown silty SAND. Sand is fine.	(0.80)	
											9.00	

1.20-1.50m Sonic run

1.50-3.00m Sonic run

3.00-4.50m Sonic run

4.50-6.00m Sonic run

6.00-7.50m Sonic run

7.50-9.00m Sonic run

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
02/09/15	18:30	12.00	12.00	114	2.90
03/09/15	08:30	12.00	12.00	114	4.00
03/09/15	17:30	22.50	22.50	114	15.30
04/09/15	08:30	22.50	22.50	114	15.30
04/09/15	10:30	25.50	25.50	114	-

General Remarks

1. Hand dug inspection pit to 1.20m.
2. 114.30mm diameter rotary-vibratory core barrell used in conjunction with semi-rigid U86 plastic liner.
3. Water added to aid drilling process.
4. Installed with 50mm standpipe piezometer on completion. Response Zone between 8.00 and 25.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP7**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				9.00-10.50m Sonic run						. . . 8.90m-8.95m, reddish brown. Buff silty SAND. Sand is fine. . . . 9.28m-9.44m, grey.	(2.16) 11.16	
				10.50-12.00m Sonic run						Light reddish brown silty SAND. Sand is fine. . . . 12.48m-12.70m, brown very sandy clay. Sand is fine to medium.	(1.74) 12.90	
				12.00-13.50m Sonic run						Firm thinly laminated grey CLAY with fine to medium brown sand and orangish brown staining on lamination faces.	13.06 – 13.50	
				13.50-15.00m Sonic run						Reddish brown silty SAND. Sand is fine to medium. . . . 13.10m-13.20m, grey staining. Stiff thinly laminated greyish brown silty slightly sandy CLAY. Sand is fine. Orangish brown fine sand and orangish brown staining on laminations. Medium spaced thin beds of buff fine sand.	(1.50) 15.00	
				15.00-16.50m Sonic run						Stiff thinly laminated dark grey silty slightly sandy CLAY. Sand is fine. Grey fine sand on lamination faces. . . . 15.60m-15.70m, brown with vertical closely spaced fissures. . . . 16.00m-16.10m, greenish brown.	(1.50) 16.50	
				16.50-18.00m Sonic run						Stiff thinly laminated greyish brown silty slightly sandy CLAY. Sand is fine. Light brown fine sand and orangish brown staining on lamination faces. Occasional approximately 5-10mm thick beds of brown fine sand. . . . 16.80m-17.10m, very sandy.	(1.97)	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP7**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				18.00-19.50m Sonic run							18.47	
										Light reddish brown silty SAND. Sand is fine to medium.		
				19.50-21.00m Sonic run						. . . 19.30m-19.36m, stiff greyish brown silty sandy clay. . . . 19.60m-19.80m, stiff thinly laminated greyish brown clay with fine light brown sand on laminations.	(2.03)	
										. . . 20.30m-20.40m, firm thinly laminated brown silty sandy clay. Sand is fine.	20.50	
										Dark reddish brown silty clayey SAND. Sand is fine to medium. . . . 20.61m-20.67m, grey silty sandy clay.	20.75	
				21.00-22.50m Sonic run						Reddish brown silty SAND. Sand is fine. . . . below 20.85m, buff.	20.95	
										Reddish brown silty SAND. Sand is fine to medium with frequent fine to coarse sand sized shell fragments. . . . 22.00m-22.27m, clayey.	(3.05)	
				22.50-24.00m Sonic run						. . . 23.20m-23.44, brown slightly clayey.	24.00	
				24.00-25.50m Sonic run						Reddish brown slightly silty SAND. Sand is fine.	(1.50)	
										Borehole terminated at 25.50m depth.	25.50	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

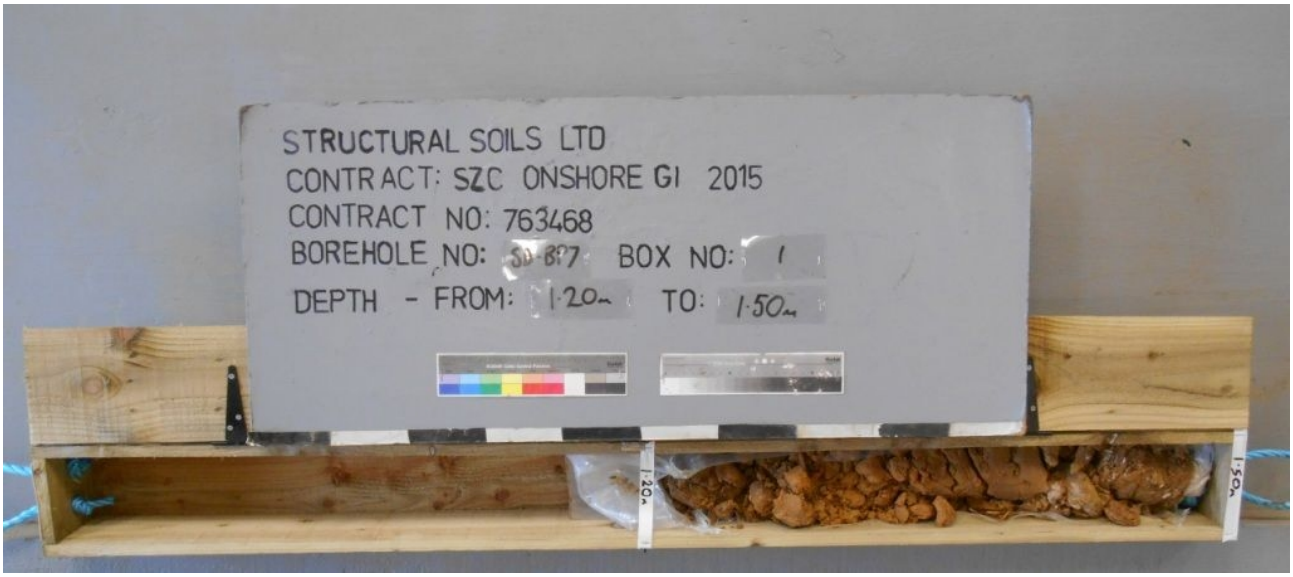
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

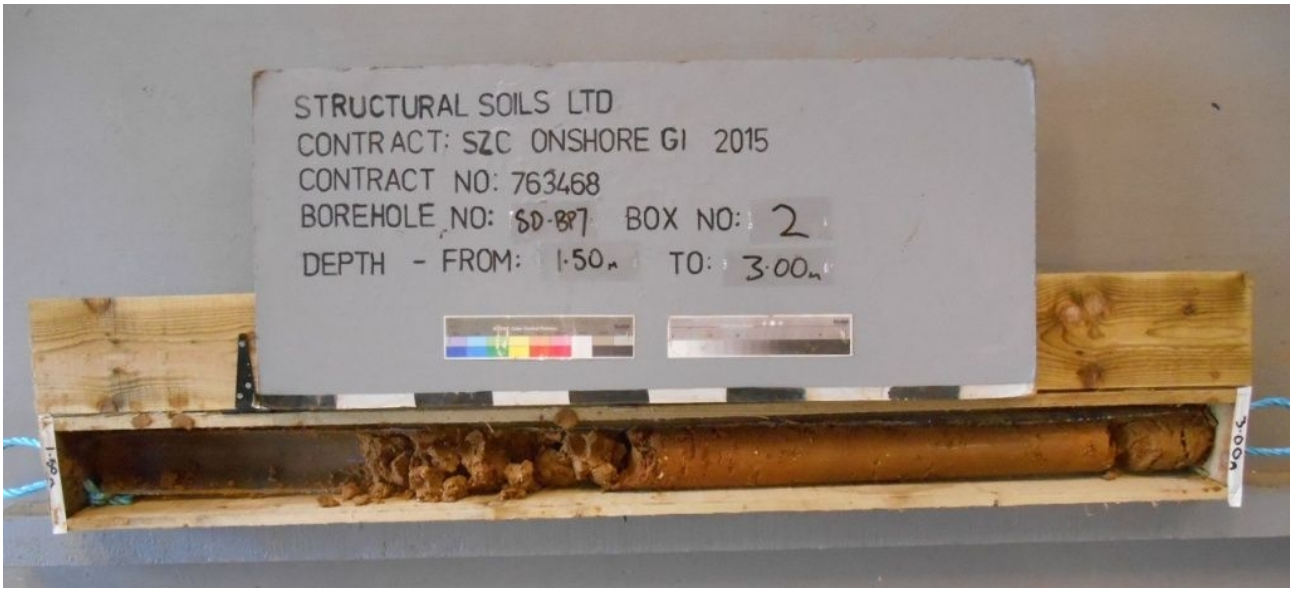
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**4** of **12**

Core Box 1





Core Box 2

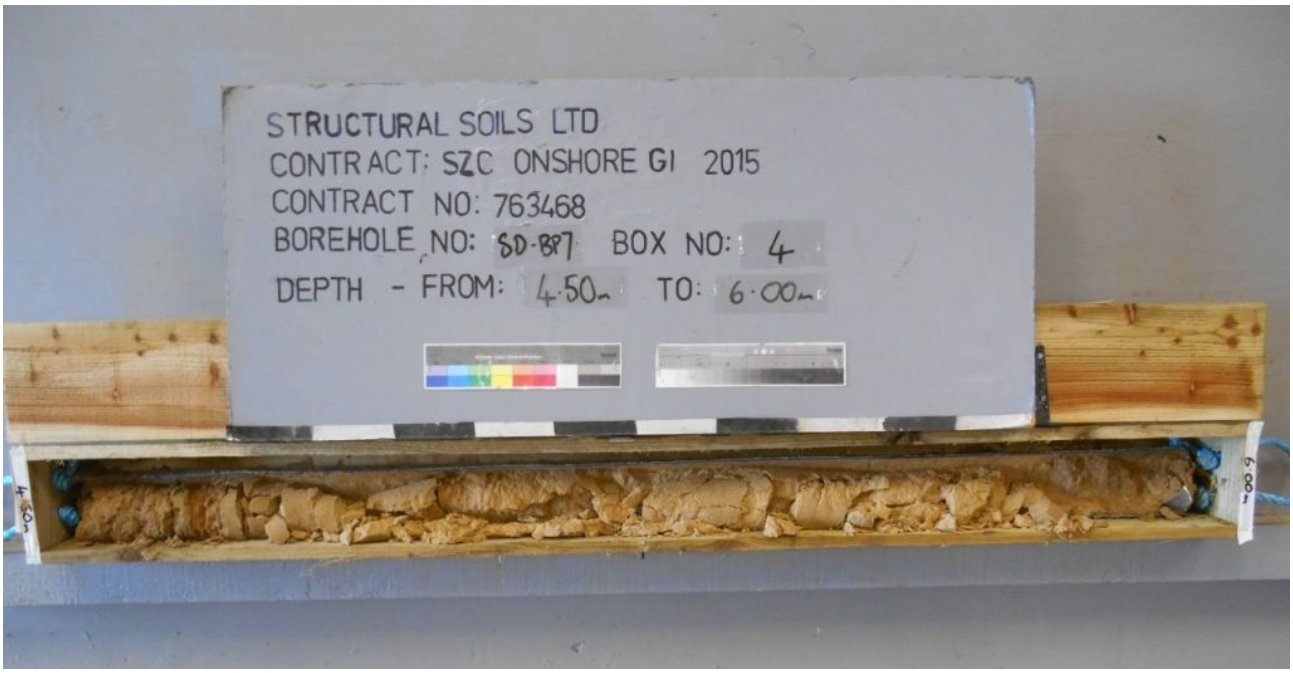
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**5** of **12**

Core Box 3



Core Box 4

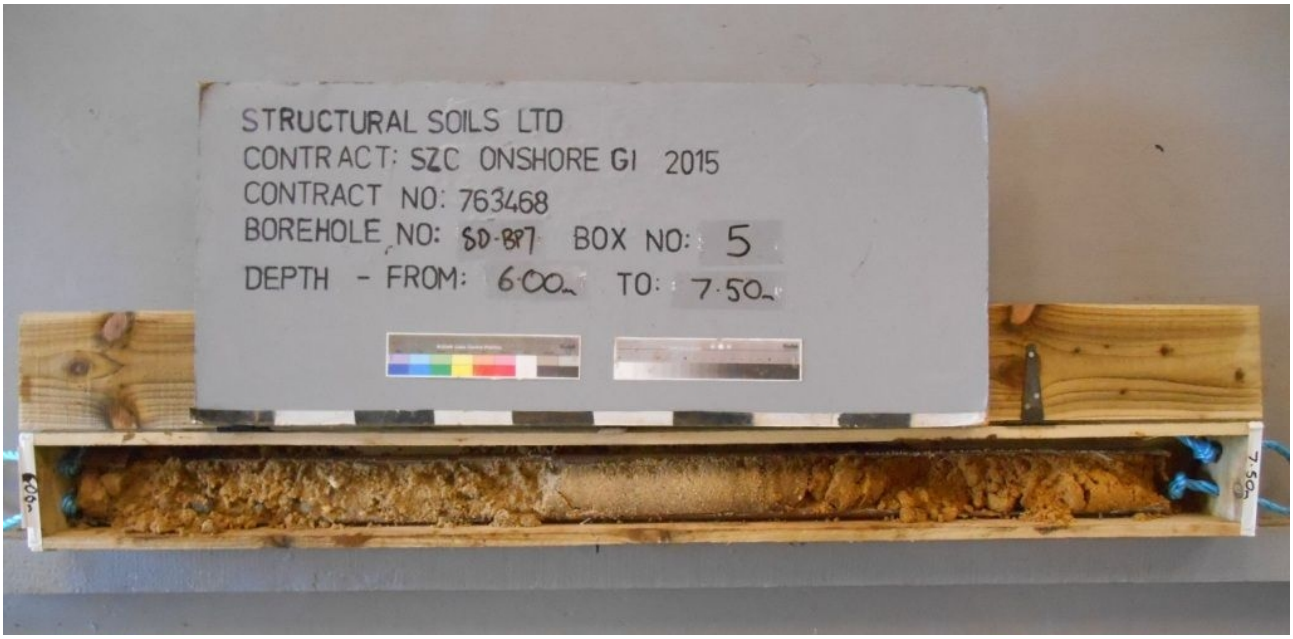
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**6** of **12**

Core Box 5



Core Box 6

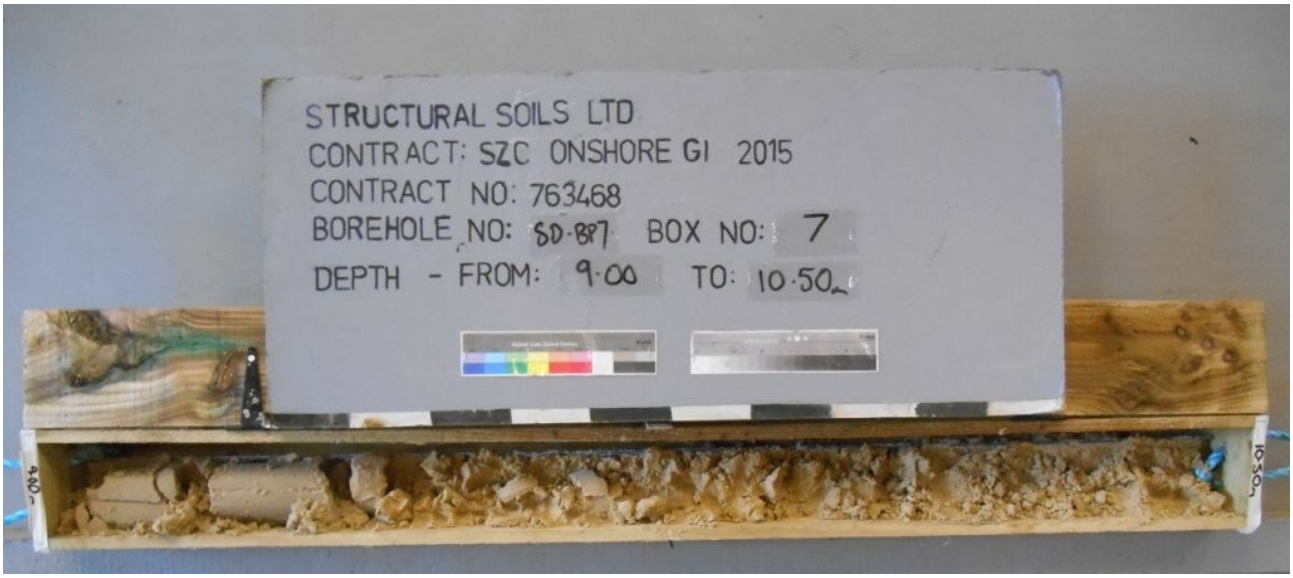
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

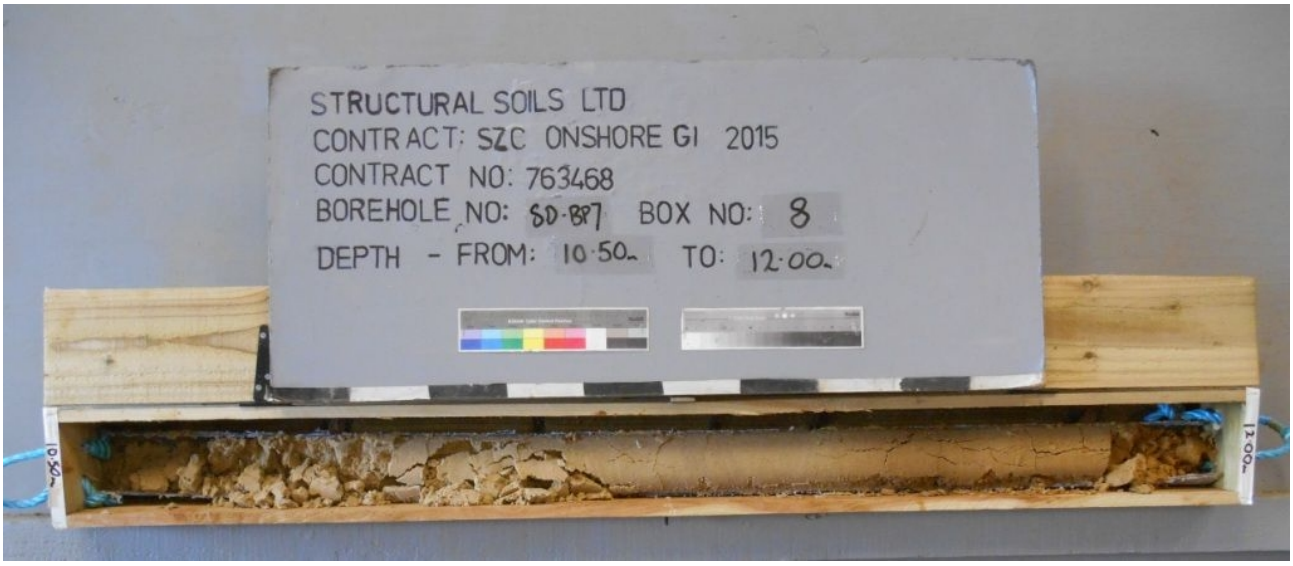
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**7** of **12**

Core Box 7





Core Box 8

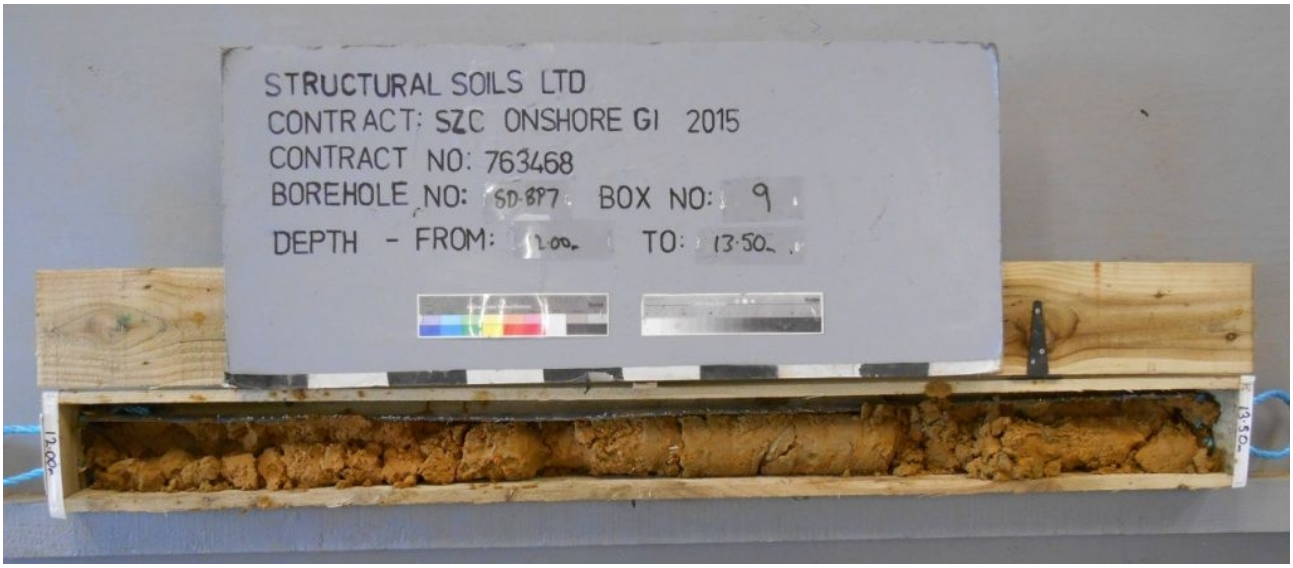
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

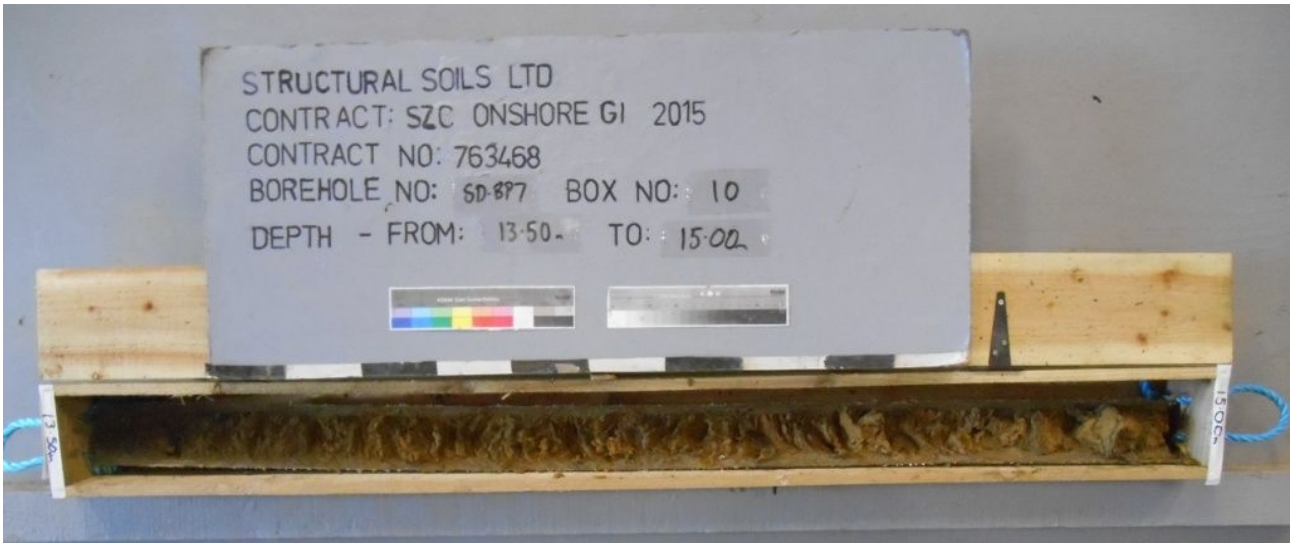
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**8** of **12**

Core Box 9





Core Box 10

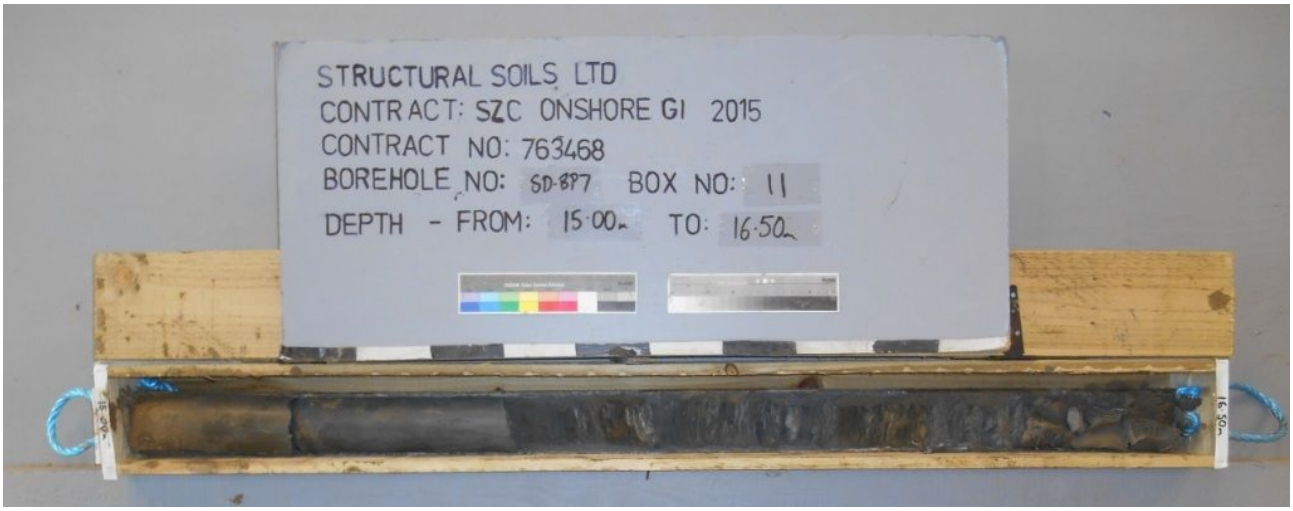
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

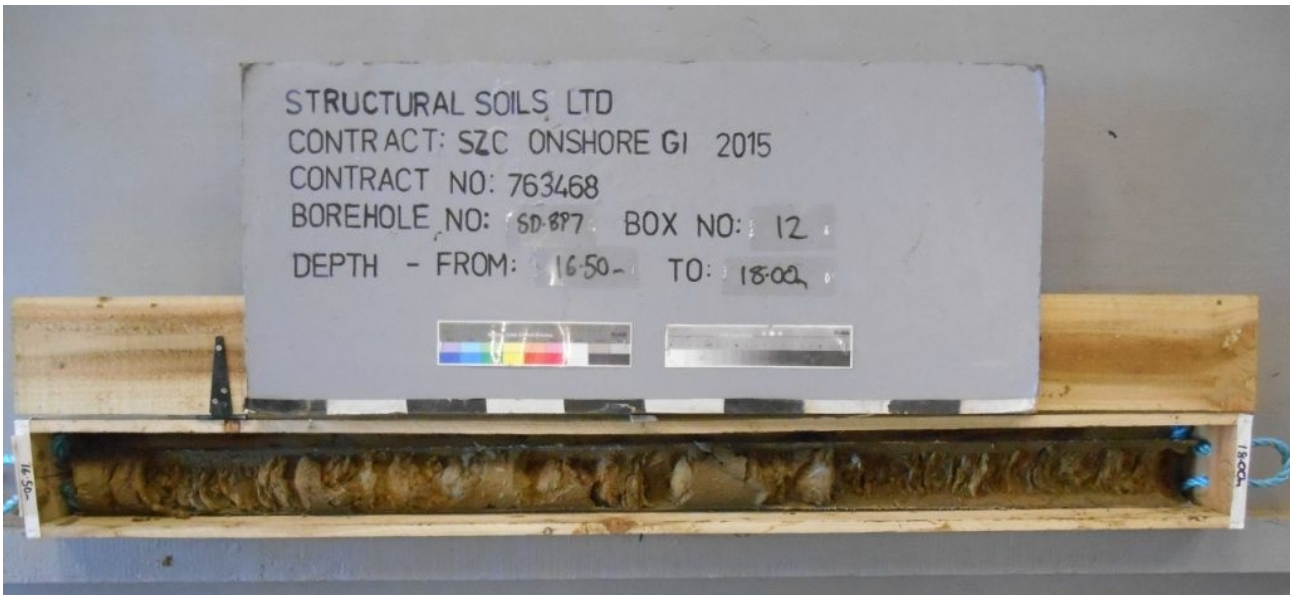
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**9** of **12**

Core Box 11





Core Box 12

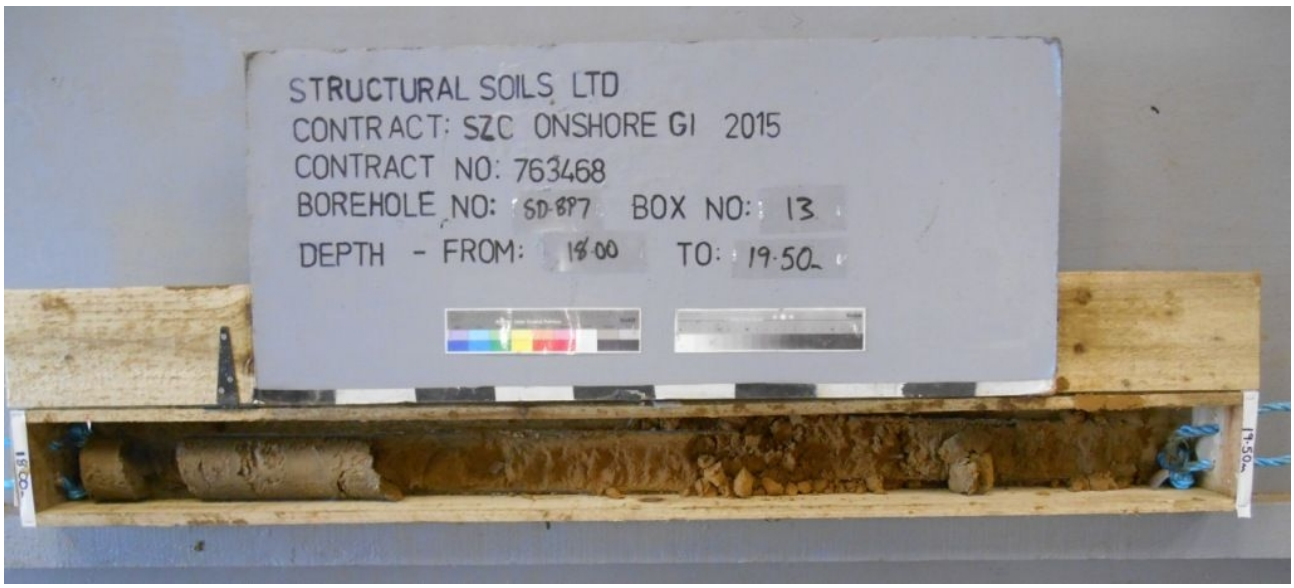
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

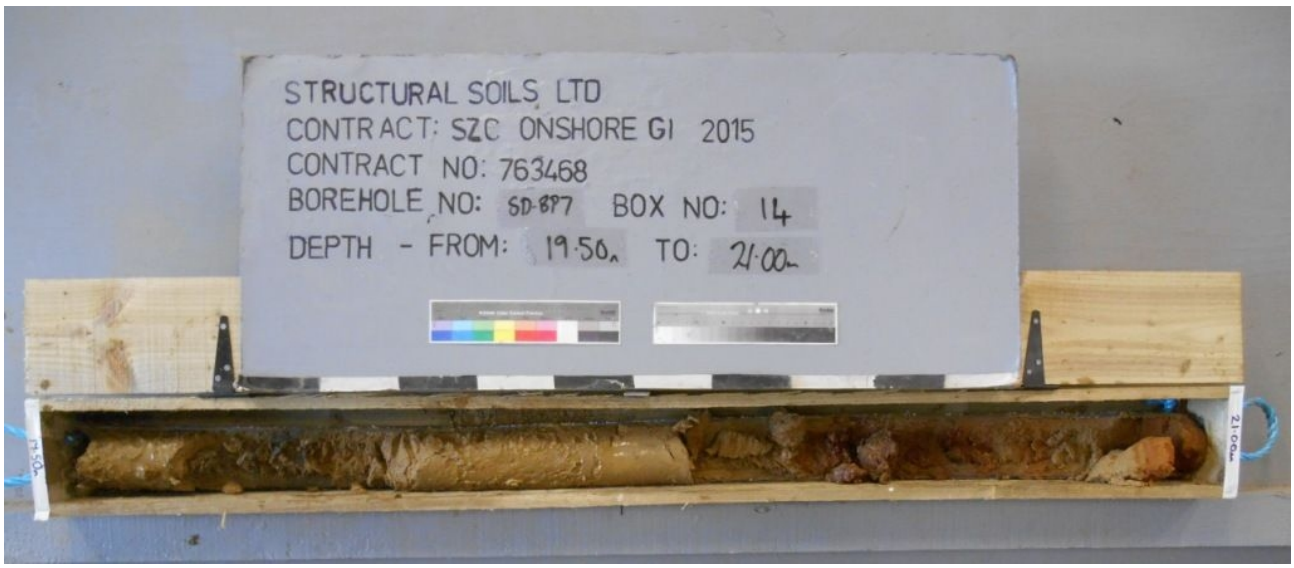
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**10** of **12**

Core Box 13





Core Box 14

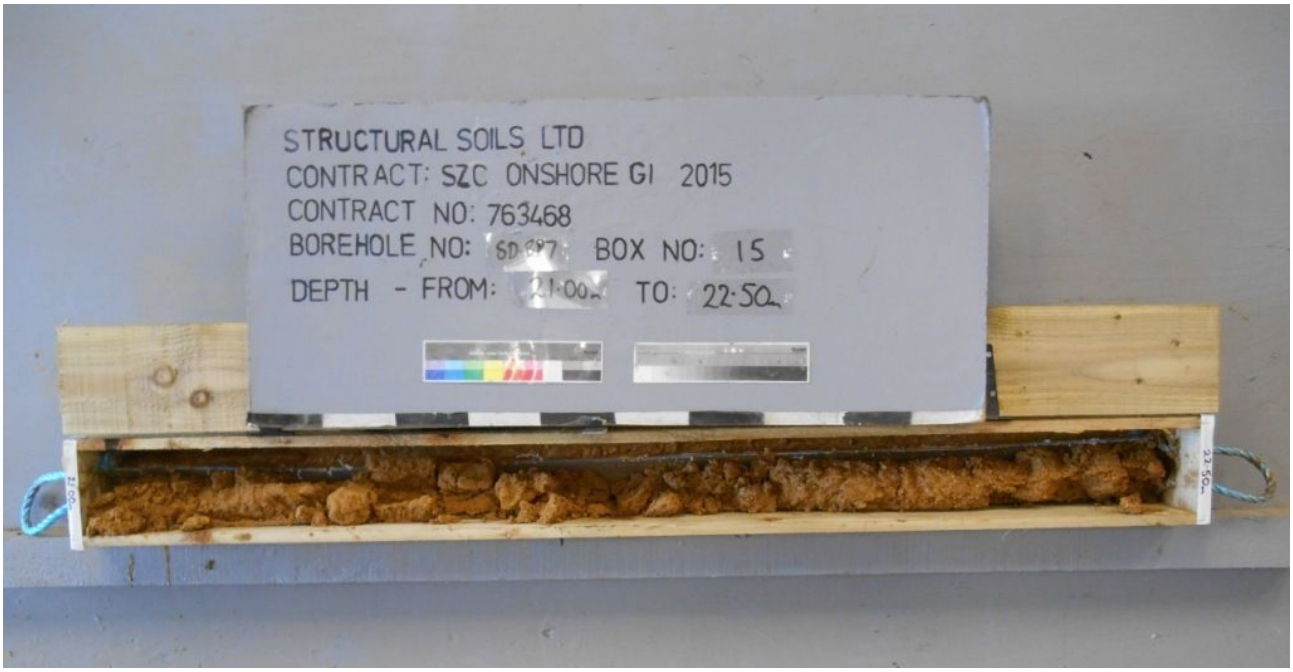
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP7**
Contract Ref:	Start: **02.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**11** of **12**

Core Box 15



Core Box 16

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP7**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	**02.09.15** End: **04.09.15**	**17.23**	**E:645326.2 N:265150.7**	**12** of **12**

Core Box 17

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CAH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP8**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**1** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
0.20-0.60	1	B								Firm reddish brown sandy slightly gravelly CLAY TOPSOIL with baked crust at surface. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse quartzite and flint.	0.20 0.60	
0.60-1.20	2	B								Reddish brown clayey slightly gravelly SAND. Sand is fine to coarse. Gravel is subangular to subrounded fine to coarse quartzite and flint.	(0.90)	
										Reddish brown silty slightly gravelly SAND. Sand is fine to medium. Gravel is subangular to subrounded fine to coarse quartzite and flint.	1.50	
				1.20-1.50m Sonic run						Buff silty SAND. Sand is fine to medium.		
				1.50-3.00m Sonic run						. . . 3.00m-3.30m, light brown and brown with rare subrounded fine to coarse flint and quartzite sandy and coarse sand sized shell fragments.	(3.36)	
				3.00-4.50m Sonic run						. . . 4.50m-4.86m, sand is fine to coarse.	4.86	
				4.50-6.00m Sonic run						Buff silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to coarse quartzite and flint. . . . 5.50m-5.80m, gravel absent. . . . 5.80m-6.00m, buff to light brown.	(1.14) 6.00	
				6.00-7.50m Sonic run						Brown silty SAND. Sand is fine to medium. Rare medium to coarse sand sized shell fragments.	(2.05)	
				7.50-9.00m Sonic run						. . . 7.70m-8.00m, fine to coarse.	8.05	
										Reddish brown silty SAND. Sand is fine to coarse.	8.52	
										Description on next sheet	(0.68)	

Boring Progress and Water Observations

Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth
07/09/15	18:15	6.00	6.00	114	5.20
08/09/15	09:00	6.00	6.00	114	Dry
08/09/15	16:45	25.50	25.50	114	8.10
09/09/15	08:00	25.50	25.50	114	9.28

General Remarks

1. Hand dug inspection pit to 1.20m.
2. 114.30mm diameter rotary-vibratory core barrell used in conjunction with semi-rigid U86 plastic liner.
3. Water added to aid drilling process.
4. Installed with 50mm standpipe piezometer on completion. Response Zone between 8.00 and 25.50m depth.

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP8**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**2** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instrumentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				9.00-10.50m Sonic run						Buff silty slightly gravelly SAND. Sand is fine to coarse. Gravel is subrounded fine to coarse quartzite and flint. *(stratum copied from 8.52m from previous sheet)*	9.20	
										. . . 9.00m-9.20m, orangish brown fine to coarse sand. Buff with frequent orangish brown strong silty SAND. Sand is fine to coarse.	(2.30)	
				10.50-12.00m Sonic run						. . . below 9.70m, orangish brown staining absent. Sand is fine. . . . below 10.60m, occasional orange brown staining. Sand is fine to coarse. . . . below 11.30m, 1 no. subrounded coarse gravel of quartzite.	11.50	
				12.00-13.50m Sonic run						Reddish brown silty SAND. Sand is fine to medium. . . . 11.52m-11.70m, thickly laminated with brown and orangish brown clayey sand. . . . at 11.65m, pocket of orange brown clay. . . . at 12.70m, 2 no. subrounded coarse quartzite gravels.	(2.00)	
				13.50-15.00m Sonic run						Light brown silty SAND. Sand is fine to medium. Rare coarse sand sized shell fragments.	13.50	
				15.00-16.50m Sonic run						. . . below 14.50m, frequent shell fragments. Slightly gravelly. Gravel is subrounded fine to medium quartzite.	(2.68)	
				16.50-18.00m Sonic run						Reddish brown silty SAND. Sand is fine to medium. Rare coarse sand sized shell fragments. . . . at 17.10m, pocket of reddish brown clay.	16.18	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:	Client:	Borehole:
SZC 2015 Onshore GI	**NNB GenCo**	**SD-BP8**

Contract Ref:	Start:	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**3** of **12**

Depth (m)	Samples & Testing: No	Type	Results	Mechanical Log: TCR (%)	SCR (%)	RQD (%)	If (mm)	Backfill & Instru-mentation	Water	Description of Strata	Depth (Thickness)	Material Graphic Legend
				18.00-19.50m Sonic run						Reddish brown silty SAND. Sand is fine to medium. Rare coarse sand sized shell fragments. *(stratum copied from 16.18m from previous sheet)* . . . 18.00m-19.00m, shells absent. . . . 18.80m-18.90m, orangish brown.	(6.92)	
				19.50-21.00m Sonic run						. . . 20.12m-20.55m, sand is fine. . . . below 20.30m, brown. . . . 20.44m-20.63m, brown clay.		
				21.00-22.50m Sonic run						. . . 21.00m-22.00m, AZCL.	23.10	
				22.50-24.00m Sonic run						Dark reddish brown silty SAND. Sand is fine to medium with much coarse sand sized shell fragments. Occasional bands of brown sandy clay.	(0.90)	
				24.00-25.50m Sonic run						Grey with orangish brown staining silty SAND. Sand is fine to coarse with frequent sand sized shell fragments. . . . below 24.85m, occasional coarse tableted mudstone gravel. . . . at 25.10m, band of brown tableted mudstone gravels. below 25.10m, sand is fine. Borehole terminated at 25.50m depth.	24.00 (1.50) 25.50	

Boring Progress and Water Observations					
Date	Time	Borehole Depth	Casing Depth	Borehole Diameter (mm)	Water Depth

General Remarks

All dimensions in metres | Scale: **1:50**

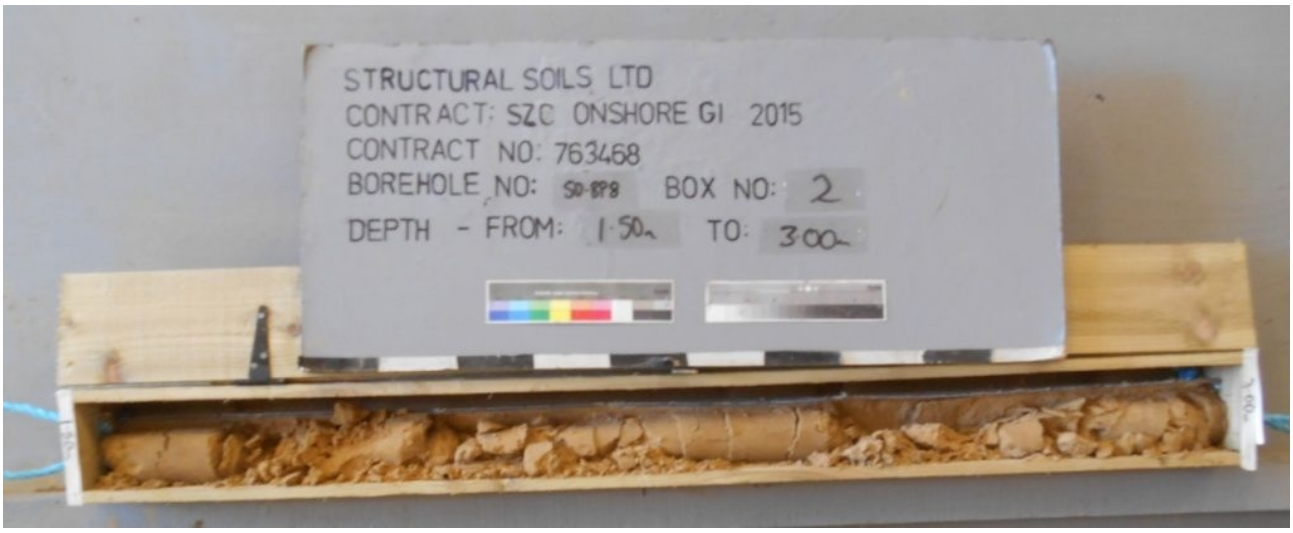
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**4** of **12**

Core Box 1



Core Box 2

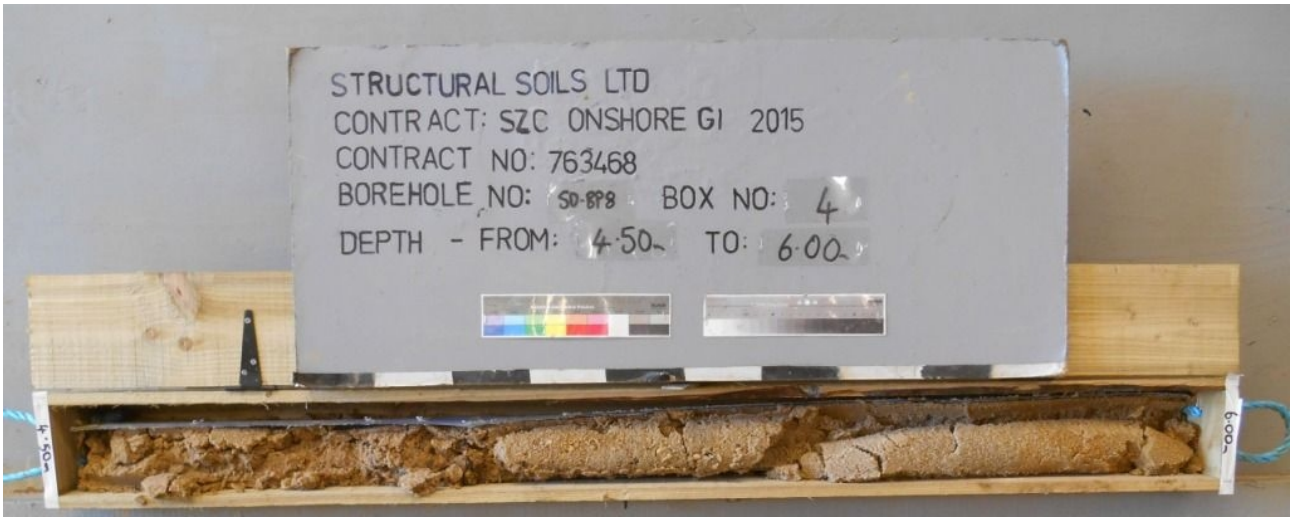
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**5** of **12**

Core Box 3



Core Box 4

Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**6** of **12**

Core Box 5

Core Box 6

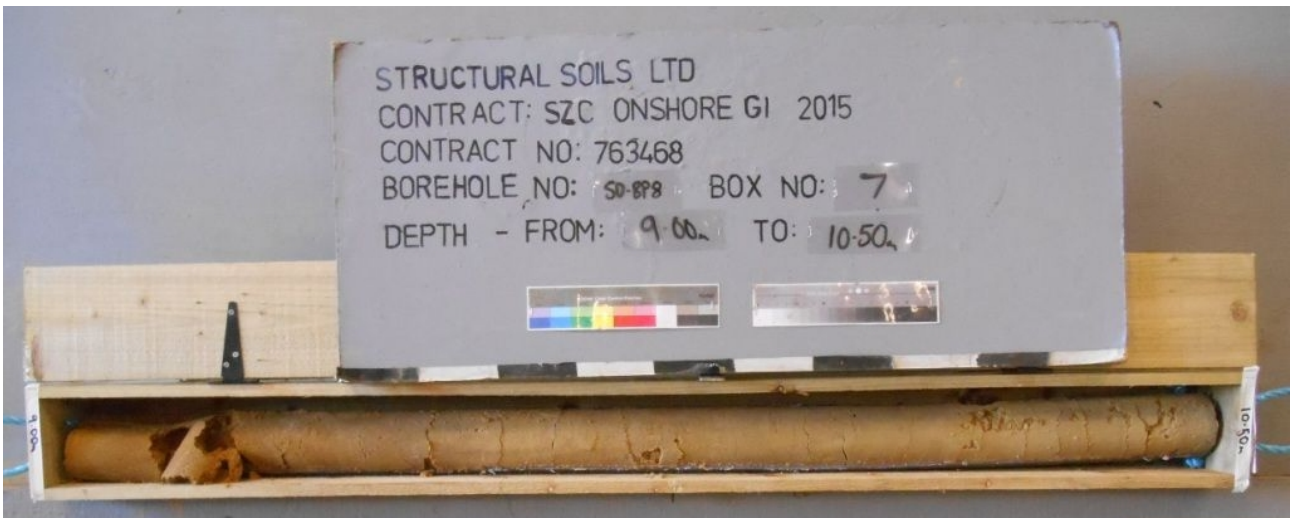
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

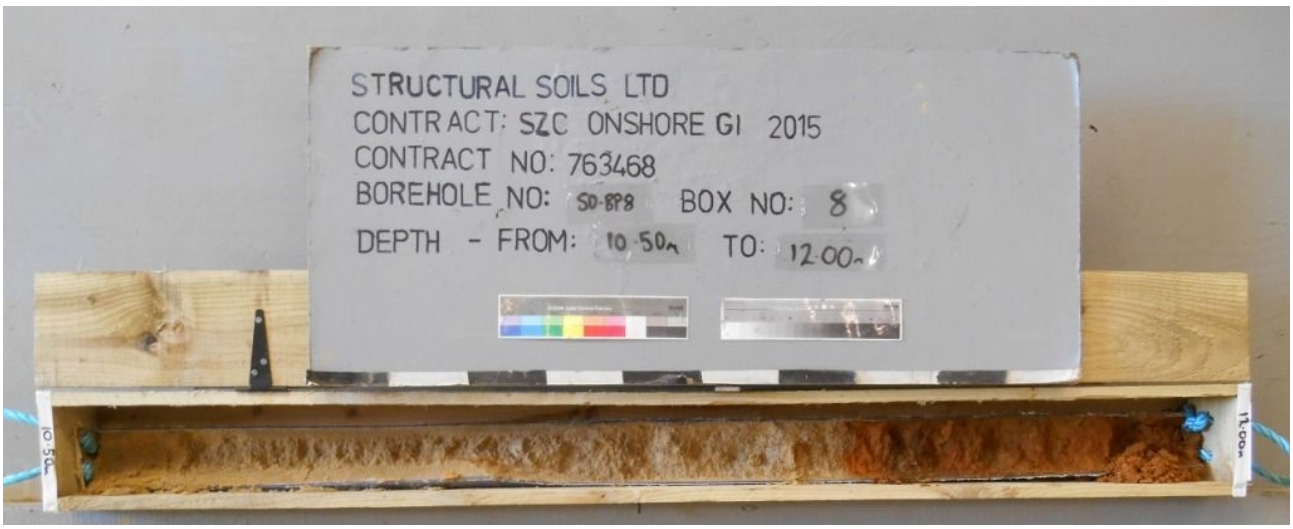
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**7** of **12**

Core Box 7





Core Box 8

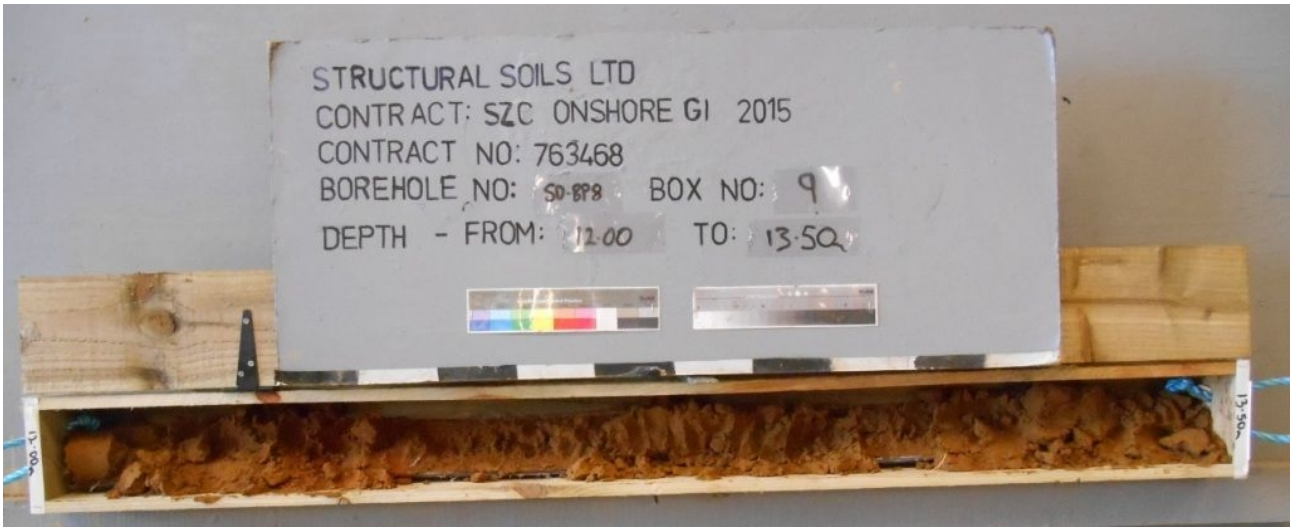
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

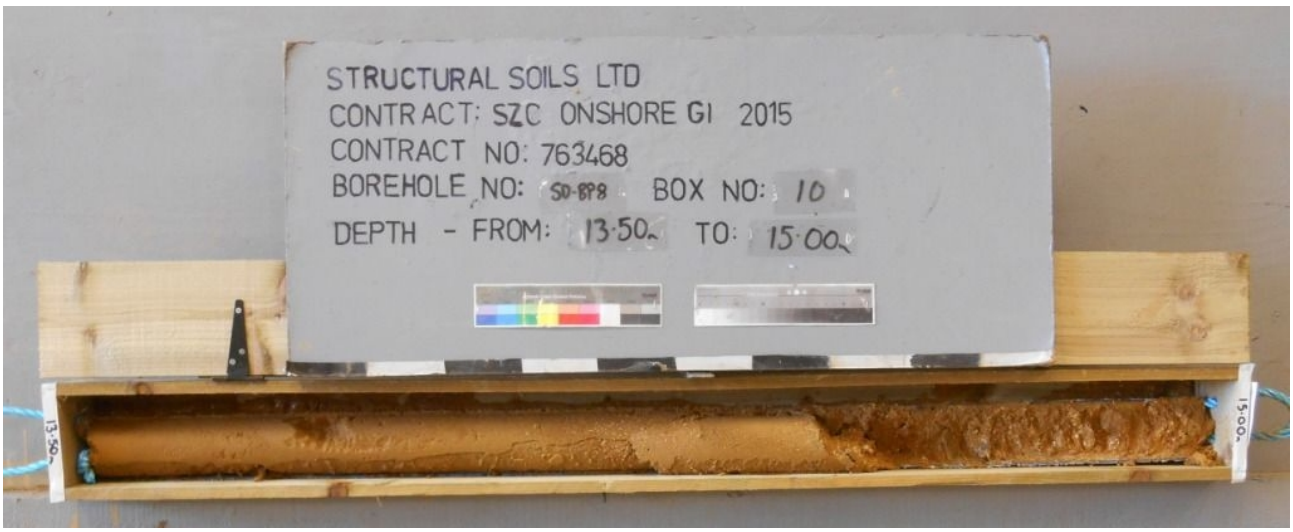
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**8** of **12**

Core Box 9





Core Box 10

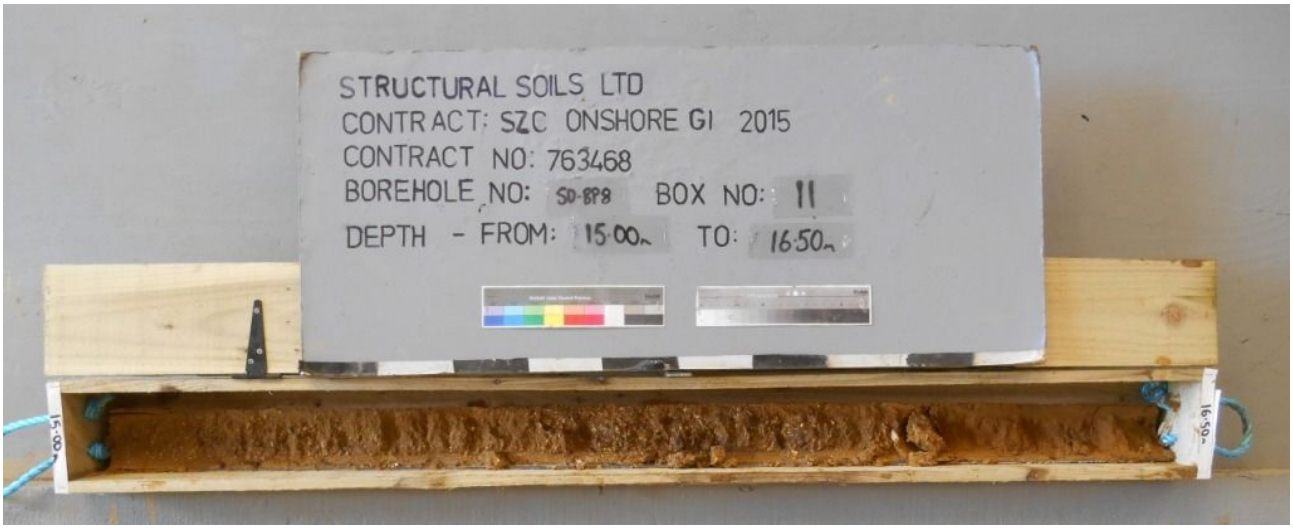
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**9** of **12**

Core Box 11



Core Box 12

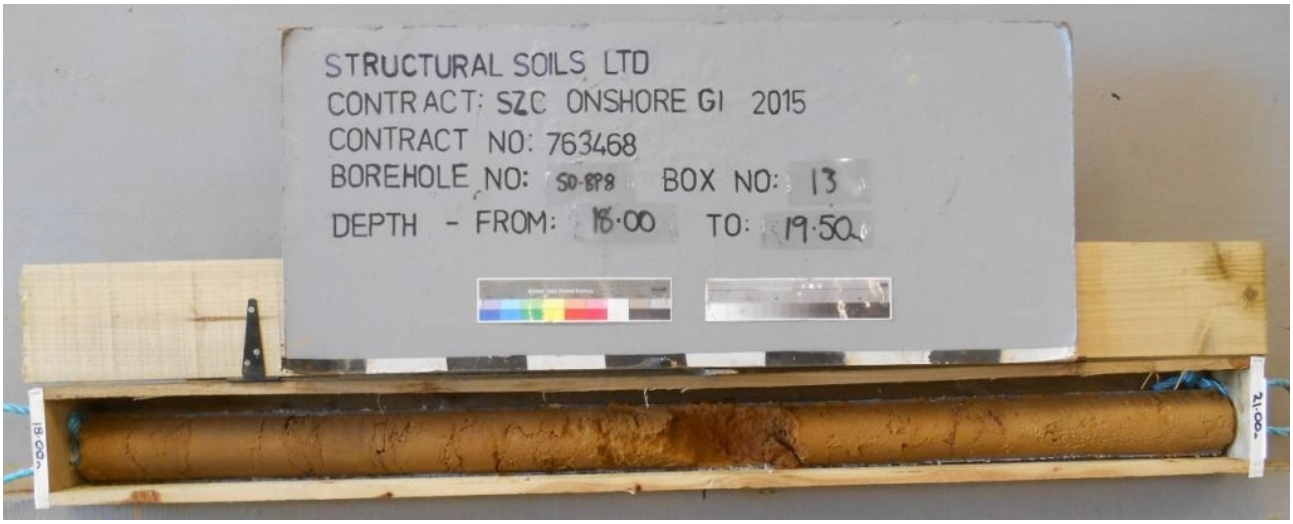
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

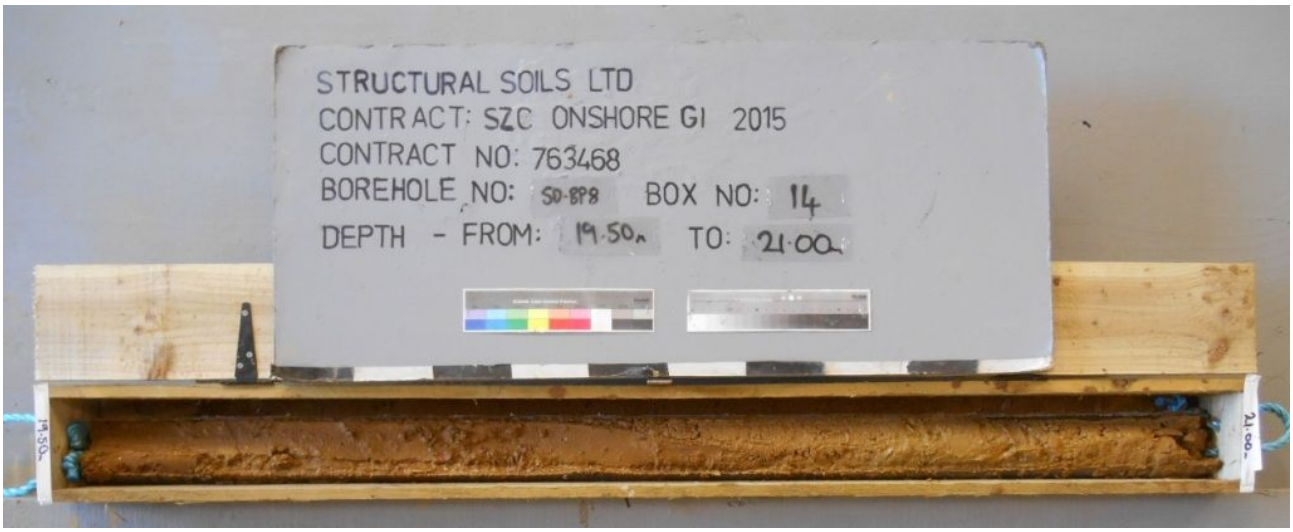
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**10** of **12**

Core Box 13





Core Box 14

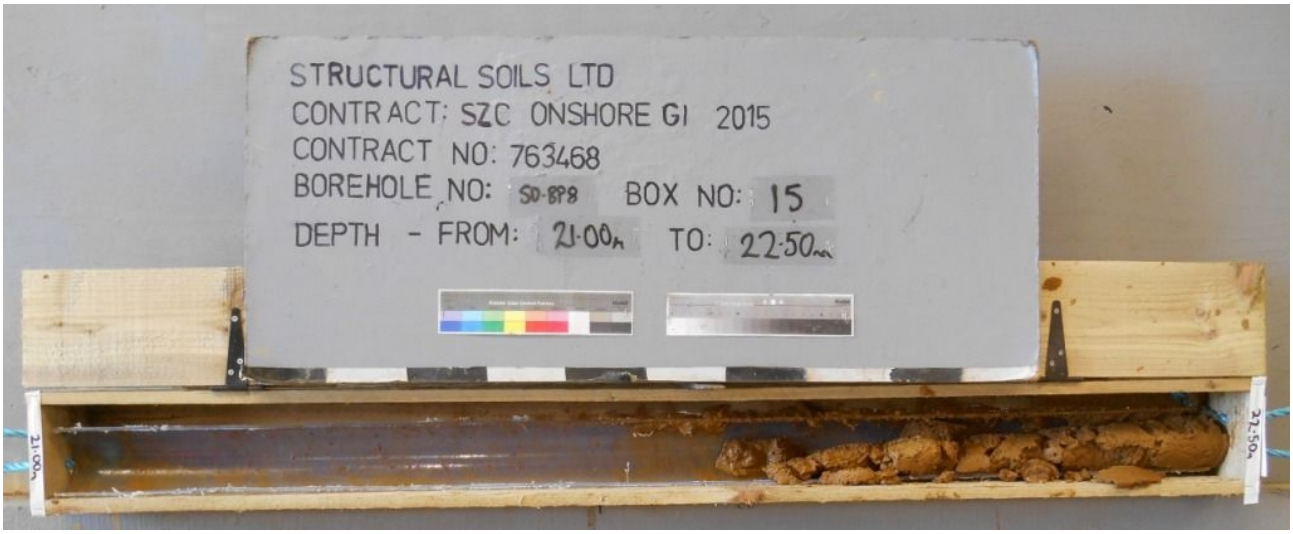
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CJH

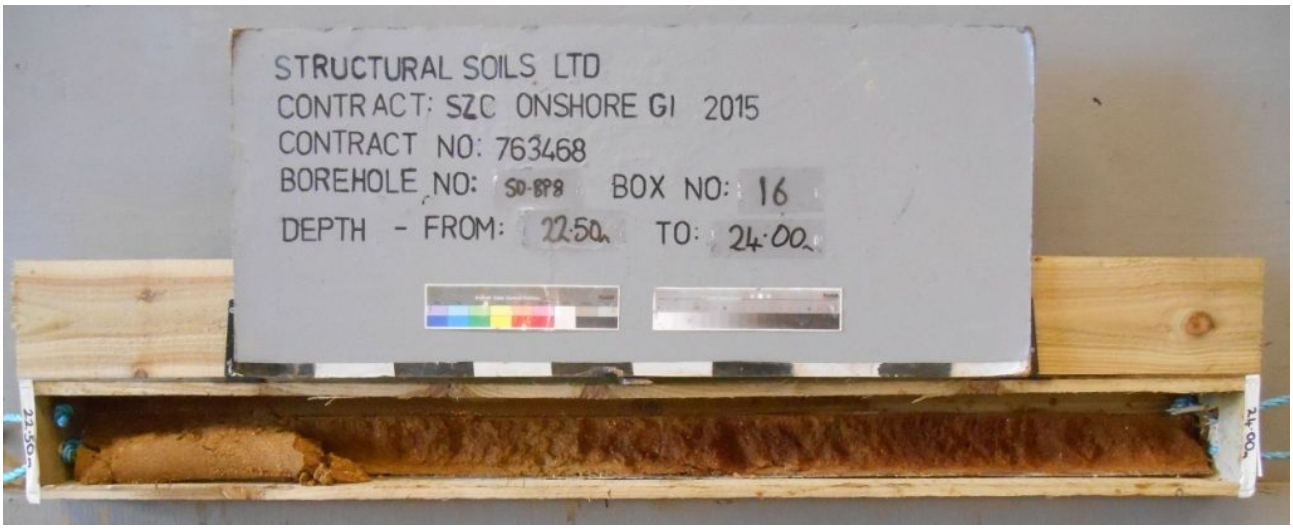
STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**11** of **12**

Core Box 15





Core Box 16

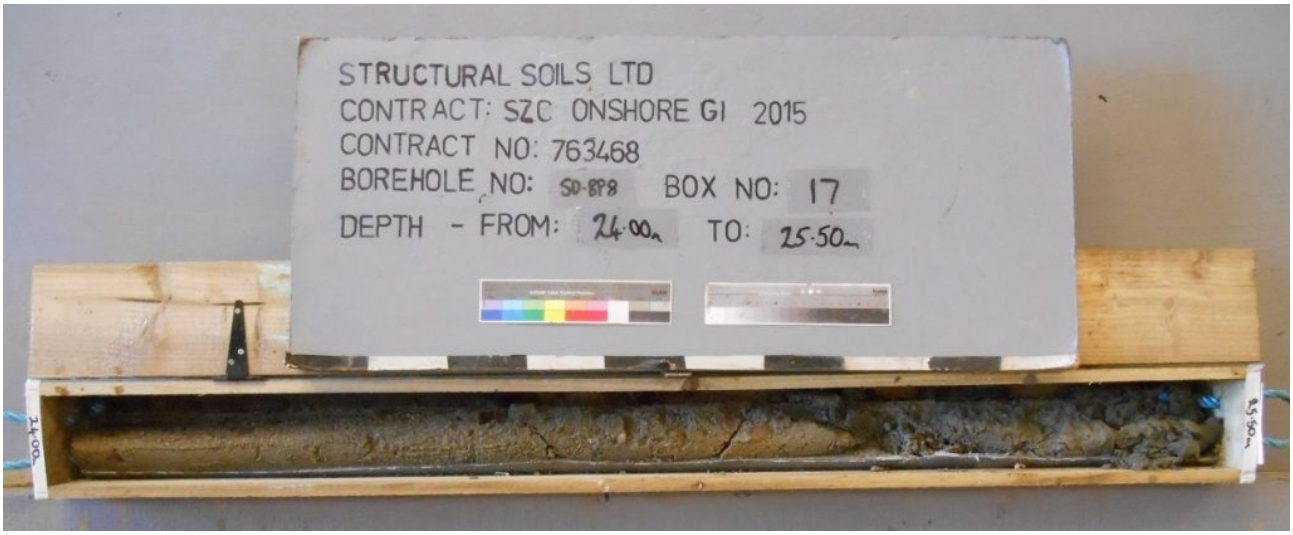
Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CSH

STRUCTURAL SOILS

DRAFT
SONIC DRILLING LOG

Contract:		Client:		Borehole:
SZC 2015 Onshore GI		**NNB GenCo**		**SD-BP8**
Contract Ref:	Start: **07.09.15**	Ground Level (m):	National Grid Co-ordinate:	Sheet:
763468	End: **09.09.15**	**15.66**	**E:645579.6 N:265036.2**	**12** of **12**

Core Box 17



Method Used:	Plant Used:	Drilled By:	Logged By:	Checked By:
Sonic Drilling	**Boart Longyear DB320 Sonic**	**DR**	**AJones**	CAH

APPENDIX C

(v) Soakaway Test Results

(vi) Permeability Test Results

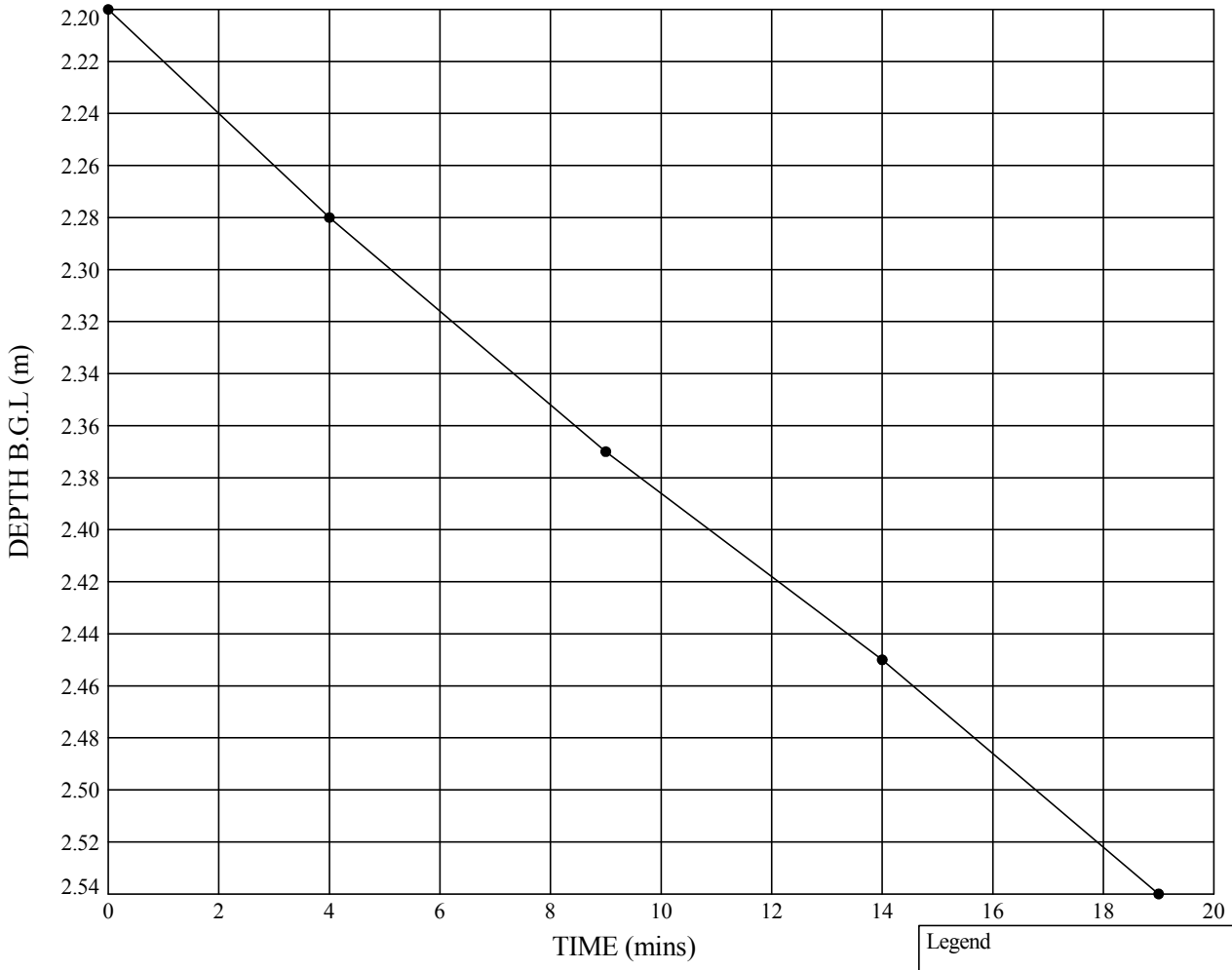
FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

Soakaway Test - Position ID : **WMZ18**

Ground Level (m): **10.88** National Grid Co-ordinates: **E:645639.6 N:265638.0**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME

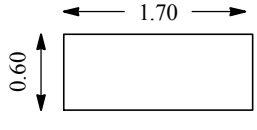


Legend

● Test 1 (15.07.15)

Pit start depth	=	3.5	m
Pit final depth	=	2.56	m
Effective depth, De	=	0.36	m
Effective storage volume, V_{p75-25}	=	0.1836	m^3
Surface area, a_{p50}	=	1.8480	m^2
Time, t_{p75-25}	=	634	secs
Infiltration rate, f	=	1.57×10^{-4}	m/s

Plan (Not to scale)



No Bearing Taken

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

	Compiled By	Date	Checked By	Date
STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	[redacted]	07/09/15		
	Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**	

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

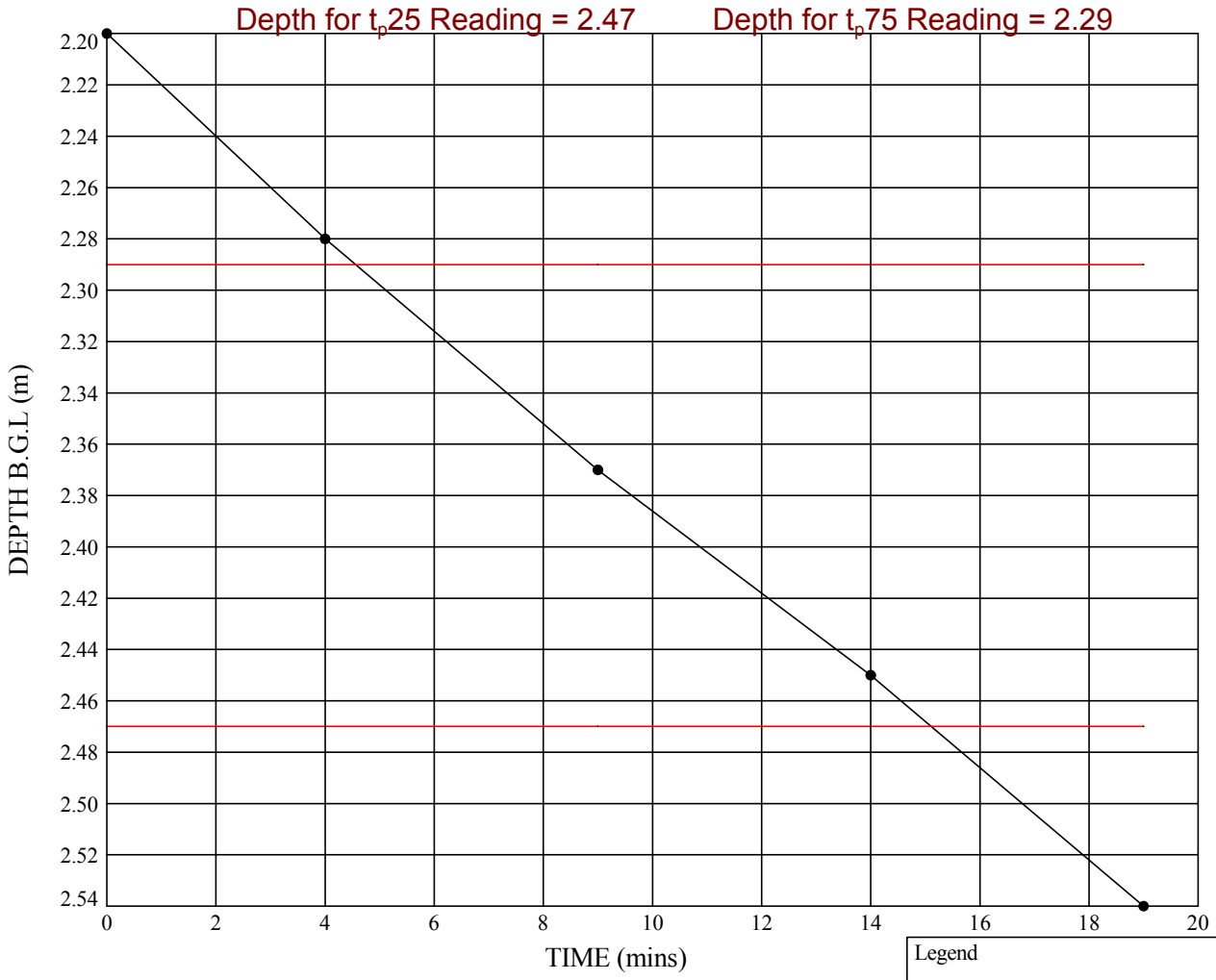
Soakaway Test - Position ID : **WMZ18**

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

Ground Level (m): **10.88**

National Grid Co-ordinates: **E:645639.6 N:265638.0**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



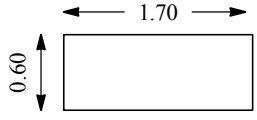
Legend

● Test 1 (15.07.15)

Effective depth, De	=	0.36	m
Effective storage volume, V_{p75-25}	=	0.1836	m^3
Surface area, a_{p50}	=	1.8480	m^2
Time, t_{p75-25}	=	634	secs
Infiltration rate, f	=	$1.57x10^{-4}$	m/s

Notes : 2000ltr water pumped over 8 mins with 2inch pump.

Plan (Not to scale)



No Bearing Taken

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By	Date	Checked By	Date
[redacted]	07/09/15		

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

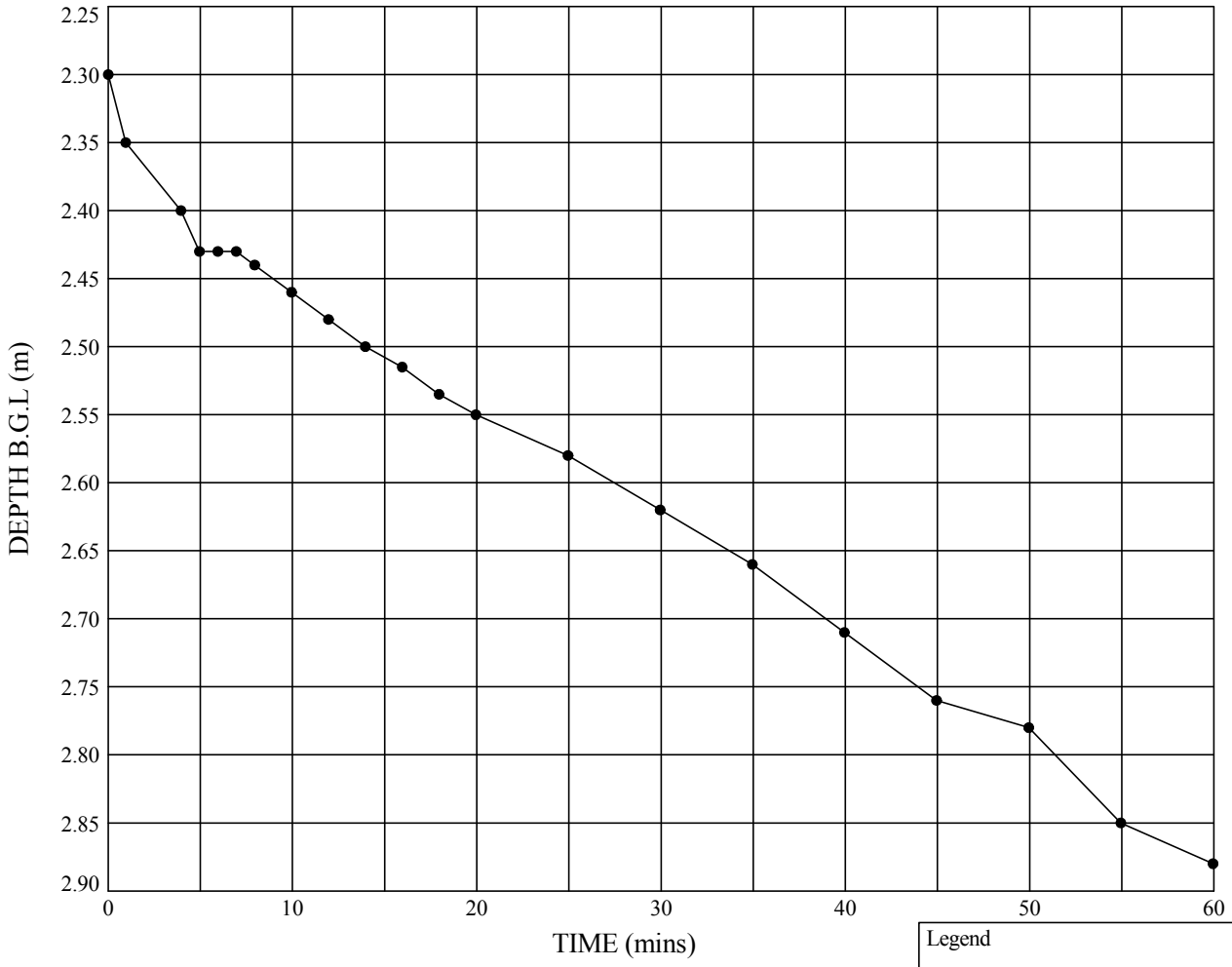
FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

Soakaway Test - Position ID : **WMZ19**

Ground Level (m): **12.22** National Grid Co-ordinates: **E:645240.9 N:263713.4**

PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME

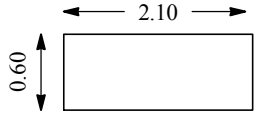


Legend

● Test 1 (16.07.15)

Pit start depth	=	3.5	m
Pit final depth	=	2.97	m
Effective depth, De	=	0.67	m
Effective storage volume, V_{p75-25}	=	0.4221	m^3
Surface area, a_{p50}	=	3.0690	m^2
Time, t_{p75-25}	=	2451	secs
Infiltration rate, f	=	5.61×10^{-5}	m/s

Plan (Not to scale)



No Bearing Taken

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

	Compiled By	Date	Checked By	Date
STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	[redacted]	07/09/15		
	Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**	

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

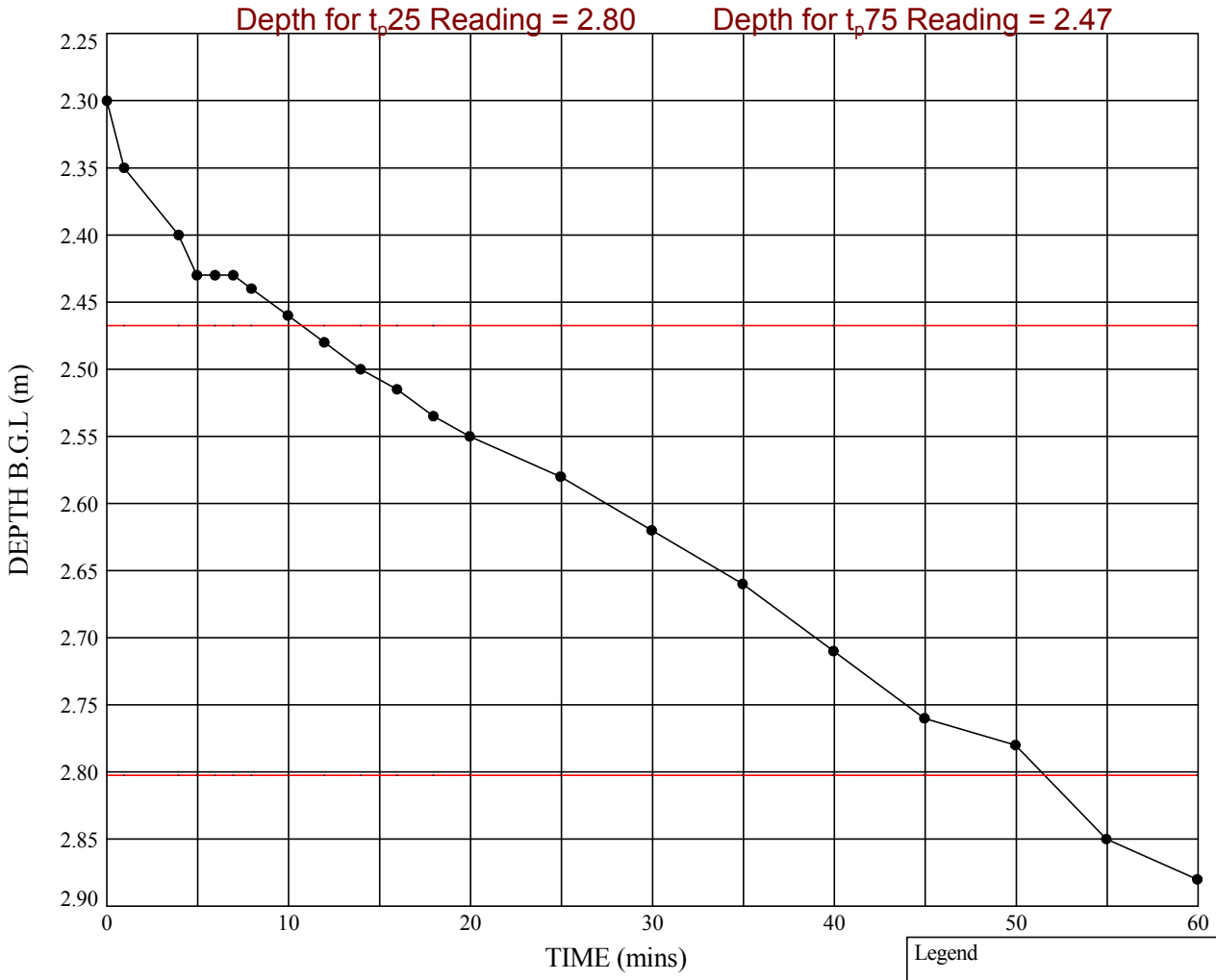
Soakaway Test - Position ID : **WMZ19**

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

Ground Level (m): **12.22**

National Grid Co-ordinates: **E:645240.9 N:263713.4**

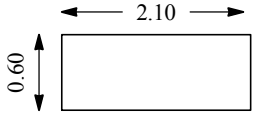
PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Legend

● Test 1 (16.07.15)

Plan (Not to scale)



No Bearing Taken

Effective depth, De	=	0.67	m
Effective storage volume, V_{p75-25}	=	0.4221	m^3
Surface area, a_{p50}	=	3.0690	m^2
Time, t_{p75-25}	=	2451	secs
Infiltration rate, f	=	5.61×10^{-5}	m/s

Notes : 2000ltr of water pumped over 10 mins with 2inch pump.

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

	Compiled By	Date	Checked By	Date
STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	[redacted]	07/09/15		
	Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**	

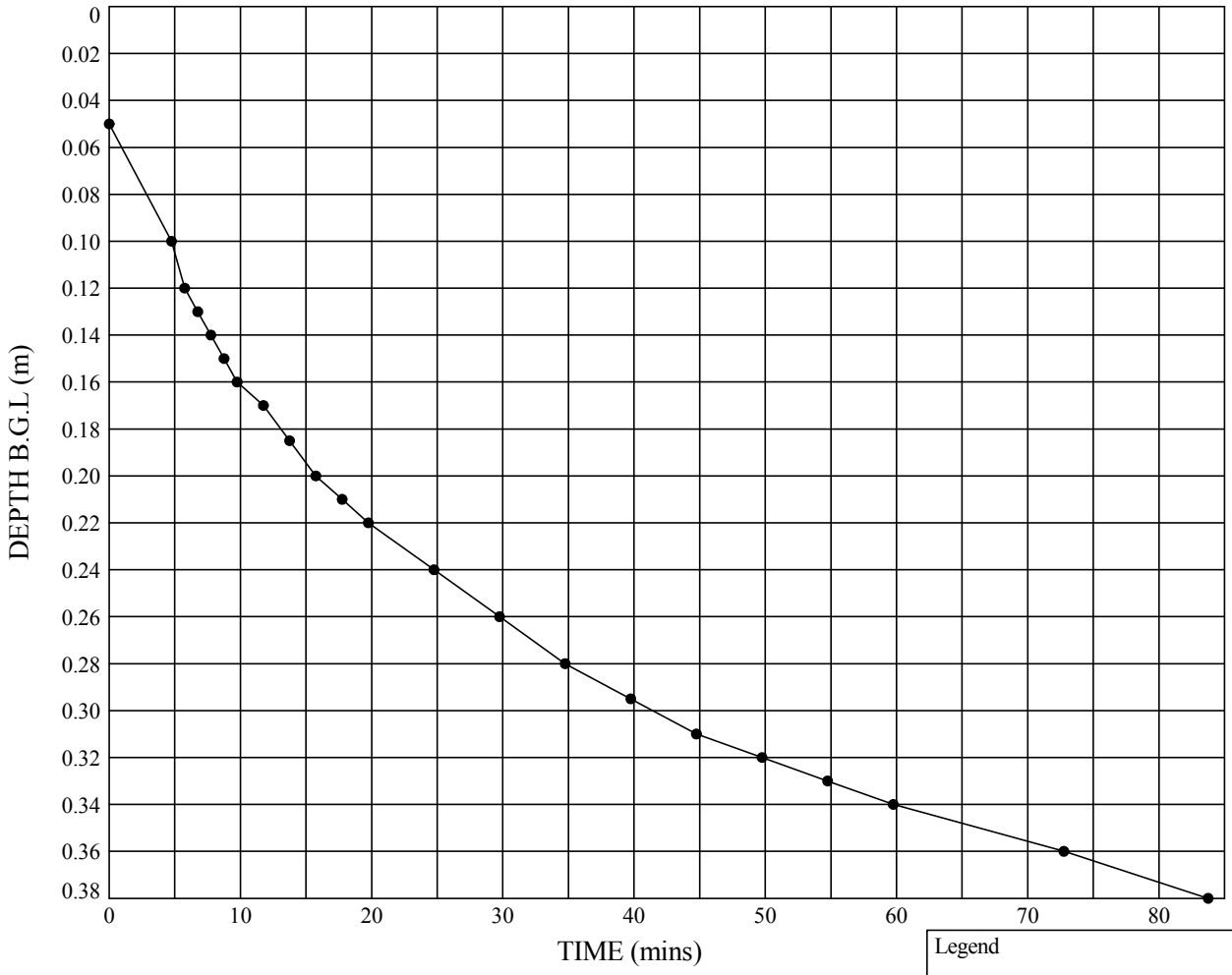
FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

Soakaway Test - Position ID : **WMZ20**

Ground Level (m): **2.29** National Grid Co-ordinates: **E:647095.4 N:264944.3**

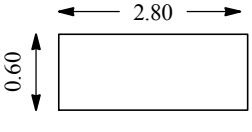
PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Legend

● Test 1 (15.07.15)

Plan (Not to scale)



No Bearing Taken

Pit start depth	=	1.1	m
Pit final depth	=	1.1	m
Effective depth, De	=	1.05	m
Effective storage volume, V_{p75-25}	=	0.8820	m^3
Surface area, a_{p50}	=	5.2500	m^2
Time, t_{p75-25}	=	20227	secs
Infiltration rate, f	=	8.31×10^{-6}	m/s

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

	Compiled By	Date	Checked By	Date
STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	[redacted]	07/09/15		
	Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**	

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

FULL SCALE SOAKAWAY TEST

In accordance with BRE Digest 365

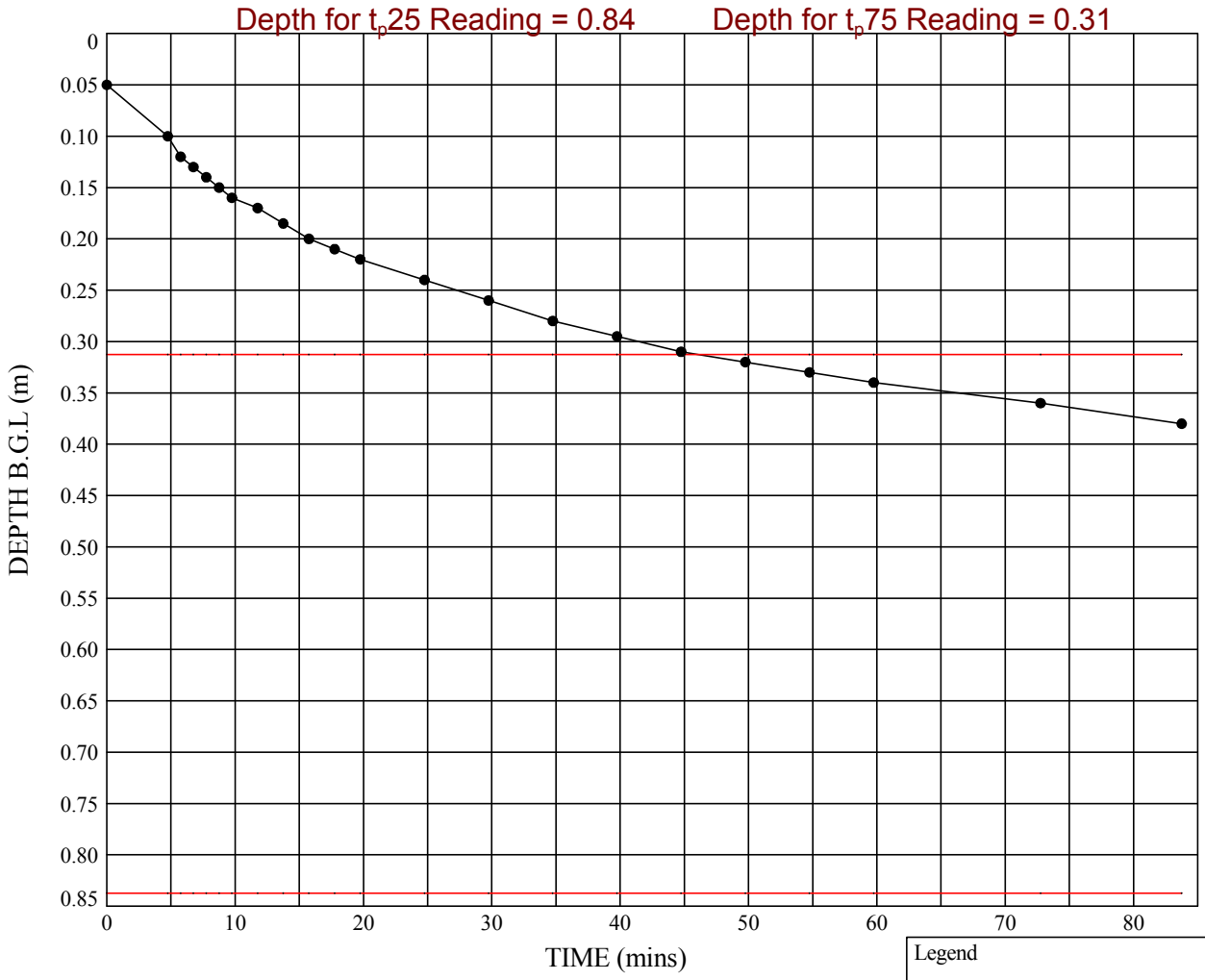
Soakaway Test - Position ID : **WMZ20**

NOT FINAL
NOT FINAL
NOT FINAL
Test No. 1

Ground Level (m): **2.29**

National Grid Co-ordinates: **E:647095.4 N:264944.3**

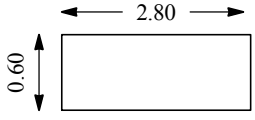
PLOT OF DEPTH OF WATER BELOW GROUND LEVEL AGAINST TIME



Legend

● Test 1 (15.07.15)

Plan (Not to scale)



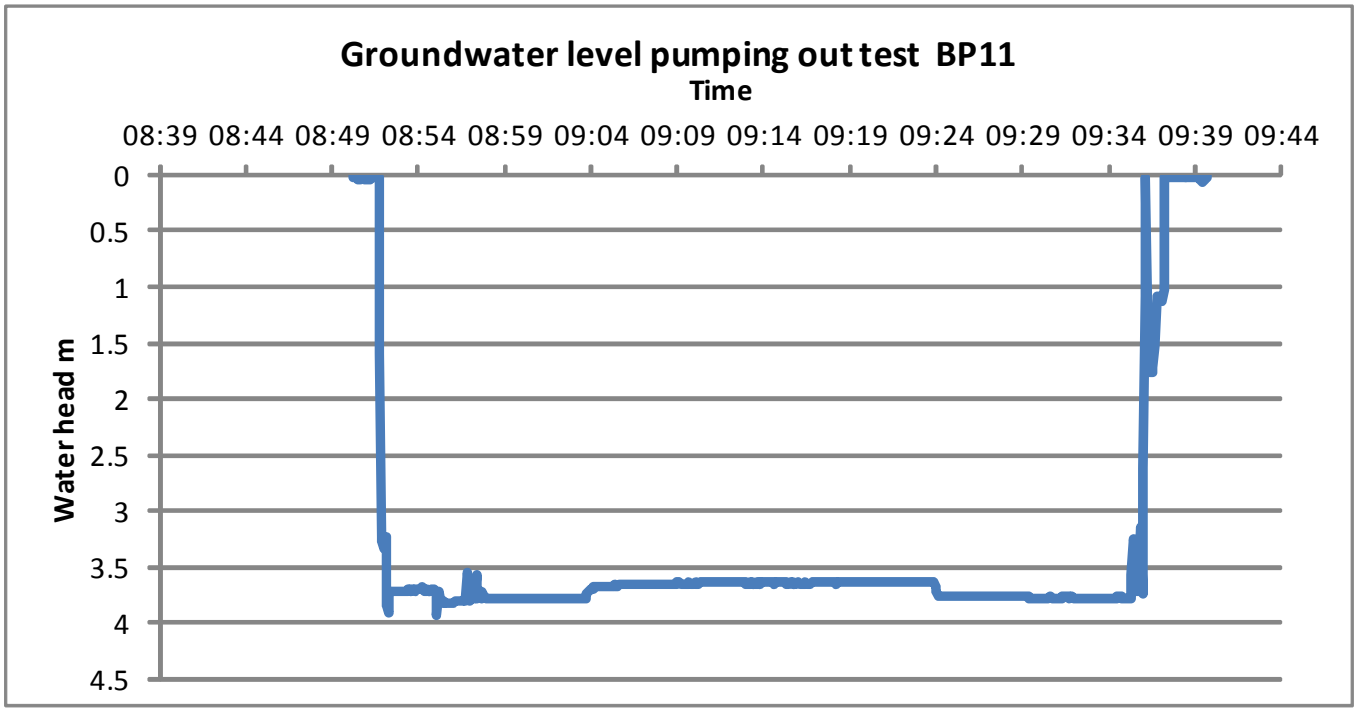
No Bearing Taken

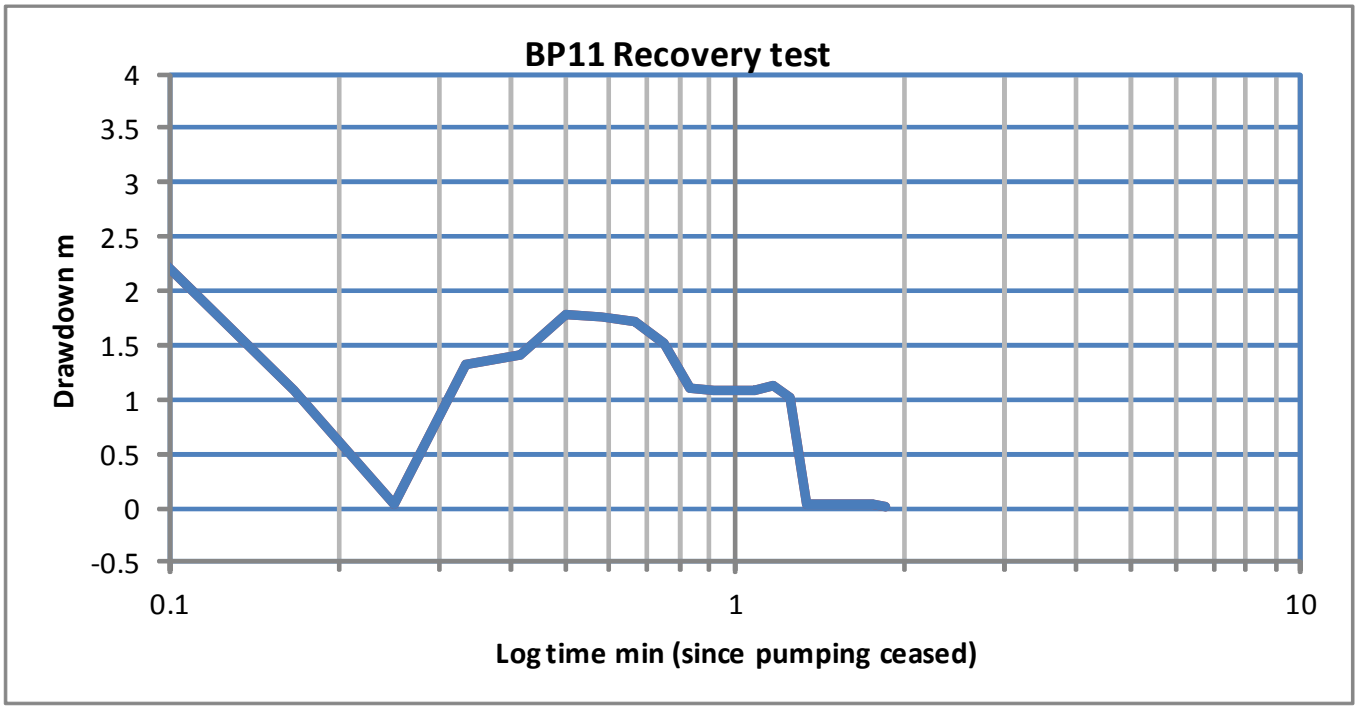
Effective depth, De	= 1.05	m
Effective storage volume, V_{p75-25}	= 0.8820	m^3
Surface area, a_{p50}	= 5.2500	m^2
Time, t_{p75-25}	=	secs
Infiltration rate, f	=	m/s

Notes : 1700ltr of water pumped over 5 mins with 2inch pump.

Approved Signatories: M. ATHORNE M. DOLBY M. FISHER

	Compiled By	Date	Checked By	Date
STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	[redacted]	07/09/15		
	Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**	





LEGEND

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
WF10 1NJ
Tel: 01977 552255
ask@soils.co.uk
www.soils.co.uk

REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

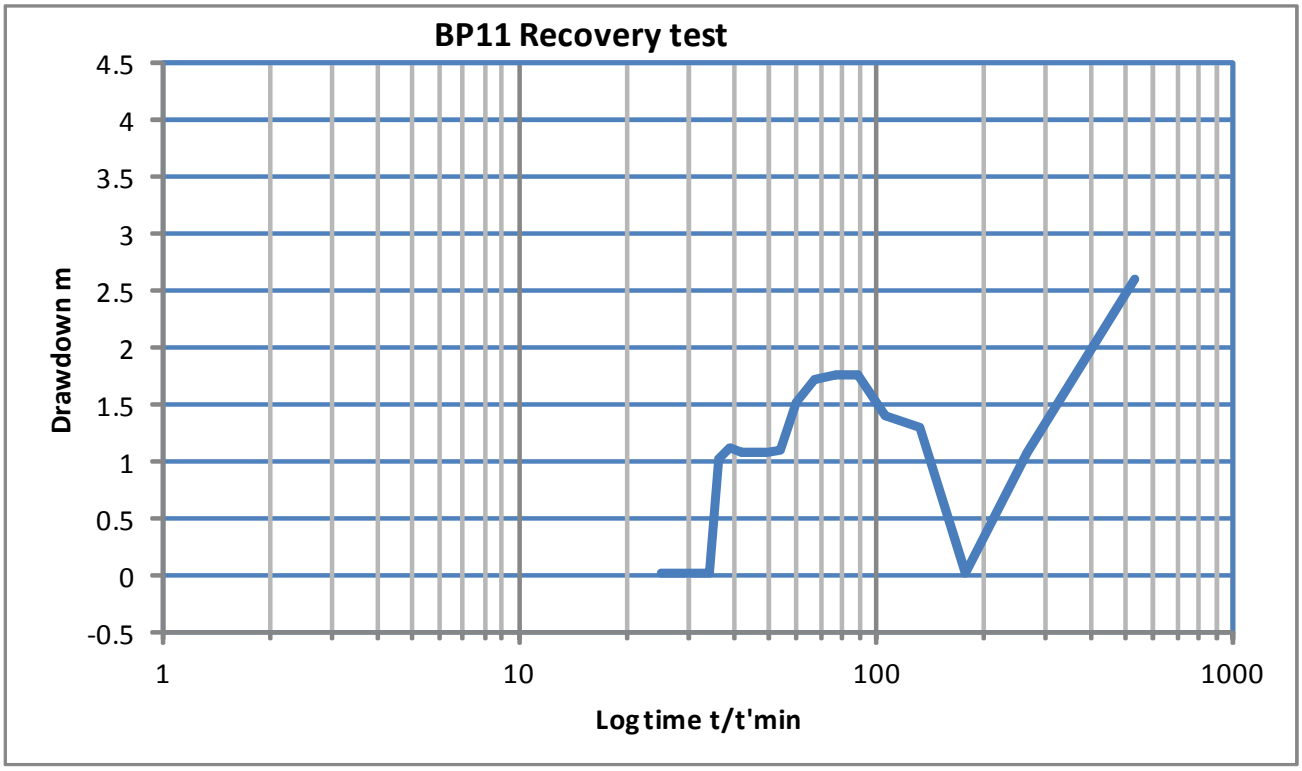
DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

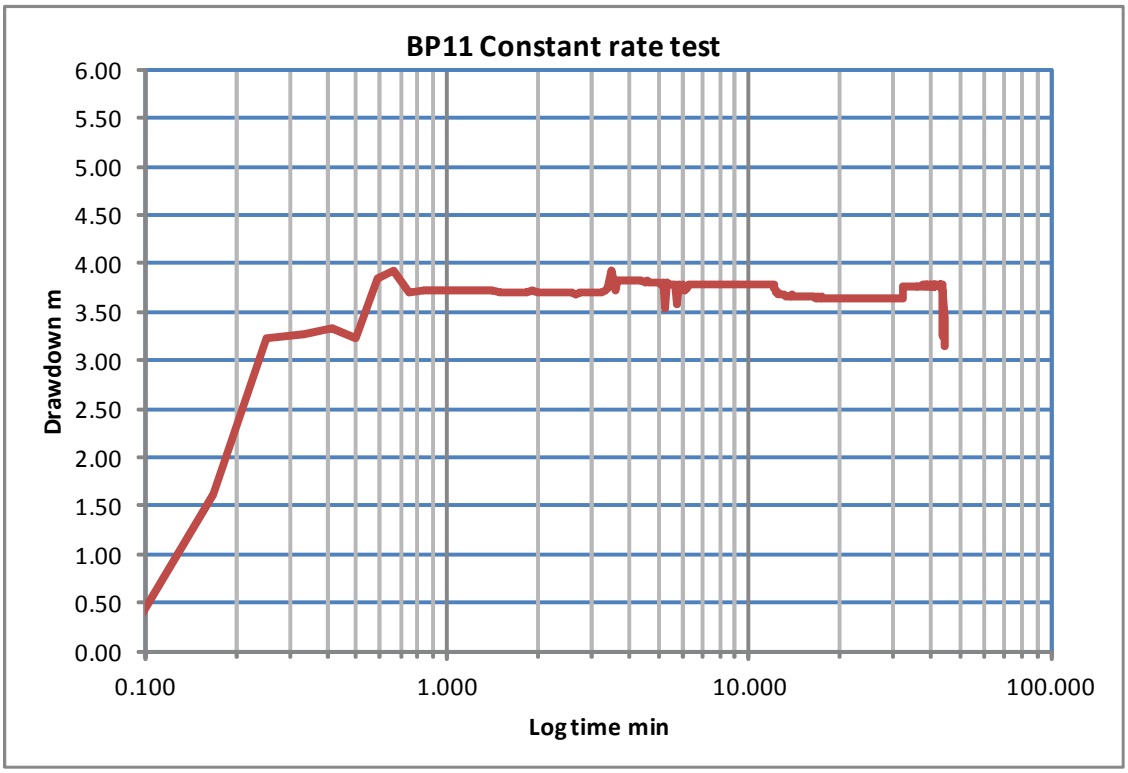
CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 11

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	3a





LEGEND	

STRUCTURAL SOILS
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Tel: 01977 552255
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www.soils.co.uk

REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

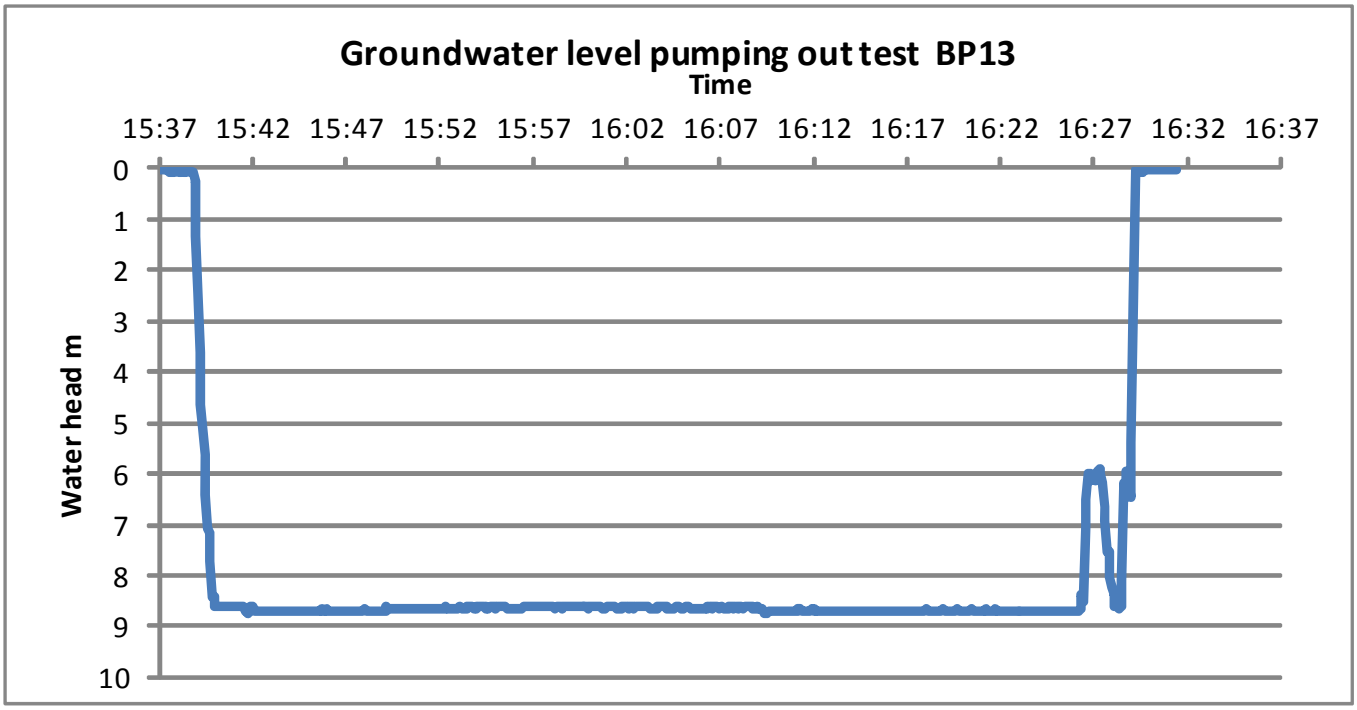
DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

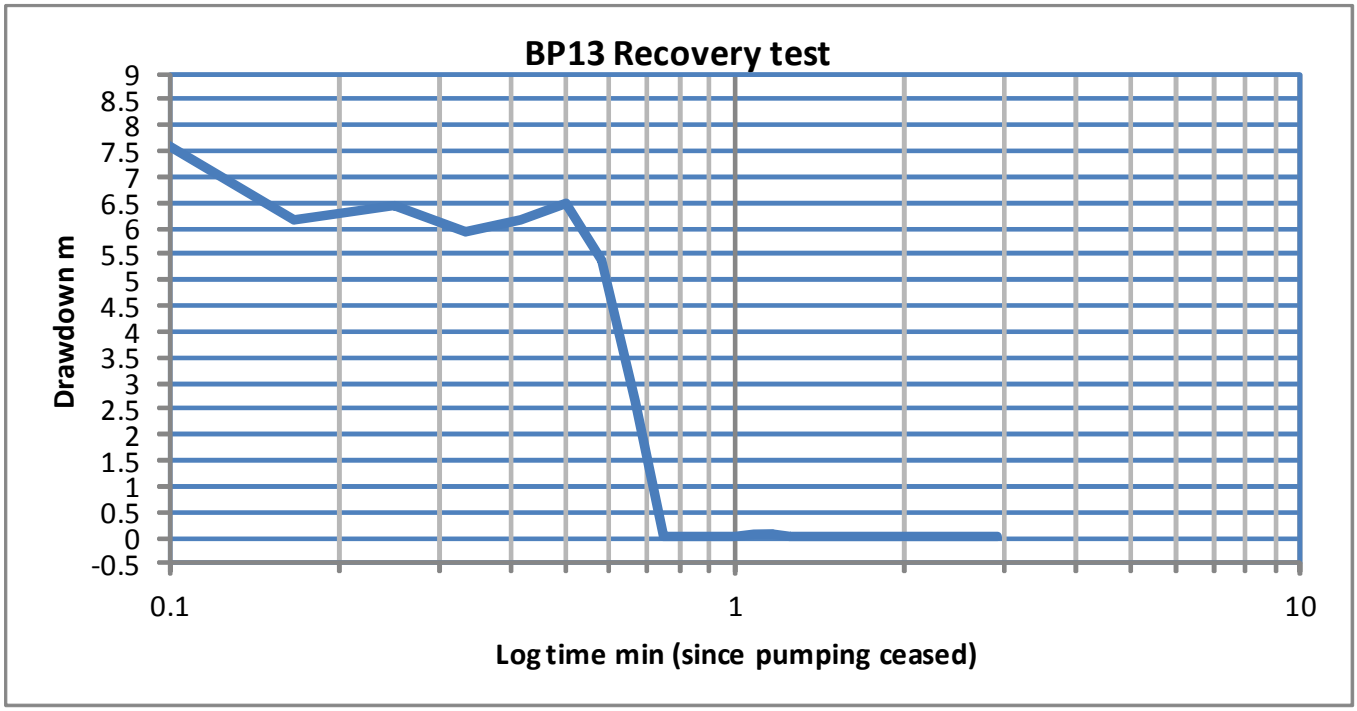
CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 11

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	3b





LEGEND

STRUCTURAL SOILS

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REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

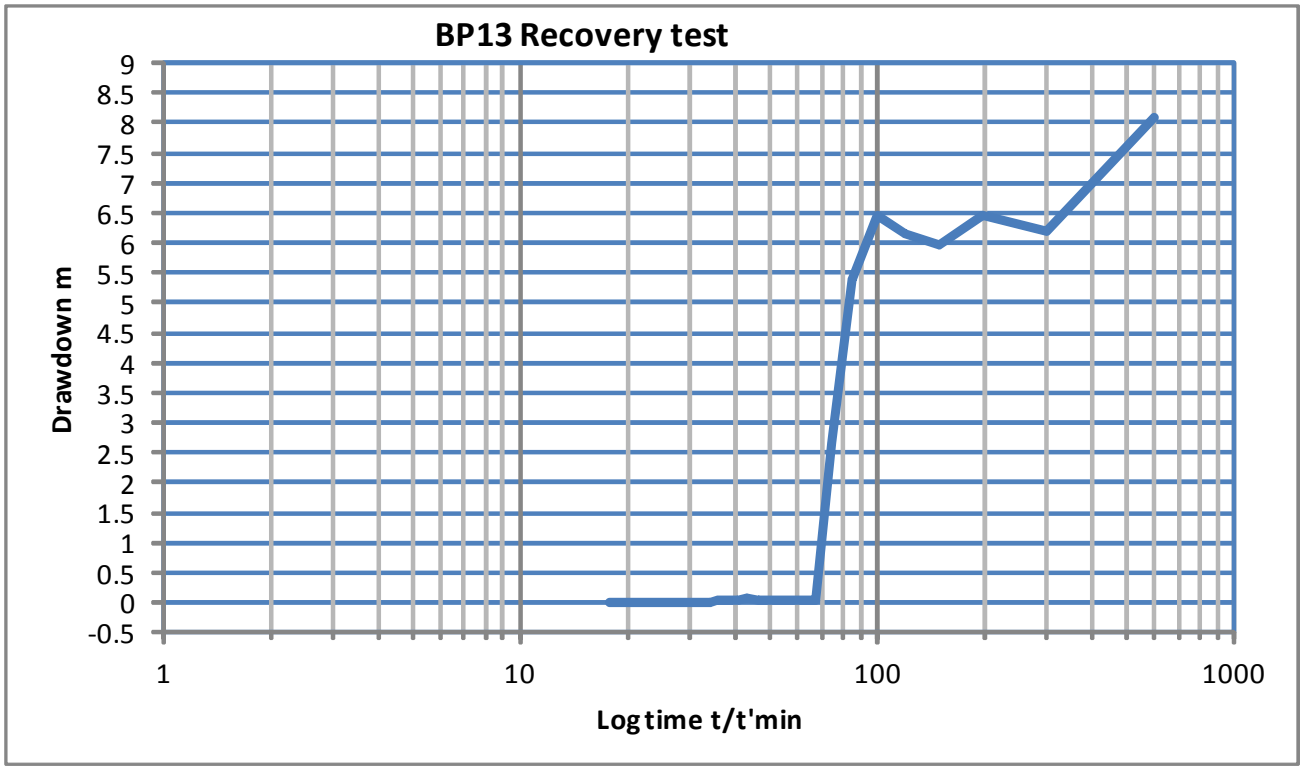
DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

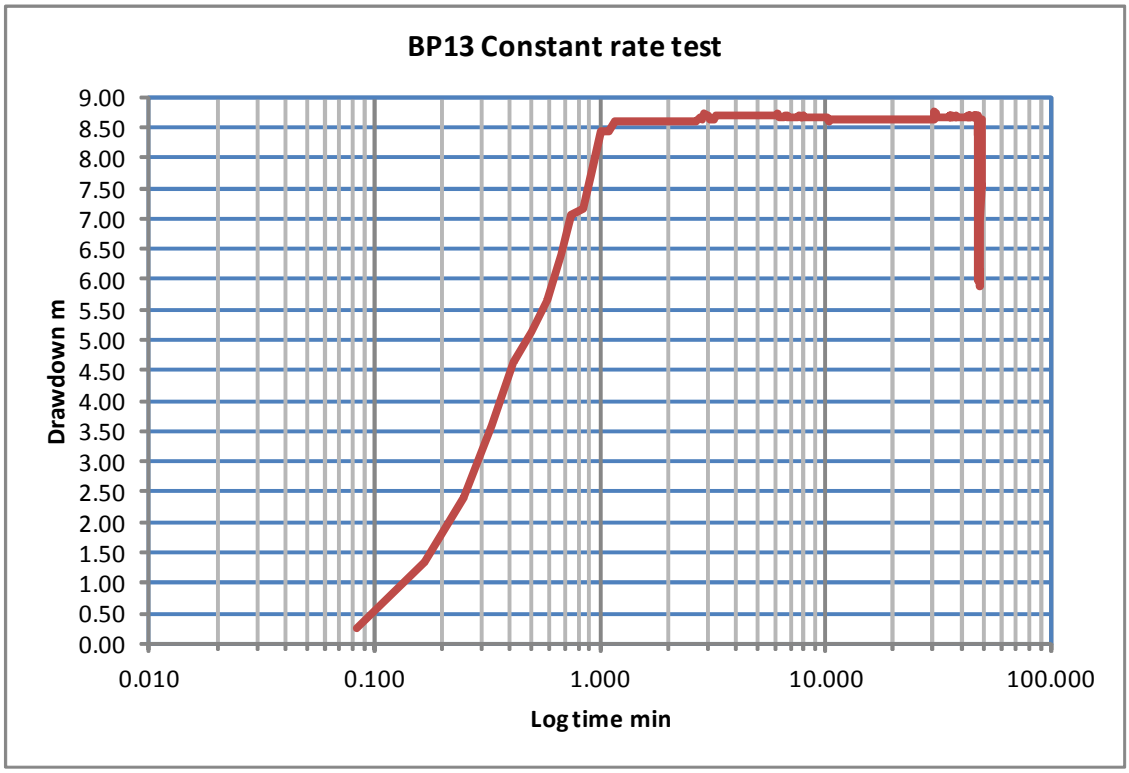
CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 13

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	4a





LEGEND	

STRUCTURAL SOILS
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REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

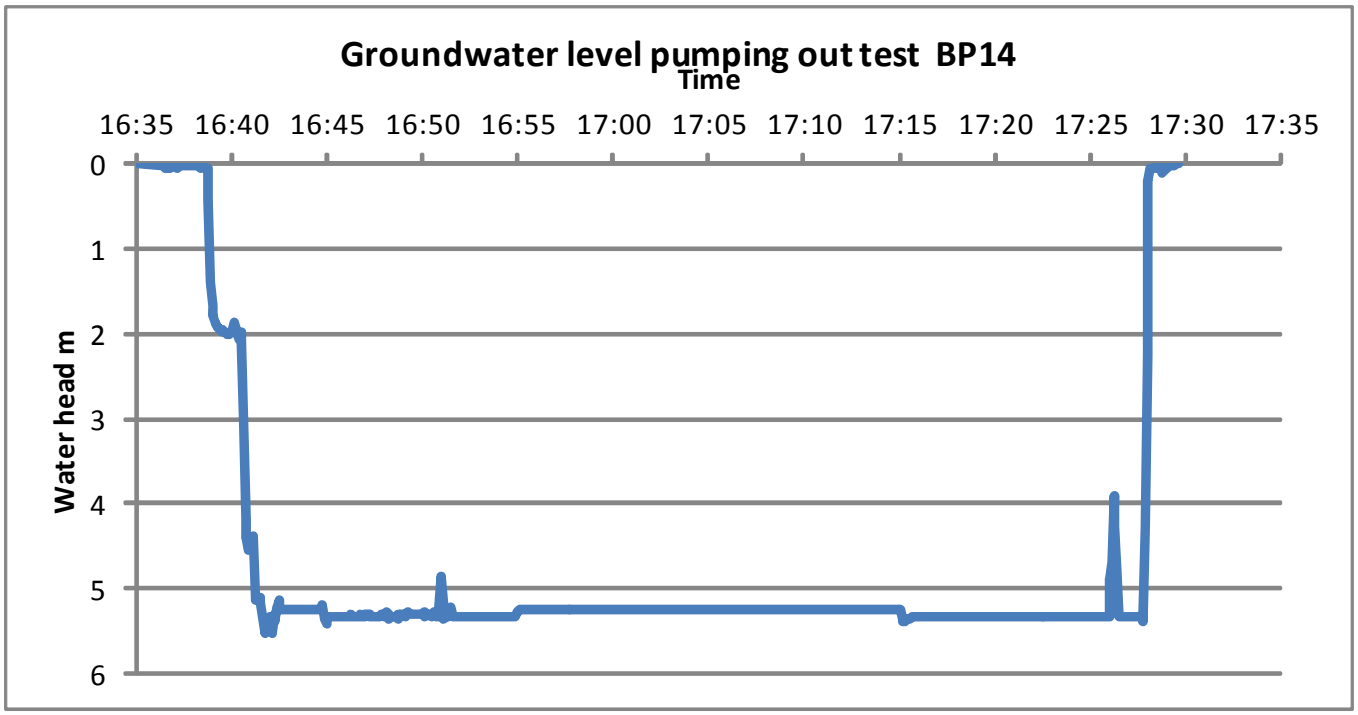
DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

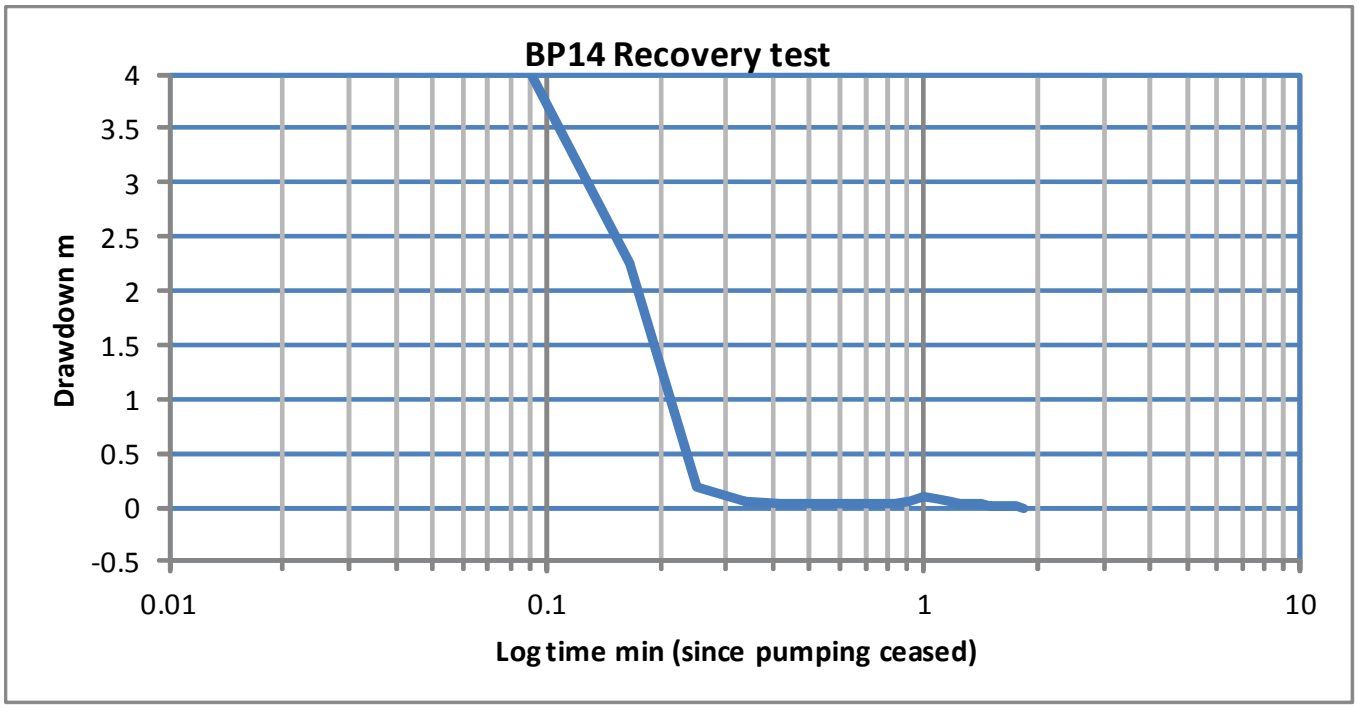
CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 13

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	4b





LEGEND

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REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

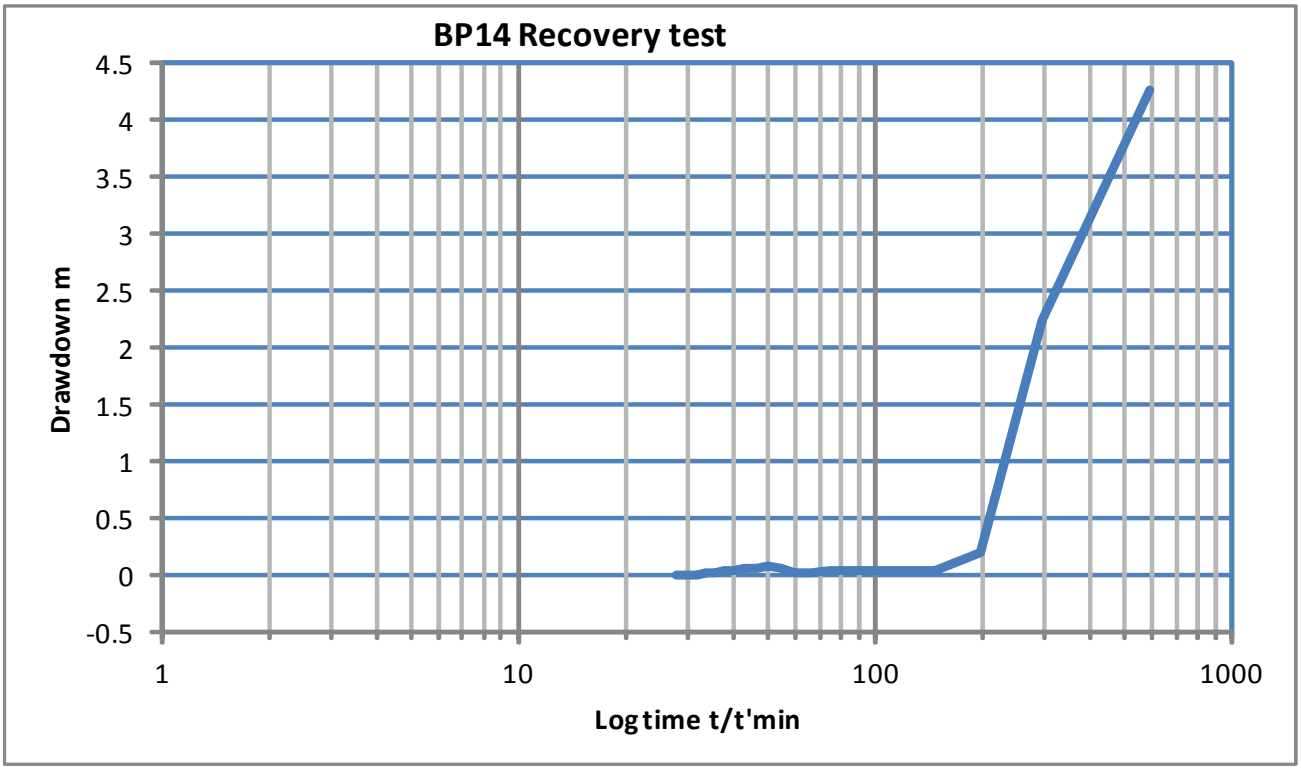
DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

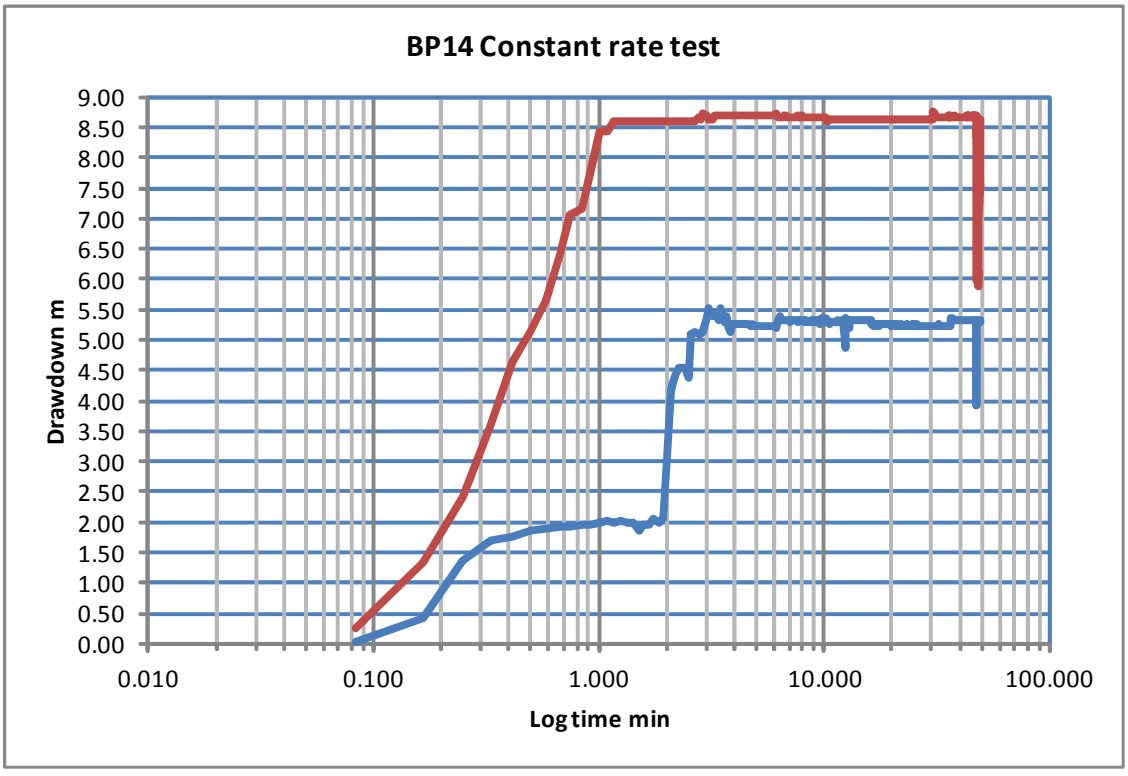
CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 13

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	5a





LEGEND

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REV	DATE	DESCRIPTION	BY	CHD	APR
00	16.10.2015	-	MW	SH	-

DIMENSION	SCALE	DRAWING STATUS
m	NTS	-

CLIENT: NNB Gen Co

PROJECT: 2015 Onshore Ground Investigation Campaign on the SZC Construction Site Area

TITLE: Permeability test CPB BP 13

JOB NO	SCALE BAR	ORIGIN SIZE	FIGURE
763468		A4	5b

APPENDIX D

(i) Geotechnical Laboratory Test Verification Sheet

(ii) Geotechnical Laboratory Test Results

TESTING VERIFICATION CERTIFICATE

1774

The test results included in this report are certified as:-

ISSUE STATUS: **FINAL**

In accordance with Structural Soils Ltd Laboratory Quality Assurance Manual, Issue 6, January 2010 all results sheets and summaries of results issued by the laboratory are checked by an approved signatory. This check will also involve checking of at least 10% of calculations for each test type to ensure that data has been correctly entered into the computer and calculated. The integrity of the test data and results are ensured by control of the computer system employed by the laboratory as part of the Software Verification Program as detailed in the Laboratory Quality Assurance Manual.

This testing verification certificate covers all testing compiled on or before the following datetime: **17/09/2015 10:58:52**.

Testing reported after this date is not covered by this Verification Certificate.

[redacted]

Approved Signatory
Mark Athorne (Laboratory Quality Manager)

STRUCTURAL SOILS The Potteries Pottery Street Castleford W. Yorkshire WF10 1NJ	Contract: **SZC 2015 Onshore GI**	Job No: **763468**

SUMMARY OF SOIL CLASSIFICATION TESTS

In accordance with clauses 3.2,4.3,4.4,5.3,5.4,7.2,8.2,8.3 of BS1377:Part 2:1990

Exploratory Position ID	Sample Ref	Sample Type	Depth (m)	Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index %	% <425um	Description of Sample
BP3	2	B	1.50	13	29	11	18	88	Brown sandy slightly gravelly CLAY
CPB BP10	2	B	0.50	15	32	14	18	86	Orange brown sandy CLAY
CPB BP11	4	B	1.50	17	34	13	21	66	Orange brown sandy slightly gravelly CLAY
CPB BP12	5	B	2.00	12	37	14	23	66	Light brown sandy gravelly CLAY
CPB BP12	34	B	16.50	34	43	20	23	100	Brown sandy CLAY
WMZ20	2	B	1.20	34	42	15	27	89	Orange grey very sandy slightly gravelly CLAY

STRUCTURAL SOILS LTD

Contract:

SZC 2015 Onshore GI

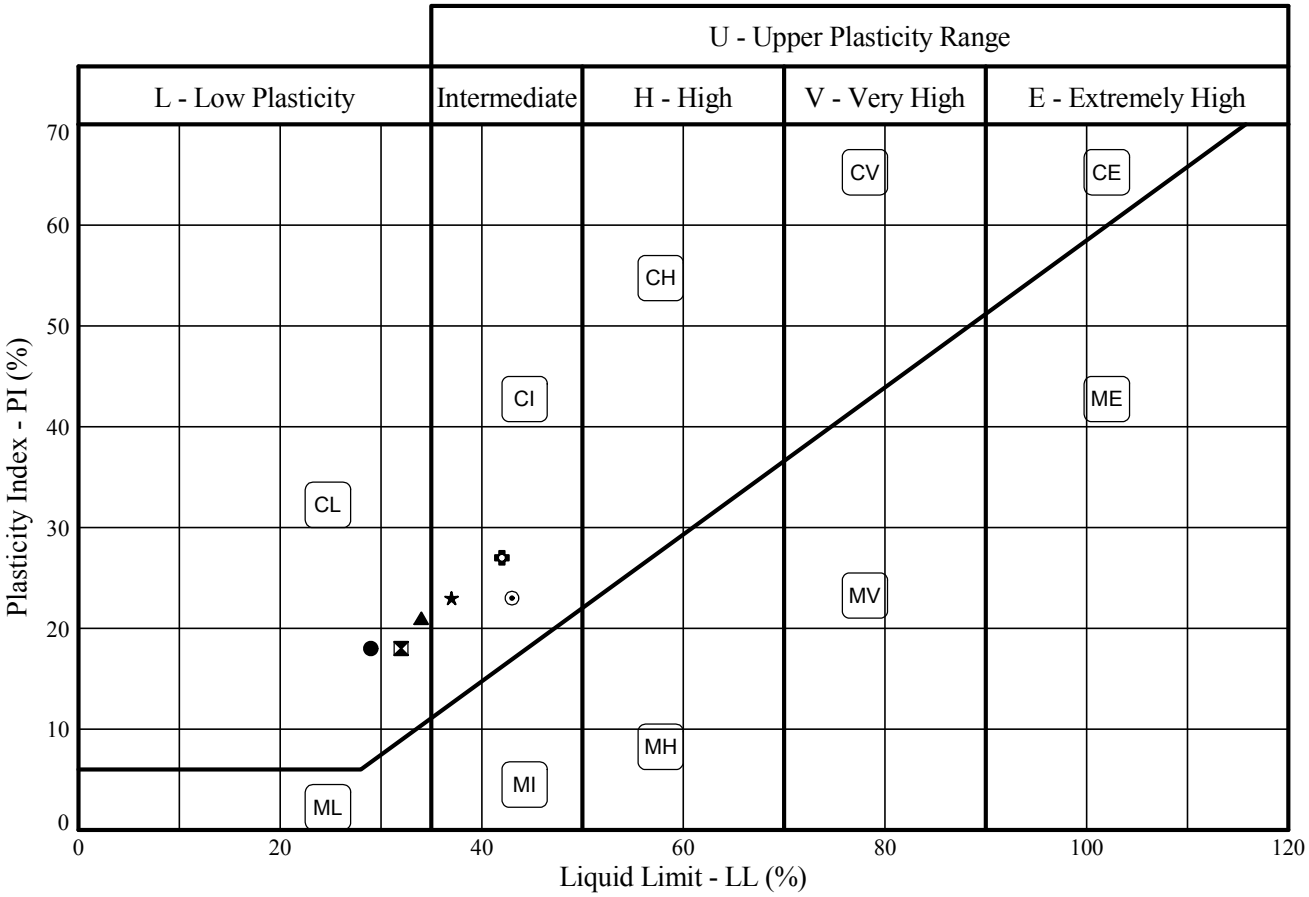
Contract Ref:

763468

AGS

PLASTICITY CHART - PI Vs LL

In accordance with clause 42.3 of BS5930:1999
Testing in accordance with BS1377-2:1990



Sample Identification				BS Test Method #	Preparation Method +	MC	LL	PL	PI	<425um
	Exploratory Position ID	Sample	Depth (m)			%	%	%	%	%
●	BP3	2B	1.50	3.2/4.3/5.3/5.4	4.2.4	13	29	11	18	88
⊠	CPB BP10	2B	0.50	3.2/4.3/5.3/5.4	4.2.4	15	32	14	18	86
▲	CPB BP11	4B	1.50	3.2/4.3/5.3/5.4	4.2.4	17	34	13	21	66
★	CPB BP12	5B	2.00	3.2/4.3/5.3/5.4	4.2.4	12	37	14	23	66
⊙	CPB BP12	34B	16.50	3.2/4.3/5.3/5.4	4.2.3	34	43	20	23	100
✿	WMZ20	2B	1.20	3.2/4.3/5.3/5.4	4.2.4	34	42	15	27	89

Tested in accordance with the following clauses of BS1377-2:1990.

3.2 - Moisture Content
4.3 - Cone Penetrometer Method
4.4 - One Point Cone Penetrometer Method
4.6 - One Point Casagrande Method
5.3 - Plastic Limit Method
5.4 - Plasticity Index

+ Tested in accordance with the following clauses of BS1377-2:1990.

4.2.3 - Natural State
4.2.4 - Wet Sieved

Key: * = Non standard test, NP = Non plastic.

MULTI LAB REPORTING ERROR

ERROR 3
ERROR 3
ERROR 3

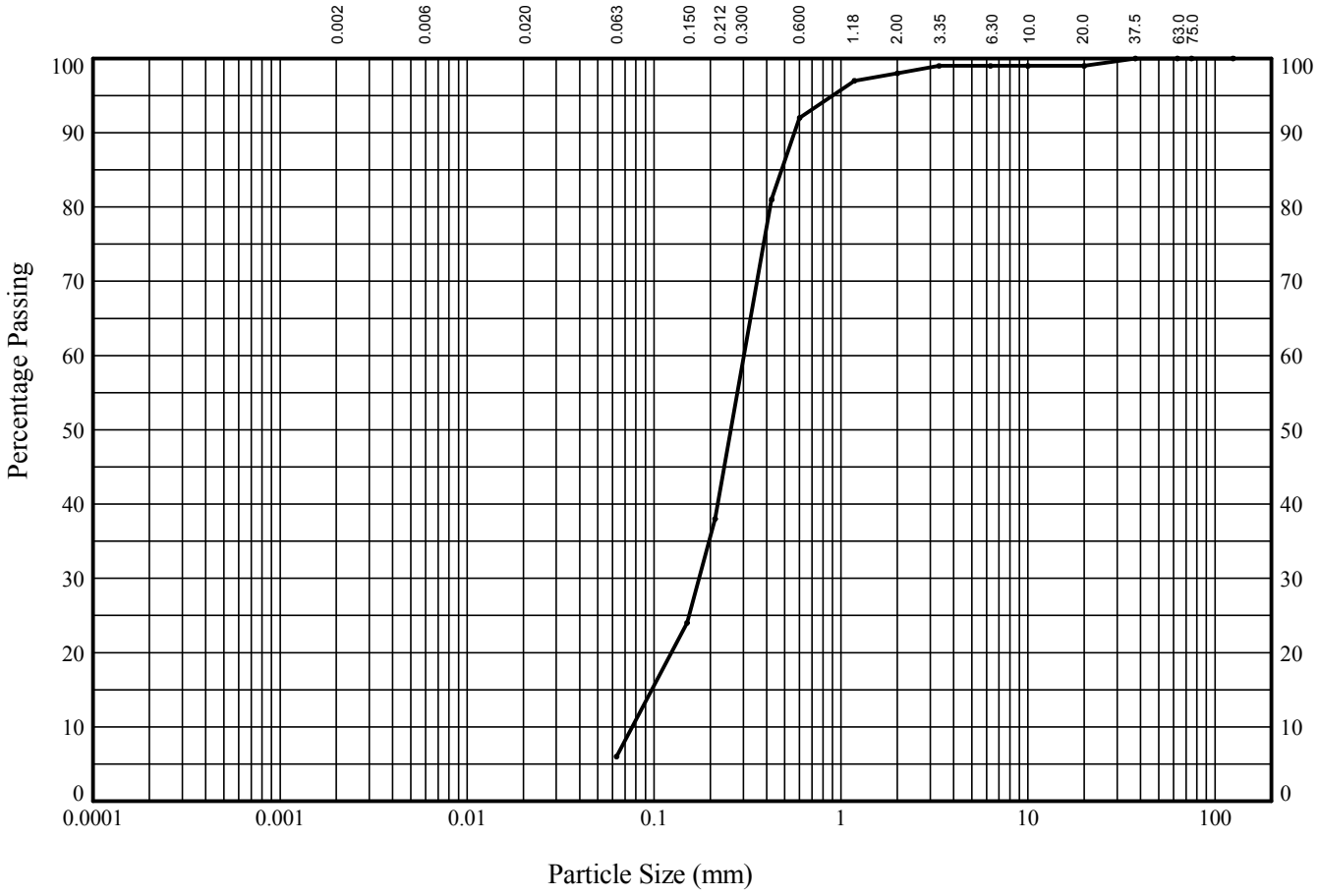
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	763468

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP1** Sample Ref: **1** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	99
6.30	99
3.35	99
2.00	98
1.18	97
0.600	92
0.425	81
0.212	38
0.150	24
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**92**
SILT/CLAY	**6**

Soil Description:
Dark brown clayey slightly gravelly SAND.

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

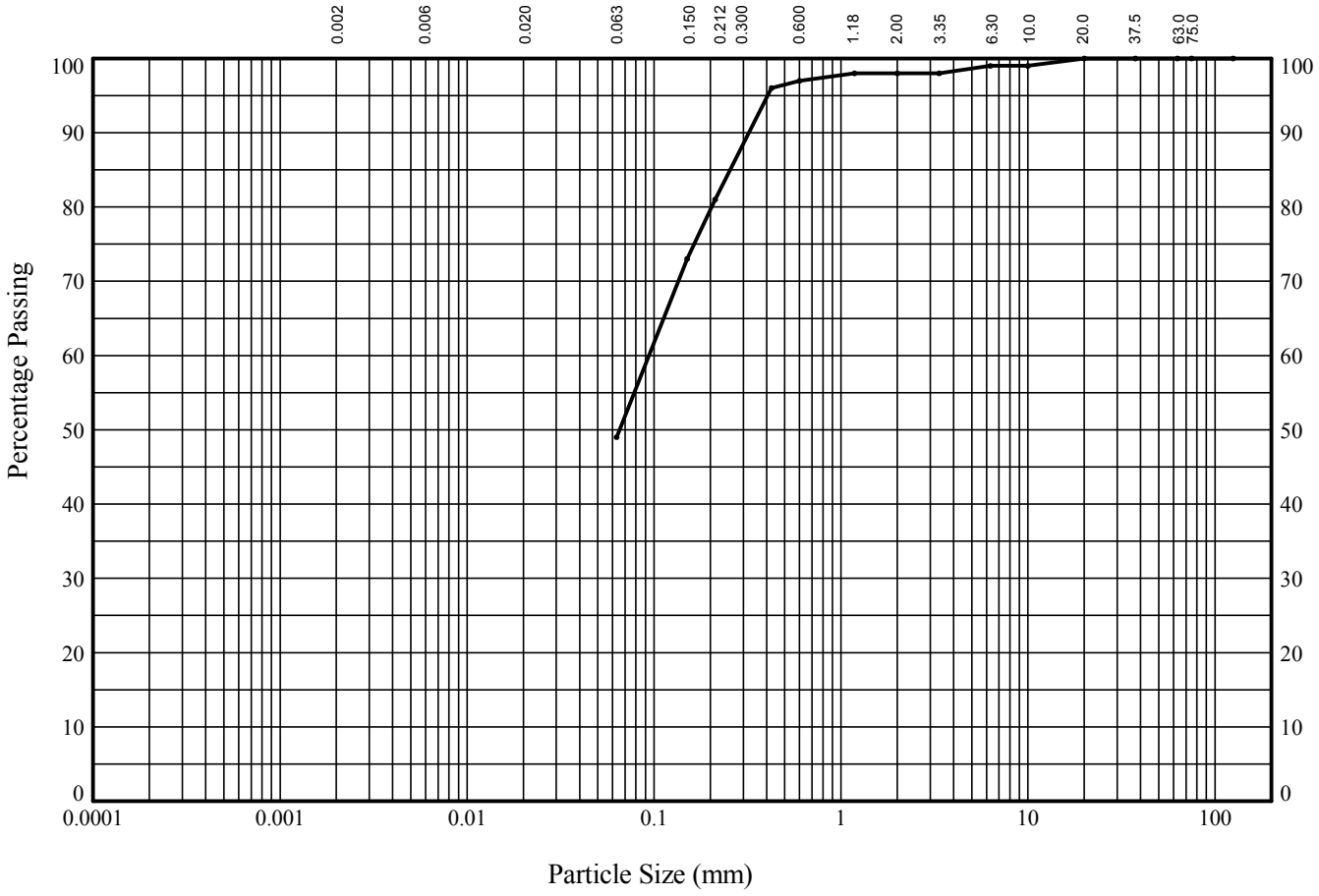
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP1** Sample Ref: **2** Sample Type: **B** Depth (m): **1.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	98
2.00	98
1.18	98
0.600	97
0.425	96
0.212	81
0.150	73
0.063	49

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**49**
SILT/CLAY	**49**

Soil Description:
Orange grey sandy slightly gravelly CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

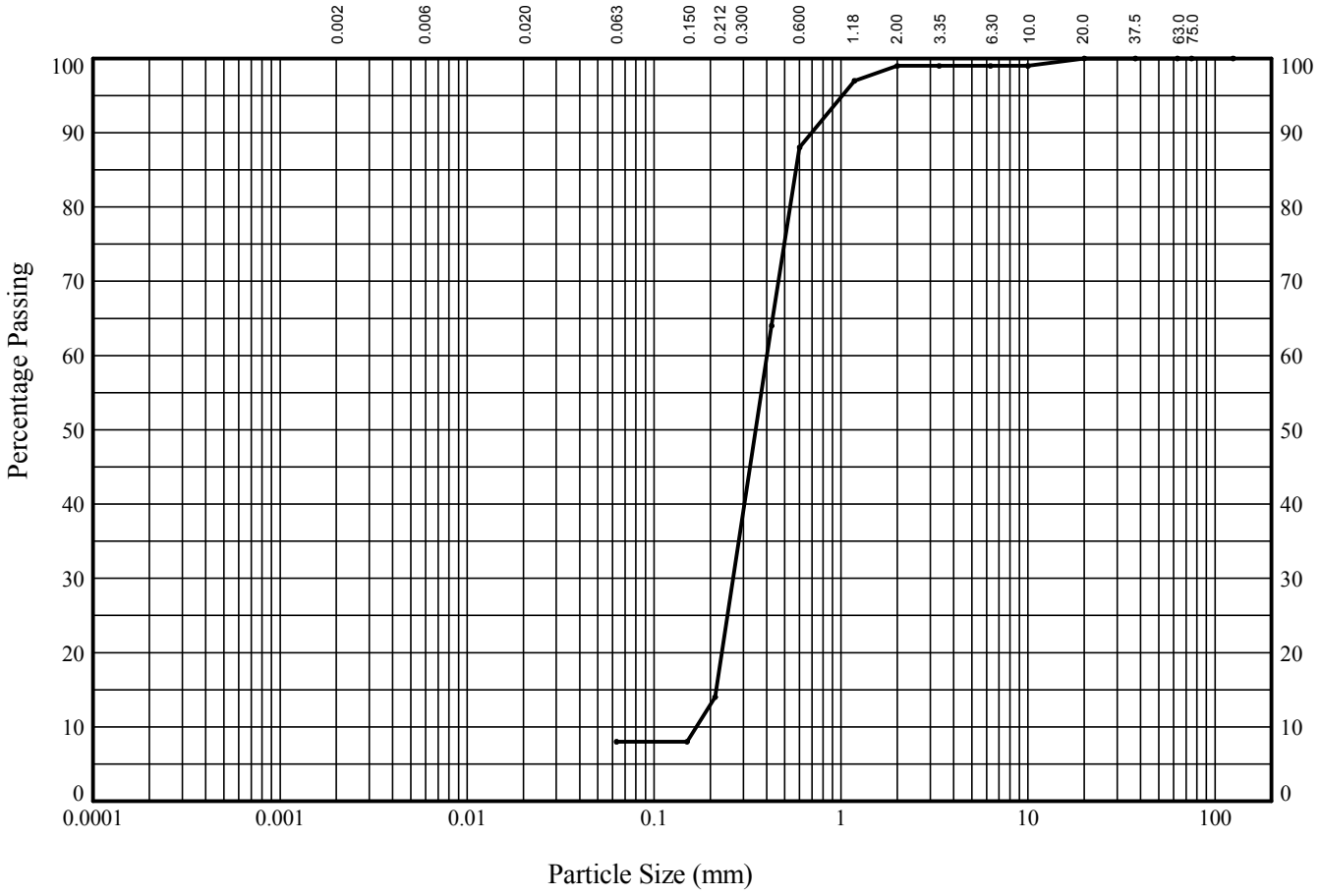
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP1** Sample Ref: **3** Sample Type: **B** Depth (m): **2.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	99
2.00	99
1.18	97
0.600	88
0.425	64
0.212	14
0.150	8
0.063	8

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**91**
SILT/CLAY	**8**

Soil Description:
Light brown clayey slightly gravelly SAND

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STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

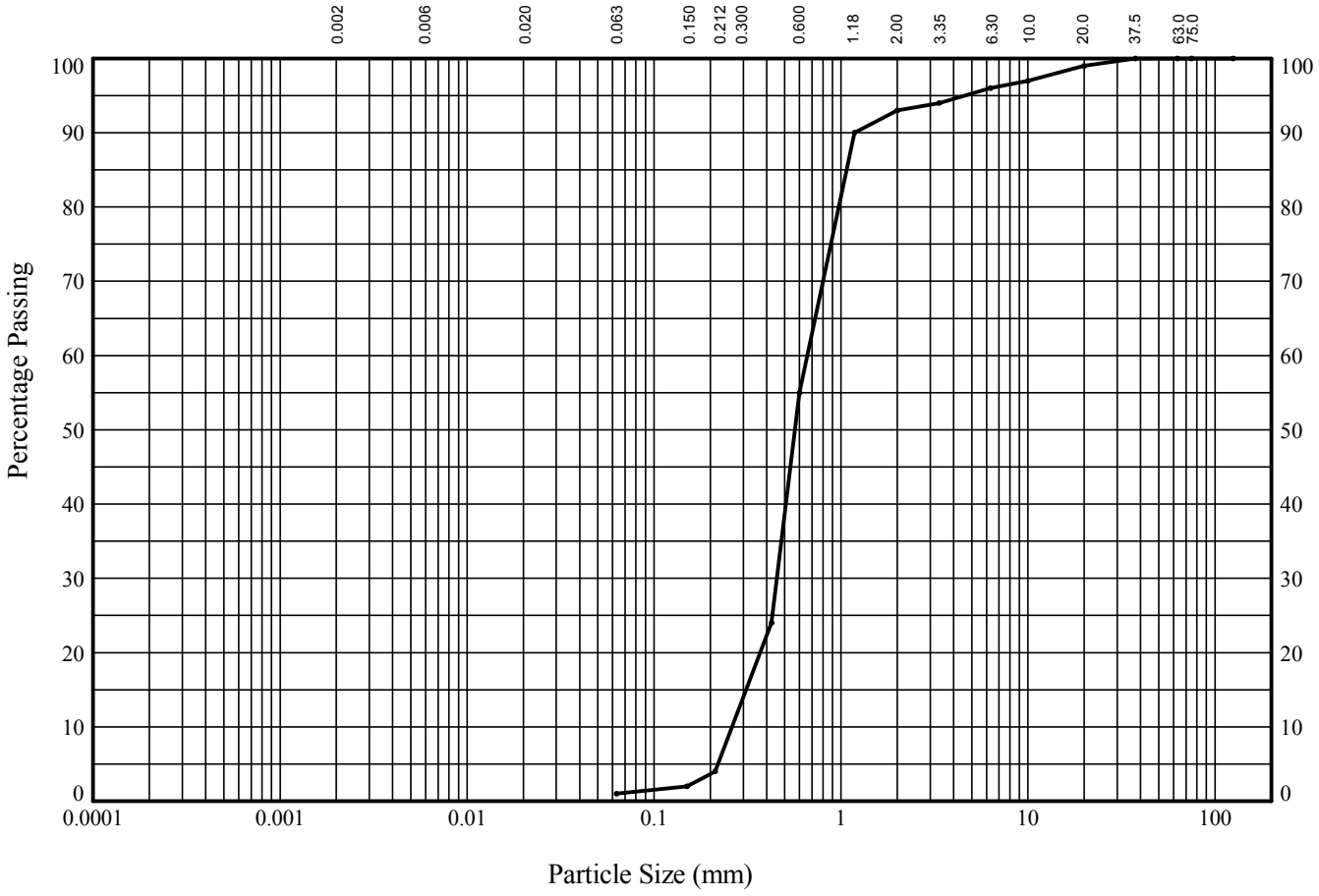
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP1** Sample Ref: **5** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	97
6.30	96
3.35	94
2.00	93
1.18	90
0.600	55
0.425	24
0.212	4
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**7**
SAND	**92**
SILT/CLAY	**1**

Soil Description:
Orange clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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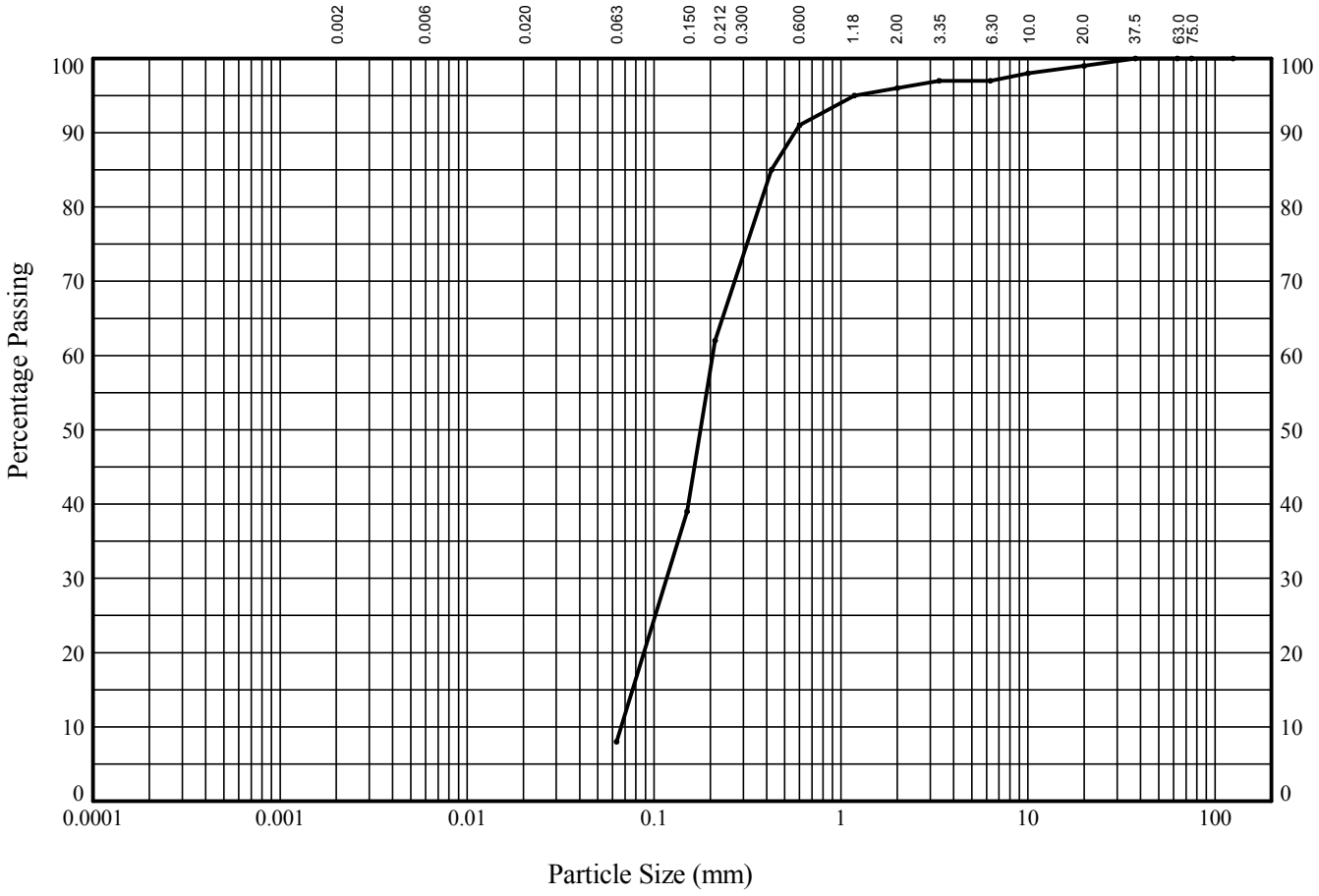
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP2** Sample Ref: **2** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	98
6.30	97
3.35	97
2.00	96
1.18	95
0.600	91
0.425	85
0.212	62
0.150	39
0.063	8

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**88**
SILT/CLAY	**8**

Soil Description:
Brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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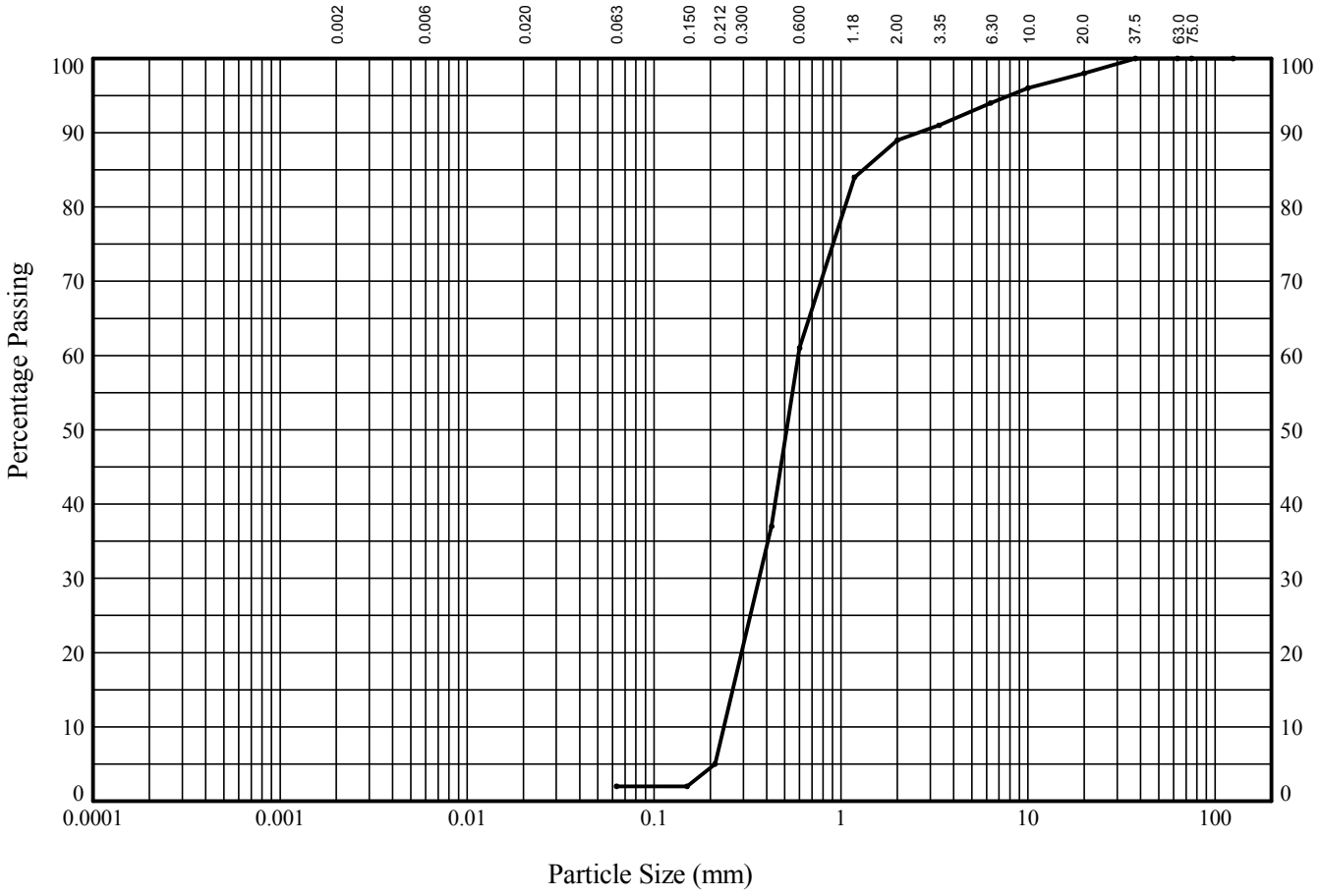
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP2** Sample Ref: **3** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	98
10.0	96
6.30	94
3.35	91
2.00	89
1.18	84
0.600	61
0.425	37
0.212	5
0.150	2
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**11**
SAND	**87**
SILT/CLAY	**2**

Soil Description:
Orange slightly clayey gravelly SAND

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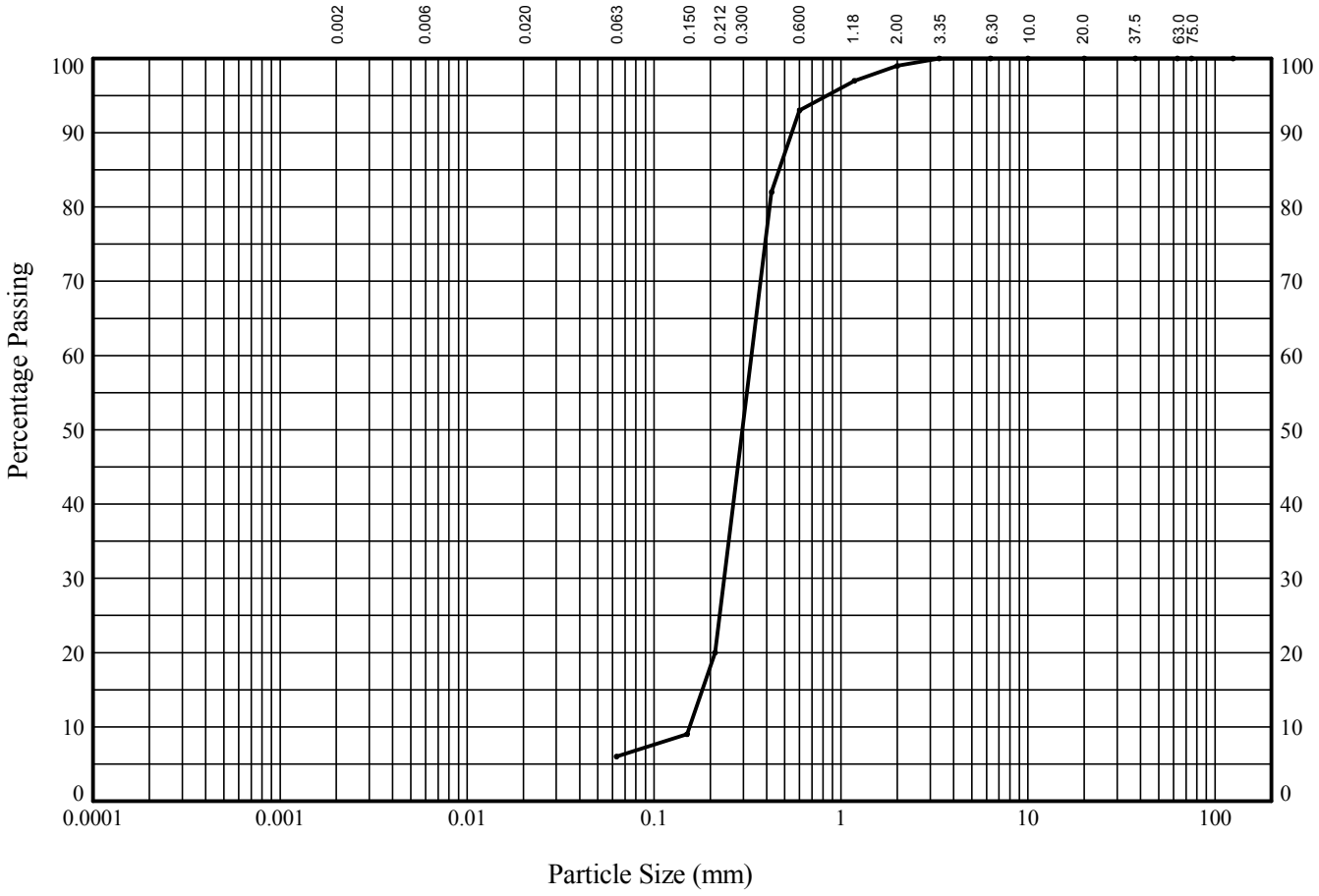
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP2** Sample Ref: **5** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	99
1.18	97
0.600	93
0.425	82
0.212	20
0.150	9
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**93**
SILT/CLAY	**6**

Soil Description:
Orange clayey slightly gravelly SAND

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Compiled By		Date
		17/09/15

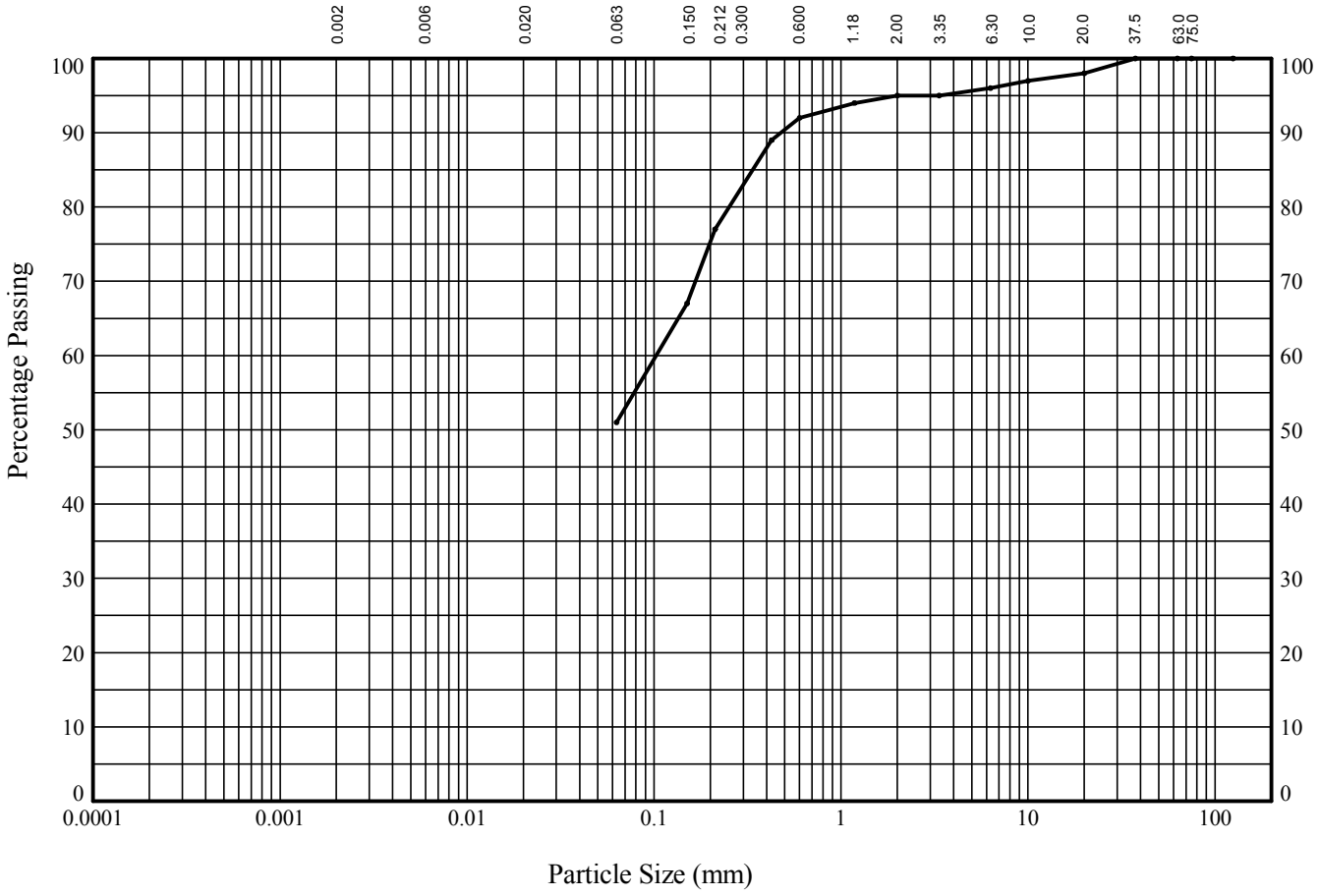
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP3** Sample Ref: **2** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	98
10.0	97
6.30	96
3.35	95
2.00	95
1.18	94
0.600	92
0.425	89
0.212	77
0.150	67
0.063	51

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**44**
SILT/CLAY	**51**

Soil Description:
Brown sandy slightly gravelly CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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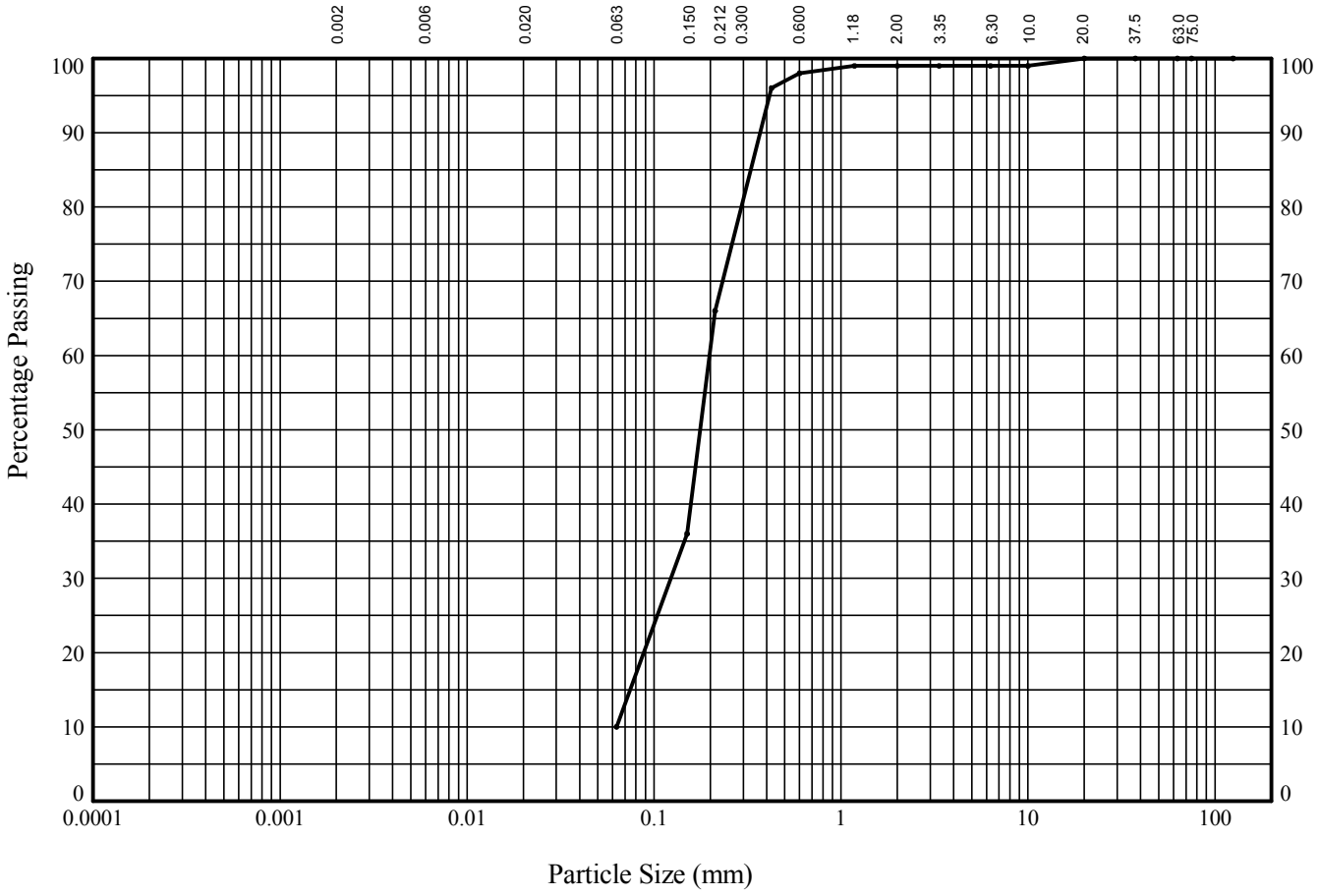
Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP3** Sample Ref: **4** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	99
2.00	99
1.18	99
0.600	98
0.425	96
0.212	66
0.150	36
0.063	10

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**89**
SILT/CLAY	**10**

Soil Description:
Light brown clayey slightly gravelly SAND

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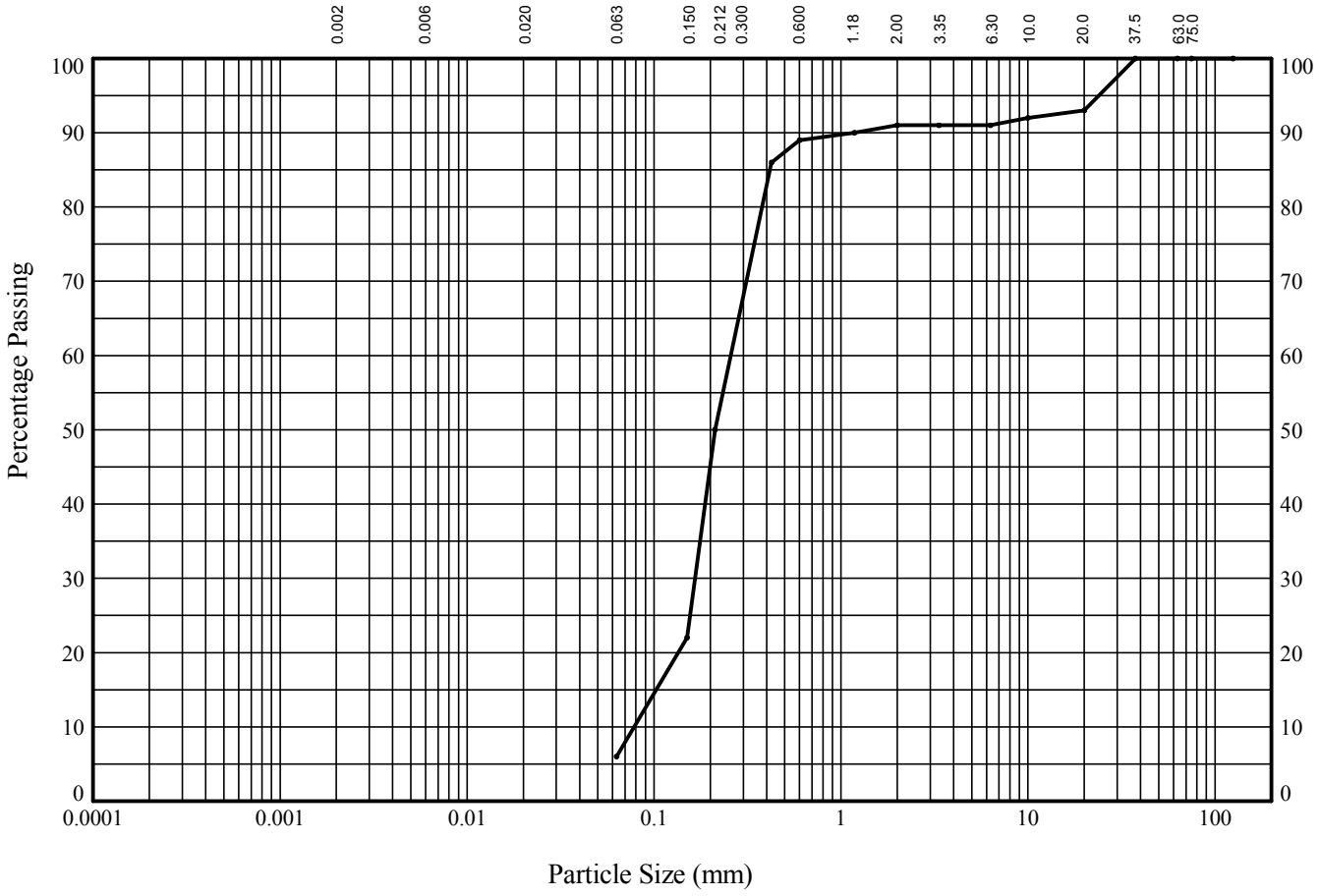
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP5** Sample Ref: **1** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	93
10.0	92
6.30	91
3.35	91
2.00	91
1.18	90
0.600	89
0.425	86
0.212	50
0.150	22
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**9**
SAND	**85**
SILT/CLAY	**6**

Soil Description:
Orange clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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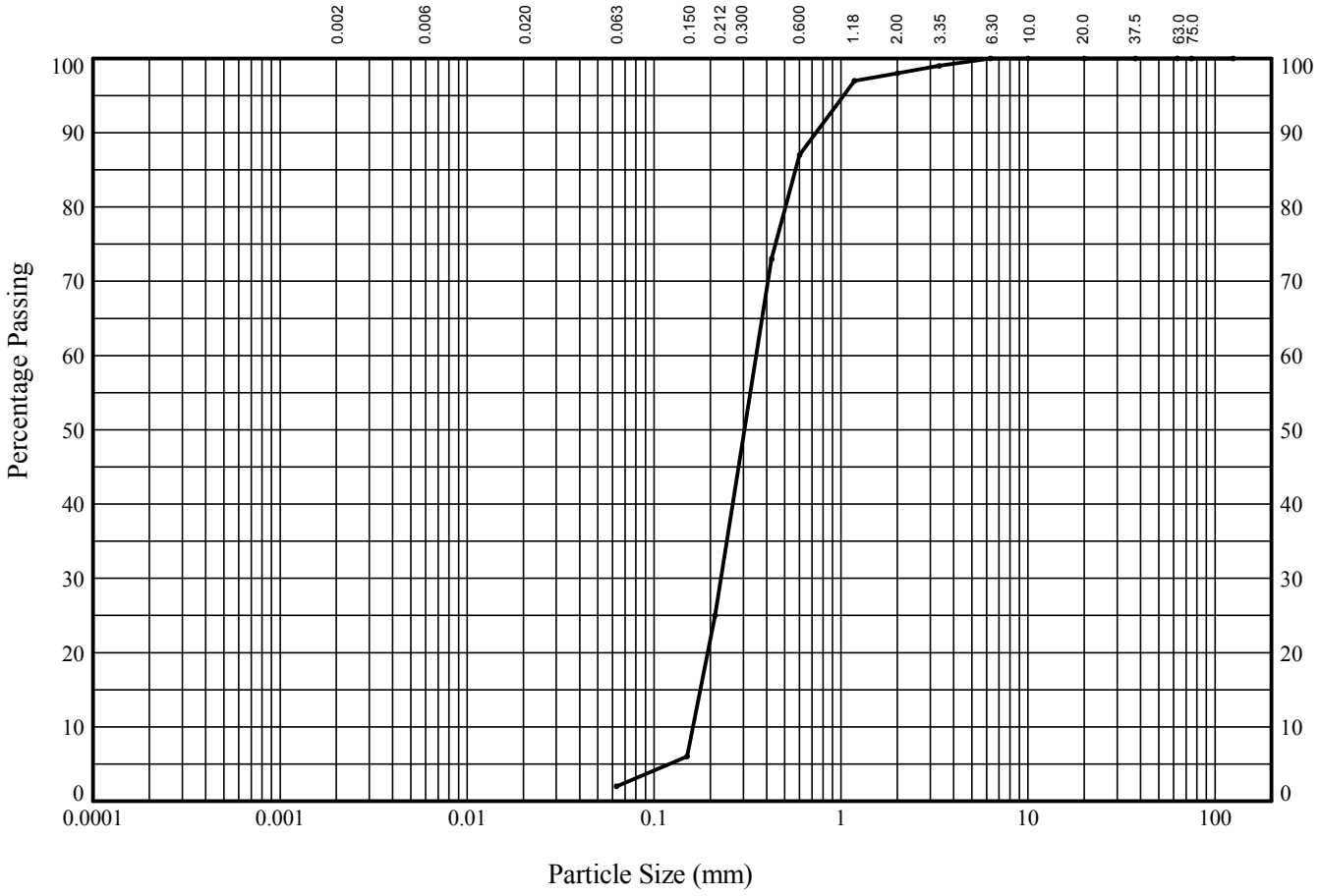
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP5** Sample Ref: **2** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	97
0.600	87
0.425	73
0.212	25
0.150	6
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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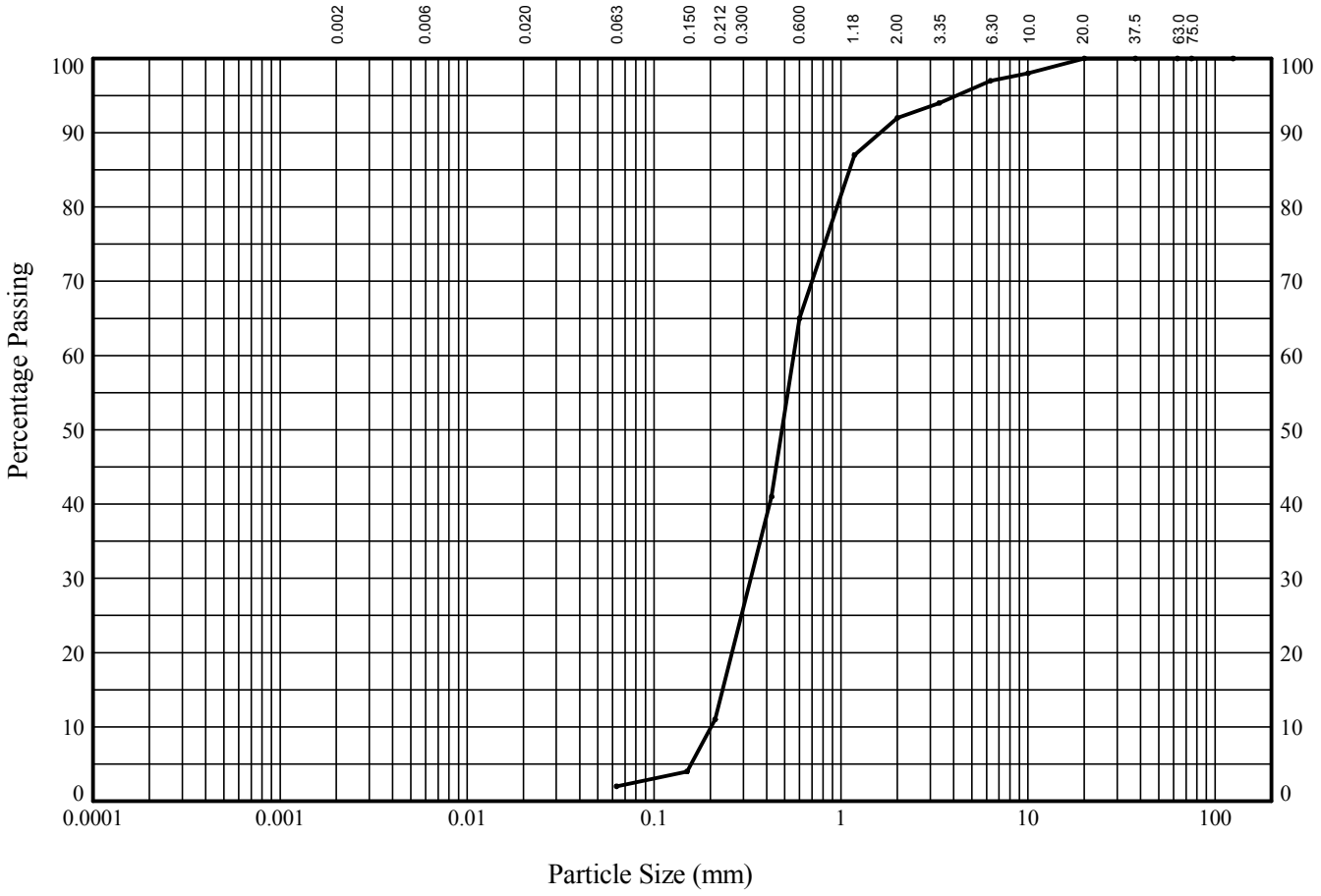
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP5** Sample Ref: **3** Sample Type: **B** Depth (m): **1.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	97
3.35	94
2.00	92
1.18	87
0.600	65
0.425	41
0.212	11
0.150	4
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**90**
SILT/CLAY	**2**

Soil Description:
Slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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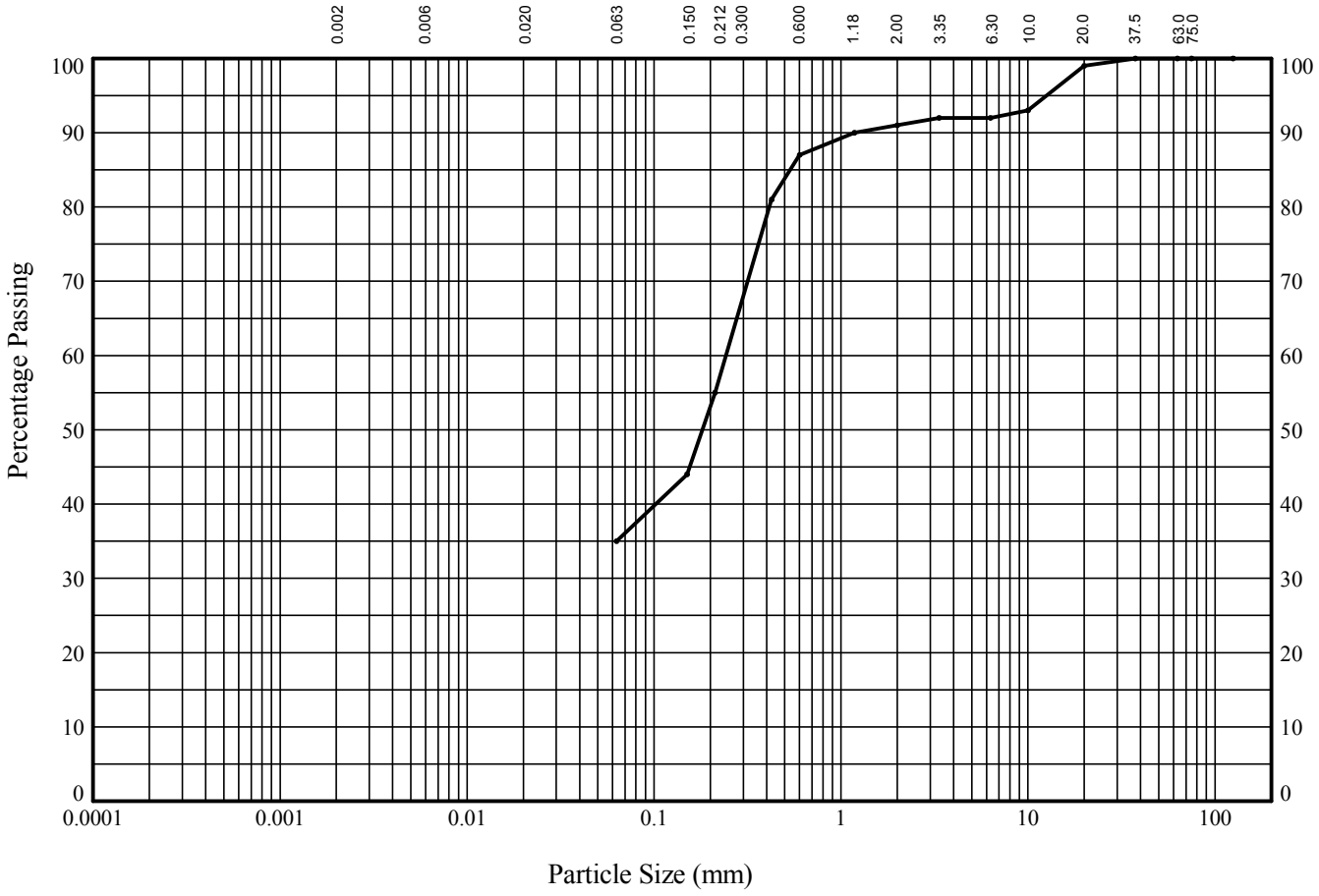
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP6** Sample Ref: **1** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	93
6.30	92
3.35	92
2.00	91
1.18	90
0.600	87
0.425	81
0.212	55
0.150	44
0.063	35

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**9**
SAND	**56**
SILT/CLAY	**35**

Soil Description:
Orange brown slightly gravelly very sandy CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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W. Yorkshire WF10 1NJ

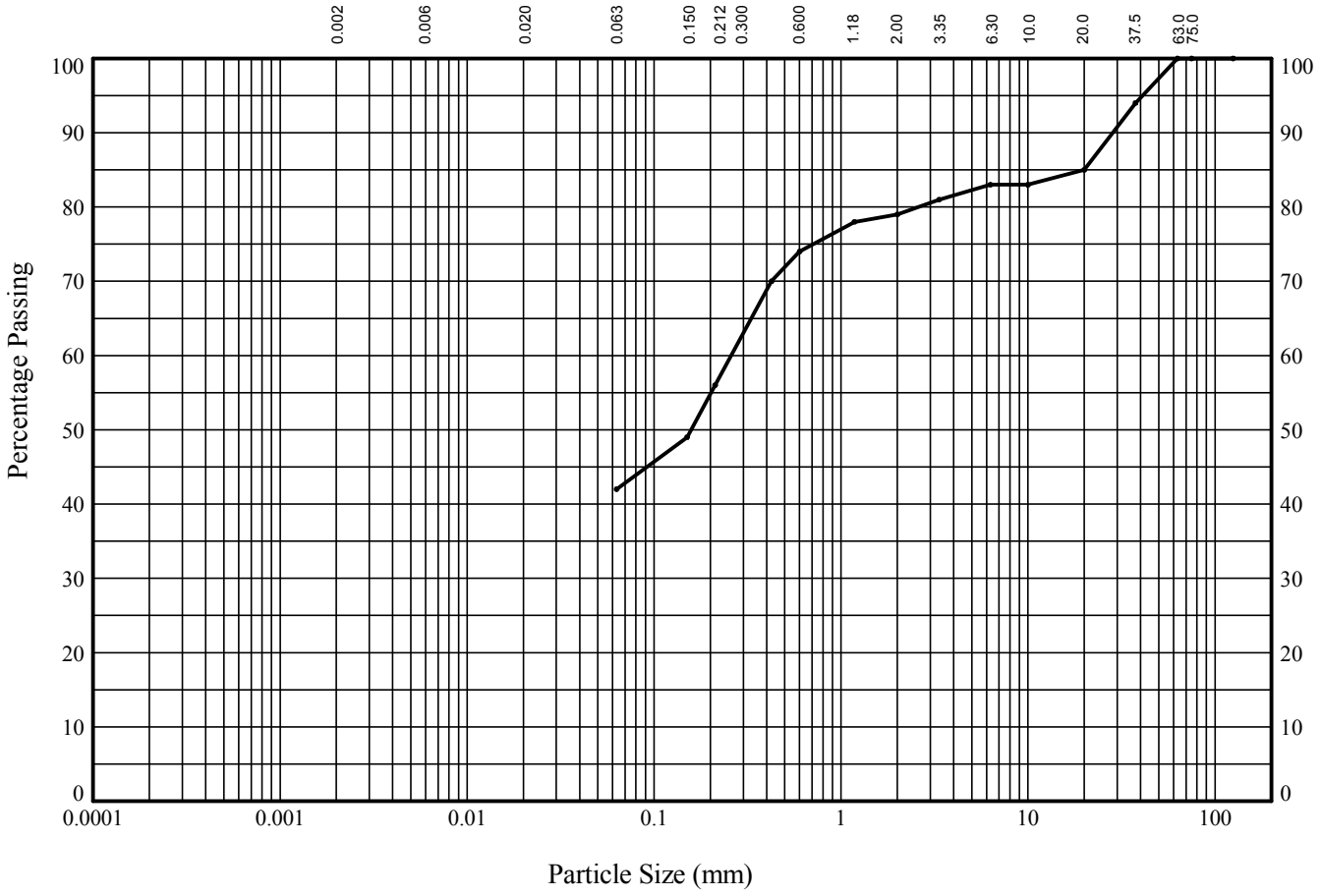
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP6** Sample Ref: **2** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	94
20.0	85
10.0	83
6.30	83
3.35	81
2.00	79
1.18	78
0.600	74
0.425	70
0.212	56
0.150	49
0.063	42

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**21**
SAND	**37**
SILT/CLAY	**42**

Soil Description:
Orange brown sandy slightly gravelly CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

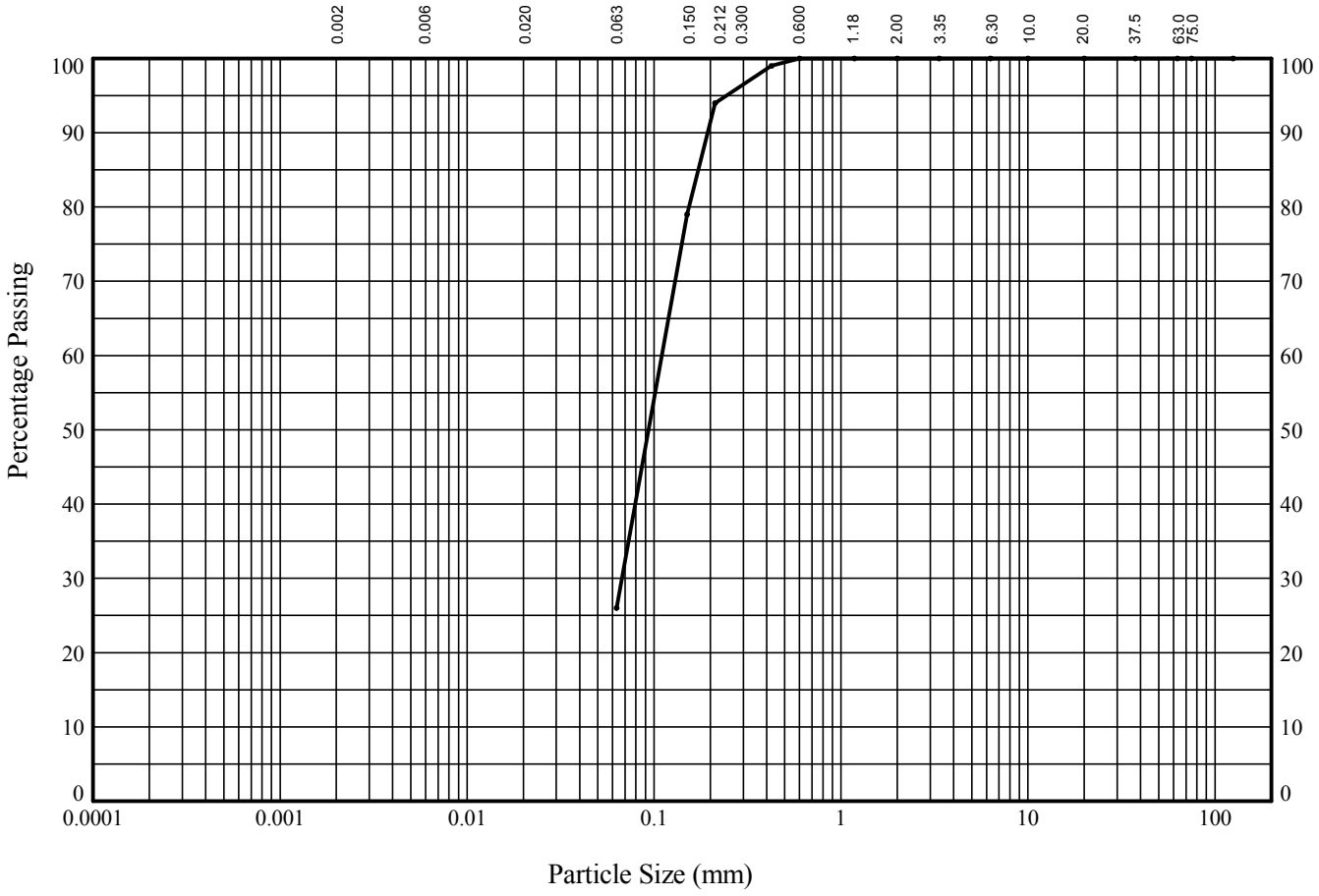
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP6** Sample Ref: **3** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	99
0.212	94
0.150	79
0.063	26

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**74**
SILT/CLAY	**26**

Soil Description:
Orange very clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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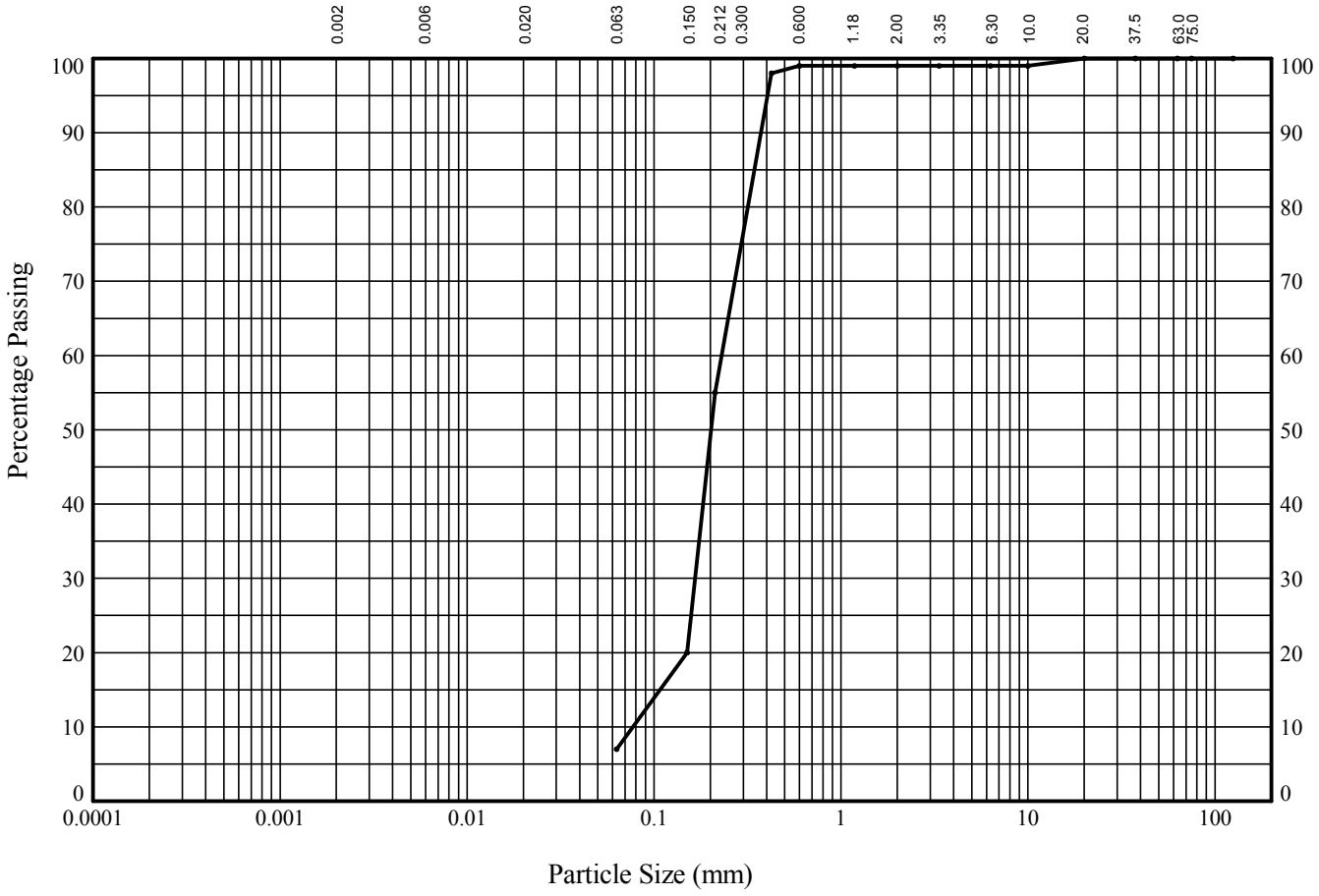
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP6** Sample Ref: **5** Sample Type: **B** Depth (m): **3.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	99
2.00	99
1.18	99
0.600	99
0.425	98
0.212	55
0.150	20
0.063	7

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**92**
SILT/CLAY	**7**

Soil Description:
Light brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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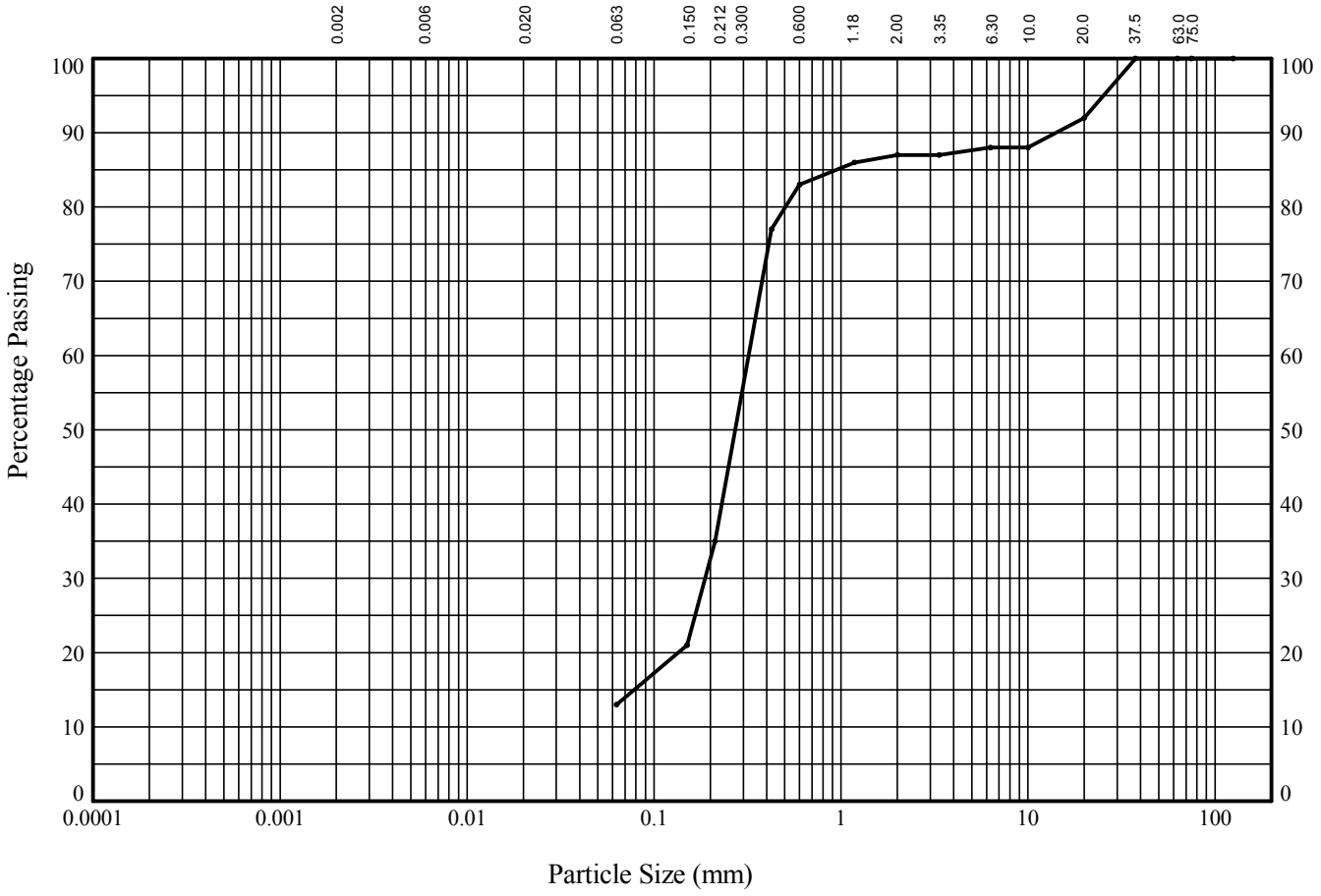
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP7** Sample Ref: **1** Sample Type: **B** Depth (m): **0.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	92
10.0	88
6.30	88
3.35	87
2.00	87
1.18	86
0.600	83
0.425	77
0.212	35
0.150	21
0.063	13

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**74**
SILT/CLAY	**13**

Soil Description:
Orange brown clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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W. Yorkshire WF10 1NJ

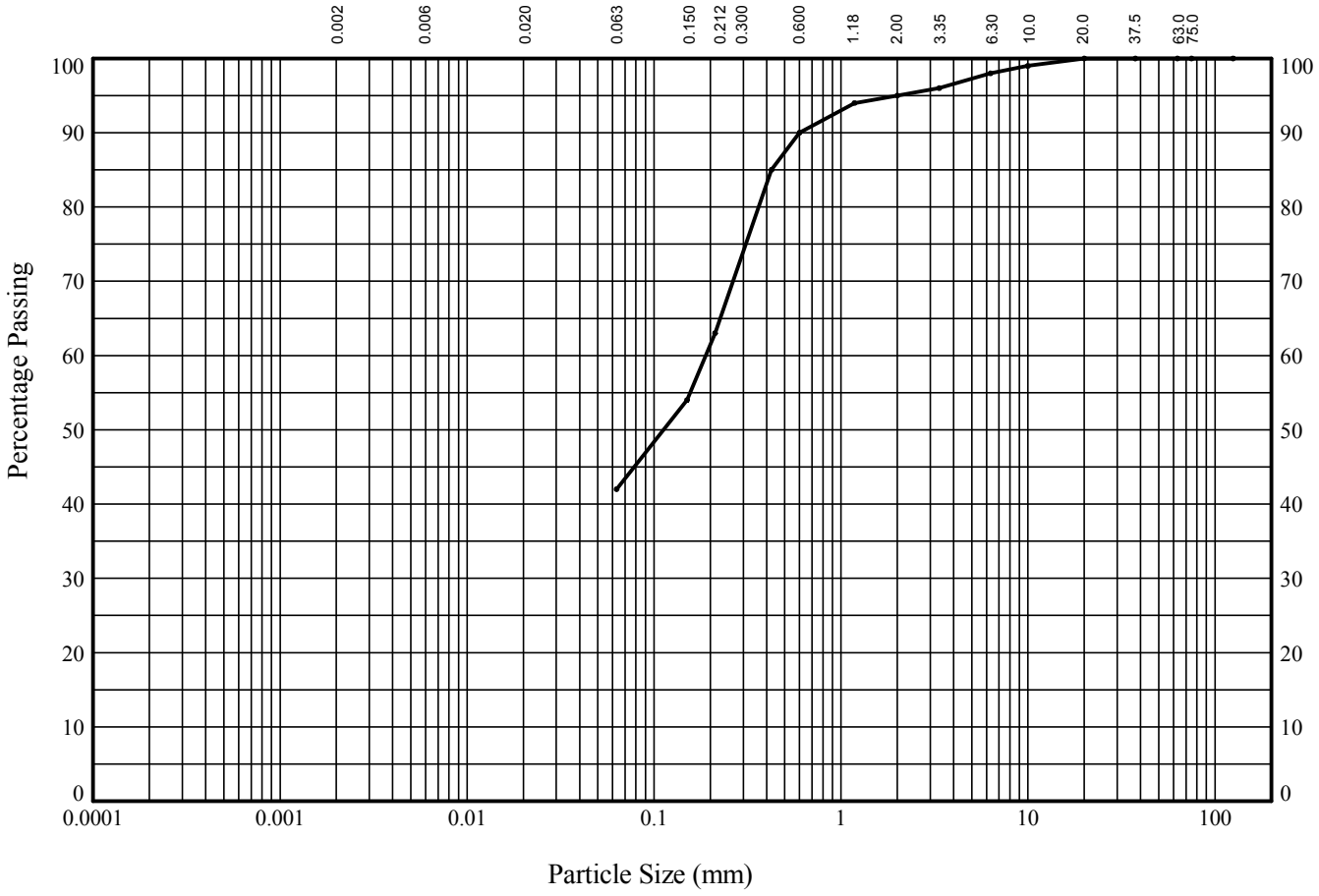
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP7** Sample Ref: **3** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	96
2.00	95
1.18	94
0.600	90
0.425	85
0.212	63
0.150	54
0.063	42

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**53**
SILT/CLAY	**42**

Soil Description:
Orange brown slightly gravelly sandy CLAY

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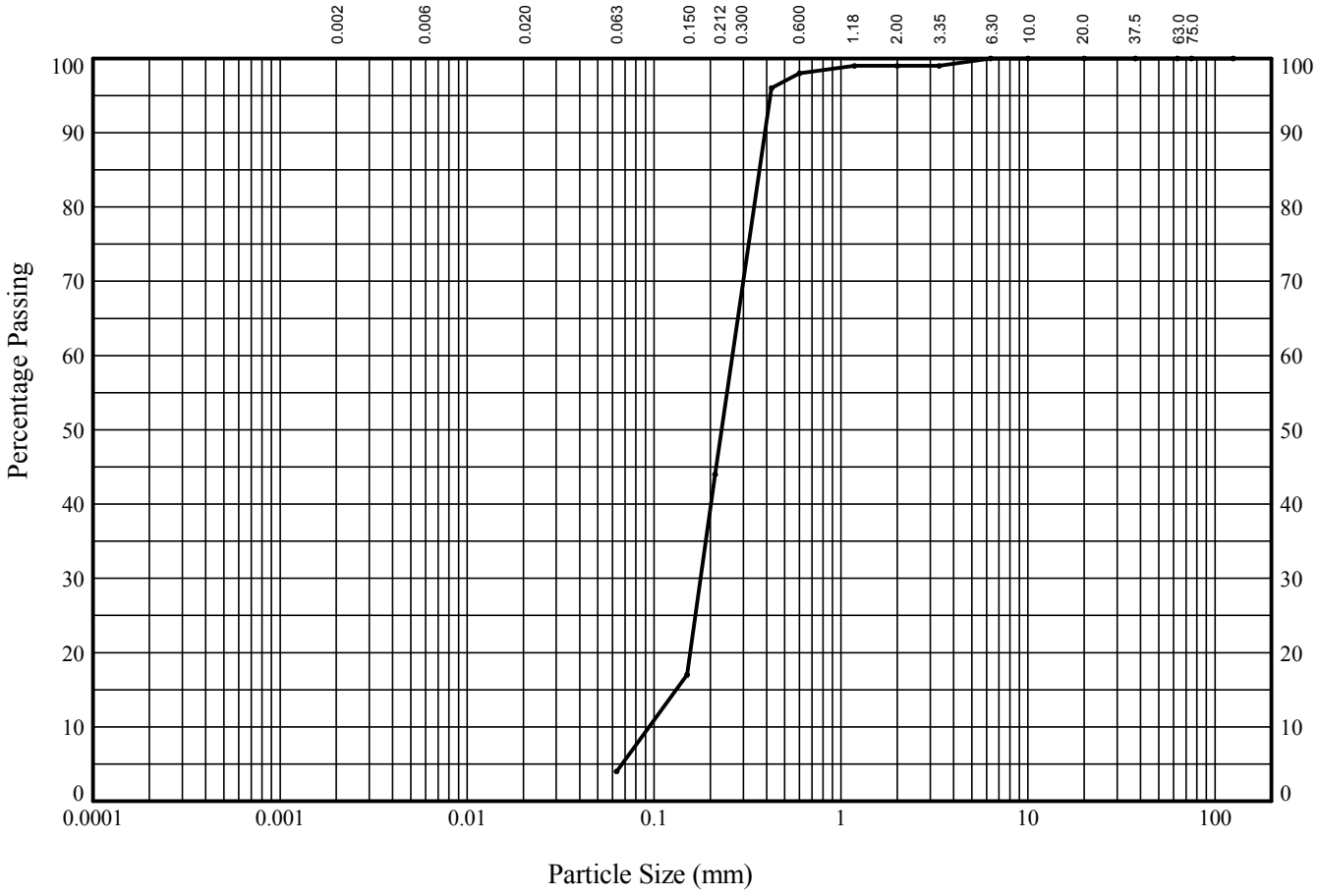
Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP7** Sample Ref: **5** Sample Type: **B** Depth (m): **3.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	98
0.425	96
0.212	44
0.150	17
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**95**
SILT/CLAY	**4**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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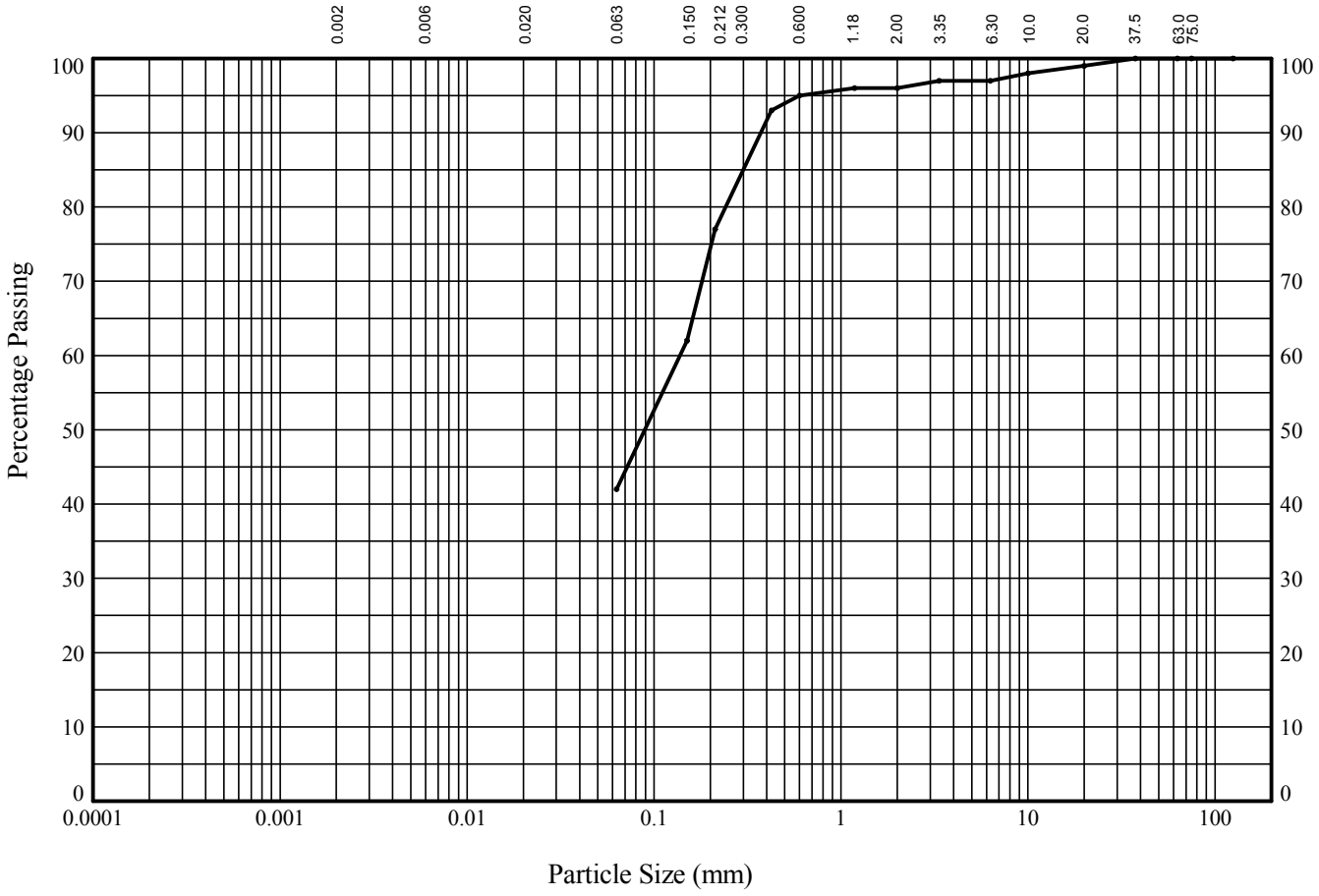
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP8** Sample Ref: **2** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	98
6.30	97
3.35	97
2.00	96
1.18	96
0.600	95
0.425	93
0.212	77
0.150	62
0.063	42

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**54**
SILT/CLAY	**42**

Soil Description:
Orange brown very sandy gravelly CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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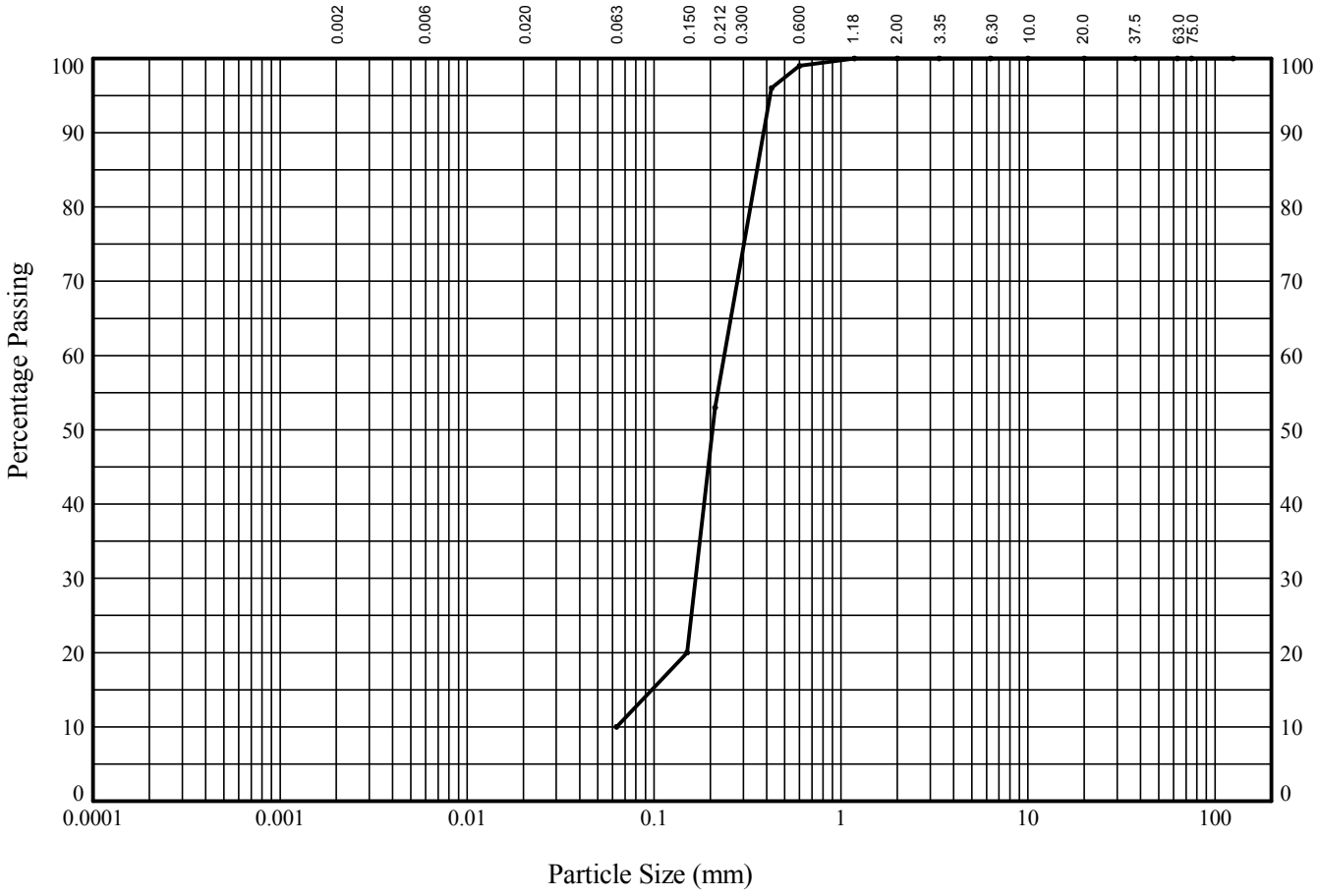
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP8** Sample Ref: **4** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	96
0.212	53
0.150	20
0.063	10

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**90**
SILT/CLAY	**10**

Soil Description:
Orange brown clayey SAND

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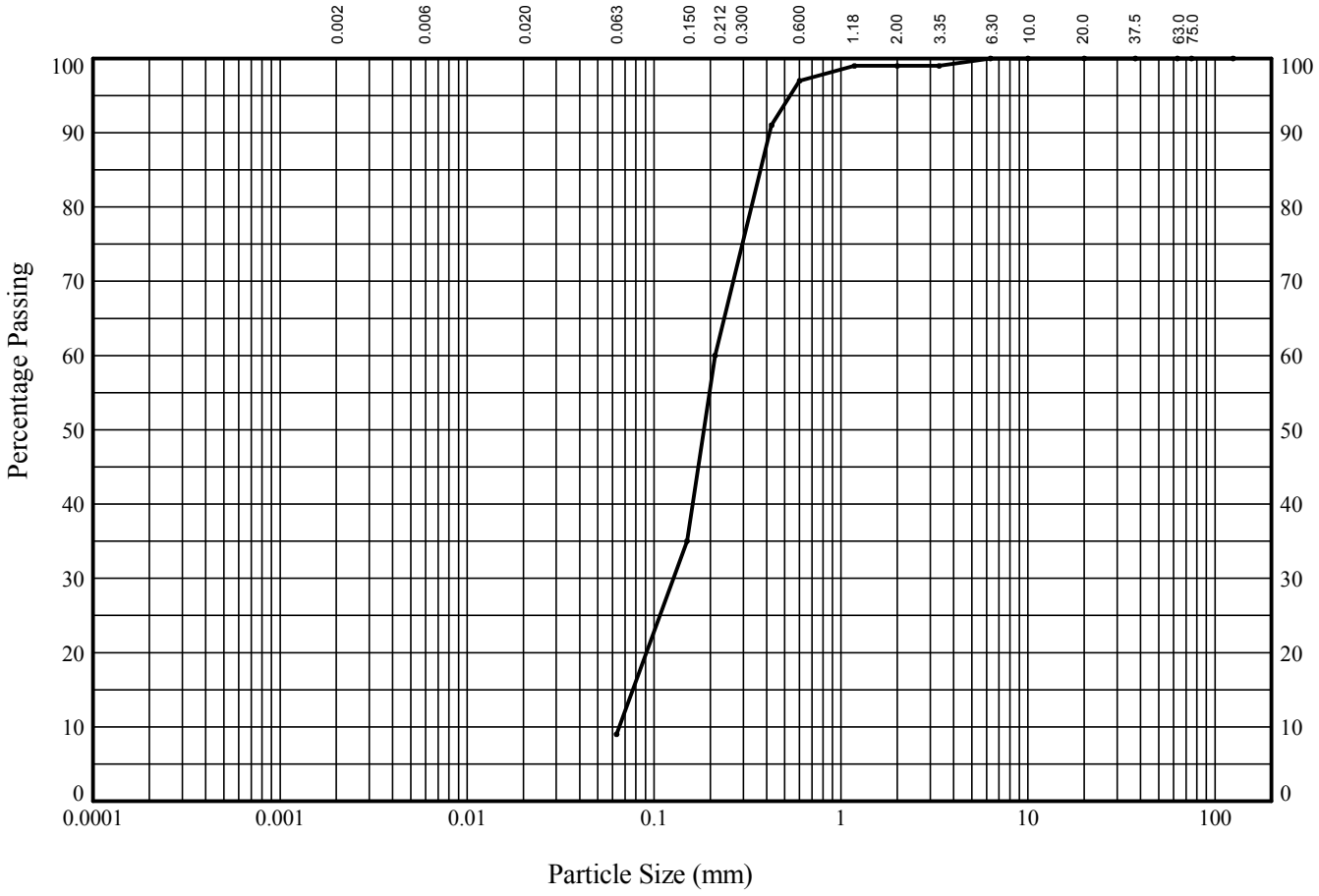
Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **BP8** Sample Ref: **6** Sample Type: **B** Depth (m): **3.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	97
0.425	91
0.212	60
0.150	35
0.063	9

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**90**
SILT/CLAY	**9**

Soil Description:
Light brown clayey slightly gravelly SAND

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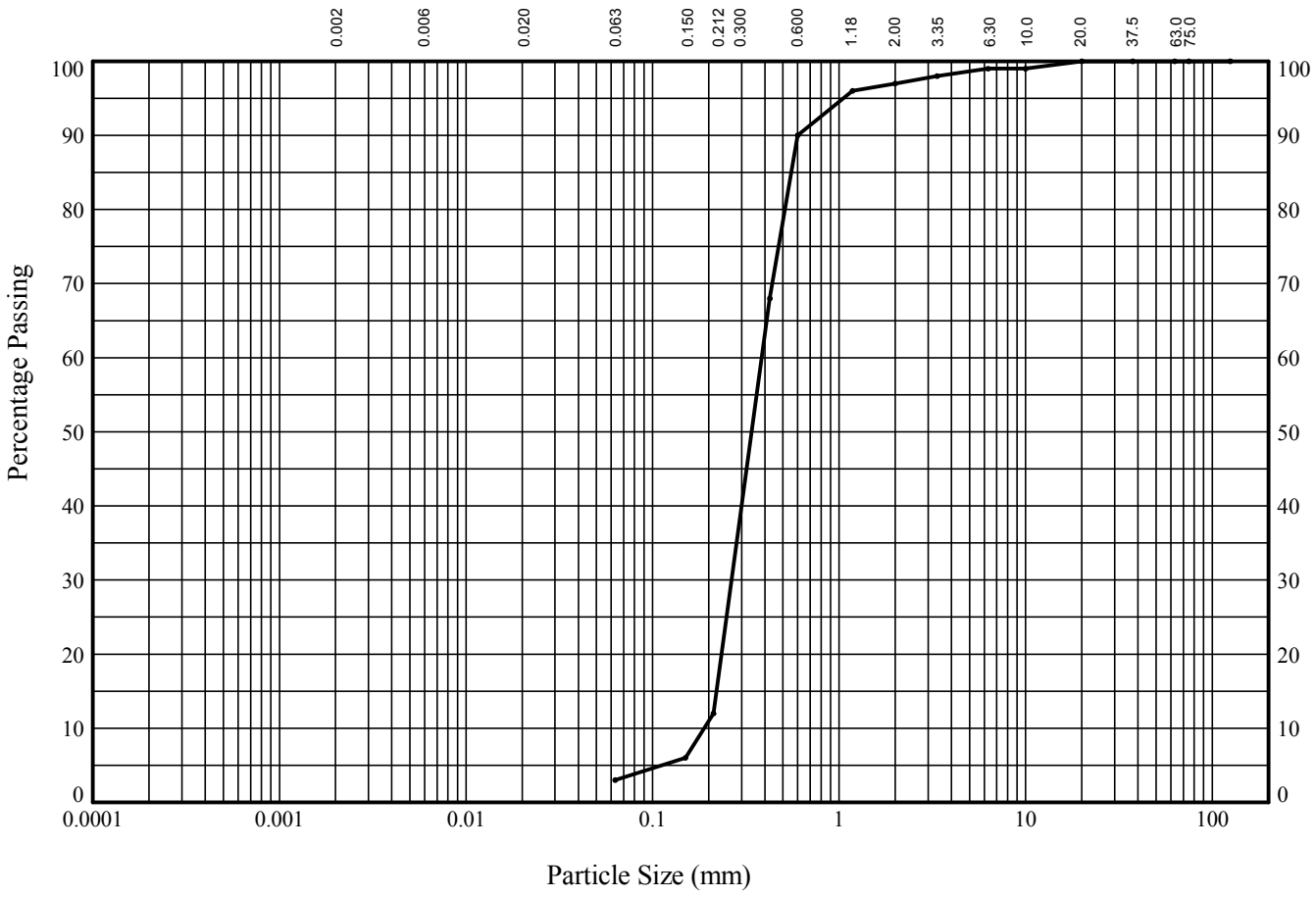
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	98
2.00	97
1.18	96
0.600	90
0.425	68
0.212	12
0.150	6
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**94**
SILT/CLAY	**3**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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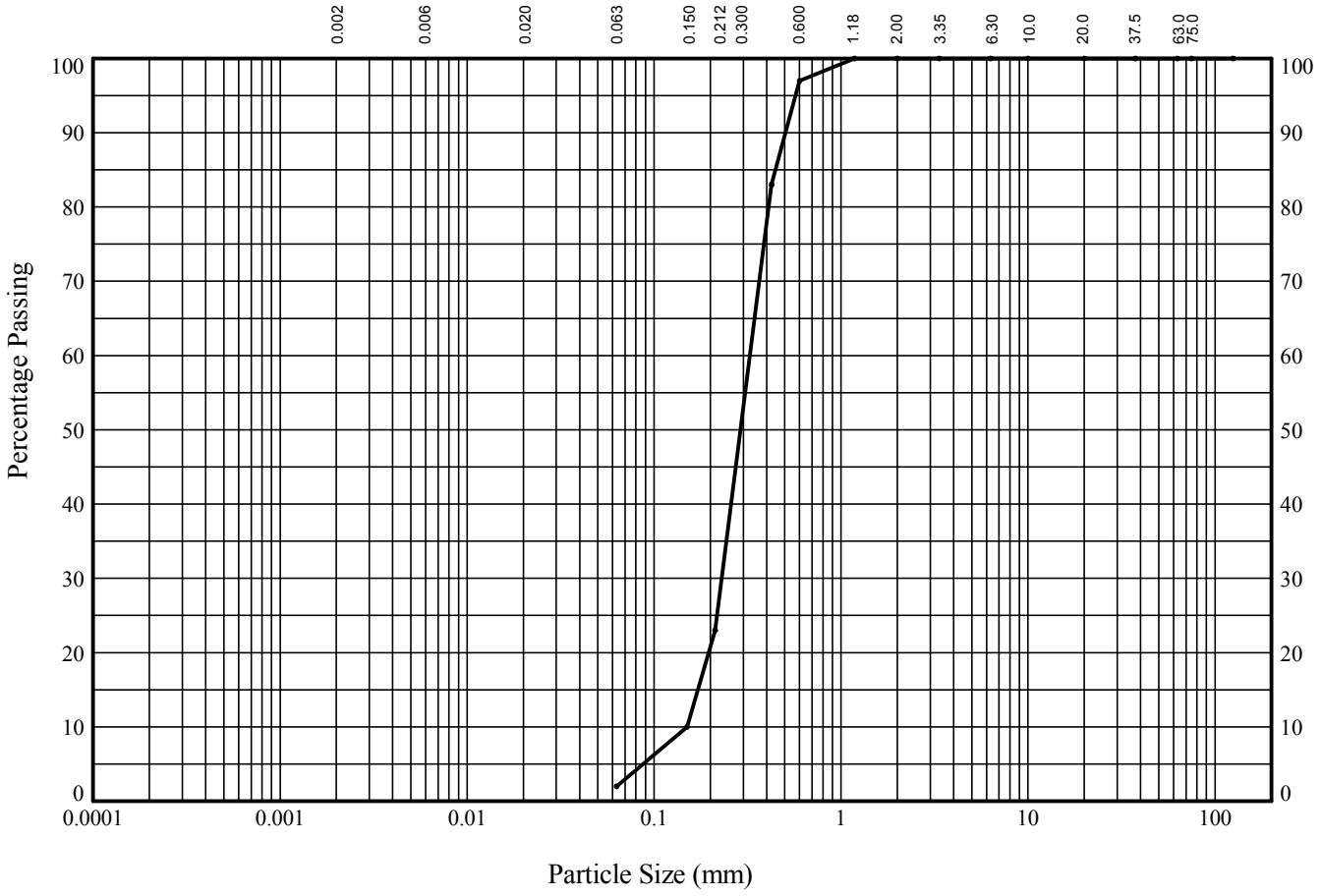
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **4** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	97
0.425	83
0.212	23
0.150	10
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**98**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey SAND

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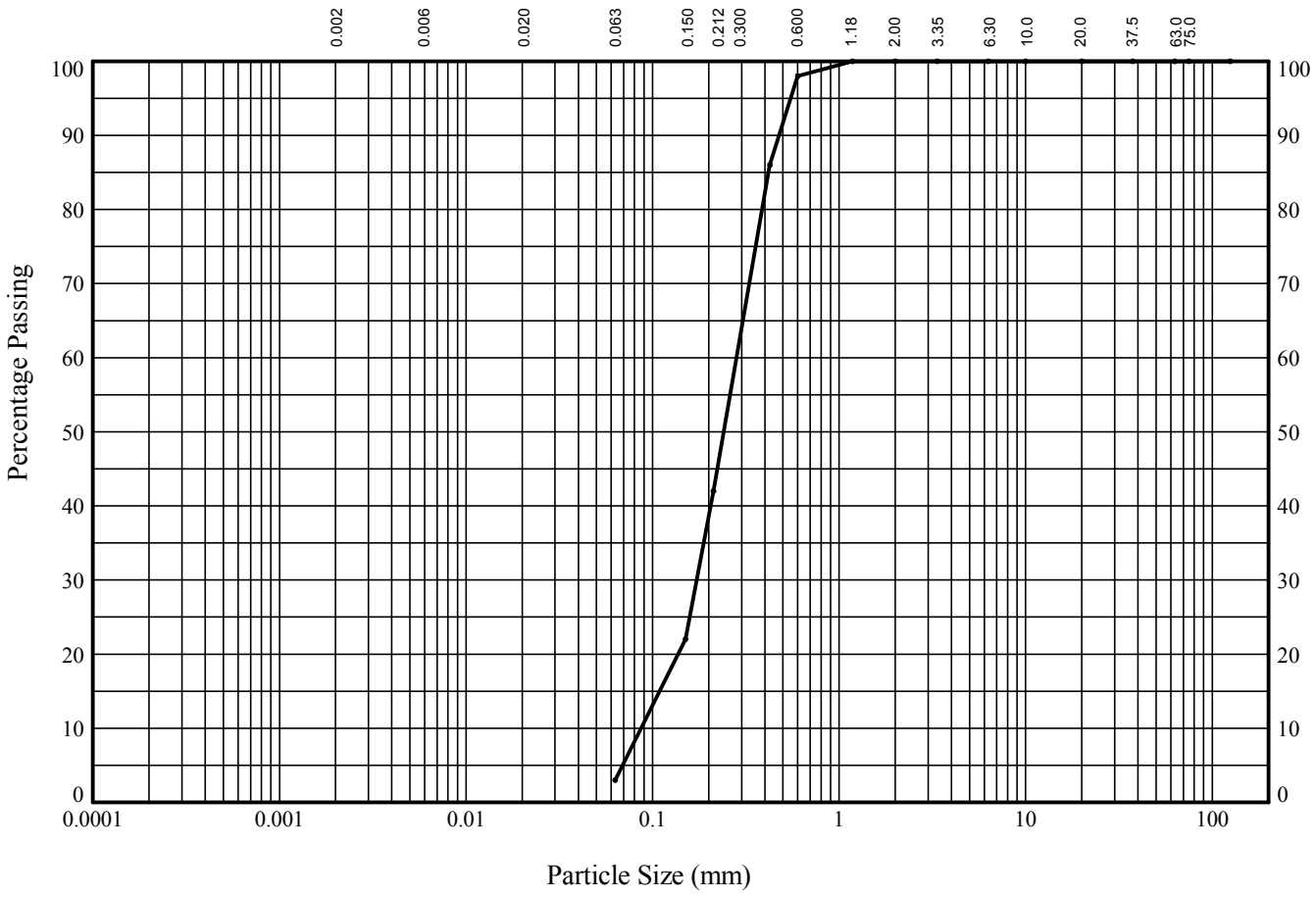
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **6** Sample Type: **B** Depth (m): **3.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	98
0.425	86
0.212	42
0.150	22
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**97**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey SAND

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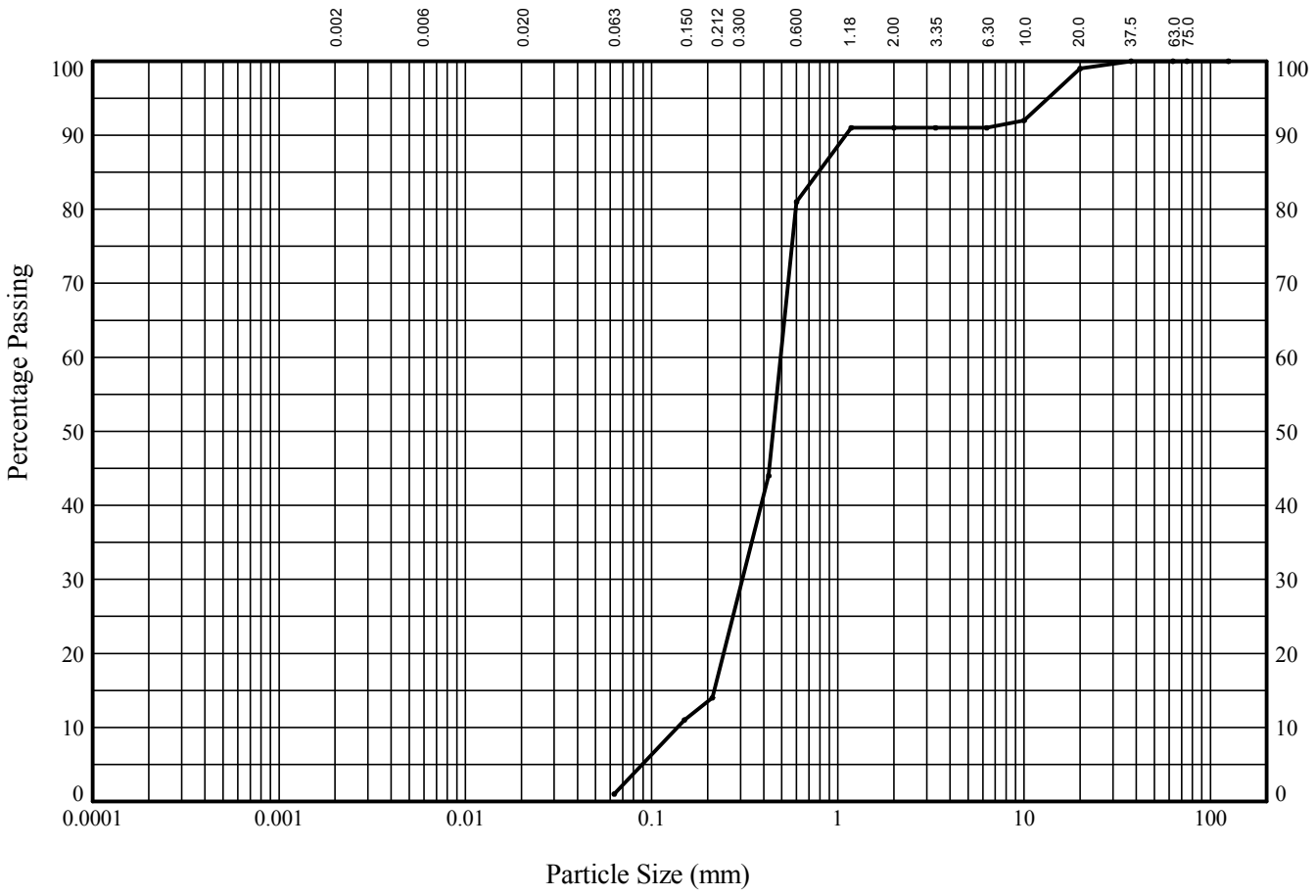
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **9** Sample Type: **B** Depth (m): **4.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	92
6.30	91
3.35	91
2.00	91
1.18	91
0.600	81
0.425	44
0.212	14
0.150	11
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**9**
SAND	**90**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey gravelly SAND

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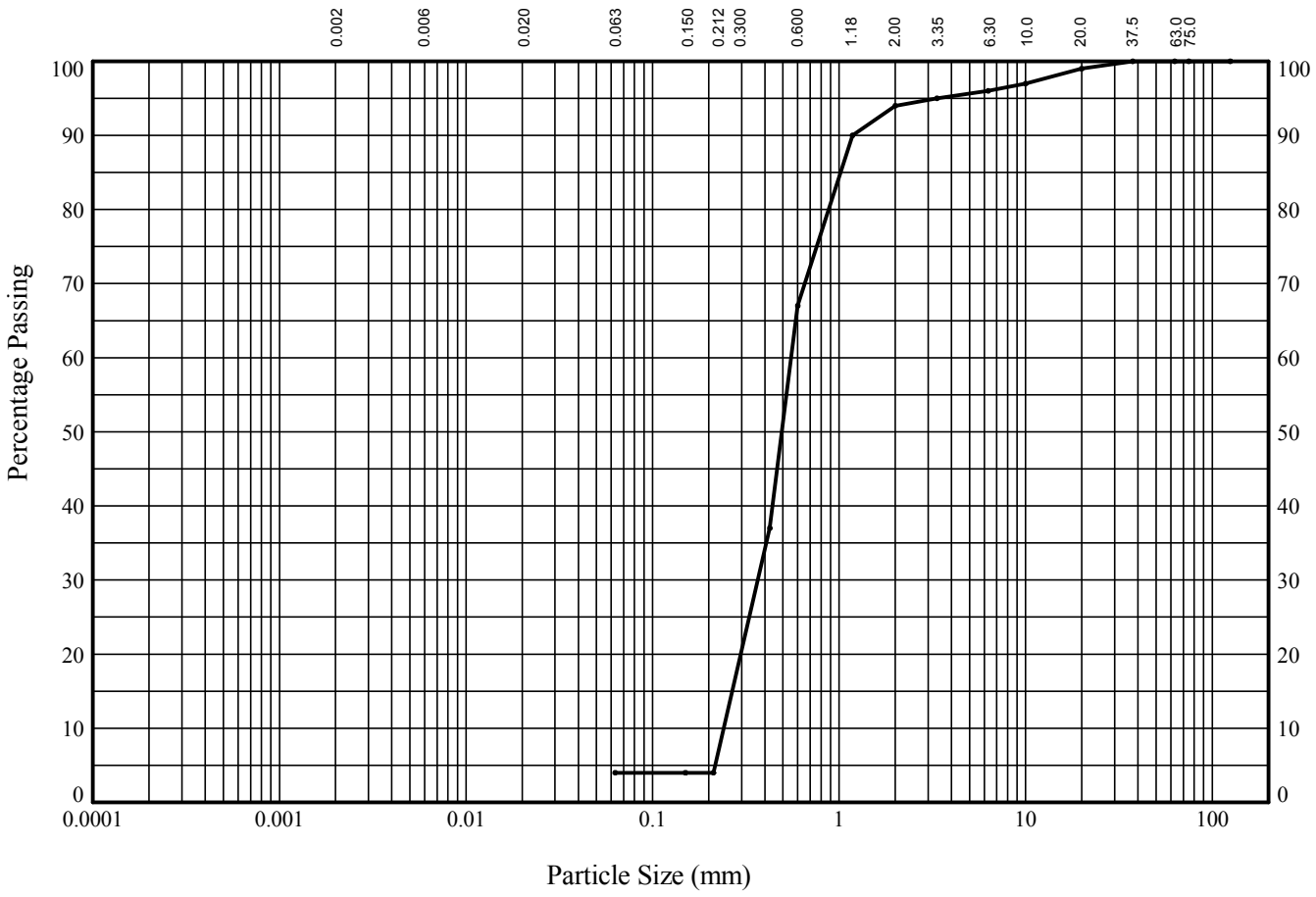
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	97
6.30	96
3.35	95
2.00	94
1.18	90
0.600	67
0.425	37
0.212	4
0.150	4
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**90**
SILT/CLAY	**4**

Soil Description:
Light brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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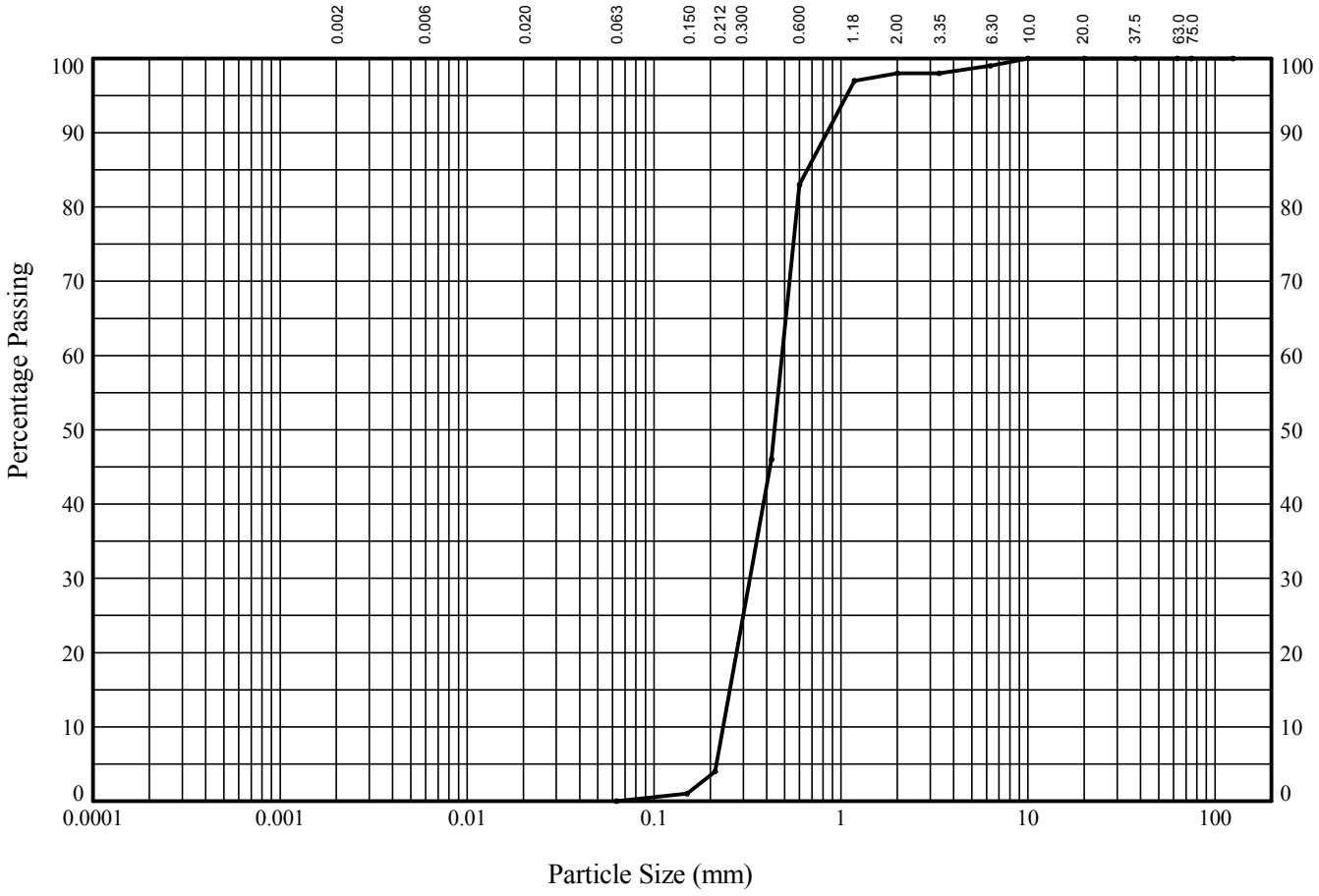
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	83
0.425	46
0.212	4
0.150	1
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**98**
SILT/CLAY	**0**

Soil Description:
Light brown slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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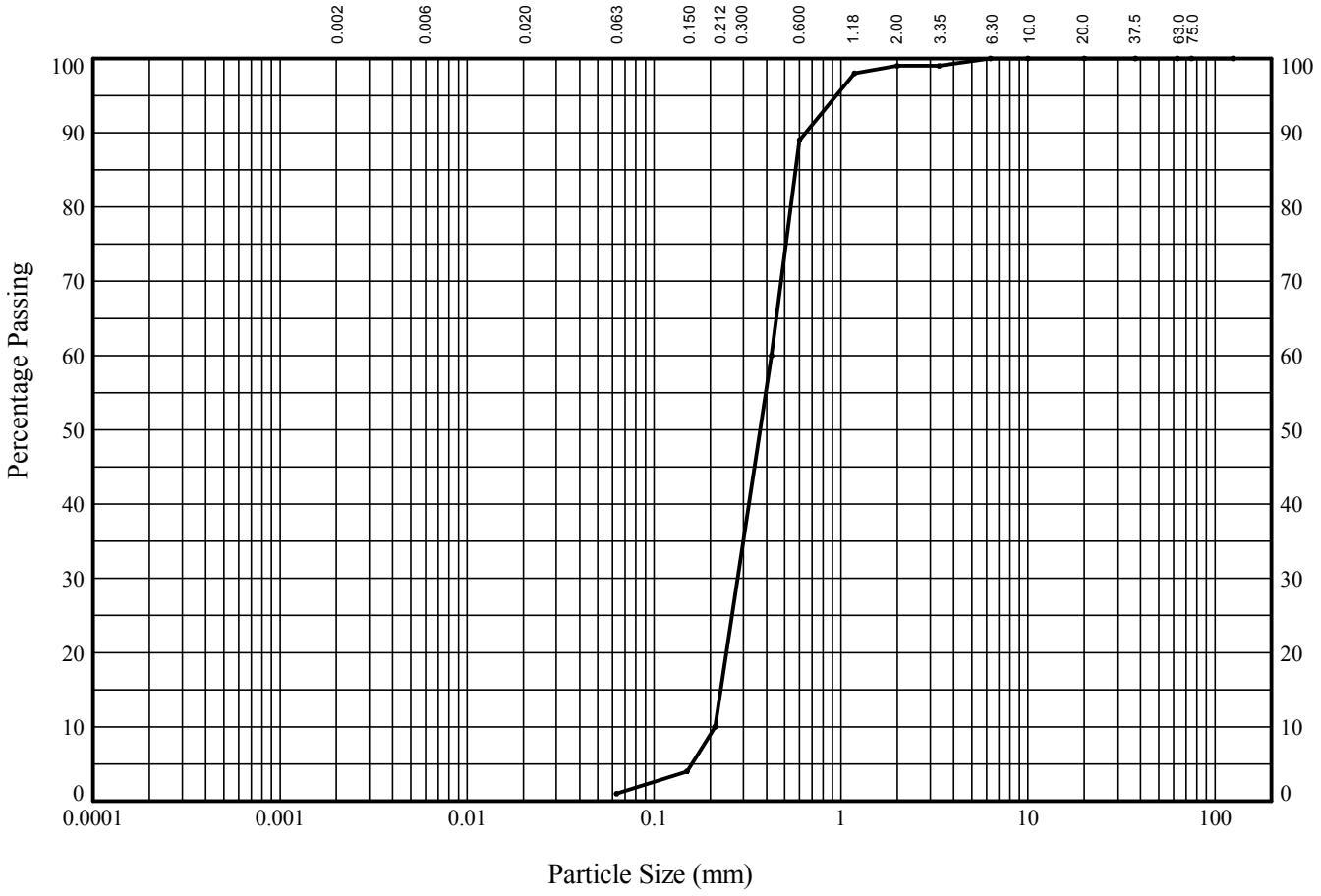
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **15** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	89
0.425	60
0.212	10
0.150	4
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**98**
SILT/CLAY	**1**

Soil Description:
Light orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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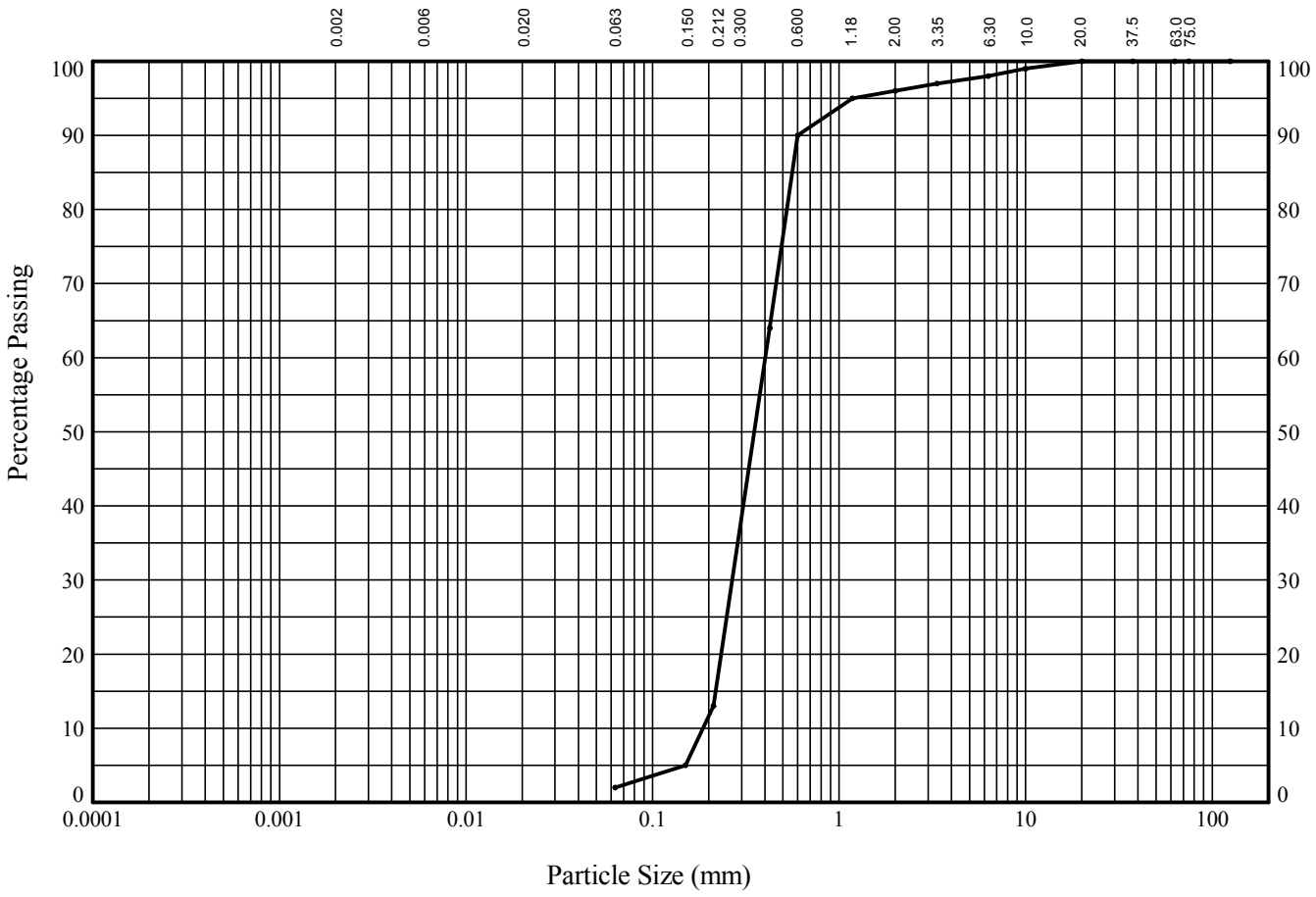
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **17** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	96
1.18	95
0.600	90
0.425	64
0.212	13
0.150	5
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**94**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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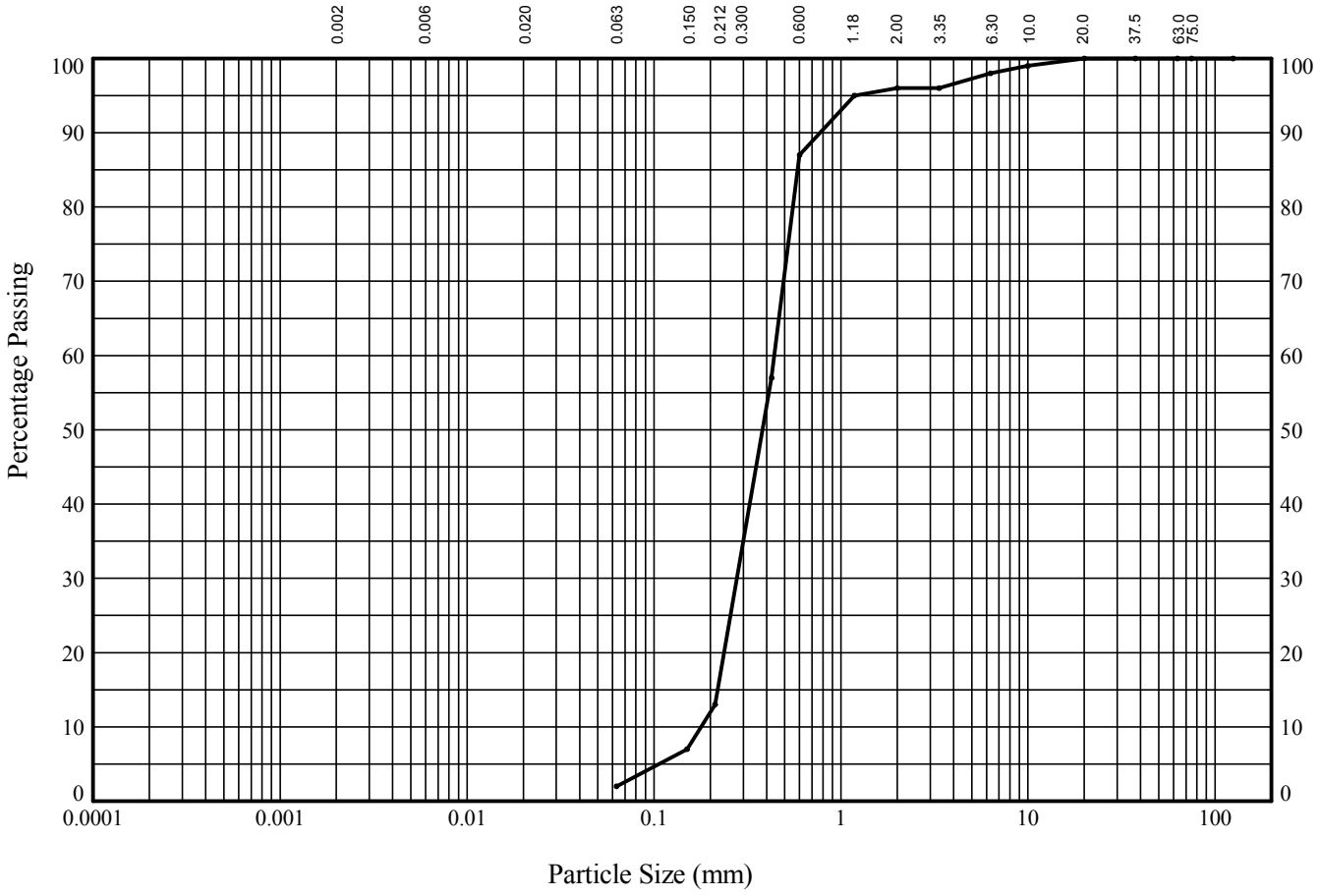
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **19** Sample Type: **D** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	96
2.00	96
1.18	95
0.600	87
0.425	57
0.212	13
0.150	7
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**94**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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W. Yorkshire WF10 1NJ

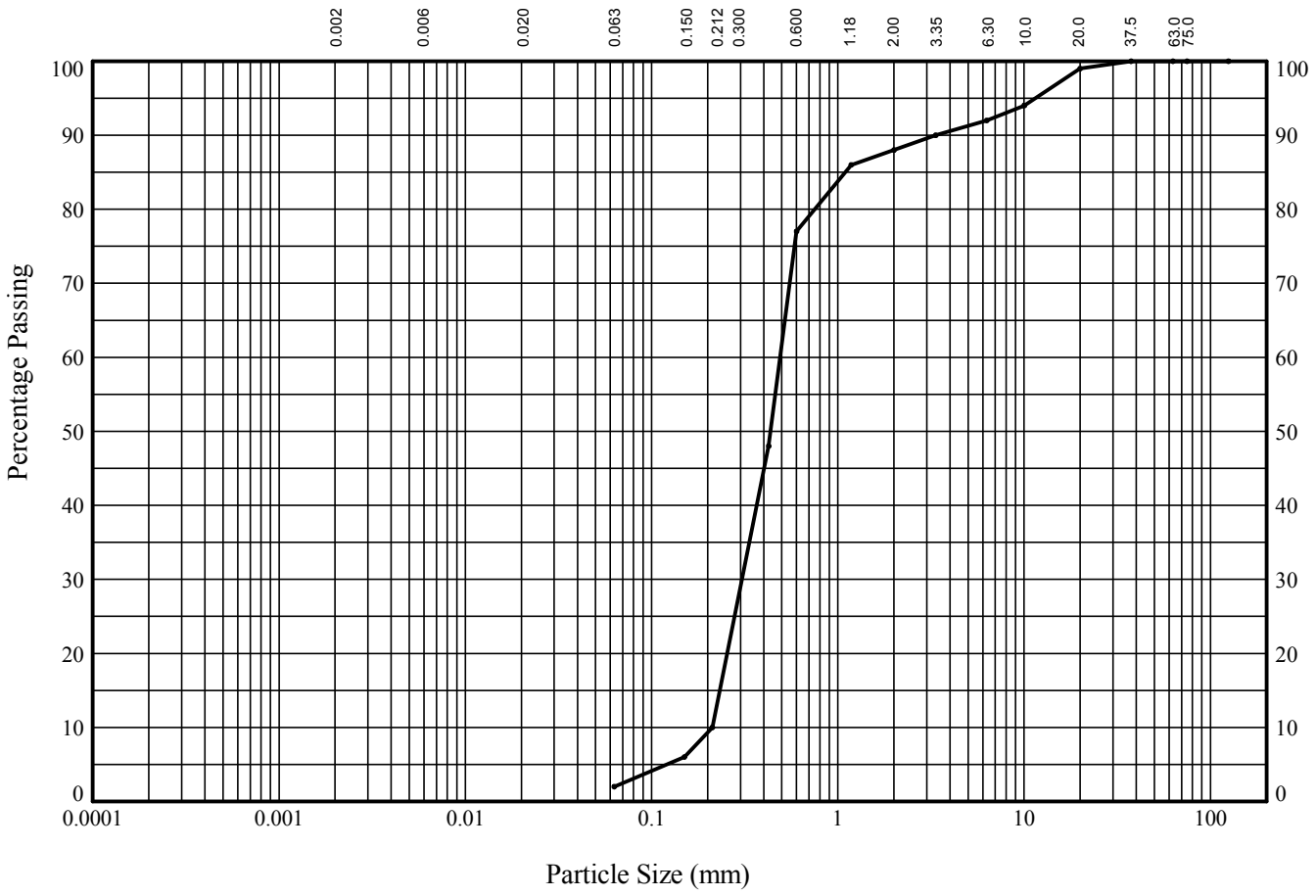
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **21** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	94
6.30	92
3.35	90
2.00	88
1.18	86
0.600	77
0.425	48
0.212	10
0.150	6
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**12**
SAND	**86**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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W. Yorkshire WF10 1NJ

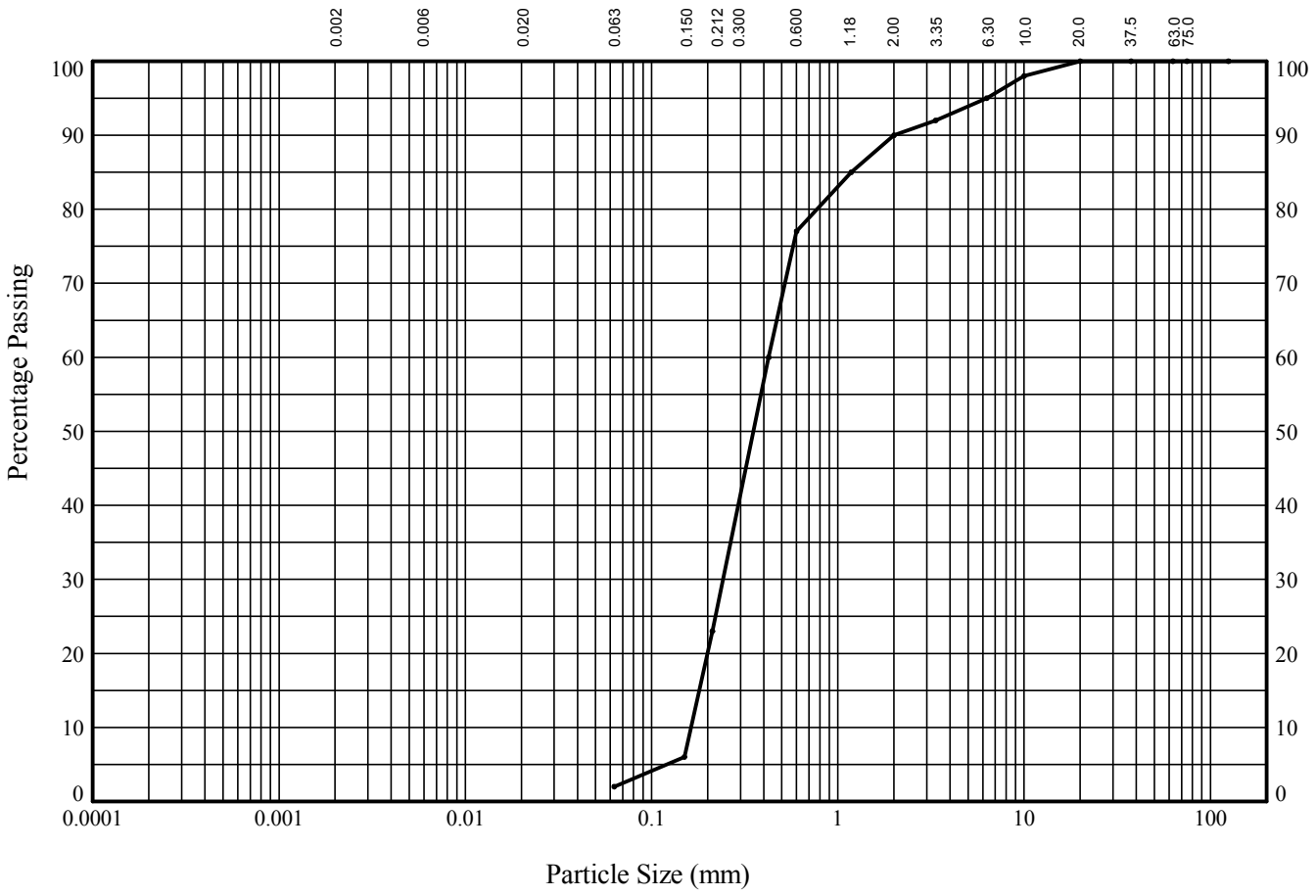
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **23** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	95
3.35	92
2.00	90
1.18	85
0.600	77
0.425	60
0.212	23
0.150	6
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**88**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey gravelly SAND

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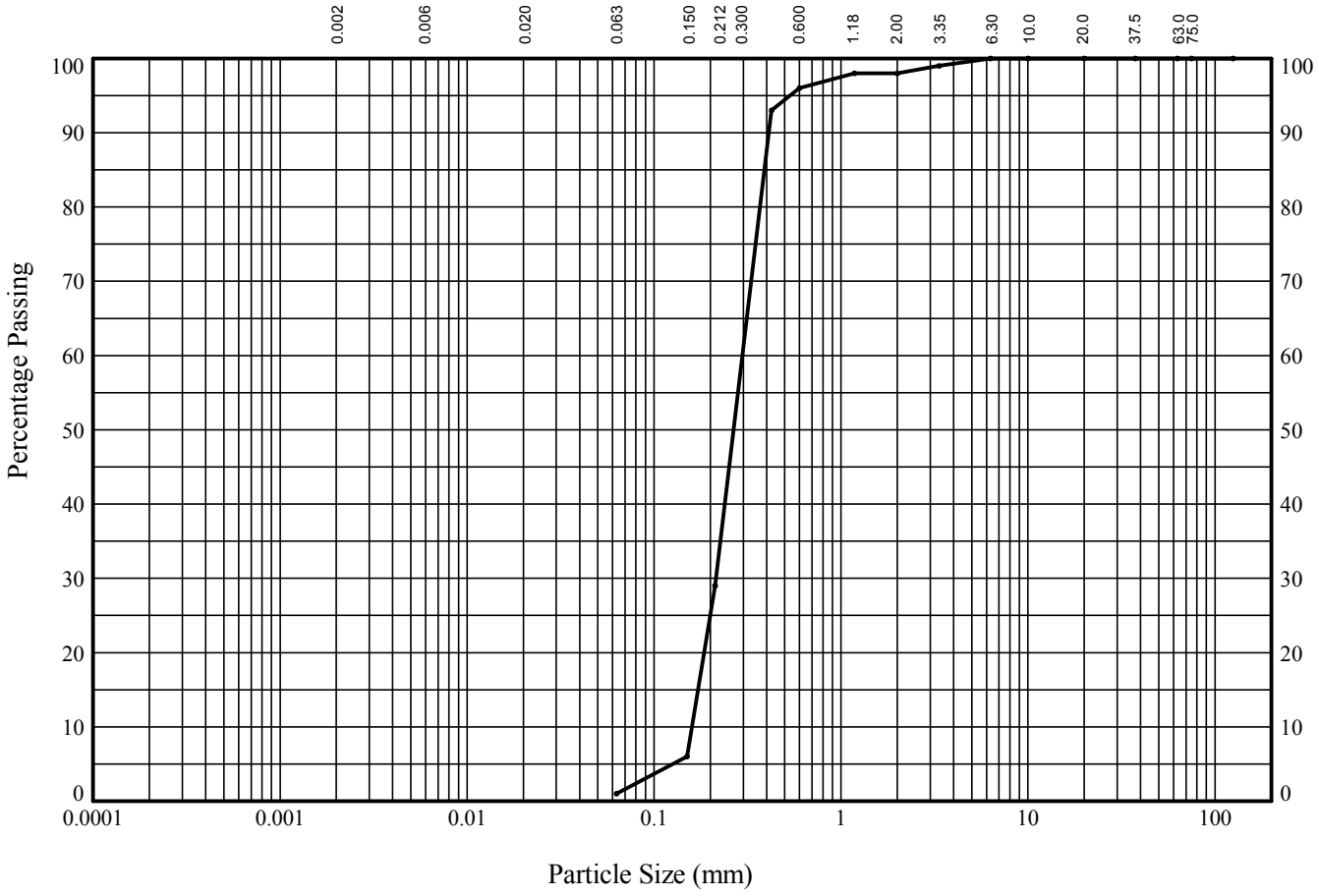
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	98
0.600	96
0.425	93
0.212	29
0.150	6
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**97**
SILT/CLAY	**1**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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Compiled By		Date
		17/09/15

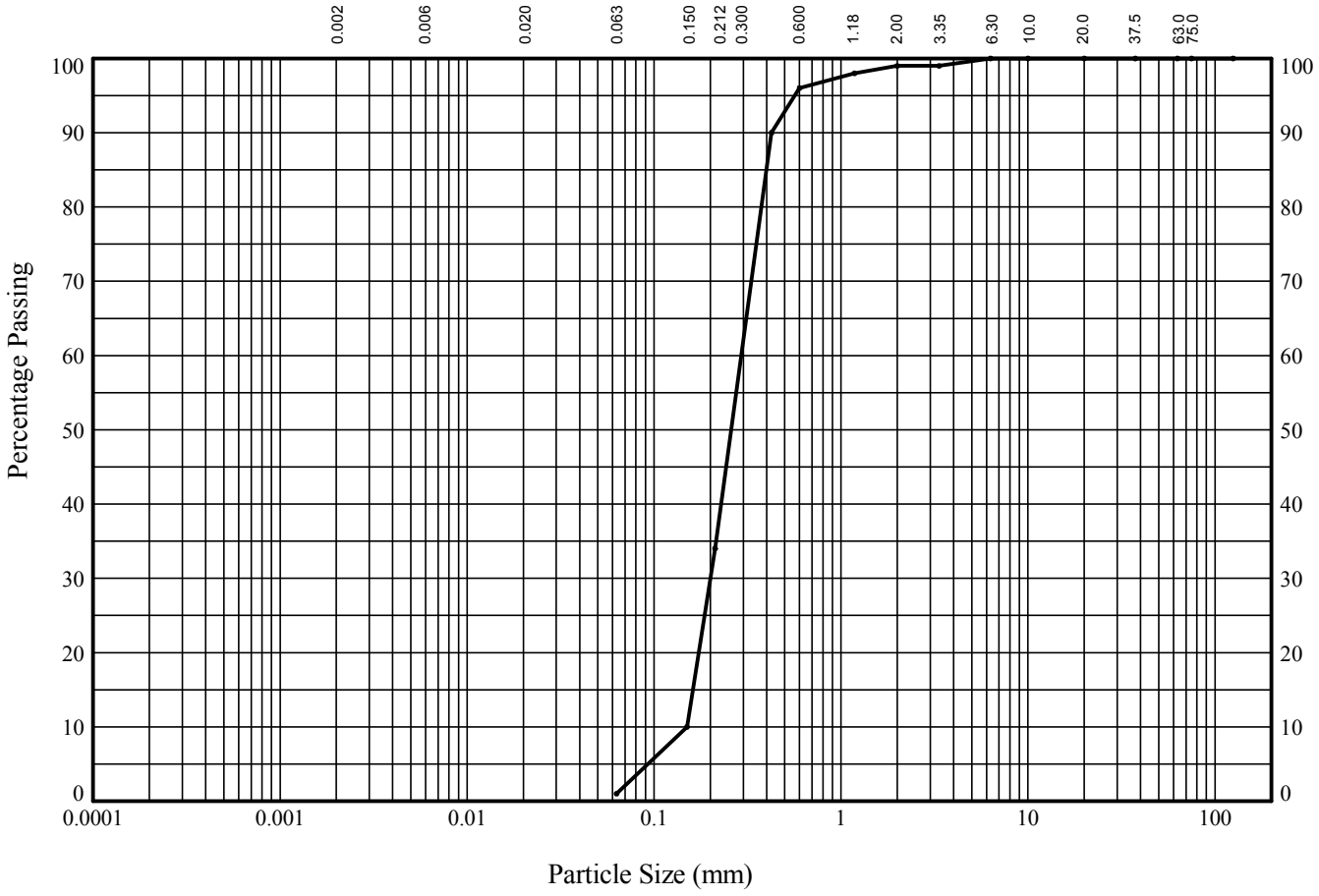
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	96
0.425	90
0.212	34
0.150	10
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**98**
SILT/CLAY	**1**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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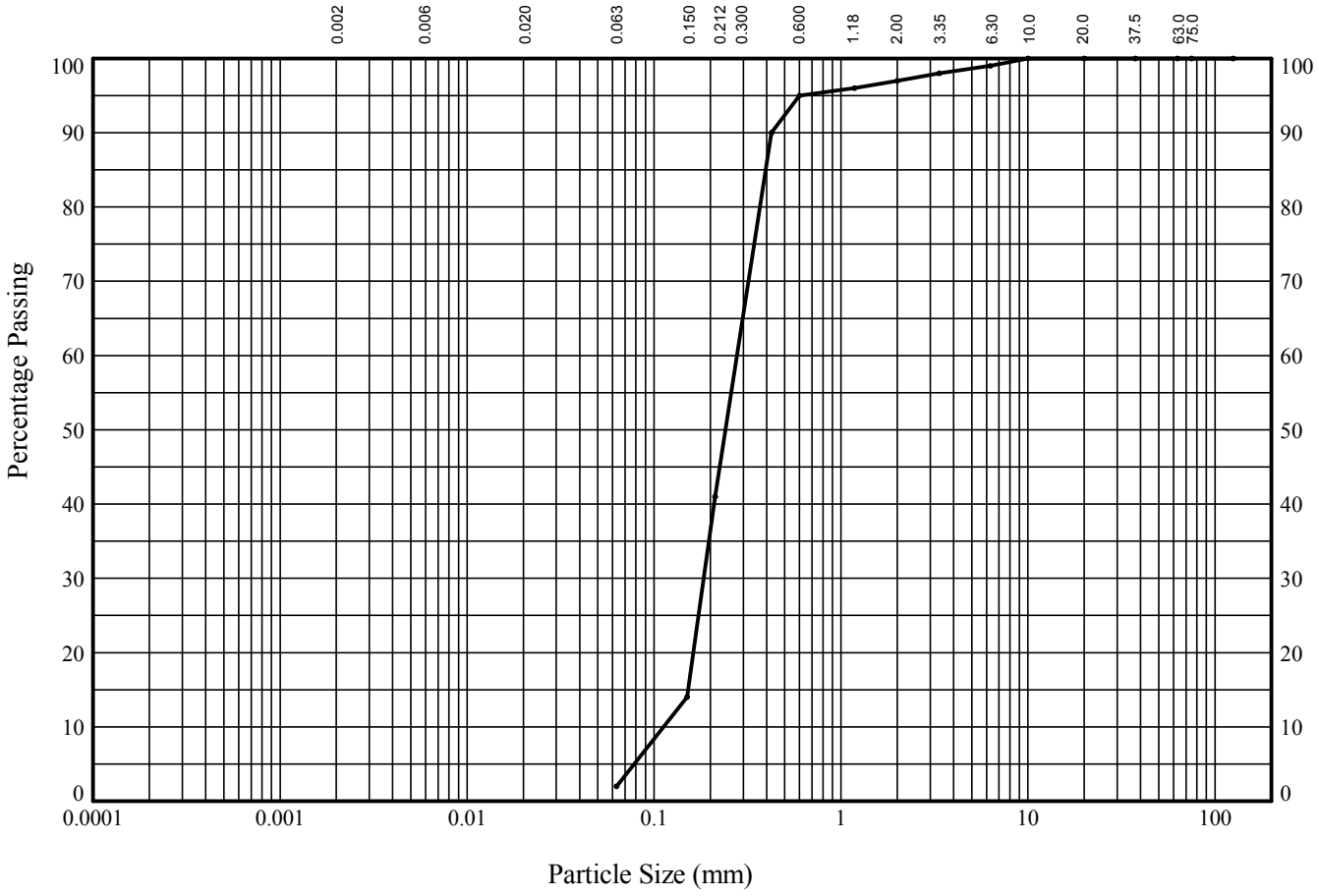
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	97
1.18	96
0.600	95
0.425	90
0.212	41
0.150	14
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**95**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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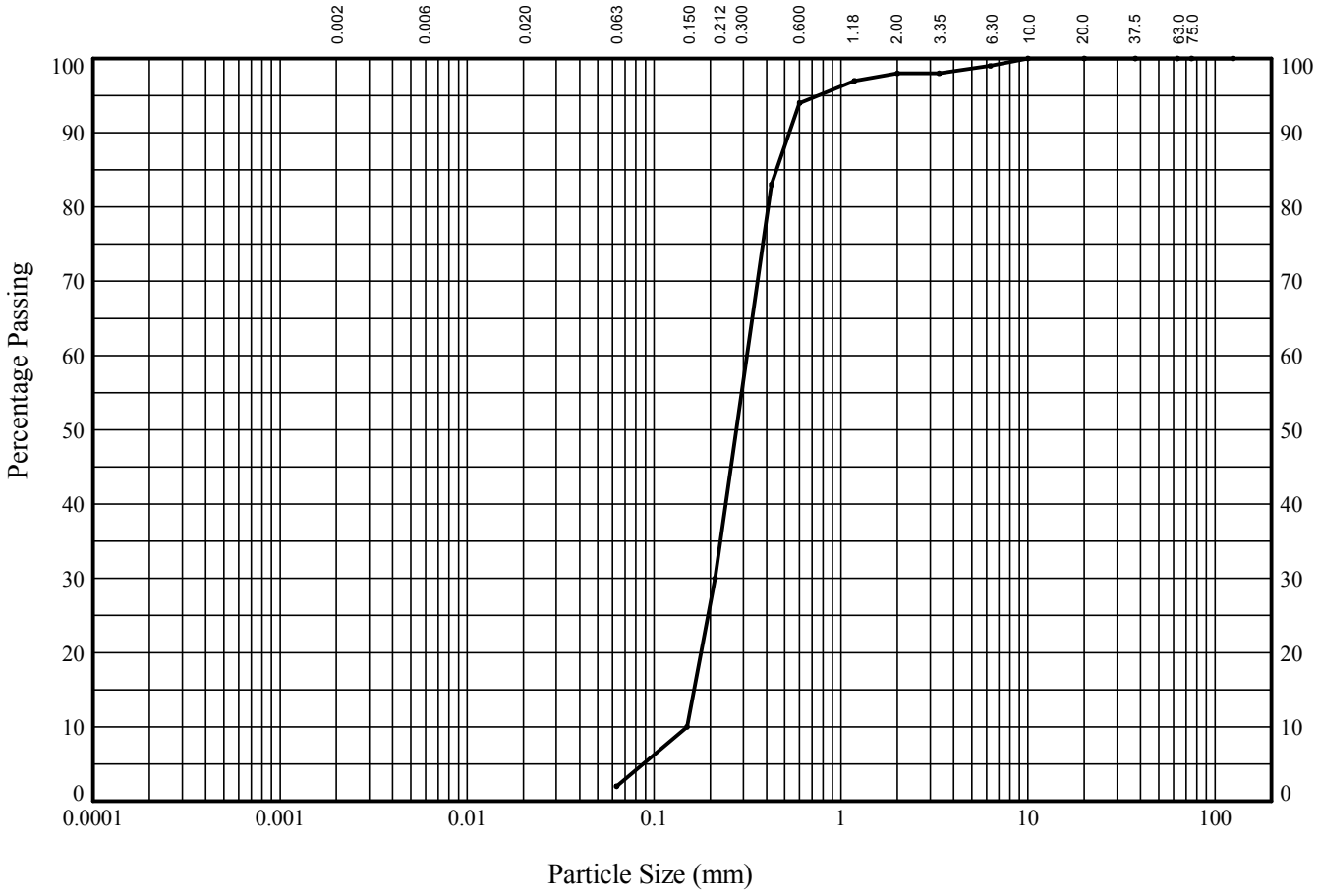
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	94
0.425	83
0.212	30
0.150	10
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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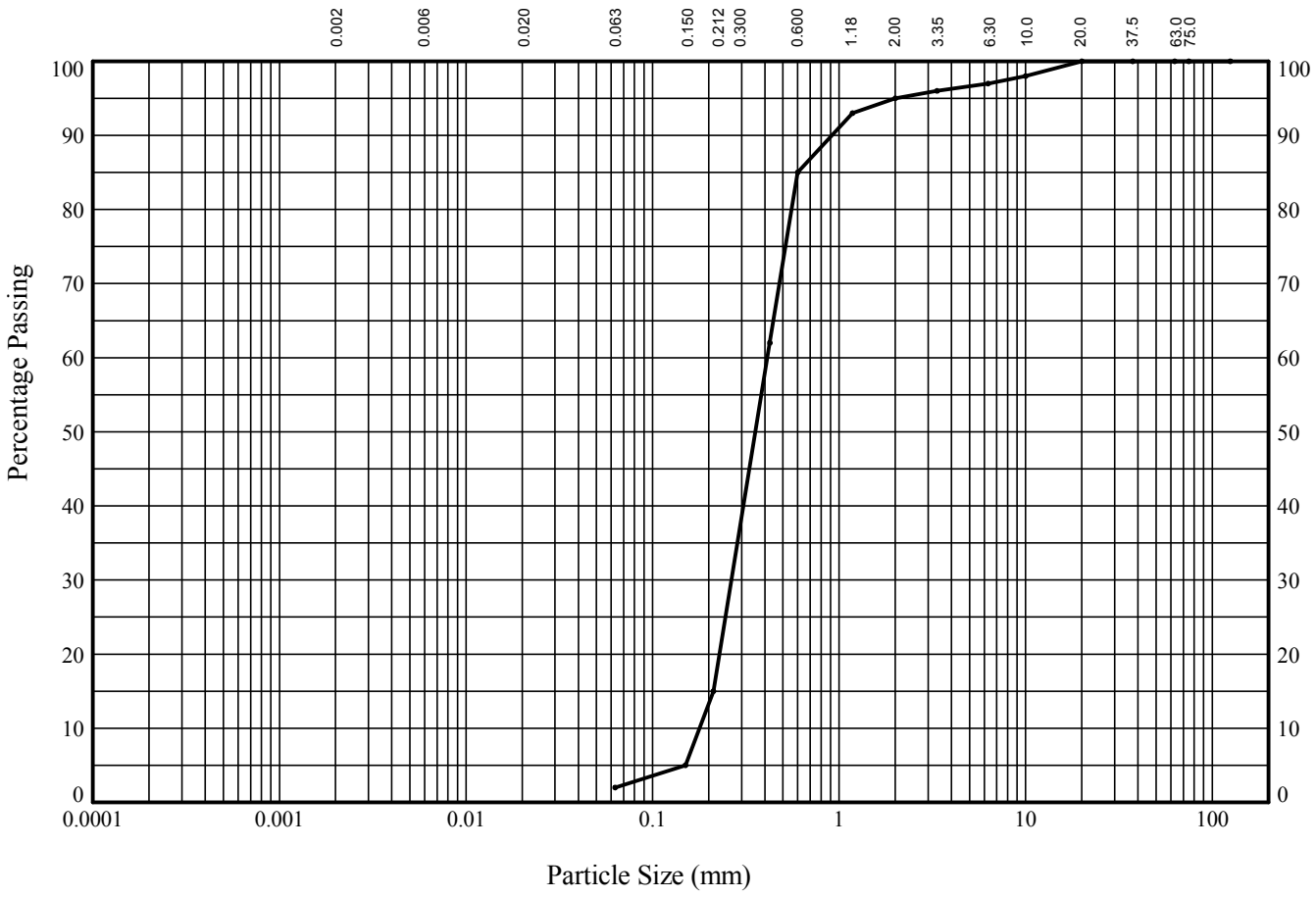
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	97
3.35	96
2.00	95
1.18	93
0.600	85
0.425	62
0.212	15
0.150	5
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**93**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey gravelly SAND

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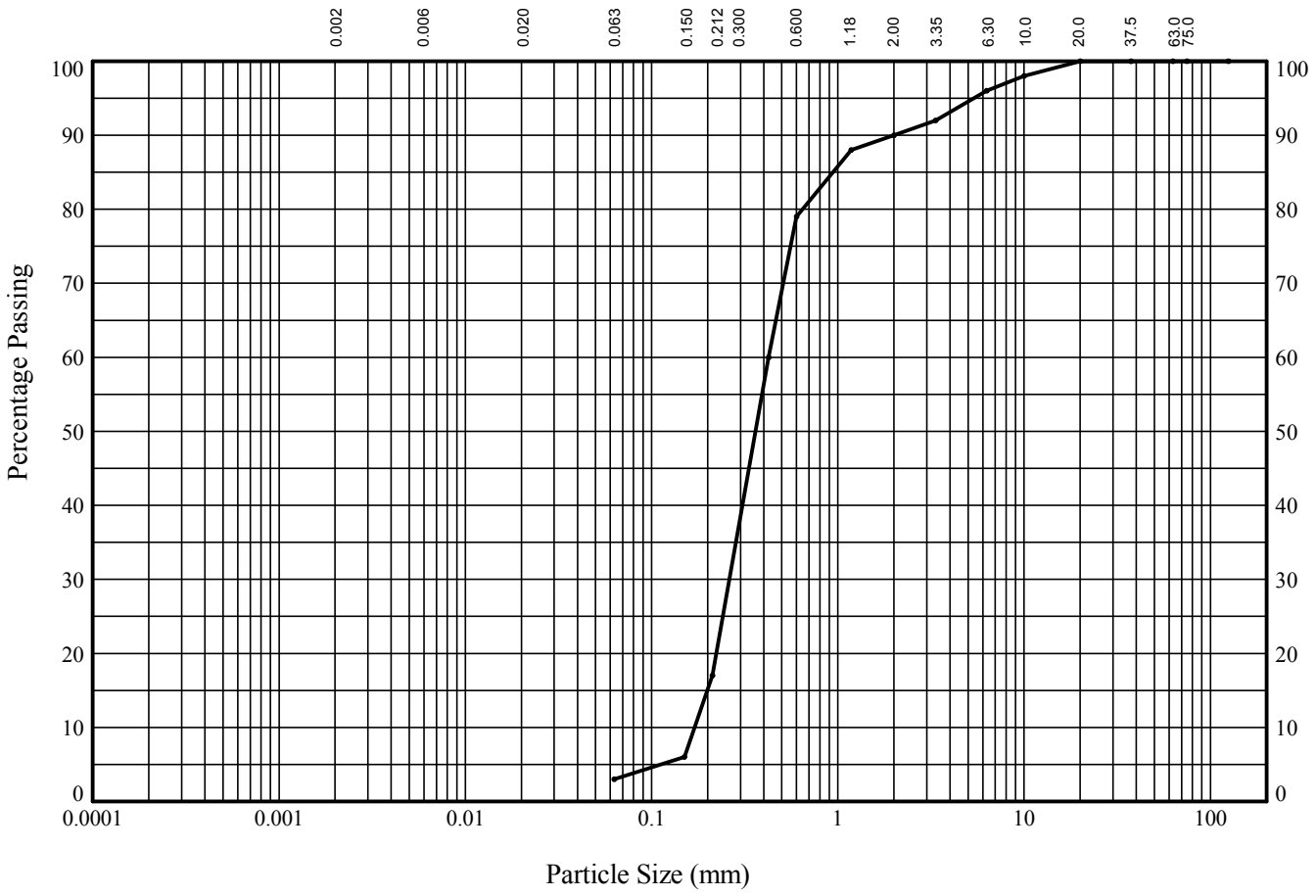
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **35** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	96
3.35	92
2.00	90
1.18	88
0.600	79
0.425	60
0.212	17
0.150	6
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**87**
SILT/CLAY	**3**

Soil Description:
Dark orange brown slightly clayey gravelly SAND

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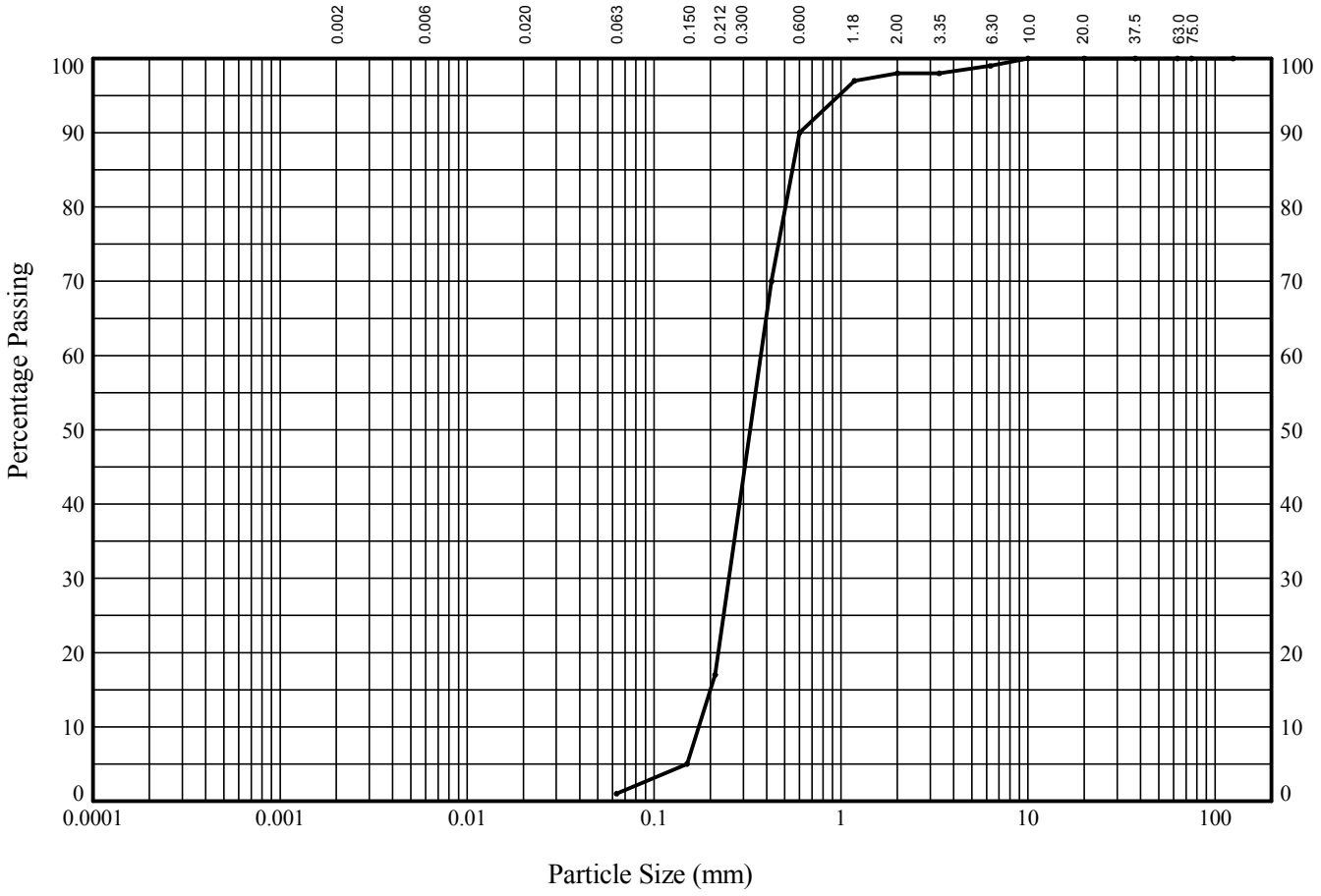
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **37** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	90
0.425	70
0.212	17
0.150	5
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**97**
SILT/CLAY	**1**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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W. Yorkshire WF10 1NJ

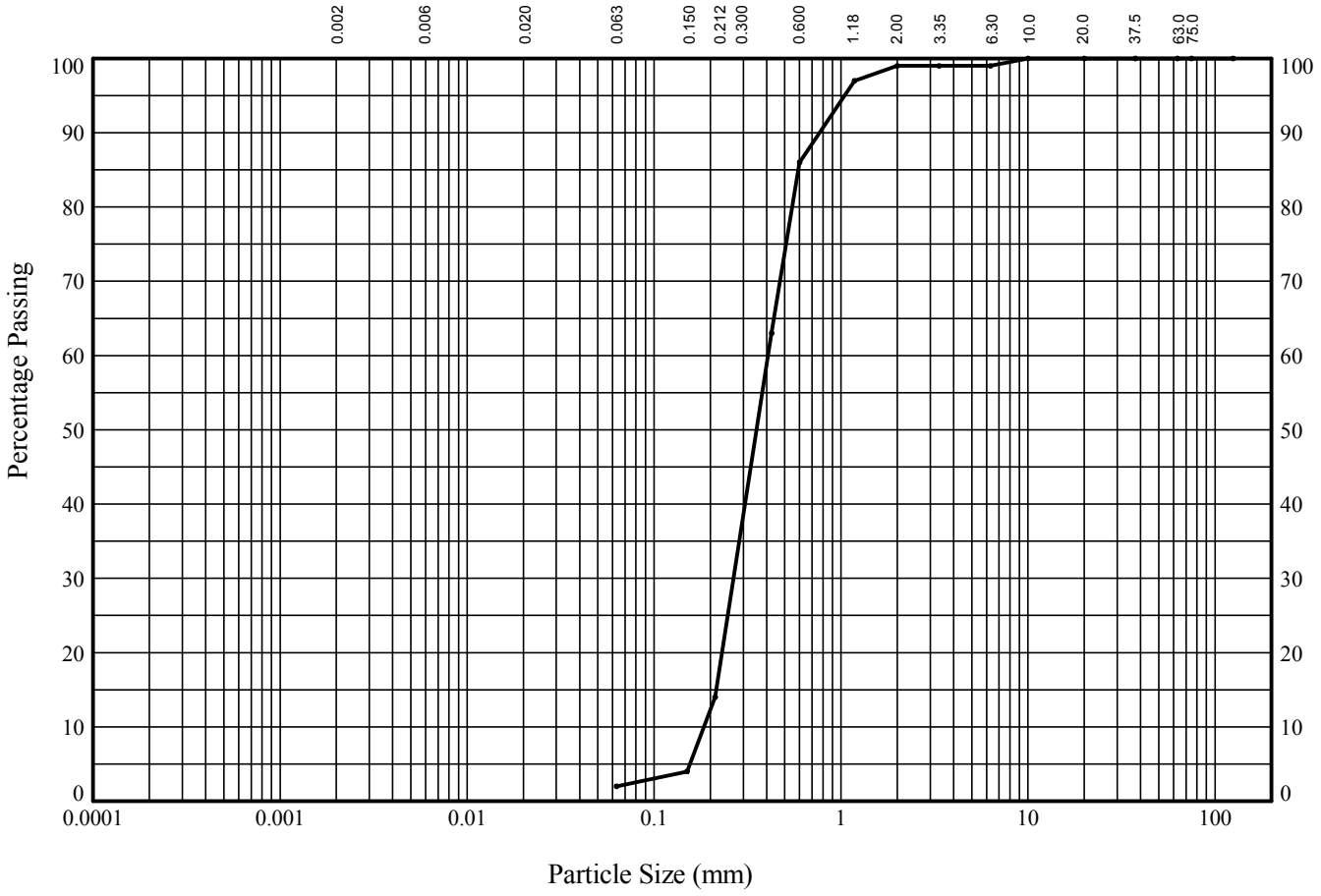
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP7** Sample Ref: **39** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	99
1.18	97
0.600	86
0.425	63
0.212	14
0.150	4
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**97**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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Compiled By		Date
		17/09/15

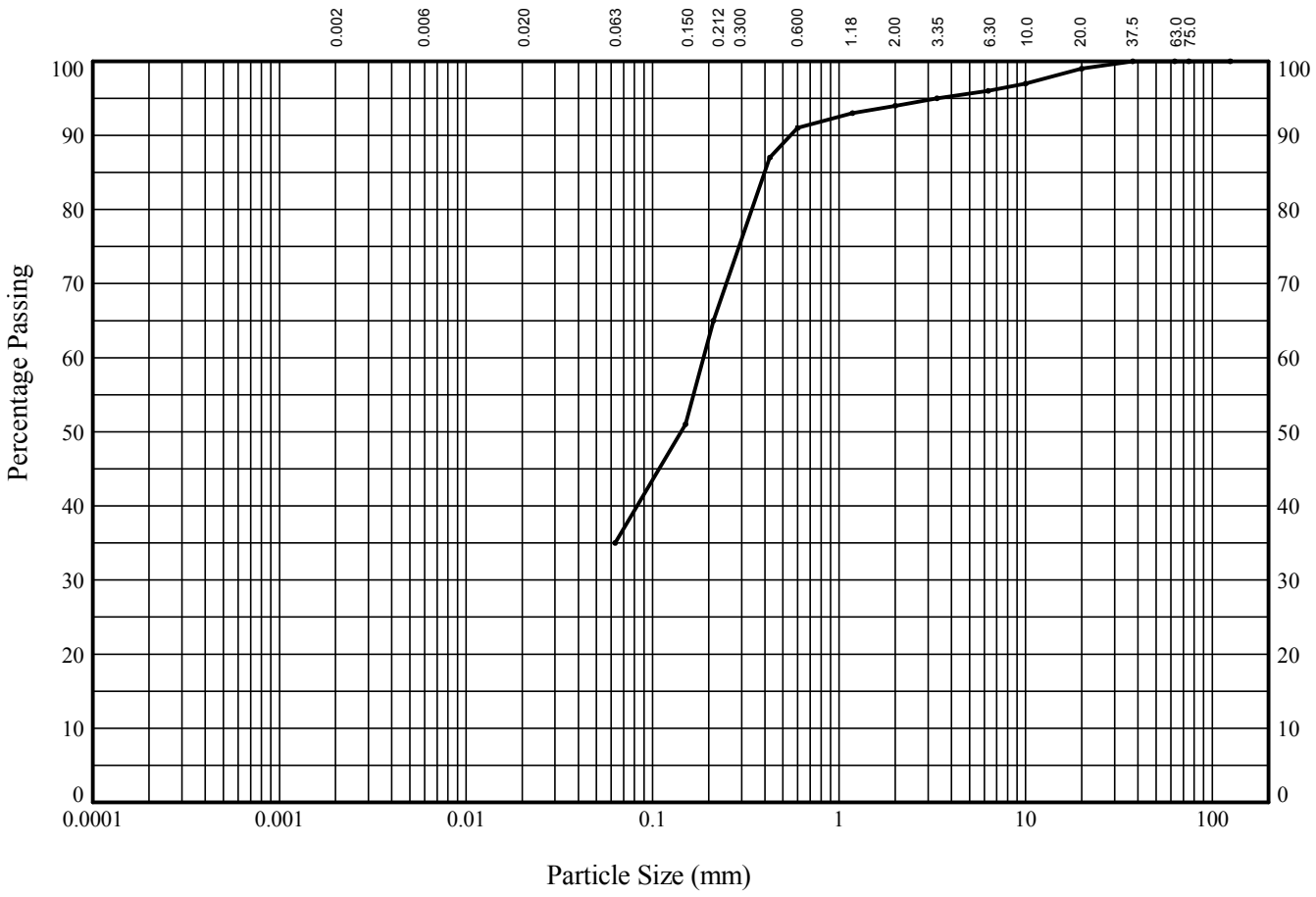
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **2** Sample Type: **B** Depth (m): **0.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	97
6.30	96
3.35	95
2.00	94
1.18	93
0.600	91
0.425	87
0.212	65
0.150	51
0.063	35

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**59**
SILT/CLAY	**35**

Soil Description:
Orange brown sandy gravelly CLAY

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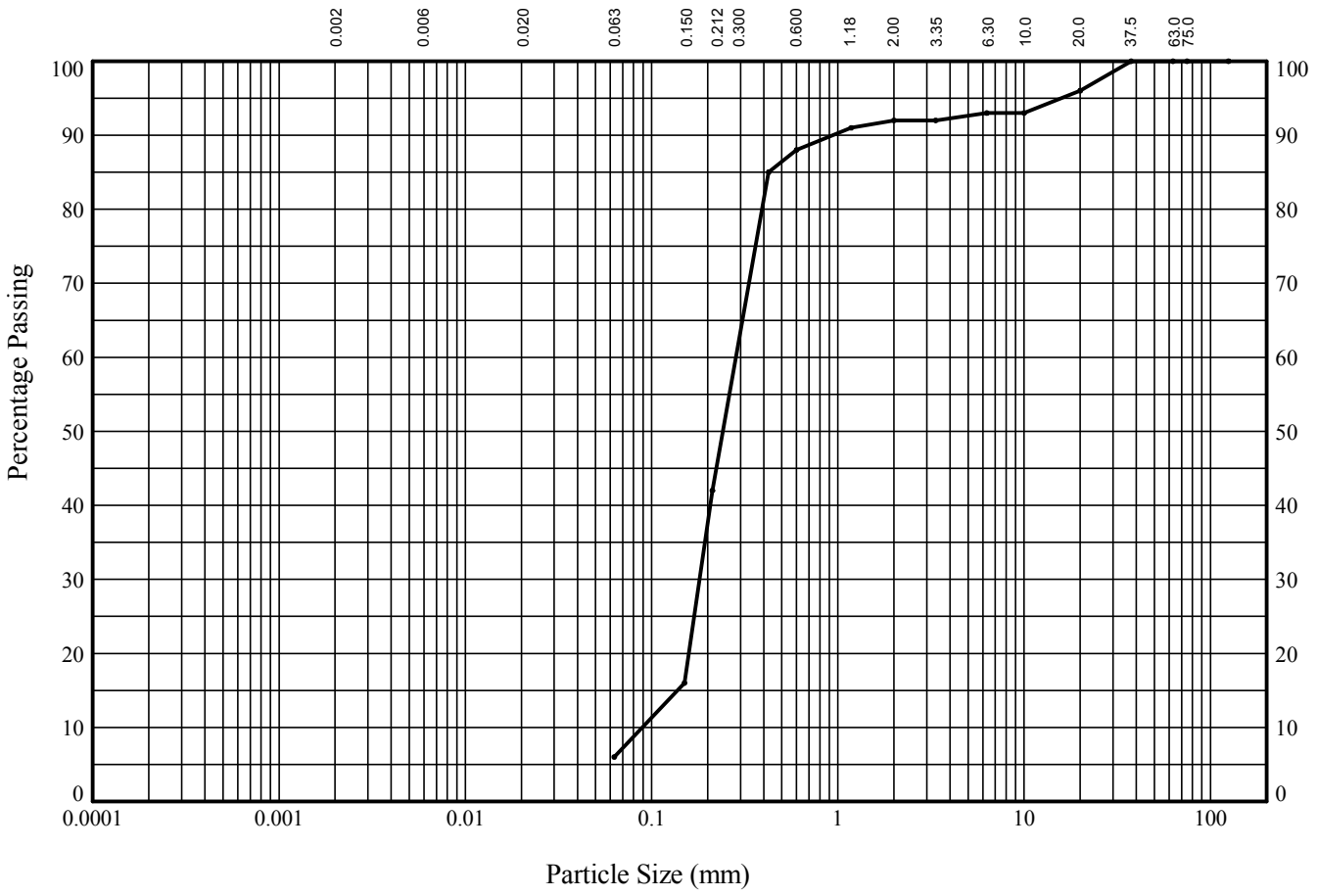
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **3** Sample Type: **B** Depth (m): **1.30**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	96
10.0	93
6.30	93
3.35	92
2.00	92
1.18	91
0.600	88
0.425	85
0.212	42
0.150	16
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**86**
SILT/CLAY	**6**

Soil Description:
Orange clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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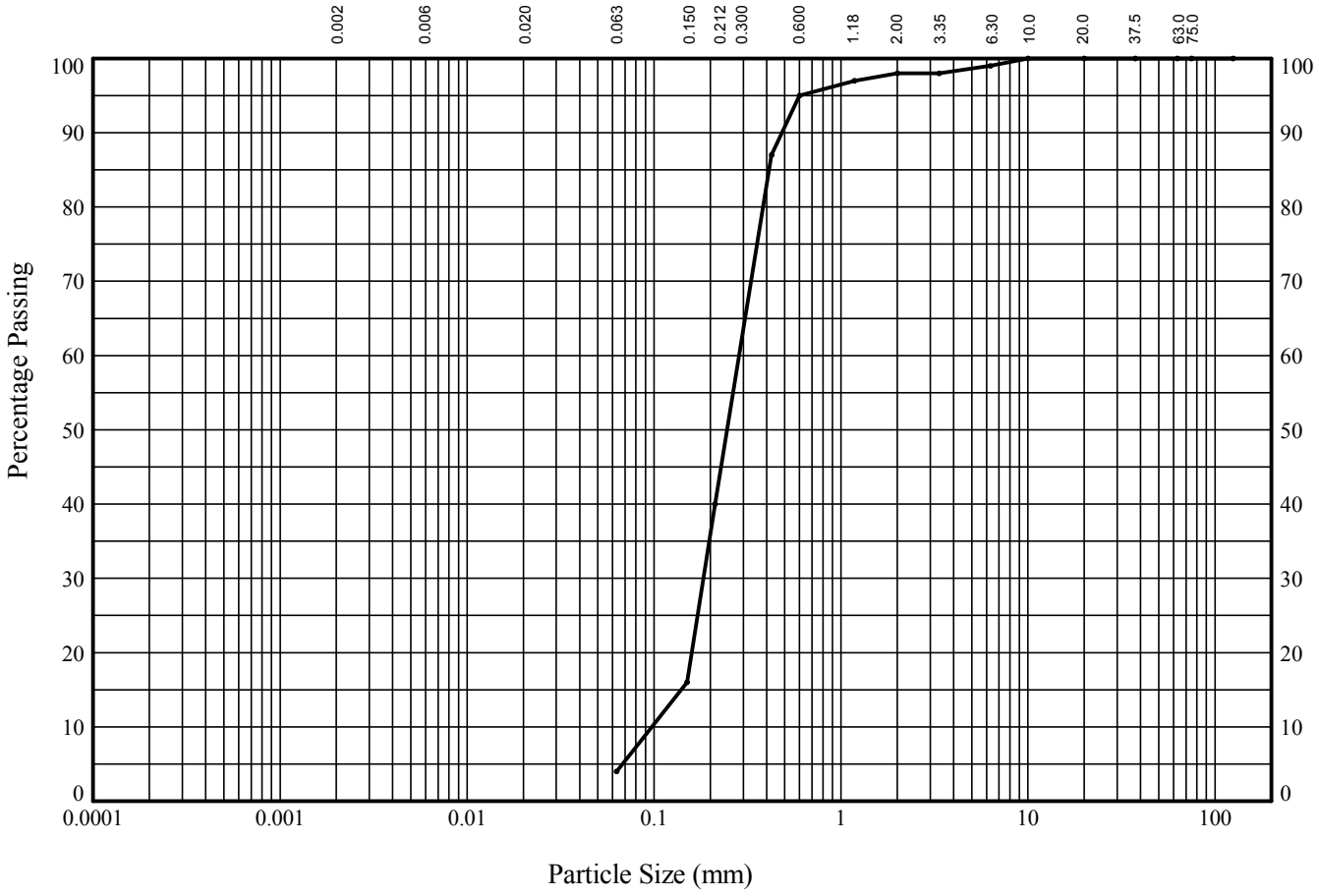
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **5** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	95
0.425	87
0.212	40
0.150	16
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**94**
SILT/CLAY	**4**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

Appendix F – Ground Investigation Factual Reports

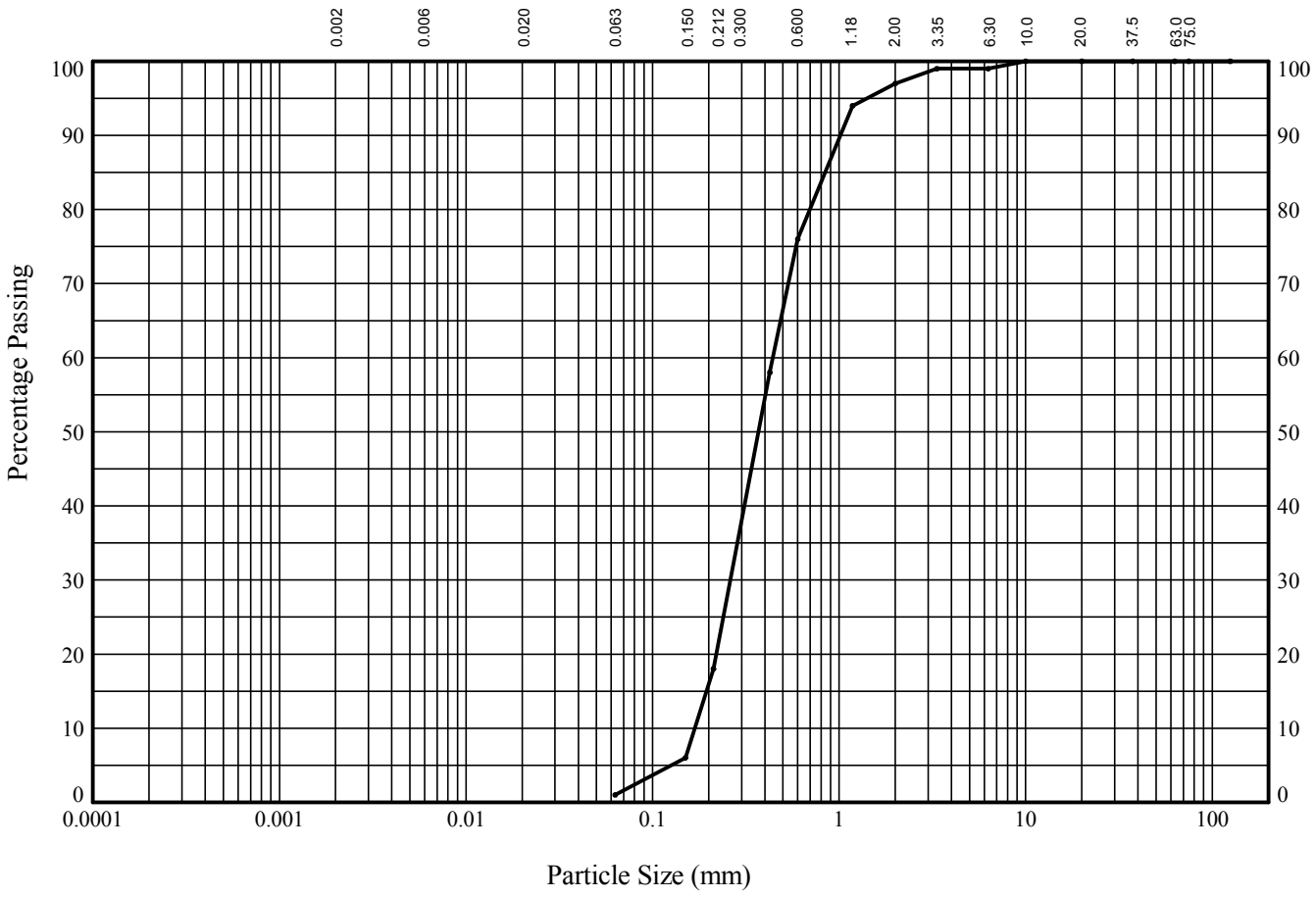
Structural Soils 2015

CONTINUED

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **7** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	97
1.18	94
0.600	76
0.425	58
0.212	18
0.150	6
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**96**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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Compiled By		Date
		17/09/15

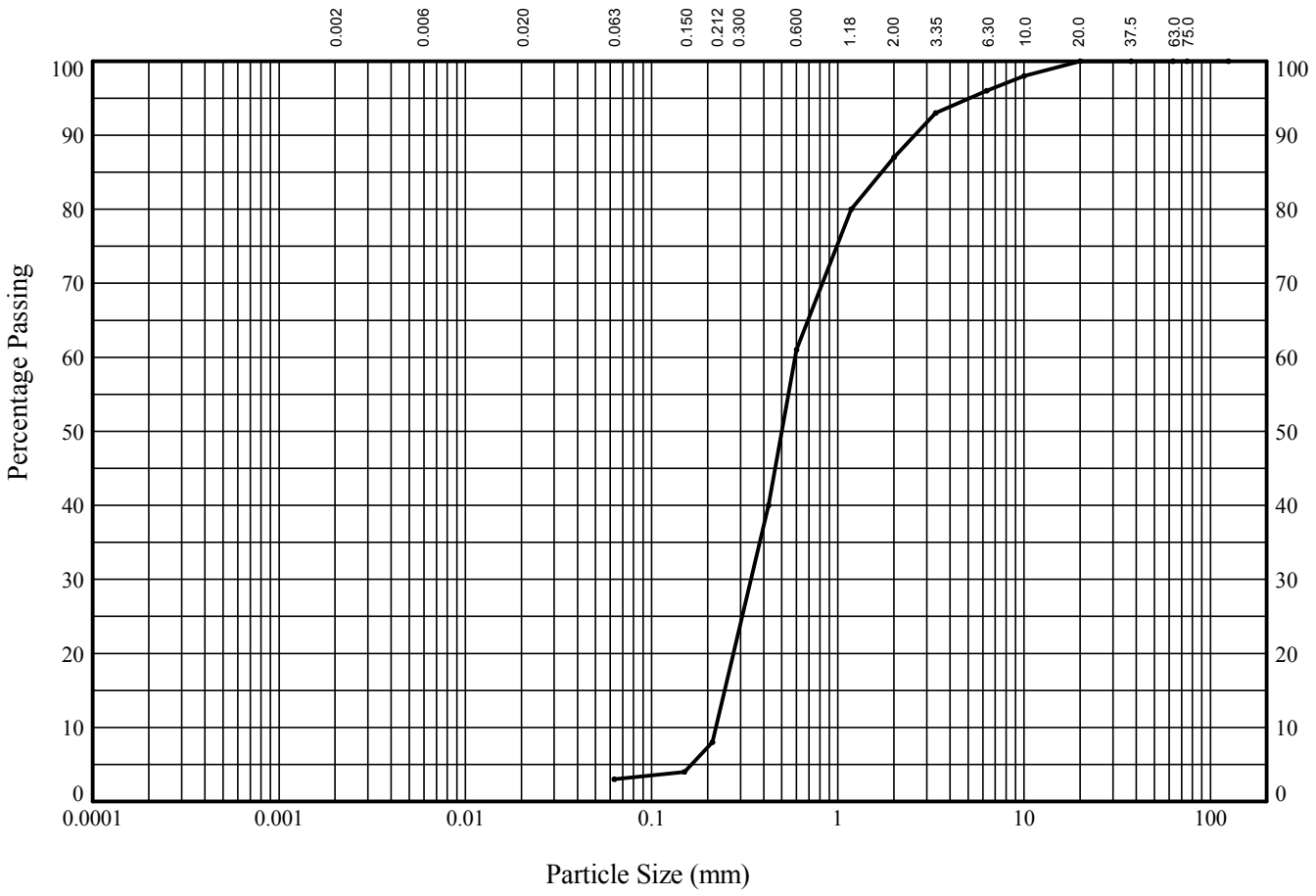
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **9** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	96
3.35	93
2.00	87
1.18	80
0.600	61
0.425	40
0.212	8
0.150	4
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**84**
SILT/CLAY	**3**

Soil Description:
Orange light brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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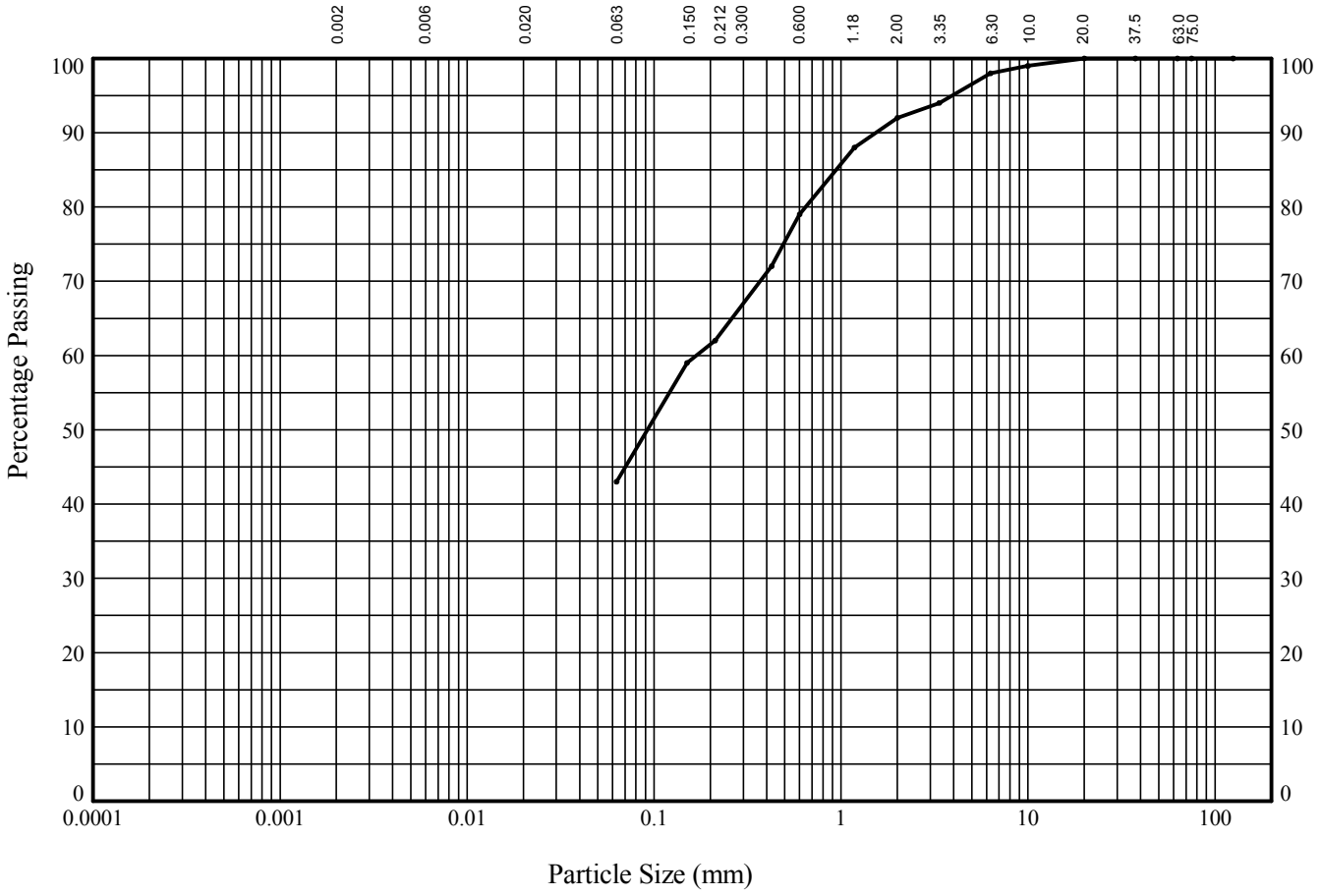
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	94
2.00	92
1.18	88
0.600	79
0.425	72
0.212	62
0.150	59
0.063	43

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**49**
SILT/CLAY	**43**

Soil Description:
Orange brown and grey sandy slightly gravelly CLAY

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STRUCTURAL SOILS
The Potteries
Pottery Street
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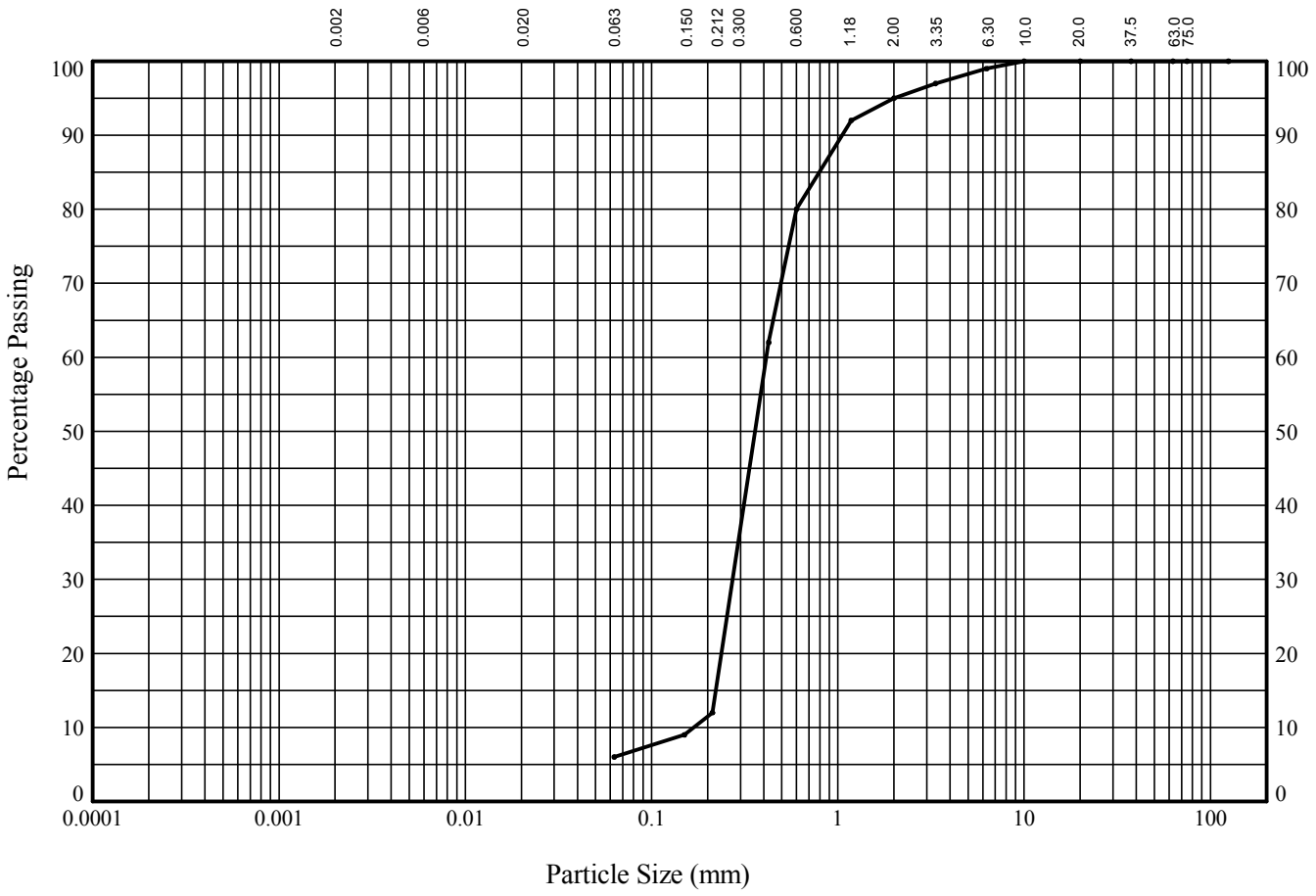
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	97
2.00	95
1.18	92
0.600	80
0.425	62
0.212	12
0.150	9
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**89**
SILT/CLAY	**6**

Soil Description:
Light brown slightly gravelly SAND

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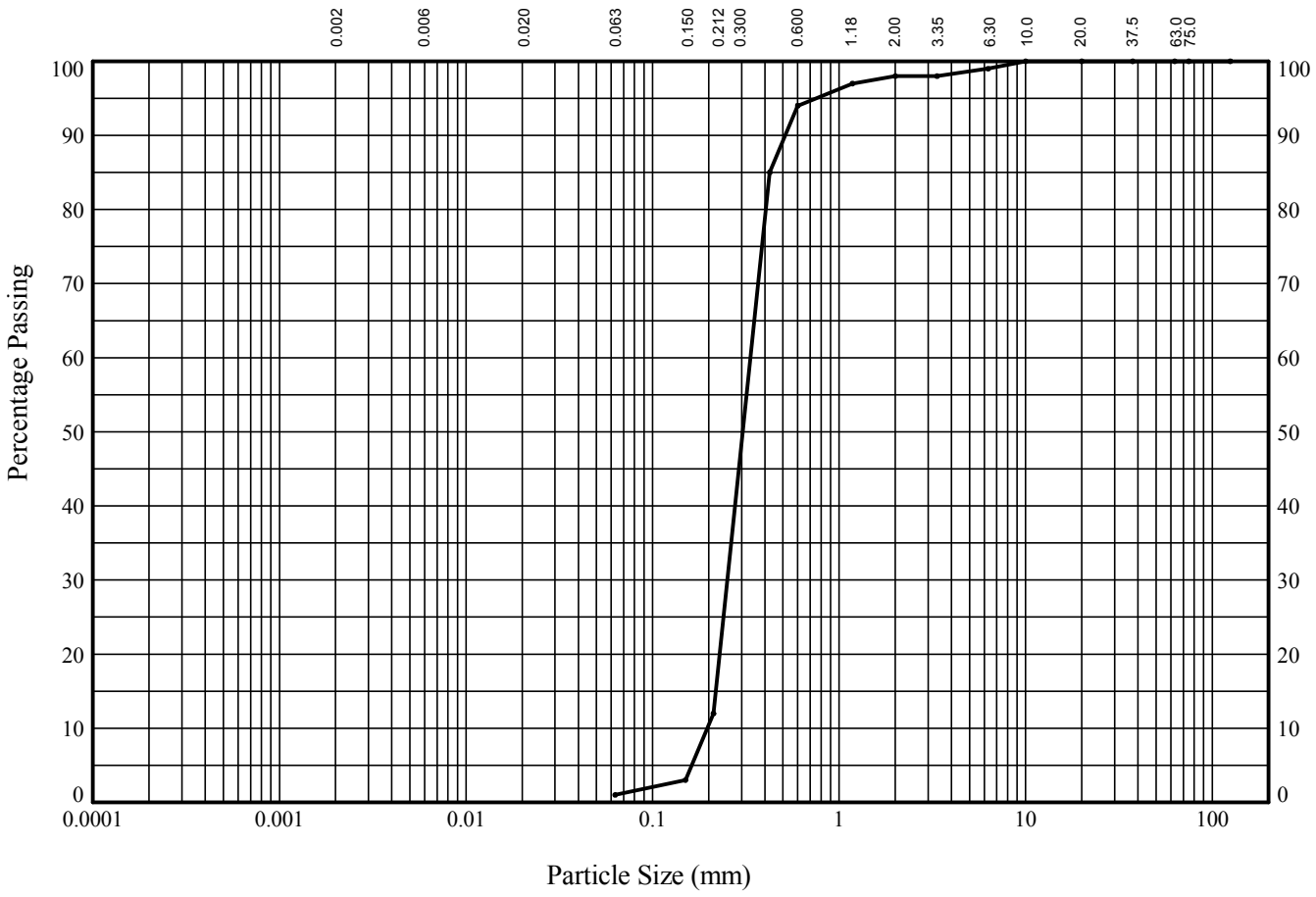
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **17** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	94
0.425	85
0.212	12
0.150	3
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**97**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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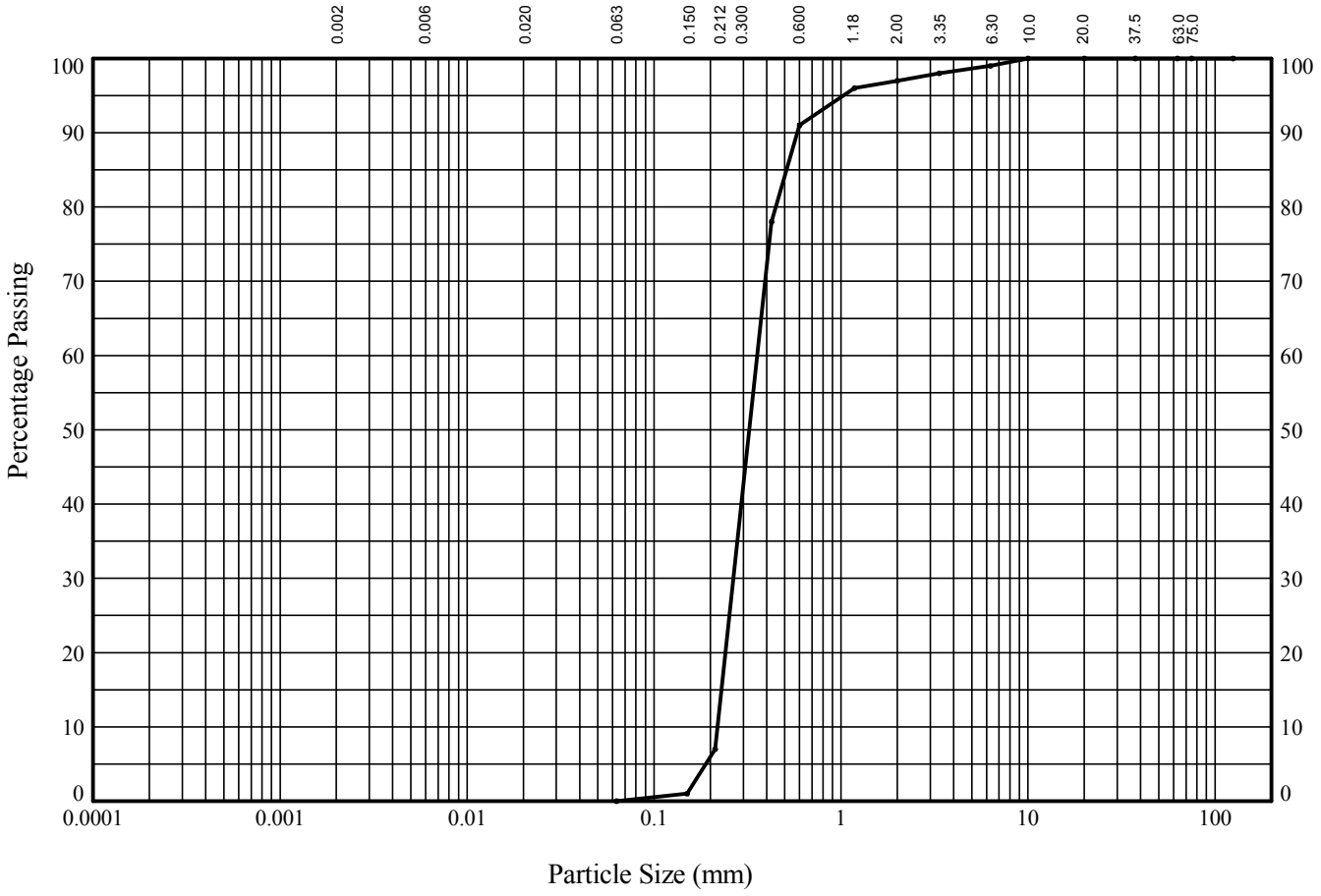
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **19** Sample Type: **B** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	97
1.18	96
0.600	91
0.425	78
0.212	7
0.150	1
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**97**
SILT/CLAY	**0**

Soil Description:
Light brown slightly gravelly SAND

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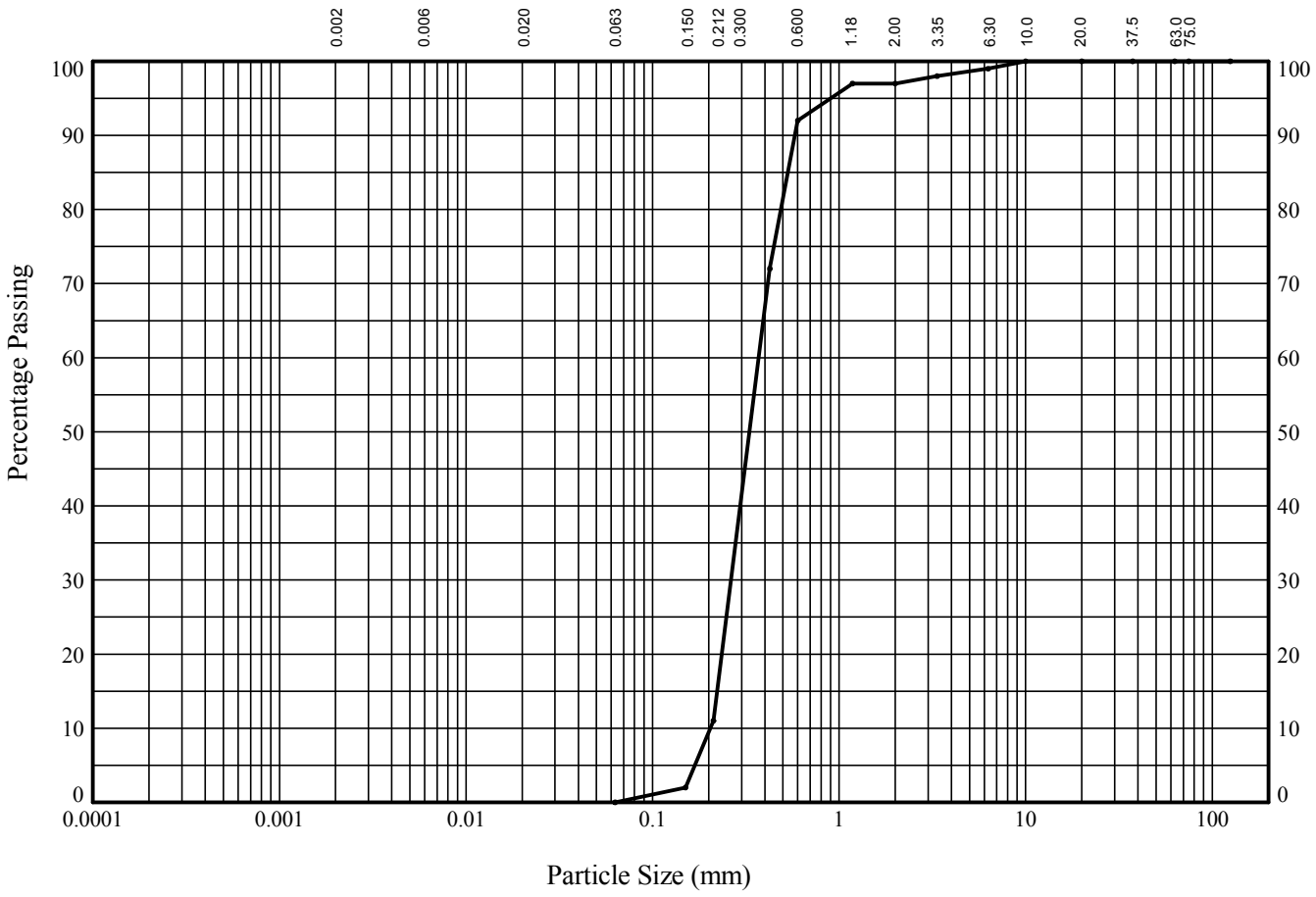
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **21** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	97
1.18	97
0.600	92
0.425	72
0.212	11
0.150	2
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**97**
SILT/CLAY	**0**

Soil Description:
Light brown slightly gravelly SAND

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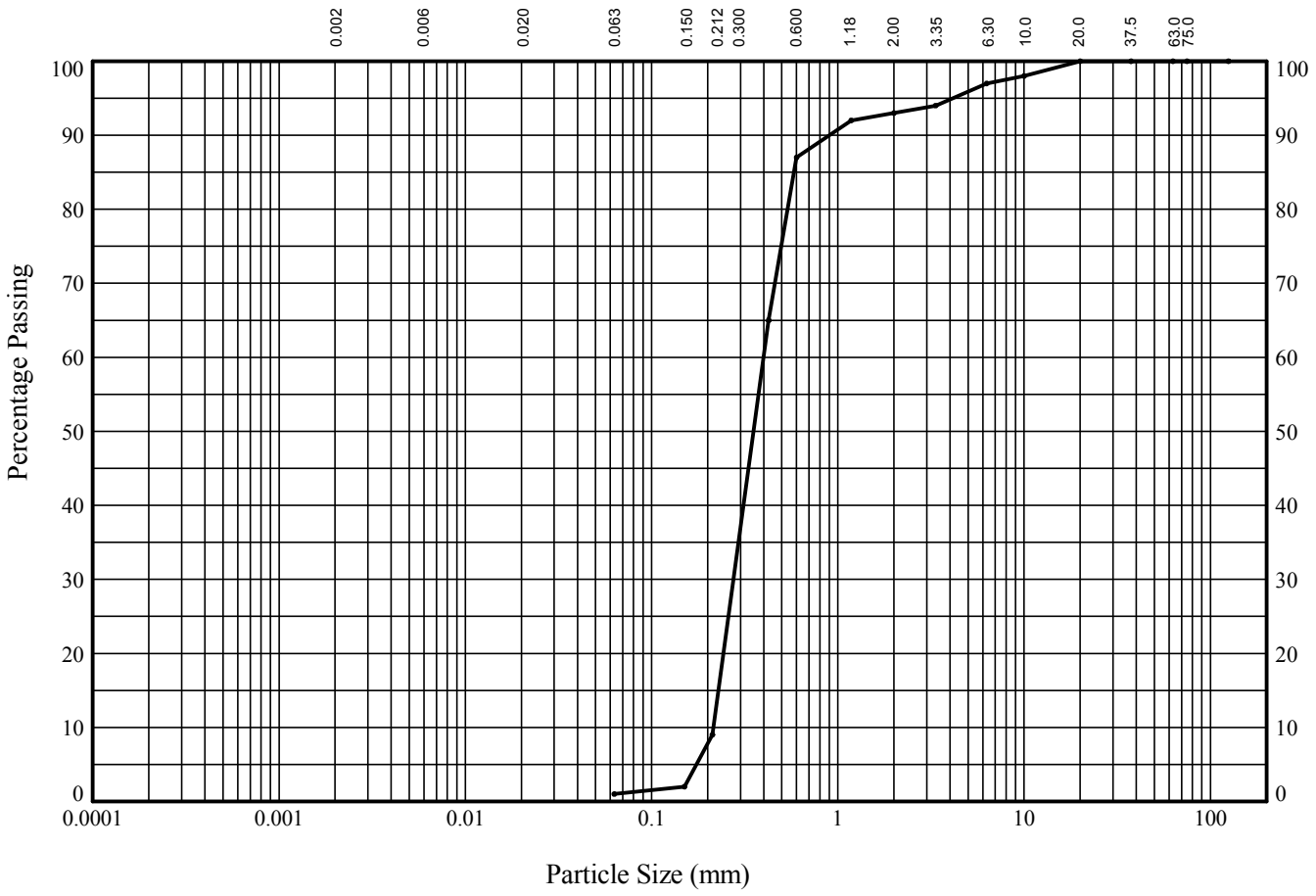
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	97
3.35	94
2.00	93
1.18	92
0.600	87
0.425	65
0.212	9
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**7**
SAND	**92**
SILT/CLAY	**1**

Soil Description:
Orange slightly clayey gravelly SAND

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Compiled By		Date
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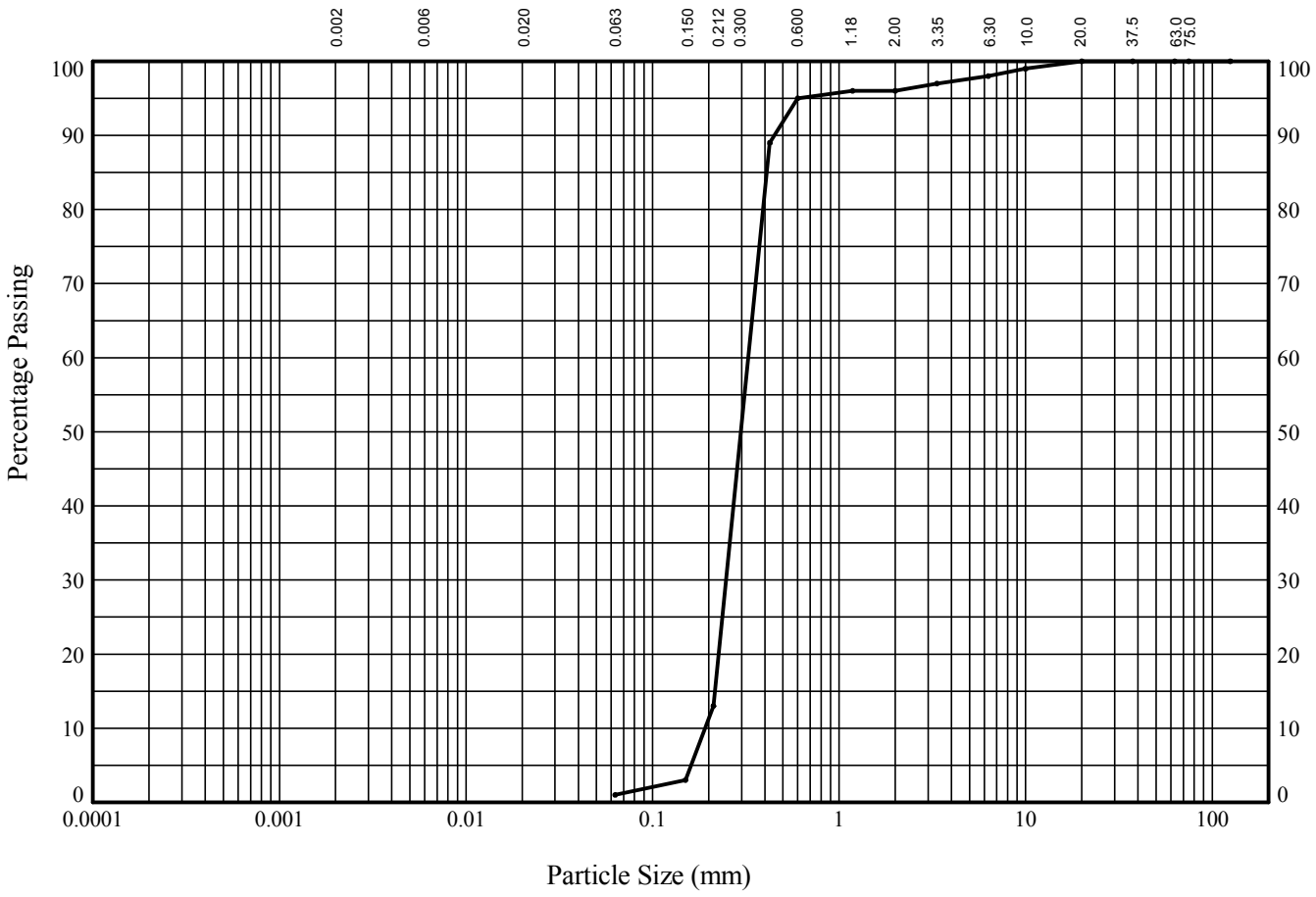
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	96
1.18	96
0.600	95
0.425	89
0.212	13
0.150	3
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**95**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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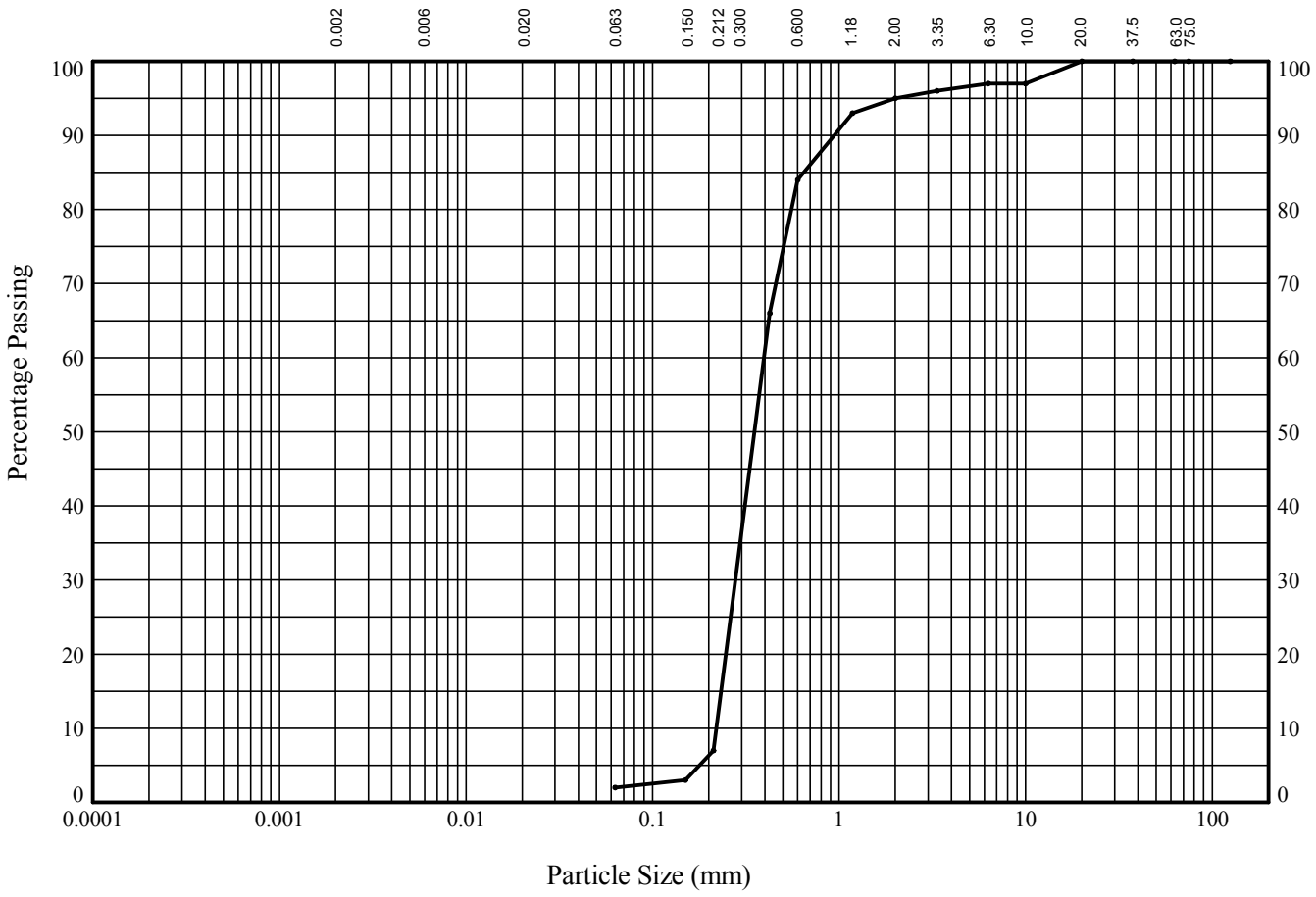
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	97
6.30	97
3.35	96
2.00	95
1.18	93
0.600	84
0.425	66
0.212	7
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**93**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey gravelly SAND

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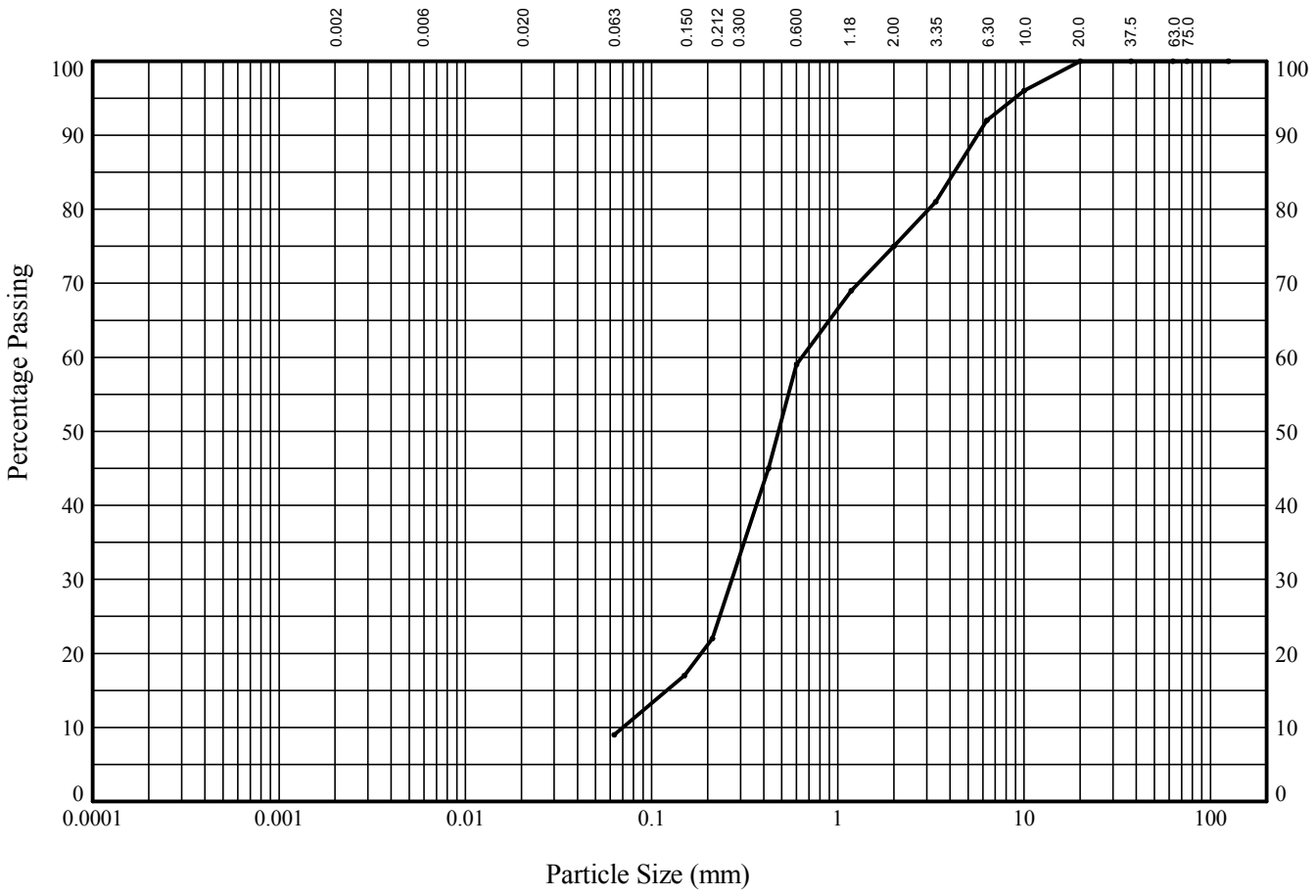
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	96
6.30	92
3.35	81
2.00	75
1.18	69
0.600	59
0.425	45
0.212	22
0.150	17
0.063	9

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**25**
SAND	**66**
SILT/CLAY	**9**

Soil Description:
Orange brown clayey very gravelly SAND (with shell fragments)

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STRUCTURAL SOILS
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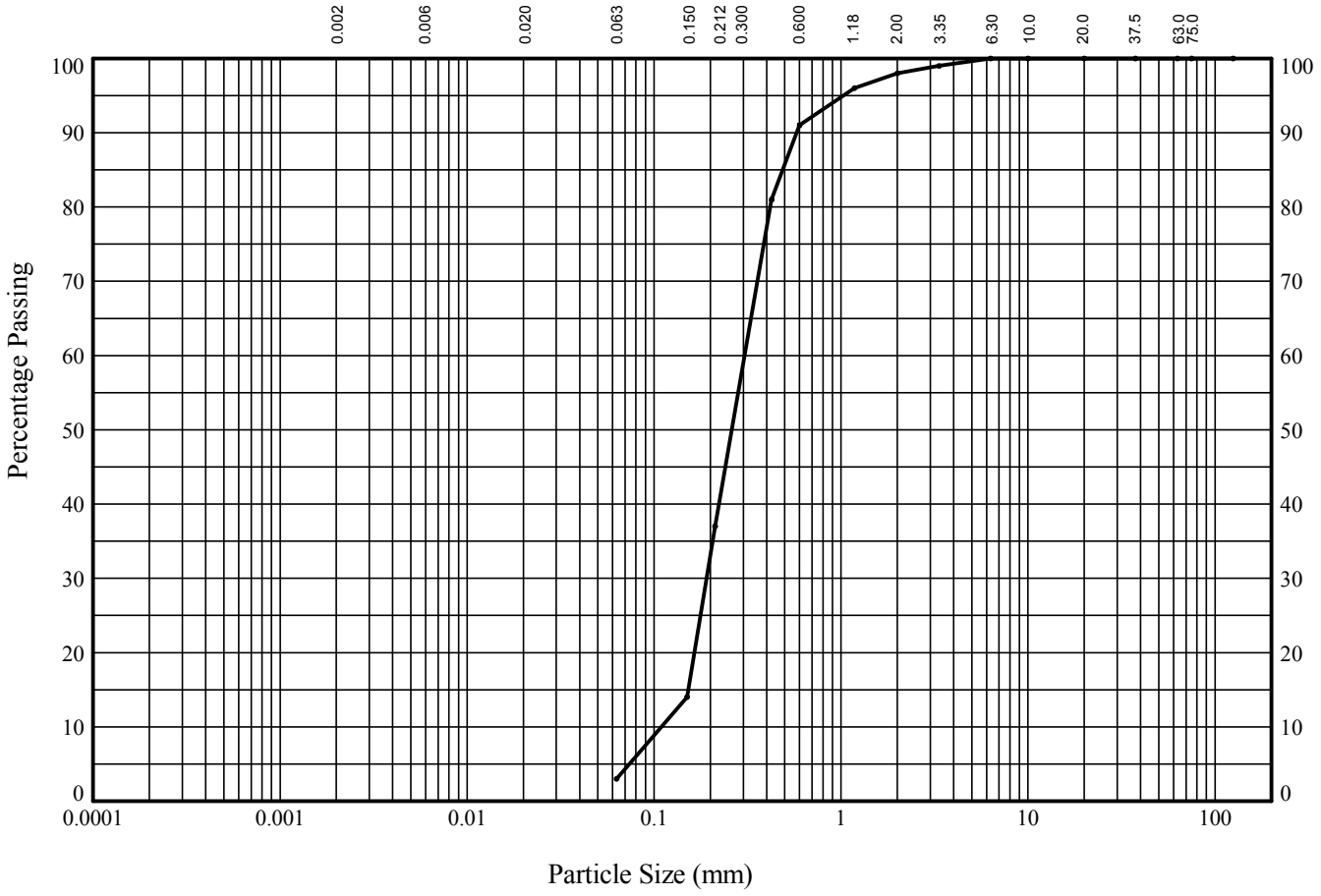
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	96
0.600	91
0.425	81
0.212	37
0.150	14
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**95**
SILT/CLAY	**3**

Soil Description:
Brown orange slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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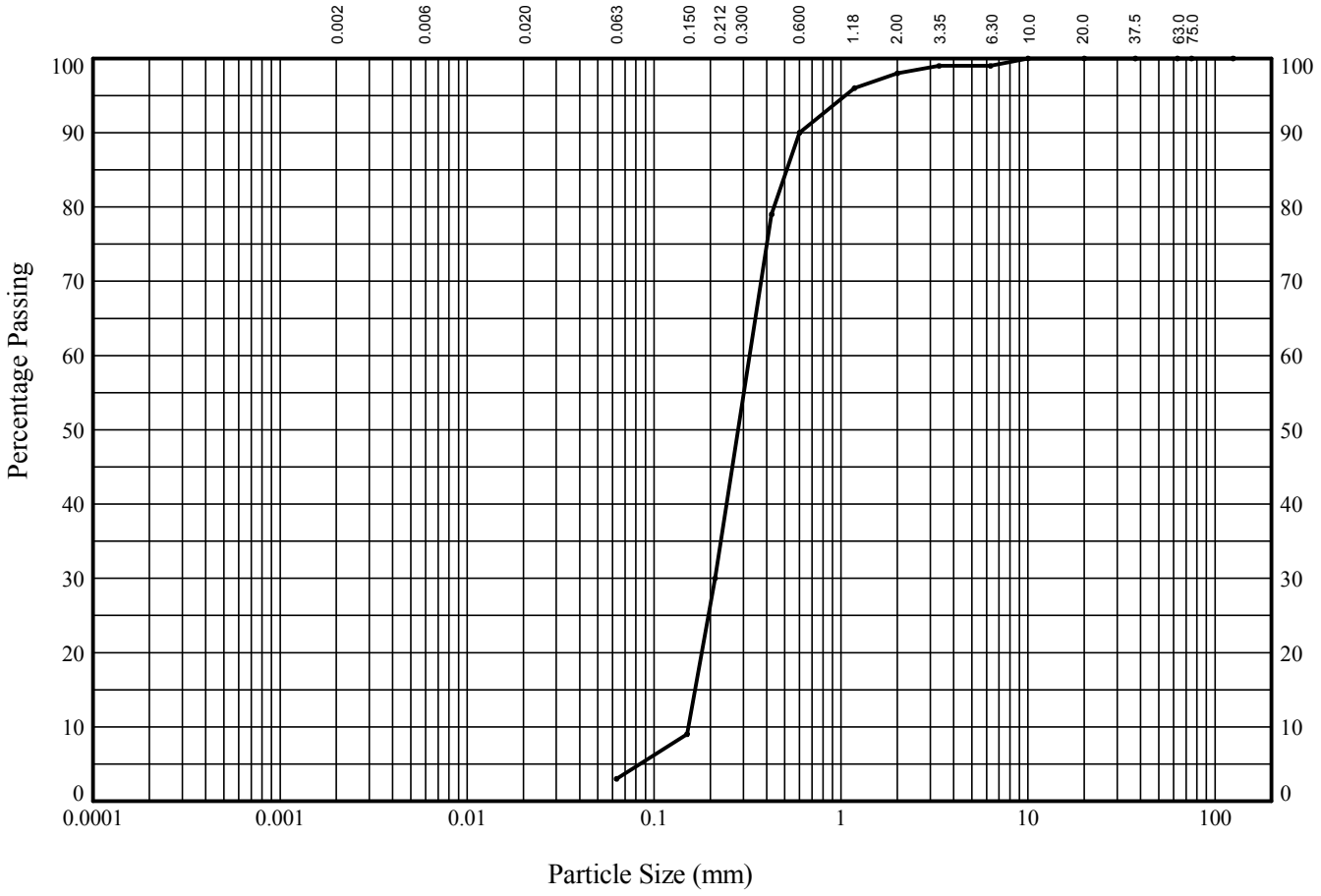
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **35** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	98
1.18	96
0.600	90
0.425	79
0.212	30
0.150	9
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**95**
SILT/CLAY	**3**

Soil Description:
Light brown orange slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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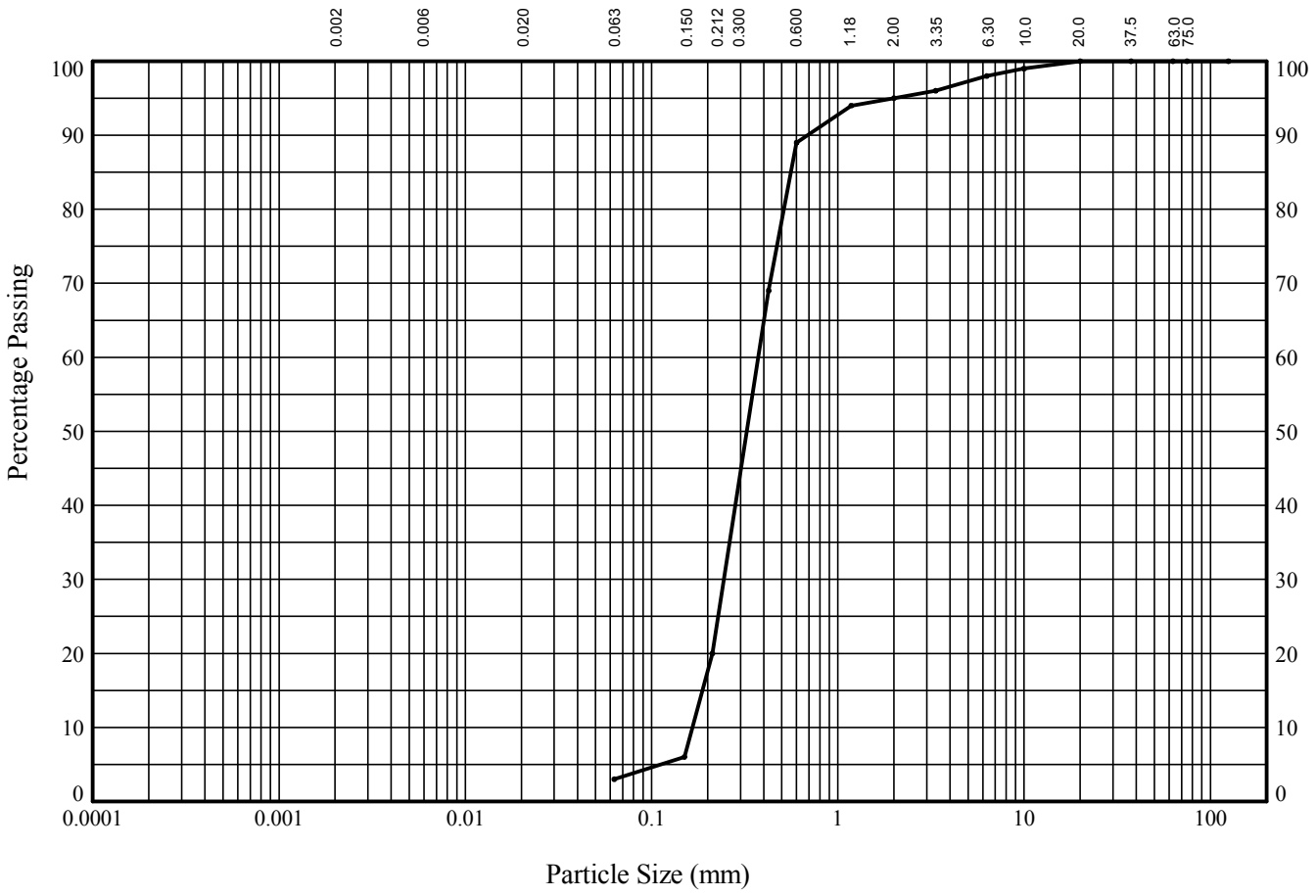
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **37** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	96
2.00	95
1.18	94
0.600	89
0.425	69
0.212	20
0.150	6
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**92**
SILT/CLAY	**3**

Soil Description:
Dark orange slightly clayey gravelly SAND

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STRUCTURAL SOILS
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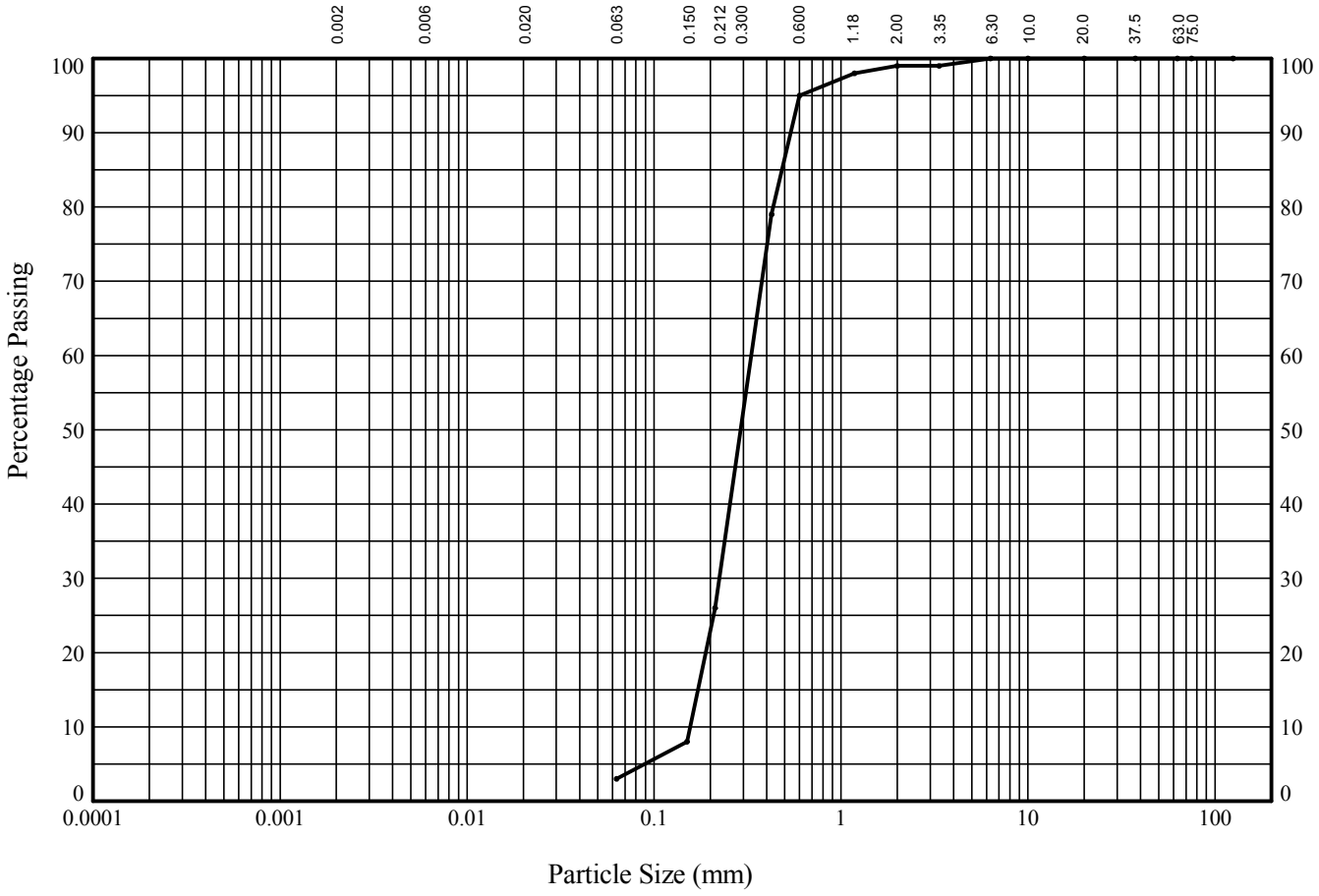
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP9** Sample Ref: **39** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	95
0.425	79
0.212	26
0.150	8
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**96**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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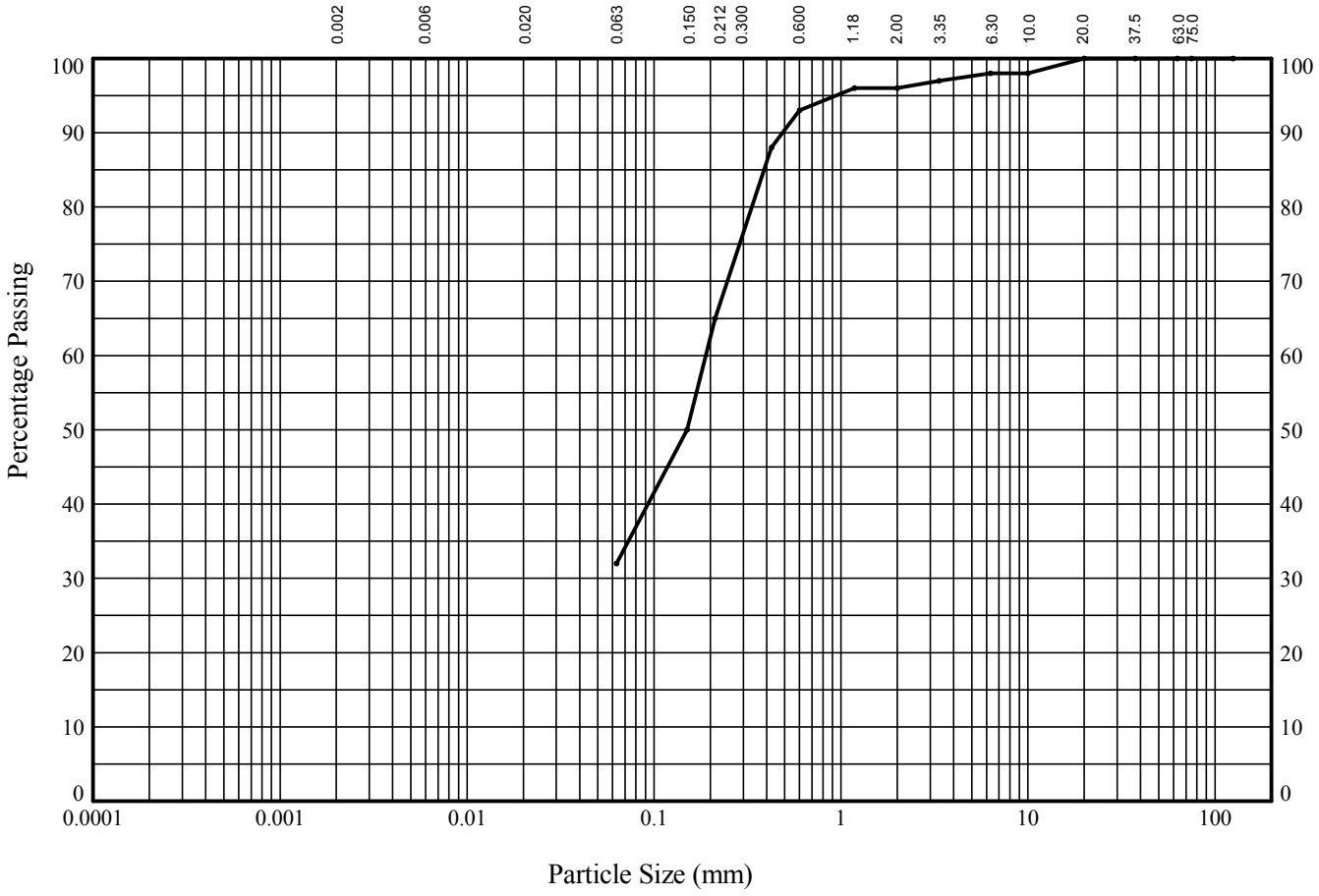
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **3** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	98
3.35	97
2.00	96
1.18	96
0.600	93
0.425	88
0.212	65
0.150	50
0.063	32

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**64**
SILT/CLAY	**32**

Soil Description:
Brown sandy slightly gravelly CLAY

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STRUCTURAL SOILS
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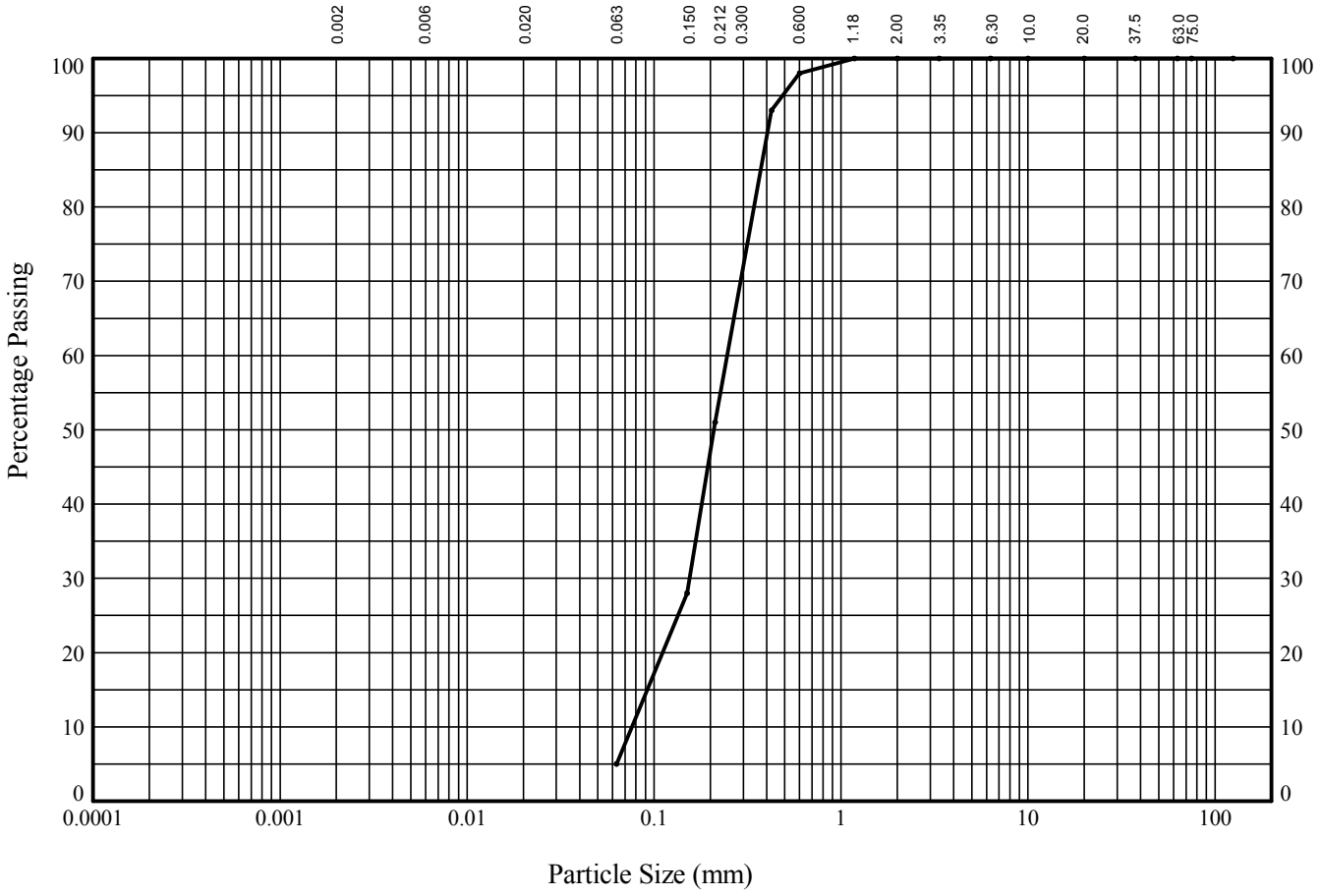
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **7** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	98
0.425	93
0.212	51
0.150	28
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**95**
SILT/CLAY	**5**

Soil Description:
Orange brown clayey SAND

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STRUCTURAL SOILS
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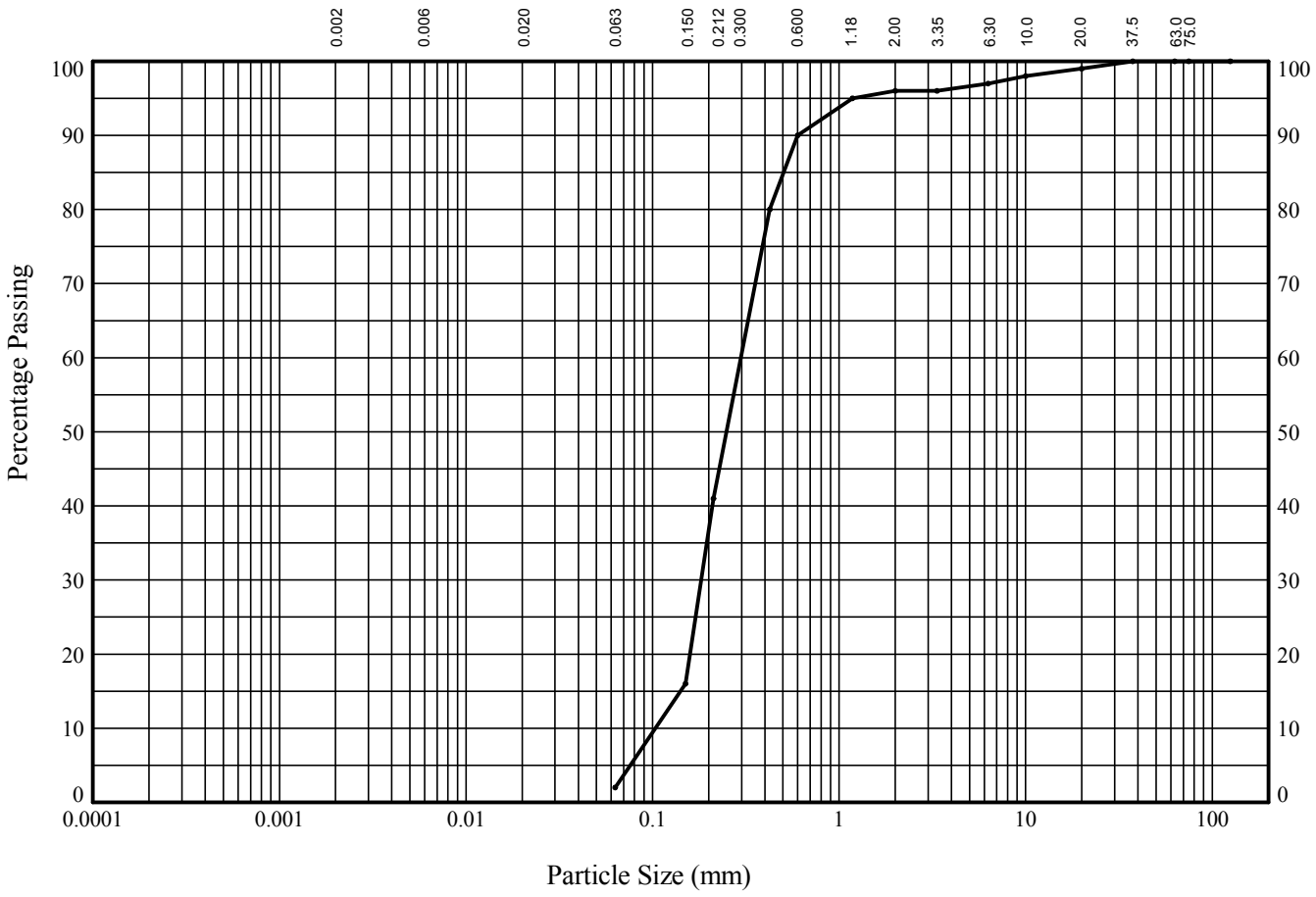
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **9** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	98
6.30	97
3.35	96
2.00	96
1.18	95
0.600	90
0.425	80
0.212	41
0.150	16
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**94**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

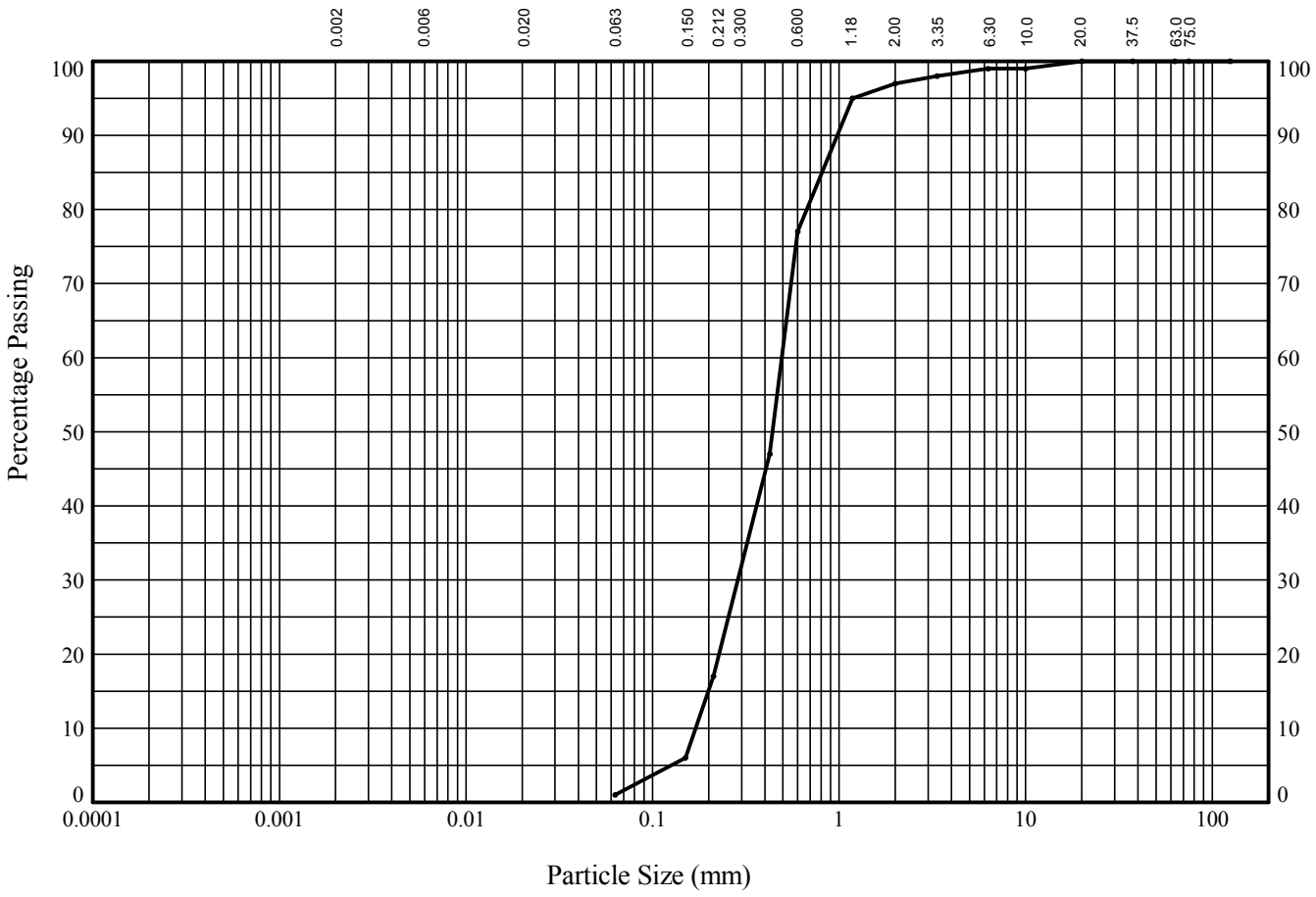
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	98
2.00	97
1.18	95
0.600	77
0.425	47
0.212	17
0.150	6
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**96**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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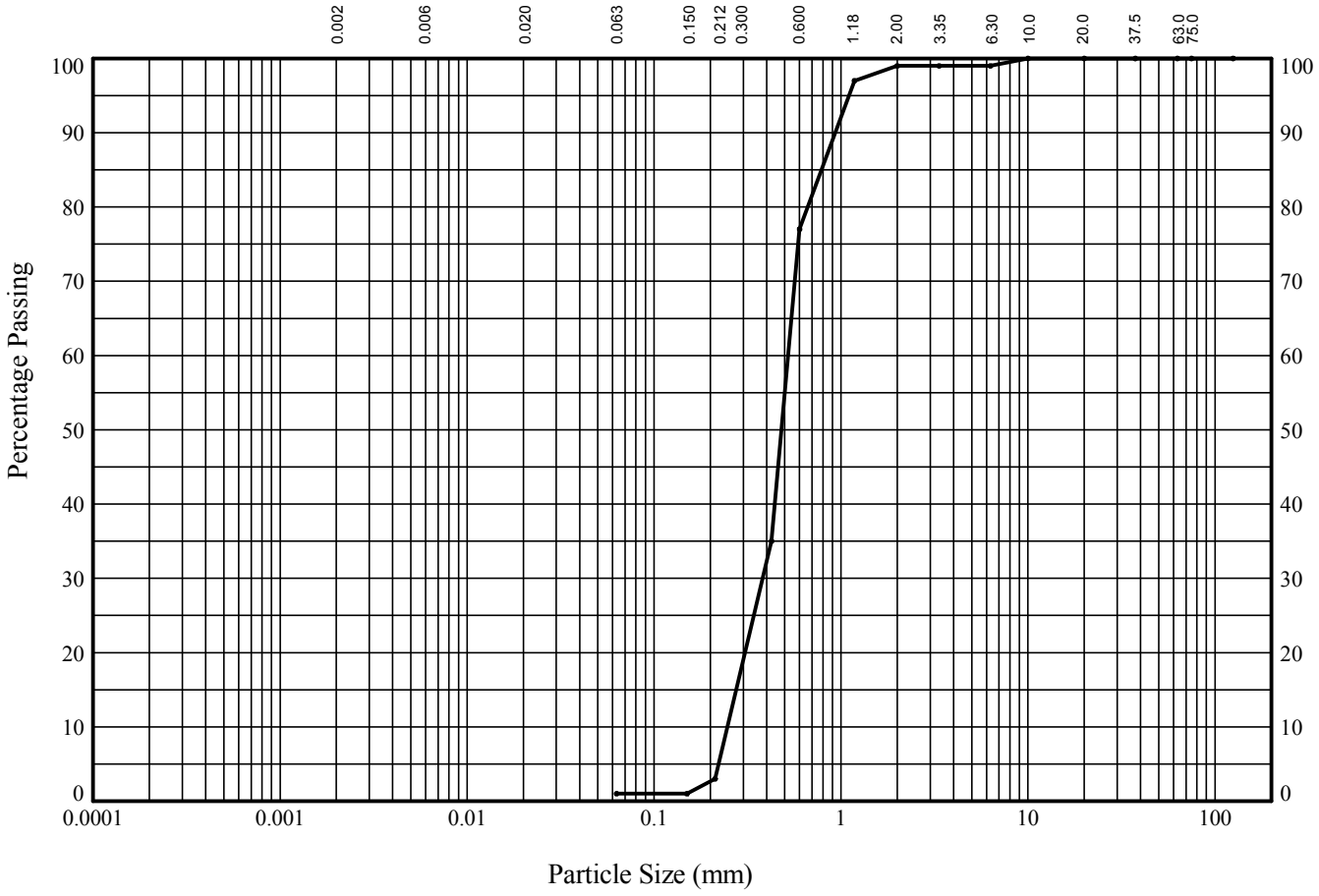
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	99
1.18	97
0.600	77
0.425	35
0.212	3
0.150	1
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**98**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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Castleford
W. Yorkshire WF10 1NJ

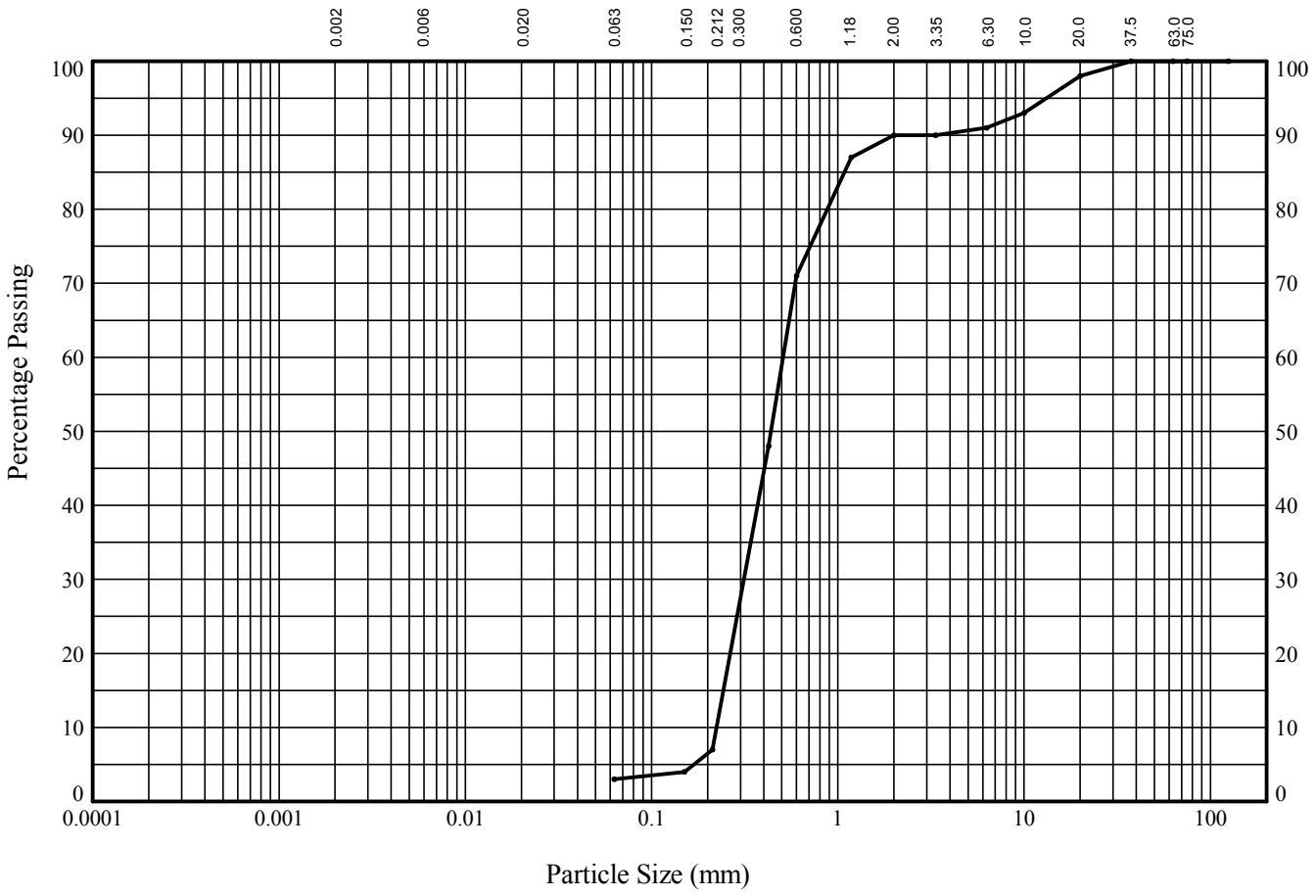
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **15** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	98
10.0	93
6.30	91
3.35	90
2.00	90
1.18	87
0.600	71
0.425	48
0.212	7
0.150	4
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**87**
SILT/CLAY	**3**

Soil Description:
Light brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
The Potteries
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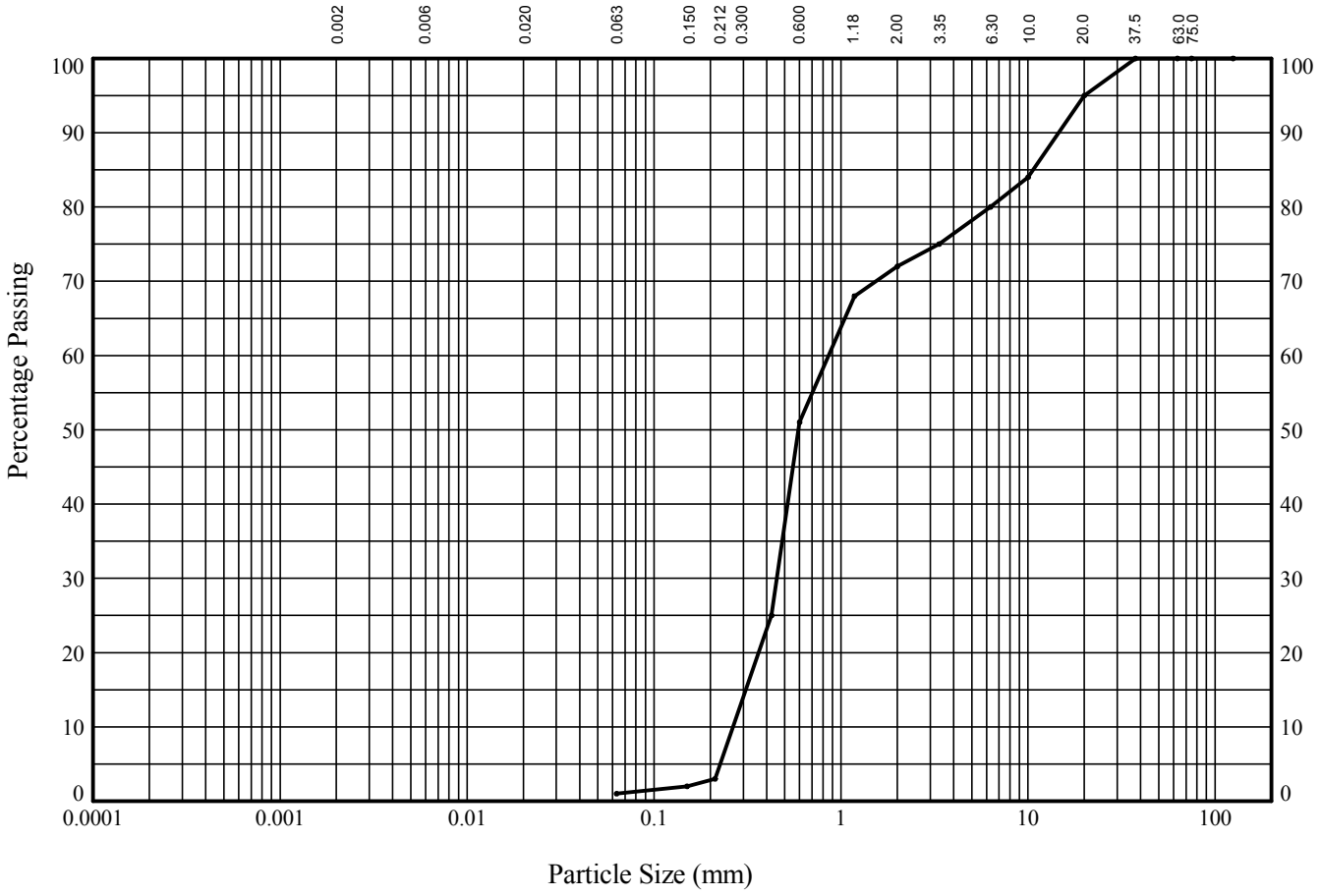
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **17** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	95
10.0	84
6.30	80
3.35	75
2.00	72
1.18	68
0.600	51
0.425	25
0.212	3
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**28**
SAND	**71**
SILT/CLAY	**1**

Soil Description:
Dark orange brown slightly clayey very gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

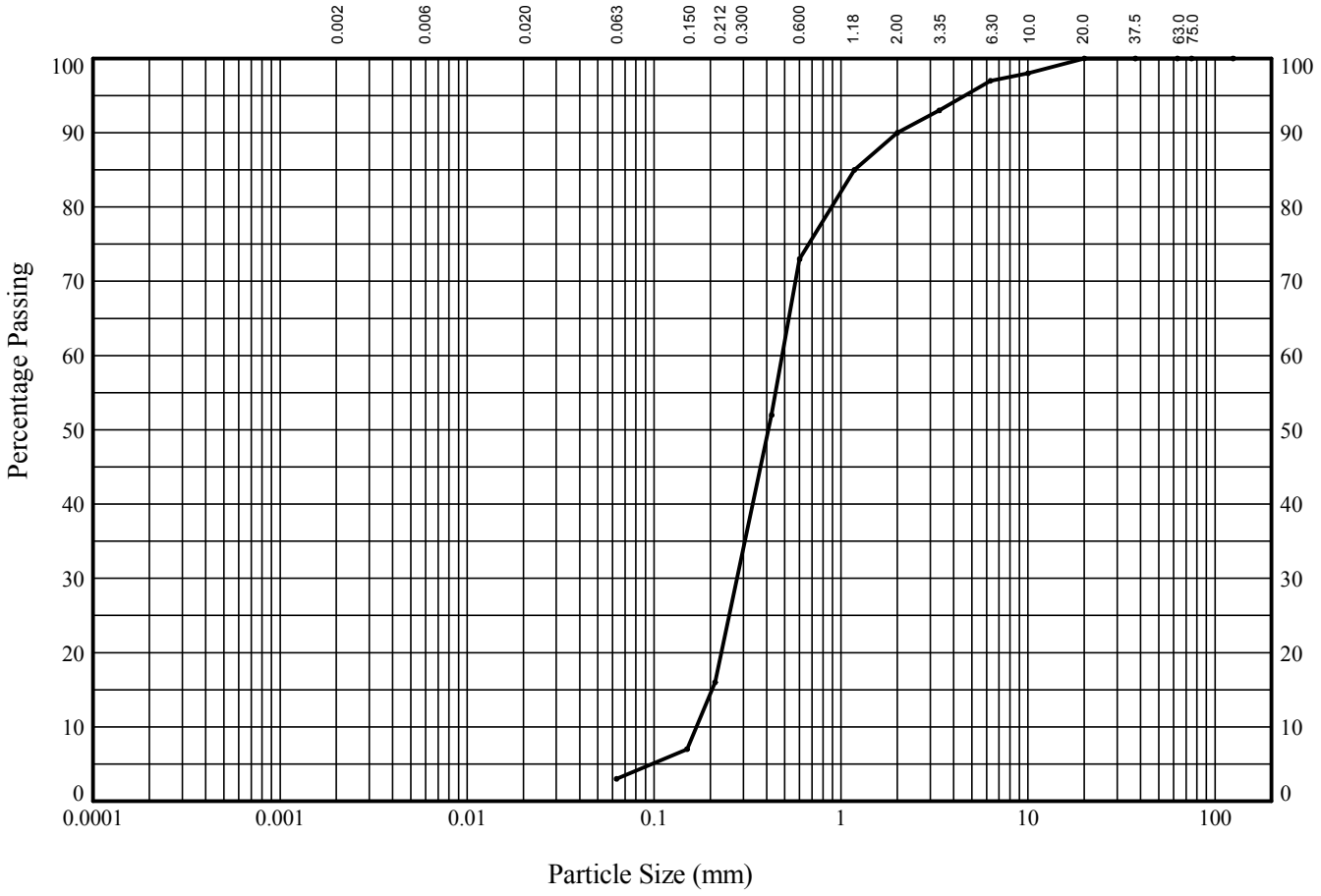
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **19** Sample Type: **B** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	97
3.35	93
2.00	90
1.18	85
0.600	73
0.425	52
0.212	16
0.150	7
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**87**
SILT/CLAY	**3**

Soil Description:
Orange slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
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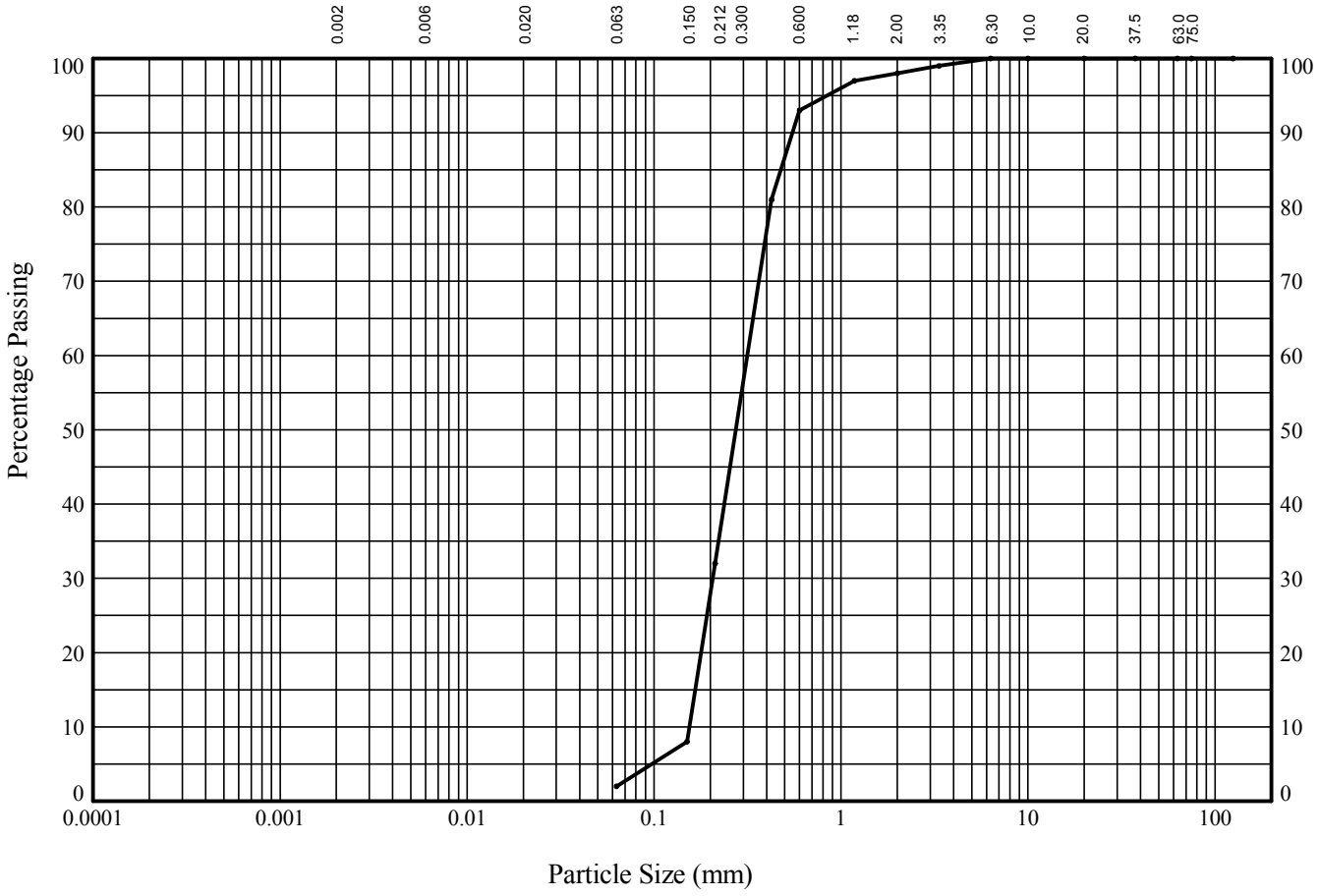
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **21** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	97
0.600	93
0.425	81
0.212	32
0.150	8
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Light brown orange slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15

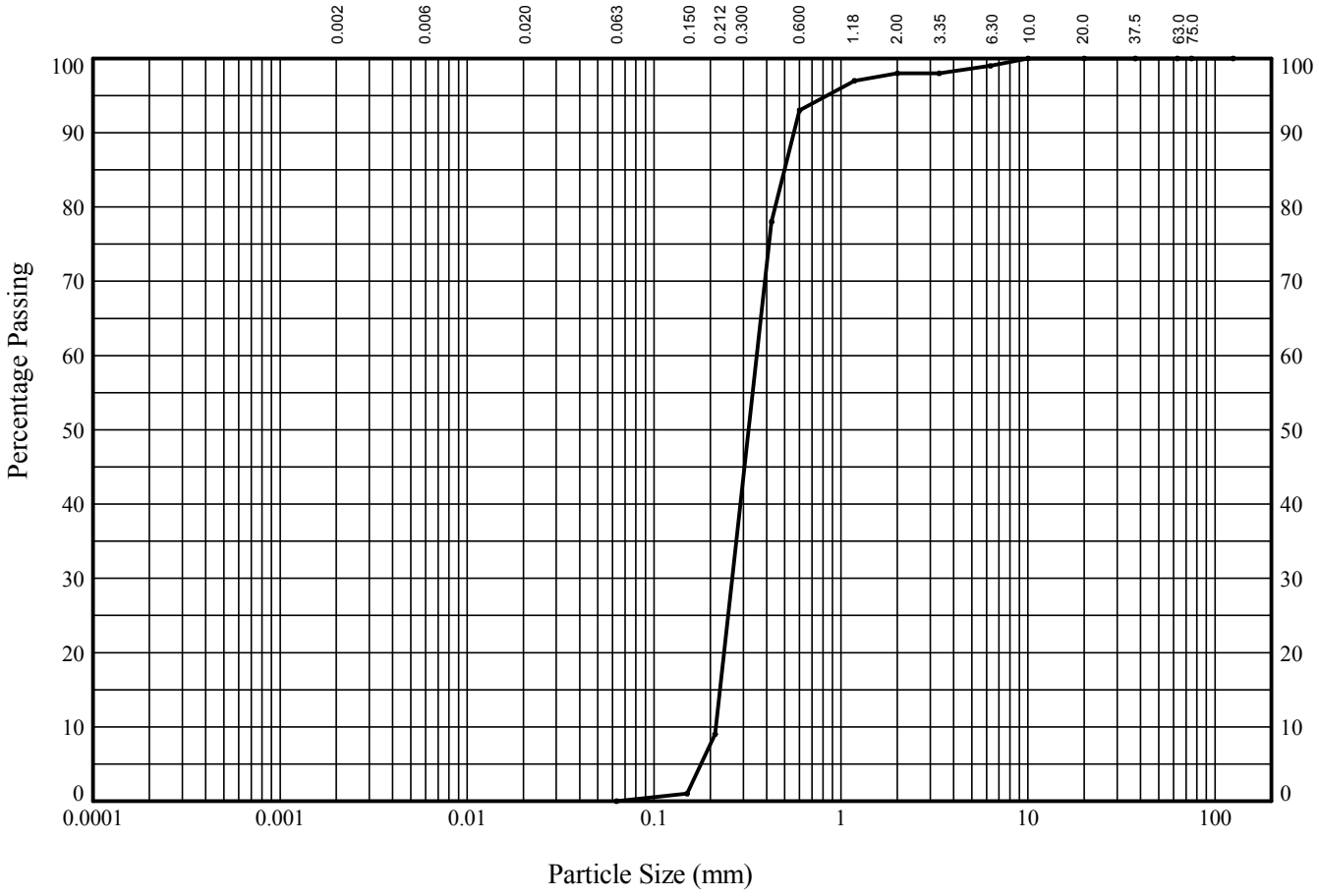
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **23** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	98
1.18	97
0.600	93
0.425	78
0.212	9
0.150	1
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**98**
SILT/CLAY	**0**

Soil Description:
Light brown orange slightly gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

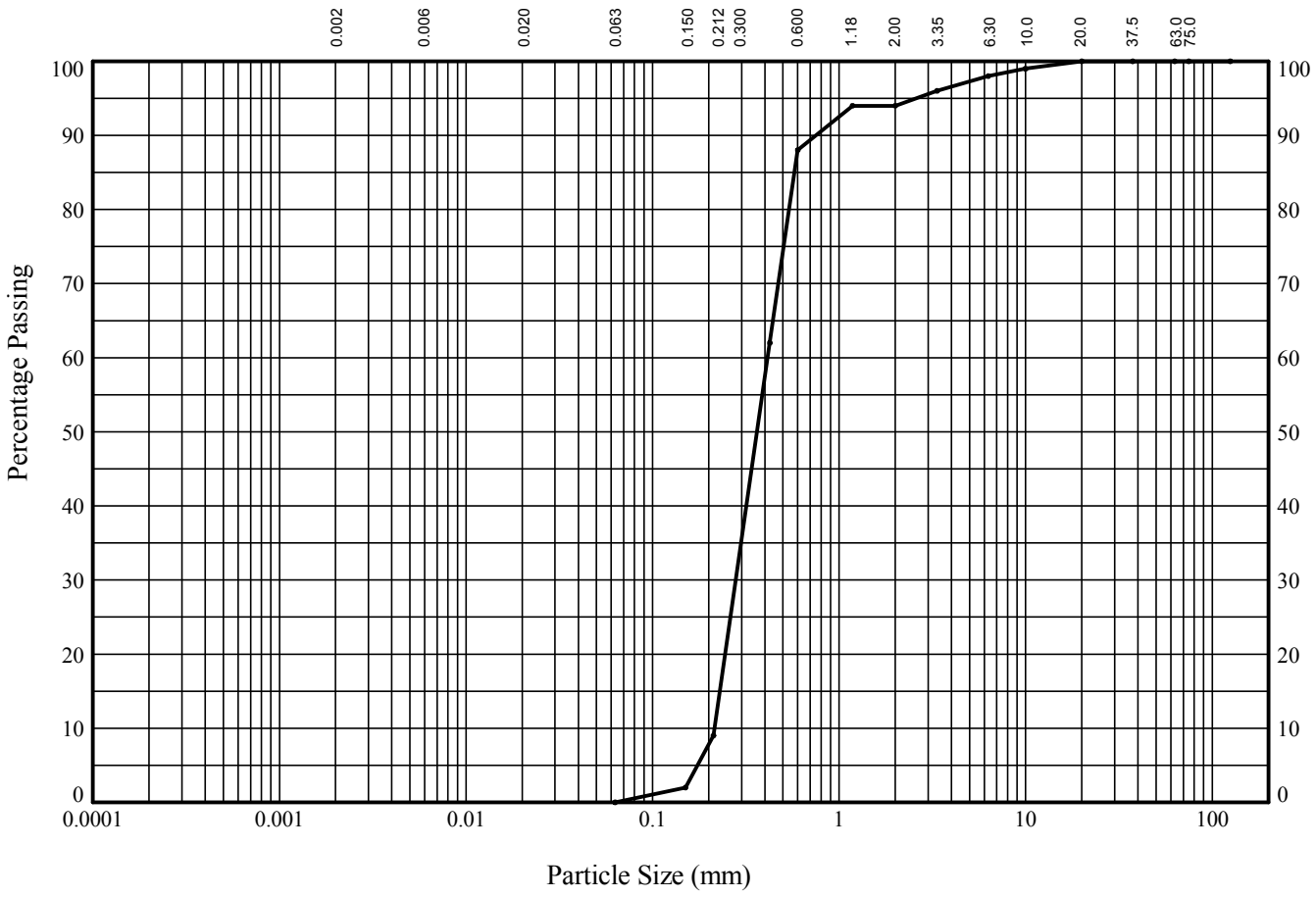
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	96
2.00	94
1.18	94
0.600	88
0.425	62
0.212	9
0.150	2
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**94**
SILT/CLAY	**0**

Soil Description:
Orange brown gravelly SAND

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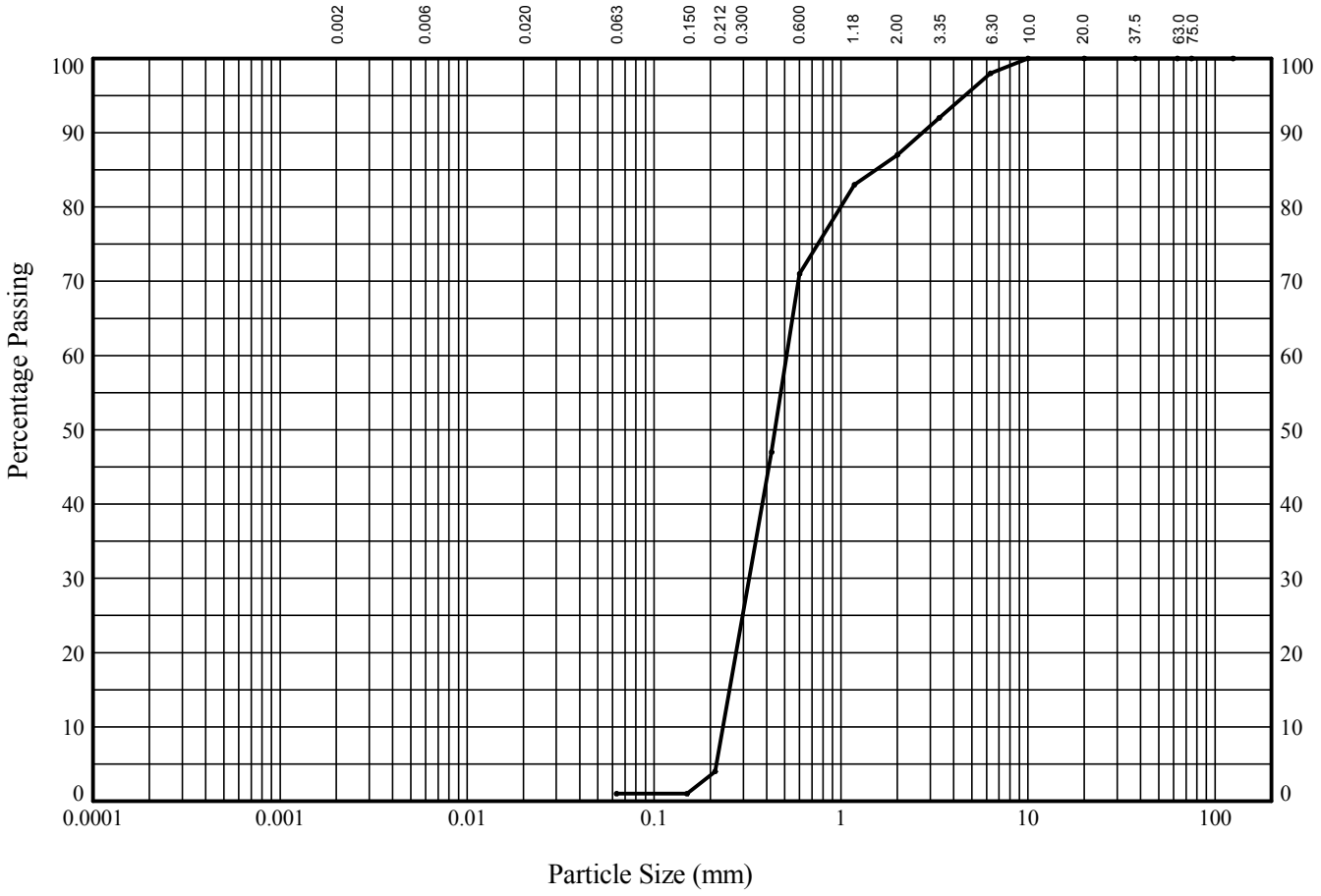
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	98
3.35	92
2.00	87
1.18	83
0.600	71
0.425	47
0.212	4
0.150	1
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**86**
SILT/CLAY	**1**

Soil Description:
Light brown orange slightly clayey gravelly SAND (with shell)

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

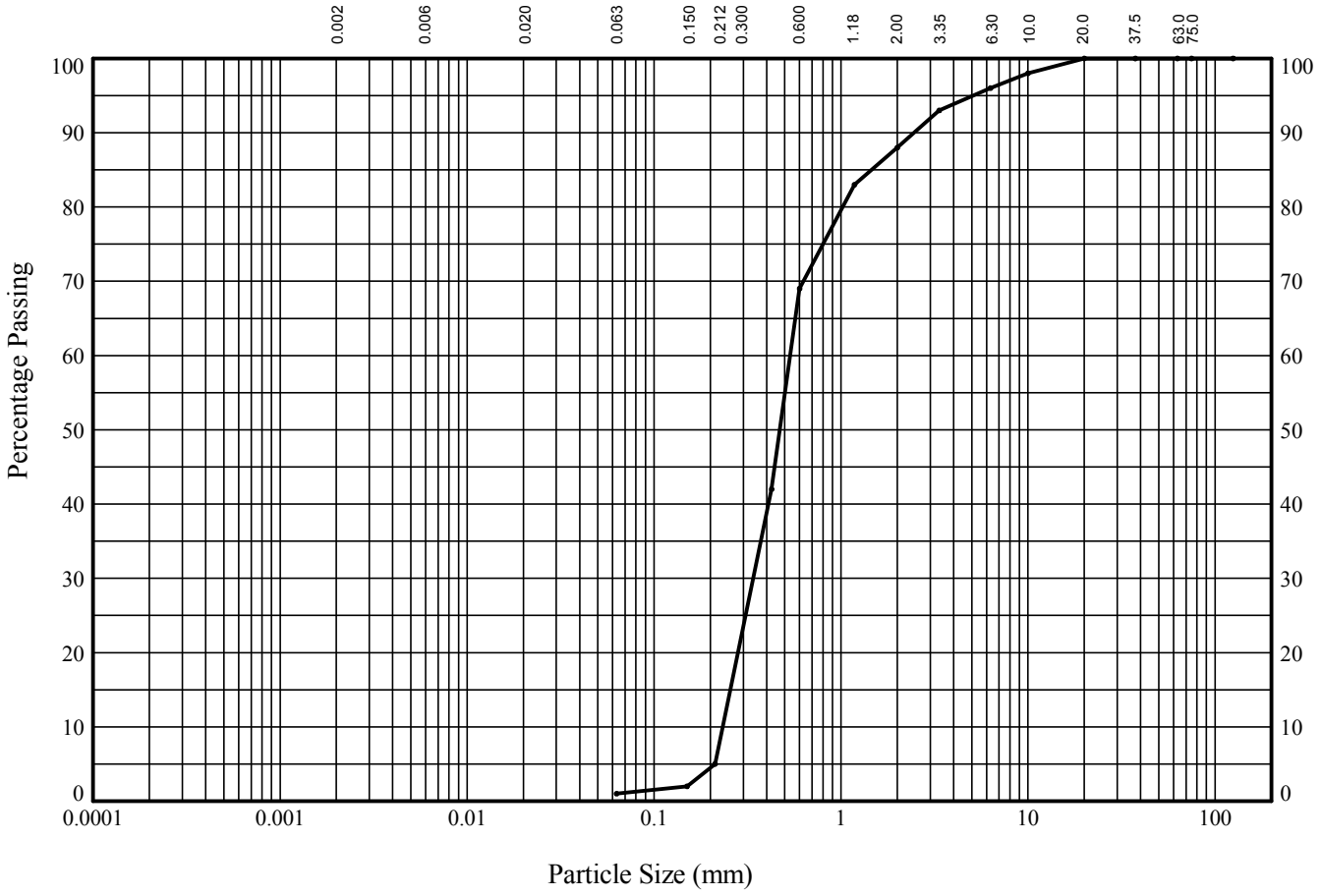
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	96
3.35	93
2.00	88
1.18	83
0.600	69
0.425	42
0.212	5
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**12**
SAND	**87**
SILT/CLAY	**1**

Soil Description:
Orange brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

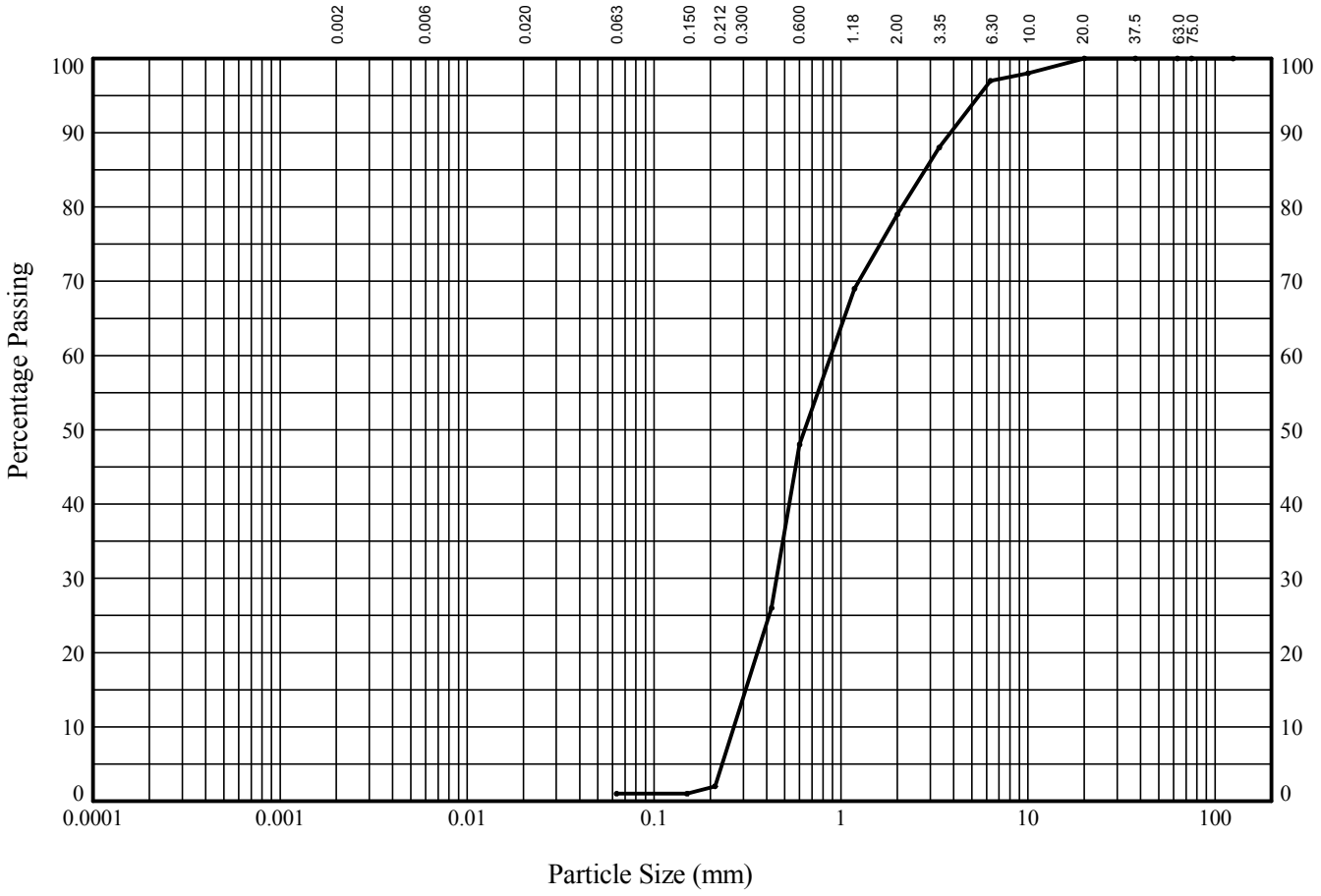
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	97
3.35	88
2.00	79
1.18	69
0.600	48
0.425	26
0.212	2
0.150	1
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**21**
SAND	**78**
SILT/CLAY	**1**

Soil Description:
Orange light brown slightly clayey very gravelly SAND (with shell fragments)

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

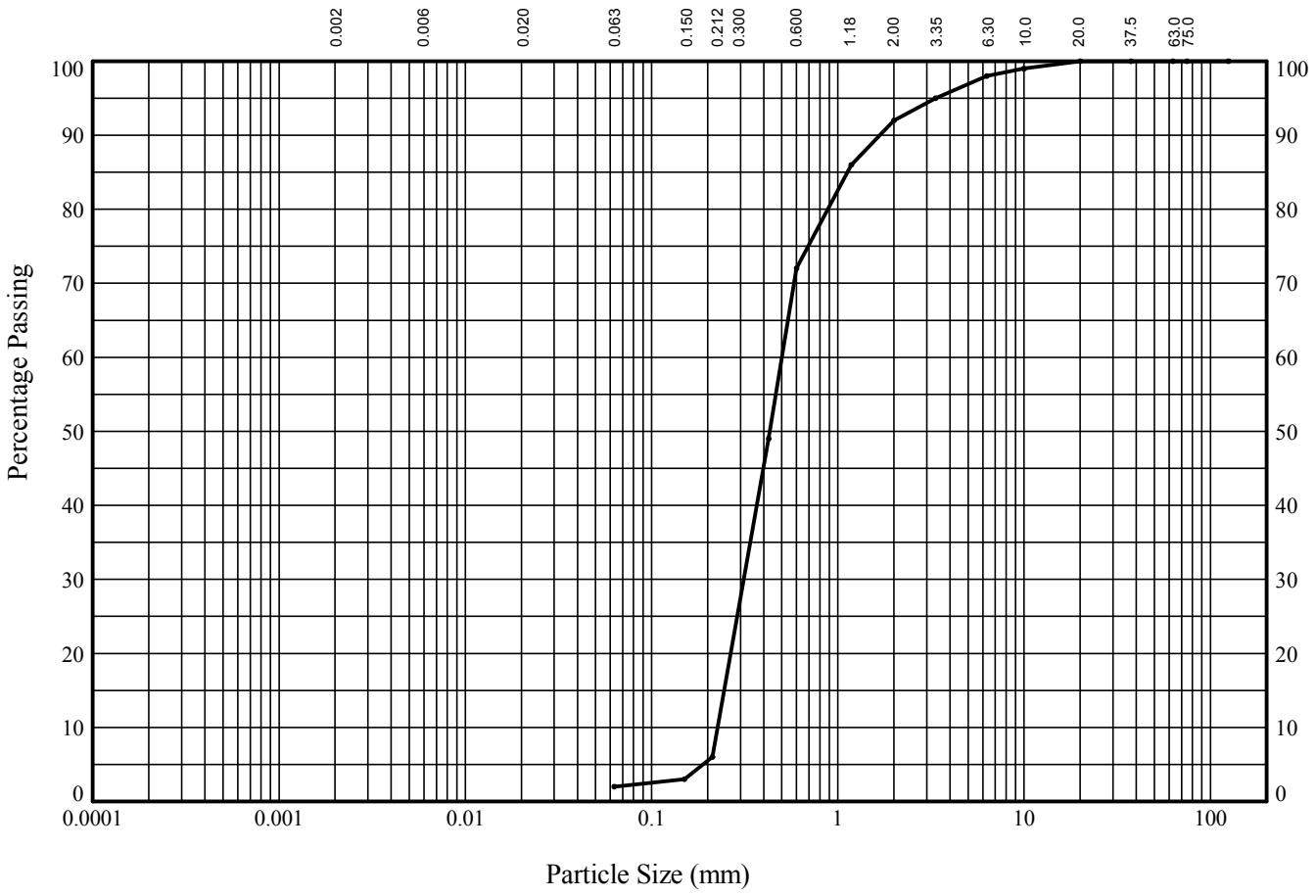
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	95
2.00	92
1.18	86
0.600	72
0.425	49
0.212	6
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**90**
SILT/CLAY	**2**

Soil Description:
Orange slightly clayey gravelly SAND (with shell fragments)

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

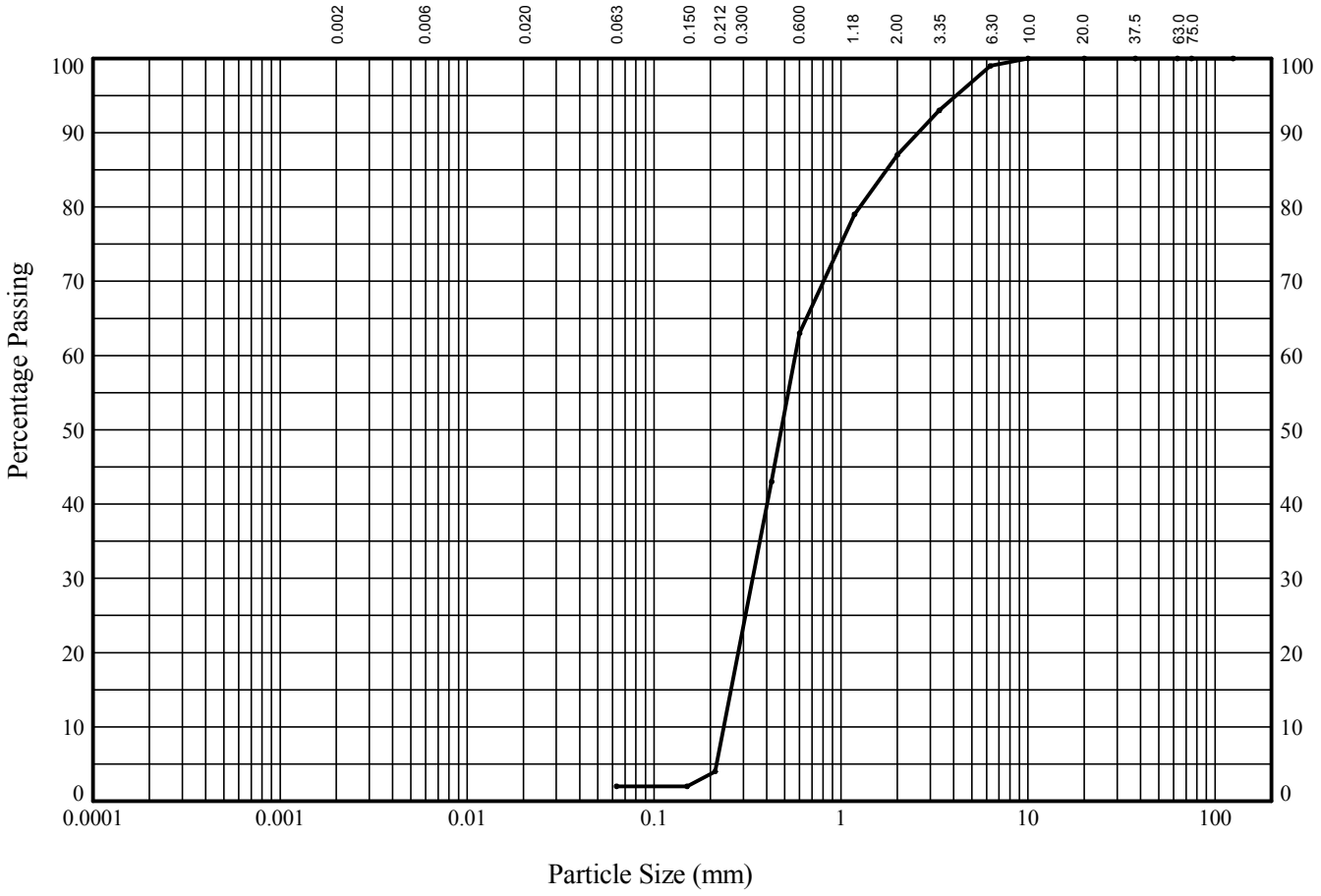
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **35** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	93
2.00	87
1.18	79
0.600	63
0.425	43
0.212	4
0.150	2
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**85**
SILT/CLAY	**2**

Soil Description:
Orange slightly clayey gravelly SAND (with shell fragments)

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

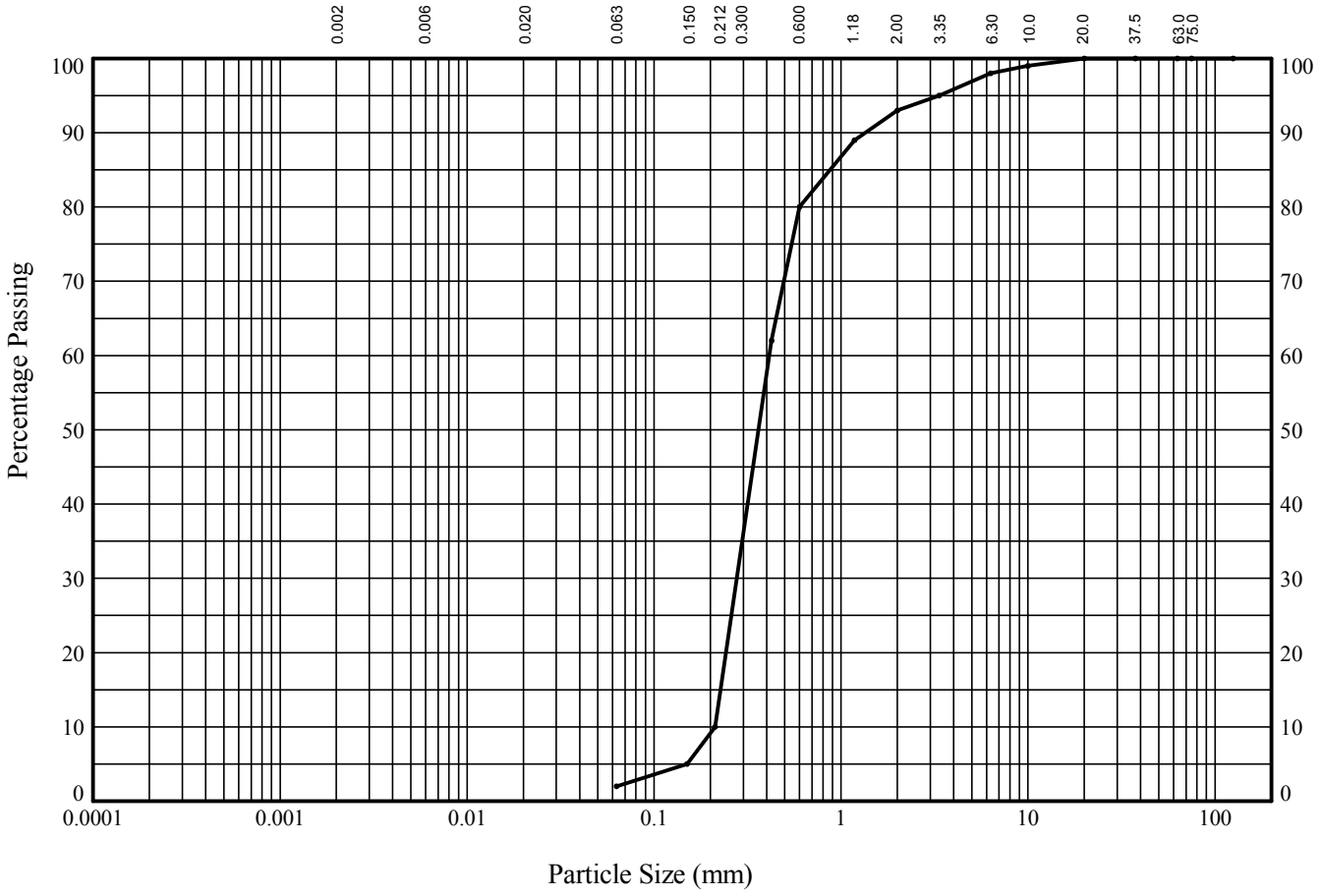
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **37** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	95
2.00	93
1.18	89
0.600	80
0.425	62
0.212	10
0.150	5
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**7**
SAND	**91**
SILT/CLAY	**2**

Soil Description:
Light brown orange slightly clayey gravelly SAND (with shell fragments)

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

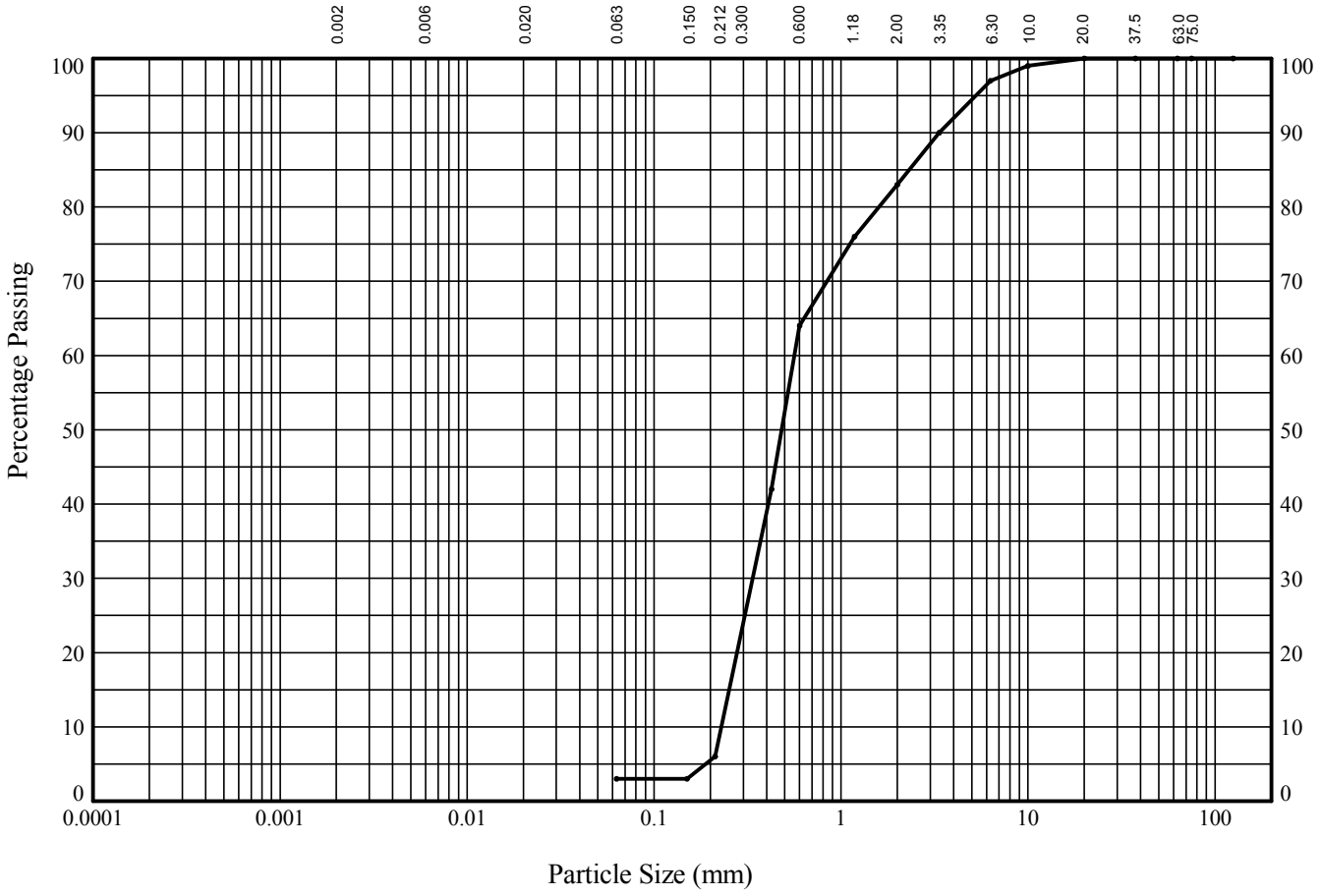
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP10** Sample Ref: **39** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	97
3.35	90
2.00	83
1.18	76
0.600	64
0.425	42
0.212	6
0.150	3
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**17**
SAND	**80**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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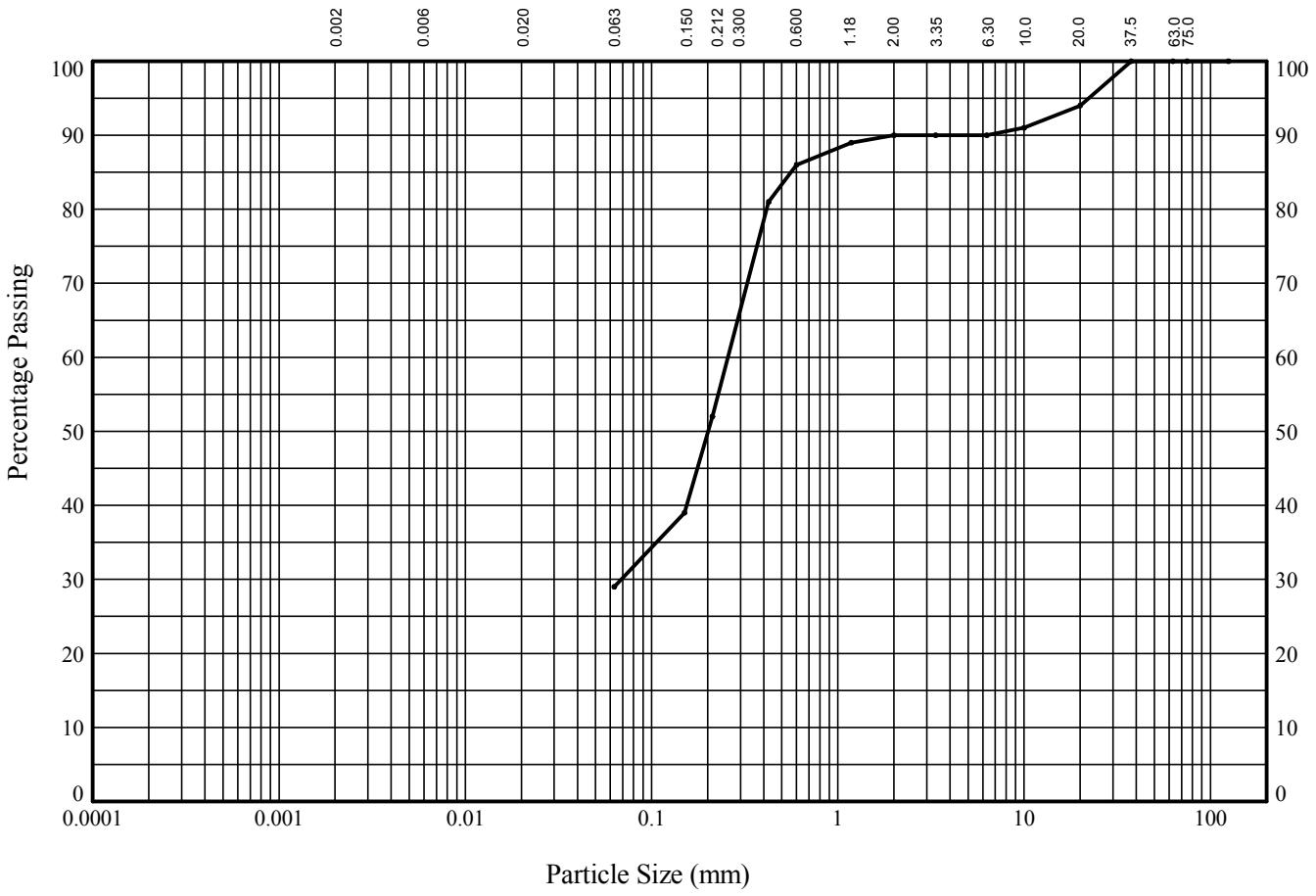
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **4** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	94
10.0	91
6.30	90
3.35	90
2.00	90
1.18	89
0.600	86
0.425	81
0.212	52
0.150	39
0.063	29

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**61**
SILT/CLAY	**29**

Soil Description:
Orange brown sandy slightly gravelly CLAY

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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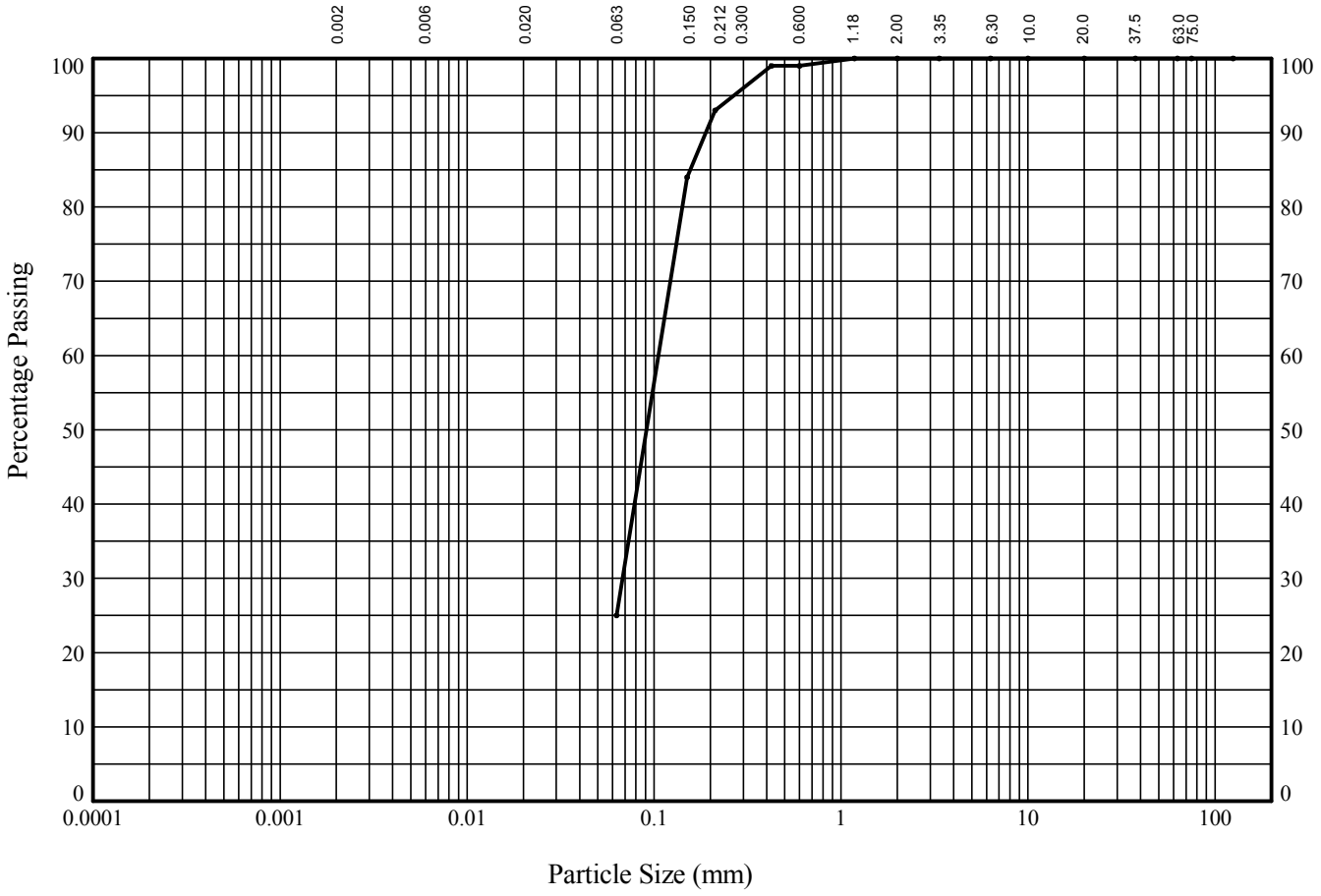
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **6** Sample Type: **B** Depth (m): **2.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	99
0.212	93
0.150	84
0.063	25

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**75**
SILT/CLAY	**25**

Soil Description:
Brown very clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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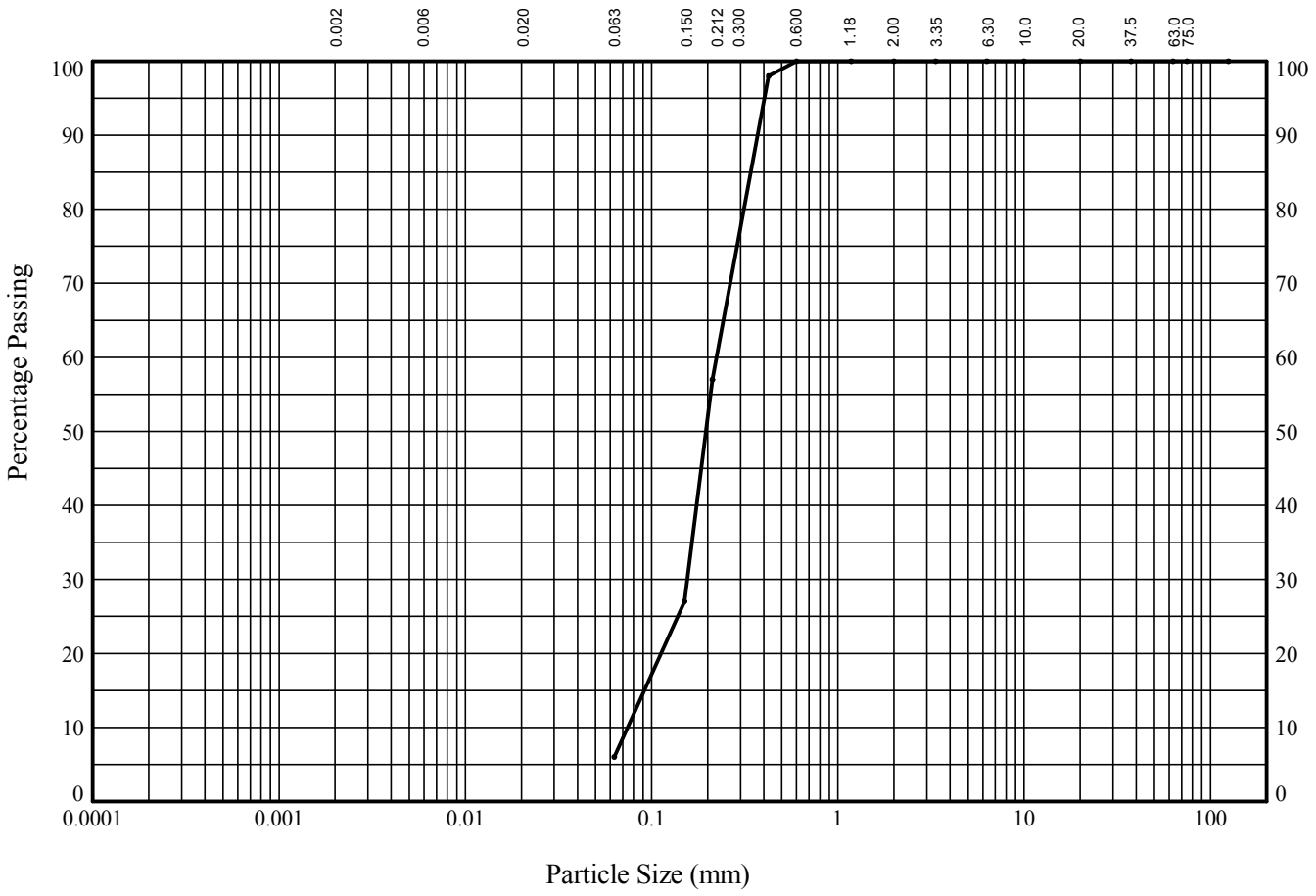
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **9** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	98
0.212	57
0.150	27
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**94**
SILT/CLAY	**6**

Soil Description:
Light brown clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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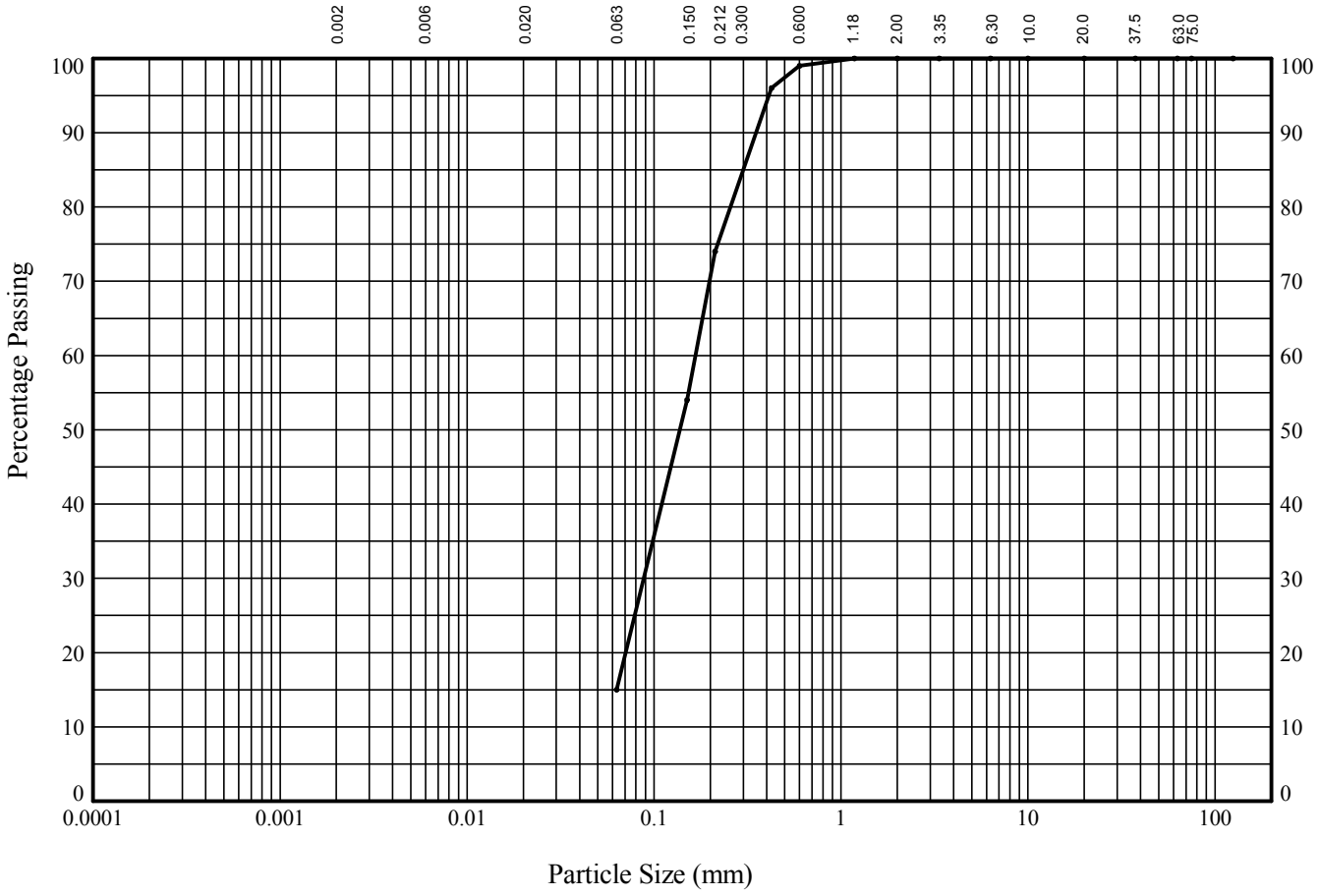
Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	96
0.212	74
0.150	54
0.063	15

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**85**
SILT/CLAY	**15**

Soil Description:
Light brown clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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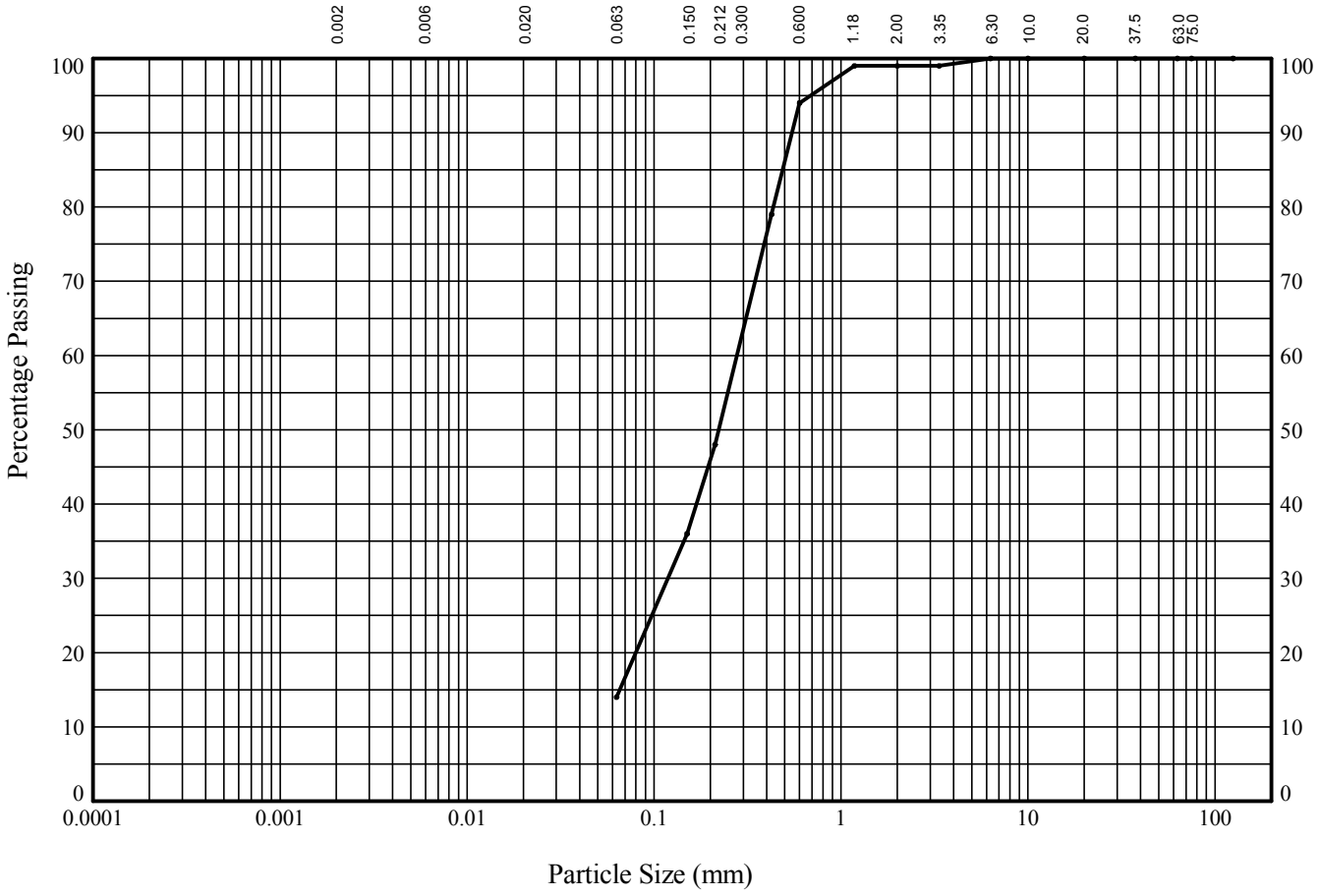
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	94
0.425	79
0.212	48
0.150	36
0.063	14

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**85**
SILT/CLAY	**14**

Soil Description:
Light brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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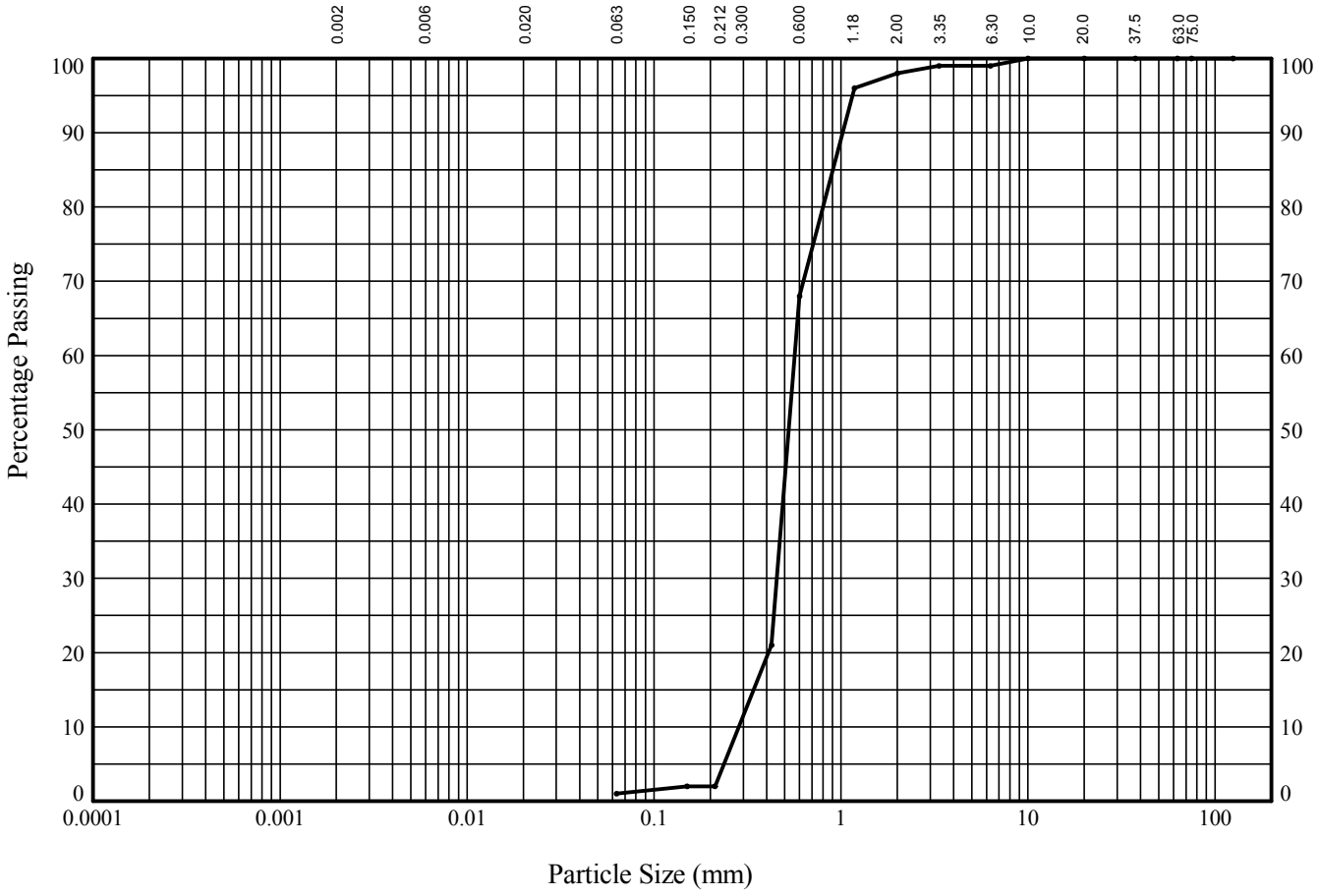
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **15** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	98
1.18	96
0.600	68
0.425	21
0.212	2
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**97**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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Compiled By		Date
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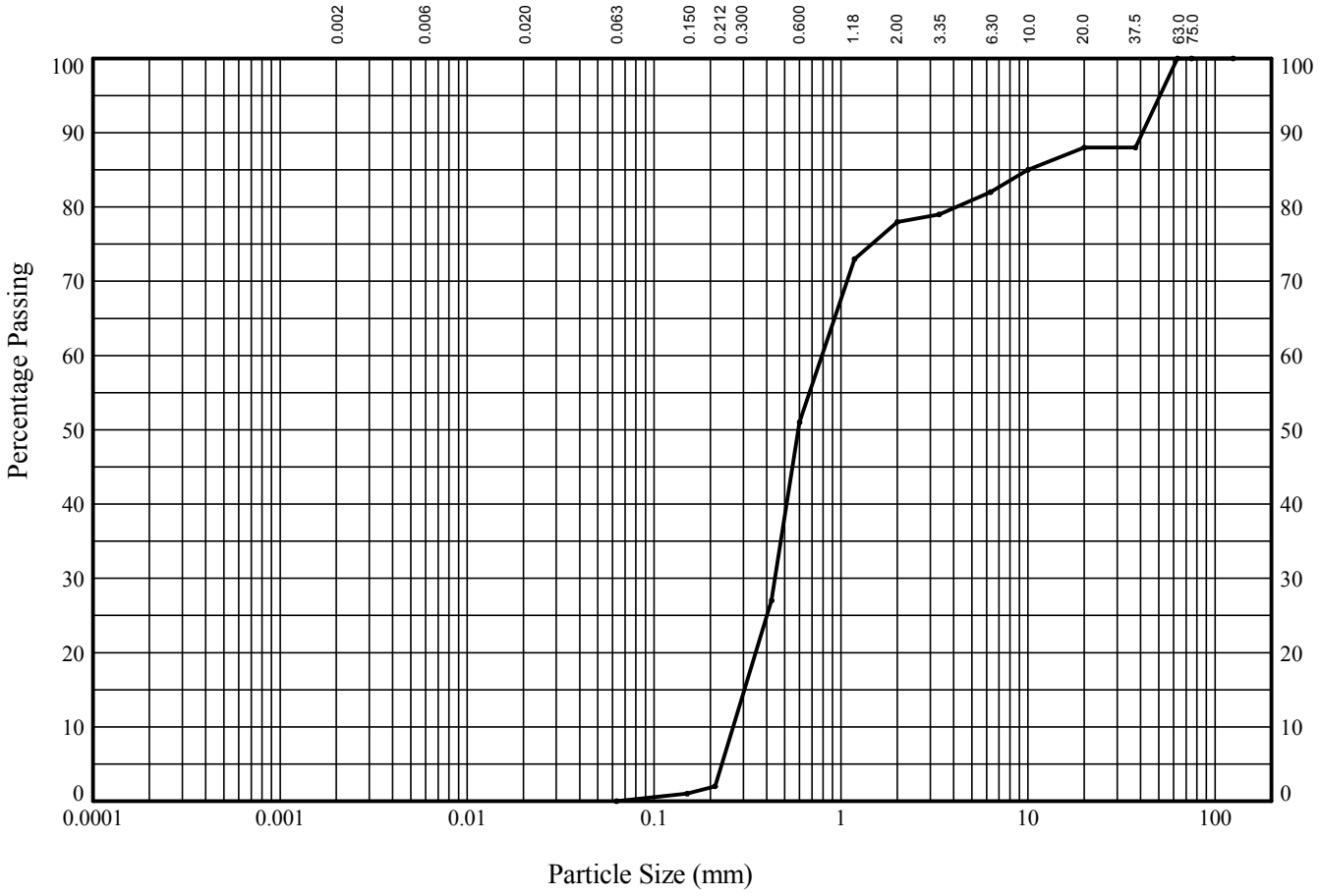
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **16** Sample Type: **B** Depth (m): **7.60**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	88
20.0	88
10.0	85
6.30	82
3.35	79
2.00	78
1.18	73
0.600	51
0.425	27
0.212	2
0.150	1
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**22**
SAND	**78**
SILT/CLAY	**0**

Soil Description:
Light brown very gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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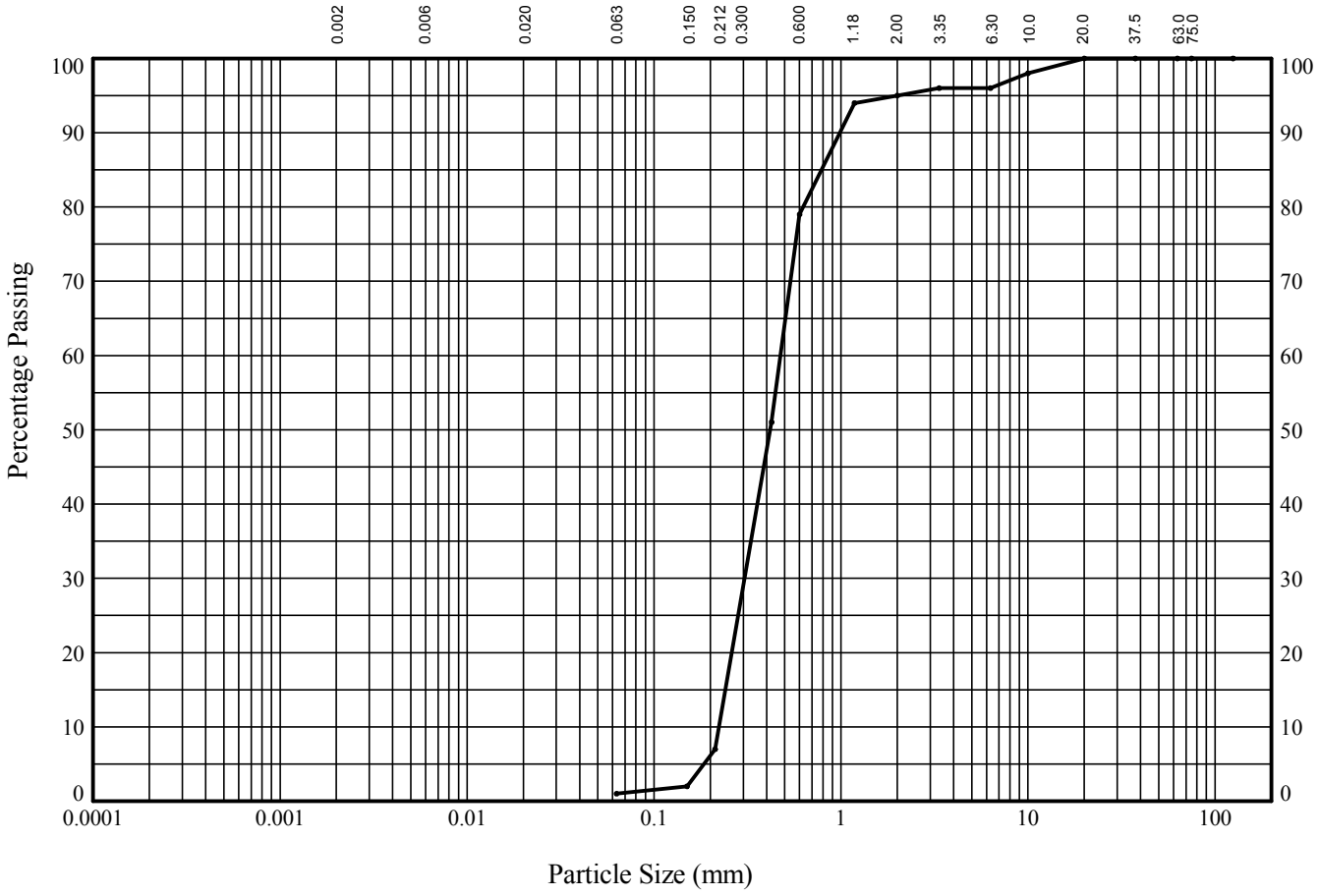
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **18** Sample Type: **B** Depth (m): **8.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	96
3.35	96
2.00	95
1.18	94
0.600	79
0.425	51
0.212	7
0.150	2
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**94**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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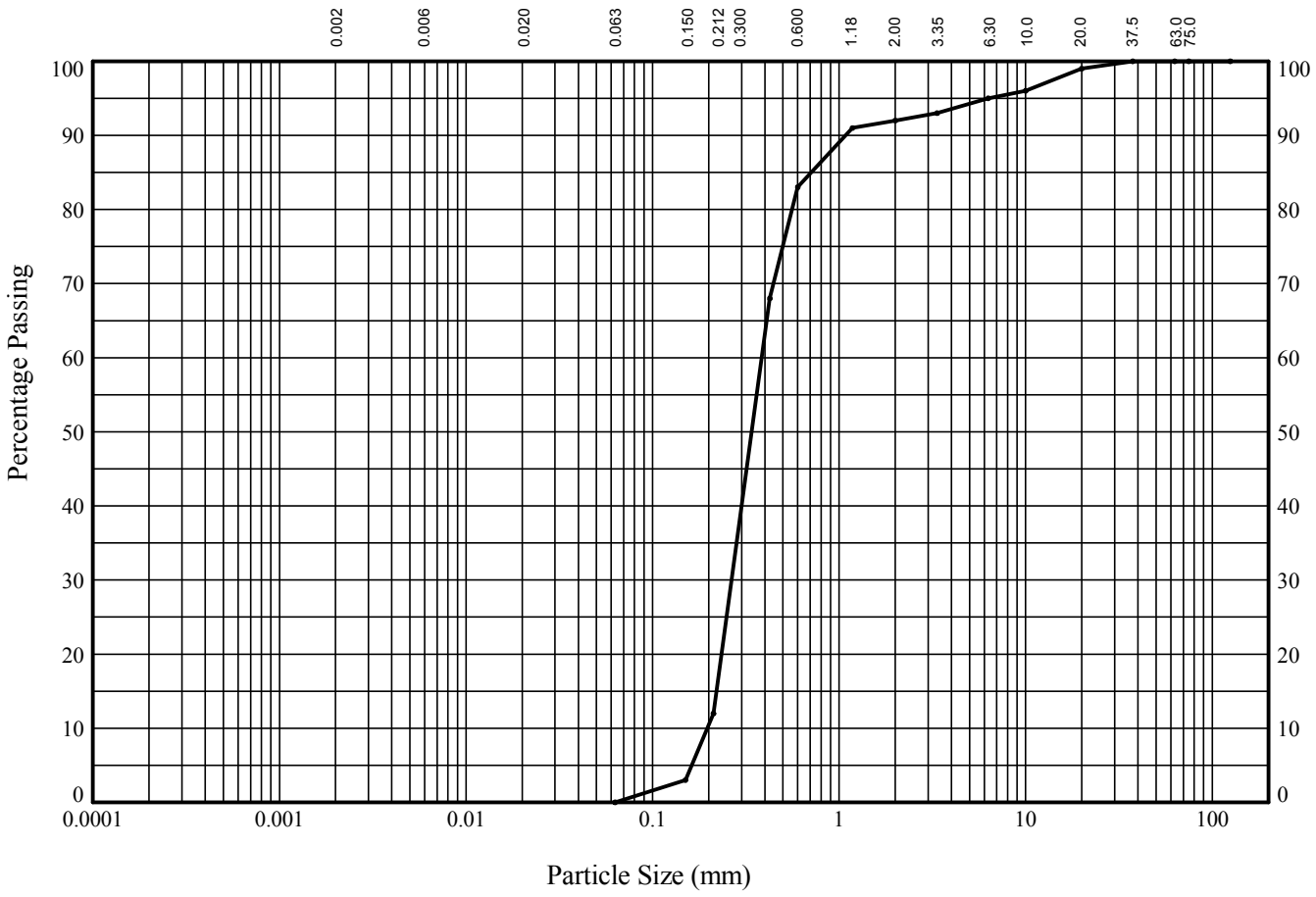
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **21** Sample Type: **B** Depth (m): **9.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	96
6.30	95
3.35	93
2.00	92
1.18	91
0.600	83
0.425	68
0.212	12
0.150	3
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**92**
SILT/CLAY	**0**

Soil Description:
Light brown orange gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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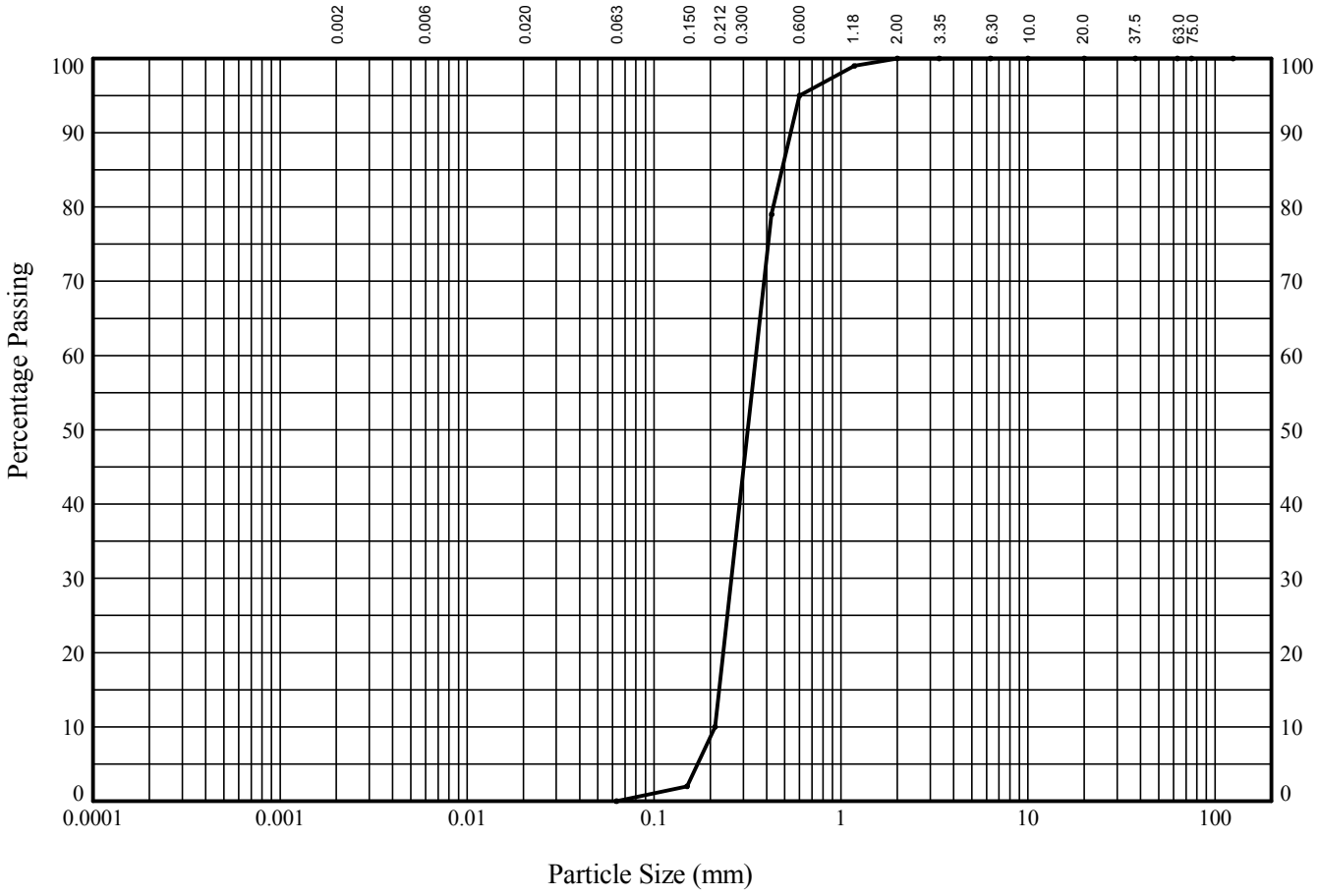
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **22** Sample Type: **B** Depth (m): **10.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	95
0.425	79
0.212	10
0.150	2
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**100**
SILT/CLAY	**0**

Soil Description:
Orange SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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Compiled By		Date
		17/09/15

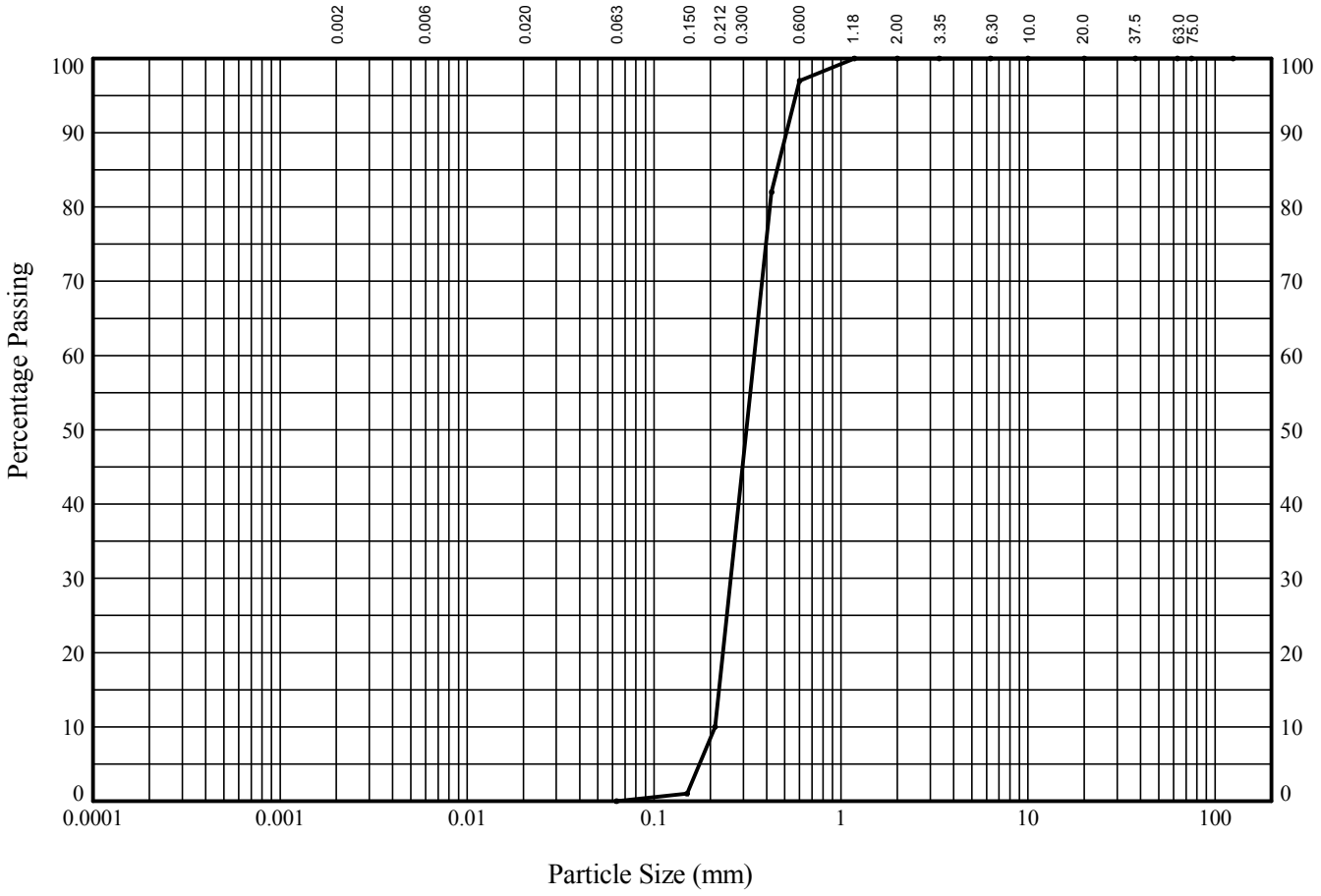
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **23** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	97
0.425	82
0.212	10
0.150	1
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**100**
SILT/CLAY	**0**

Soil Description:
Orange SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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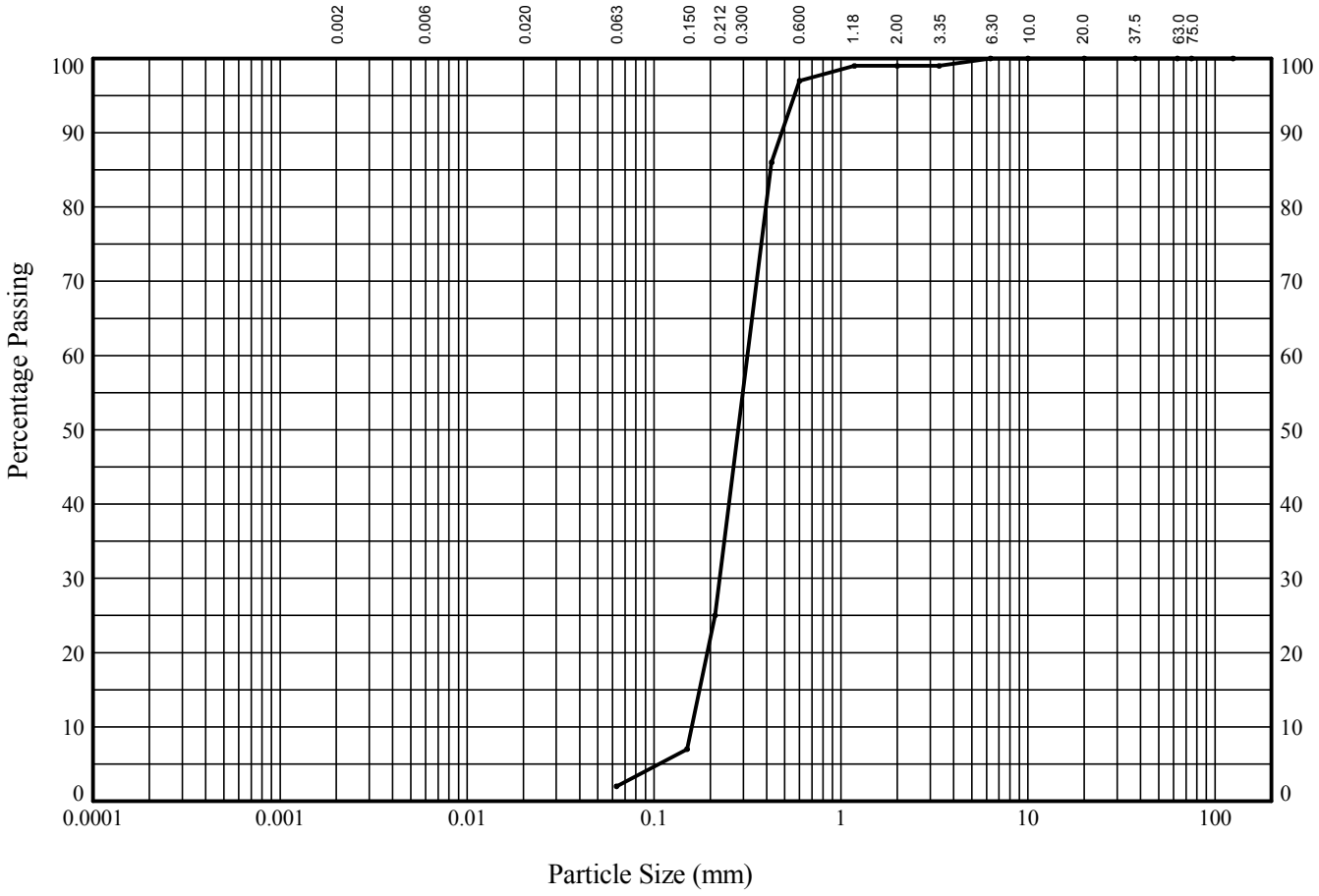
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	97
0.425	86
0.212	25
0.150	7
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**97**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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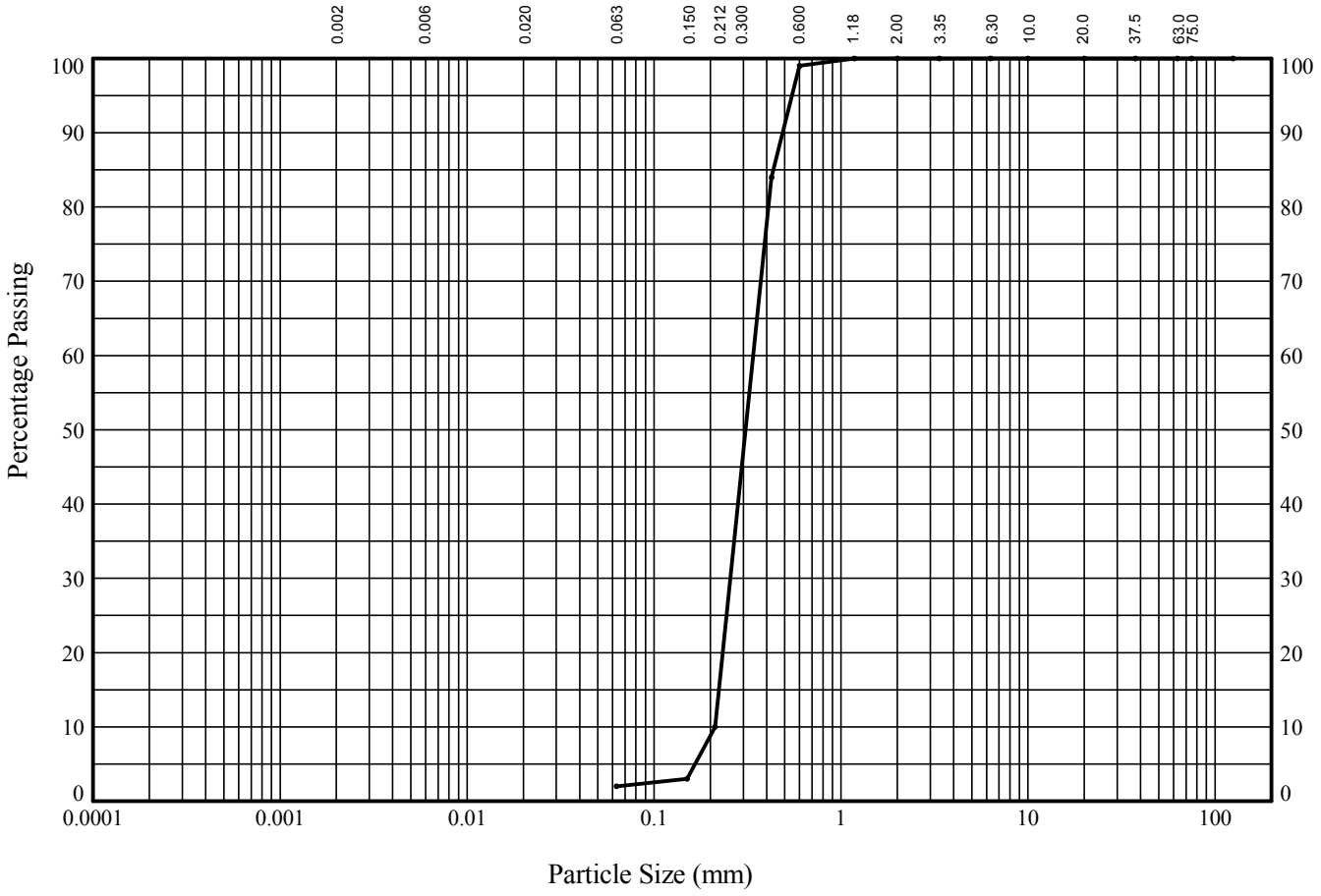
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	84
0.212	10
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**98**
SILT/CLAY	**2**

Soil Description:
Orange slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

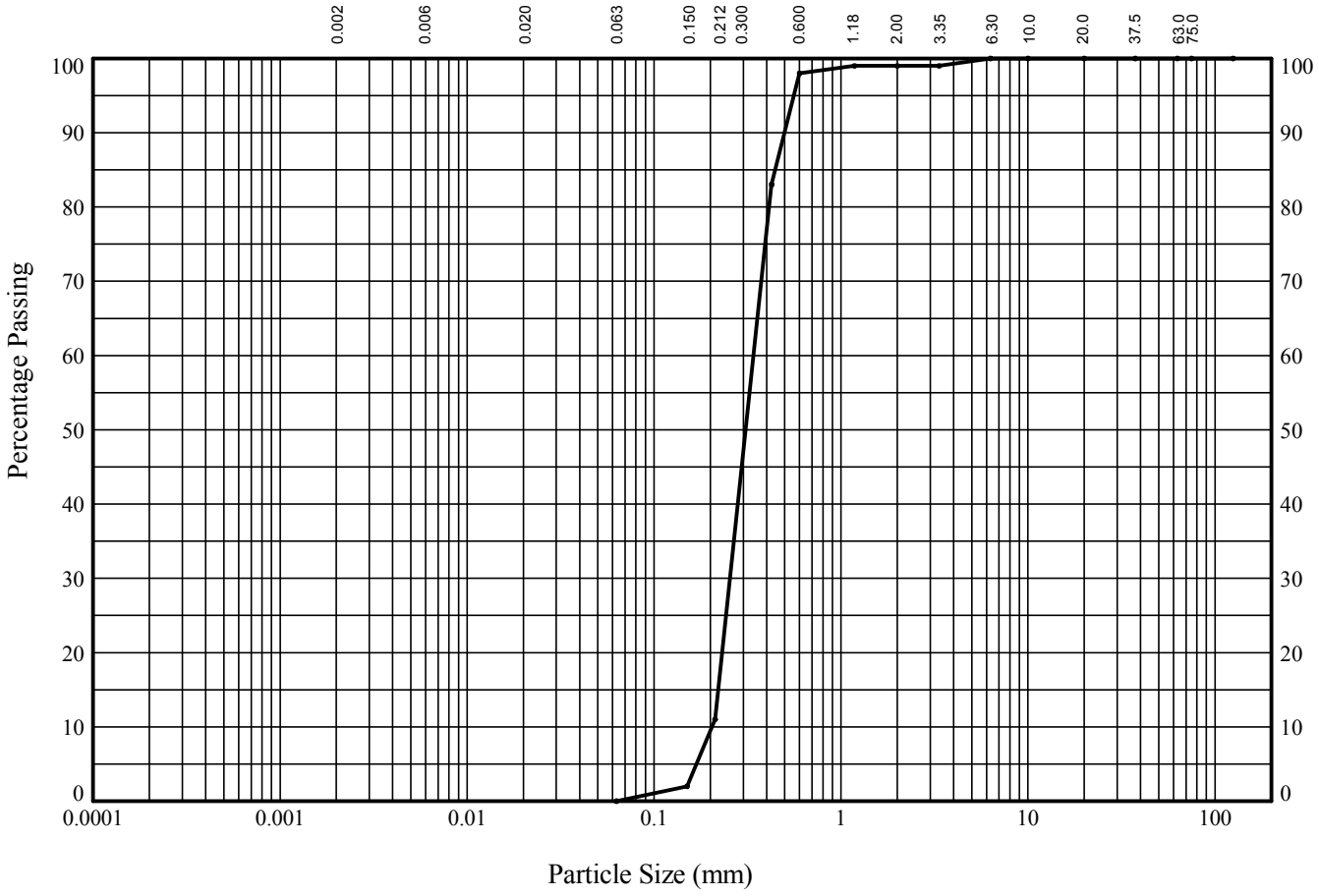
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	98
0.425	83
0.212	11
0.150	2
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**99**
SILT/CLAY	**0**

Soil Description:
Light brown orange slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

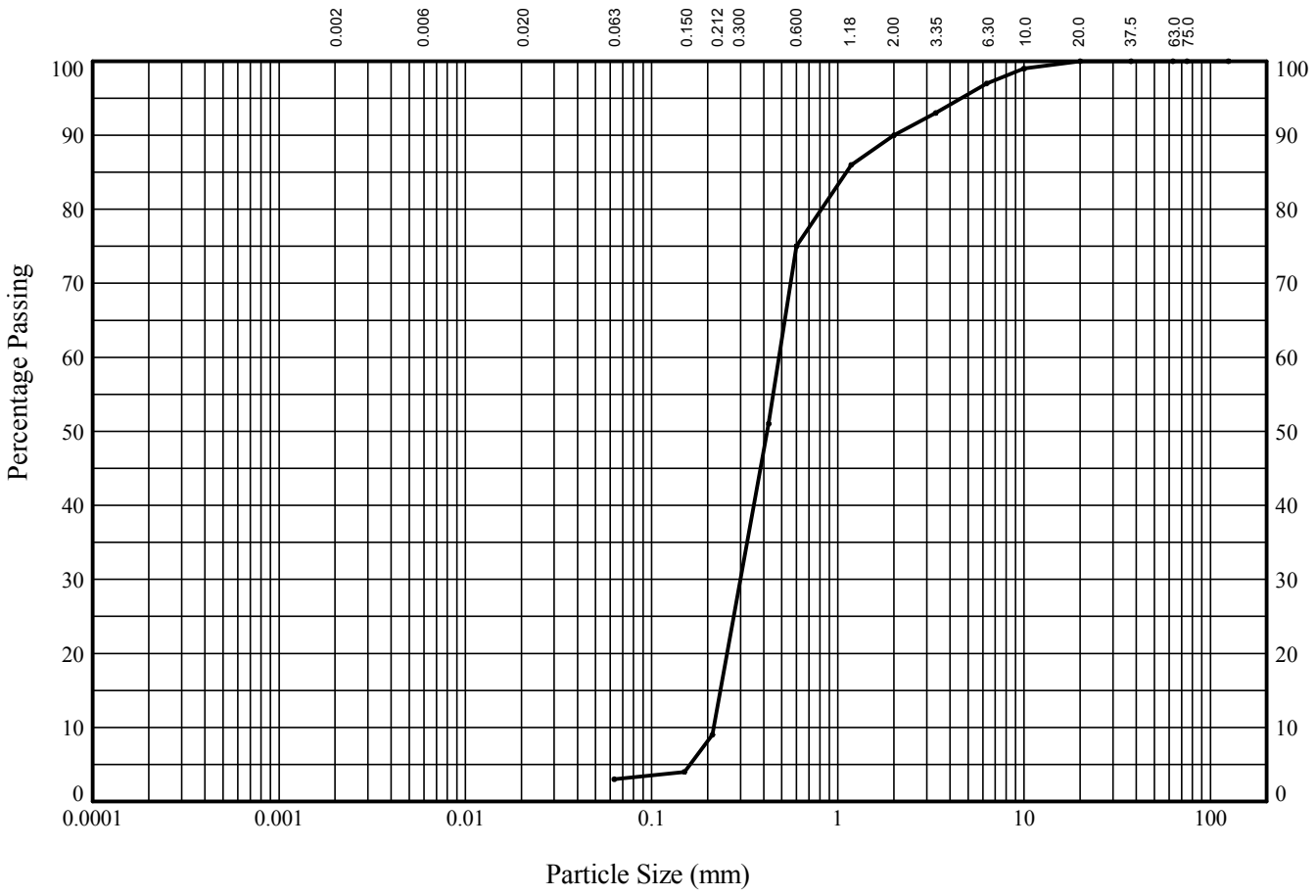
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	97
3.35	93
2.00	90
1.18	86
0.600	75
0.425	51
0.212	9
0.150	4
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**87**
SILT/CLAY	**3**

Soil Description:
Brown slightly clayey gravelly SAND (with shell fragments)

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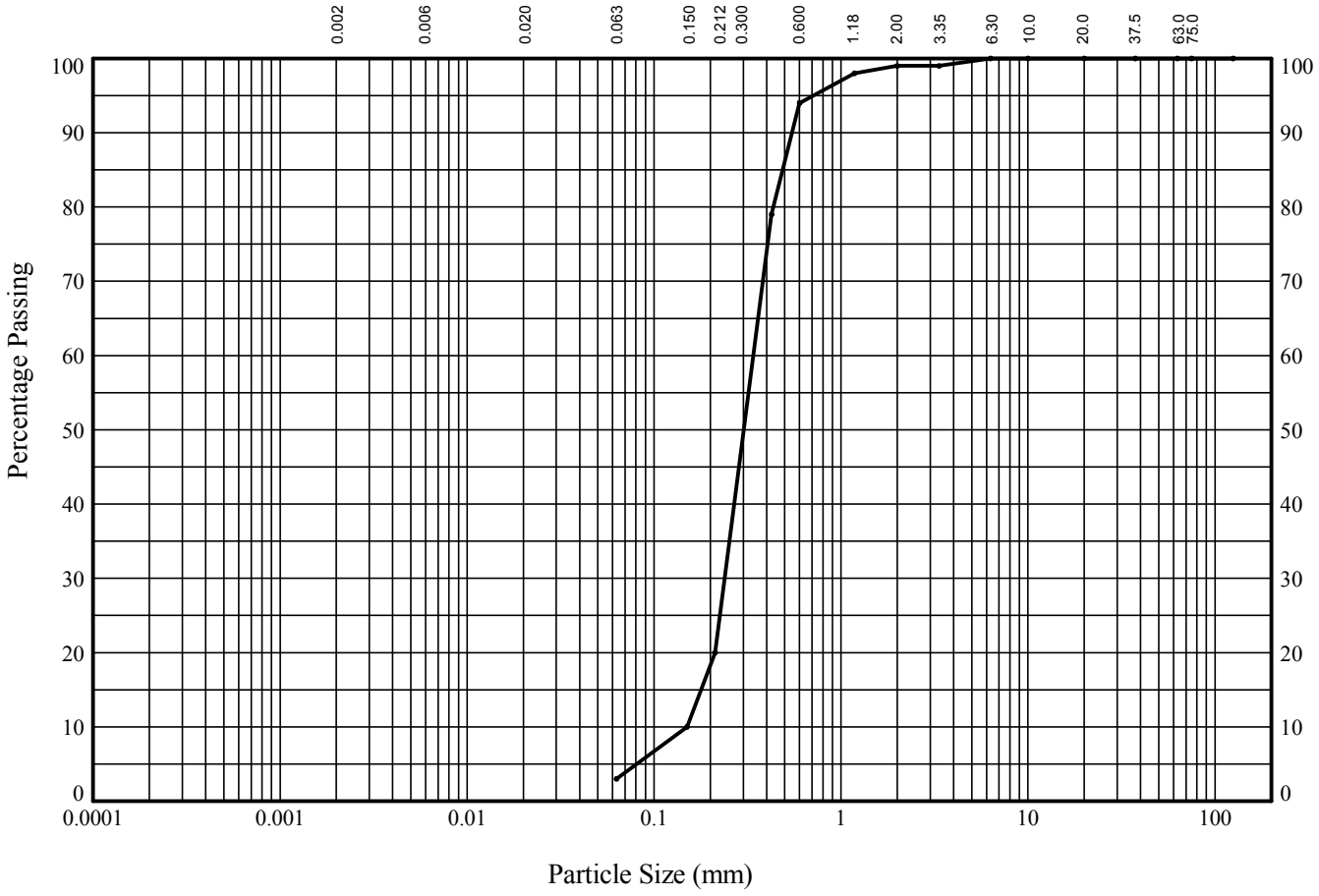
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	94
0.425	79
0.212	20
0.150	10
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**96**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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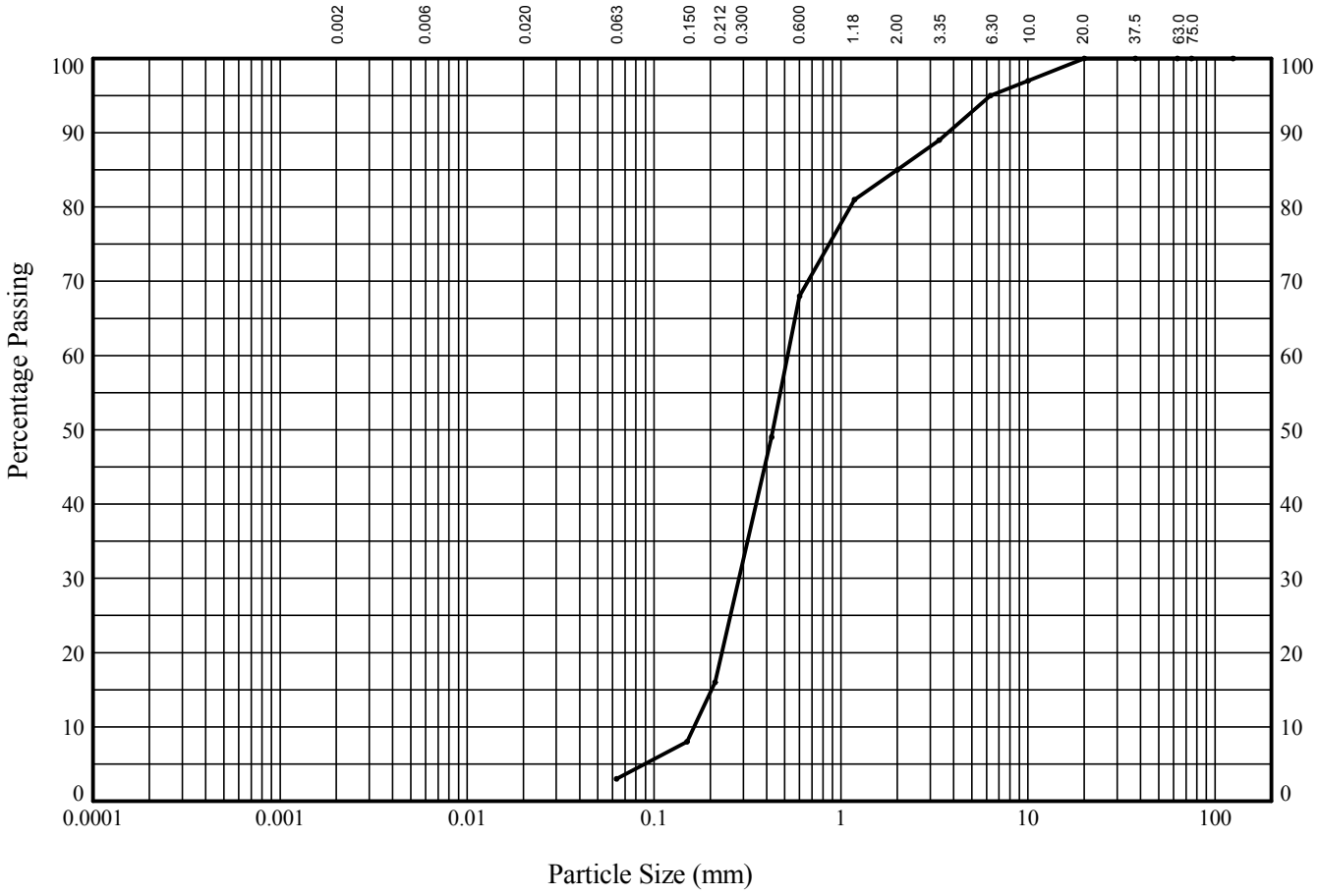
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **35** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	97
6.30	95
3.35	89
2.00	85
1.18	81
0.600	68
0.425	49
0.212	16
0.150	8
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**15**
SAND	**82**
SILT/CLAY	**3**

Soil Description:
Brown slightly clayey gravelly SAND

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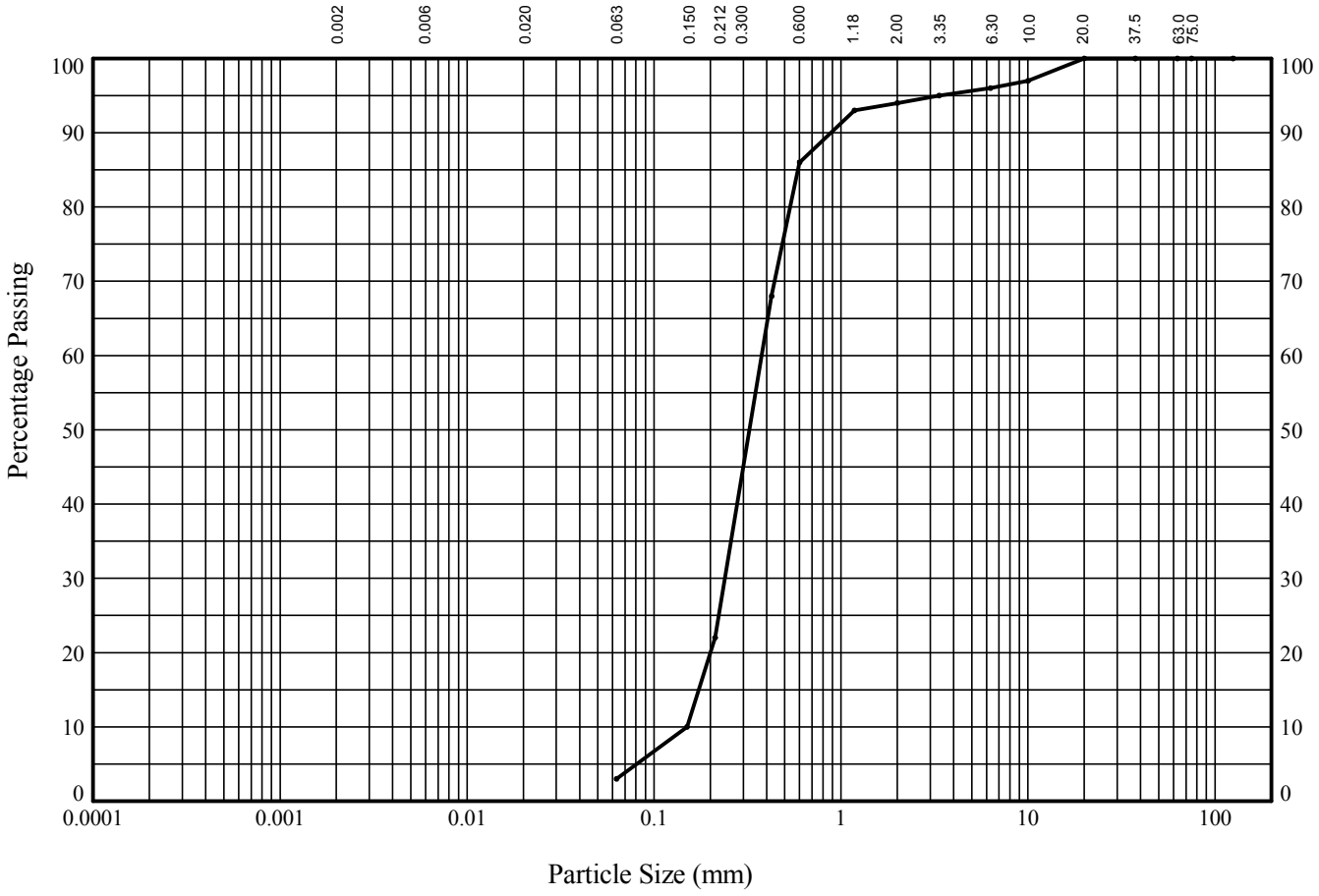
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP11** Sample Ref: **37** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	97
6.30	96
3.35	95
2.00	94
1.18	93
0.600	86
0.425	68
0.212	22
0.150	10
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**91**
SILT/CLAY	**3**

Soil Description:
Brown slightly clayey gravelly SAND

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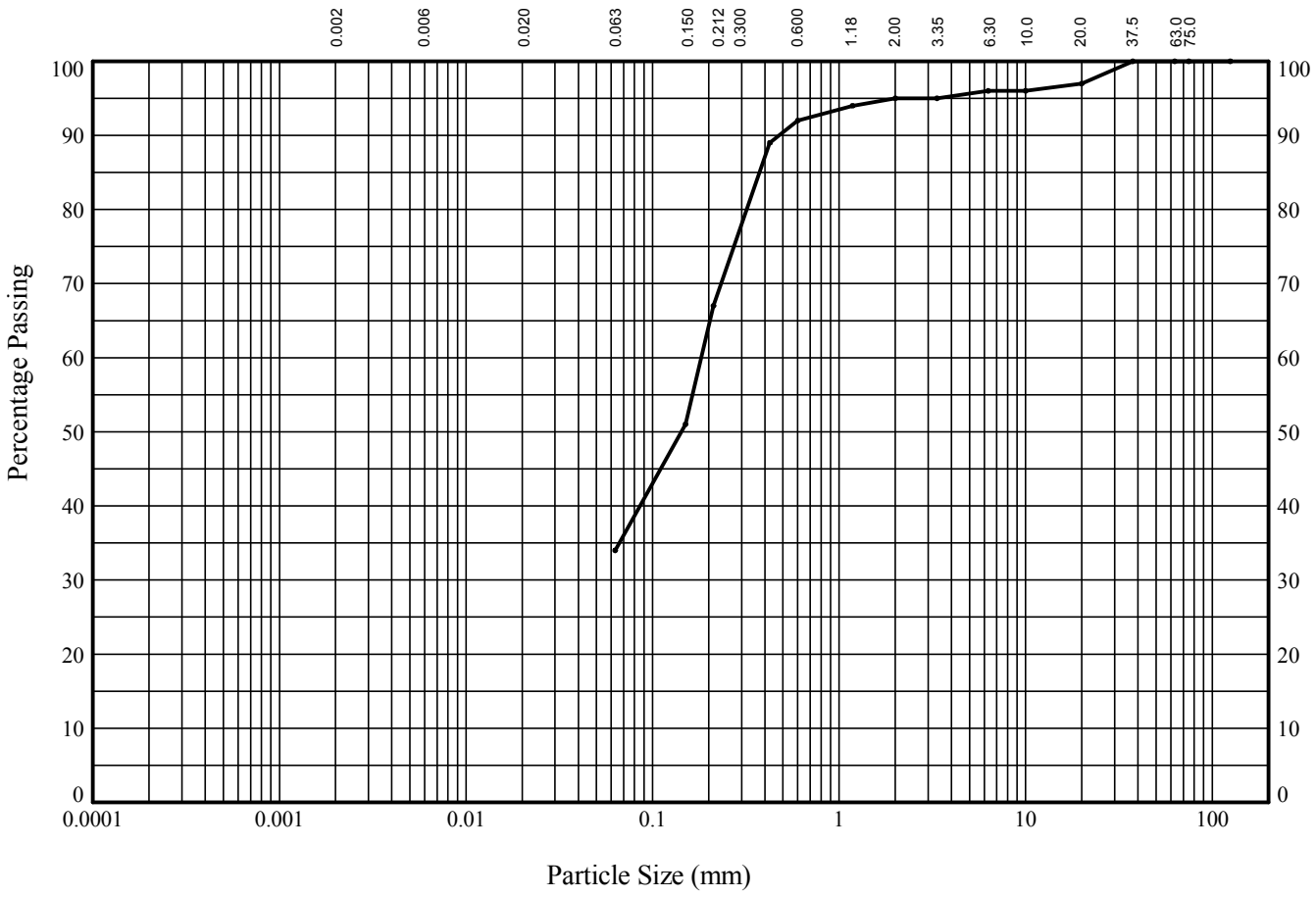
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **5** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	97
10.0	96
6.30	96
3.35	95
2.00	95
1.18	94
0.600	92
0.425	89
0.212	67
0.150	51
0.063	34

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**61**
SILT/CLAY	**34**

Soil Description:
Light brown very clayey gravelly SAND

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STRUCTURAL SOILS
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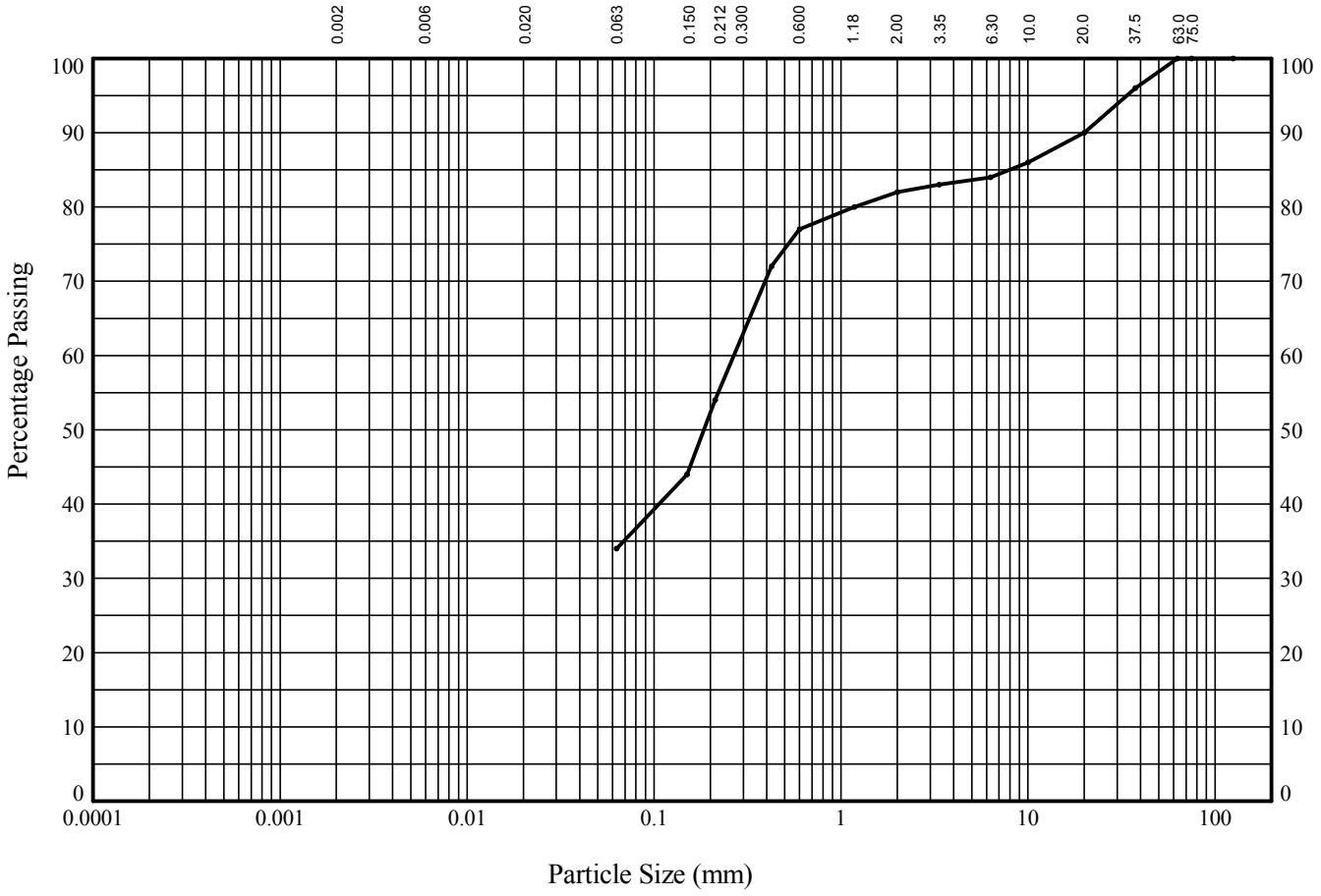
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **7** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	96
20.0	90
10.0	86
6.30	84
3.35	83
2.00	82
1.18	80
0.600	77
0.425	72
0.212	54
0.150	44
0.063	34

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**18**
SAND	**48**
SILT/CLAY	**34**

Soil Description:
Brown sandy slightly gravelly CLAY

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STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

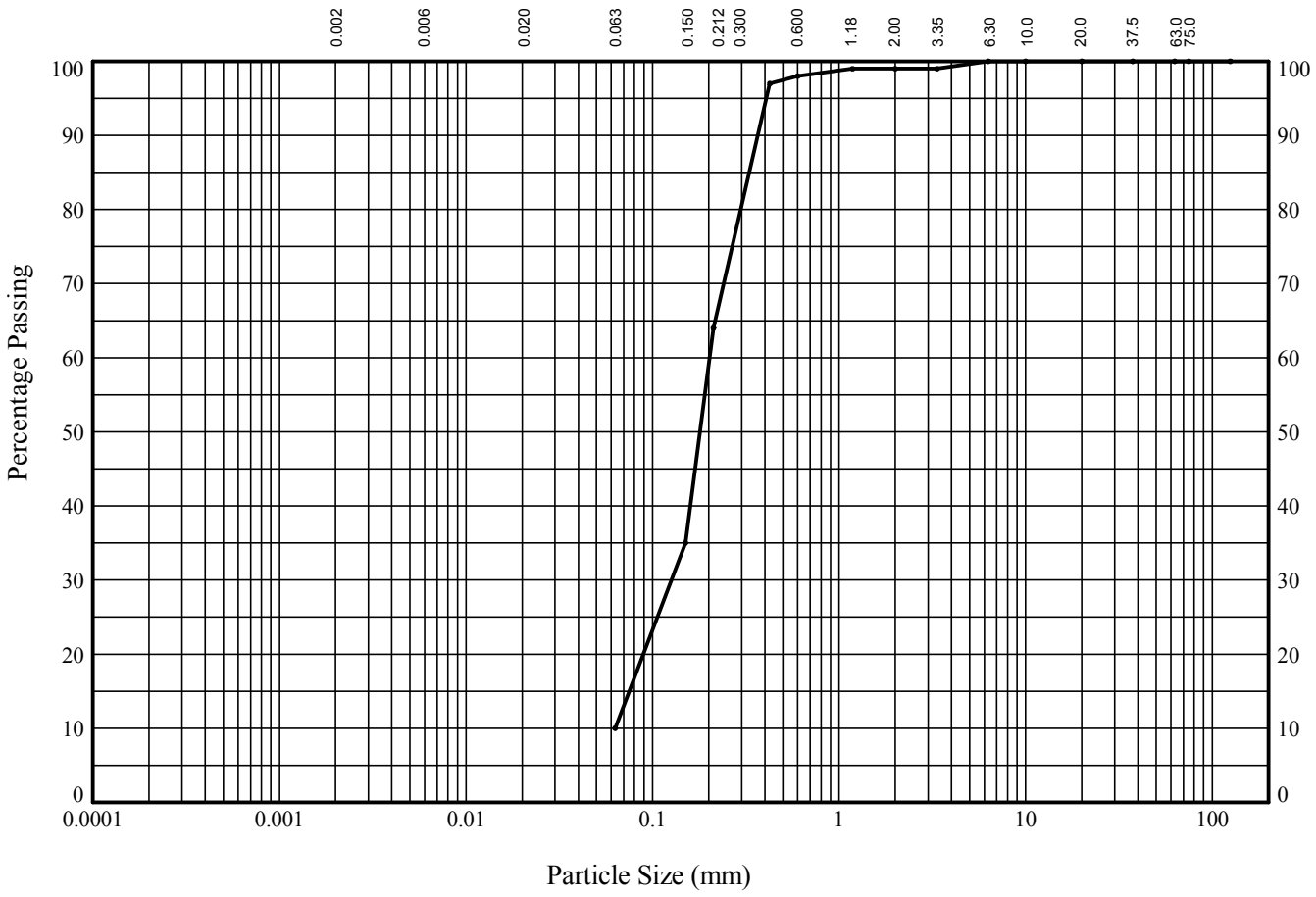
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **9** Sample Type: **B** Depth (m): **4.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	99
0.600	98
0.425	97
0.212	64
0.150	35
0.063	10

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**89**
SILT/CLAY	**10**

Soil Description:
Light brown clayey slightly gravelly SAND

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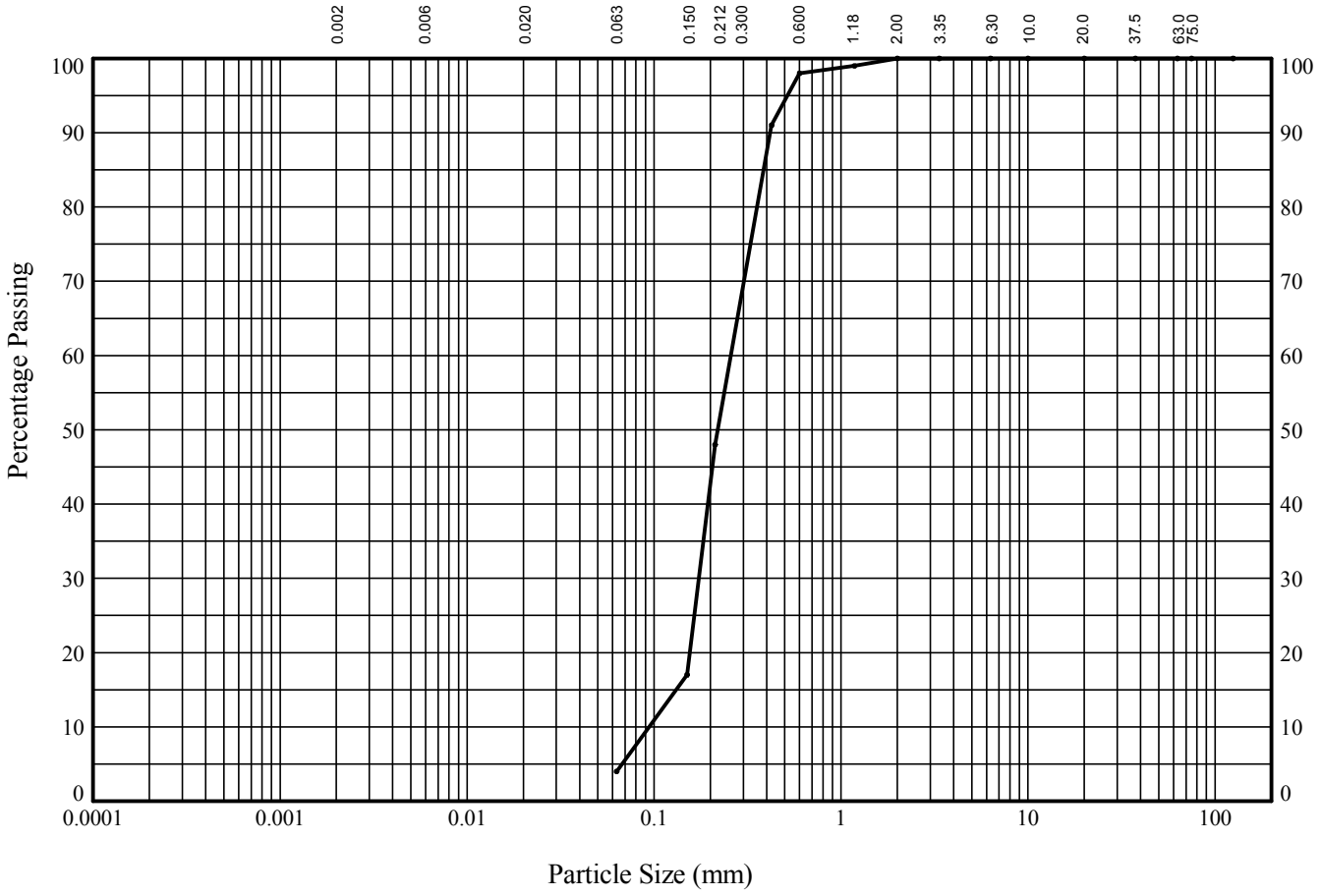
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	98
0.425	91
0.212	48
0.150	17
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**96**
SILT/CLAY	**4**

Soil Description:
Light brown slightly clayey SAND

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STRUCTURAL SOILS
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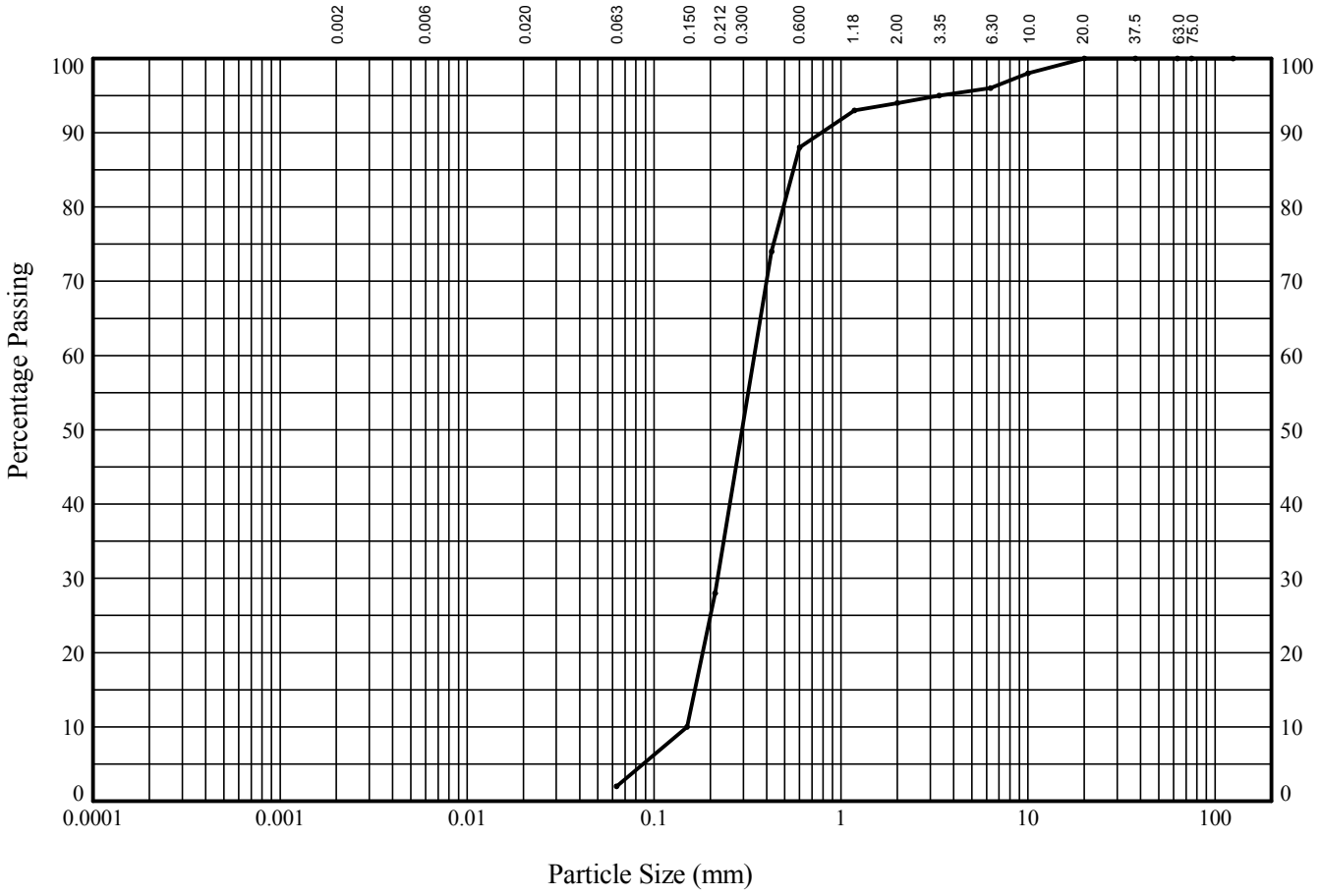
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	98
6.30	96
3.35	95
2.00	94
1.18	93
0.600	88
0.425	74
0.212	28
0.150	10
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**92**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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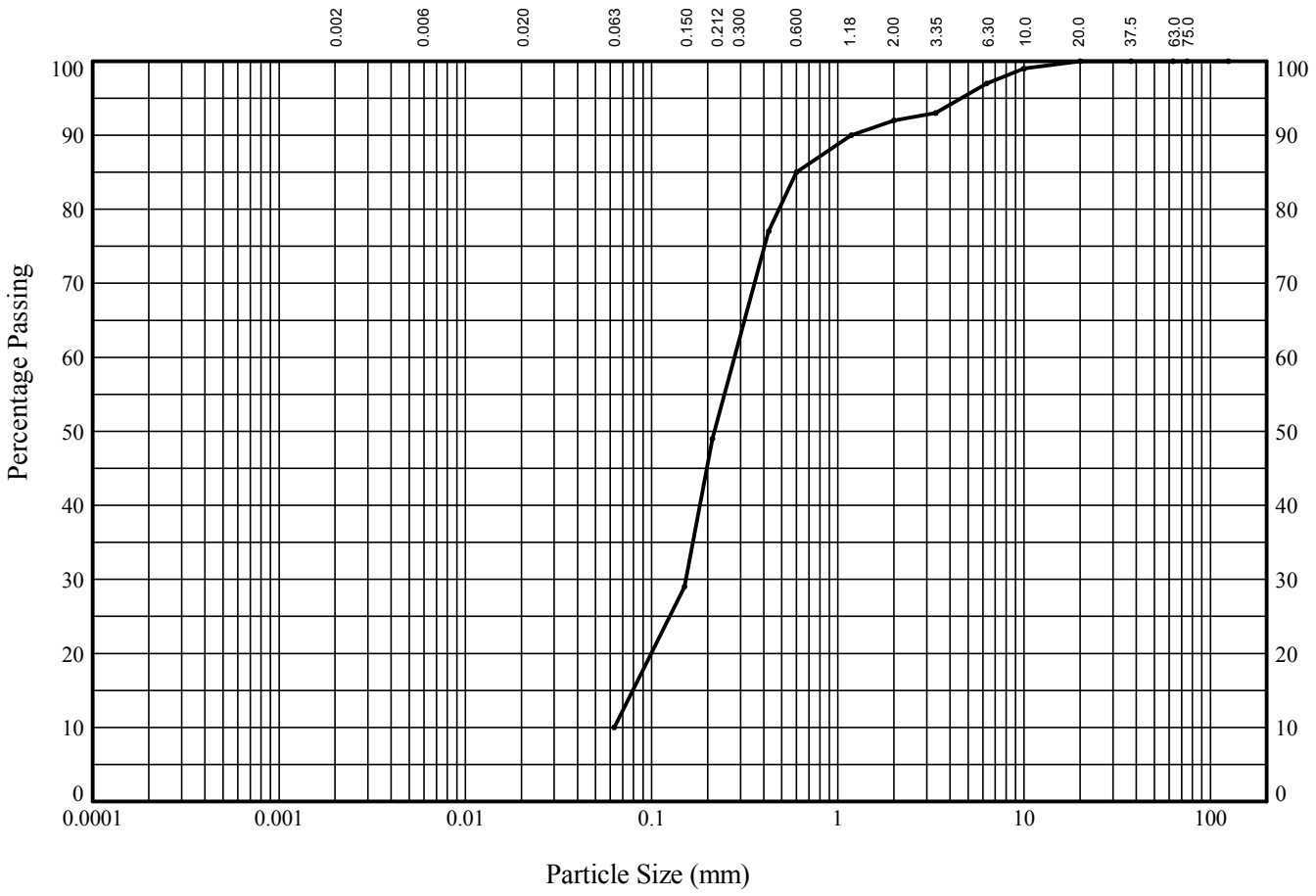
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **15** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	97
3.35	93
2.00	92
1.18	90
0.600	85
0.425	77
0.212	49
0.150	29
0.063	10

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**82**
SILT/CLAY	**10**

Soil Description:
Light brown clayey gravelly SAND

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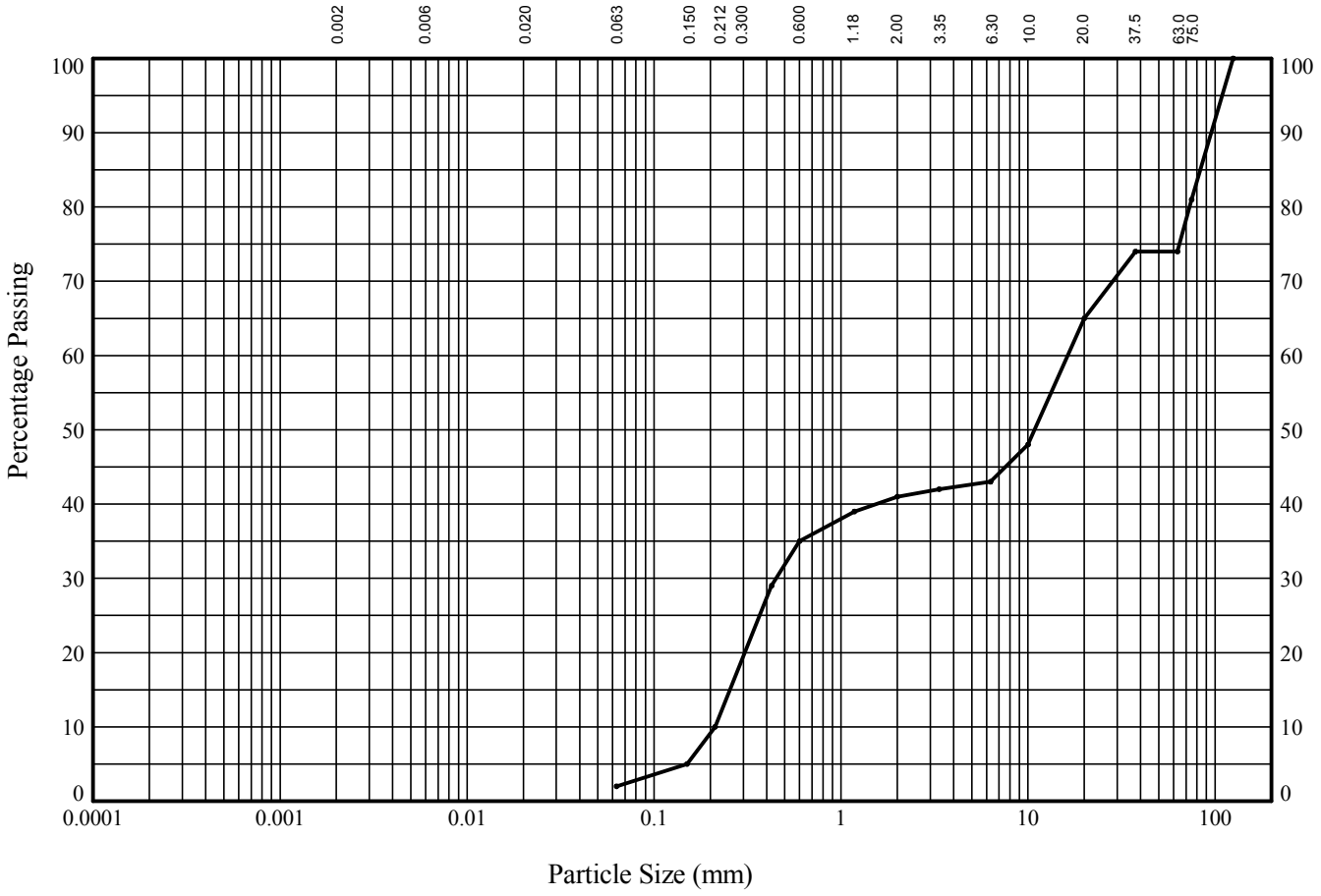
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **17** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	81
63.0	74
37.5	74
20.0	65
10.0	48
6.30	43
3.35	42
2.00	41
1.18	39
0.600	35
0.425	29
0.212	10
0.150	5
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
COBBLES	**26**
GRAVEL	**33**
SAND	**39**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey SAND and GRAVEL with many cobbles

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STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

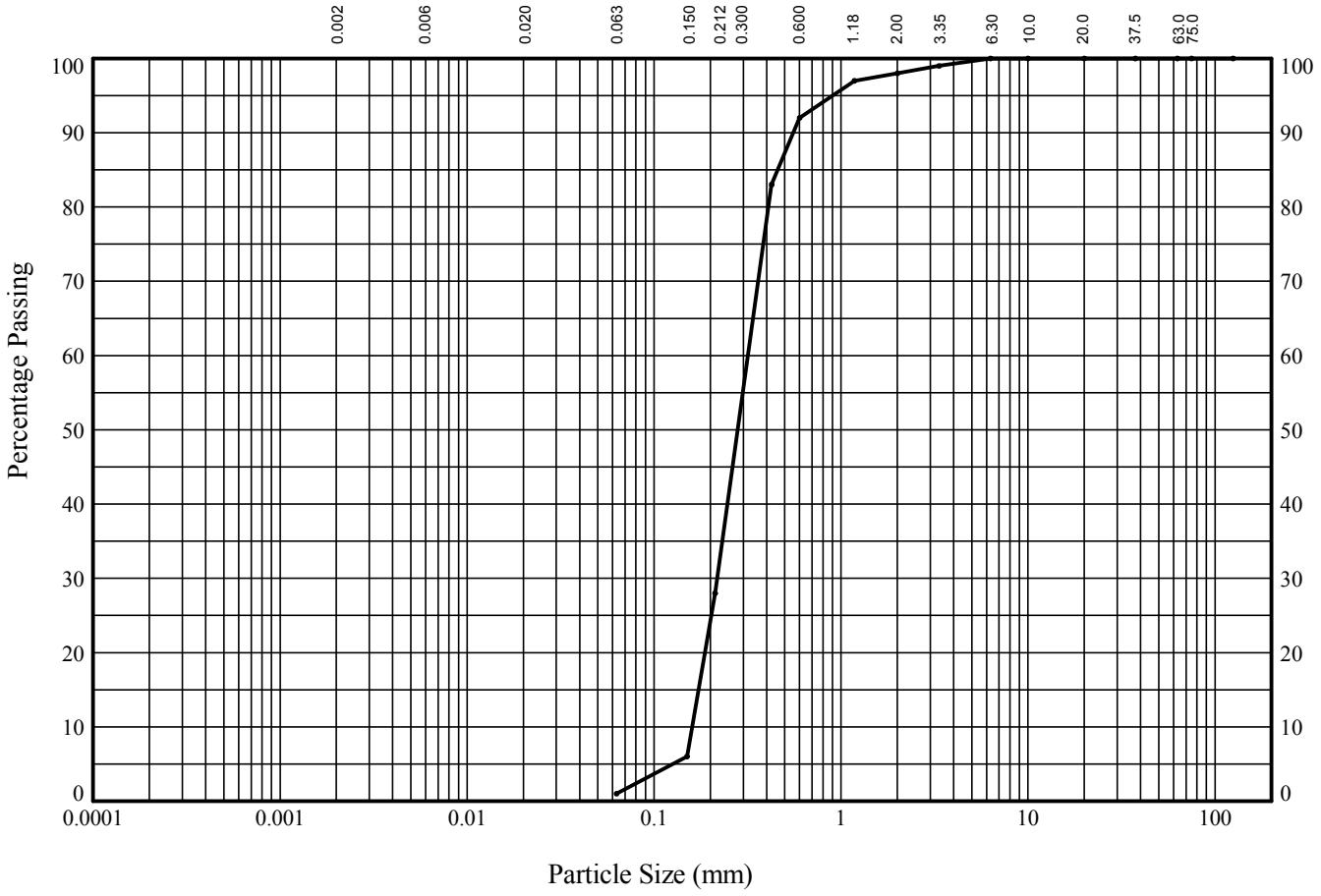
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **19** Sample Type: **B** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	97
0.600	92
0.425	83
0.212	28
0.150	6
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**97**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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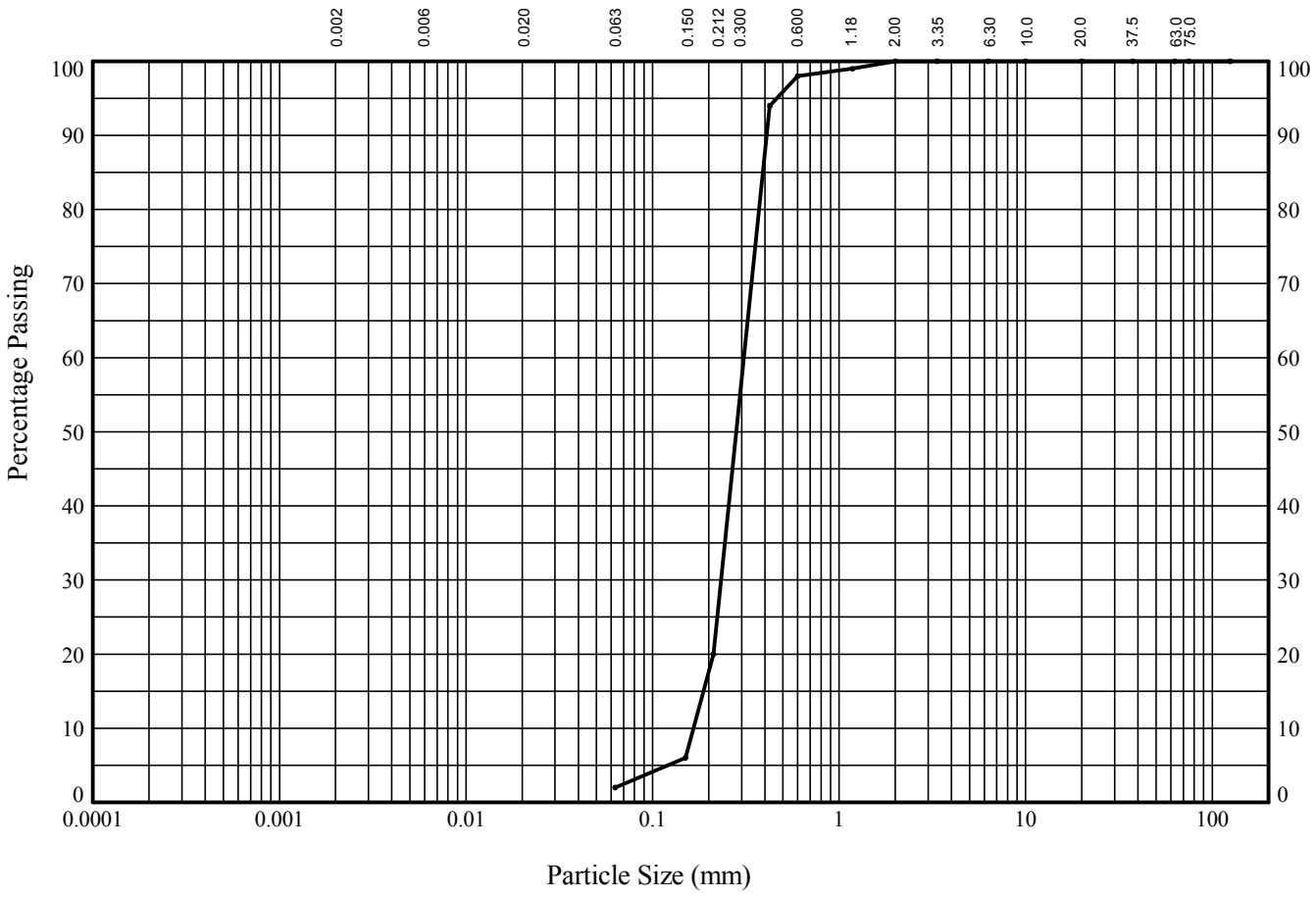
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **21** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	98
0.425	94
0.212	20
0.150	6
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**98**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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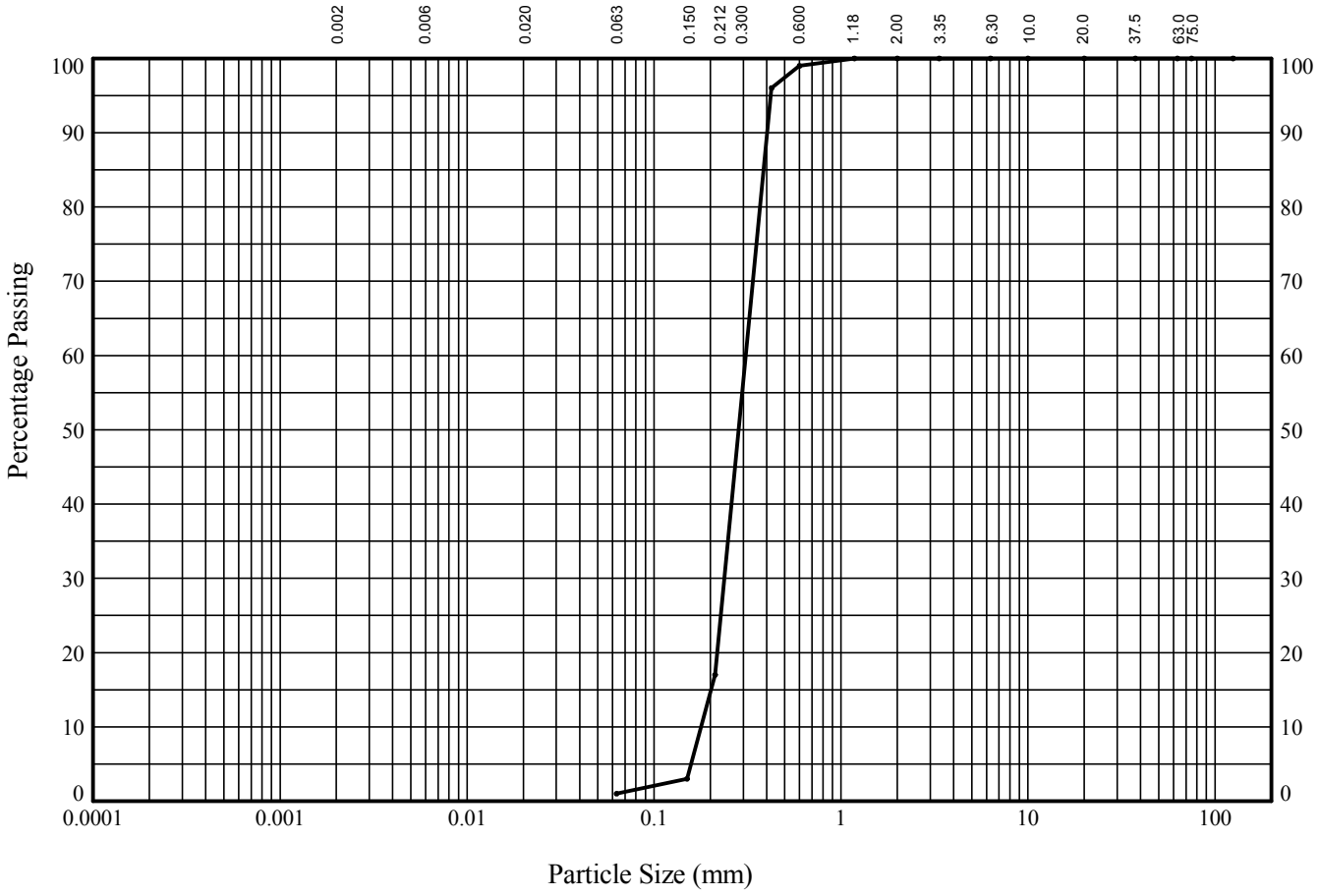
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **23** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	96
0.212	17
0.150	3
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**99**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey SAND

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STRUCTURAL SOILS
The Potteries
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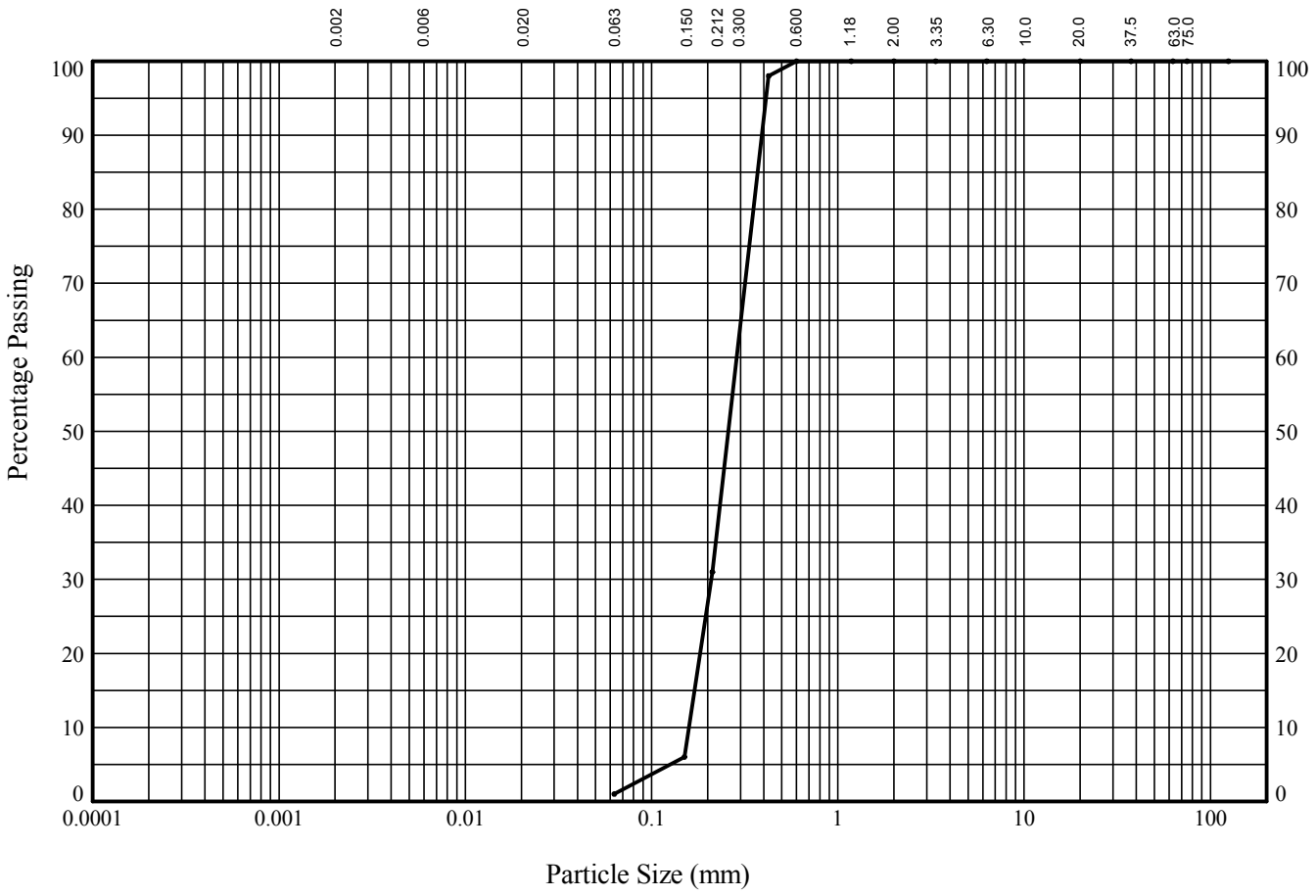
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	98
0.212	31
0.150	6
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**99**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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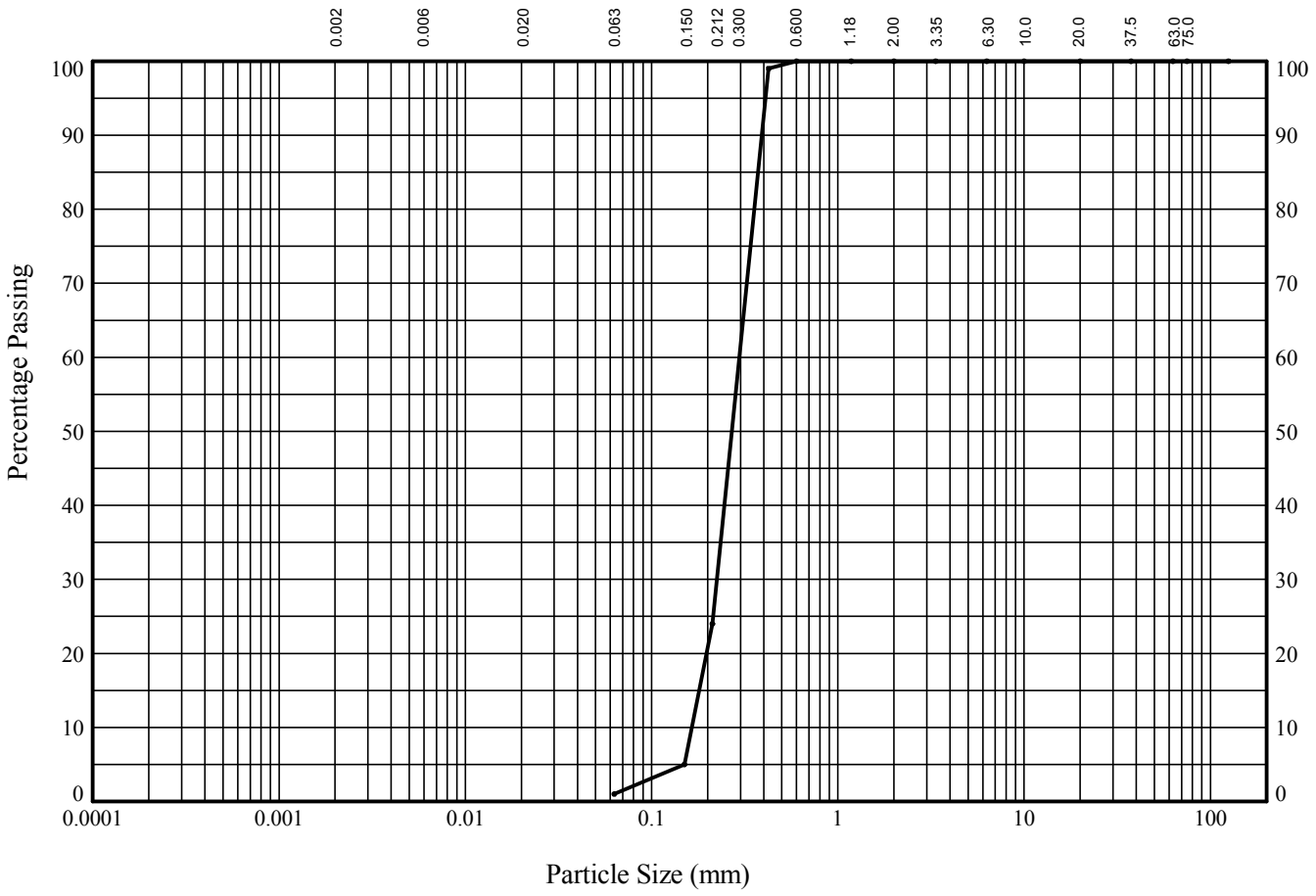
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	99
0.212	24
0.150	5
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**99**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

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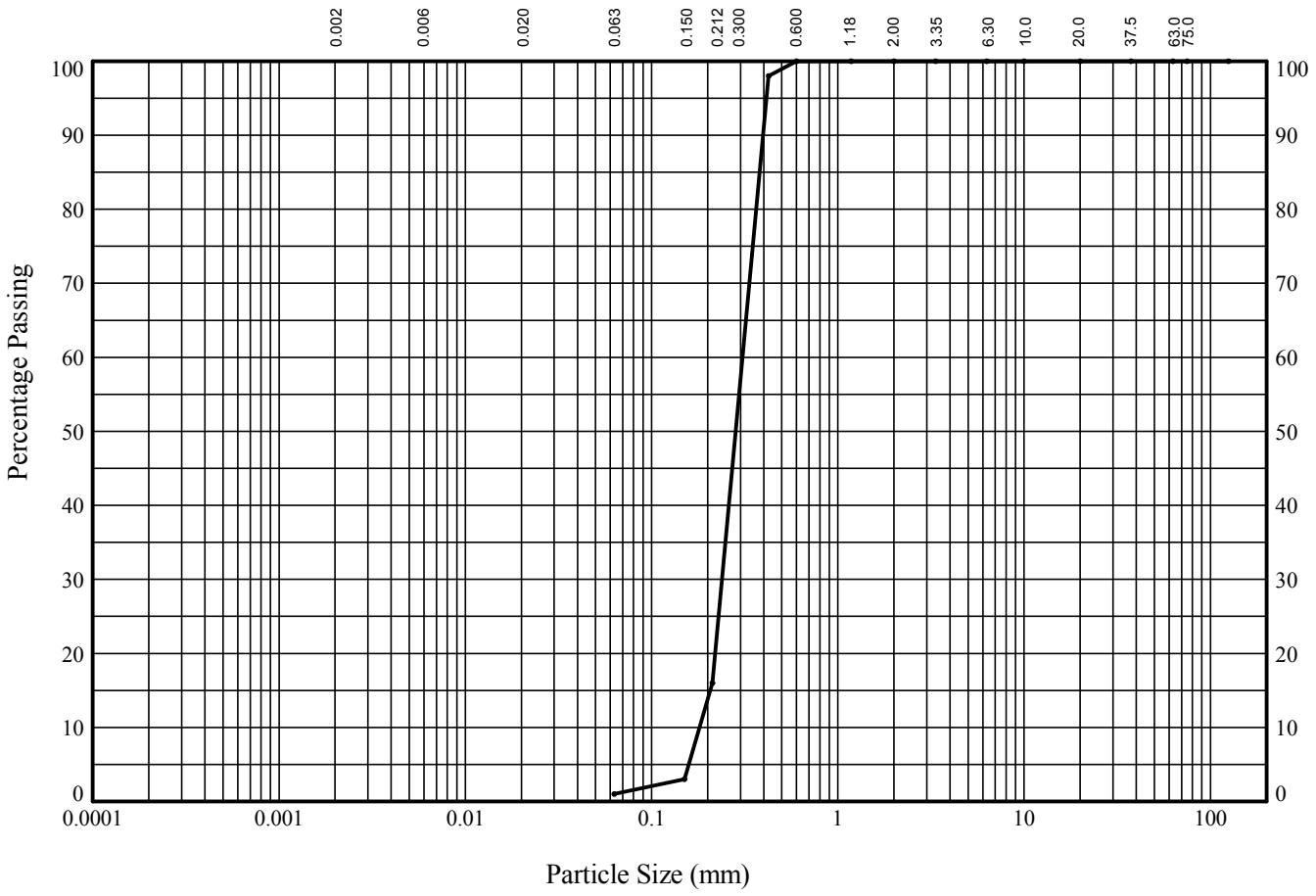
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	98
0.212	16
0.150	3
0.063	1

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**99**
SILT/CLAY	**1**

Soil Description:
Light brown slightly clayey SAND

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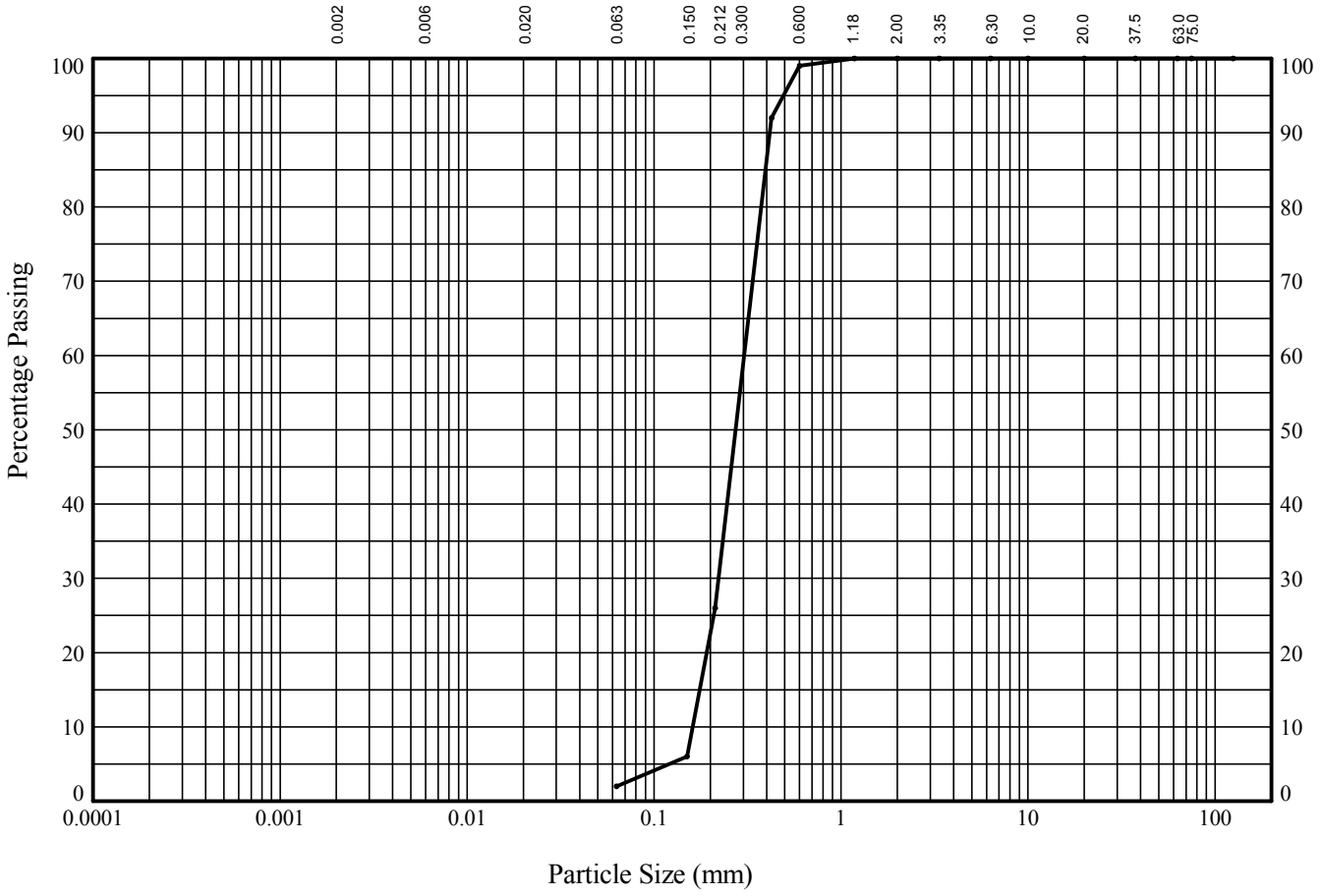
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	99
0.425	92
0.212	26
0.150	6
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**98**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey SAND

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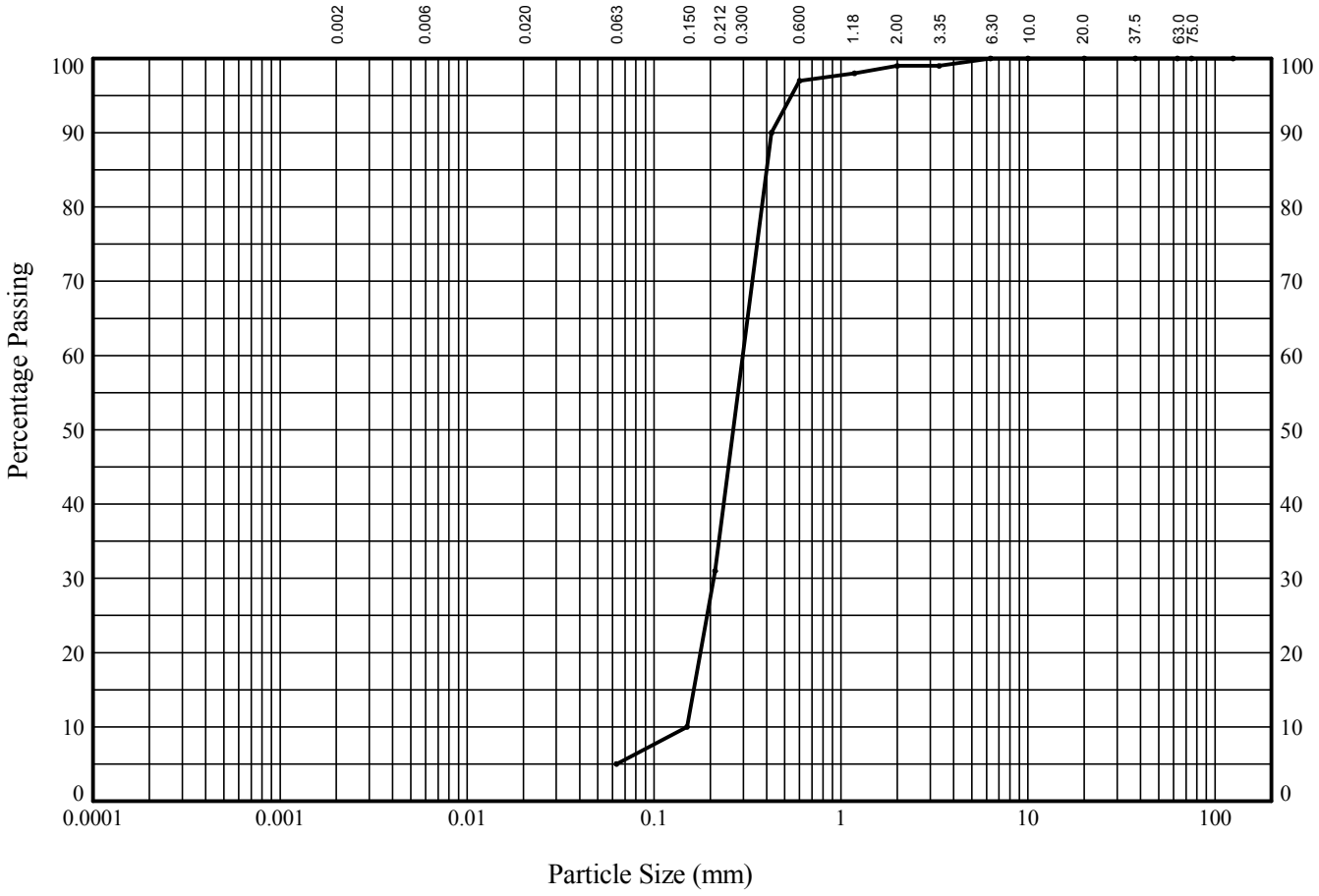
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	97
0.425	90
0.212	31
0.150	10
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**94**
SILT/CLAY	**5**

Soil Description:
Light brown clayey slightly gravelly SAND

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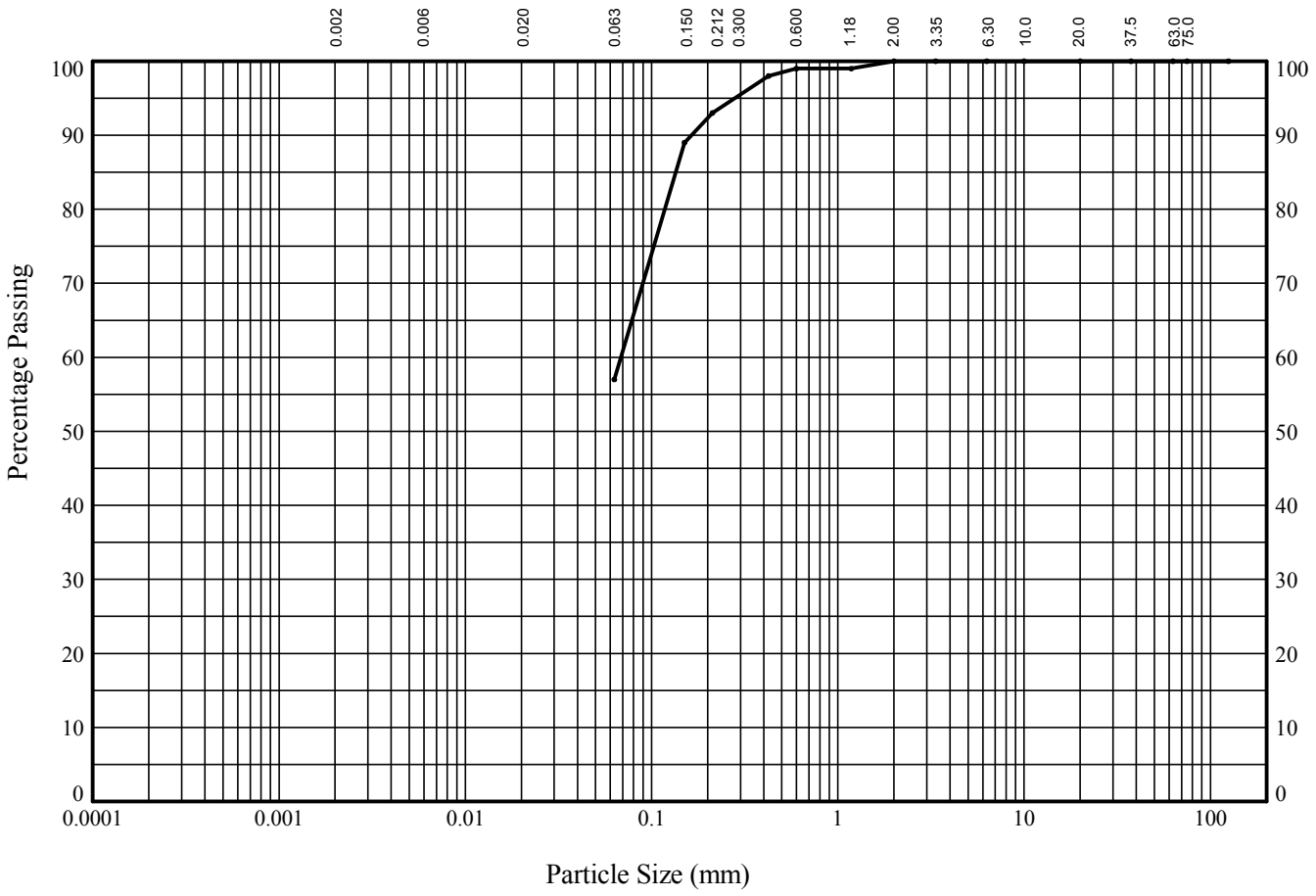
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **34** Sample Type: **B** Depth (m): **16.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	99
0.425	98
0.212	93
0.150	89
0.063	57

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**43**
SILT/CLAY	**57**

Soil Description:
Brown sandy CLAY

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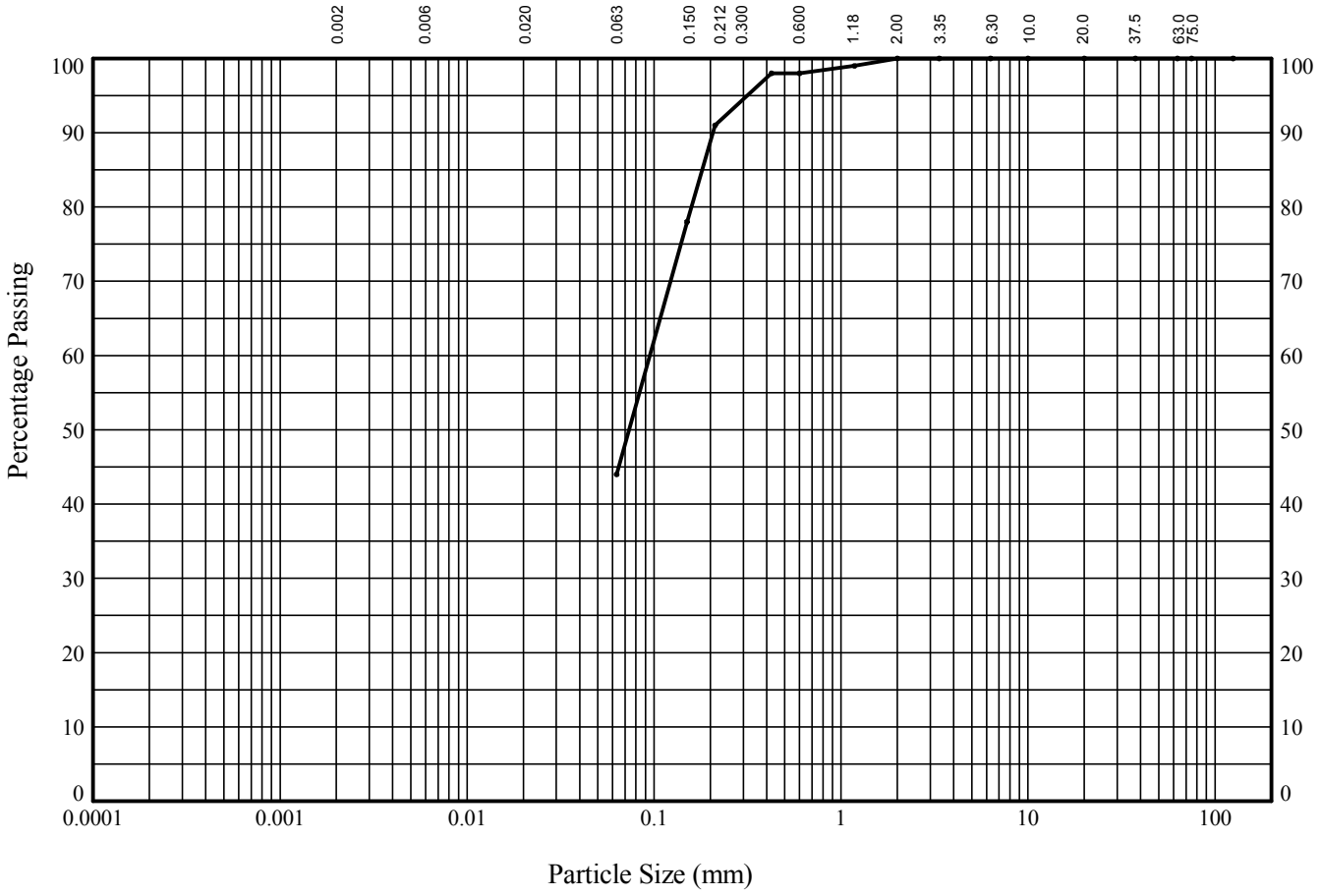
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **36** Sample Type: **B** Depth (m): **17.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	98
0.425	98
0.212	91
0.150	78
0.063	44

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**56**
SILT/CLAY	**44**

Soil Description:
Light brown very sandy CLAY

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STRUCTURAL SOILS
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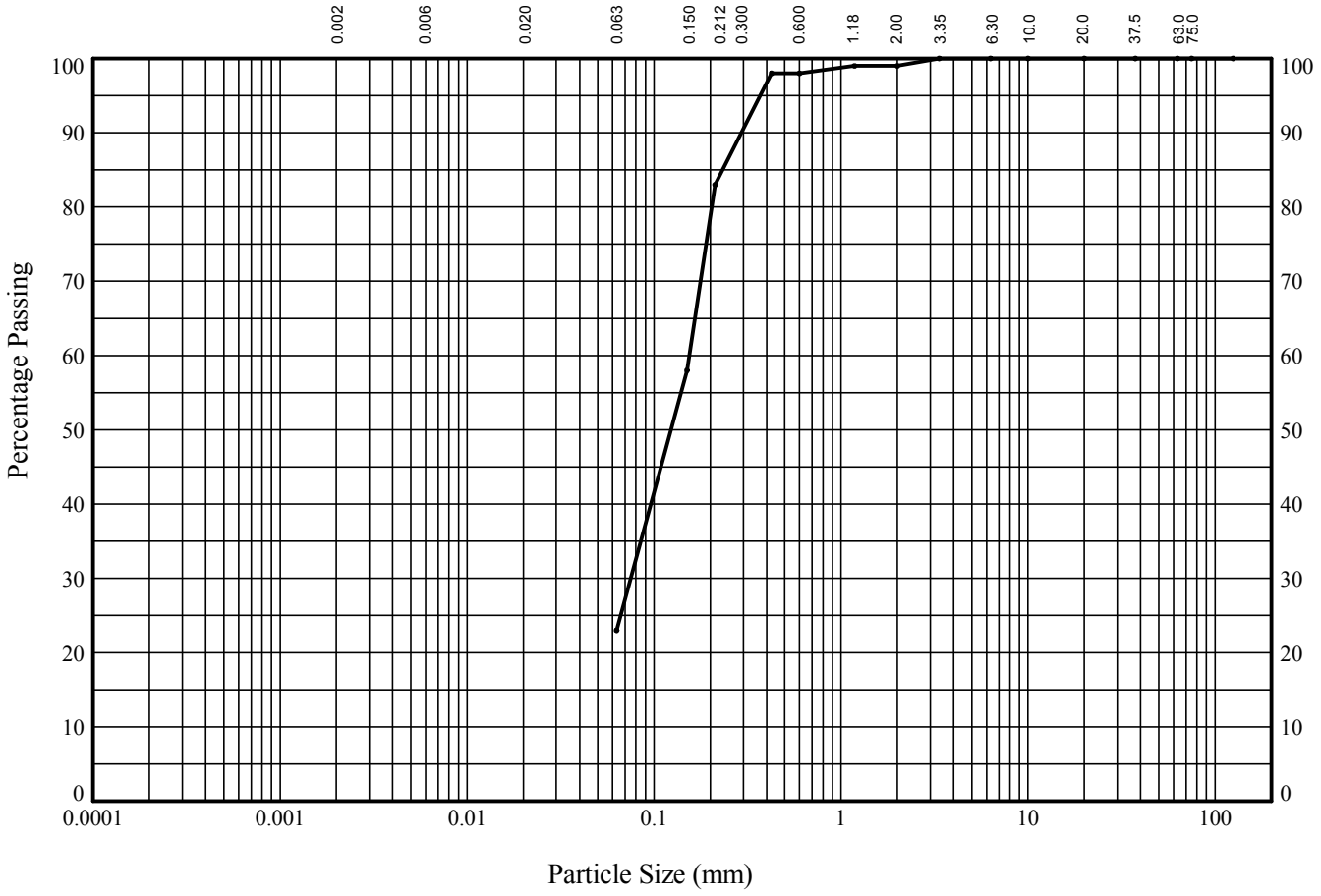
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP12** Sample Ref: **40** Sample Type: **B** Depth (m): **19.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	99
1.18	99
0.600	98
0.425	98
0.212	83
0.150	58
0.063	23

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**76**
SILT/CLAY	**23**

Soil Description:
Brown clayey slightly gravelly SAND

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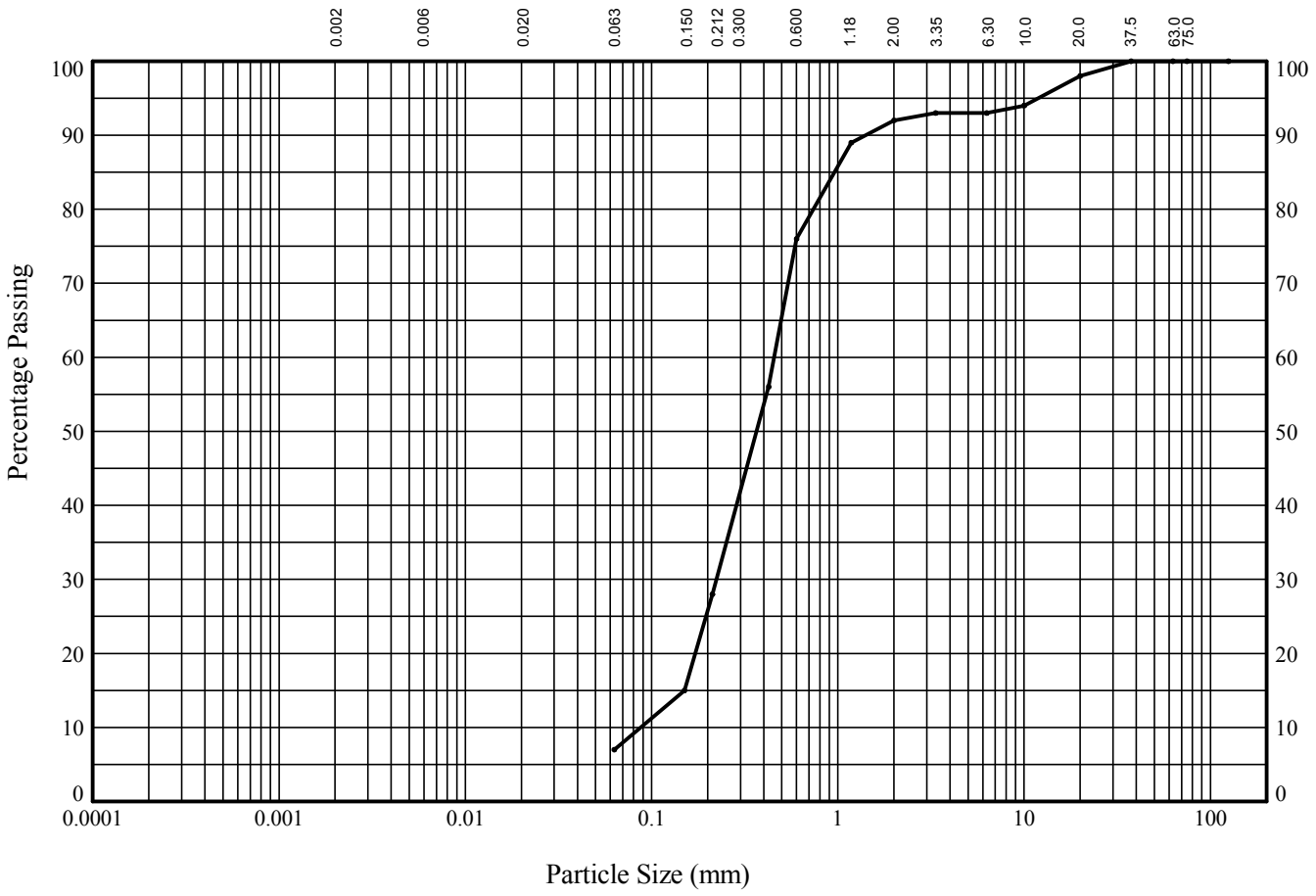
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **3** Sample Type: **B** Depth (m): **1.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	98
10.0	94
6.30	93
3.35	93
2.00	92
1.18	89
0.600	76
0.425	56
0.212	28
0.150	15
0.063	7

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**85**
SILT/CLAY	**7**

Soil Description:
Dark brown clayey gravelly SAND

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STRUCTURAL SOILS
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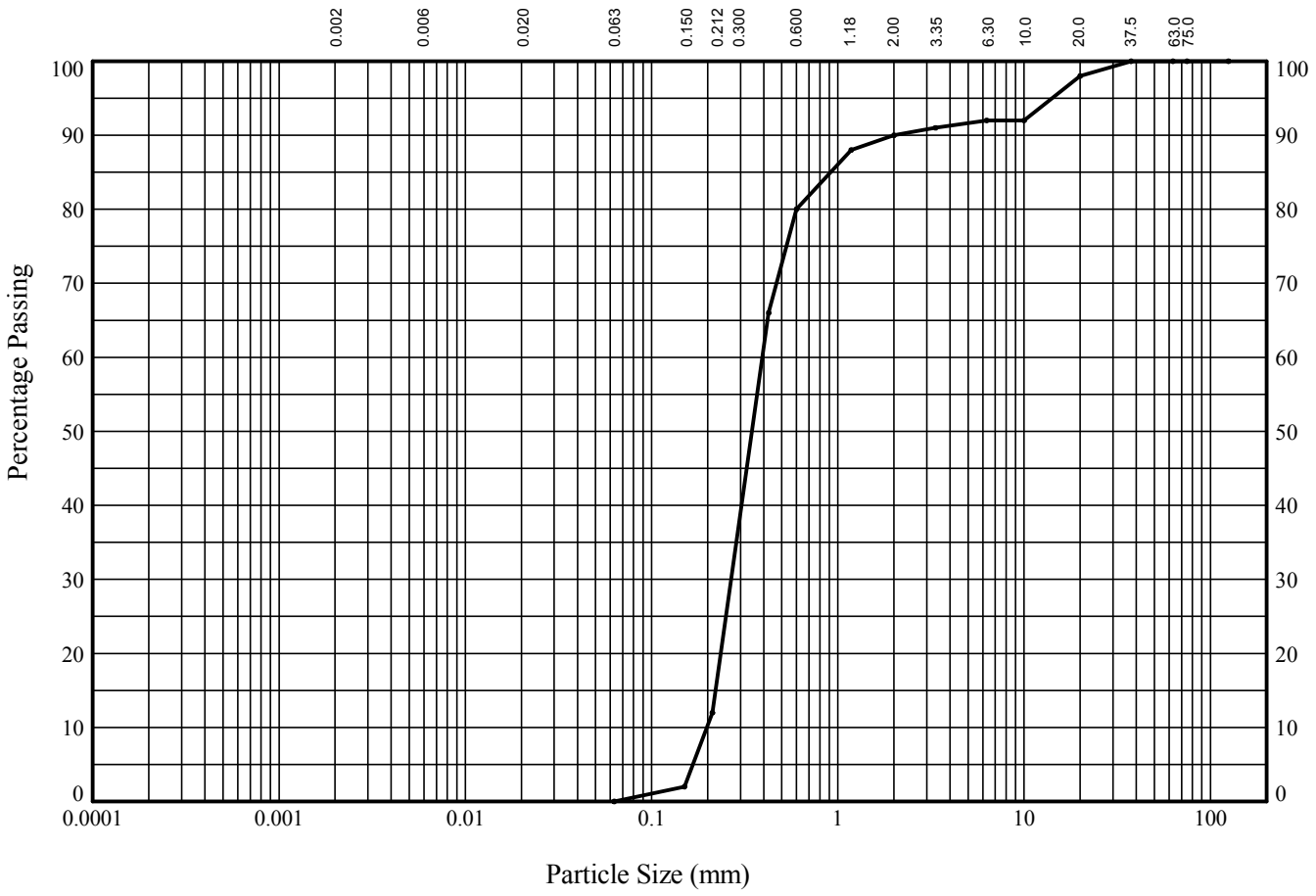
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **5** Sample Type: **B** Depth (m): **2.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	98
10.0	92
6.30	92
3.35	91
2.00	90
1.18	88
0.600	80
0.425	66
0.212	12
0.150	2
0.063	0

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**90**
SILT/CLAY	**0**

Soil Description:
Orange brown gravelly SAND

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STRUCTURAL SOILS
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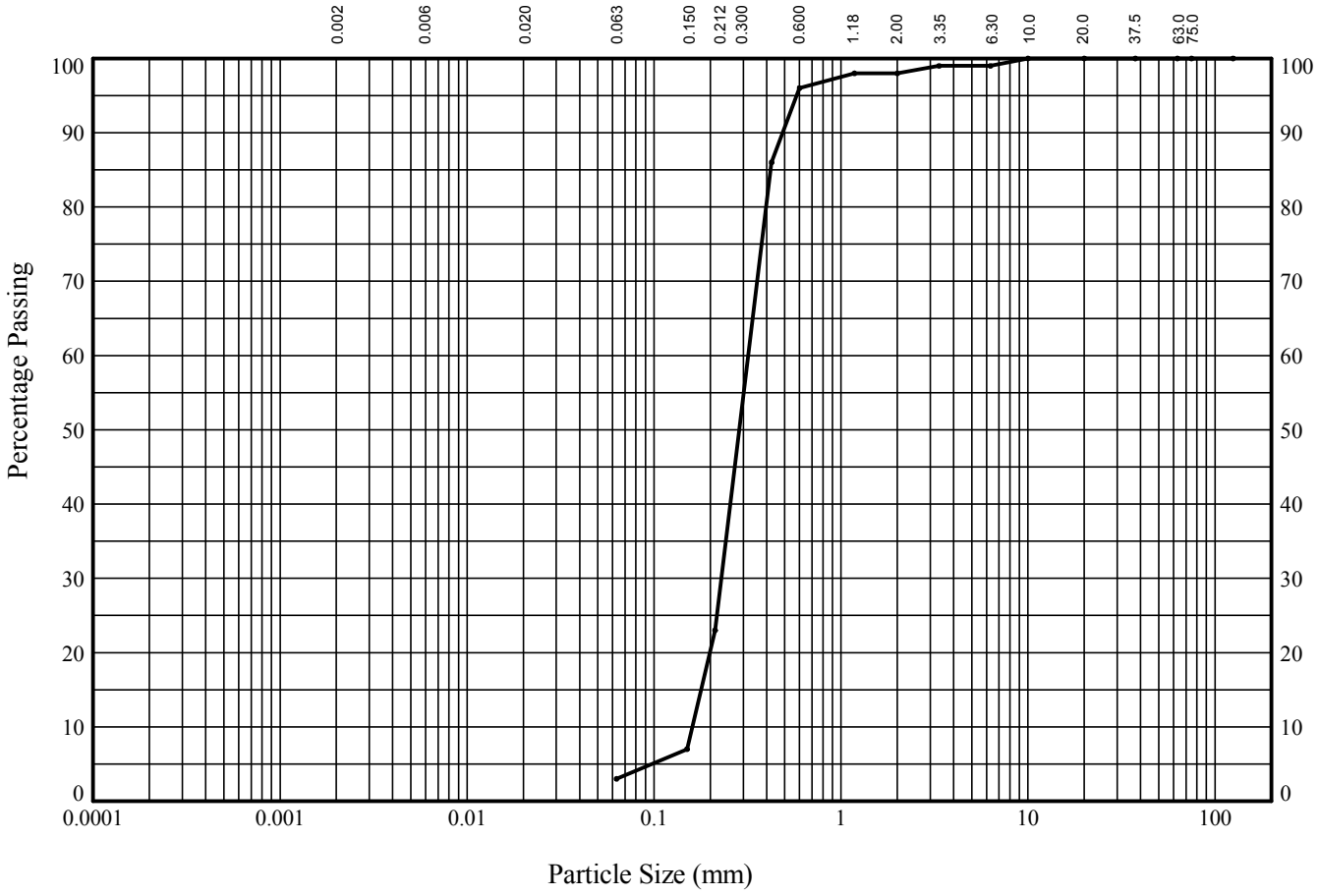
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **7** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	98
1.18	98
0.600	96
0.425	86
0.212	23
0.150	7
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**95**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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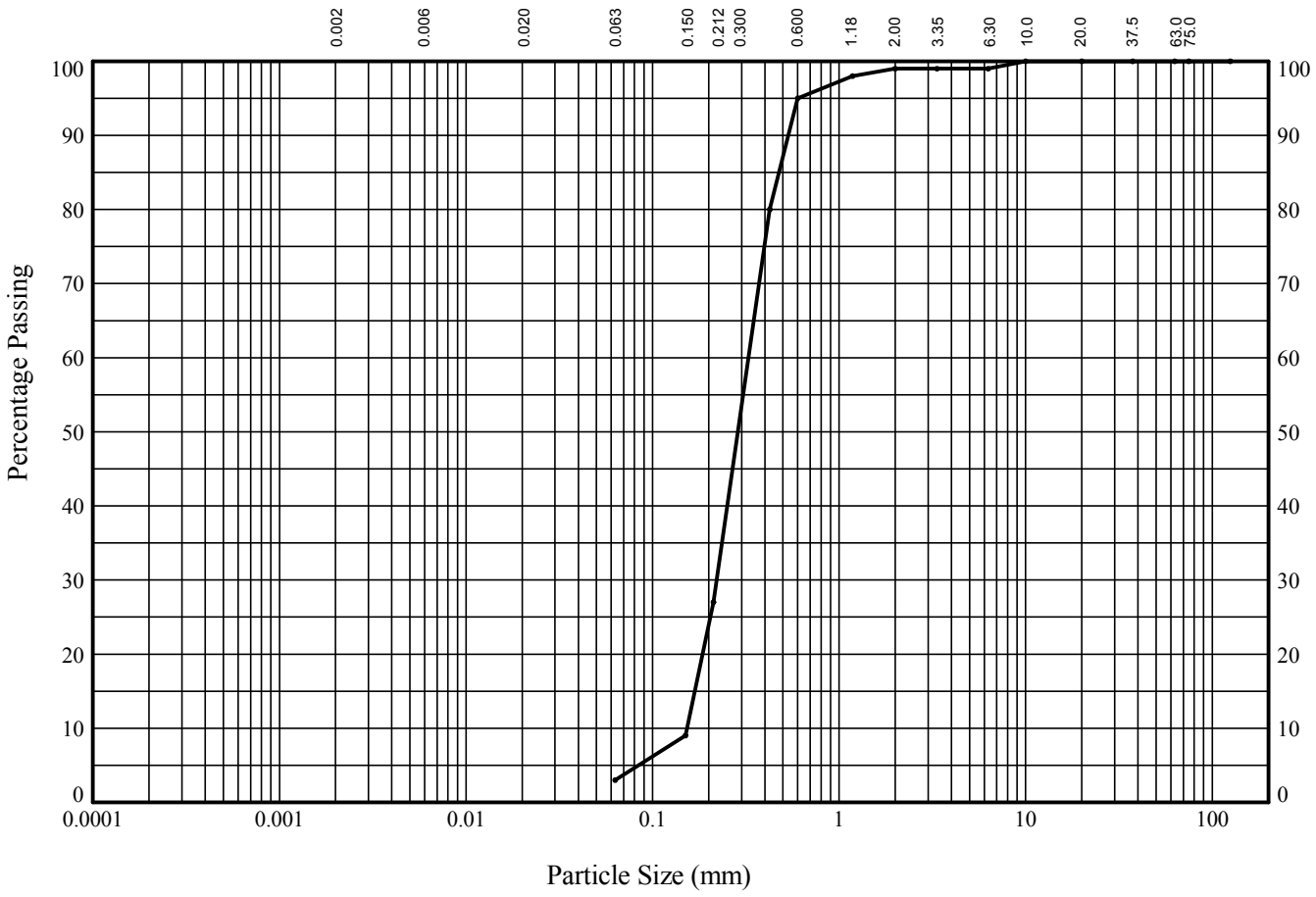
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **9** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	99
1.18	98
0.600	95
0.425	80
0.212	27
0.150	9
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**96**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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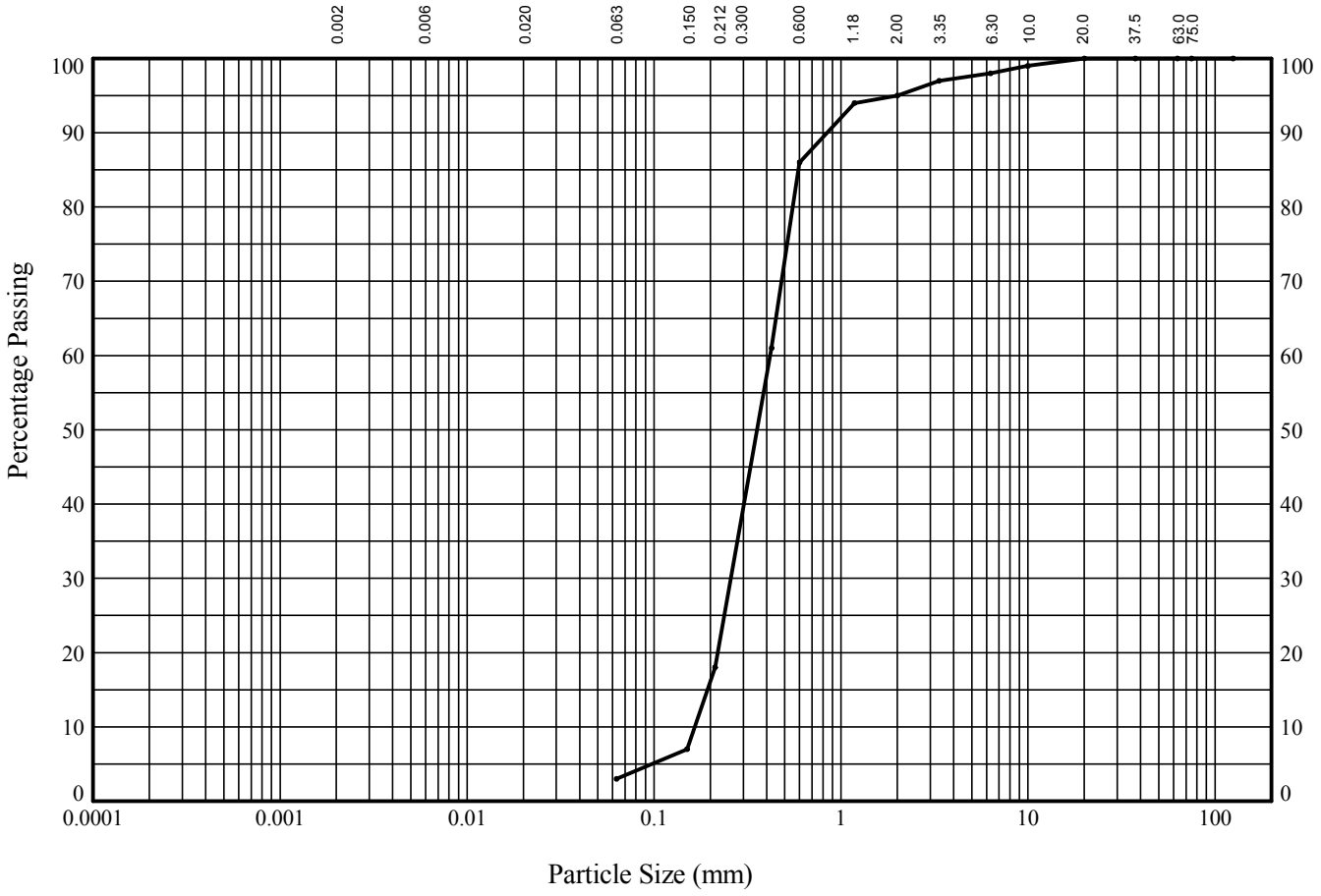
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	95
1.18	94
0.600	86
0.425	61
0.212	18
0.150	7
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**92**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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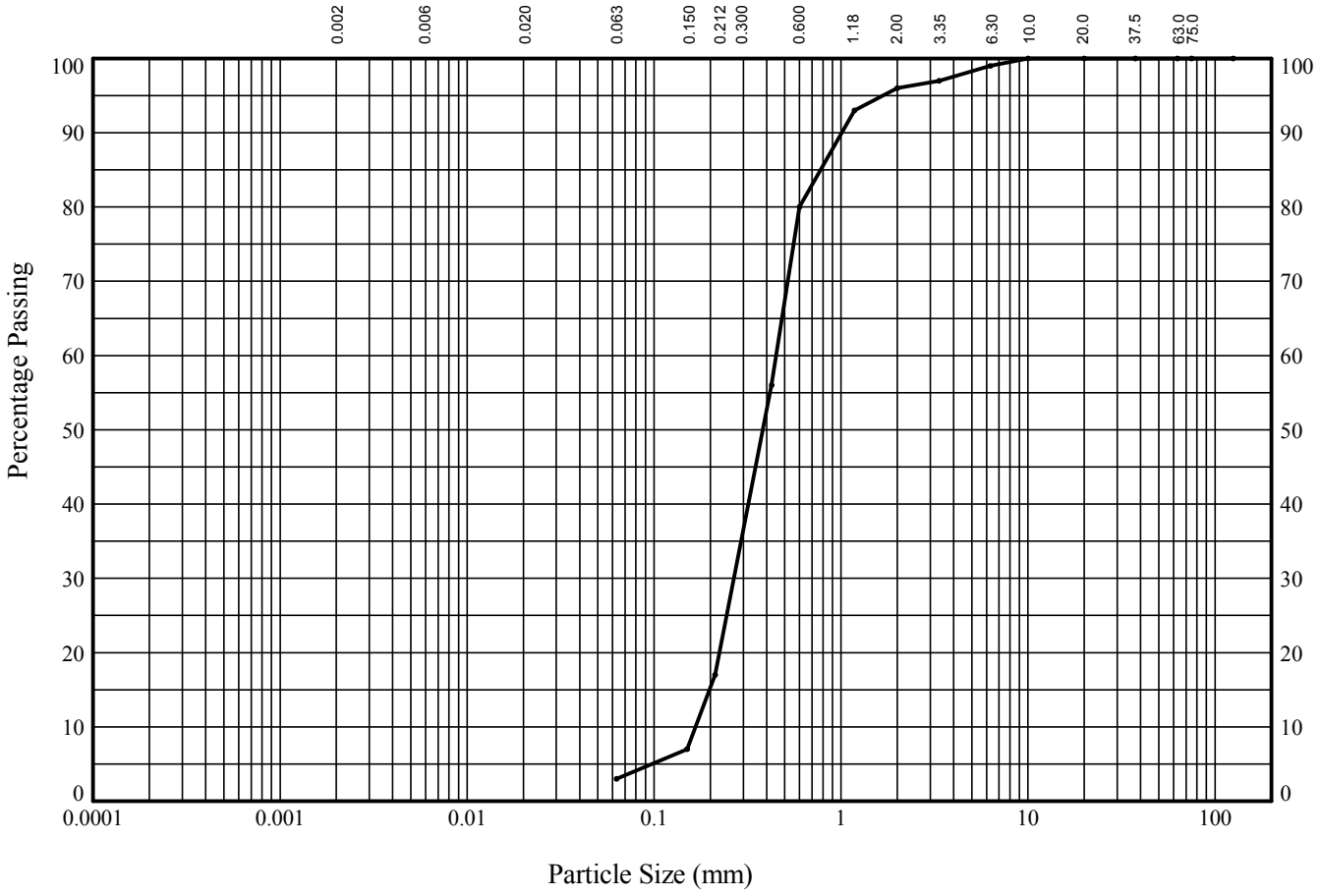
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **15** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	97
2.00	96
1.18	93
0.600	80
0.425	56
0.212	17
0.150	7
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**93**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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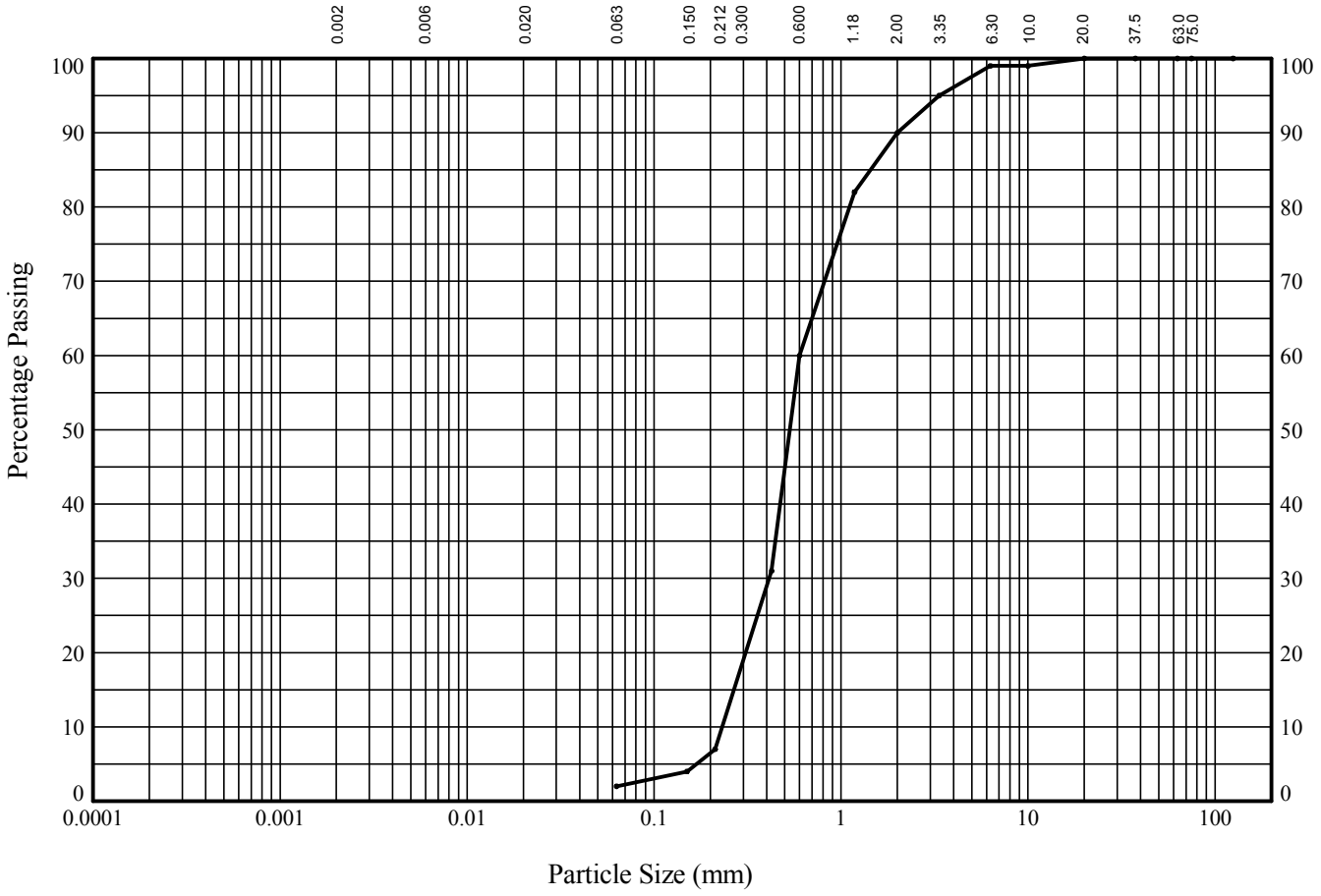
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **17** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	95
2.00	90
1.18	82
0.600	60
0.425	31
0.212	7
0.150	4
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**88**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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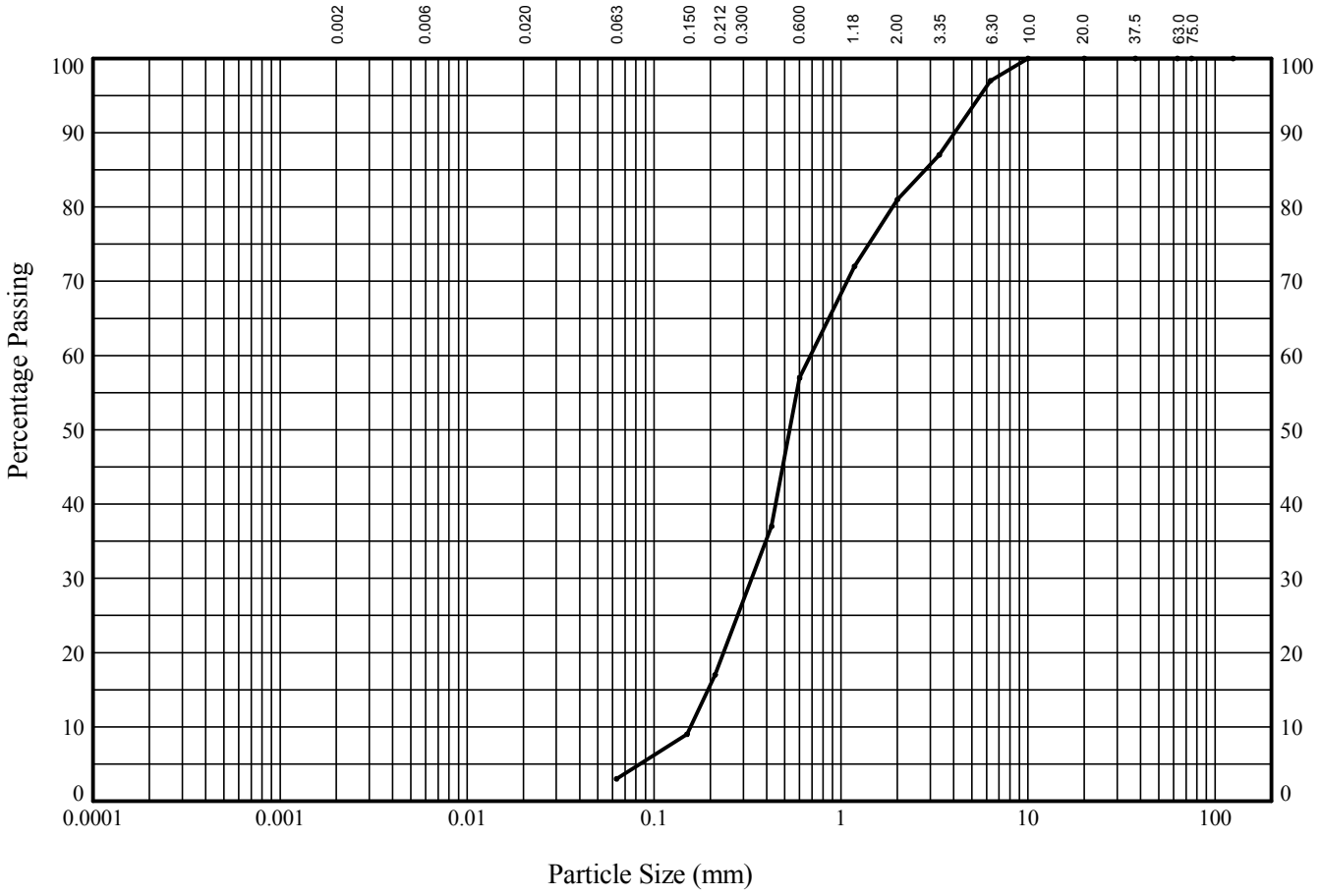
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **19** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	97
3.35	87
2.00	81
1.18	72
0.600	57
0.425	37
0.212	17
0.150	9
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**19**
SAND	**78**
SILT/CLAY	**3**

Soil Description:
Brown slightly clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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Castleford
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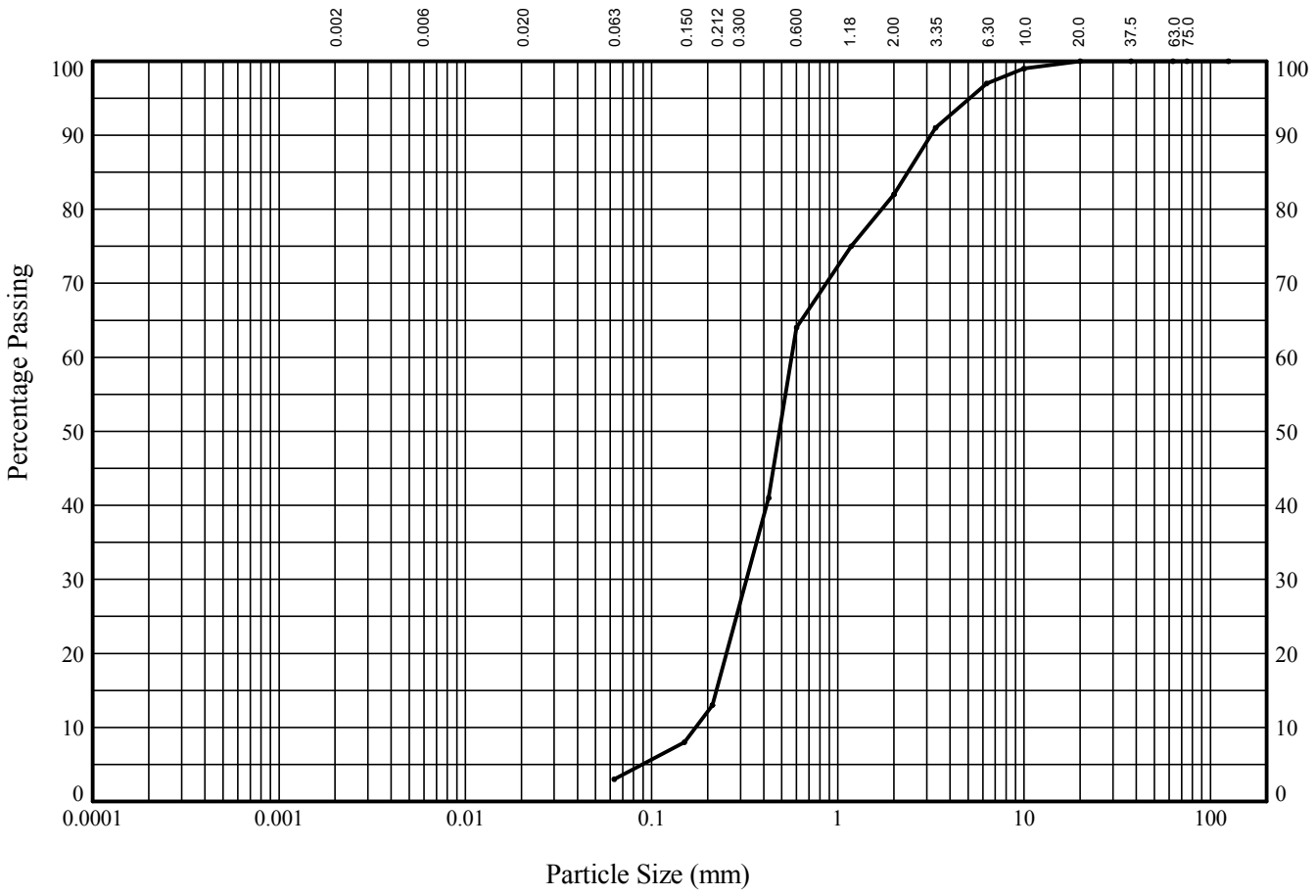
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **21** Sample Type: **B** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	97
3.35	91
2.00	82
1.18	75
0.600	64
0.425	41
0.212	13
0.150	8
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**18**
SAND	**79**
SILT/CLAY	**3**

Soil Description:
Brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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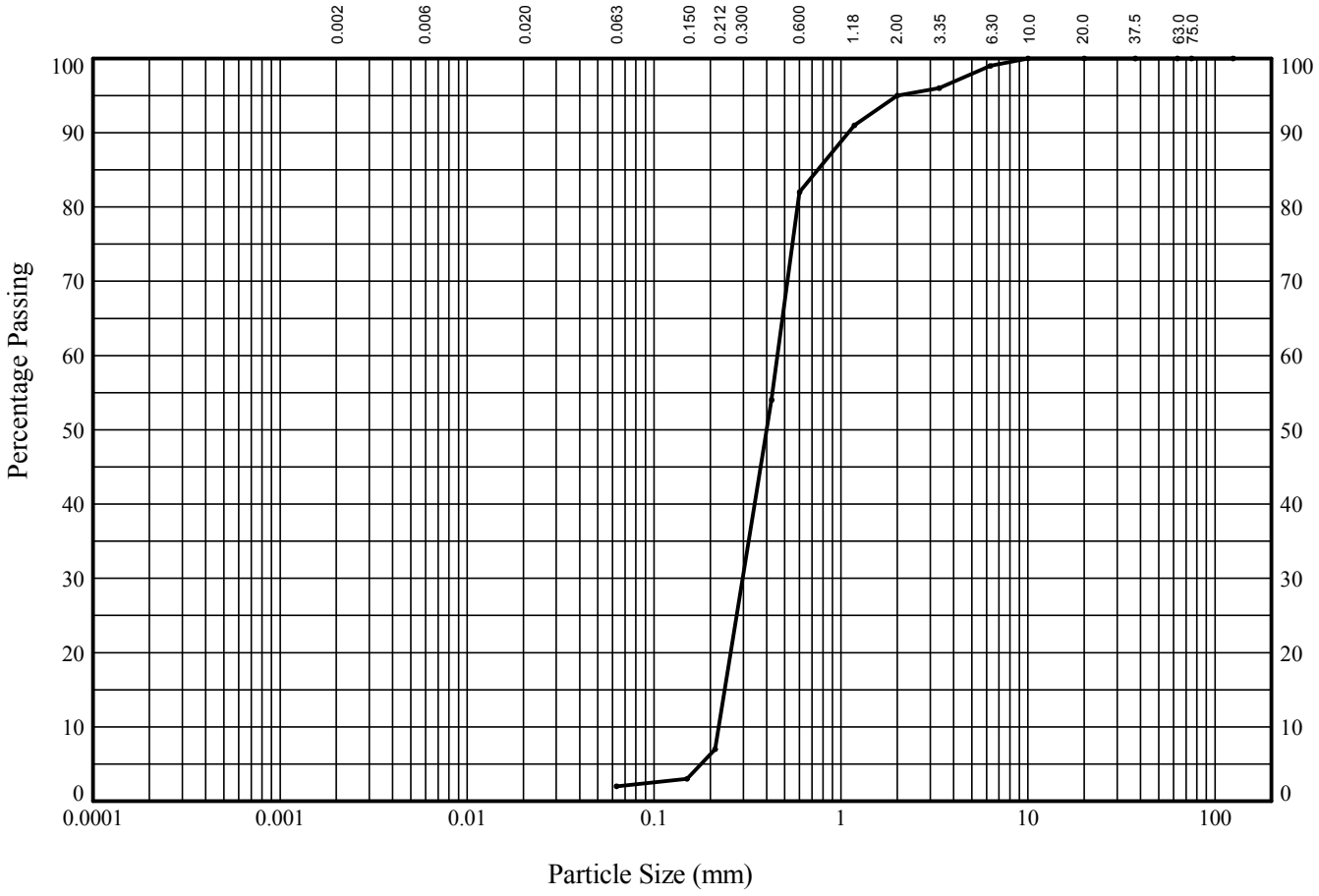
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **23** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	96
2.00	95
1.18	91
0.600	82
0.425	54
0.212	7
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**93**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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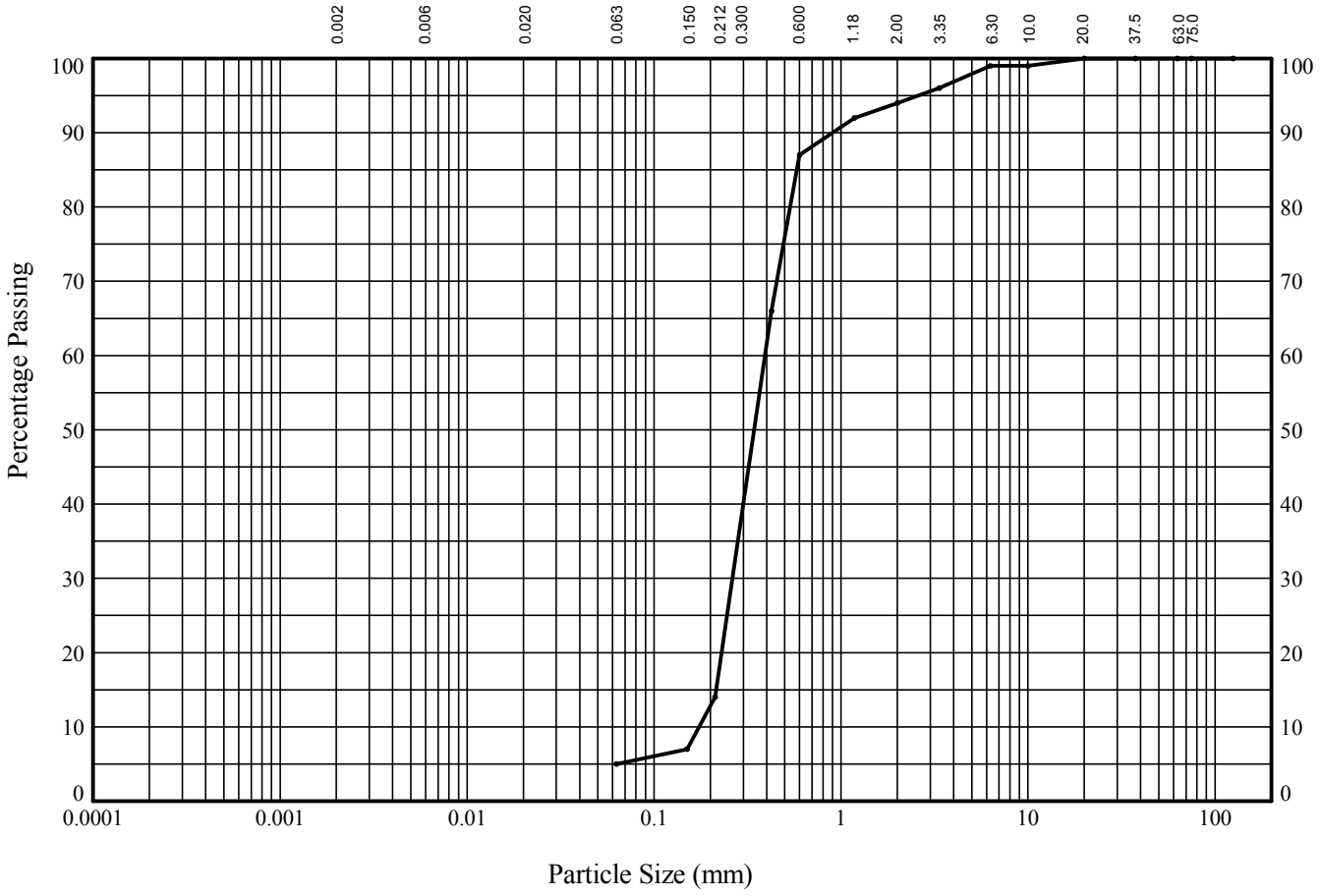
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **25** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	96
2.00	94
1.18	92
0.600	87
0.425	66
0.212	14
0.150	7
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**89**
SILT/CLAY	**5**

Soil Description:
Orange brown clayey gravelly SAND

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STRUCTURAL SOILS
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Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

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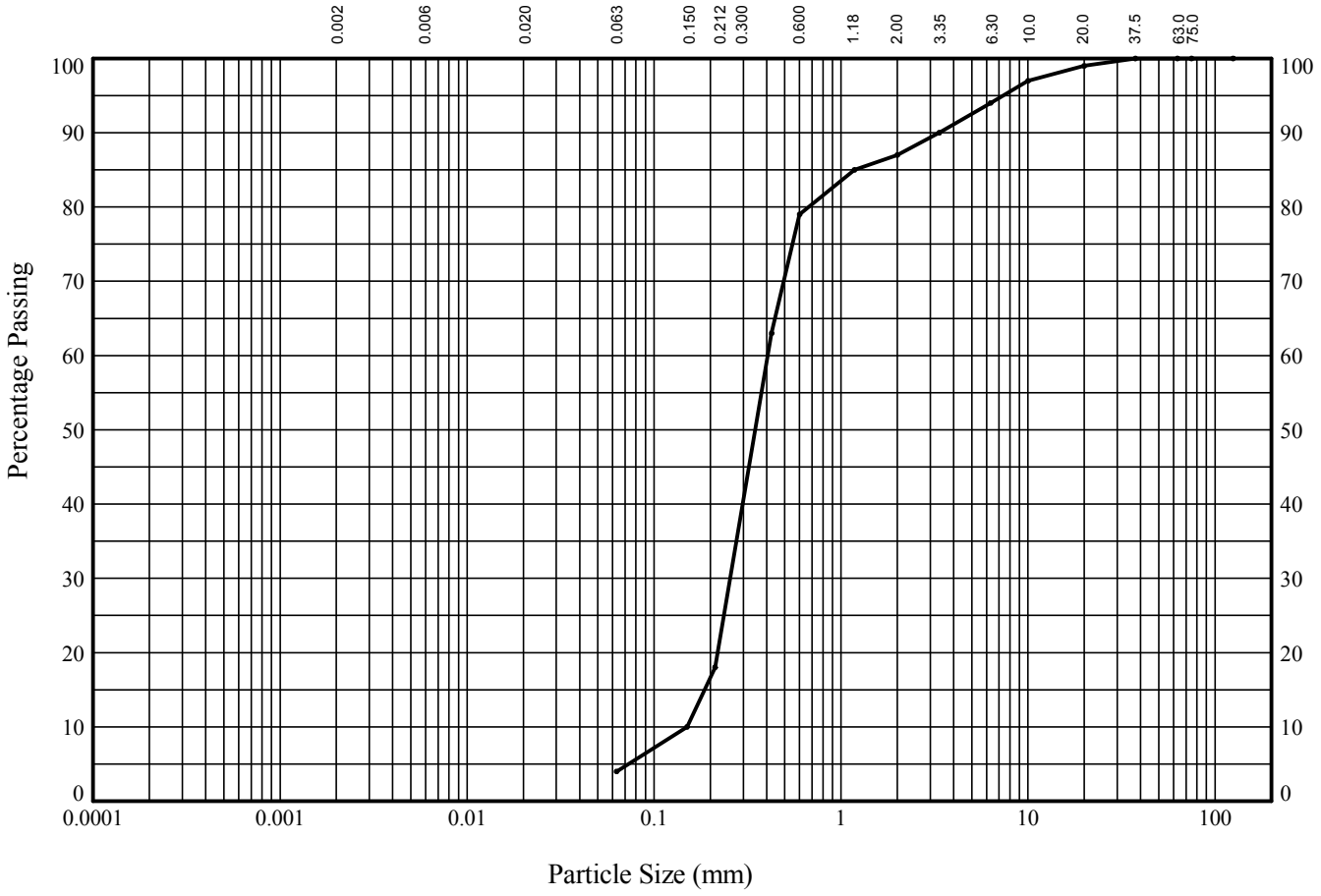
PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **27** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	97
6.30	94
3.35	90
2.00	87
1.18	85
0.600	79
0.425	63
0.212	18
0.150	10
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**83**
SILT/CLAY	**4**

Soil Description:
Dark brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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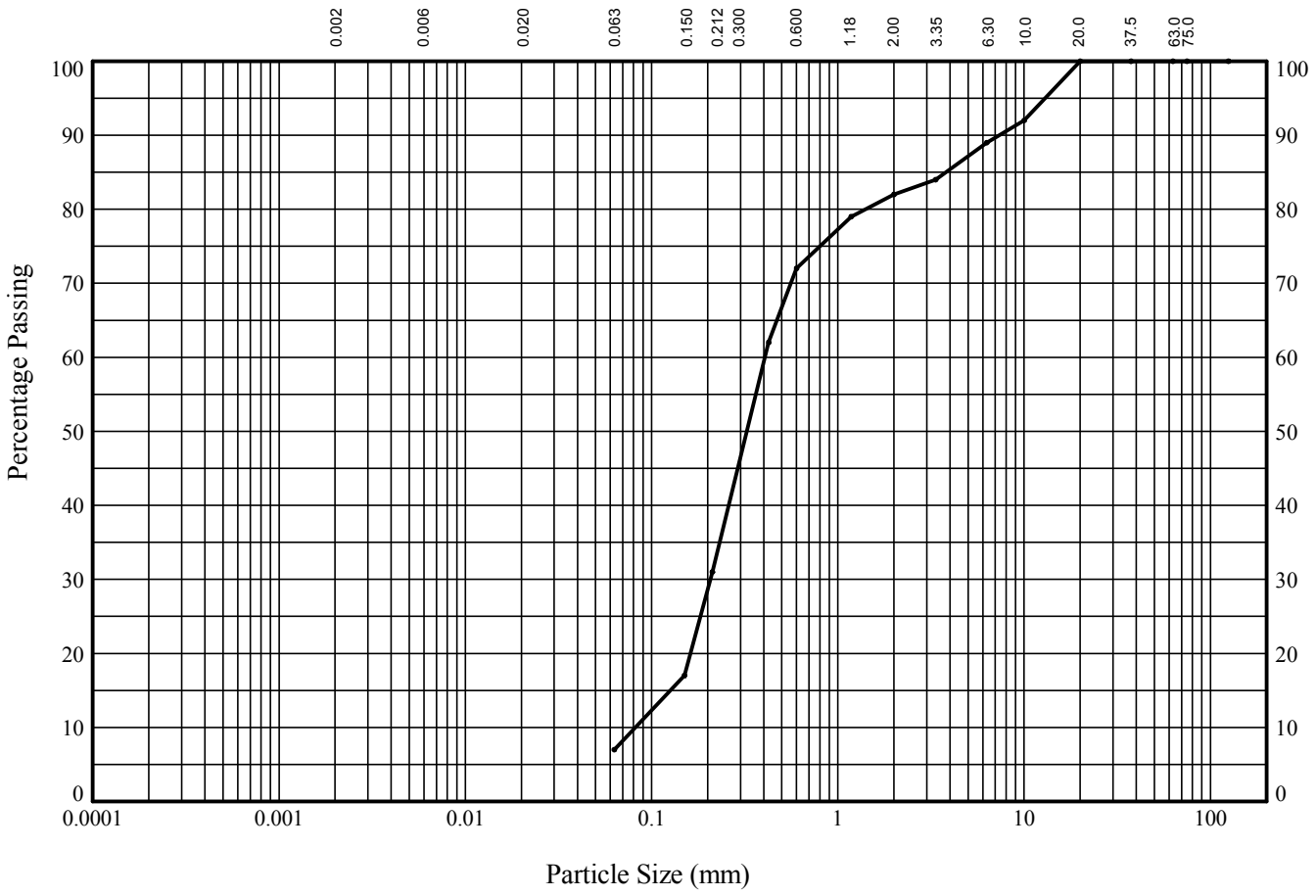
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **29** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	92
6.30	89
3.35	84
2.00	82
1.18	79
0.600	72
0.425	62
0.212	31
0.150	17
0.063	7

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**18**
SAND	**75**
SILT/CLAY	**7**

Soil Description:
Dark orange brown clayey gravelly SAND

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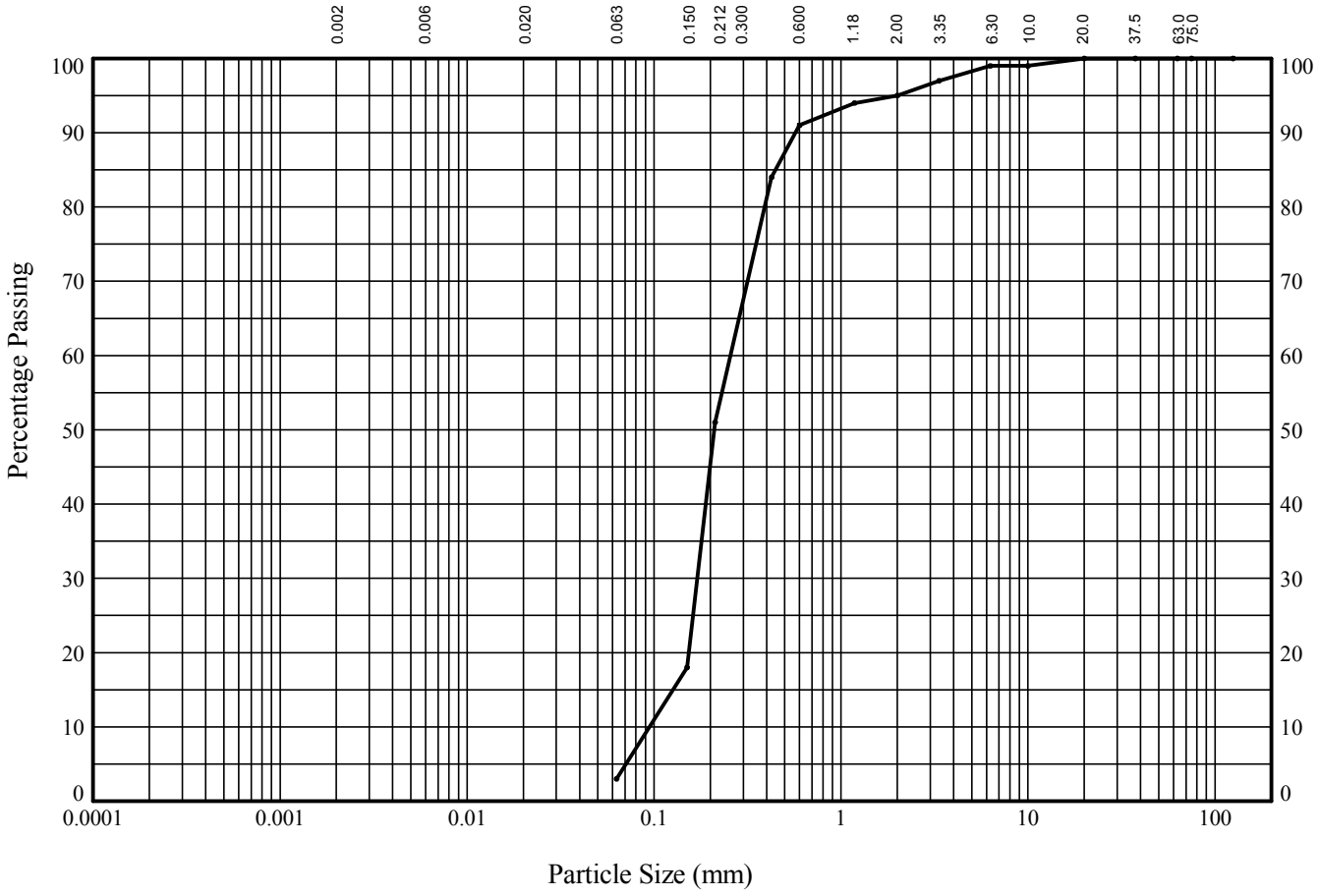
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **31** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	97
2.00	95
1.18	94
0.600	91
0.425	84
0.212	51
0.150	18
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**92**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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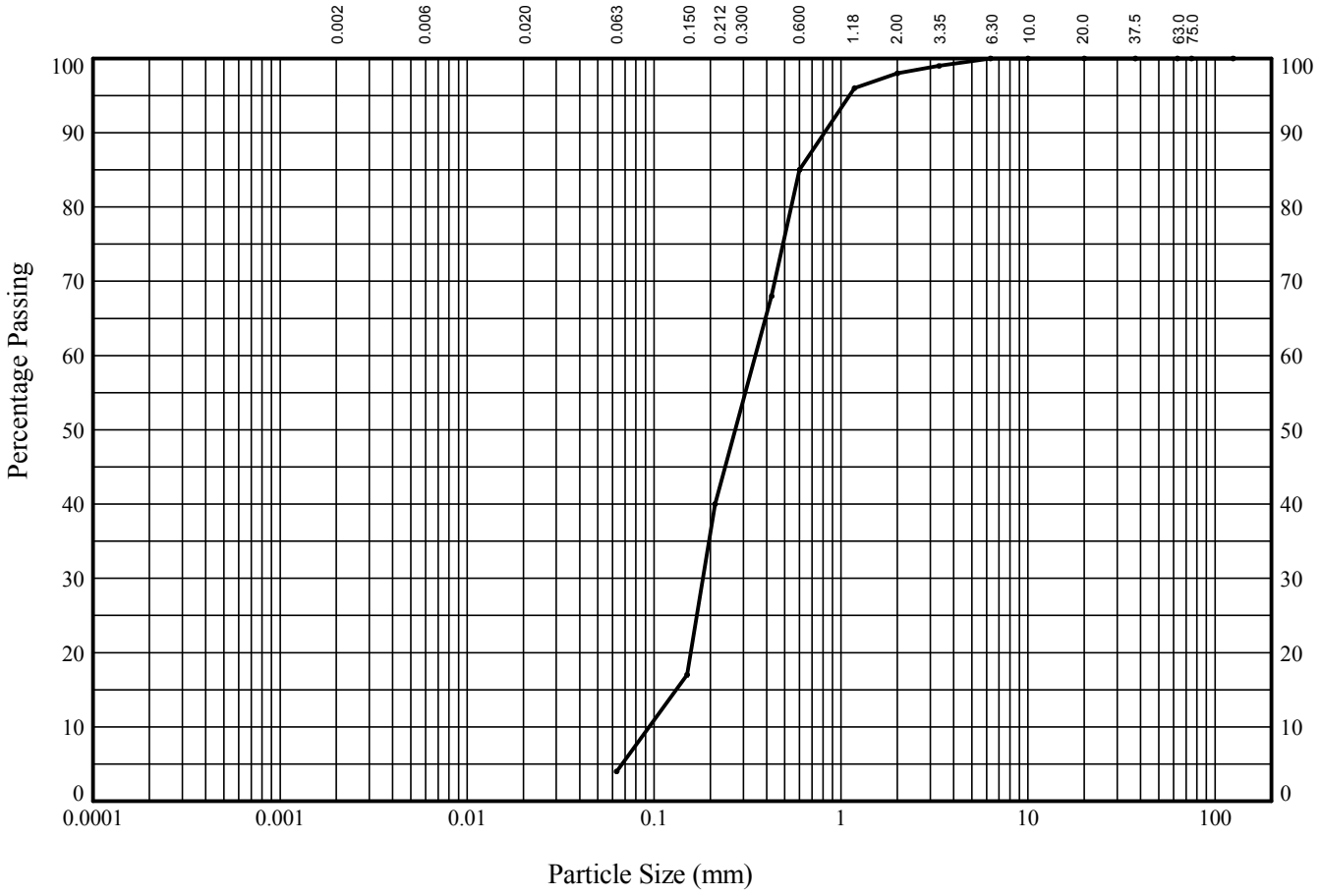
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **33** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	96
0.600	85
0.425	68
0.212	40
0.150	17
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**94**
SILT/CLAY	**4**

Soil Description:
Dark orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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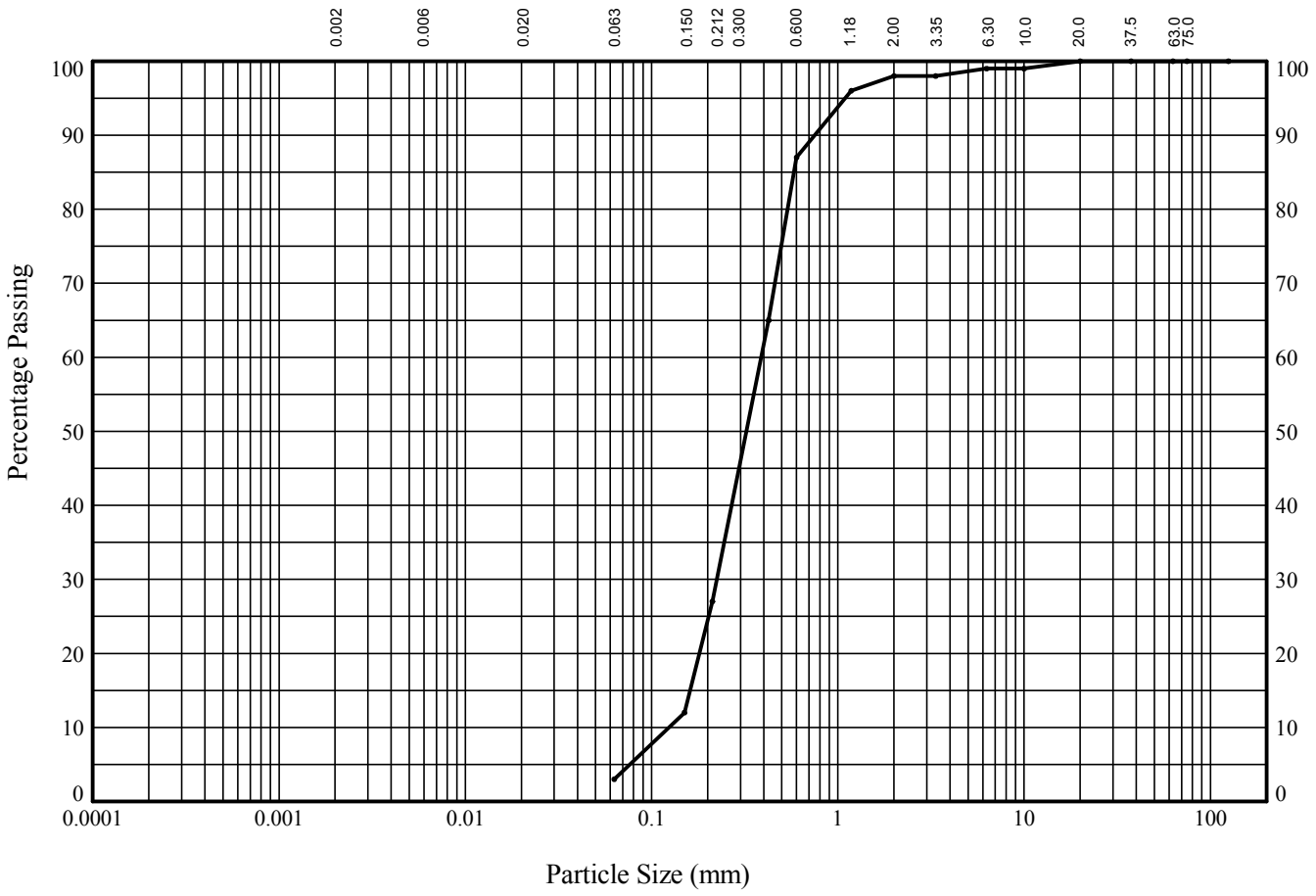
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **35** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	98
2.00	98
1.18	96
0.600	87
0.425	65
0.212	27
0.150	12
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**95**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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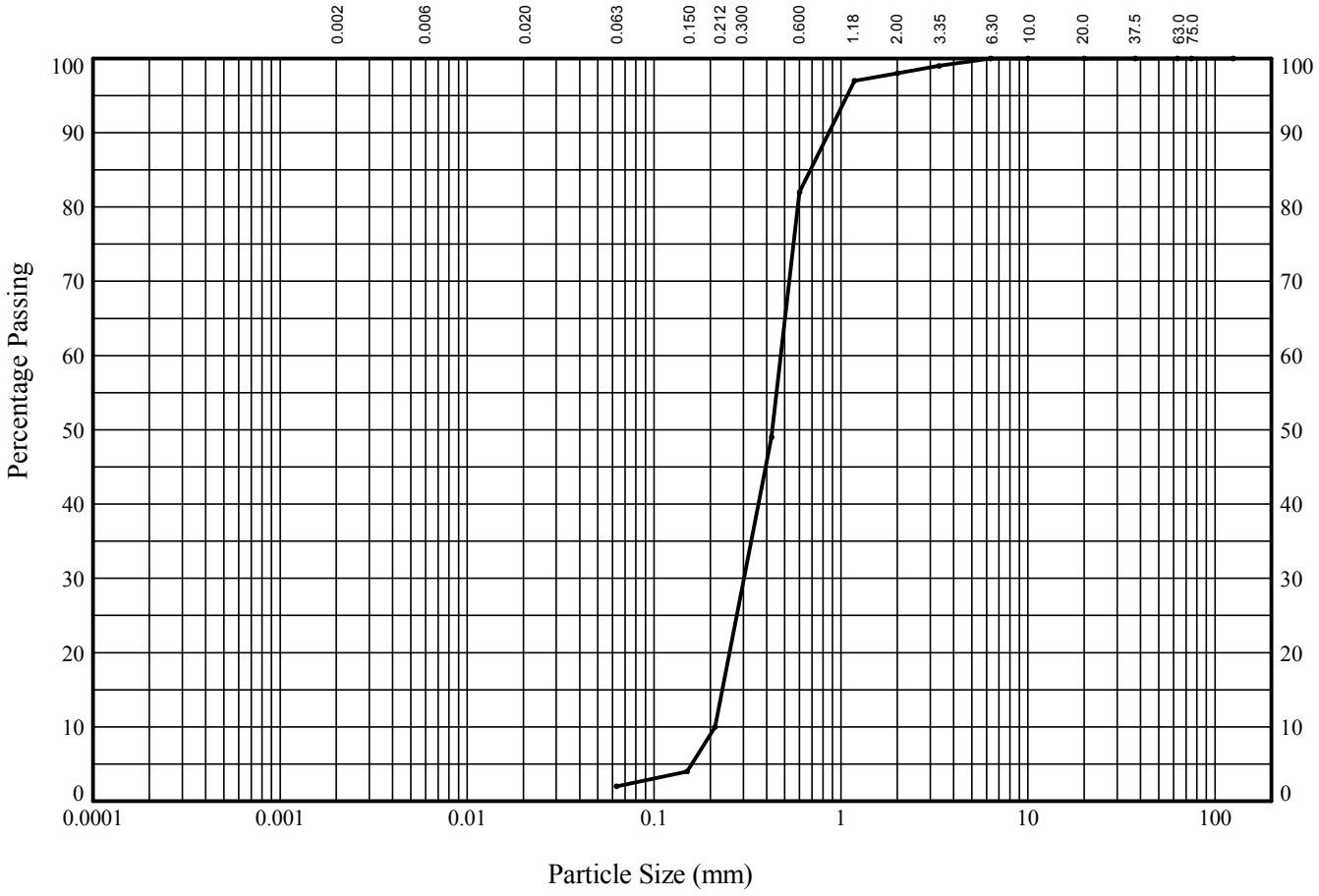
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **37** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	97
0.600	82
0.425	49
0.212	10
0.150	4
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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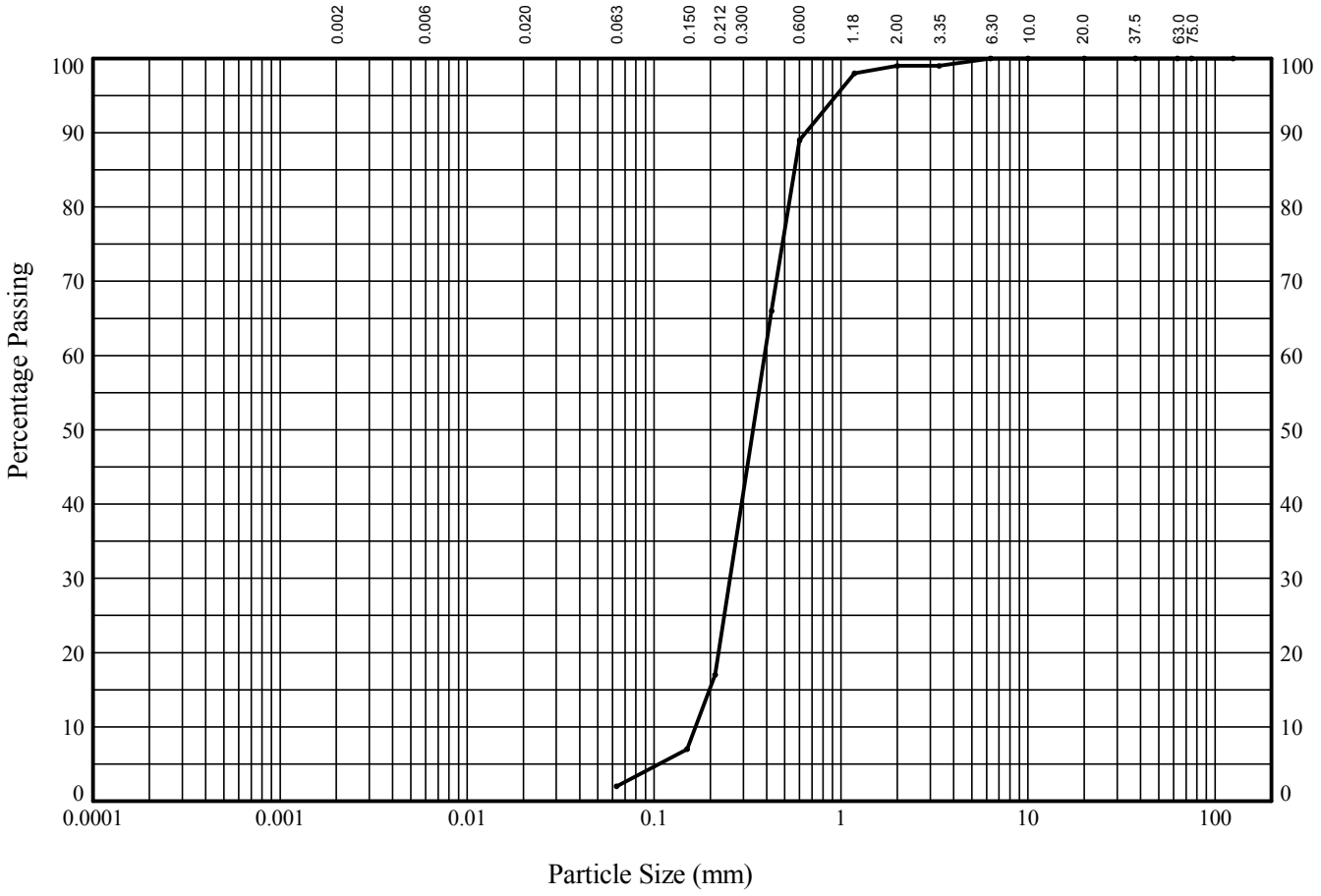
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **39** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	99
1.18	98
0.600	89
0.425	66
0.212	17
0.150	7
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**97**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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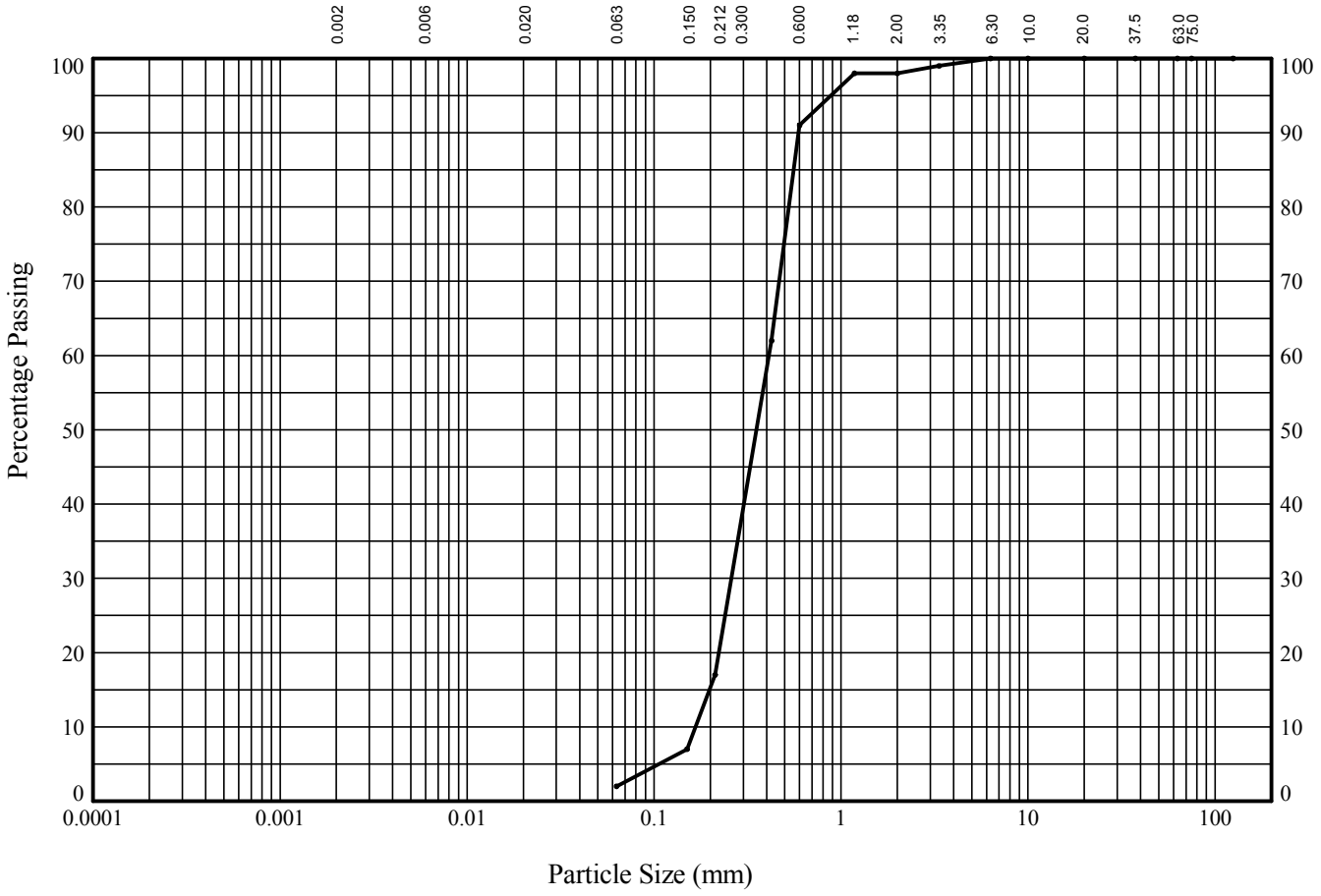
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP13** Sample Ref: **41** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	99
2.00	98
1.18	98
0.600	91
0.425	62
0.212	17
0.150	7
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Dark orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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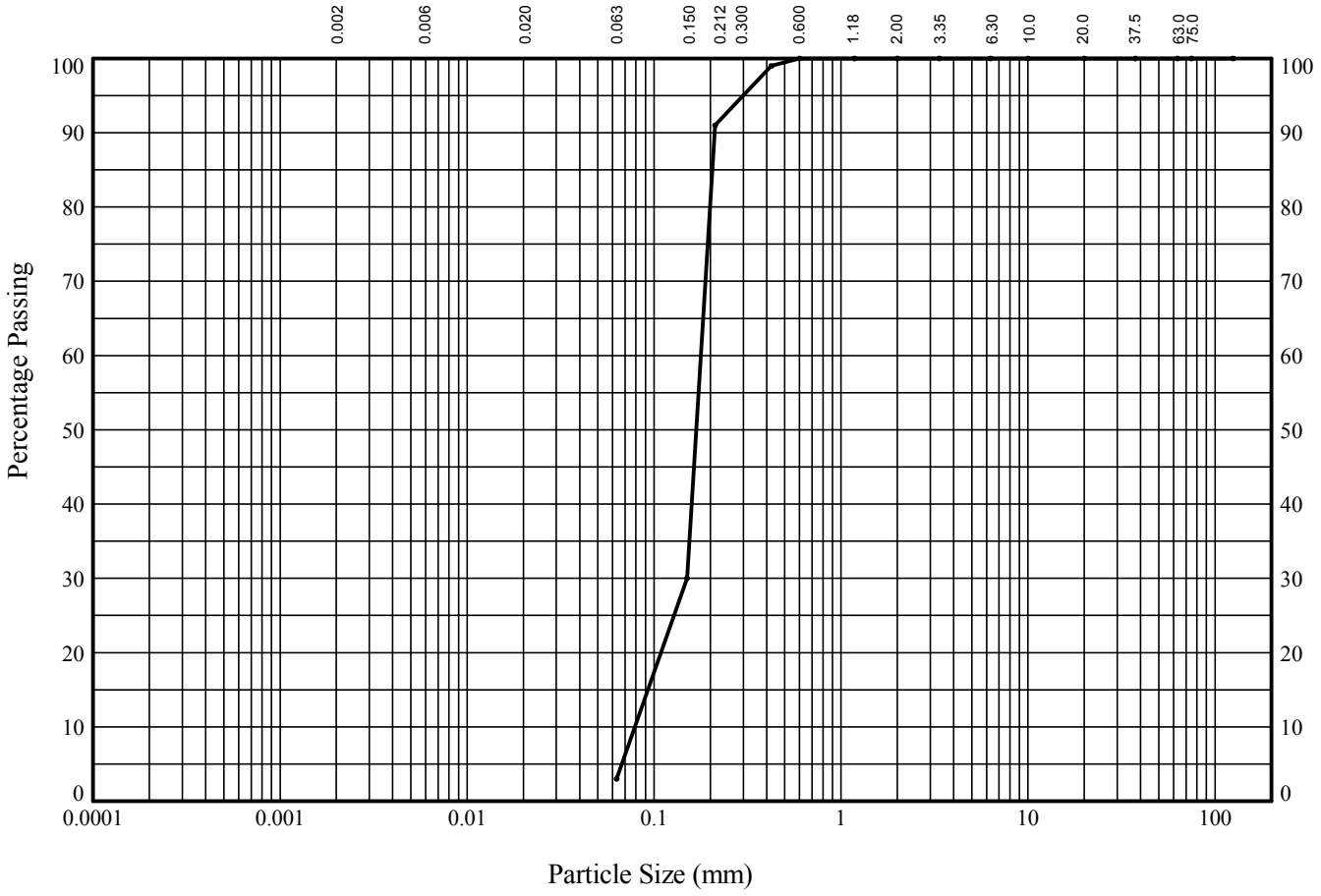
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **2** Sample Type: **B** Depth (m): **0.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	100
0.425	99
0.212	91
0.150	30
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**97**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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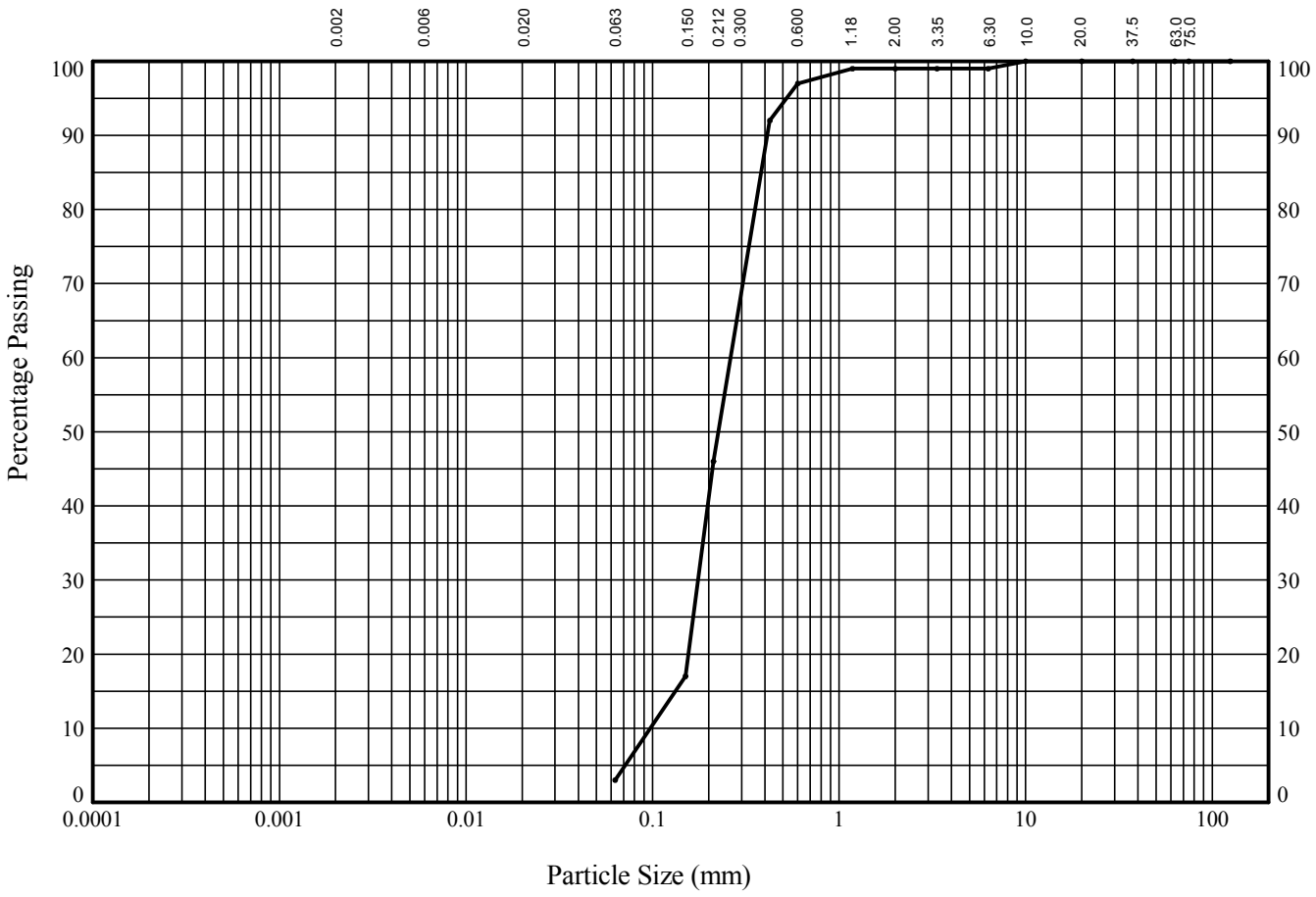
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **4** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	99
1.18	99
0.600	97
0.425	92
0.212	46
0.150	17
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**96**
SILT/CLAY	**3**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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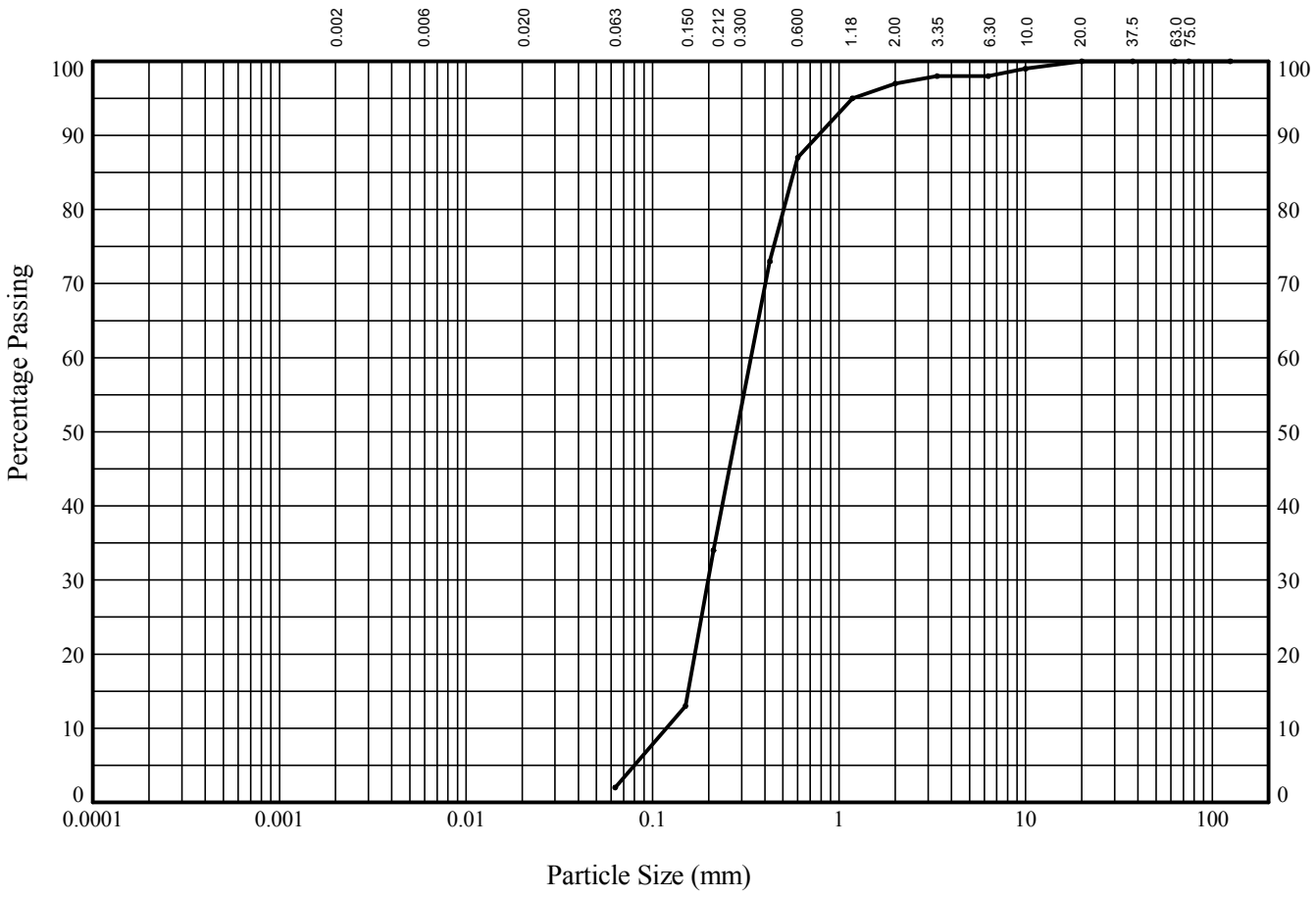
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **7** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	98
2.00	97
1.18	95
0.600	87
0.425	73
0.212	34
0.150	13
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**95**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
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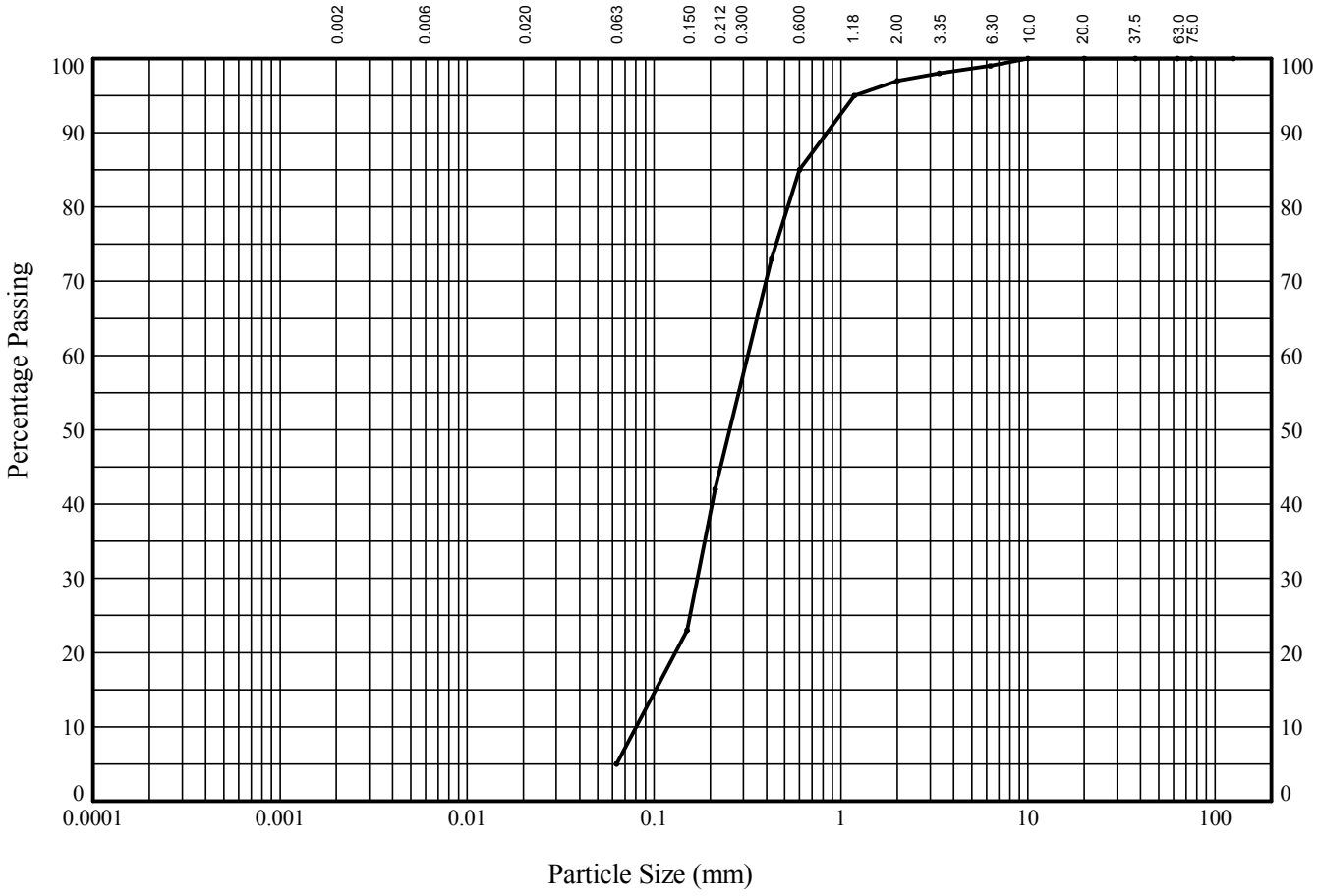
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **9** Sample Type: **B** Depth (m): **4.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	98
2.00	97
1.18	95
0.600	85
0.425	73
0.212	42
0.150	23
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**3**
SAND	**92**
SILT/CLAY	**5**

Soil Description:
Orange brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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W. Yorkshire WF10 1NJ

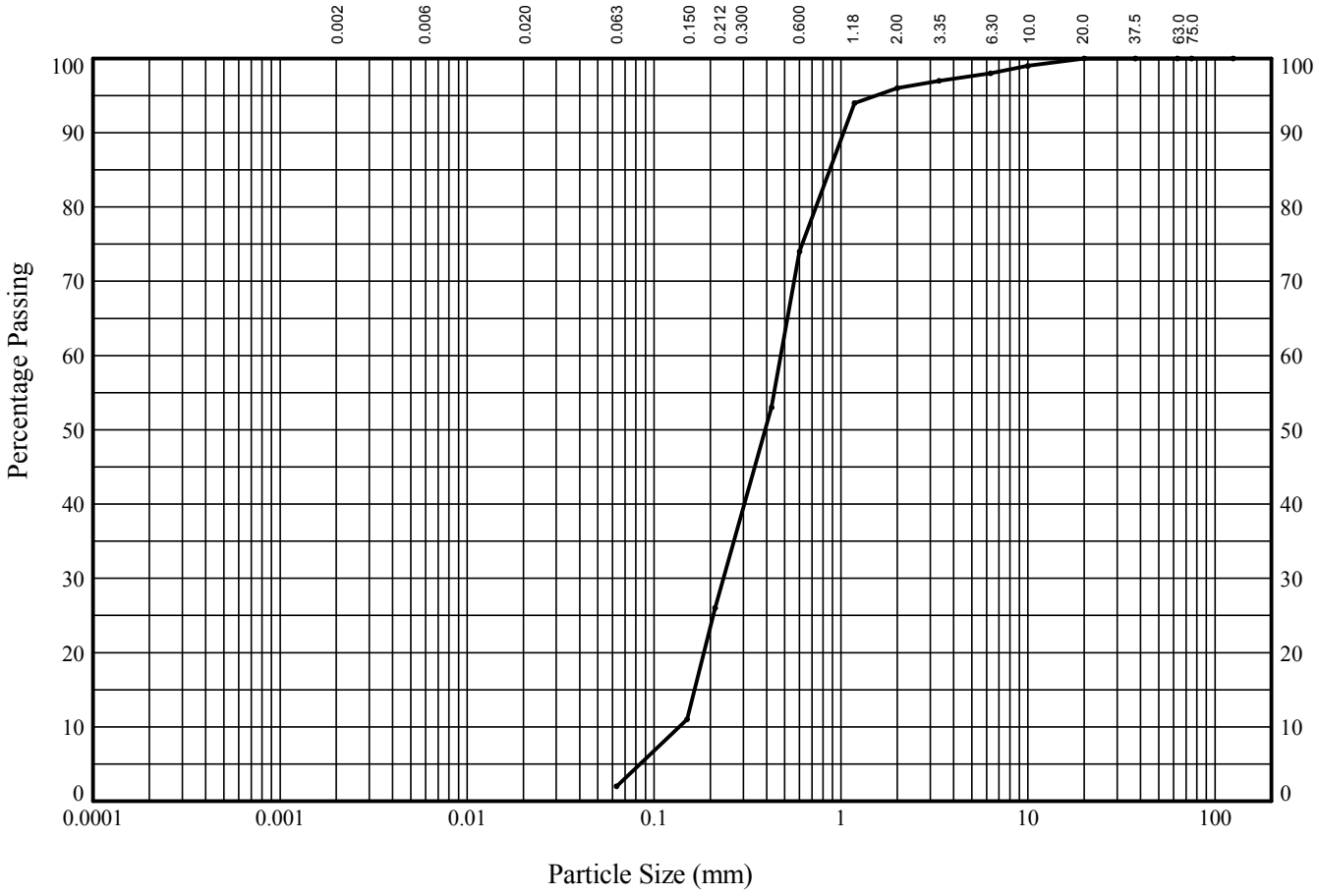
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **11** Sample Type: **B** Depth (m): **5.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	96
1.18	94
0.600	74
0.425	53
0.212	26
0.150	11
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**94**
SILT/CLAY	**2**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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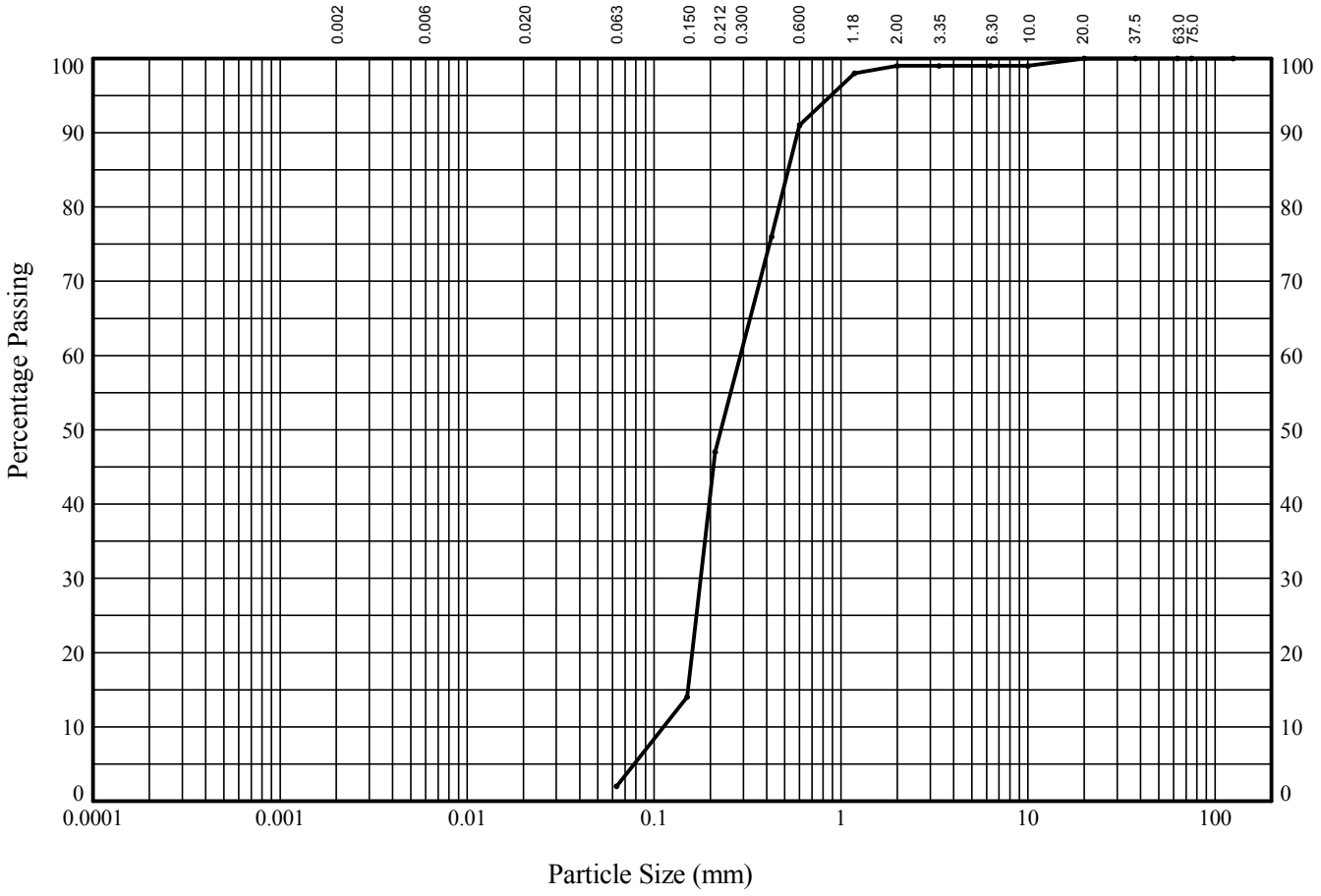
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **13** Sample Type: **B** Depth (m): **6.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	99
2.00	99
1.18	98
0.600	91
0.425	76
0.212	47
0.150	14
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**97**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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Pottery Street
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Compiled By		Date
		17/09/15

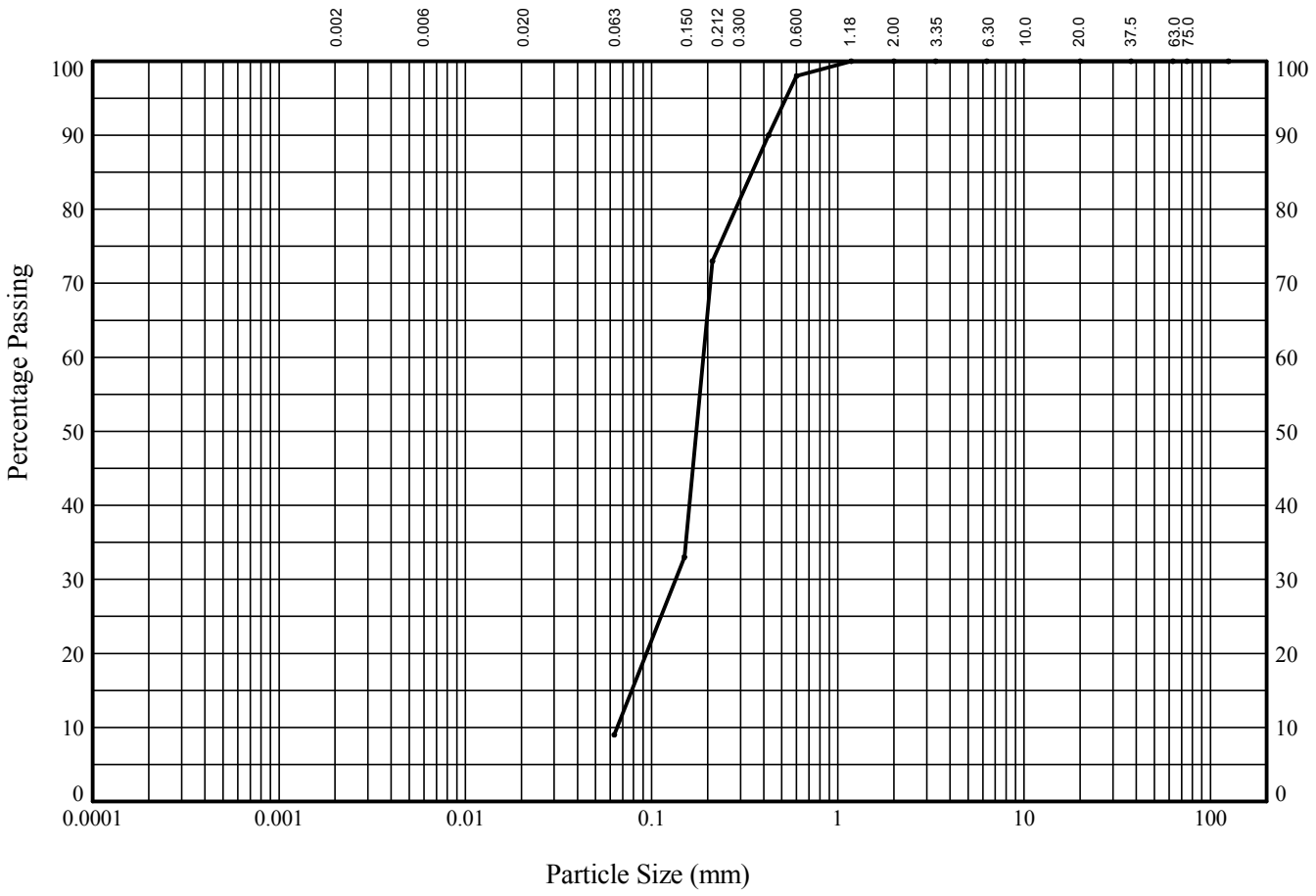
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **15** Sample Type: **B** Depth (m): **7.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	98
0.425	90
0.212	73
0.150	33
0.063	9

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**91**
SILT/CLAY	**9**

Soil Description:
Orange brown clayey SAND

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STRUCTURAL SOILS
The Potteries
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Castleford
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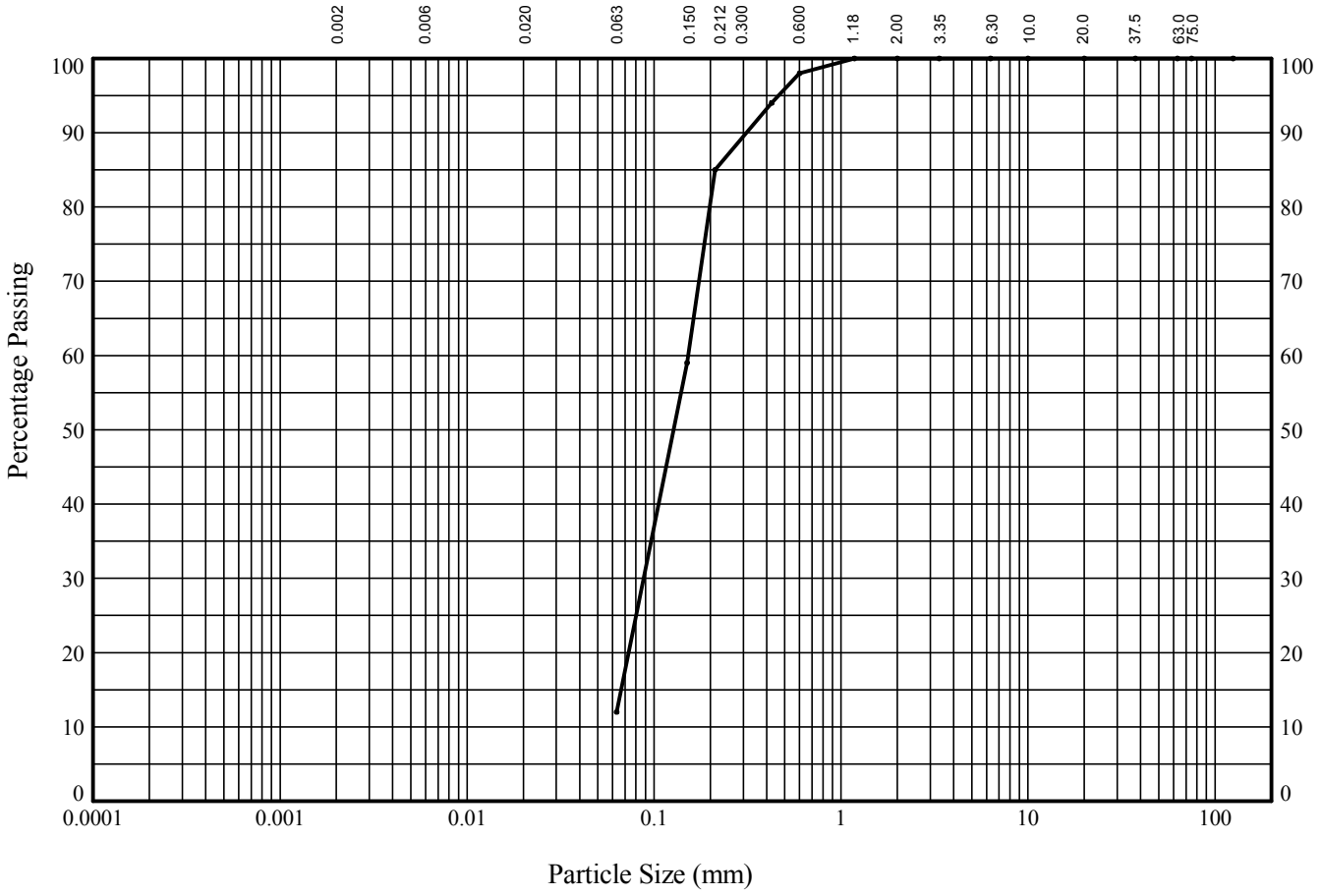
Compiled By		Date
		17/09/15
Contract: **SZC 2015 Onshore GI**		Contract Ref: **763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **17** Sample Type: **B** Depth (m): **8.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	100
0.600	98
0.425	94
0.212	85
0.150	59
0.063	12

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**88**
SILT/CLAY	**12**

Soil Description:
Orange brown clayey SAND

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STRUCTURAL SOILS
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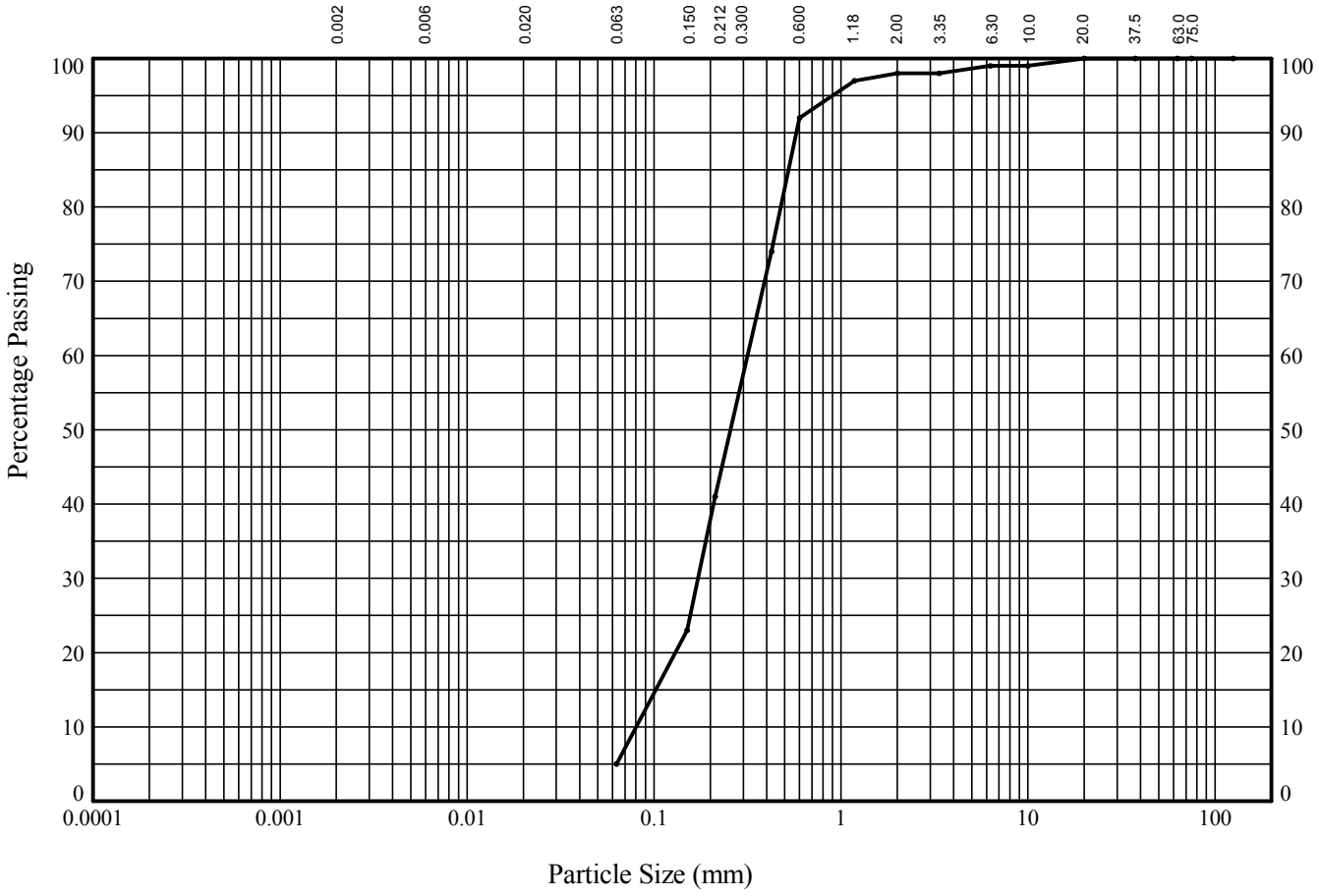
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **19** Sample Type: **B** Depth (m): **9.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	98
2.00	98
1.18	97
0.600	92
0.425	74
0.212	41
0.150	23
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**93**
SILT/CLAY	**5**

Soil Description:
Orange brown clayey slightly gravelly SAND

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STRUCTURAL SOILS
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Pottery Street
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Compiled By		Date
		17/09/15

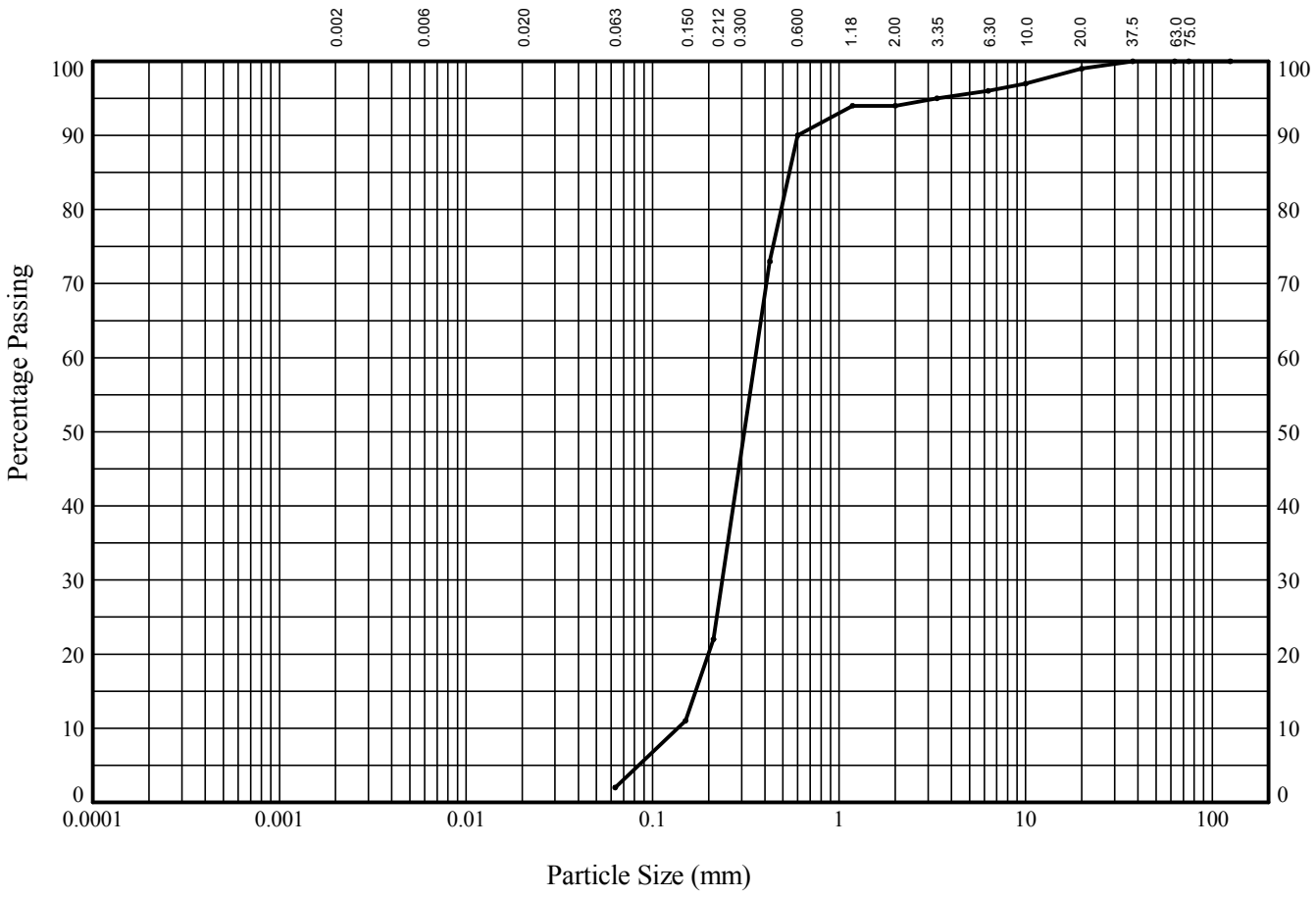
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **21** Sample Type: **B** Depth (m): **10.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	97
6.30	96
3.35	95
2.00	94
1.18	94
0.600	90
0.425	73
0.212	22
0.150	11
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**92**
SILT/CLAY	**2**

Soil Description:
Orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
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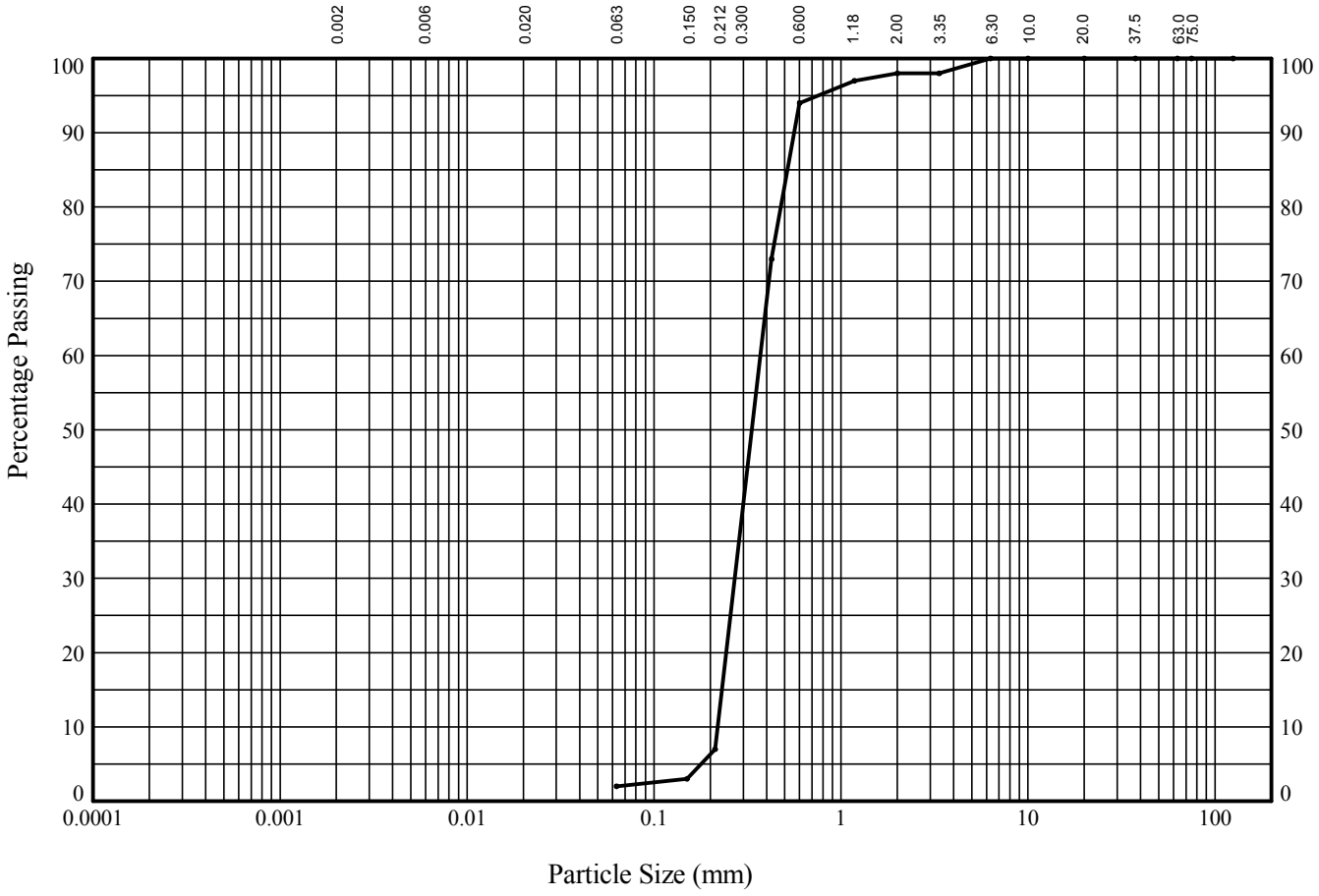
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **23** Sample Type: **B** Depth (m): **11.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	98
2.00	98
1.18	97
0.600	94
0.425	73
0.212	7
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**96**
SILT/CLAY	**2**

Soil Description:
Light orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
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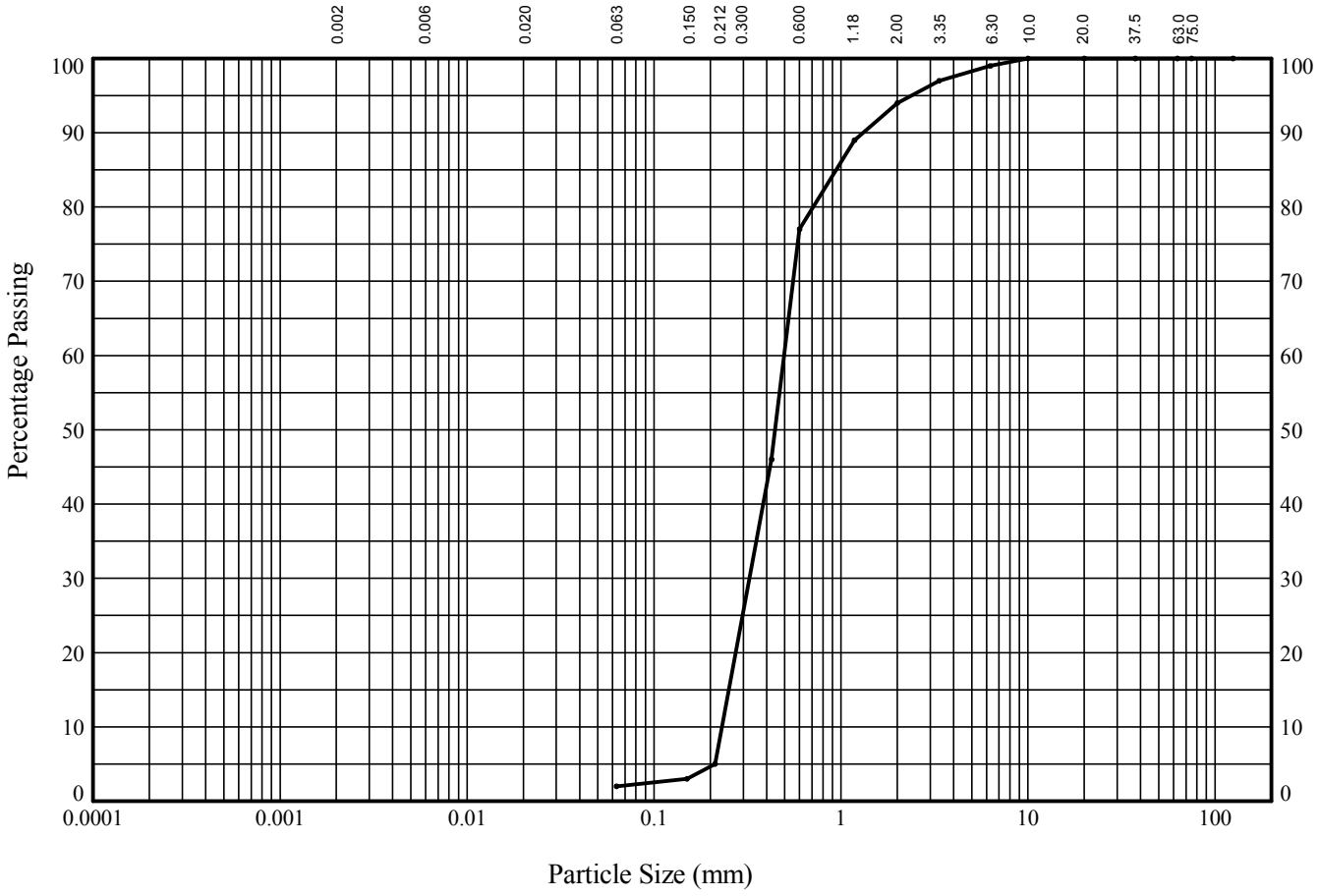
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **25** Sample Type: **B** Depth (m): **12.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	97
2.00	94
1.18	89
0.600	77
0.425	46
0.212	5
0.150	3
0.063	2

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**6**
SAND	**92**
SILT/CLAY	**2**

Soil Description:
Light orange brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
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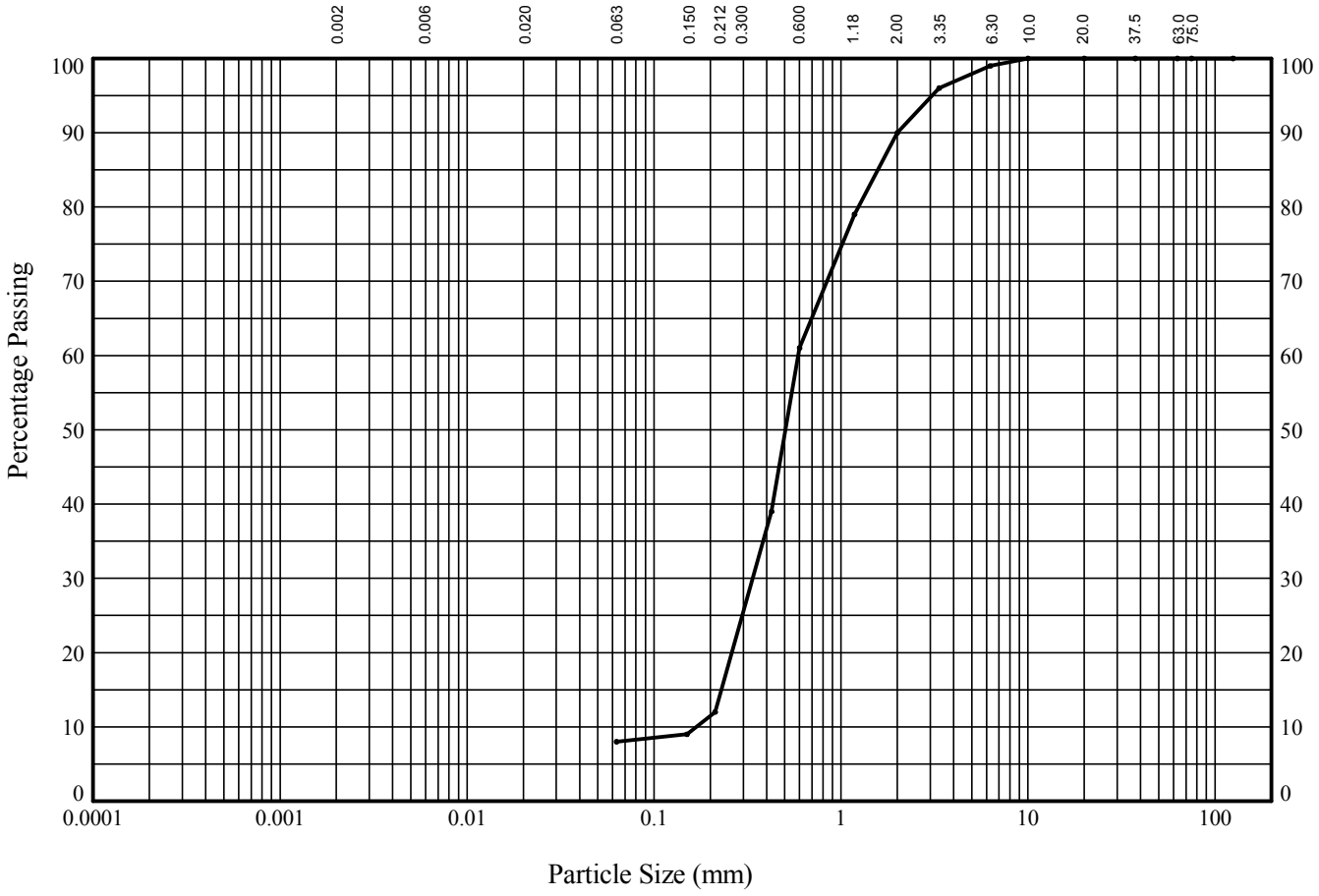
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **27** Sample Type: **B** Depth (m): **13.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	96
2.00	90
1.18	79
0.600	61
0.425	39
0.212	12
0.150	9
0.063	8

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**10**
SAND	**82**
SILT/CLAY	**8**

Soil Description:
Light brown clayey gravelly SAND

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STRUCTURAL SOILS
The Potteries
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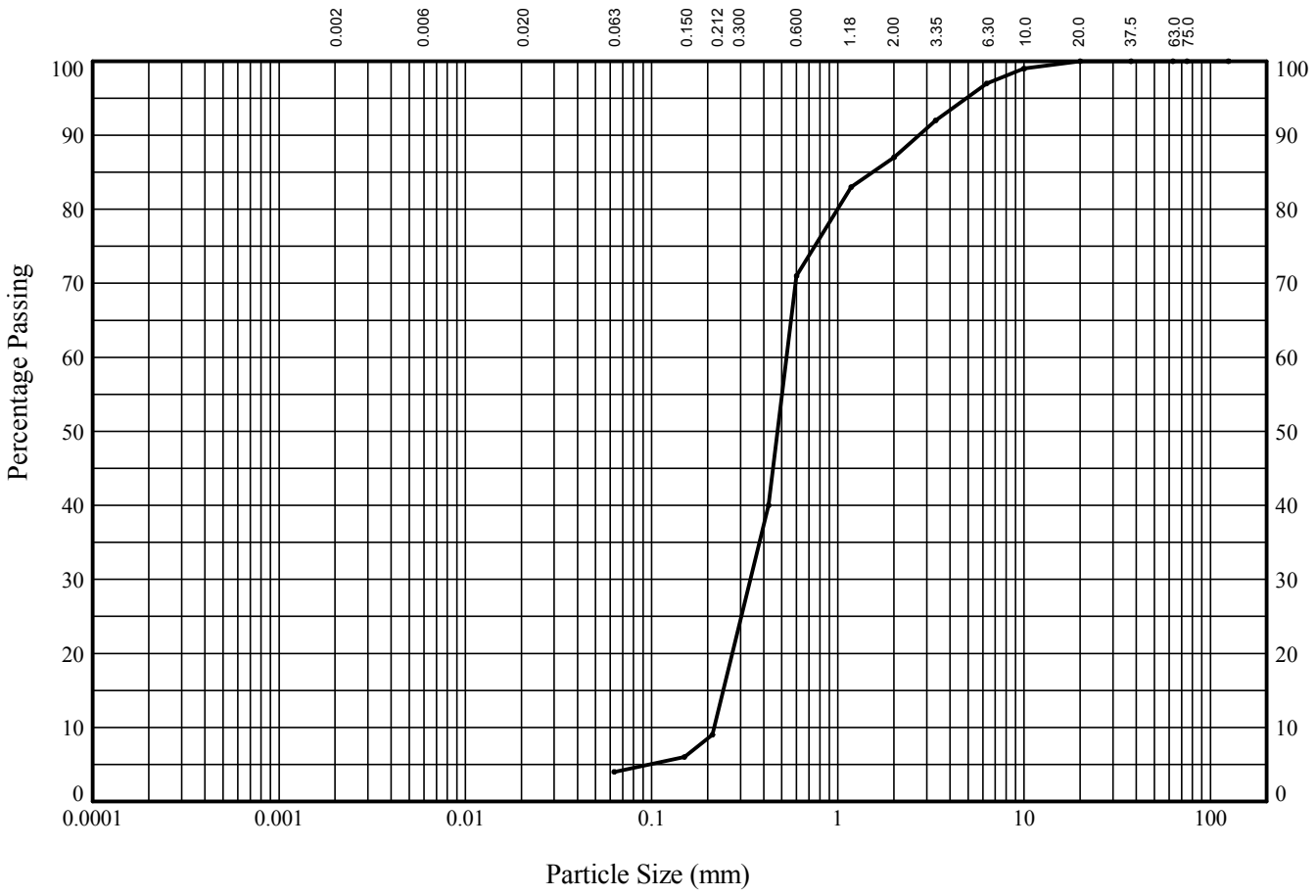
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **29** Sample Type: **B** Depth (m): **14.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	97
3.35	92
2.00	87
1.18	83
0.600	71
0.425	40
0.212	9
0.150	6
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**13**
SAND	**83**
SILT/CLAY	**4**

Soil Description:
Brown slightly clayey gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
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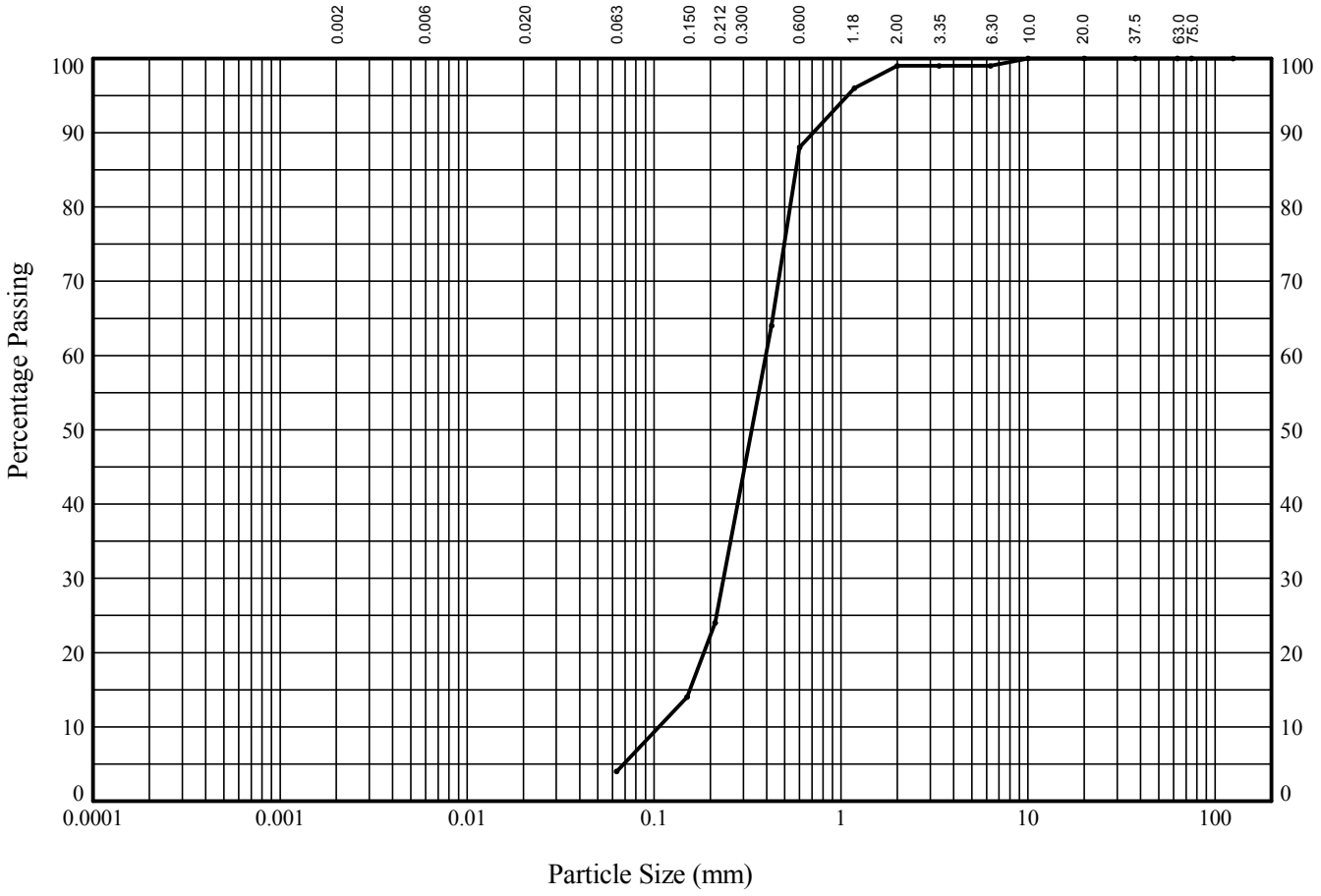
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **31** Sample Type: **B** Depth (m): **15.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	99
2.00	99
1.18	96
0.600	88
0.425	64
0.212	24
0.150	14
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**95**
SILT/CLAY	**4**

Soil Description:
Orange brown slightly clayey slightly gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

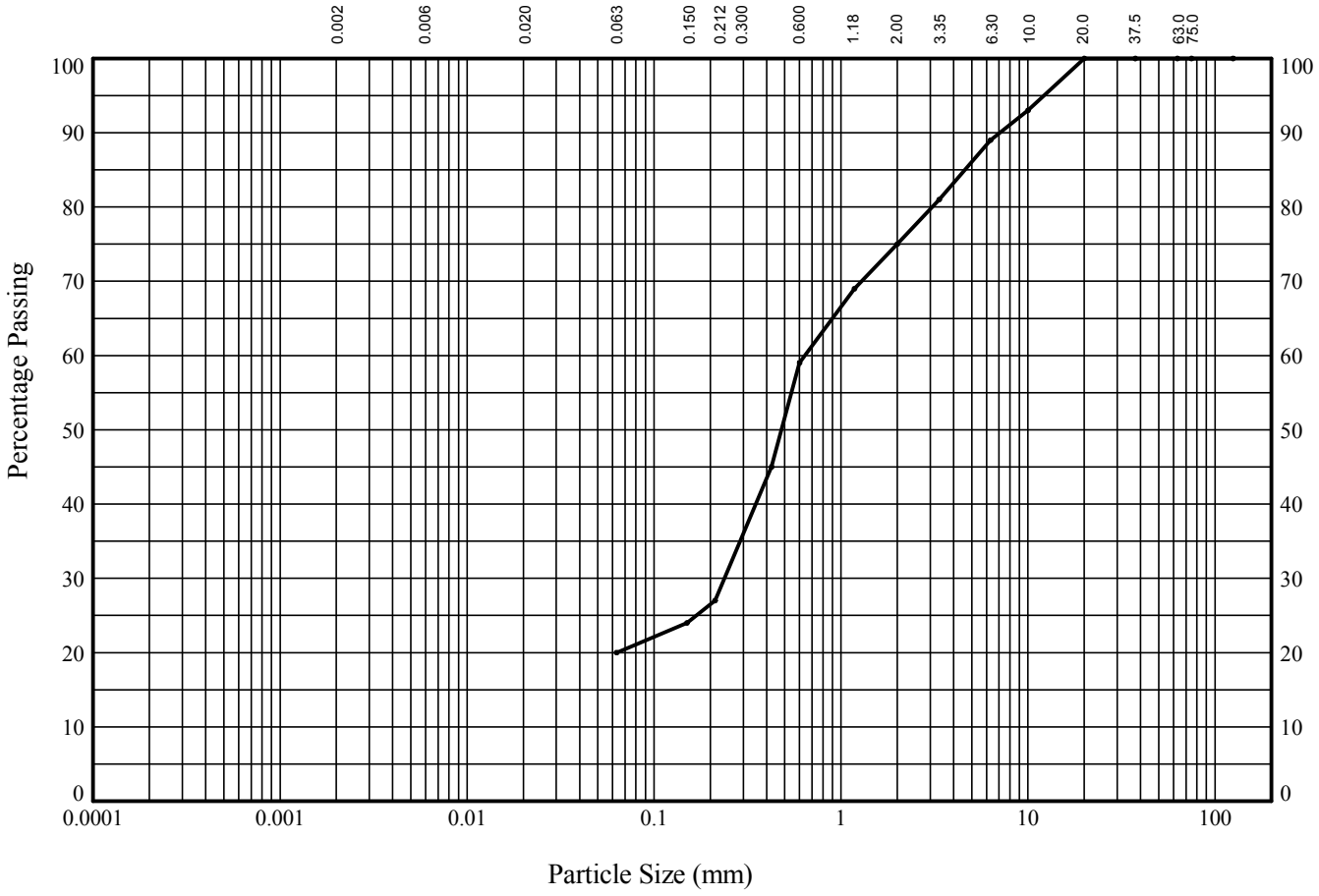
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **33** Sample Type: **B** Depth (m): **16.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	93
6.30	89
3.35	81
2.00	75
1.18	69
0.600	59
0.425	45
0.212	27
0.150	24
0.063	20

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**25**
SAND	**55**
SILT/CLAY	**20**

Soil Description:
Dark orange brown very silty very gravelly SAND

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

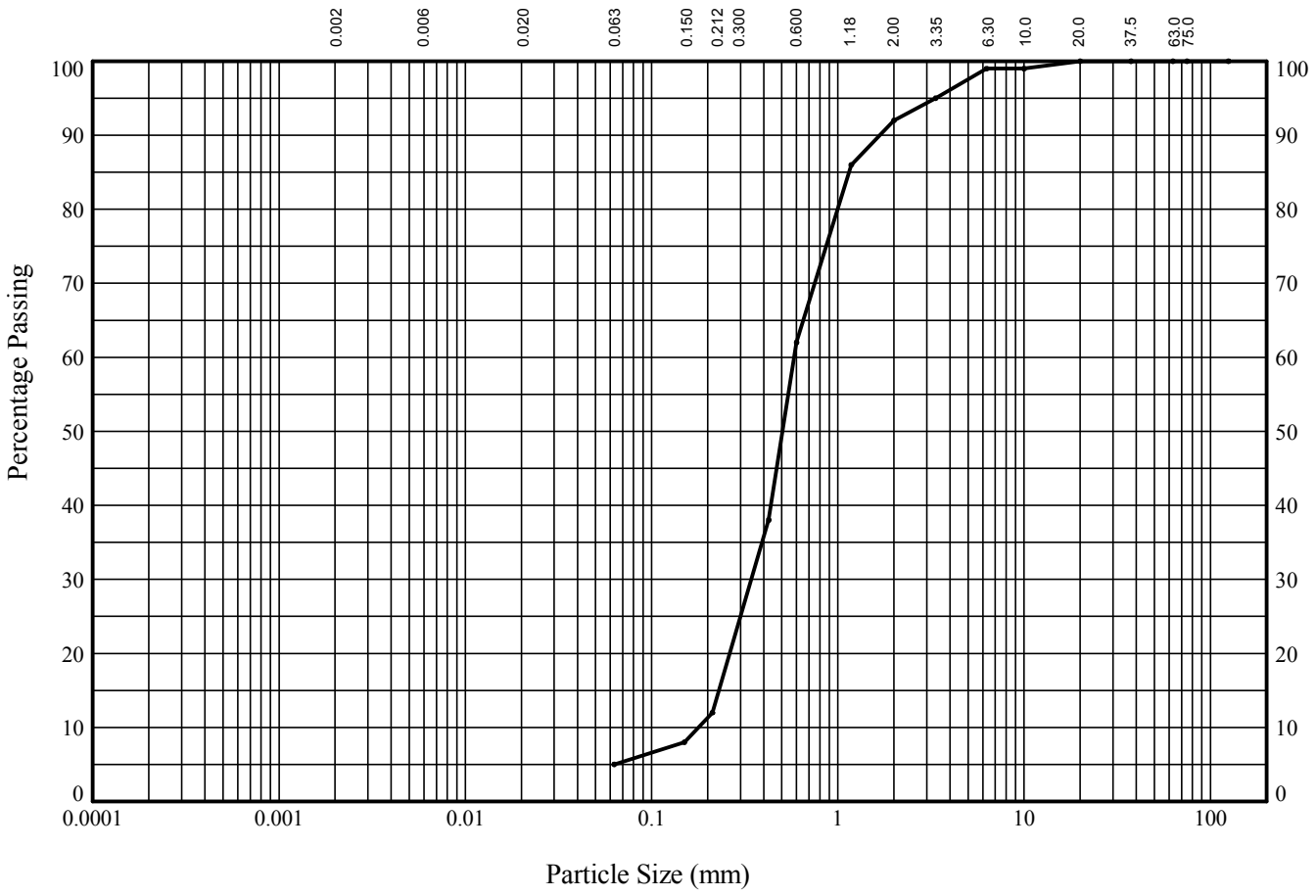
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **35** Sample Type: **B** Depth (m): **17.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	95
2.00	92
1.18	86
0.600	62
0.425	38
0.212	12
0.150	8
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**8**
SAND	**87**
SILT/CLAY	**5**

Soil Description:
Brown clayey gravelly SAND

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STRUCTURAL SOILS
The Potteries
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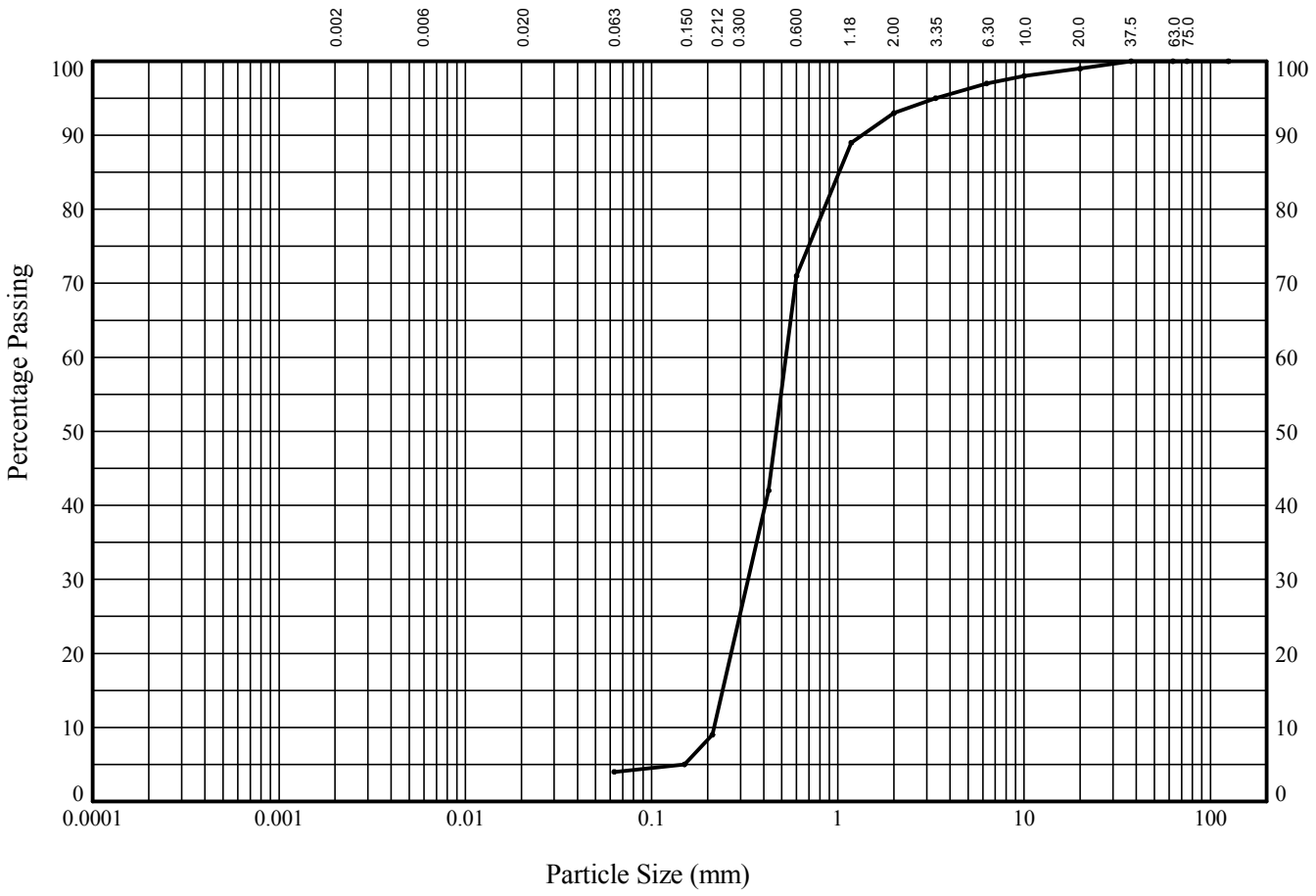
Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **37** Sample Type: **B** Depth (m): **18.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	99
10.0	98
6.30	97
3.35	95
2.00	93
1.18	89
0.600	71
0.425	42
0.212	9
0.150	5
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**7**
SAND	**89**
SILT/CLAY	**4**

Soil Description:
Dark orange brown clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

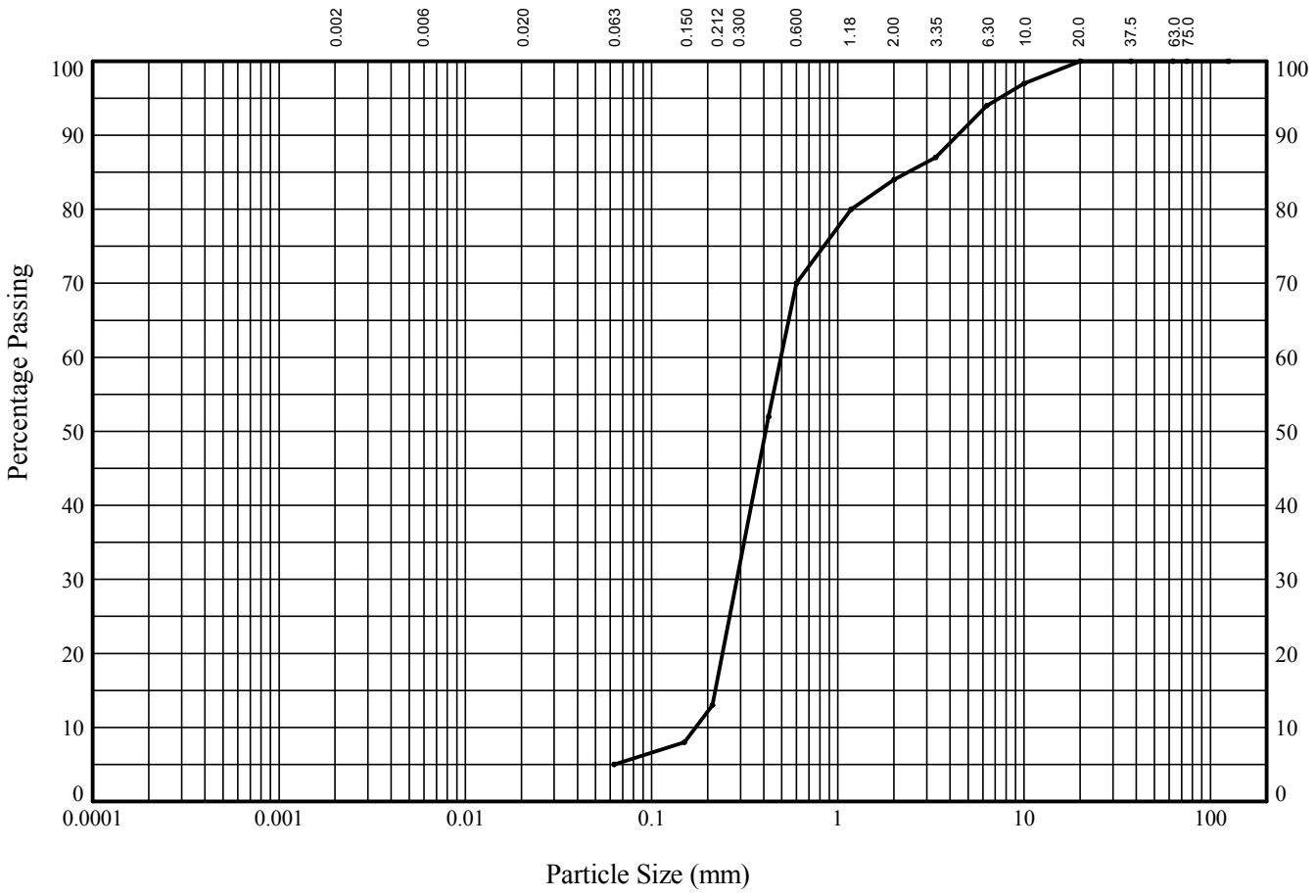
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **CPB BP14** Sample Ref: **39** Sample Type: **B** Depth (m): **19.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	97
6.30	94
3.35	87
2.00	84
1.18	80
0.600	70
0.425	52
0.212	13
0.150	8
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**16**
SAND	**79**
SILT/CLAY	**5**

Soil Description:
Brown clayey gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

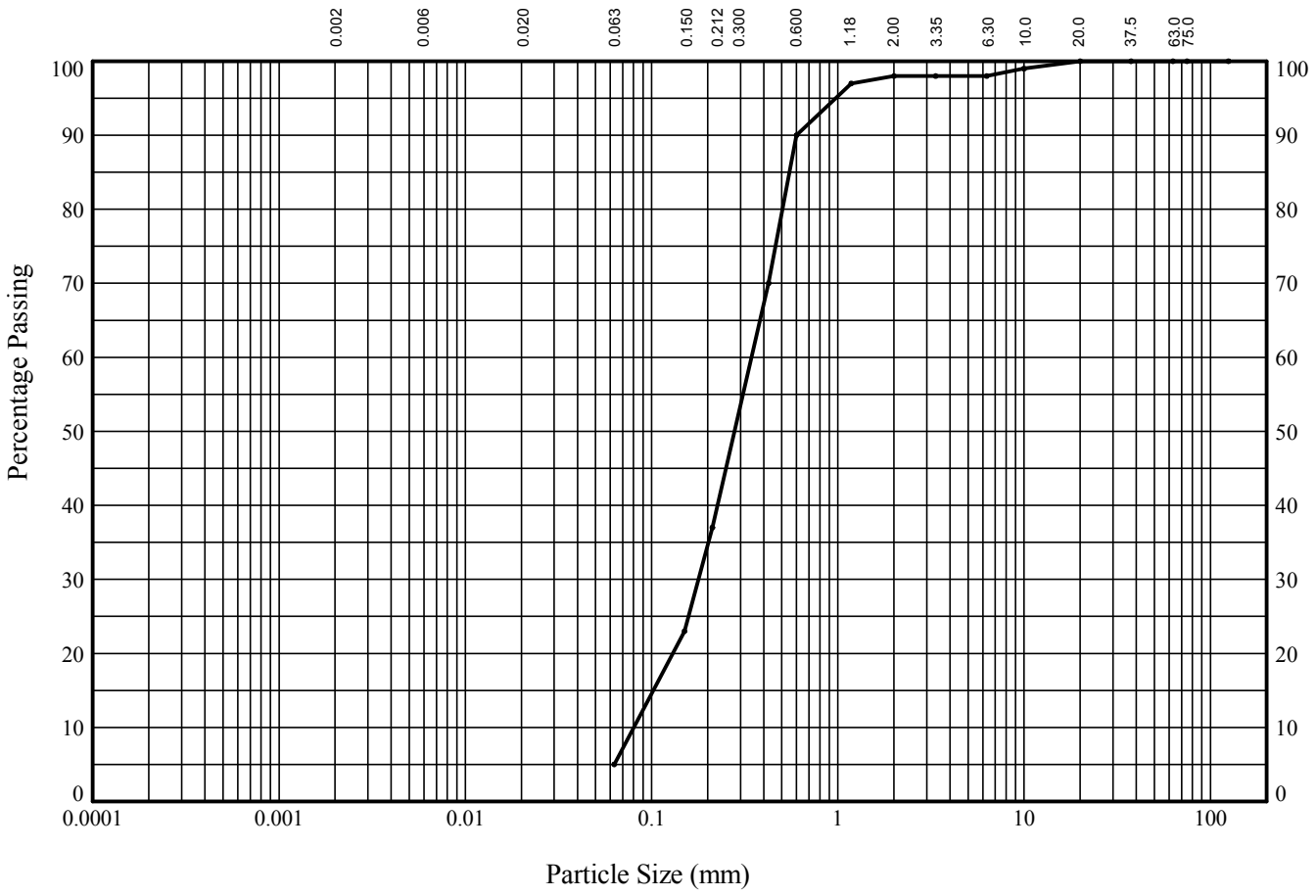
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ18** Sample Ref: **2** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	98
2.00	98
1.18	97
0.600	90
0.425	70
0.212	37
0.150	23
0.063	5

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**93**
SILT/CLAY	**5**

Soil Description:
Brown slightly gravelly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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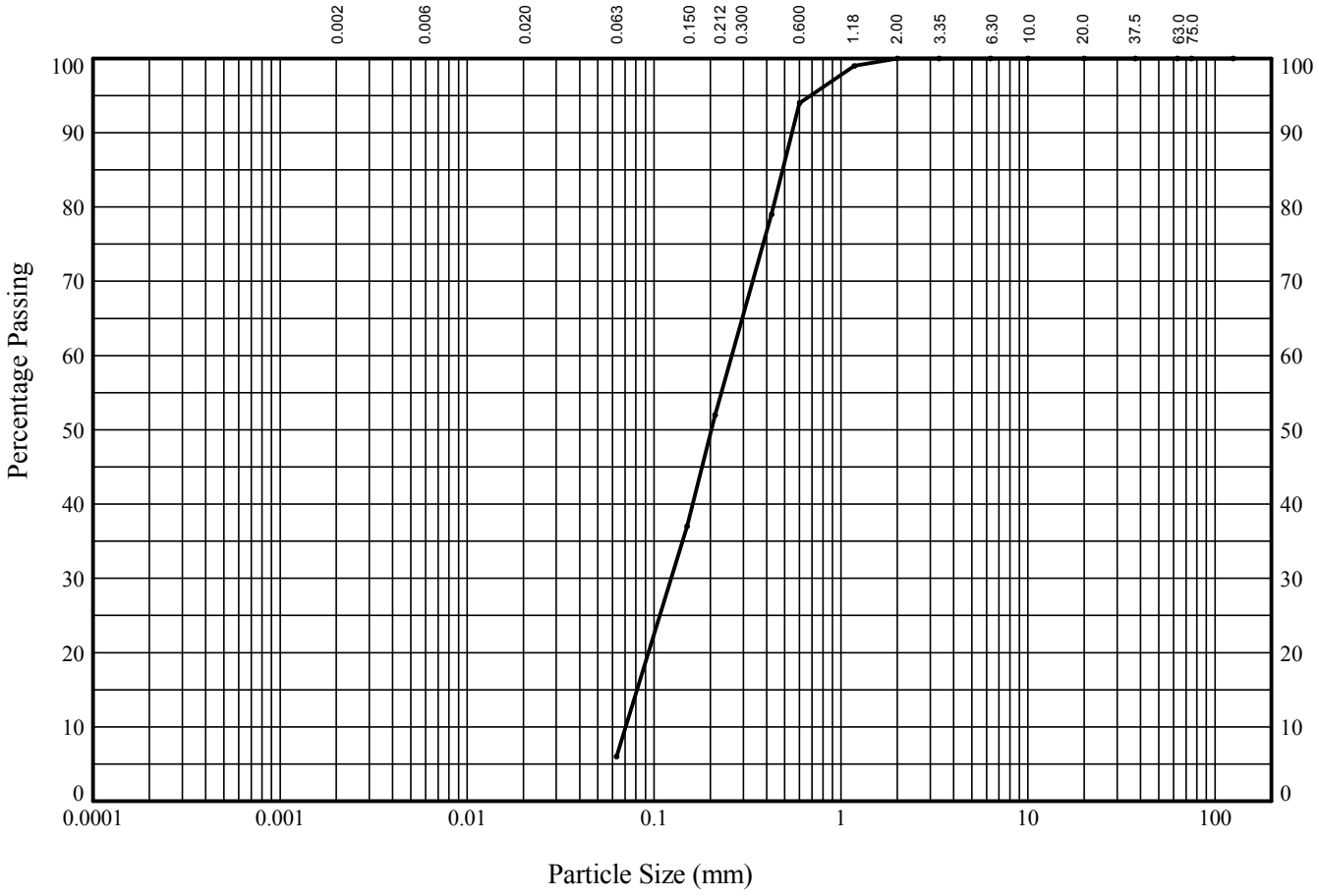
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ18** Sample Ref: **3** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	100
1.18	99
0.600	94
0.425	79
0.212	52
0.150	37
0.063	6

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**0**
SAND	**94**
SILT/CLAY	**6**

Soil Description:
Orange brown slightly clayey SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

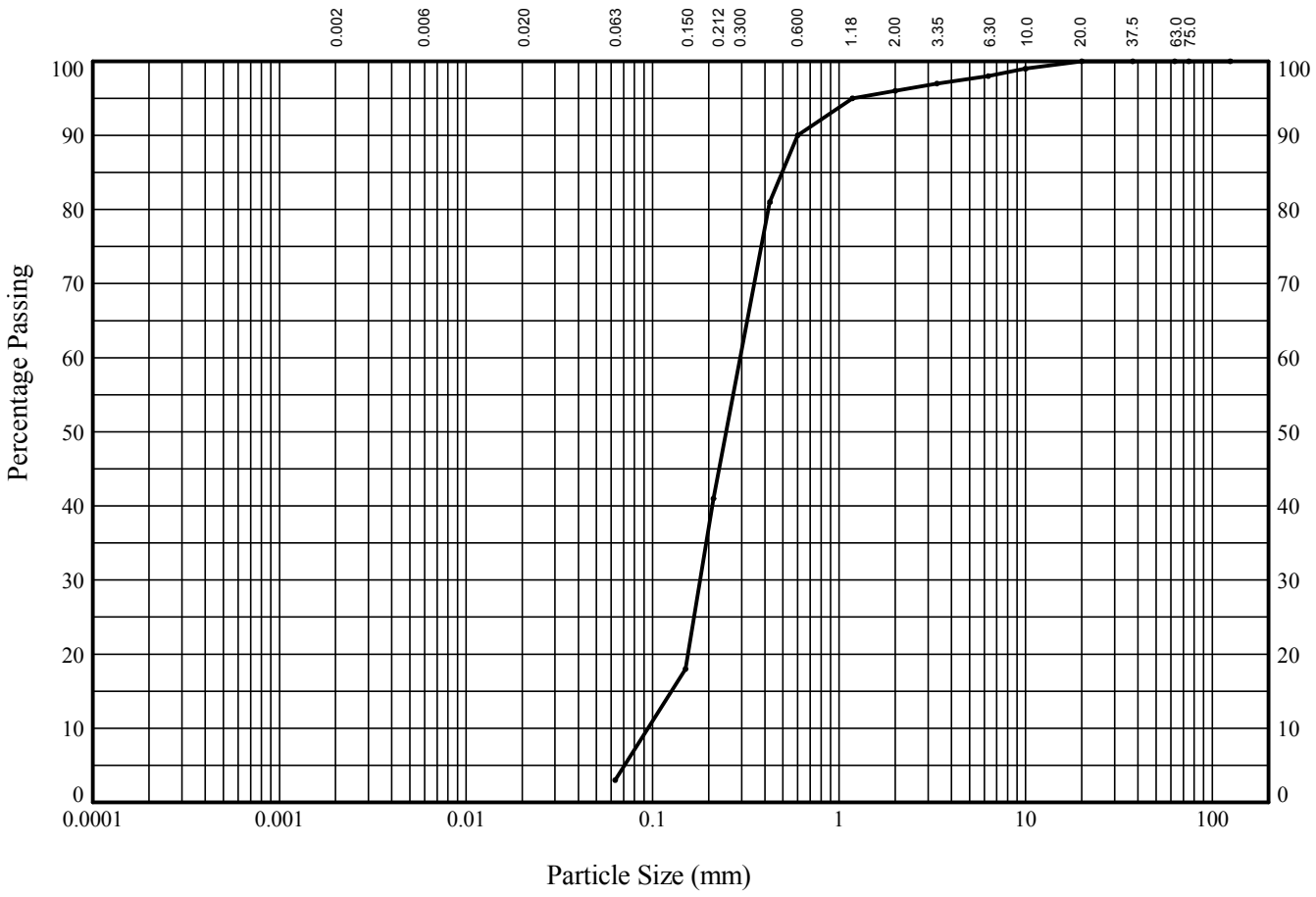
STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15
Contract		Contract Ref:
SZC 2015 Onshore GI		**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ18** Sample Ref: **4** Sample Type: **B** Depth (m): **3.00**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	96
1.18	95
0.600	90
0.425	81
0.212	41
0.150	18
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**93**
SILT/CLAY	**3**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15

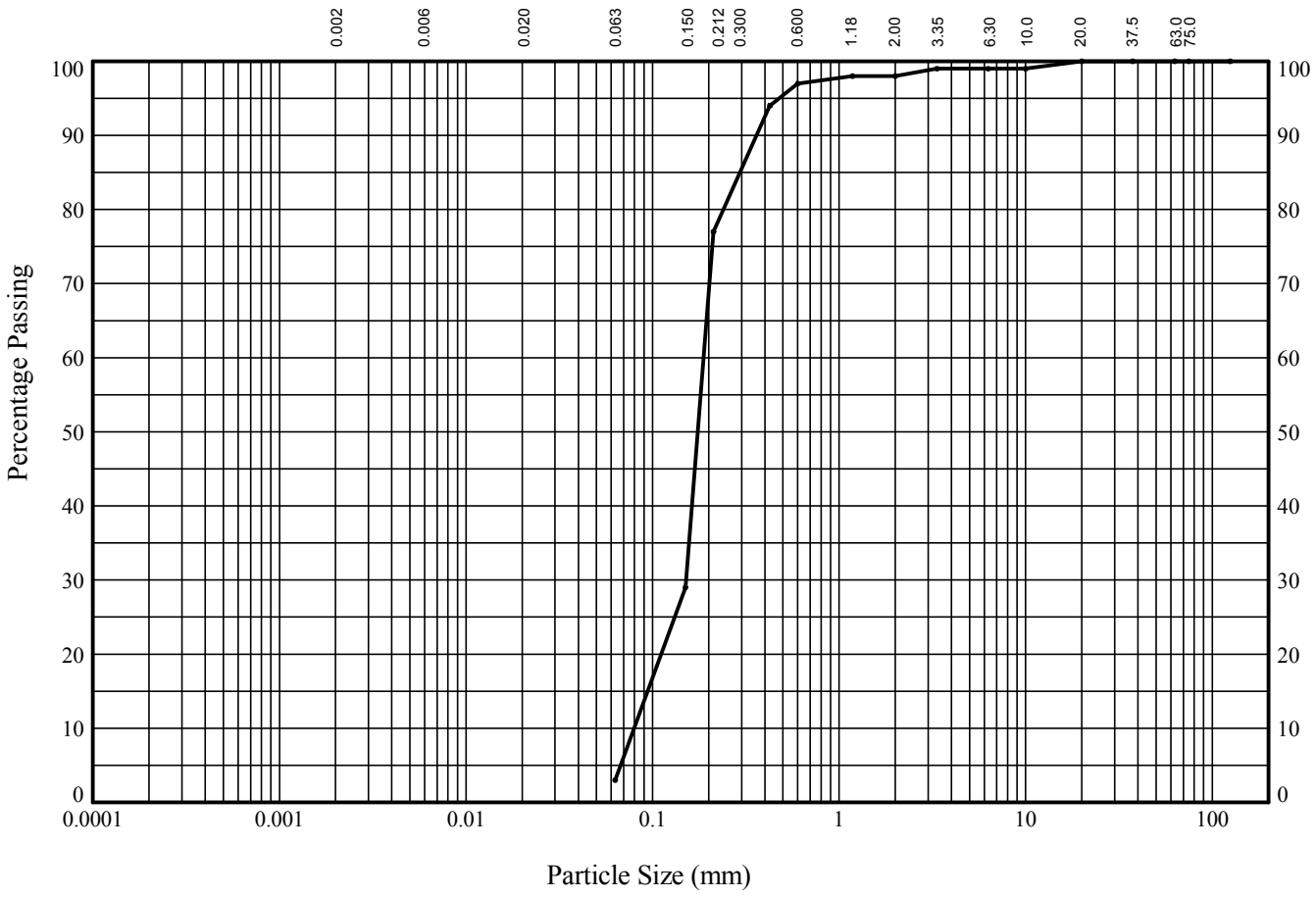
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ19** Sample Ref: **1** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	99
3.35	99
2.00	98
1.18	98
0.600	97
0.425	94
0.212	77
0.150	29
0.063	3

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**2**
SAND	**95**
SILT/CLAY	**3**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15

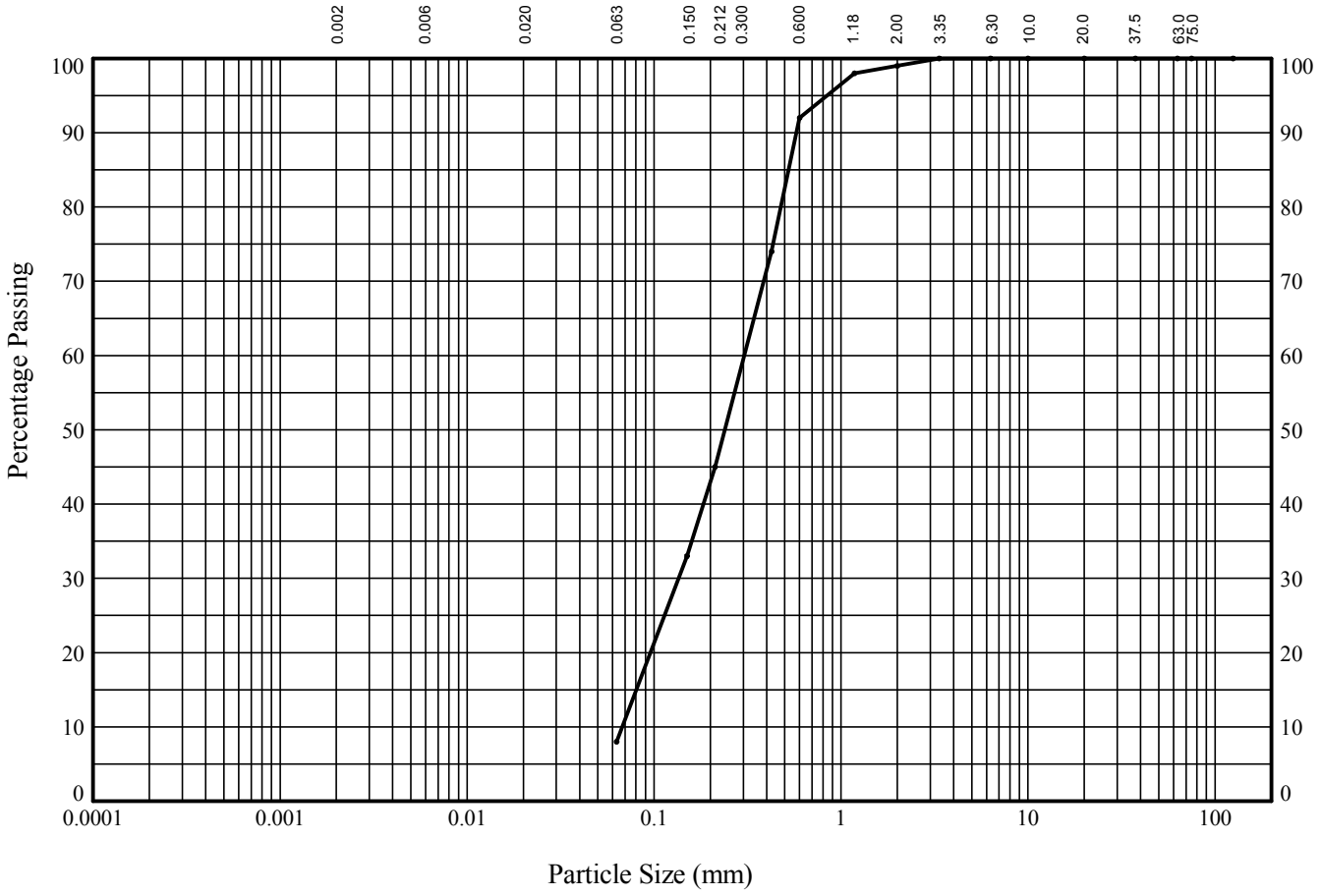
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ19** Sample Ref: **2** Sample Type: **B** Depth (m): **1.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	100
3.35	100
2.00	99
1.18	98
0.600	92
0.425	74
0.212	45
0.150	33
0.063	8

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**1**
SAND	**91**
SILT/CLAY	**8**

Soil Description:
Orange brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
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W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15

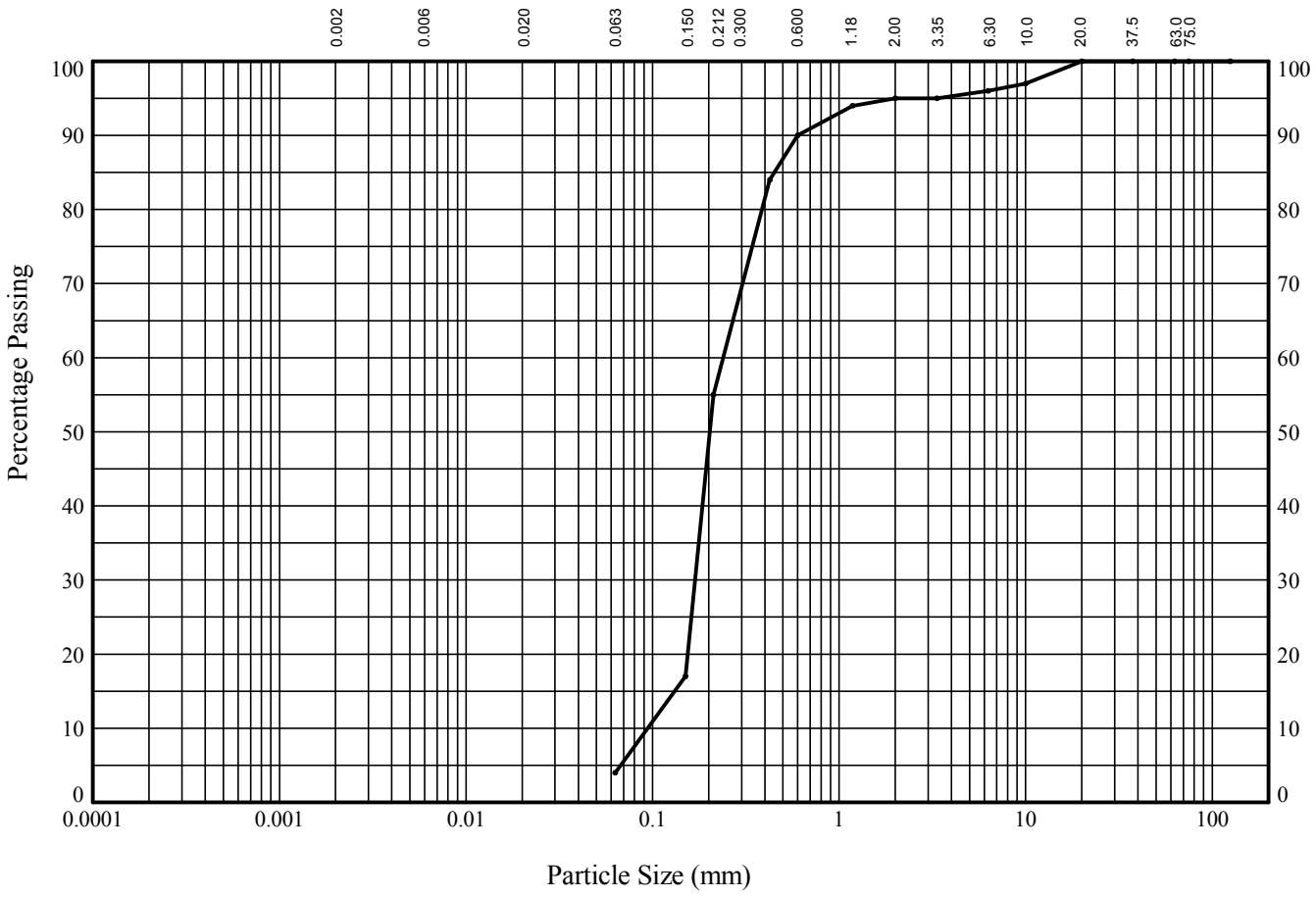
Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

AGS

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ19** Sample Ref: **4** Sample Type: **B** Depth (m): **2.50**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	97
6.30	96
3.35	95
2.00	95
1.18	94
0.600	90
0.425	84
0.212	55
0.150	17
0.063	4

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**5**
SAND	**91**
SILT/CLAY	**4**

Soil Description:
Light brown slightly clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
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W. Yorkshire WF10 1NJ

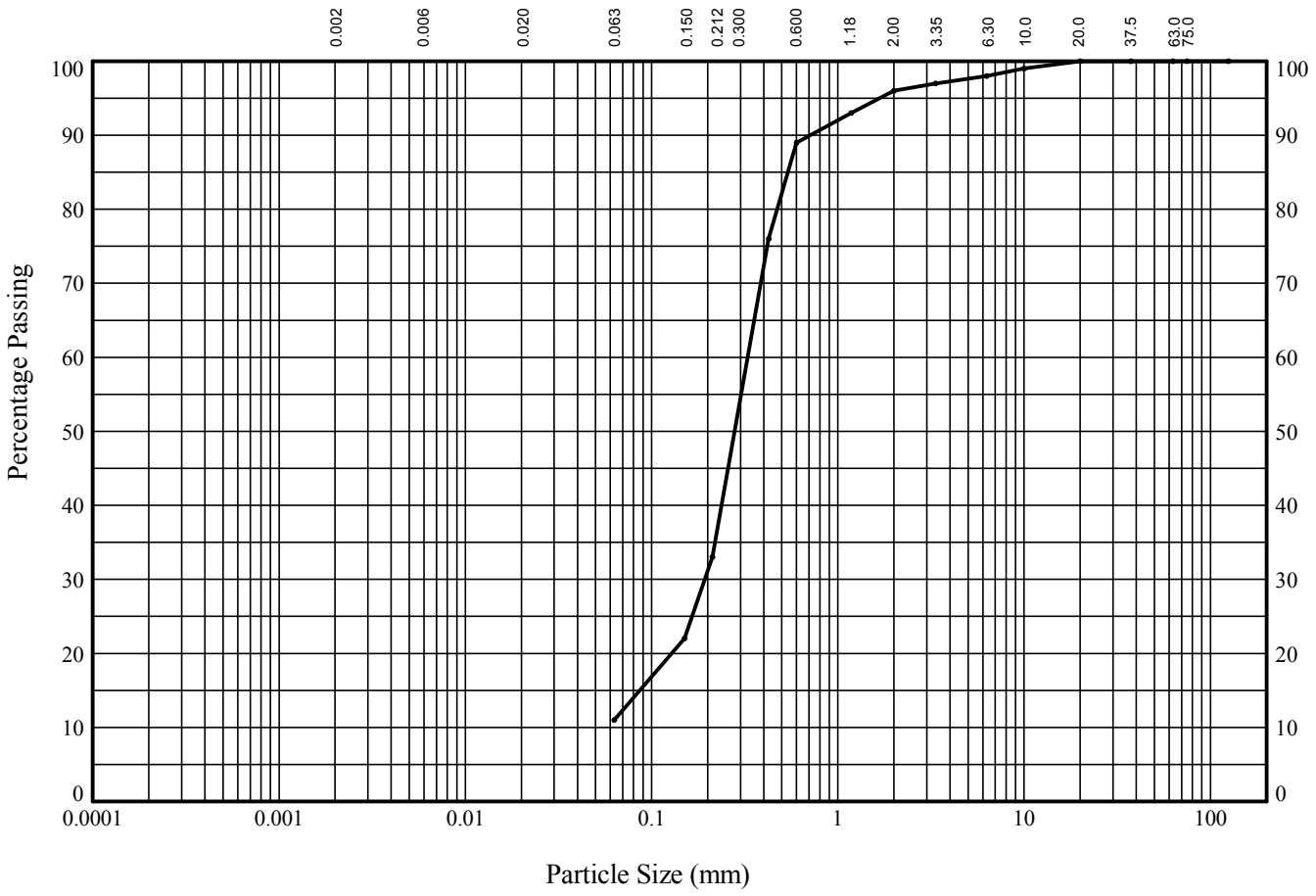
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ20** Sample Ref: **1** Sample Type: **B** Depth (m): **0.70**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	99
6.30	98
3.35	97
2.00	96
1.18	93
0.600	89
0.425	76
0.212	33
0.150	22
0.063	11

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**85**
SILT/CLAY	**11**

Soil Description:
Brown clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

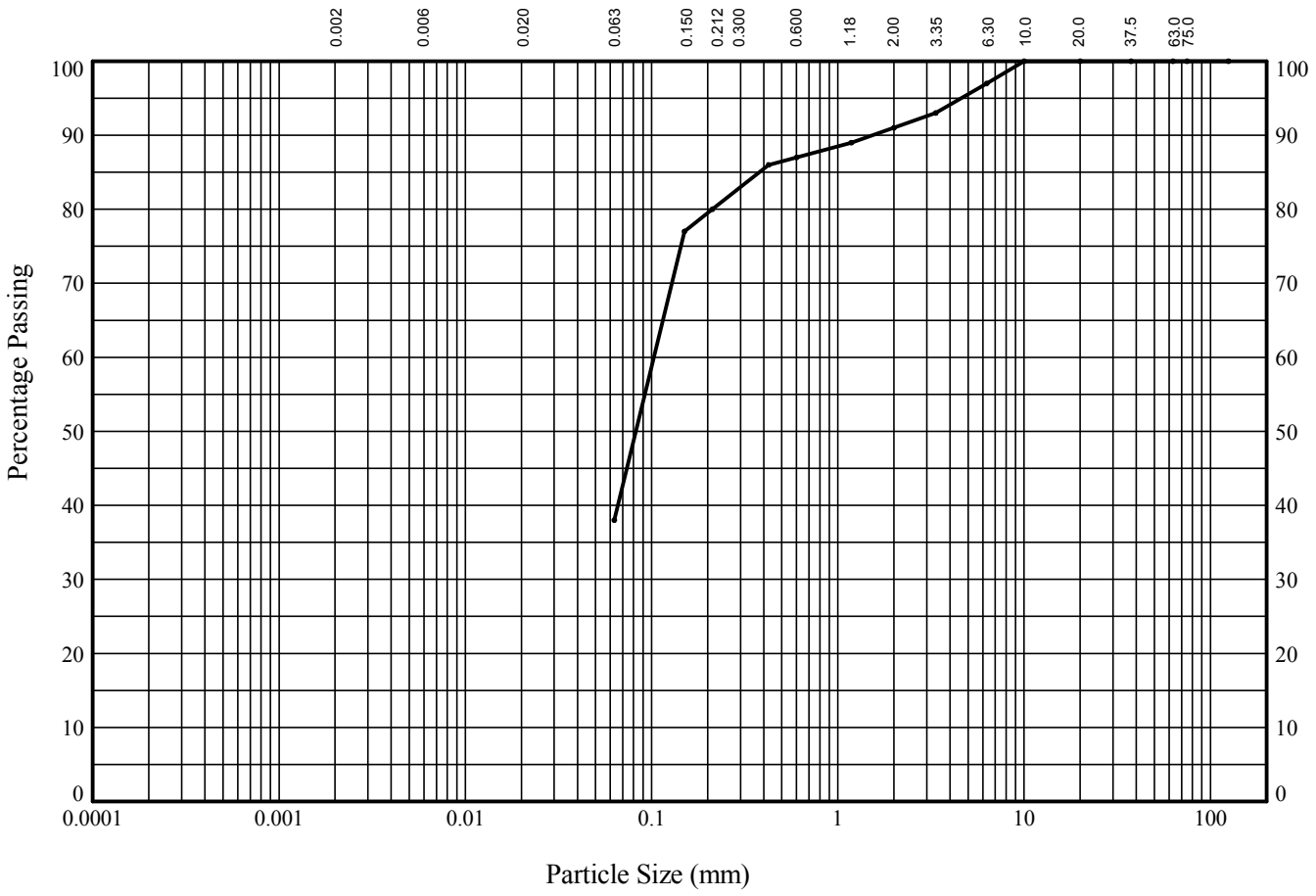
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ20** Sample Ref: **2** Sample Type: **B** Depth (m): **1.20**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	97
3.35	93
2.00	91
1.18	89
0.600	87
0.425	86
0.212	80
0.150	77
0.063	38

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**9**
SAND	**53**
SILT/CLAY	**38**

Soil Description:
Orange grey very sandy slightly gravelly CLAY

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STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

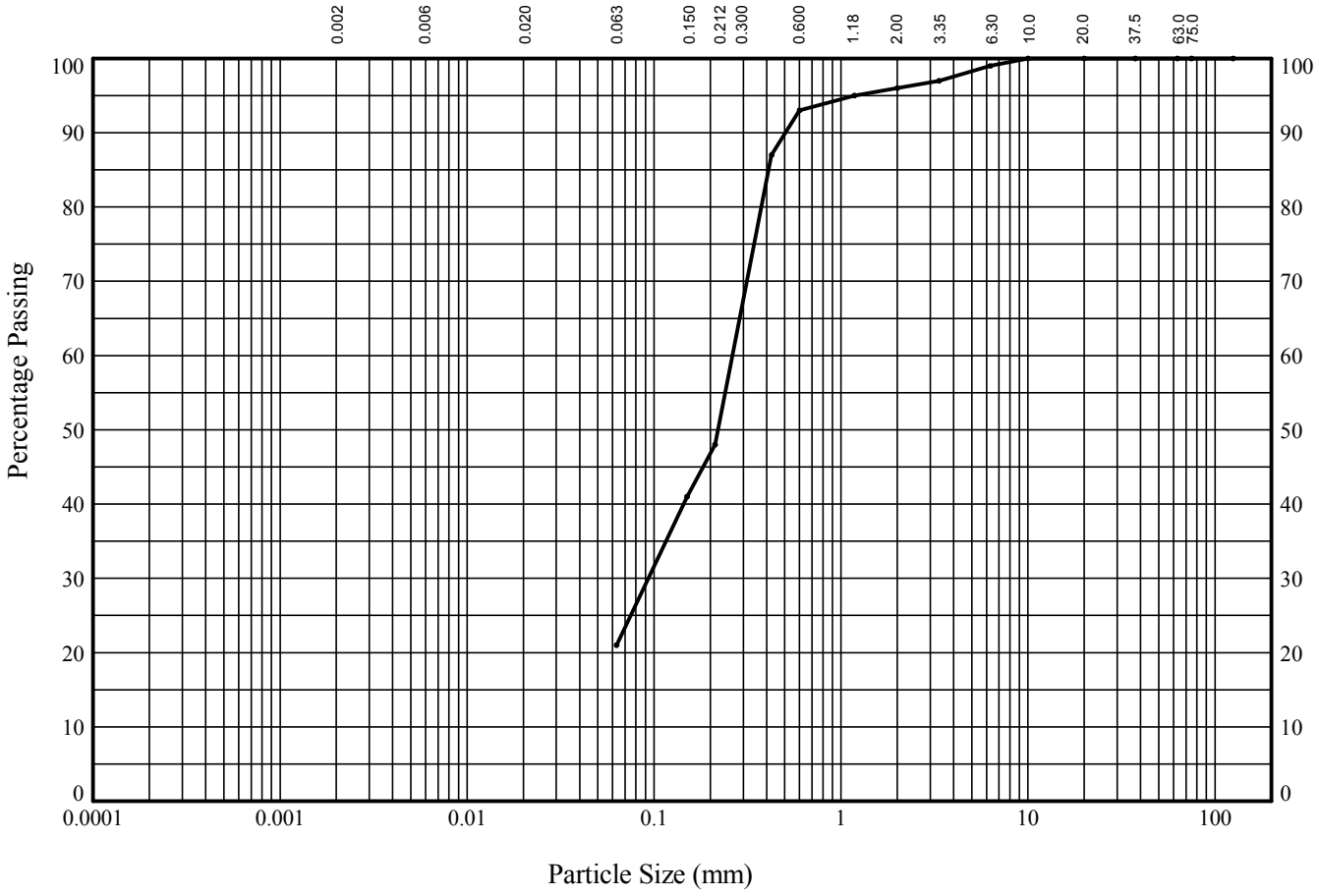
Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

PARTICLE SIZE DISTRIBUTION TEST

In accordance with clauses 9.2,9.5 of BS1377:Part 2:1990

Position ID: **WMZ20** Sample Ref: **3** Sample Type: **B** Depth (m): **2.10**



CLAY	fine	medium	coarse	fine	medium	coarse	fine	medium	coarse	COBBLES
	SILT			SAND			GRAVEL			

BS Test Sieve (mm)	Percentage Passing
125.0	100
75.0	100
63.0	100
37.5	100
20.0	100
10.0	100
6.30	99
3.35	97
2.00	96
1.18	95
0.600	93
0.425	87
0.212	48
0.150	41
0.063	21

Particle Diameter	Percentage Passing

Soil Fraction	Sieve Percentage
GRAVEL	**4**
SAND	**75**
SILT/CLAY	**21**

Soil Description:
Brown very clayey slightly gravelly SAND

Approved Signatories: J.BARRETT M.ATHORNE A.FROST M.RANDERSON R.CLARKSON M.FISHER C.COLE M.STOKES

STRUCTURAL SOILS
The Potteries
Pottery Street
Castleford
W. Yorkshire WF10 1NJ

Compiled By		Date
		17/09/15

Contract	Contract Ref:
SZC 2015 Onshore GI	**763468**

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 15/05603
Issue Number: 1 **Date:** 03 September, 2015

Client: Structural Soils Limited (Castleford)
The Potteries
Pottery Street
Castleford
West Yorkshire
UK
WF10 1NJ

Project Manager: Mark Athorne
Project Name: SZC 2015 Onshore GI P1
Project Ref: 763468
Order No: N/A
Date Samples Received: 26/08/15
Date Instructions Received: 27/08/15
Date Analysis Completed: 02/09/15

Prepared by:

[redacted]

Kate Ellison
Administrative Assistant

Approved by:

[redacted]

John Gustafson
Director

UKAS TESTING
1247

Envirolab Job Number: 15/05603

Client Project Name: SZC 2015 Onshore GI P1

Client Project Ref: 763468

Lab Sample ID	15/05603/1	15/05603/2	15/05603/3	15/05603/4	15/05603/5	15/05603/6	15/05603/7	15/05603/8	Units	Method ref
Client Sample No										
Client Sample ID	CPB BP 11	CPB BP 11	CPB BP 11	CPB BP 11	CPB BP 11	CPB BP 13	CPB BP 13	CPB BP 13		
Depth to Top	3.20	7.60	10.80	16.00	18.00	2.00	5.00	10.00		
Depth To Bottom	3.50	8.00		16.50	18.50	2.50	5.50	10.50		
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
Sample Matrix Code	5	1A	1A	1A	1A	1A	1A	1A		
% Stones >10mm$_A^{\#}$	<0.1	3.5	10.6	<0.1	<0.1	7.0	2.8	<0.1	% w/w	A-T-044
Alkalinity (total) Colorimetry$_D$	78	32	<15	91	98	33	<15	104	mg/kg CaCO3	A-T-038 (s)

Envirolab Job Number: 15/05603

Client Project Name: SZC 2015 Onshore GI P1

Client Project Ref: 763468

Lab Sample ID	15/05603/9	15/05603/10	15/05603/11	15/05603/12	15/05603/13	15/05603/14	15/05603/15	15/05603/16	Units	Method ref
Client Sample No										
Client Sample ID	CPB BP 13	CPB BP 13	CPB BP 14	CPB BP 14	CPB BP 14	CPB BP 14	CPB BP 14	CPB BP 14		
Depth to Top	15.00	19.00	1.50	5.00	9.00	11.00	15.00	19.00		
Depth To Bottom	15.50	19.50	2.00	5.50	9.50	11.50	15.50	19.50		
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
Sample Matrix Code	1A	1A	1A	1A	1	1A	1A	1A		
% Stones >10mm$_A^{\#}$	<0.1	<0.1	<0.1	1.4	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
Alkalinity (total) Colorimetry$_D$	108	110	75	53	41	73	85	110	mg/kg CaCO3	A-T-038 (s)

REPORT NOTES

Notes - Soil chemical analysis
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General
This report shall not be reproduced, except in full, without written approval from Envirolab.
Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.
All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.
All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.
Superscript "M" indicates method accredited to MCERTS.
If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified a being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 15/05643
Issue Number: 1 **Date:** 02 September, 2015

Client: Structural Soils Limited (Castleford)
The Potteries
Pottery Street
Castleford
West Yorkshire
UK
WF10 1NJ

Project Manager: Mark Athorne
Project Name: Sizewell
Project Ref: 763468
Order No: N/A
Date Samples Received: 28/08/15
Date Instructions Received: 28/08/15
Date Analysis Completed: 02/09/15

Prepared by:

[redacted]

Danielle Brierley
Administrative Assistant

Approved by:

[redacted]

Lianne Bromiley
Senior Client Manager

Envirolab Job Number: 15/05643

Client Project Name: Sizewell

Client Project Ref: 763468

Lab Sample ID	15/05643/1	15/05643/2	15/05643/3	15/05643/4					Units	Method ref
Client Sample No										
Client Sample ID	WMZ18	WMZ18	WMZ19	WMZ20						
Depth to Top	0.50	3.00	1.50	2.10						
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil						
Sample Matrix Code	1A	1A	1A	5						
% Stones >10mm$_A^{\#}$	4.3	9.3	12.8	<0.1					% w/w	A-T-044
pH BRE$_D^{M\#}$	6.32	5.51	8.33	6.41					pH	A-T-031s
Sulphate BRE (water sol 2:1)$_D^{M\#}$	<10	37	13	55					mg/l	A-T-026s

REPORT NOTES

Notes - Soil chemical analysis
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General
This report shall not be reproduced, except in full, without written approval from Envirolab.
Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.
All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.
All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.
Superscript "M" indicates method accredited to MCERTS.
If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified a being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

APPENDIX E

(i) Contamination Laboratory Test Results

(ii) Laboratory UKAS Accreditation Certificate

envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 15/05475
Issue Number: 1 **Date:** 04 September, 2015

Client: Structural Soils Limited (Castleford)
The Potteries
Pottery Street
Castleford
West Yorkshire
UK
WF10 1NJ

Project Manager: Chris Hustler
Project Name: Sizewell 2015 GI Campaign
Project Ref: 763468
Order No: N/A
Date Samples Received: 19/08/15
Date Instructions Received: 20/08/15
Date Analysis Completed: 04/09/15

Prepared by:

[redacted]

Melanie Marshall
Laboratory Coordinator

Approved by:

[redacted]

John Gustafson
Director

UKAS TESTING
1247

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/1	15/05475/2	15/05475/3	15/05475/4	15/05475/5	15/05475/6	15/05475/7	15/05475/8	Units	Method ref
Client Sample No	9	15	19	21	27	9	15	21		
Client Sample ID	CP BP7	CP BP7	CP BP7	CP BP7	CP BP7	CP BP11	CP BP11	CP BP11		
Depth to Top	4.10	7.0	9.00	10.00	13.00	4.00	7.0	9.50		
Depth To Bottom	4.50	7.50	9.50	10.50	13.50	4.50	7.50	10.00		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1A	1	1A	1A	1	1	1A	1		
% Stones >10mm$_A$#	2.2	<0.1	<0.1	1.4	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
Carbonate as CaCO3$_D$	-	-	<0.8	4.7	<0.8	-	-	<0.8	% w/w	CO3s
Fraction of organic carbon$_D$#	-	-	<0.0003	-	-	-	-	<0.0003	N/A	A-T-032 FOC
Leachate Prep BS EN 12457-2 (10:1)$_A$										A-T-046
pH (leachable)$_A$#	7.19	7.15	-	-	-	7.50	7.53	-	pH	A-T-031w
Chloride (leachable)$_A$#	<1.00	<1.00	-	-	-	1.61	<1.00	-	mg/l	A-T-026w
Sulphate (leachable)$_A$#	2.19	<1.00	-	-	-	1.84	<1.00	-	mg/l	A-T-026w
Arsenic (leachable)$_A$#	<1	2	-	-	-	1	3	-	µg/l	A-T-025w
Cadmium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Copper (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Chromium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Lead (leachable)$_A$#	4	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Mercury (leachable)$_A$#	<0.1	<0.1	-	-	-	<0.1	<0.1	-	µg/l	A-T-025w
Nickel (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Selenium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Zinc (leachable)$_A$#	3	4	-	-	-	3	2	-	µg/l	A-T-025w

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/1	15/05475/2	15/05475/3	15/05475/4	15/05475/5	15/05475/6	15/05475/7	15/05475/8	Units	Method ref
Client Sample No	9	15	19	21	27	9	15	21		
Client Sample ID	CP BP7	CP BP7	CP BP7	CP BP7	CP BP7	CP BP11	CP BP11	CP BP11		
Depth to Top	4.10	7.0	9.00	10.00	13.00	4.00	7.0	9.50		
Depth To Bottom	4.50	7.50	9.50	10.50	13.50	4.50	7.50	10.00		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1A	1	1A	1A	1	1	1A	1		
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	<0.02	0.06	-	-	-	0.08	0.08	-	µg/l	A-T-019w
Acenaphthylene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	0.02	<0.02	-	µg/l	A-T-019w
Benzo(a)anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(a)pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Chrysene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Fluorene (leachable)$_A$	<0.02	0.02	-	-	-	0.04	0.03	-	µg/l	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Naphthalene (leachable)$_A$	<0.02	0.07	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Phenanthrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	0.02	<0.02	-	µg/l	A-T-019w
PAH (total 16) (leachable)$_A$	<0.02	0.15	-	-	-	0.16	0.11	-	µg/l	A-T-019w

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/9	15/05475/10							Units	Method ref
Client Sample No	23	27								
Client Sample ID	CP BP11	CP BP11								
Depth to Top	11.00	13.00								
Depth To Bottom	11.50	13.50								
Date Sampled										
Sample Type	Soil - B	Soil - B								
Sample Matrix Code	1	1								
% Stones >10mm$_A^{\#}$	<0.1	<0.1							% w/w	A-T-044
Carbonate as $CaCO3_D$	<0.8	<0.8							% w/w	CO3s

REPORT NOTES

Notes - Soil chemical analysis
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

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All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.
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envirolab
Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 15/05475
Issue Number: 1 **Date:** 04 September, 2015

Client: Structural Soils Limited (Castleford)
The Potteries
Pottery Street
Castleford
West Yorkshire
UK
WF10 1NJ

Project Manager: Chris Hustler
Project Name: Sizewell 2015 GI Campaign
Project Ref: 763468
Order No: N/A
Date Samples Received: 19/08/15
Date Instructions Received: 20/08/15
Date Analysis Completed: 04/09/15

Prepared by:

[redacted]

Melanie Marshall
Laboratory Coordinator

Approved by:

[redacted]

John Gustafson
Director

UKAS TESTING
1247

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/1	15/05475/2	15/05475/3	15/05475/4	15/05475/5	15/05475/6	15/05475/7	15/05475/8	Units	Method ref
Client Sample No	9	15	19	21	27	9	15	21		
Client Sample ID	CP BP7	CP BP7	CP BP7	CP BP7	CP BP7	CP BP11	CP BP11	CP BP11		
Depth to Top	4.10	7.0	9.00	10.00	13.00	4.00	7.0	9.50		
Depth To Bottom	4.50	7.50	9.50	10.50	13.50	4.50	7.50	10.00		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1A	1	1A	1A	1	1	1A	1		
% Stones >10mm$_A$#	2.2	<0.1	<0.1	1.4	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
Carbonate as CaCO3$_D$	-	-	<0.8	4.7	<0.8	-	-	<0.8	% w/w	CO3s
Fraction of organic carbon$_D$#	-	-	<0.0003	-	-	-	-	<0.0003	N/A	A-T-032 FOC
Leachate Prep BS EN 12457-2 (10:1)$_A$										A-T-046
pH (leachable)$_A$#	7.19	7.15	-	-	-	7.50	7.53	-	pH	A-T-031w
Chloride (leachable)$_A$#	<1.00	<1.00	-	-	-	1.61	<1.00	-	mg/l	A-T-026w
Sulphate (leachable)$_A$#	2.19	<1.00	-	-	-	1.84	<1.00	-	mg/l	A-T-026w
Arsenic (leachable)$_A$#	<1	2	-	-	-	1	3	-	µg/l	A-T-025w
Cadmium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Copper (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Chromium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Lead (leachable)$_A$#	4	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Mercury (leachable)$_A$#	<0.1	<0.1	-	-	-	<0.1	<0.1	-	µg/l	A-T-025w
Nickel (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Selenium (leachable)$_A$#	<1	<1	-	-	-	<1	<1	-	µg/l	A-T-025w
Zinc (leachable)$_A$#	3	4	-	-	-	3	2	-	µg/l	A-T-025w

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/1	15/05475/2	15/05475/3	15/05475/4	15/05475/5	15/05475/6	15/05475/7	15/05475/8	Units	Method ref
Client Sample No	9	15	19	21	27	9	15	21		
Client Sample ID	CP BP7	CP BP7	CP BP7	CP BP7	CP BP7	CP BP11	CP BP11	CP BP11		
Depth to Top	4.10	7.0	9.00	10.00	13.00	4.00	7.0	9.50		
Depth To Bottom	4.50	7.50	9.50	10.50	13.50	4.50	7.50	10.00		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1A	1	1A	1A	1	1	1A	1		
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	<0.02	0.06	-	-	-	0.08	0.08	-	µg/l	A-T-019w
Acenaphthylene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	0.02	<0.02	-	µg/l	A-T-019w
Benzo(a)anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(a)pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Chrysene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Fluorene (leachable)$_A$	<0.02	0.02	-	-	-	0.04	0.03	-	µg/l	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Naphthalene (leachable)$_A$	<0.02	0.07	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Phenanthrene (leachable)$_A$	<0.02	<0.02	-	-	-	<0.02	<0.02	-	µg/l	A-T-019w
Pyrene (leachable)$_A$	<0.02	<0.02	-	-	-	0.02	<0.02	-	µg/l	A-T-019w
PAH (total 16) (leachable)$_A$	<0.02	0.15	-	-	-	0.16	0.11	-	µg/l	A-T-019w

Envirolab Job Number: 15/05475

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05475/9	15/05475/10							Units	Method ref
Client Sample No	23	27								
Client Sample ID	CP BP11	CP BP11								
Depth to Top	11.00	13.00								
Depth To Bottom	11.50	13.50								
Date Sampled										
Sample Type	Soil - B	Soil - B								
Sample Matrix Code	1	1								
% Stones >10mm$_A^{\#}$	<0.1	<0.1							% w/w	A-T-044
Carbonate as CaCO3$_D$	<0.8	<0.8							% w/w	CO3s

REPORT NOTES

Notes - Soil chemical analysis
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Units 7 & 8 Sandpits Business Park
Mottram Road, Hyde, Cheshire, SK14 3AR

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 15/05888
Issue Number: 1 **Date:** 15 September, 2015

Client: Structural Soils Limited (Castleford)
The Potteries
Pottery Street
Castleford
West Yorkshire
UK
WF10 1NJ

Project Manager: Chris Hustler/Mark Athorne
Project Name: Sizewell 2015 GI Campaign
Project Ref: 763468
Order No: N/A
Date Samples Received: 09/09/15
Date Instructions Received: 09/09/15
Date Analysis Completed: 15/09/15

Prepared by:

[redacted]

Danielle Brierley
Administrative Assistant

Approved by:

[redacted]

Gill Scott
Laboratory Manager

UKAS TESTING
1247

Envirolab Job Number: 15/05888

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05888/1	15/05888/2	15/05888/3	15/05888/4	15/05888/5	15/05888/6	15/05888/7	15/05888/8	Units	Method ref
Client Sample No	7	13	19	29	7	15	21	25		
Client Sample ID	CPBBP9	CPBBP9	CPBBP9	CPBBP9	cpbBP13	cpbBP13	cpbBP13	cpbBP13		
Depth to Top	3.00	6.00	9.00	14.00	3.00	6.00	9.00	11.00		
Depth To Bottom	3.50	6.50	9.50	14.50	3.50	6.50	9.50	11.50		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1	1	1	1	1A	1A	1A	1A		
% Stones >10mm$_A^\#$	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	% w/w	A-T-044
Carbonate as $CaCO3_D$	-	-	<0.8	2.5	-	-	8.4	2.0	% w/w	CO3s
Fraction of organic carbon$_D^\#$	-	-	<0.0003	-	-	-	0.0006	-	N/A	A-T-032 FOC
Leachate Prep BS EN 12457-2 (10:1)$_A$	*	*	-	-	*	*	-	-		A-T-046
pH (leachable)$_A^\#$	7.17	7.83	-	-	6.74	6.25	-	-	pH	A-T-031w
Chloride (leachable)$_A^\#$	<1.00	<1.00	-	-	3.14	3.54	-	-	mg/l	A-T-026w
Sulphate (leachable)$_A^\#$	1.92	1.84	-	-	11.46	10.72	-	-	mg/l	A-T-026w
Arsenic (leachable)$_A^\#$	2	4	-	-	3	2	-	-	µg/l	A-T-025w
Cadmium (leachable)$_A^\#$	<1	<1	-	-	<1	<1	-	-	µg/l	A-T-025w
Copper (leachable)$_A^\#$	1	<1	-	-	1	<1	-	-	µg/l	A-T-025w
Chromium (leachable)$_A^\#$	1	<1	-	-	<1	<1	-	-	µg/l	A-T-025w
Lead (leachable)$_A^\#$	<1	<1	-	-	<1	<1	-	-	µg/l	A-T-025w
Mercury (leachable)$_A^\#$	<0.1	<0.1	-	-	<0.1	<0.1	-	-	µg/l	A-T-025w
Nickel (leachable)$_A^\#$	<1	<1	-	-	<1	<1	-	-	µg/l	A-T-025w
Selenium (leachable)$_A^\#$	<1	<1	-	-	<1	<1	-	-	µg/l	A-T-025w
Zinc (leachable)$_A^\#$	5	4	-	-	4	10	-	-	µg/l	A-T-025w

Envirolab Job Number: 15/05888

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05888/1	15/05888/2	15/05888/3	15/05888/4	15/05888/5	15/05888/6	15/05888/7	15/05888/8	Units	Method ref
Client Sample No	7	13	19	29	7	15	21	25		
Client Sample ID	CPBBP9	CPBBP9	CPBBP9	CPBBP9	cpbBP13	cpbBP13	cpbBP13	cpbBP13		
Depth to Top	3.00	6.00	9.00	14.00	3.00	6.00	9.00	11.00		
Depth To Bottom	3.50	6.50	9.50	14.50	3.50	6.50	9.50	11.50		
Date Sampled										
Sample Type	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B	Soil - B		
Sample Matrix Code	1	1	1	1	1A	1A	1A	1A		
PAH 16MS (leachable)										
Acenaphthene (leachable)$_A$	0.02	0.03	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Acenaphthylene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Anthracene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Benzo(a)anthracene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Benzo(a)pyrene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Benzo(b)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Benzo(ghi)perylene (leachable)$_A$	0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Benzo(k)fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Chrysene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Dibenzo(ah)anthracene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Fluoranthene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Fluorene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Indeno(123-cd)pyrene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Naphthalene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Phenanthrene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
Pyrene (leachable)$_A$	<0.02	<0.02	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w
PAH (total 16) (leachable)$_A$	0.04	0.03	-	-	<0.02	<0.02	-	-	µg/l	A-T-019w

Envirolab Job Number: 15/05888

Client Project Name: Sizewell 2015 GI Campaign

Client Project Ref: 763468

Lab Sample ID	15/05888/9								Units	Method ref
Client Sample No	31									
Client Sample ID	cpbBP13									
Depth to Top	14.0									
Depth To Bottom	14.50									
Date Sampled										
Sample Type	Soil - B									
Sample Matrix Code	5A									
% Stones >10mm$_A^\#$	<0.1								% w/w	A-T-044
Carbonate as CaCO3$_D$	1.5								% w/w	CO3s

REPORT NOTES

Notes - Soil chemical analysis
All results are reported as dry weight (<40°C).
For samples with Matrix Codes 1 - 6 natural stones and brick and concrete fragments >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General
This report shall not be reproduced, except in full, without written approval from Envirolab.
Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.
All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.
All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.
Superscript "M" indicates method accredited to MCERTS.
If results are in italic font they are associated with an AQC failure. These are not accredited and are unreliable.
A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

TPH analysis of water by method A-T-007
Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Asbestos in soil
Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. Stones etc. are not removed from the sample prior to analysis.
Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed. Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:
1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.
Samples with Matrix Code 7 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:
A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis.
NDP indicates No Determination Possible.
NAD indicates No Asbestos Detected.
N/A indicates Not Applicable.
Superscript # indicates method accredited to ISO 17025.
Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

Appendix F – Ground Investigation Factual Reports

On-shore Phase 2 Ground Investigation for Sizewell Site 2019

Sizewell C On Shore Phase 2 Ground Investigation – **2019 Task Order 1**

Factual Report on Ground Investigation (Volume 1)

Project no.: 734318

Client: NNB Generation Company (SZC) Ltd

JULY 2020

STRUCTURAL SOILS LTD

DOCUMENT ISSUE RECORD

Project No.:	734318
Project Name:	Sizewell C On Shore Phase 2 Ground Investigation-2019 TO1
Document Title:	Factual Report on Ground Investigation
Client:	NNB Generation Company (SZC) Ltd
Investigation Supervisor:	EDF
Status:	Factual Report (V.1)
Author	S Al-Jassar BSc (Hons) MSc PhD FGS
Approved by	A Barby-Moule BSc (Hons) MSc CGeol FGS
Report Issue Date	16 July 2020

REVISION RECORD

Revision	Date	Description of revisions	Prepared by
00	29.07.2019	Interim Factual Report 1	SAJ
00	08.08.2019	Interim Factual Report 2	SAJ
00	21.08.2019	Interim Factual Report 3	SAJ
00	01.10.2019	Interim Factual Report 4	SAJ
00	11.10.2019	Interim Factual Report 5	SAJ
00	25.10.2019	Interim Factual Report 6	SAJ
00	04.11.2019	Interim Factual Report 7	SAJ
00	13.11.2019	Interim Factual Report 8	SAJ
00	27.11.2019	Interim Factual Report 9	SAJ
00	11.12.2019	Interim Factual Report 10	SAJ
00	03.01.2020	Interim Factual Report 11	SAJ
00	15.01.2020	Interim Factual Report 12	SAJ
00	29.01.2020	Interim Factual Report 13	SAJ
00	15.05.2020	Draft Factual Report 00	SAJ
01	10.06.2020	Outstanding test results, UHR report and revised Pumping test report with the associated data	SAJ
00	16.07.2020	Factual Report 00	SAJ

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CONTENTS

1 INTRODUCTION

This factual report covers Task Order 1 (TO1) ground investigation work carried out during the period between 8 July 2019 to 6 April 2020.

The work was carried out by Structural Soils Ltd (SSL) on the instructions of NNB Generation Company (SZC) Ltd (the Investigation Supervisor). The purpose of the work was to undertake onshore exploratory holes to obtain information to develop the existing ground model across the site for the new nuclear power station in close proximity to the existing power station site (Sizewell A and B).

The whole investigation included cable percussive, rotary and sonic drilled boreholes, in-situ testing, laboratory testing and the preparation of this report. This factual report contains a description of the site and the works, the exploratory hole logs, the in-situ testing results and lab test results.

The ground investigation has been carried out in accordance with the contract specification, and the general requirements of BS 5930:2015, BS 10175:2011+A2:2017, BS EN 1997-2 (2007), BS EN ISO 22475-1 (2006) and other relevant standards.

This report presents the factual records of the fieldwork carried out. Whilst every attempt is made to record full details of the strata encountered in the exploratory holes, techniques of hole formation and sampling will inevitably lead to disturbance, mixing or loss of material in some soils and rocks. All information given in this report is based on the ground conditions encountered during the site work, and on the results of laboratory and field tests performed during the investigation. However, there may be conditions at the site that have not been taken into account, such as unpredictable soil strata, contaminant concentrations, and water conditions between or below exploratory holes.

This report was prepared by SSL for the sole and exclusive use of NNB Generation Company (SZC) Ltd in response to particular instructions. Any other parties using the information contained in this report do so at their own risk and any duty of care to those parties is excluded. No liability will be accepted after a period of 6 years from the date of the report.

2 SITE DESCRIPTION

2.1 Location and Topography

The site is located approximately 3.5 km to the east of Leiston, Suffolk. The British National Grid Reference of the centre of the site is TM 473 641 (see Site Location Map in Appendix A Fig.1).

The site is irregular in shape, measuring approximately 182,41 m^2 (covering an area of 18.34 hectares) in size (see Exploratory Hole Location Plan in Appendix A (Fig.2)). The site lies to the north of Sizewell B and is bounded to the east by sea bund, to the south by Sizewell B and to the west and north by marshland, partly farmland with some conifer plantations.

The main site area is generally open low lying flat and covered with grass, varies between 0.2m AOD and 2.5m AOD in the centre of the main site. To the east 10m AOD bund has been formed along the eastern flank, parallel to the existing coastal fringe sand dunes and extends to the north of the site.

Site access is gained from the training centre car park.

2.2 Geology

Information on the geology of the site was obtained from the following sources published by the British Geological Survey (BGS):

- BGS map (sheet 191, scale 1:50,000, published 1994).
- The BGS digital geology map, which utilises the most up to date names for geological units (www.bgs.ac.uk/data).
- The BGS Lexicon of Named Rock Units, which provides typical descriptions for most geological units (www.bgs.ac.uk/lexicon).

The British Geological Survey Map of Great Britain for Saxmundha shows the site to be generally underlain by the following descending sequence of strata:

TABLE 1 : SUMMARY OF EXPECTED SITE GEOLOGY (BGS Geological Map sheet 191)	
Geological Unit Name	**Description**
Tidal Flat Deposits	Mud flat and Sand flat deposits
Peat	Pseudo – fibrous
Crag Group	Sand, Gravels, Silts and Clay
London Clay Formation	Mudstones and Siltstones
Harwich Formation	Sandy Siltstone
Lambeth Group	Mudstone, Sands and Silts
Ormesby Clay Formation	Mudstone
Chalk Group	White micritic Limestone with flint nodules

The BGS digital geological map, which utilises the most up to date names for the geological units, shows the site to be underlain by Tidal Flat Deposits, including mud flat and sand flat deposits.

The above superficial deposits overlie the Crag Formation which consists of sands, gravels, silts and clay, and the descending sequence of solid geology shown in Table 1.

2.2.1 Geology Based on Previous Information

The specification for the work has provided a detailed geology for the site derived from previous investigations. The previous investigations show the Made ground is underlain by Recent Deposits which consist of clay and peat.

The underlying solid geological sequence encountered in the previous boreholes was:

- Crag Deposits
- London Clay
- Lower London Tertiaries
- Chalk Group

The geological nomenclature used in different phases of past investigations on the site varies depending on the geological unit names in use by the BGS at the time, and the approach taken by the specific parties involved. The geological unit names used in this investigation have been specified by the Investigation Supervisor. Details of the geological Member and Formation names are provided by Jacobs in the Field Logging Guide issue 1.0 Rev.0, which is included in Appendix B (ii).

3 FIELDWORK

3.1 General

The ground investigation was carried out by SSL and commenced on 8 July 2019 and completed on 6 April 2020.

The scope of works and positions were selected by NNB Generation Company (SZC), set out by SSL and adjusted where necessary to take account of buried or overhead services, or other restrictions.

3.2 Scope of Works

The following works were completed at the locations shown on the Exploratory Location Plans in Appendix A (Fig 2) and are detailed in Table 2 below:

TABLE 2 : SCOPE OF INTRUSIVE WORKS AND IN-SITU TESTING

Quantity	Exploratory Hole / Test	Exploratory IDs
9	Cable Percussion drilling to help the progress of the CPTu tests	DCPT2019_1, DCPT2019_2, DCPT2019_2A, DCPT2019_2AT2, DCPT2019_2B, DCPT2019_3, DCPT2019_4, DCPT2019_5, and DCPT2019_6
14	Cable Percussion Borehole to recover made ground samples	MGS2019_A, MGS2019_B, MGS2019_B1 MGS2019_B2, MGS2019_C, MGS2019_D, MGS2019_E, MGS2019_E1, MGS2019_E2, MGS2019_F, MGS2019_H, MGS2019_I, MGS2019_J and MGS2019_K
8	Rotary Cored Boreholes	DCBH2019_1, DCBH2019_2, DCBH2019_3, DCBH2019_4 DCBH2019_5, DCBH2019_6, DCBH2019-7 and DCBH2019_8
8	Sonic/Rotary Drilling Boreholes	SDBH2019_2, SDBH2019_3, SDBH2019_4, SDBH2019_5, SDBH2019_7, CH2019_T, CH2019_R1 and CH2019_R2
14	Menard Pressuremeter Tests	MPM2019_1, MPM2019_2, MPM2019_3, MPM2019_4, MPM2019_5, MPM2019_6, MPM2019_7, MPM2019_8, MPM2019_9, MPM2019_10, MPM2019_11, MPM2019_12, MPM2019_13 and MPM2019_14
7	CPTu and SCPT Tests	DCPT2019_1, DCPT2019_2A, DCPT2019_2B, DCPT2019_3, DCPT2019_4, DCPT2019_5 and DCPT2019_6

TABLE 2 : SCOPE OF INTRUSIVE WORKS AND IN-SITU TESTING		
Quantity	**Exploratory Hole / Test**	**Exploratory IDs**
13	Optical and Geologging	DCBH2019_1, DCBH2019_2, DCBH2019_3, DCBH2019_4, DCBH2019_7, CH2019_T, CH2019_R1,CH2019_R2, SD2019_3, SD2019_4, DBH2009_1, DBH2009_2 and SBP2009_2
22	Permeability Tests	DCBH2019-7 and DCBN2019_8
3	Verticality tests	CH2019_T, CH2019_R1 and CH2019_R2
3	Crosshole Tests	CH2019_T, CH2019_R1 and CH2019_R2
3	Downhole Test	CH2019_T, CH2019_R1 and CH2019_R2
1	Geophysical Survey	Ambient Measurements Vibration (AMV), Frequency Domain Electromagnetic (FDEM) and Electrical Resistivity Tomography (ERT) and Seismic Reflection (UHR)
1	Pumping Test	DBH2009_20, PZ2009_2, PZ2009_3, PZ2009_15, PZ2009_11, PZ2009_7 and PZ2009_16

The exploratory hole logs including drillers logs are presented in Appendix B (iva and ivb). These provide information including the equipment and methods used, samples taken, tests carried out, water observations and descriptions of the strata encountered. Explanation of the terms and abbreviations used on the logs is given in the Key to Exploratory Hole Records in Appendix B (i), together with other explanatory information.

Prior to the commencement of any exploratory hole, the utility service records were consulted before a cable avoidance scan was carried out, using a cable avoidance tool (CAT) and signal generator (‘genny’). Inspection pits were hand dug at exploratory locations, where noted on the relevant exploratory hole logs.

3.3 Cable Percussion Boreholes

The boreholes were drilled using a cable tool percussion drilling rig. Small, large and large bulk disturbed soil samples were taken from the boreholes at regular intervals. Some of these boreholes were drilled to recover made ground material. The others were drilled in the CPT test locations prior to the commencement of the CPT test, in order to remove any obstruction which might be encountered in the made ground. The cable percussion rig was also used to clear the hole from the blowing sand and using bentonite pallets to control the blowing sand.

All the MGS boreholes were backfilled with sand as per instruction.

3.4 Rotary Boreholes

Rotary coring was undertaken using rotary wireline techniques, consisting of a Geobore-S wireline system with Polycarbonate Diamond Core bit (PDC), to produce a hole of 146 mm diameter and a core of 102 mm diameter, recovered within plastic core liner. Water with biodegradable polymer additive was used as the drilling flush medium. The flush was contained, recirculated and re-used via a settlement tanks to minimise water usage.

Different techniques were used during the drilling to improve the quality of the core recovery, using different types of drilling bits and different catchers. The different types of methods and techniques used in the rotary drilling and the RAMS are all included in Appendix B.

All core samples were extruded horizontally and laid out sequentially in wooden core

boxes. After the removal of the liner, all cores were cleaned from excess flush and surface discoloration caused by drilling process before they were photographed, prior to commencing logging.

The core photographs are included at the end of each borehole log included in Appendix B. In additional all the photos are included in volume 2 of this report.

3.5 Sonic Drilling

The sonic drilling was undertaken to recover continuous core of approximately 100 mm diameter, recovered within plastic core liner.

All core samples were extruded horizontally and laid out sequentially in wooden core boxes. After the removal of the liner, all cores were cleaned from excess flush and surface discoloration caused by drilling process before they were photographed, prior to commencing logging.

The core photographs are included at the end of each borehole log included in Appendix B.

3.6 Exploratory Holes and Test Depths

The depths of the exploratory holes using different drilling techniques and the in-situ testing are included in Table 3 below:

TABLE 3: SUMMARY OF EXPLORATORY HOLES AND TETS DEPTH

	Depth (m)			
Location	**Cable Percussion**	**Rotary Coring**	**In-Situ Tests**	**Remarks**
CH2019_T		120.50		Installed
CH2019_R1		120.00		Installed
CH2019_R2		120.00		Installed
DCBH2019_1		106.00		Grouted

DCBH2019_2		120.30		Installed
DCBH2019_3		101.00		Installed
DCBH2019_4		102.70		Installed
DCBH2019_5		100.30		Installed
DCBH2018_6		100.82		Installed
DCBH2018_7		100.50		VW Installed
DCBH2019_8		98.00		VW Installed
DCPT2019_1	1.20		80.75	Grouted
DCPT2019_1A	0.65			Backfilled
DCPT2019_1B	0.55			Backfilled
DCPT2019_1C	0.75			Backfilled
DCPT2019_2	1.20		2.80	Grouted
DCPT2019_2A	1.20		2.95	Grouted
DCPT2019_2A T2	1.20		16.55	Grouted
DCPT2019_2B	1.20		17.31	Grouted
DCPT2019_2B T2	1.20		64.11	Grouted
DCPT2019_3	1.20		82.00	Grouted
DCPT2019_4	1.20		83.60	Grouted
DCPT2019_5	1.20		81.04	Grouted
DCPT2019_6	1.20		62.36	Grouted
DCPT2019_6 T2	1.20		80.63	Grouted
MGS2019_A	6.00			Installed
MGS2019_B	7.00			Backfilled
MGS2019_B1	1.90			Backfilled
MGS2019_B2	7.00			Backfilled
MGS2019_C	4.00			Backfilled
MGS2019_D	4.70			Backfilled
MGS2019_E	6.00			Backfilled
MGS2019_E1	4.00			Backfilled
MGS2019_E2	5.50			Backfilled
MGS2019_F	4.60			Installed
MGS2019_H	2.50			Backfilled
MGS2019_I	2.50			Backfilled
MGS2019_J	6.00			Backfilled
MGS2019_K	7.50			Backfilled
MPM2019_1			85.00	Grouted
MPM2019_2			85.00	Grouted
MPM2019_3			85.00	Grouted
MPM2019_4			85.00	Grouted
MPM2019_5			85.00	Grouted
MPM2019_6			85.00	Grouted
MPM2019-7			85.00	Grouted
MPM2019_8			85.00	Grouted
MPM2019_9			85.00	Grouted
MPM2019_10			85.00	Grouted

MPM2019_11			85.00	Grouted
MPM2019_12			85.00	Grouted
MPM2019_13			85.00	Grouted
MPM2019_14			85.00	Grouted
SD2019_2		91.30		Grouted
SD2019_3		120.00		Grouted
SD2019_4		120.00		Installed
SD2019_5		100.50		Grouted
SD2019_7		120.00		Grouted

The exploratory hole depths quoted above are those used on the exploratory logs included in Appendix B (iii). The drillers logs are also included in Appendix B (iv).

3.7 Soil and Rock Core Logging

All the boreholes were logged by engineers in accordance with the recommendations of BS 5930:2015 (which incorporates the requirements of BS EN ISO 14689-1:2003, 14688-1 and 14688-2) and CIRIA Report C574 *Engineering in Chalk*. The "Field Logging Guide" issued by Jacobs was also used to guide the logging. The guide is included in Appendix B (ii).

3.8 In-Situ Tests

3.8.1 Menard Pressuremeter Tests

SSL commissioned Geotec to undertake the tests which commenced on 15 July 2019. The tests were carried out as per the specification and in accordance with BS EN ISO 22476-4, while the cyclic test was in accordance with the French Standard XP P 94-110-2. The tests were carried out in MPM2019_1, MPM2019_2, MPM2019_3, MPM2019_4, MPM2019_5, MPM2019_6, MPM2019_7, MPM2019_8, MPM2019_9, MPM2019_10, MPM2019_11, MPM2019_12, MPM2019_13 and MPM2019_14. The total depths of the tests are included in Table 3. The final report is included in Appendix C.

3.8.2 CPTu and SCPT Tests

SSL commissioned In-Situ Site Investigation to carry out the CPTU and SCPT in six locations. The tests commenced on 22 July 2019 which were carried out as per the specification and in accordance with the ASTM D7400-08 in DCPT2019_1, DCPT2019_2, DCPT2019_2A, DCPT2019_2AT2, DCPT2019_2B, DCPT2019_2BT2 DCPT2019_3, DCPT2019_4, DCPT2019_5, DCPT2019_6 and DCPT2019_6T2. The total depth in each location is included in Table 3. The test results report is included in Appendix C.

3.8.3 Optical Televiewer and Acoustic Logging

SSL commissioned European Geophysical Survey and Robertson Geo Services to carry out optical and acoustic logging in some of the boreholes. They were carried out in DCBH2019_1, DCBH2019_2, DCBH2019_3, DCBH2019_4, SD2019_3 and SD2019_4. The logs and the reports are included in Appendix D.

3.8.4 Geologging

SSL commissioned European Geophysical Survey and Robertson Geo Services to carry out geologging in DCBH2019_1. DCBH2019_2, DCBH2019_3, DCBH2019_4, SD2019_3 and SD2019_4. In addition, CBL was carried out in CH2019_T, CH2019_R1, CH2019_R2, DBH2009_1, DBH2009_2 and SBP2009_2. The logs and reports are included in Appendix D.

3.8.5 Hydraulic Conductivity

Hydraulic conductivity tests were carried out in DCBH2019_7 and DCBH2019_8 in accordance with BS 5930:2015. In the Crag Formation, all tests were undertaken with data-logging (barometrically corrected) pressure transducers installed, while in the London Clay Formation, the tests were carried out overnight with the casing sealed into the clay, to enable an estimate of vertical hydraulic conductivity to be determined. All tests were undertaken with data-logging (and barometrically corrected) pressure transducers installed. The results are included in Appendix C.

3.8.6 Verticality Test

The verticality test was carried out as per the specification in CH2019_T, CH2019_R1 and CH2019_R2. The results are included in Appendix B.

3.8.7 Geophysical Survey

SSL commissioned RSK Geophysics to carry out a geophysical survey including Ambient Measurements Vibration (AMV), Frequency Domain Electromagnetic (FDEM) and Electrical Resistivity Tomography (ERT). The survey commenced on 14 October 2019. The test results and the report are included in Appendix H.

3.8.8 Crosshole and Downhole Survey

SSL commissioned RSK Geophysics to carry out crosshole and downhole survey in CH2019_T, CH20019_R1 and CH2019_R2. The results are included in a report in Appendix C.

3.8.9 Radiological Survey

SSL commissioned RSK to carry out radiological survey which include on site scanning of samples from DCBH2019_4, DCBH2019_5, MGS2019_A, MGS2019_B, MGS2019_B1, MGS2019_B2, MGS2019_C, MGS2019_D,. MGS2019_E, MGS2019_E1, MGS2019_E2 and MGS2019_F. These samples were sent to the lab as part of the suites of contamination for alpha, gamma and tritium determination. The results are included in Appendix C and Appendix E.

3.8.10 Pumping Test

SSL commissioned WJ Groundwater Limited to undertake a pumping test using an existing well installed during a previous phase of site investigation work. The obstruction well DBH2009_20 was installed in 2010. During the testing, an array of piezometers/monitoring holes were monitored by SSL. The data collected and the interpretation are all included in the pumping test report in Appendix C.

3.9 Planning of Works

The site work commenced on 17 July. The programme of the work was monitored during the duration of the site work and was revised and updated when and if needed. The latest revised programme is included in Appendix B (viii).

The site work including all the in-situ tests and the downhole and crosshole testing for TO1 was completed on 29 January 2020, while the pumping test was completed on 6 April 2020. .

3.10 Problems Encountered During Site Works

3.10.1 Menard Pressuremeter Test

Some problems were encountered during the Menard pressuremeter test. These are summarised below.

In MPM2019_1, the probe burst at 33.00m, 48.00m, 51.00 and 56.00m depths. There was obstruction at 68.80m depth and consequently 1 no. drilling bit and 1 no. PDC were damaged.

In MPM2019_2, the probe burst twice between 21.00m-27.00m depth. There was a problem with the blowing sand, which caused some problems with progressing the casing between 19.00-22.00m depth. At 44.00m and 62.00m depths the probe burst. The test at 64.00m depth was moved to 66m because of difficulties encountered during the drilling, and the probe could not be moved beyond 63m.

In MPM2019_4, the probe burst at 64.00m depth.

In MPM2019_8, concrete was encounter in the made ground, the hole had to be cored through the concrete. On 20 July the sand filled the borehole preventing the drill rods from moving and also prevented the casing from being advanced. Both the casing and the rods were subsequently removed after which the flexible hose collapsed. The hydraulic oil spillage was contained and removed. The hole was continued with larger caseing. The test was carried out at 21.00m depth up to 72 bar before the probe collapsed; the probe burst before the ground has moved therefore cyclic test couldn't be carried out. The probe was repaired, but the casing was parted inside the hole at 10.50m. The hole had to be abandoned temporarily until the casing was removed by another more powerful rig.

In MPMBH2019_9, the probe burst at 49.00m depth, while at 61.00m the test stopped prematurely at 50 bar. At 66m depth the test stopped at 60 bar because the pressure in the nitrogen bottle was low.

In MPM2019_10 on 17 July 2019, the probe had some technical problems. On 18 July 2019, the probe collapsed twice during a test and during the calibration. Two tests were carried out at 43.00m and 45.00m; the probe collapsed during both tests. The drilling bit at 63.50m was jammed and became damaged. A second drilling bit was also damaged at 67m depth. The test between 64m and 67m depth couldn't be carried out because of the collapses and the probe was blocked by the loose sand. The test at 70.00m depth was stopped at 72 bar because the bottle pressure was too low.

In MPM2019_11, the probe collapsed at 20.00m,33.00m and 41.00m depth. The probe had difficulty to be in contact with the hole wall at 72.00m depth, the test was moved to 71.00m depth. At 85m depth the probe burst.

In MPM2019_12, the probe collapsed at 17.00m and 35.00m depths.

In MPM2019_13, the probe burst in the last test at 84m depth.

One of the MPM three rigs broke down and was idol for a few days until the parts arrived from France.

3.10.2 CPTu and SCPT Tests

In DCPT2019_3 and at 5.17m depth, the casing was following the probe down the hole. the test was stopped. The test was also stopped at 11.95 m depth due of refusal.

The rig was then moved to DCPT2019_4 to carry out the testing. The test was stopped at 17.30m depth due to the buckling of the rods.

The rig was then moved to DCPT2019_5. The test stopped at 15.20m depth due to the buckling of the rods.

The rig was then moved back to DCPT2019_3 after the hole was cleaned from the blowing sand by the cable percussion rig to 12.45m depth. The testing was resumed but the last meter of the hole was blocked. The casing was pushed further down the hole in an attempt to progress the hole. The test was resumed but refused at 13.48m depth. The hole was cleaned by the cable percussion rig and the test was resumed. The test was refused at 15.81m depth.

The rig was then moved to DCPT2019_4 after the borehole was cleaned. The test was refused at 19.32m depth. The hole was cleaned from the blowing sand and the test was resumed. The test was refused at 21.06m depth.

The rig was moved to DCPT2019_5 after cleaning the hole from the blowing sand and the test was resumed. The test was refused at 17.94m depth. The test was resumed after cleaning the hole from the blowing sand. The test was refused at 16.21m depth and at 19.66m depth following another cleaning.

The rig was moved to CPT2019_2A. The test was refused at 2.95m on a concrete obstruction. The test was resumed after the removal of the concrete. The test was refused at 16.55m depth.

Three refusals were encountered within the Crag formation in DCPT2019_2B, DCPT2019_3, DCPT2019_4 and DCPT2019_5.

Five refusals were encountered within the clay in DCPT2019_2B, five refusals within the clay in DCPT2019_4, and three refusals within the clay in DCPT2019_3.

3.11 Monitoring Wells, Vibrating Wire Piezometers, Liners Installations and Backfilling

On completion 50mm (ID) HDPE groundwater monitoring wells were installed in; DCBH2019_2, DCBH2019_3, DCBH2019_4, DCBH2019_5 and DCBH2019_6.

Gas monitoring wells were also installed in MGS2019_A, MGS2019_F. The installation details are shown on the exploratory logs in Appendix B, the design having been decided by EDF.

Vibrating wire piezometer was installed in DCBH2019-7 to 87m depth and in DCBH2019_8 to 90m depth, using grout ratio 1cement:0.5 bentonite:2 water.

The seismic crosshole boreholes were installed with 99.4mm (ID) plastic liners. The grout ratio was approximately 2 cement:1 water in the chalk and 62.5L water:25 kg cement:19 kg bentonite in the clay and sand sections.

The grout in all the boreholes was pumped to the bottom of the hole using a tremie pipe which should displace the water from the bottom of the hole to ensure no voids or bridging.

The remaining MGS2019 boreholes were backfilled with sand while the remaining boreholes were backfilled with bentonite cement grout.

Water and gas monitoring data and vibrating wire piezometers data are all included in Appendix F.

3.12 As Built Survey

On completion of the works, a survey of the exploratory hole locations was undertaken using specialist Global Positioning System (GPS) equipment. The coordinates of each exploratory hole were measured relative to British National Grid, and the level relative to Ordnance Datum. These are shown on the exploratory hole logs contained in Appendix B, which have been printed with a reduced level column. Some of the exploratory holes in the woodland or where the GPS signal was weak have been surveyed using Leica Full Station system. The as built survey results are also presented in tabular form in Appendix B.

4 LABORATOTY TESTING

Samples for potential geotechnical testing were returned to one of the Company's UKAS accredited laboratories. Laboratory tests were scheduled by NNB Generation/EDF. Tests carried out in accordance with MCERTD/UKAS standards were noted on the results sheets.

4.1 Geotechnical laboratory Testing

Geotechnical laboratory testing was generally carried out in accordance with the relevant parts of BS EN ISO 17892:2014 *Geotechnical investigation and testing – Laboratory testing of soil*, or the relevant part of BS1377:1990, *Methods of Test for Soils for Civil Engineering Purposes* if required.

The number of tests completed and the test methods used are summarised below. Where non-standard procedures have been undertaken, this is recorded on the report sheet. The results are reported in tabular and/or graphical form and included as Appendix G of this report. A spreadsheet summarising the samples tested and all the abortive test notices are also included in Appendix G.

Table 4:SUMMARY OF GEOTECHNICAL TESTING

Number of tests	Test	Remarks
Classification Tests		
237	Water content.	
111	Liquid and plastic (Atterberg) limits.	
138	Particle size distribution by sieving.	
31	Particle size distribution by sedimentation.	
42	Particle Density	
99	Linear Density	
3	Density by fluid displacement/immersion in water	
2	Paper Suction	
11	Maximum and Minimum Density	
81	Methylene Blue	
Compressibility, Permeability and Durability Tests		
32	One-dimensional consolidation	
1	Swelling Pressure	
Shear Strength - Total Stress		
25	Consolidated undrained triaxial compression tests.(3X38mm)	
18	Consolidated undrained triaxial compression tests.(50 or 100mm single stage)	
Rock Tests		

Table 4:SUMMARY OF GEOTECHNICAL TESTING		
13	Water content of rock	
10	Uniaxial compressive strength	
13	Rock density	
13	Porosity	
3	Brazil	
Chemical Tests: Soil*		
5	Organic	
3	BRE Brownfield non pyritic	

4.2 Geoenvironmental Laboratory Testing

95 no. soil and water samples were scheduled by the client for geoenvironmental testing in accordance with the specification. The results are included in Appendix E.

5 REFERENCES

5.1 BS 5930:2015 *Code of practice for ground investigations*

5.2 BS EN 1997-1:2004 *Eurocode 7 — Geotechnical Design Part 1 - General Rules* incorporating corrigendum Feb 2009 and Amemdment A1 2013

5.3 BS EN 1997-2:2007 Eurocode 7 — *Geotechnical design Part 2: Ground Investigation and testing*

5.4 British Geological Survey sheet 191 scale 1:50,000, published by BGS.

5.5 British Geological Survey online digital geological map, www.bgs.ac.uk/data

5.6 British Geological Survey Lexicon of Named Rock Units, www.bgs.ac.uk/lexicon

5.7 BS EN ISO 14688-1:2018 *Geotechnical investigation and testing – Identification and classification of soil: Part 1: Identification and description*

5.8 BS EN ISO 14688-2:2018 *Geotechnical investigation and testing – Identification and classification of soil: Part 2: Principles for a classification*

5.9 **CIRIA Report C574 (2002) Engineering In Chalk**

5.10 Jacobs 2019: *Field Logging Guide.*

5.11 BS EN ISO 22476-1:2012 Geotechnical investigation and testing - Field Testing - Electrical Cone and piezocone penetration test, incorporating corrigendum January 2013

5.12 BS EN ISO 22476-4 (2012) *Geotechnical investigation and testing - field testing - Ménard pressuremeter test.*

5.13 BS EN ISO 22476-1:2012 Geotechnical investigation and testing - Field Testing - Electrical Cone and piezocone penetration test, incorporating corrigendum January 2013

5.14 BS EN ISO 22282-2:2012 Geotechnical investigation and testing — Geohydraulic testing Part 2 Water permeability tests in a borehole using open systems

5.15 BS EN ISO 22282-4:2012 *Geotechnical investigation and testing — Geohydraulic testing Part 4 Pumping tests*

LABORATORY TESTING REFERENCES

5.16 BS 1377: 1990 *Methods of Test for Soils for Civil Engineering Purpose* (including amendment 1 (1996)).

5.17 BS 1377-1: 2016 Methods of Test for Soils - *General Requirements and Sample Preparation*

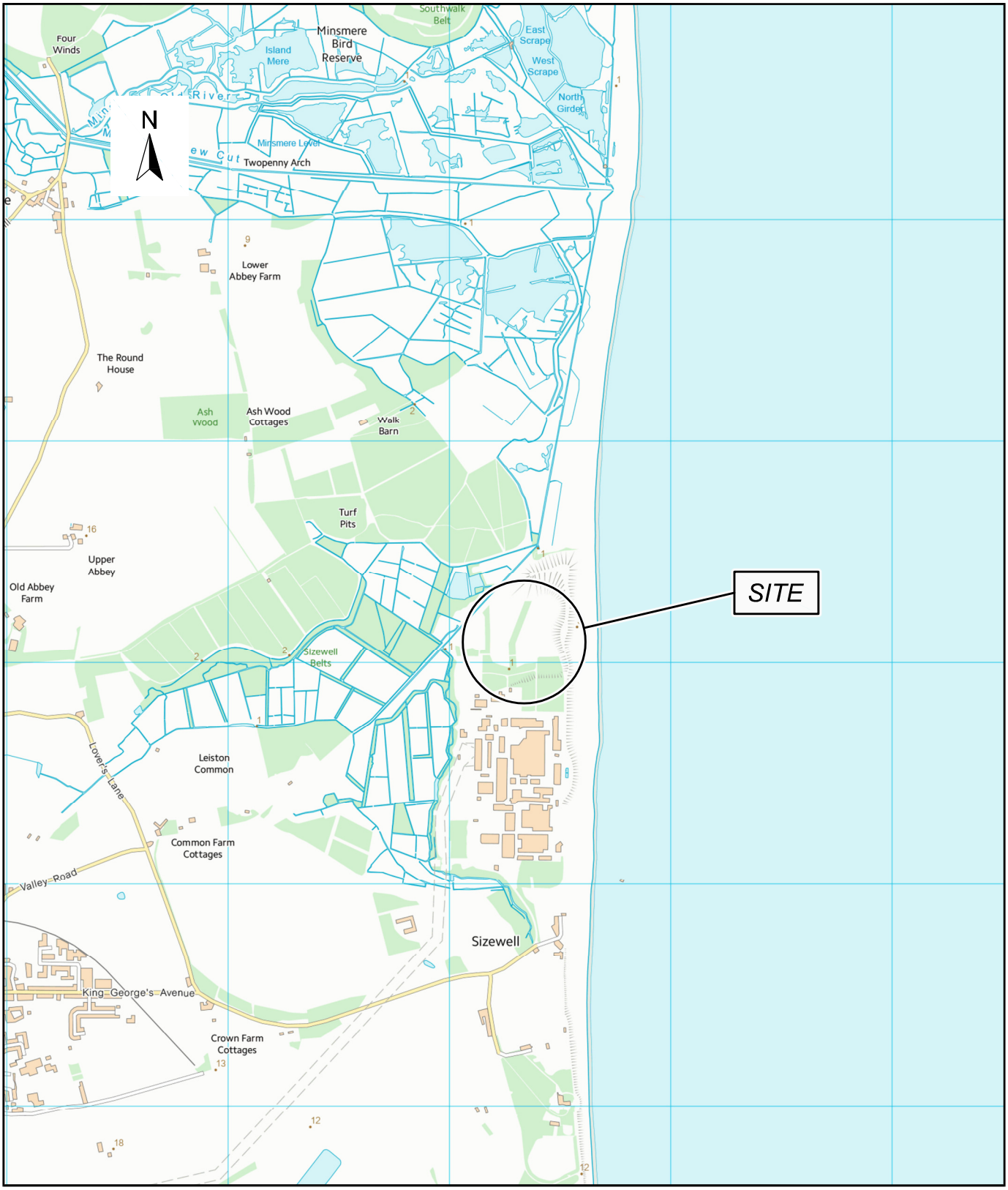
5.18 BS EN ISO 17892:2014 Geotechnical investigation and testing – Laboratory Testing of Soil

5.19 International Society for Rock Mechanics (1974-2006). The complete ISRM suggested methods for rock characterization, testing and monitoring.

APPENDIX A -
PLANS AND DRAWINGS

(i) Site Location Plan (Fig.1)

(ii) Exploratory Hole Location and In-Situ Testing Plan (Fig.2)



STRUCTURAL SOILS
The Old School
Stillhouse Lane
Bedminster
Bristol BS3 4EB
Tel: 0117 947 1000
ask@soils.co.uk
www.soils.co.uk

CLIENT: NNB Generation Company (SZC) Ltd

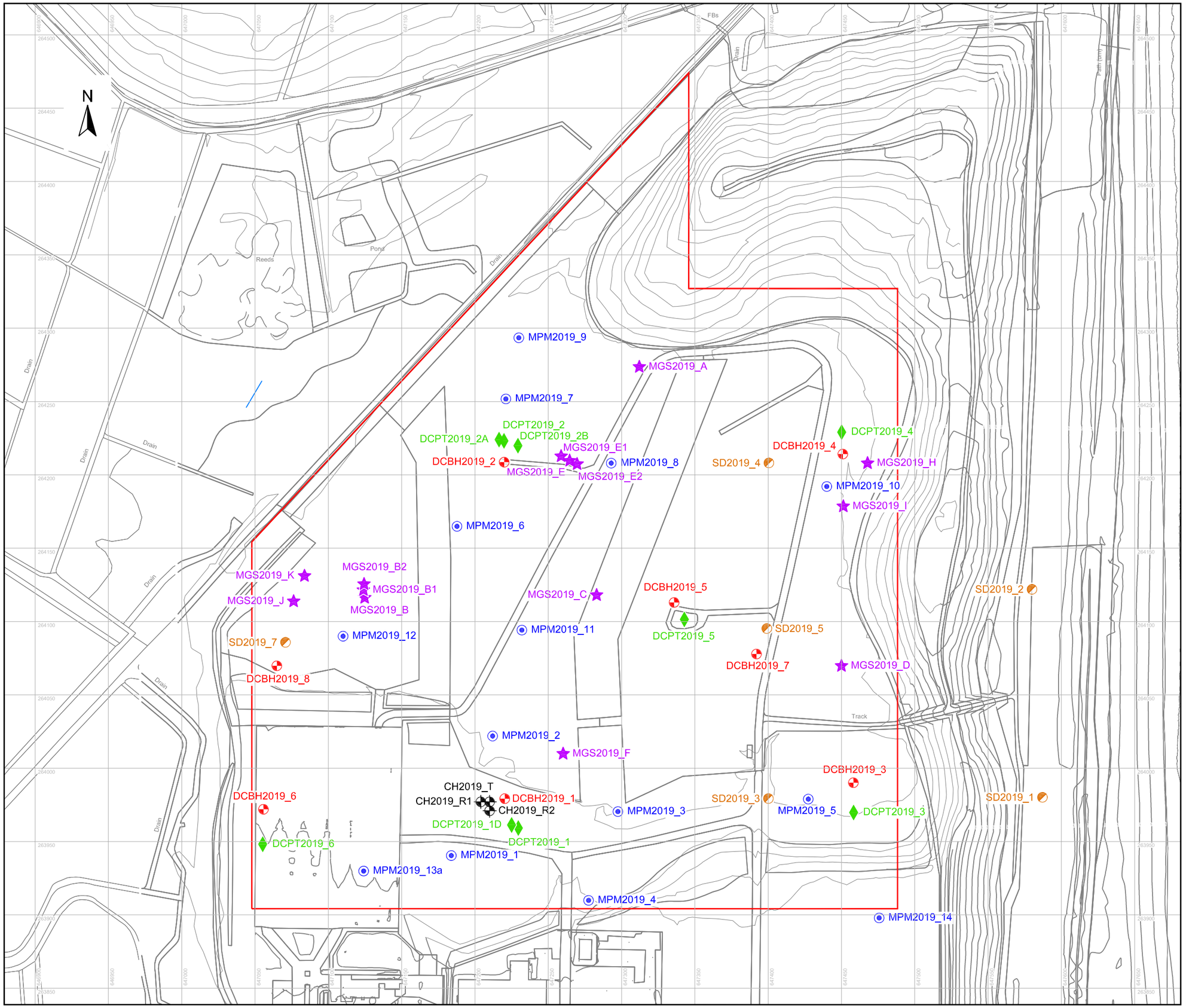
PROJECT: Sizewell C Onshore GI Phase 2 2019

TITLE: SITE LOCATION MAP

REV.	DATE	DESCRIPTION	BY	CHD.	APR.
00	29.07.2019	-	MW	SAJ	SAJ

DIMENSION	SCALE	DRAWING STATUS
m	1:25,000	-

JOB NO	GRID REF	SCALE BAR	ORIGIN SIZE	FIGURE
734318	TM 473 641	0 250 500 750 1,000m	A4	1



LEGEND

- Deep Core Borehole Location
- Menard Pressuremeter Test Location
- Deep CPTu with Seismic Probe Location
- Material Sampling Location
- Sonic Drilling Location
- Cross Hole Location

REV	DATE	DESCRIPTION	BY	CHD	APR
00	29.02.2020	-	MW	SAJ	SAJ

DIMENSION	SCALE	ORIGIN SIZE
m	1:2500	A3

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CLIENT

NNB Generation Company (SZC) Ltd

PROJECT

Sizewell C Onshore GI Phase 2 2019 TO1

TITLE

TO1 EXPLORATORY HOLE LOCATION PLAN

JOB NO	FIGURE
734318	2
DRAWING STATUS	REV
-	00

SCALE BAR

0 20 40 60 80 100m

APPENDIX B - EXPLORATORY HOLE RECORDS

(i) Key to Exploratory Hole Logs

(ii) Field Logging Guide

(iii) Summary of Co-Ordiantes

(iv) Exploratory Hole Logs

(iiia) Borehole Logs

(iiib) Driller's Borehole Logs

(v) Drilling RAMS

(vi) Drilling Method Statement

(vii) Verticality Data

(viii) As Built Programme

KEY TO EXPLORATORY HOLE LOGS - SUMMARY OF ABBREVIATIONS

SAMPLING

Sample type codes

B	=	Bulk disturbed sample.
C	=	Core sample.
D	=	Small disturbed sample.
DSPT	=	Small disturbed sample originating from SPT test.
ES	=	Soil sample for environmental testing.
EW	=	Water sample for environmental testing.
ExU	=	Extruded undisturbed sample remnants.
LB	=	Large bulk disturbed sample.
P	=	Undisturbed pushed piston sample - 102 mm diameter, 1000 mm long. % recovery reported.

IN-SITU TESTING

$SPT_{(c)}$	=	Standard Penetration Test using a solid 60 degree cone.
SPT	=	Standard Penetration Test using split spoon sampler. ($_{(NR)}$ indicates 'No Sample Recovery').
	=	* denotes extrapolated N value. NP denotes 'No Penetration'.
PID	=	Photo Ionisation Detector Results, in ppm.

ROTARY DRILLING INFORMATION

W	=	Water flush returns (%)
TCR	=	Total core recovery (%)
SCR	=	Solid core recovery (%)
RQD	=	Rock quality designations (%)
If	=	Fracture spacing (mm). Where variable the minimum - mode - maximum spacing may be quoted.

In fracture column (i) denotes discontinuity is infilled (refer to Fracture Table for details).
'NI' denotes non-intact core. 'NA' denotes not applicable.

All lengths used to determine rock core mechanical properties taken along the centre line of the core.
Obvious induced fractures have been ignored.
The assessment of solid core is based on lengths that show a full diameter and not necessarily a full circumference.

AZCL = Assessed zone of core loss

MR/AZCL= Depths where recovery is less than 25% and "Minimal Recovery" has been used in the description.
This is only to be used when the specific depth of the AZCL cannot be determined

PR/AZCL= Depths where recovery is less than 50% and "Partial Recovery" has been used in the description.
This is only to be used when the specific depth of the AZCL cannot be determined

ADDITIONAL NOTES

1. All soil and rock descriptions and legends in general accordance with BS EN ISO 14688-1, 14688-2, 14689-1, and BS5930:2015.
2. Material types divided by a broken line (- - -) indicates an unclear boundary.
3. The data on any sheet within the report showing the AGS icon is available in the AGS format.
4. TAF = Tabular Agglutinated Foraminifera

STRUCTURAL SOILS

Contract Reference: **734318**

KEY TO EXPLORATORY POSITION LOGS - SUMMARY OF GRAPHIC SYMBOLS

WATER COLUMN SYMBOLS

First water strike, second water strike etc.

Standing water level following first strike, standing water level following second strike etc.

Seepage.

Standing water level recorded at documented date.

INSTRUMENTATION SYMBOLS

BACKFILL GRAPHICS

Backfill

Bentonite cement grout

Cement grout

Bentonite seal

Concrete

Gravel filter

Flush cover

Upstanding cover

PIPE GRAPHICS

Plain pipe

Slotted pipe

KEY TO EXPLORATORY POSITION LOGS - SUMMARY OF GRAPHIC SYMBOLS

MATERIAL GRAPHIC LEGENDS

	CLAY		Peaty CLAY		Clayey GRAVEL		gravelly SAND with shell
	Clayey gravelly SAND		Gravelly clayey SAND		Chalk		Clayey PEAT
	Clayey SAND		GRAVEL		Gravelly CLAY		Gravelly CLAY with COBBLES
	Gravelly silty CLAY with COBBLES		Gravelly PEAT		Gravelly SAND		Gravelly SAND with COBBLES
	Gravelly clayey SILT		Gravelly SILT		Limestone		MADE GROUND
	Mudstone		PEAT		Possible MADE GROUND		SAND with shell
	SAND with clay laminations		SAND		Sandstone		Sandy CLAY
	Sandy silty CLAY		Sandy GRAVEL		Sandy GRAVEL with COBBLES		Gravelly sandy CLAY
	Sandy gravelly SILT		Sandy PEAT		Peaty SILT		Sandy clayey SILT
	Sandy SILT		Topsoil		SILT		Clayey SILT
	Silty CLAY		Gravelly silty SAND		Silty gravelly SAND		Silty PEAT
	Silty SAND		Silty sandy GRAVEL	AZCL	Zone of core loss	MR / AZCL	Minimal recovery/assumed zone of core loss
NLZS	Not Logged Zone with Sampling - Sizewell request	PR / AZCL	Partial recovery/assumed zone of core loss		Clayey gravelly PEAT		Clayey sandy PEAT
	Sandy gravelly PEAT						

TECHNICAL MEMORANDUM

Sizewell C CFS & PSHA Sizewell C Phase 2 Ground Investigation (Onshore and Offshore)

Field Logging Guide

Prepared for

NNB (SZC) GenCo

Document Number: SZC GI003

October 2019

JACOBS ch2m

Burderop Park
Swindon
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Contents

Section Page

CONTENTS

Section Page

Tables

Section Page

Figures

Document History

Project Title: Sizewell CFS & PSHA
Report Title: Sizewell C Phase 2 Ground Investigation (Onshore and Offshore) Field Logging Guide
Client: NNB GenCo (SZC)

CH2M[1] Project Number: 667734
Document Number: SZC GI003

This document has been issued and amended as follows:

Issue	Rev	Descrip-tion	Created by			Verified by			Approved by		
			Name	Date	Signature	Name	Date	Signature	Name	Date	Signature
1.0	0	Initial Working Draft (For Core Logging Workshop)	Oliver Rose	11/07/19	*OR*	Neill Hadlow Mike Palmer	11/07/19	*NH* *MJP*	Guy Green	11/07/19	*GSG*
1.0	1	Updated Working Draft #2	Oliver Rose	11/10/19	*OR*	Mike Floyd	11/10/19	*MF*	Guy Green	20/10/19	*GSG*

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[1] Note: CH2M is now JACOBS.

Introduction

1.1 The Project

EDF is developing proposals to construct a new nuclear power station at Sizewell in close proximity to the existing power generation site (Sizewell A and B).

The preliminary ground investigations (Phase 1 GI) were undertaken in 2010-2011 for the feasibility studies. NNB (SZC) are currently (Oct 2019) undertaking further ground investigation (Phase 2) for the next phases of the project. The key objectives of the Phase 2 ground investigation are (EDF report D309518039319):

- To build a robust ground model for Design studies (i.e. Geotechnical De-risking of the site);
- To provide the ground data required for External Hazard assessment, i.e. Probabilistic Seismic Hazard Assessment (PSHA) & Capable Fault Study (FCS);
- To define ground conditions for Construction (i.e. Geotechnical De-risking of Contracts).

This Field Logging Guide has been established by taking account of published literature, previous ground investigations, photographs of Sizewell historical C3 borehole, logging workshop and Jacobs core logging support observations from the current onshore and offshore ground investigation.

1.2 Rationale for this Field Logging Guide

The purpose of this Field Logging Guide is to define the methodology, description terminology and framework for the lithostratigraphic interpretation of the core, to provide consistency and continuity in the production of exploratory hole logs across this and future investigations.

The Field Logging Guide is not intended to be a design or engineering manual, nor is it an exhaustive treatise. It does not replace the Specification which takes precedence at all times.

The Field Logging Guide should be updated as necessary to reflect the results of new information from the investigation, testing or research.

Geological Overview

The site geology at the proposed Sizewell C site consists of topsoil / made ground overlying superficial deposits. The superficial deposits consist of Marine Bank Deposits, Beach Deposits, Tidal Flat Deposits, Peat, Re-worked Crag Deposits and Glacial Deposits. These overlie the Crag Group deposits.

The Crag Basin represents the onshore extension of the Pliocene to early Middle Pleistocene Southern North Sea Basin within East Anglia. The extent of the onshore Crag basin through eastern Norfolk, Suffolk and Essex is shown in Figure 2-1. Shallow marine deposits that occur within the current onshore part of the Crag Basin collectively form the Crag Group and were deposited between the early Pliocene (c.4.0 Ma) and the onset of the late Middle Pleistocene Anglian Glaciation (c.0.48 Ma). Crag Group deposits comprise calcarenites (Coralline Crag Formation) and shelly sands (Red Crag Formation) that pass upwards into fine sands with lenticular bodies of silt, clay and gravel (Norwich Crag Formation). Overall, the Crag Group records a transition from relatively open water marine conditions, to shallow marine and coastal deposition. However, the succession is not continuous and is instead highly-fragmented containing numerous unconformities of unknown duration.

The oldest unit within the Crag Group is the Coralline Crag Formation which unconformably overlies Eocene-age sediments of the Lambeth and Thames groups. The Coralline Crag Formation forms a buried north-northeast trending ridge bounding the south-eastern extent of the Sizewell Trough which is infilled with the Red and Norwich Crag Formation.

The geological sequence below the Crag Deposits encountered in boreholes comprises:

- London Clay Formation (found offshore only, underlying the Coralline Crag Formation)
- Harwich Formation
- Lambeth Group
- Montrose Group (Lista Formation)
- Chalk Group

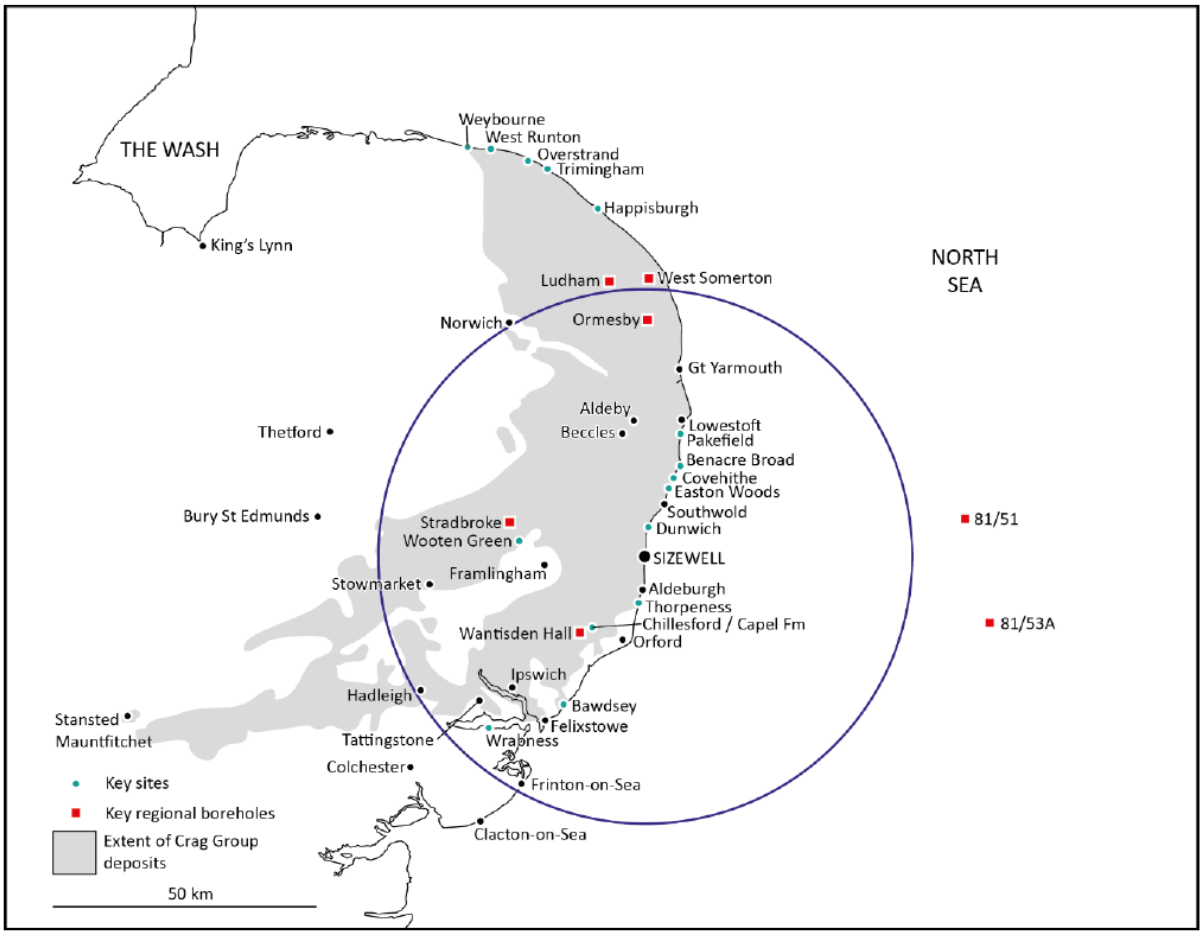

Figure 2-1: Location of Sizewell within the Crag Basin (Lee et al., 2016)

Field Logging Procedures

3.1 Description Procedures

In general, terms used for the logging are in accordance with the British Standard 'Code of practice for site investigations' BS5930:1999+A2:2015 (which incorporates BS EN ISO 14688-1:2018, BS EN ISO 14688-2:2018 and BS EN ISO 14689-1:2018) and also Norbury (2016) Soil and Rock Description in Engineering Practice.

The number of Logging Engineers employed as part of the investigation is kept to a minimum to help ensure a consistent logging approach.

Cores which are not subsampled for testing are split to allow description of lithology and structural features. One half of the core is wrapped in cling film and left undisturbed within the core box. The other half is used for logging and once complete also wrapped in cling film and re-placed in the core box with the undisturbed half.

3.2 Strata and Bed Thickness

All bed thicknesses greater than 200mm are logged as individual beds, and anything less than 200mm recorded as detail unless deemed to be significant for lithostratigraphic purposes. Where strata boundaries are potentially ambiguous these are discussed and agreed with the project team.

3.3 Depth Control in Drillholes

Downhole geophysics allows certain features to be identified such as some geological boundaries, stone bands within the Harwich Formation and hardgrounds within the chalk. These are used by the logging engineers where necessary to aid logging and the designation of core loss.

3.3.1 Core Loss / Gain

The process of recording total core recovery and dealing with core loss and gain follows that outlined in Valentine and Norbury (2011). An assumed zone of core loss (AZCL) is recorded on the log and if greater than 200mm shall be included on the Material Graphic Legend. Valentine and Norbury suggest the core is moved from one box to another and depths corrected to account for core loss and core gain prior to photographing. This has proven impractical due to difficulties in assessing this at the time of photography of the core prior to logging. Therefore, although labels are moved to show where core gain occurs prior to photographing, core is not moved from one box to another and all depth corrections are made by the logging engineers during logging.

When the recovery is low the zone of the core loss can be difficult to determine. Norbury (2016), suggests that when recovery is between 25-50%, descriptive wording "partial recovery" shall be used, and for recovery below 25%, descriptive wording "minimal recovery" shall be used. The percentage recovered of each material shall be noted but the AZCL will not be estimated (Norbury, 2016). An amended Table 12.2 from Norbury (2016) is provided below showing example descriptions for strata with low core recovery (Table 1).

Table 1: Scheme for recording low core recoveries (after Norbury, 2016)

Indicative core recovery	Descriptive format
25-50%	Example descriptive wording: "**Partial recovery (35%)**. 270mm recovered as soft brown mottled greyish brown and grey silty CLAY with rare pockets of fibrous peat and occasional relict rootlets TIDAL FLAT DEPOSITS 330mm recovered as soft grey mottled yellow silty CLAY with frequent relict rootlets. TIDAL FLAT DEPOSITS "
<25%	Example descriptive wording: "**Minimal recovery (7%)**. Recovered as firm brown silty CLAY with occasional pockets of black amorphous peat. TIDAL FLAT DEPOSITS."

Where core is picked up from the previous run resulting in total core recovery greater than 100%, CRF (core recovered from following run) shall be recorded on the logs with the depth range (Valentine and Norbury, 2011). For example, if recovery is 90% from 1.5-3.00 mBGL and 110% from 3-4.5 mBGL, CRF would be reported from 2.85-3.00 mBGL. If there are cases where CRF does not explain core recovery greater than 100% a comment shall be provided as to the most likely reason (eg: core swell).

Total Core Recovery (TCR) is corrected for core recovered from following run (CRF), so that TCR is 100% or less.

In the absence of other evidence core loss is assumed to be at the base of the core runs.

Where the AZCL cannot be determined either due to low recovery or where AZCL occurs over the same depth interval as CRF, the following Material Graphic Legend symbols shall be used (Table 2).

Table 2: 'Material Graphic Legend Codes' and an associated Legend symbol for areas of Exploratory Hole Logs involving assumed zones of core loss (AZCL).

Material Graphic Legend Codes	Description
CRF/AZCL	Depths over which core loss is assumed and that have also had material recovered in the following run, such that the specific depth of the AZCL cannot be determined.
PR/AZCL	Depths where recovery is between 25 - 50% and "Partial Recovery" has been used in the description. This is only to be used when the specific depth of the AZCL cannot be determined.
MR/AZCL	Depths where recovery is less than 25% and "Minimal Recovery" has been used in the description. This is only to be used when the specific depth of the AZCL cannot be determined.

3.4 Colour

The description of colour follows the procedures outlined in the British Standard 'Code of practice for site investigations' BS5930:1999+A2:2015 (which incorporates BS EN ISO 14688-1:2018, BS EN ISO 14688-2:2018 and BS EN ISO 14689-1:2018) and also Norbury (2016) Soil and Rock Description in Engineering Practice.

3.5 Lab Testing

Descriptions shall be amended if necessary, for the results of lab testing.

3.6 Weathering

The description of weathering follows the procedures outlined in the British Standard 'Code of practice for site investigations' BS5930:1999+A2:2015 (which incorporates BS EN ISO 14688-1:2018, BS EN ISO 14688-2:2018 and BS EN ISO 14689-1:2018) and also Norbury (2016) Soil and Rock Description in Engineering Practice.

3.7 Logging the Chalk

Logging of the Chalk follows the CIRIA Report C574 Engineering in Chalk (Lord et al., 2002) and Logging the Chalk (Mortimer, 2014).

3.8 Lithostratigraphical Interpretation

The lithostratigraphical classification for each logged unit is provided based on the framework described in Section 4. Levels of uncertainty are indicated with the use of "probably" or "possibly" (Norbury, 2016).

3.9 Core Photography

For the holes where undisturbed samples are required, the following photography steps are undertaken:

- Photos of unsplit (intact) core where undisturbed samples are to be taken;
- Undisturbed samples identified and taken by the core prep. engineers, with help from the loggers;
- Core split;
- Photos of split core;
- Core provided to the loggers for logging.

For the holes where undisturbed samples are not required, the following photography steps are undertaken:

- Core split;
- Photos of split core;
- Core provided to the loggers for logging.

Lithostratigraphy

4.1 Lithostratigraphic Framework

Table 3 and Table 4 summarise the lithostratigraphy anticipated at Sizewell.

The lithostratigraphy for the superficial deposits is based on the BGS 1:50,000 geological mapping and past ground investigations. The lithostratigraphic framework for the superficial deposits is provided in Table 3.

The lithostratigraphy for the bedrock formations is principally based on King (2016), Lee at al. (2015), and Moorlock (2000) and is interpreted in the field by changes in lithology and grainsize, colour, mineralogy, structure and fossils. Table 6 provides a collation of the varying nomenclature and interpretation of the Paleogene geological formations at Sizewell within literature. The lithostratigraphy for the chalk formations is based on Woods et al. (2012) and is interpreted in the field principally by the presence of hardgrounds.

The key changes used to differentiate the strata are indicated in Table 4.

For the Crag Formations where the members are not currently differentiated within formations (Coralline and Red Crag Formation), the logging teams are recording in detail the facies variations, with emphasis on the changes in grain size, shell fragments, gravel and clay layers and coarsening or fining upwards sequences. The descriptions and logs will be subsequently reviewed with the assistance of the BGS and Jacobs to review the potential for further refinement of the lithostratigraphic framework for the Crag Group Deposits. Within the Phase 1 Ground Investigation Report, TEGG (2019) identified 3 units within the onshore Crag Group Deposits (C1, C2 and C3). These were tentatively correlated to the Chillesford Sand Member of the Norwich Crag Formation and the Thorpeness and Sizewell Members of the Red Crag Formation respectively (Table 5), however this correlation is still to be confirmed.

Appendix A provides further details including example photographs and descriptions for each of the units.

Table 3: Superficial Deposits anticipated at Sizewell.

Superficial Deposits	Units	Remarks	Approximate Thickness (m)
Top Soils and Made Grounds		Variable, mainly re-worked Crag sand material (orangish brown fine sands). Locally up to ~10 m thick	0 - 10
Marine Deposits	Bank Deposits	Sand and Gravel with some organic content (Only present offshore)	0 - 6
Beach Deposits		Sand and Gravel located in the east of the site. (Currently only identified onshore and in the intertidal zone)	0 - 10
Tidal Flat Deposits		Clay, sometimes mixed with peat. Thickness varies across the site.	0 - 9
Peat		Peat (can be mixed with sandy and clayey facies, clay bands within the peat). (Currently only identified onshore)	0 - 6
Re-worked Crag Deposits		Sandy facies	1.5
Lowestoft Formation		Sand and Gravel. Drift (Glacial Till, associated fluviol glacial and outwash deposits) may be present in limited thickness.	0 - 3

Table 4: Summary of the geological formations anticipated at Sizewell, with key remarks and typical thicknesses.

Group	Formation	Member	Unit	Remarks	Approximate Thickness (m)	
Crag Group	Norwich Crag Formation	Westleton Member		Not present at Sizewell		
		Easton Bavents Member		Not present at Sizewell		
		Chillesford Clay Member		Not present at Sizewell		
		Chillesford Sand Member		Uniform fine sands occasionally with gravel beds	15-20	
	Red Crag Formation	Thorpeness Member		Currently Members undifferentiated at Sizewell, potential further study. More shelly and coarser grained sand than the Norwich Crag	20	
		Sizewell Member				
	Coralline Crag Formation	Aldeburgh Member		Currently Members undifferentiated at Sizewell, potential further study. Only present offshore at Sizewell.	23-28	25-30
		Sudbourne Member				
		Ramsholt Member		More silty (finer grained than overlying units). Darker colour possibly indicating increased glauconitic content. Only present offshore at Sizewell.	2	
			Boxstone Bed	Basal conglomeratic lag (phosperite pebbles, phospatic nodules and calcareous concretions reworked from the London Clay Fm with bones and sharks teeth). Only present offshore at Sizewell		
Thames Group	London Clay Fornation	Walton Member (A2)		Silty and micaceous with abundant tubular agglutinated foraminifera. De-calcified- no shell fragments or calcareous claystones. Only present offshore at Sizewell	10	
	Harwich Formation	Wrabness Member	Unit B	Coarser grained SILT located at the top. Colour change from dark grey of the Walton to greyish brown. Glauconitic towards the top of the member. No ash bands present. Only present offshore at Sizewell.	7-10 onshore 15-20 offshore	12-15 onshore 20-25 offshore
			Unit A with HSB	Clayey SILT and silty CLAY, beds of volcaniclastic silt/clay.		
				The **Harwich Stone Band (HSB)** consists of a dark central ash layer with concretionary limestone either side. Two or more stone bands are encountered in most holes. Two of the stone bands contain a central ash layer.		
		Orwell Member	Unit C	Bioturbated silty clay, with lenses and pockets of silt/sand	5	
			Unit B	Clay (plastic)		
			Unit A	Sand unit at the base of the Orwell Member		
		Ipswich Member		Rounded flint GRAVEL. Part of the Suffolk Pebble Beds	<0.1	
Lambeth Group	Reading Formation			Un-bedded fissured colour-mottled sandy clay (grey/green mottled orange) occasionally with stone band at the top.	6	
			Sand Unit	Laminated and cross bedded sand occasionally with stone bands		
				Dark grey mottled brown clay (organic rich??)		
	Upnor Formation?		Red Mottled Unit	Olive-green interbedded glauconitic sand and clay. The upper part is reddened. Clay lithology onshore, sand lithology offshore	1.5	2.5
				Dark grey cross bedded and laminated sand Only present offshore.	1	
Montrose Group	Lista Formation	Ormesby Clay Member	OC4	Waxy clay with argillised ash band. Not present at Sizewell		9-12
			OC3	Greyish brown silty clay (partly glauconitic)	7	
			OC2	Reddish brown silty clay	2	
			OC1	Silty greenish grey glauconitic clay. Only present offshore	3	
				GRAVELS and COBBLES of back nodular flint surrounded by silt	0.1	
White Chalk Sub Group	Portsdown Chalk Formation	Beeston Chalk (Member)		Devoid of marl and relatively massive with numerous phosphatic clasts	3	>30
		Weybourne Chalk (Member)	Catton Sponge	Pair of glauconitic stained hardgrounds	7-9	
				Increase in marl content compared to the overlying Beeston Chalk		
		Pre Weybourne Chalk (Member)		Top boundary is an irregular glauconitised hardground, with common sponge remains, some phosphatised.	>18	

Schematic summary logs are shown below, showing the comparison between the stratigraphy encountered onshore and offshore (east of the edge of the Sizewell Trough) (Figure 4-1).

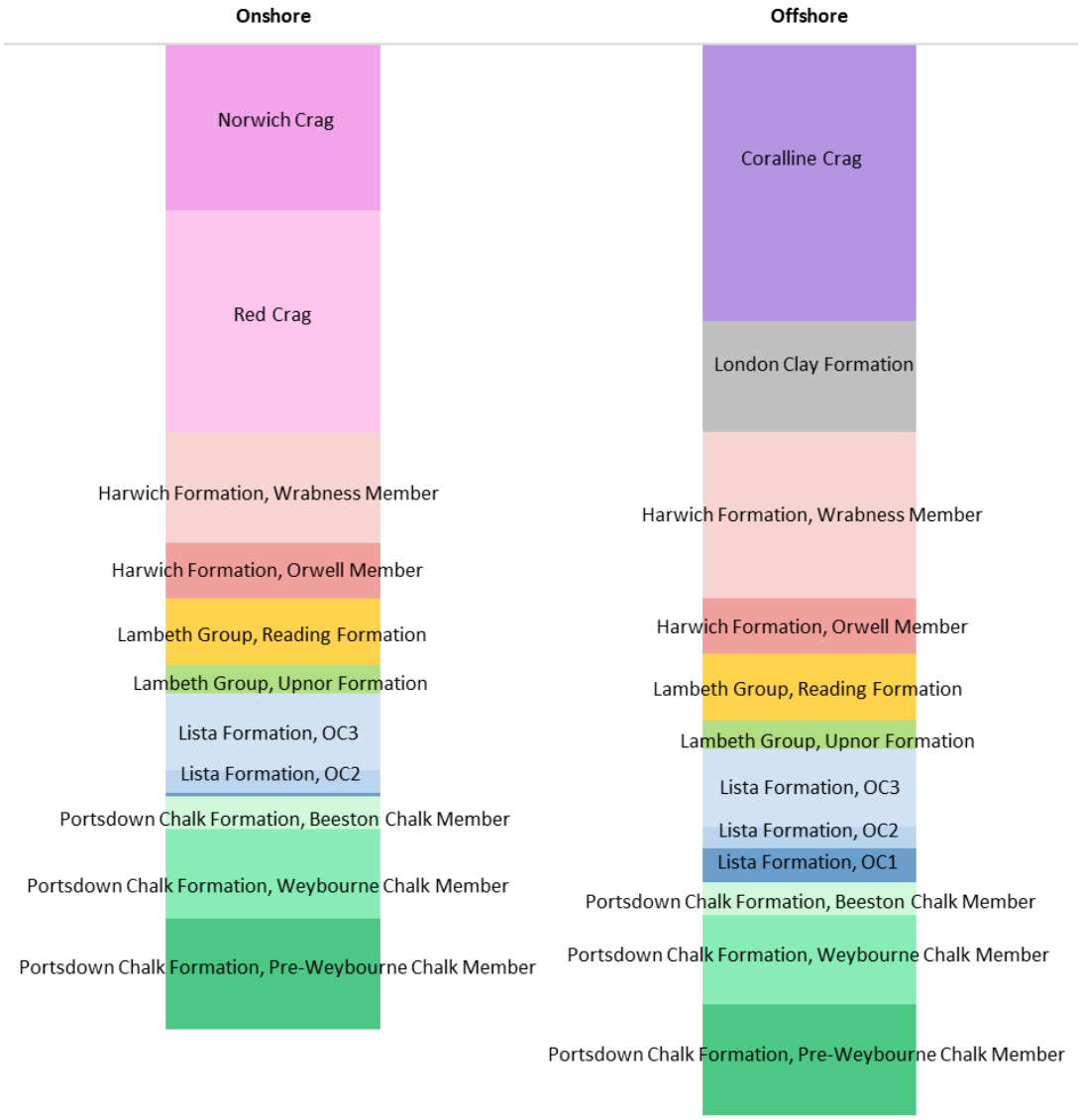

Figure 4-1: Comparison between the stratigraphy onshore and east of the Sizewell trough offshore

4.2 Biostratigraphy Framework

The following biostratigraphy framework was developed for the stratigraphy at Bradwell, based on King (2016) (Figure 4-2). The chalk biostratigraphy is documented in Hart et al., (1989), King et al., (1989) and Burnett (1999). The framework is to be updated if required for the Sizewell area based on laboratory tests and literature review.

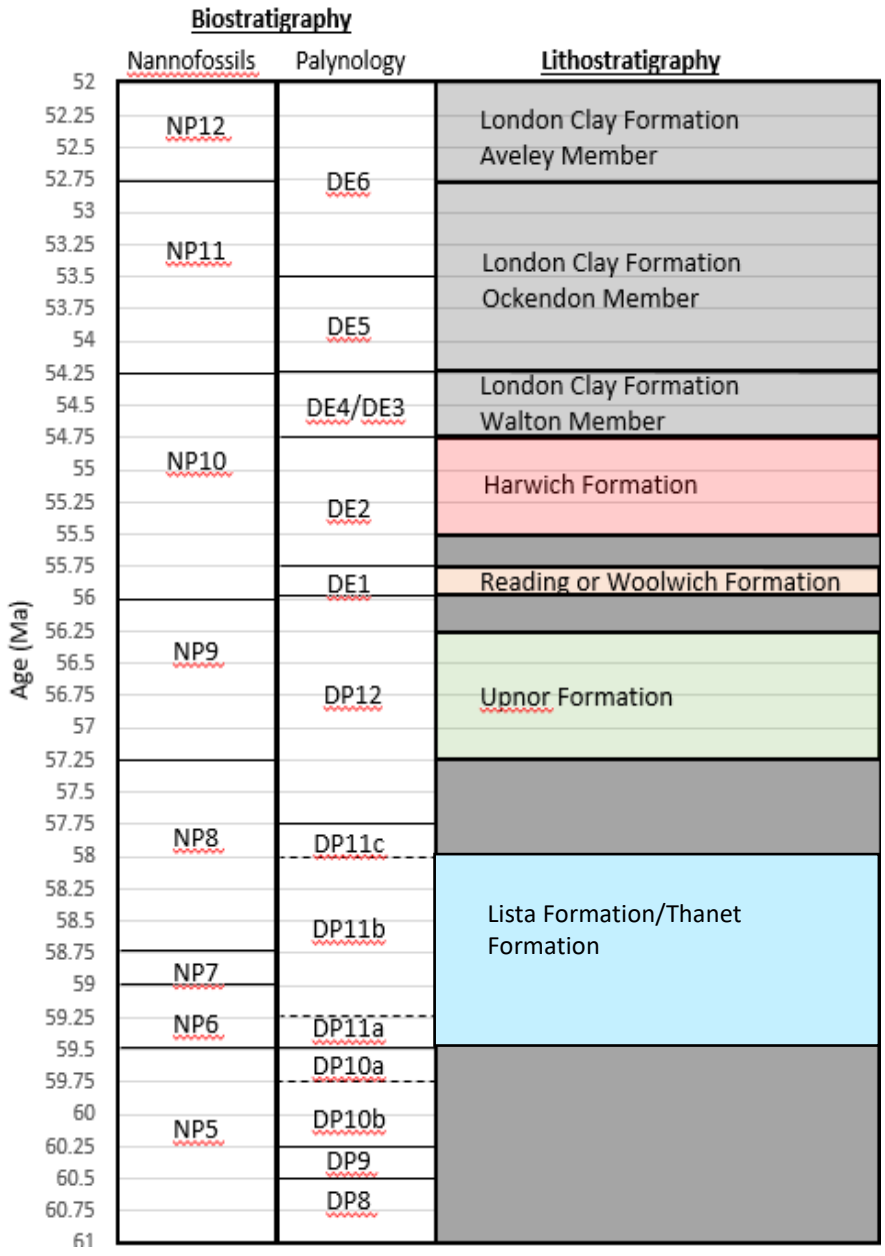

Figure 4-2: Bedrock Formations biostratigraphic framework.

4.3 Lithostratigraphic classification from previous literature on the region

4.3.1 Crag Group (Neogene and Quaternary)

Table 5: Comparison of nomenclature for the Neogene and Quaternary Crag Group deposits in the vicinity of Sizewell.

Stage	Moorlock (2000)		Lee et al., (2015)		King (2016)		TEGG (2019)	This logging guide (2019)	
Beestonian / Baventian	Norwich Crag Formation	Chillesford Clay Member	Norwich Crag	Westleton Member	Norwich Crag	Westleton Member	[redacted]	Norwich Crag	Westleton Member
Baventian				Easton Bavents Member		Easton Bavents Member			Easton Bavents Member
Bramertonian / Antian				Chillesford Clay Member		Chillesford Clay Member			Chillesford Clay Member
				Chillesford Sand Member		Chillesford Sand Member	Crag 1		Chillesford Sand Member
Thurnian	Red Crag Formation	Thorpeness Member	Red Crag	Thorpeness Member	Red Crag	Thorpeness Member	Crag 2	Red Crag	Thorpeness Member
Pre-Ludhamian		Sizewell Member		Sizewell Member		Sizewell Member	Crag 3		Sizewell Member
Gedgravian	Coralline Crag Formation	Aldeburgh Member	Coralline Crag Formation	Aldeburgh Member	Coralline Crag Formation	Sudbourne Member	[redacted]	Coralline Crag Formation	Sudbourne Member
		Sudbourne Member		Sudbourne Member		Aldeburgh Member			Aldeburgh Member
		Ramsholt Member		Ramsholt Member		Ramsholt Member			Ramsholt Member

4.3.2 Montrose Group, Lambeth Group and Thames Group (Palaeogene)

Table 6: Comparison of the nomenclature and interpretation of the Paleogene geological formations at Sizewell.

Stage	Jolley (1996)	Ali and Jolley (1996)	Knox (1996b)		Moorlock (2000)		Aldiss (2015)		King (2016)		TEGG (2019)		This logging guide (2019)	
early Ypresian			London Clay Fm		London Clay		London Clay Fm		London Clay Fm	Walton Member	London Clay	London Clay Fm	London Clay Fm	Walton Member
	Wrabness	Wrabness	Wrabness Member		Harwich Member		Wrabness Member		Harwich Fm	Wrabness Member Unit B			Harwich Fm	Wrabness Member Unit B
										Wrabness Member Unit A				Wrabness Member Unit A
	Orwell C	Orwell Member	Hales Clay Member		Hales Clay		Orwell Member (pebble bed at base)			Orwell Member Unit C	Lower London Tertiaries	Harwich Fm		Orwell Member Unit C
	Orwell B									Orwell Member Unit B				Orwell Member Unit B
	Orwell A (possibly pebble bed at base)									Orwell Member Unit A				Orwell Member Unit A
										Suffolk Pebble Beds				Ipswich Member
	Reading	Woolwich Fm / Reading Fm.	U. Reading Fm		Reading Fm		Reading Fm		Lambeth Group	Undifferentiated		Reading and Woolwich Beds	Reading Fm	
	[redacted]		L. Woolwich Fm		Woolwich Fm		Woolwich Fm							
Thanetian		Upnor Fm	Upnor Fm				Upnor Fm						Upnor Fm	
		Ormesby Clay	Ormesby Clay Fm	Ormesby Clay OC3	Ormesby Clay Fm	Ormesby Clay OC3	Ormesby Clay Fm	Ormesby Clay OC3	Lista Fm	Ormesby Clay Member OC3		Ormesby Clay Fm	Lista Fm	Ormesby Clay Member OC3
				Ormesby Clay OC2		Ormesby Clay OC2		Ormesby Clay OC2		Ormesby Clay Member OC2				Ormesby Clay Member OC2
Selandian				Ormesby Clay OC1 pebble unit	Bullhead Bed			Ormesby Clay OC1		Ormesby Clay Member OC1? Pebble unit				Ormesby Clay Member OC1

4.3.3 Correlation of the London Clay Formations Lithostratigraphy with Subdivisions of King (1981)

Table 7 shows the London Clay Formation member names and how they relate to King's (1981) sequence stratigraphic divisions. Division A1 of King (1981) comprised the former Harwich Member and Swanscombe Member and is now part of the Harwich Formation.

King (2016) indicates that the divisions are less distinctive in the eastern London Basin.

Table 7: Correlation of the King (1981) sequence stratigraphy divisions correlated with King (2016) Member Names (after King, 2016).

<table>
<tr><th>2016 Members</th><th>King, 1981 sub-divisions</th><th>Comments</th></tr>
<tr><td>Hadleigh Member</td><td>F</td><td>Not encountered at Sizewell</td></tr>
<tr><td rowspan="5">Sheppey Member</td><td>E</td><td rowspan="4">Not encountered at Sizewell</td></tr>
<tr><td>D2</td></tr>
<tr><td>D1b</td></tr>
<tr><td>D1a</td></tr>
<tr><td rowspan="5">Aveley Member</td><td rowspan="2">C2/C3</td><td rowspan="4">King (1981) records unit C as equivalent to parts of the Aveley and Sheppey Members. King (1981) describes units C1, C2 and C3; however, King (2016) revises this to units C1 and C2 only.
Not encountered at Sizewell</td></tr>
<tr><td>C1</td></tr>
<tr><td>B2</td></tr>
<tr><td>B1</td></tr>
<tr><td>Ockendon Member</td><td>A3</td><td>Not encountered at Sizewell</td></tr>
<tr><td>Walton Member</td><td>Walton Member (A2)</td><td></td></tr>
<tr><td>Wrabness Member</td><td>Harwich Member (A1)</td><td></td></tr>
</table>

4.4 Logging the Chalk

A guide is included in Appendix C produced by Mark Woods (BGS), to assist in identifying key features in the chalk at Sizewell.

Quality Control and Consistency

5.1 Consistency with Core Logging

To maintain consistency in the logging approach the following procedures have formed part of the works:

- Attendance at the logging workshop at the start of the project by key personnel:
  - Jacobs Logging Support Team
  - SSL and Fugro Logging Supervisor
  - All SSL and Fugro Logging Engineers
  - BGS geological expert for the Chalk (Mark Woods)
  - BGS geological expert for the Crag Deposits (Jon Lee)
  - Geological expert for the Palaeogene strata (Jackie Skipper)
- Logging supervisor to identify and agree the strata boundaries with the logging engineers and when available the logging support team
- Spot checks on descriptions undertaken by logging supervisor and logging support team
- Ad hoc involvement of British Geological Survey and other external geological experts to agree interpretation and to provide comments on logging procedures
- Use of televiewer and geophysical logs to aid depth-control where necessary
- Logging support team to work closely with SSL and Fugro during the logging and provide formal comments on the preliminary logs for stratigraphic interpretation and nomenclature.
- Historical exploratory hole logs are consulted during the logging process and elevations of strata boundaries compared across the site.
- Internal QA and checking of the logs by the Contractor

5.2 Reporting and checking process

Preliminary Logs will be provided by the Contractor and these will be reviewed by the Project Team and comments provided for action prior to their inclusion within the draft report. A similar checking process is proposed to be undertaken after the issue of the draft and final factual report. The system for documenting the log status and the checking process is provided in Table 8.

Table 8: Summary of the Exploratory Hole Log Document Issue Process

Document Issue	Document Issue Name	Checks and Details of Content
Preliminary	Preliminary Log	• General formatting of logs • Technically checked by Contractor
Logs reviewed and comments provided by Project Team (Issue 1)		
Draft	Exploratory Hole Log for Draft Report	• Issue 1 comments addressed, and amendments made where applicable • Logs updated to account for laboratory test results
Draft report reviewed and comments provided by Project Team (Issue 2)		
Final	Exploratory Hole Log for Final Report	• Issue 2 comments addressed, and amendments made where applicable • Final lithostratigraphic revisions where applicable
Project Team to confirm acceptance of Final Report (or provide comments where earlier comments not addressed (Issue 3))		

Sub-sampling Methodology

Sub-Samples are selected based scheduled intervals provided by TEGG, geological boundaries and quality of core. Sub-samples are cleaned of surplus drilling fluids, photographed and preserved (as described below) in order to maintain moisture content and prevent sample disturbance.

The current process for the sub-sampling of core is outlined below. The method statement for sub-sampling by Fugro and SSL are included in Appendix A.

1. Core liner is split;
2. Sample is selected (based on the scheduled intervals, geological boundaries and material);
3. Sample is trimmed (this is just a gentle scrape, less than 5mm is generally removed);
4. 'Top' and 'bottom' labelled on sample;
5. Heavy-duty cling film wrapped around the sample;
6. Aluminium foil wrapped around the sample and secured with tape;
7. Labelled with details including, the hole, depth and top and bottom of the sample;
8. Waxed in an upright position;
9. Heavy-duty cling film wrapped around the sample again, with a label on the inside;
10. Waxed again;
11. Placed in pre-cut liner (310mm length) and labelled. If the sample is too thick (after the addition of the foil/cling film/wax) the liner is split and then taped up;
12. End caps are put on the ends and secured with tape. Top and bottom marked on the end caps;
13. Sample is placed in coolbox or plastic boxed wrapped with bubble wrap.

Between steps 7 and 11, Fugro wrap the sample with one more layer of cling film and then place the sample into cardboard tubes with a wax plug about 25mm thick at the base of the tube. The sample is inserted into the centre of the tube ensuring there is space between the sample edge and the inside of the tube. The tube is then filled with wax (several pours) ensuring the top, base and sides of the sample are entirely submerged/encased in wax.

Steps for sub-sampling within the Crag Formation are listed below:

1. Core runs of less than 300mm recovery shall not be sampled but split for logging. Photographs of the core before and after splitting will be taken.
2. For runs greater than 300mm recovery the lower part of the run is likely to be less disturbed. The liner is cut along the short axis giving a sub-sample of sufficient length from the end on the run.
3. End caps are put on the sub-sample liner and the depths marked
4. The remainder of the run is processed as steps 1-13 above. If the clay/silt content is high enough, a further sample will be taken and waxed.

Fugro do not follow the Crag Deposits sampling methodology outlined above. They sub-sample the Crag Formation during logging. Samples are placed in small disturbed sample pots and bulk bags.

One full deep onshore exploratory hole (DCBH2019_1) is to be sent to France for sub-sampling. The stratigraphy for this hole will be based on the adjacent exploratory holes (CH2019_R1, R2 and T). Samples will also be taken on site and placed in T1 sample cells, which can be used to keep the sample at the in-situ overburden pressure.

Pictures of the sub-sampling process are provided in Appendix B.

AGS Stratum Codes

Proposed stratum codes adopted in the Association of Geotechnical Specialists (AGS) Digital Data Format are listed in Table 9 .

Table 9: Proposed AGS stratum codes for Sizewell

GEOL_GEOL	**Description**
TS	*Topsoil*
MG	*Made Ground*
BD	*Beach Deposits*
MD_BANK	*Marine Deposits, Bank Deposits*
TFD	*Tidal Flat Deposits*
RWCD	*Re-worked Crag Deposits*
LOFT	*Lowestoft Formation*
CRAG	*Crag Group (undifferentiated)*
NCRC	*Norwich Crag Formation And Red Crag Formation (Undifferentiated)*
NCG	*Norwich Crag Formation (undifferentiated)*
NCG_CSM	*Norwich Crag, Chillesford Sand Member*
RCG	*Red Crag Formation (undifferentiated)*
RCG_TM	*Red Crag Formation, Thorpeness Member*
RCG_SM	*Red Crag Formation, Sizewell Member*
CCG	*Coralline Crag Formation (undifferentiated)*
CCG_AM	*Coralline Crag Formation, Aldburgh Member*
CCG_SM	*Coralline Crag Formation, Sudbourne Member*
CCG_RM	*Coralline Crag Formation, Ramsholt Member*
LCF	*London Clay Formation (undifferentiated)*
LCF_WAM	*London Clay Formation, Walton Member*
HWH_WRAB	*Harwich Formation, Wrabness Member*
HWH_WRAB_HARS	*Harwich Formation, Wrabness Member, Harwich Stone Band*
HWH_ORW	*Harwich Formation, Orwell Member*
HWH_IPSW	*Harwich Formation, Ipswich Member*
RB	*Reading Formation*
UPR	*Upnor Formation*
LIST_OC	*Lista Formation, Ormesby Clay Member (undifferentiated)*
LIST_OC3	*Lista Formation, Ormesby Clay Member, OC3*
LIST_OC2	*Lista Formation, Ormesby Clay Member, OC2*
LIST_OC1	*Lista Formation, Ormesby Clay Member, OC1*
WHCK	*White Chalk Subgroup (undifferentiated)*

SECTION 7 – AGS STRATUM CODES

GEOL_GEOL	Description
BEECK	*Portsdown Formation, Beeston Chalk Member*
WBCK	*Portsdown Formation), Weybourne Chalk Member*
PWBCK	*Portsdown Formation, Pre-Weybourne Chalk Member*

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Appendix A: Details, Descriptions and Photos

Crag Group

The Crag Group onshore and within the Sizewell Trough offshore is anticipated to comprise the Chillesford Sand Member of the Norwich Crag and the Thorpeness Member and Sizewell Member of the Red Crag. Offshore, southeast of the Sizewell Trough, the Crag Group is anticipated to comprise the Aldburgh Member, Sudbourne Member and Ramsholt Member of the Coralline Crag. At the time of issue of this version of the Field Logging Guide, all the members of the Red Crag and Coralline Crag Formations cannot be consistently identified. The Ramsholt Member of the Coralline Crag Formation is currently identified.

The Phase 1 Ground Investigation Report (EDF report EDTGG110745) identified three Crag units (Crag 1, 2 and 3) for geotechnical studies but these are not being shown on the logs. These were provisionally interpreted as the equivalent of the Chillesford Sand Member of the Norwich Crag Formation and Thorpeness Member and Sizewell Member of the Red Crag Formation respectively.

Norwich Crag Formation

Previous Names

Likely to correlate to C1 in the Phase 1 Ground Investigation Report.

Typical Thickness

The Norwich Crag Formation is approximately 15 to 20m thick.

Distribution

The Norwich Crag Formation is present across the entire site onshore and extends approximately 2.5km offshore within the limits of the Sizewell Trough.

Notable Features

The shell fragments are rarer and finer than the shell fragments in the Red Crag Formation. The sand is generally fine to medium grained. Clay laminae are common, and pebble/gravel layers can be present of mixed lithologies, for example quartzite and flint.

Description and photo

"Light greenish grey (oxidising to light orangish brown and dark orangish brown) SAND with rare shell fragments (<2mm x 2mm). Calcareous. Sand is mainly fine and medium. NORWICH CRAG FORMATION"

Figure 9-1: Norwich Crag Formation. Fine to medium sand with rare shell fragments.

Red Crag Formation

Previous Names

Likely to correlate to C2 and C3 in the Phase 1 Ground Investigation Report.

Typical Thickness

The Red Crag Formation is approximately 20m thick.

Distribution

The Red Crag Formation is present across the entire site onshore and extends approximately 2.5km offshore within the limits of the Sizewell Trough.

Notable Features

The shell fragments are more abundant and the sand and shell fragments are coarser grained than the Norwich Crag Formation. Gravel layers of flint can be present.

Description and photo

"Dark greenish grey SAND with abundant shell fragments (<2mm x 20mm x 20mm). Calcareous. Sand is fine to coarse. RED CRAG FORMATION"

Figure 9-2: Red Crag Formation. Fine to coarse sand with abundant shell fragments.

Coralline Crag Formation

Previous Names

Coralline Crag in the Phase 1 Ground Investigation Report.

Typical Thickness

The Coralline Crag is approximately 25 to 30m thick

Distribution

The Coralline Crag Formation is present offshore on the south eastern edge of the Sizewell Trough, approximately 2.5km due east of the onshore site. It's subcrop trends southwest to northeast, and therefore subcrops onshore to the south of the site. It is not present at the site onshore.

Notable Features

The Coralline Crag Formation is partially cemented. Towards the base of the formation, potentially the Ramsholt Member (approximately 2m thick) can be identified which is siltier than the rest of the formation. The Boxstone Bed, which consists of dark coated rounded pebbles, is present at the base of the Ramsholt Member, and is approximately 0.5m thick.

Description and photo

"Yellowish brown, locally mottled dark yellowish brown, silty and very silty SAND recovered with rare to occasional subrounded moderately weak (weakly cemented) yellowish brown calcareous sandstone/ calcarenite fragments (<20mm x 20mm x 30mm), with some to frequent shell fragments (<4mm x 5mm) and rare bryozoan (possible Hornea) fragments (<5mm x 5mm). Calcareous. Sand is fine and medium. CORALLINE CRAG FORMATION (UNDIFFERENTIATED)"

"Grey gravelly silty SAND, with frequent to abundant shell fragments (<3mm x 30mm) and occasional bivalve shells (<20mm x 20mm). Calcareous. Sand is fine and medium. Gravel is subangular to rounded medium and coarse of flint, with rare to occasional subangular and subrounded fine to coarse (<30mm x 30mm) of moderately weak calcareous sandstone/ calcarenite. CORALLINE CRAG FORMATION, RAMSHOLT MEMBER"

Figure 9-3: Coralline Crag Formation. Weakly cemented sand.

London Clay Formation

Walton Member

Previous Names

The Walton Member was formerly Division A2 of the London Clay Formation(King, 2016). The Phase 1 Ground Investigation Report does not differentiate the London Clay Formation.

Typical Thickness

The top surface of the Walton Member at Sizewell is an erosional surface at the contact with the overlying Crag Group and the thickness at the site is variable, but is typically 10m.

Distribution

The Walton Member is present offshore on the south eastern edge of the Sizewell Trough, approximately 2.5km due east of the site onshore. It is not present at the site onshore.

Notable Features

The Walton Member is greyer than the underlying Wrabness Member of the Harwich Formation and finer grained. It is de-calcified and so no shell fragments or calcareous claystone nodules are present. There is an increase in the abundance of tubular agglutinated foraminifera with depth.

Description and photo

"Very stiff fissured dark grey, occasionally mottled reddish brown, silty CLAY, with frequent to abundant tubular foraminifera (<1mm x 5mm), abundant burrows (<1mm x 25mm) infilled with grey pyritic silty clay with rare pockets (<10mm x 20mm) of light grey silt. Fissures are very closely spaced, randomly orientated, planar, smooth, very tight and tight, with occasional reddish brown staining. LONDON CLAY FORMATION, WALTON MEMBER"

Figure 9-4: Frequent tubular agglutinated foraminifera (TAFs) in the Walton Member, seen as white streaks of silt and on closer inspection with the use of a hand lens, a central cavity (or tube) of darker material).

Harwich Formation

Wrabness Member

Previous Names

The Wrabness Member was formerly Division A1 of the London Clay Formation (King, 1981). The Phase 1 Ground Investigation Report incorporates the Harwich Formation as part of the London Clay Formation.

Typical Thickness

The top surface onshore of the Wrabness Member is an erosional surface and so the thickness is expected to vary. Onshore the Wrabness Member is approximately 7-10m thick. Offshore the Wrabness Member is approximately 15-20m thick.

Distribution

The Wrabness Member is found across the entire site, both onshore and offshore. The Harwich Stone Band is often found towards the base of the Wrabness Member. Two or more stone bands are often encountered.

Notable Features

The Wrabness Member typically has a coarser grained unit at the top which correlates to King's (2016) Unit B. The Wrabness Member is greyish brown in colour compared to the overlying dark grey Walton Member. Ash bands (volcaniclastic clay/claystone/silt/siltstone) can be seen throughout Unit A. Towards the base of Unit A the Harwich Stone Band is typically present. The Harwich Stone Band is a fine-grained limestone with a dark grey volcaniclastic claystone/siltstone layer in the middle.

Description and photo

"Very stiff, locally fissured, greyish brown, locally brown, silty CLAY with closely and medium spaced very thin and thin beds of very stiff dark bluish grey and black tuffaceous silty clay, with rare lenses (<5mm x 40mm) of black tuffaceous silty clay. Micaceous. Fissures are very closely and closely spaced, inclined (50-70 degrees), planar, smooth, very tight. HARWICH FORMATION, WRABNESS MEMBER"

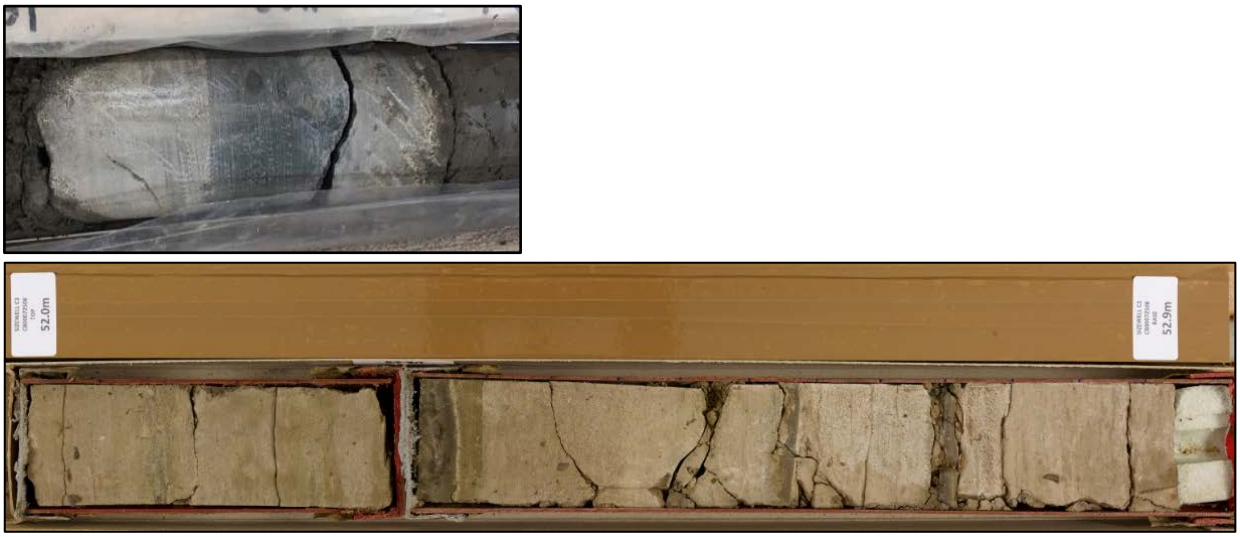


Figure 9-5: Wrabness Member in Sizewell C3 hole. Volcaniclastic layers are visible in the bottom picture and Harwich Stone Band with the dark central ash band in the top picture.

Orwell Member

Previous Names

Moorlock (2000) and Knox (1996) identified the Hales Clay Member underlying the Wrabness Member at Sizewell. The Phase 1 ground Investigation Report incorporates the Harwich Formation as part of the London Clay Formation.

Typical Thickness

The Orwell Member is approximately 5m thick.

Distribution

It is encountered across the entire site, both onshore and offshore.

Notable Features

The Orwell Member is heavily bioturbated and contains partings and lenses of silt and sand. There are potentially three units that have been identified within the Orwell Member (Unit A – Unit C). Unit A is a coarser grained deposit at the base of the member. Unit B is a dark plastic clay with less bioturbation than the overlying sandy, silty clay (Unit C).

Description and photo

Unit C is often described as:

"Very stiff indistinctly fissured dark greyish brown and brown silty CLAY with some to frequent pockets/lenses (<10mm x 15mm) of light brown and dark grey silty fine sand, and some burrows (<1mm x 10mm) infilled with grey silty clay. HARWICH FORMATION, ORWELL MEMBER"

Unit B is often described as:

"Stiff and very stiff dark greyish brown and dark brownish grey silty CLAY. HARWICH FORMATION, ORWELL MEMBER"

Unit C is often described as:

"Stiff dark greyish brown and brown sandy CLAY with abundant pockets (<30mm x 40mm) and lenses (<10mm x 20mm) of light brown, brown and dark grey silty fine sand. HARWICH FORMATION, ORWELL MEMBER"

Figure 9-6: Bioturbated Orwell Member

Ipswich Member

Previous Names

The Orwell Member was divided into three units by Jolly (1996) and as described by Aldiss (2014). The description of the base of the lowest unit, Unit A, on the BGS lexicon is "…glauconitic fine-grained sands (Unit A) with well-rounded flint gravel and faunal debris at the base". King (2016) interpreted this lower gravel unit as being the Ipswich Member (type area Ipswich, East Anglia) or the Ferry Cliff Member (type area Ferry Cliff, Woodbridge).

Typical Thickness

The Ipswich Member is interpreted as a channel deposit, with an erosional basal contact (King, 2016) and so its thickness is expected to vary. Thickness of up to 10cm is provided in the Phase 1 Ground Investigation Report.

Distribution

The distribution varies across the site.

Notable Features

Consists of rounded flint gravel.

Description and photo

"Black *rounded flint gravels IPSWICH MEMBER*"

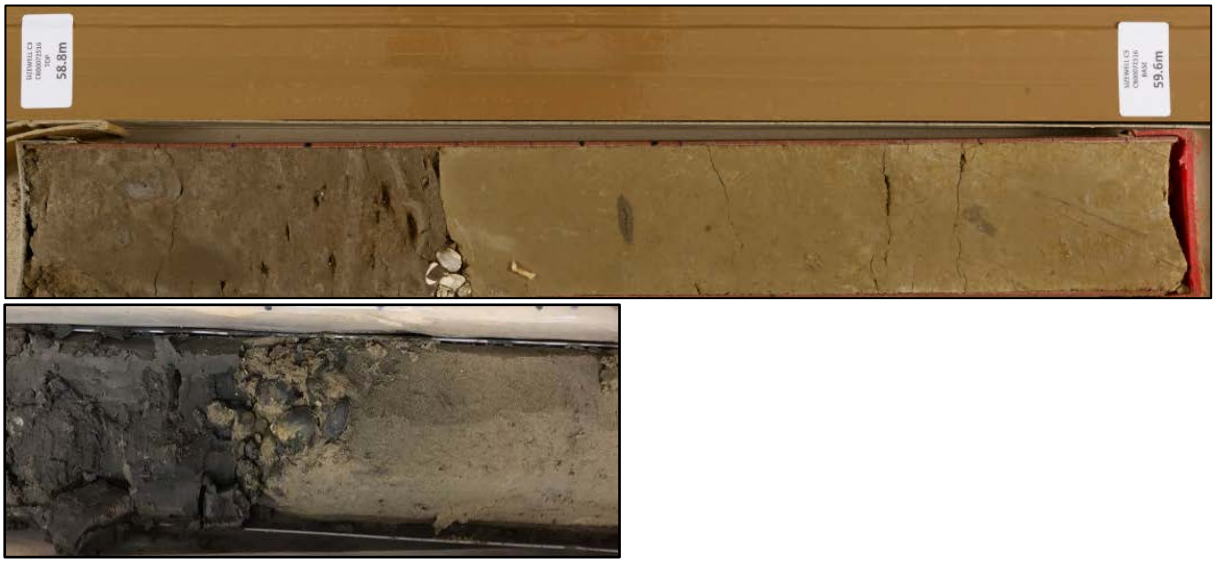


Figure 9-7: Rounded flint gravels between the Orwell Member and the Reading Formation.

Reading Formation

Previous Names

The Reading Formation has not been differentiated from the Lower London Tertiaries within the Phase 1 Ground Investigation Report. King (2016) did not differentiate the Lambeth Group at Sizewell. Table 6 shows the various classification systems that have been documented in literature for Sizewell.

Typical Thickness

The Reading Formation is typically 6 m thick.

Distribution

The Reading Formation is encountered across the entire site, both onshore and offshore. However, the formation varies in lithology across the site.

Notable Features

The Reading Formation consists of brown mottled clay, occasionally with a stone band at the top of the formation, overlying an approximately 5m thick sequence of interbedded mottled clays and laminated sands. A stone band has also been encountered in several holes within the middle of the formation. Underlying the interbedded sands and clays, there is often a dark grey clay.

Description and photo

"Very stiff microfissured brown and light brown mottled bluish grey silty CLAY with extremely closely to closely spaced thin and thick laminae of light brown and light grey calcareous and highly calcareous silt, with frequent burrows (<4mm x 60mm) infilled with light grey silt. Slightly calcareous. Microfissures are extremely closely spaced, randomly orientated. READING FORMATION"

"Dark yellowish brown silty SAND. Slightly calcareous and calcareous. Sand is fine and medium. READING FORMATION"

Figure 9-8: Mottled Reading Formation in the top photo, and oxidised sand unit in bottom photo.

Upnor Formation

Previous Names

The Upnor Formation has not been differentiated from the Lower London Tertiaries within the Phase 1 Ground investigation Report.

Moorlock (2000) did not identify the Upnor Formation at Sizewell and instead interpreted this interval as the Woolwich Formation.

Typical Thickness

The Upnor Formation is typically 2.5m thick.

Distribution

The Upnor Formation is expected to be encountered across the entire site.

Notable Features

The Upnor Formation is greenish grey in colour mottled red at the top of the unit. Onshore the formation is a clay, whereas offshore the formation is a sand.

Description and photo

"Stiff and very stiff dark grey and greenish grey, locally mottled purplish red, slightly sandy SILT, locally slightly sandy clayey silt. Sand is fine. UPNOR FORMATION"

Figure 9-9: Upnor Formation. Top photograph is onshore, and the bottom two photographs are offshore. All show th mottled red top to the Upnor Formation at Sizewell

Lista Formation

Ormesby Clay Member

Previous Names

This interval has been named the Thanet Formation in the Phase 1 Ground Investigation Report.

Typical Thickness

The typical thickness is approximately 9m onshore and up to 14m offshore.

Distribution

It is expected to be encountered across the entire site, both onshore and offshore. The top unit of OC1 (greyish green highly glauconitic clay) is only present offshore.

Notable Features

A reddish brown unit is present at the base of the unit overlying a cobble layer at the contact with the underlying Chalk. The Cobble Layer is a unit within OC1, and the reddish layer is believed to represent OC2. Offshore there is an additional unit within OC1 consisting of greyish green highly glauconitic clay.

Description and photo

"Very stiff fissured dark brownish grey mottled dark green (glauconitic) slightly sandy silty CLAY with some to frequent burrows (<1mm x 20mm) infilled with light grey and white possible silt, locally with frequent to abundant possible tubular foraminifera (<1mm x 4mm). Sand is fine. Fissures are mainly indistinct, possibly very closely to medium spaced, subhorizontal and inclined (30-70 degrees), planar and undulating, smooth, locally polished and striated (possibly sheared), very tight and tight, with some brown and black speckling. LISTA FORMATION, ORMESBY CLAY MEMBER, 0C3"

"Very stiff fissured dark reddish brown mottled dark grey silty CLAY, with abundant randomly orientated burrows (<1mm x 40mm) (possibly with tubular foraminifera) infilled with white and light grey silt. Fissures are mainly medium spaced, locally conjugating, inclined (40-70 degrees), planar and undulating, smooth, polished and striated (possibly sheared), tight, with brown and black staining. LISTA FORMATION, ORMESBY CLAY MEMBER, 0C2"

"Dark greenish grey (glauconitic) slightly sandy clayey gravel. Sand is fine to coarse. Gravel is angular to subrounded mainly medium and coarse of brown, reddish brown and black flint. LISTA FORMATION, ORMESBY CLAY MEMBER, OC1"

Figure 9-10: Lista Formation, Ormesby Clay Member. Pebble unit of OC1 in base photo, reddish unit of OC2 in middle photo and OC3 in top photo.

Portsdown Chalk Formation

Beeston Chalk

Previous Names

The Phase 1 Ground Investigation report does not subdivide the Chalk Group.

Typical Thickness

The Beeston Chalk is approximately 3m thick.

Distribution

Expected to be present across the entire site

Notable Features

Devoid of marl and relatively massive with phosphatic clasts. Belemnites are common within this Member

Description and photo

"Weak high density white CHALK with rare light grey mottling (possible burrows).PORTSDOWN CHALK FORMATION, BEESTON CHALK"

Figure 9-11: Beeston Chalk, with minimal marl.

Weybourne Chalk

Previous Names

The Phase 1 Ground Investigation report does not subdivide the Chalk Group.

Typical Thickness

The Weybourne Chalk is typically between 7 and 9m in thickness.

Distribution

Expected to be present across the entire site.

Notable Features

Pair of glauconitic stained hardgrounds associated with the Catton Sponge are present near the boundary with the overlying Beeston Chalk.

Description and photo

"Moderately weak very high density white CHALK (chalkstone) with rare bivalve shell fragments (<1mm x 30mm). PORTSDOWN CHALK FORMATION, WEYBOURNE CHALK"

"90.13m to 90.20m; non intact (assumed drilling induced). Recovered as angular and subangular chalkstone fragments (<30mm x 40mm x 60mm) with occasional dark green glauconitic mineralisation. CATTON SPONGE BED"

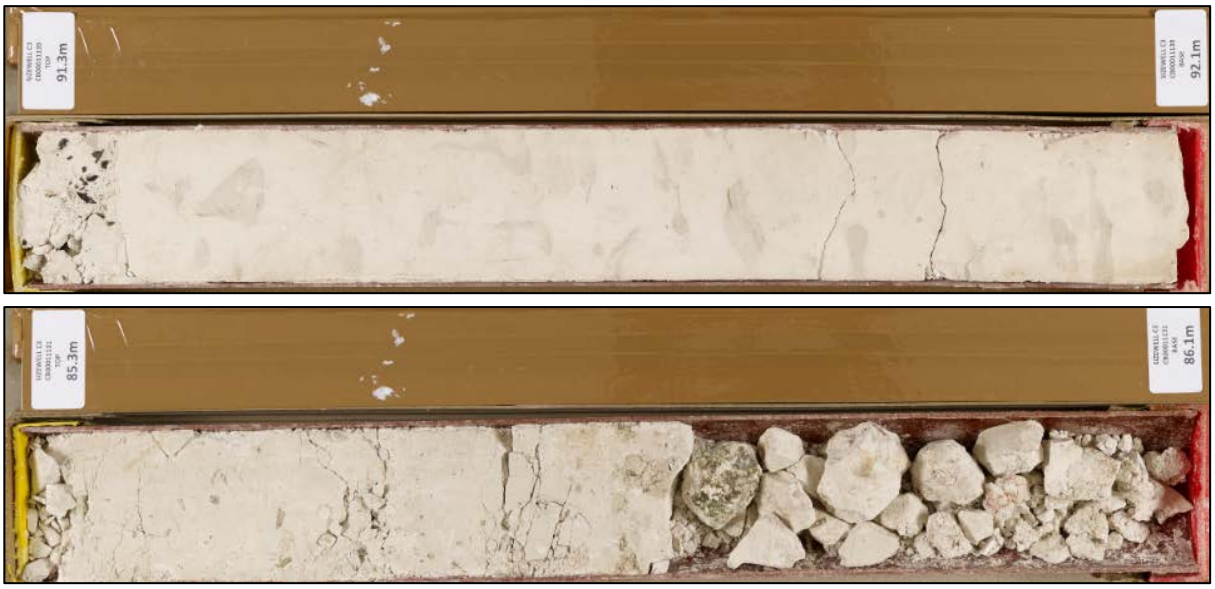


Figure 9-12: Weybourne Chalk. Glauconitic stained hardground visible in base photo, which is associated with the Catton Sponge.

Pre-Weybourne Chalk

Previous Names

The Phase 1 Ground Investigation report does not subdivide the Chalk Group.

Typical Thickness

The base of the Pre-Weybourne Chalk has not been encountered in holes. The thickness is at least 18m.

Distribution

Expected to be present across the entire site.

Notable Features

Top boundary is an irregular glauconitised hardground, with common sponge remains.

Description and photo

"Very weak medium and high density white CHALK with occasional to frequent light greyish brown and dark greyish brown mottling (possible burrows) and occasional black sponge (<5mm x 100mm). Fractures are widely and very widely spaced, subhorizontal, planar, smooth, very tight. PORTSDOWN CHALK FORMATION, PRE-WEYBOURNE CHALK"

"97.70m to 97.78m; non intact (assumed drilling induced). Recovered as subangular moderately weak possibly very high density chalk and chalkstone fragments (<50mm x 50mm x 50mm) with occasional dark green (glauconitic) nodules (<5mm x 5mm x 5mm). Possible hardground."

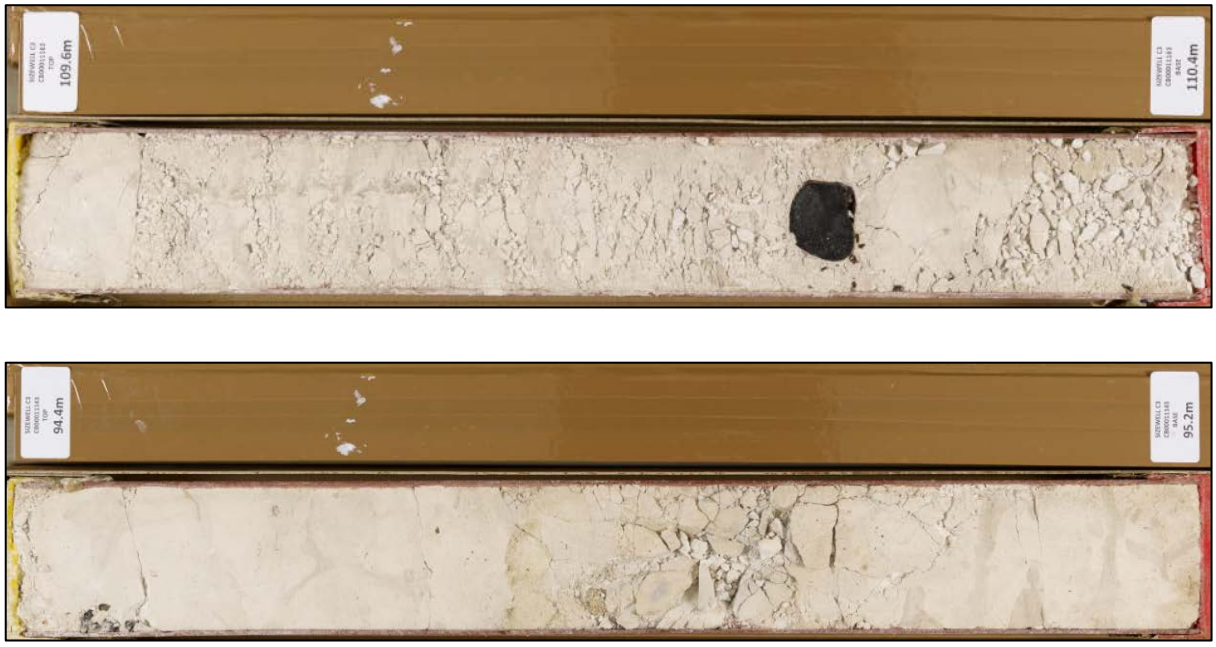


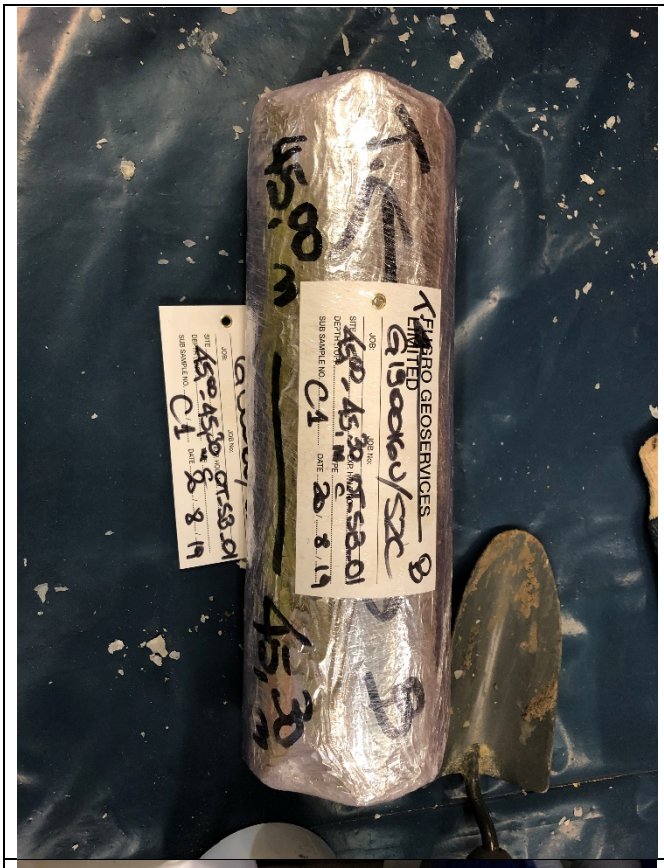
Figure 9-13: Pre-Weybourne Chalk. Base photo shows hardground at contact with the overlying Weybourne Chalk.

Appendix B: Sampling Methodology Photos

Fugro Methodology

Sample wrapped in cling film.

SECTION 10 – APPENDIX B: SAMPLING METHODOLOGY PHOTOS

	*Sample is then wrapped in foil and labelled.*
	*Sample is placed in cardboard tubes with a wax plug approximately 25mm thick at the base. The sample does not touch the sides of the tube.*

	*The tube is then be filled with wax (several pours) ensuring the top, base and sides of the sample are entirely submerged/encased in wax and another label placed in the tube.*
	*End caps are placed at the top and bottom of the cardboard tube and are taped down. Cardboard tube is labelled as well.*

SECTION 10 – APPENDIX B: SAMPLING METHODOLOGY PHOTOS

Samples safely placed on pallet with bubble wrap and are ready for transport.

Structural Soils Methodology

Sample is wrapped in cling film and then foil.

Sample is labelled.

	*Sample is covered with wax and another label is placed.*
	*Sample is waxed again and then placed within a liner with end caps which are taped down. Bubble wrap is taped around the liner for extra transfer protection.*

Appendix C: Chalk Logging Guidance Sheet

The following was produced by Mark Woods from the BGS to aid the identification of features within the Chalk at Sizewell.

FLINT

Patterns of flint occurrence are valuable for local correlation of boreholes, particularly if there is a distinctive combination of flint types in borehole successions. Flints may also form named marker-beds that are important for relating the Chalk in borehole core to standard Chalk successions, and providing supporting evidence for its age and identification of formational units. It is not uncommon for flints to get lodged in the core barrel during coring and be responsible for intervals of core loss. Consequently, the record of flint in borehole core is often incomplete.

Where possible aim to record:

Flint Habit (main types are: nodular; tabular; semi-tabular; sheet; spiky/finger-flints; tubular flints). In East Anglia the flints at some levels are very large, forming vertical columns (Paramoudras), or dough-nut shapes (in plan-view – the so-called 'Ring Flints') with a flint mass at their centre. Appreciating the geometry of these flints in borehole core is challenging.

Flint Size (thickness; does flint occupy whole core diameter?)

In the Sizewell C3 Borehole, many of the flints are small nodular, horn-shaped and spiky forms.

FLINT IMAGES

Medium nodular flint

Vertically elongated flint ('mini-moudra')

Semi-tabular flint

Small spiky flint

High angle sheet flint representing growth of flint along an inclined fracture plane. These flints may also occur sub-horizontally and often have a central hollow seam, indicating inward growth from the fracture margins

Sub-horizontal sheet flint showing detail of the central seam of chalky material

Tubular flints with chalky central infill (arrowed)

Large ring-shaped flint developed in the Beeston Chalk of East Anglia

MARLS

Marls are thin, clay-rich horizons, often appearing as concentrated bands of thin grey coloured wisps in the Chalk, or as solid seams with well-defined boundaries. The typically range in thickness from mm to a few 10s of cm. The distribution of marls is very valuable for local borehole correlation and correlation with standard Chalk successions. Some marl seams are named marker-beds that are important for relating the Chalk in borehole core to standard Chalk successions and providing supporting evidence for its age and identification of formational units.