



APPENDIX B

PHOTOGRAPHIC RECORD



Photo 1: View north west across the site.



Photo 2: View north west across the site.



Photo 3: View north across the centre of the site.



Photo 4: View north east across the centre of the site.

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Geotechnical, Environmental &
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Client:

**Brookbanks Consulting/
Lands Improvement**

Project:

Northaw Road East, Cuffley

Project No.:

GEG-14-356



Photo 5: View east across the site.



Photo 6: View south east across the site.



Photo 7: View south of southern boundary.



Photo 8: View south of southern boundary.

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Northaw Road East, Cuffley

Project No.:

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Photo 9: Excavation of trial pit TP01.



Photo 10: Arisings from trial pit TP01.



Photo 11: Excavation of trial pit TP02.



Photo 12: Arisings from trial pit TP02.

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Northaw Road East, Cuffley

Project No.:

GEG-14-356



Photo 13: Excavation of trial pit TP03.



Photo 14: Arisings from trial pit TP03.



Photo 15: Excavation of trial pit TP04.



Photo 16: Arisings from trial pit TP04.

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Project No.:

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Photo 17: Excavation of trial pit TP05.



Photo 18: Arisings from trial pit TP05.



Photo 19: Excavation of trial pit TP06.



Photo 20: Arisings from trial pit TP06.

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Project No.:

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Photo 21: Excavation of trial pit TP07.



Photo 22: Arisings from trial pit TP07.



Photo 23: Excavation of trial pit TP08.



Photo 24: Arisings from trial pit TP08.

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Photo 25: Excavation of trial pit TP09.



Photo 26: Arisings from trial pit TP09.

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Northaw Road East, Cuffley

Project No.:

GEG-14-356



APPENDIX C

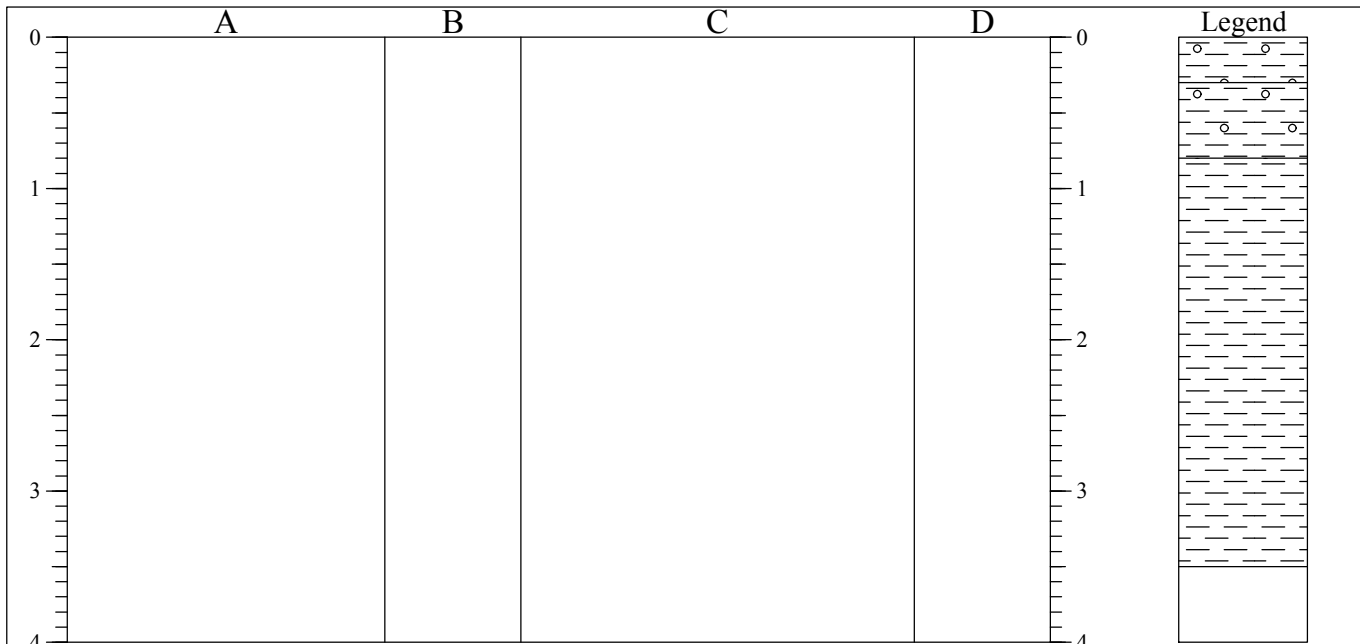
EXPLORATORY HOLE LOGS



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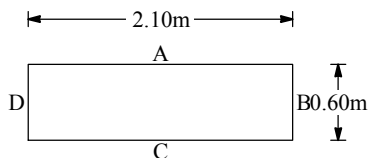
TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP01
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 63.00	Co-Ordinates () E 530,323.0 N 202,195.3	
Contractor				Sheet 1 of 1



STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)			106 KPa 98 KPa 90 KPa	
0.30-0.80		(Soft to firm) orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)				
0.80-3.50		Stiff brown occasionally grey and orange brown CLAY. (LONDON CLAY FORMATION)	0.70	B		
			1.10	B		
			1.10	HV		
			1.60	HV		98 KPa
			1.80	HV		90 KPa
		2.00 - 3.50 Becoming friable				

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Excavation difficult from 3.00m. 3. Infiltration test undertaken in trial pit. 4. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client Brookbanks Consulting Ltd

Method/
Plant Used

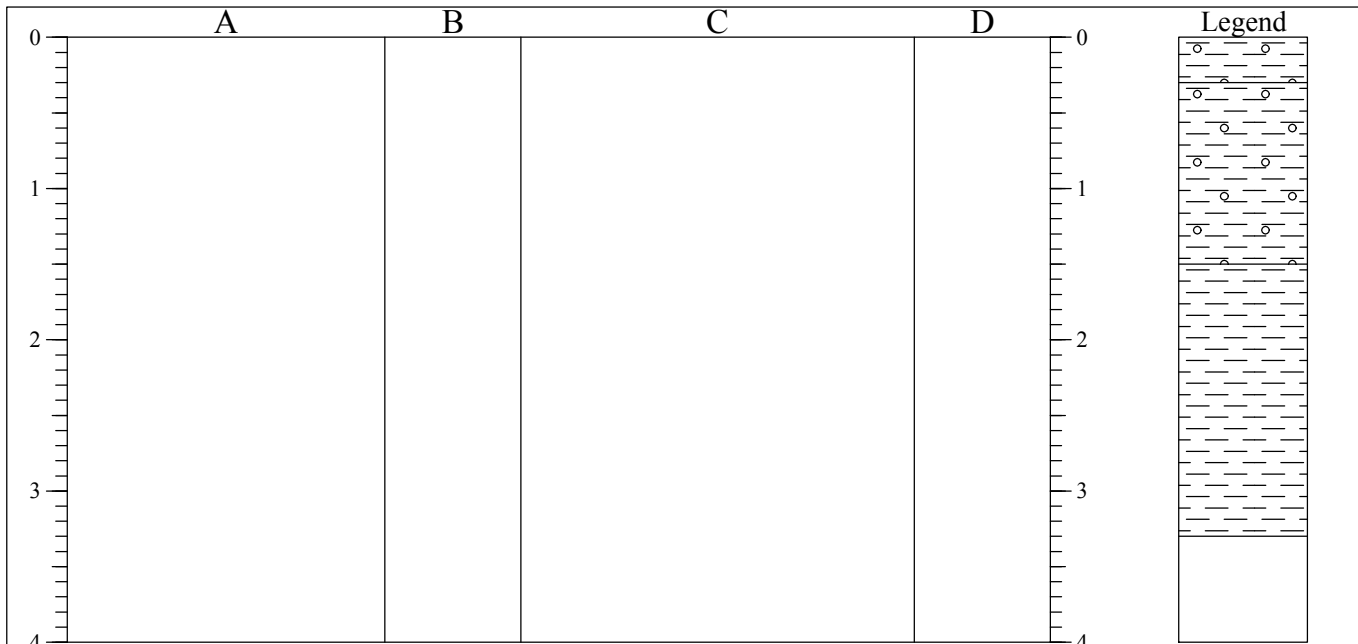
JCB-3CX

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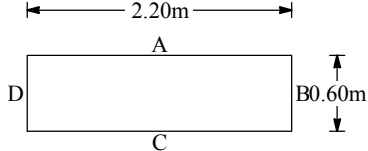


TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP02
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 59.00	Co-Ordinates () E 530,370.4 N 202,122.3	
Contractor				Sheet 1 of 1



STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)				
0.30-1.50		Firm orange brown slightly gravelly CLAY with some boulder-sized pockets of very clayey gravel. Gravel is sub-angular to sub-rounded flint and quartzite. (DOLLIS HILL GRAVEL MEMBER)	0.50	B		
			1.10	B		
			1.20	HV	62 KPa	
1.50-3.30		Stiff brown occasionally grey CLAY. (LONDON CLAY FORMATION)	1.50	HV	82 KPa	
		2.50 - 3.30 Becoming friable with occasional gravel-sized mudstone lithorelicts	2.00	HV	81 KPa	
		2.90 - 3.10 Becoming (stiff to very stiff)				
		3.10 - 3.30 Becoming (very stiff)				

Shoring/Support: None Stability: Sides Stable		GENERAL REMARKS 1. No groundwater encountered. 2. Excavation difficult from 3.00m. 3. Infiltration test undertaken in trial pit. 4. Upon completion trial pit backfilled with arisings.
		

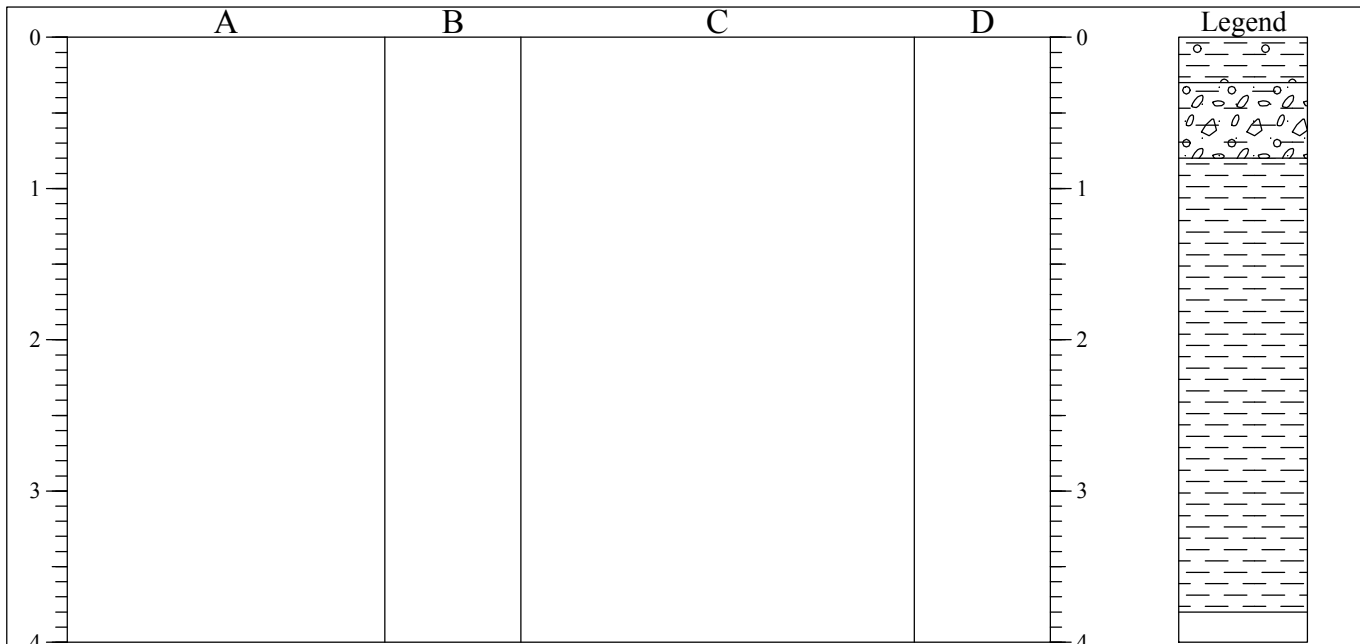
All dimensions in metres Scale 1:50	Client Brookbanks Consulting Ltd	Method/ Plant Used JCB-3CX	Logged By SA
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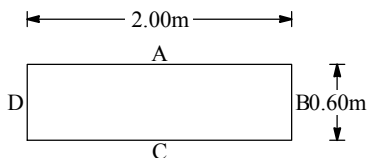
TRIAL PIT LOG

Project Northaw Road East, Cuffley				TRIAL PIT No TP03
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 60.75	Co-Ordinates () E 530,397.9 N 202,167.2	
Contractor				Sheet 1 of 1



STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)	0.10	D		
0.30-0.80		(Loose) brown very clayey sandy GRAVEL of sub-angular and sub-rounded flint. (DOLLIS HILL GRAVEL MEMBER)				
0.80-3.80		Firm brown occasionally orange brown and light grey CLAY. (LONDON CLAY FORMATION)	1.10	D		
		1.60 - 3.30 Becoming stiff	1.10	HV	65 KPa	
			1.60	HV	82 KPa	
		2.50 - 3.30 With occasional orange brown sandy to very sandy partings	2.30	HV	78 KPa	
		2.70 - 3.80 Becoming friable	2.70	HV	90 KPa	
		3.30 - 3.80 Becoming (stiff to very stiff) with occasional gravel-sized mudstone lithorelicts				

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Excavation difficult from 3.30m. 3. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client **Brookbanks Consulting Ltd**

Method/
Plant Used

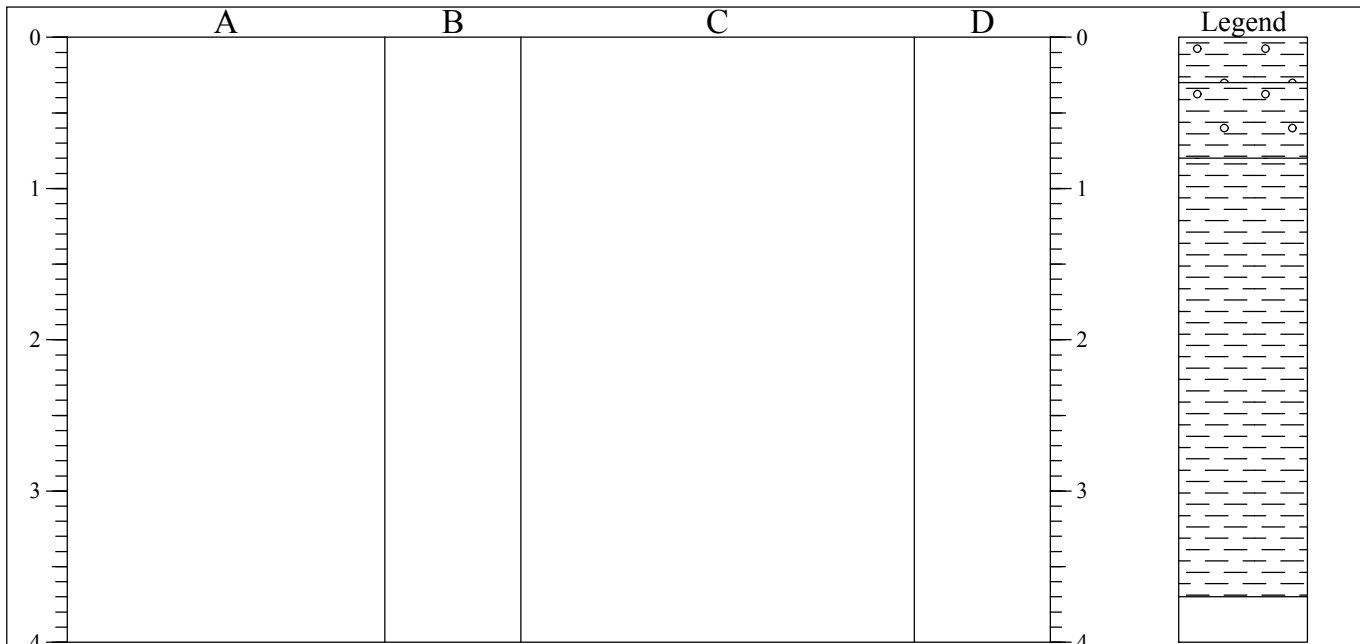
JCB-3CX

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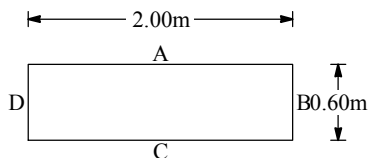
TRIAL PIT LOG

Project Northaw Road East, Cuffley				TRIAL PIT No TP04
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 60.25	Co-Ordinates () E 530,431.8 N 202,083.5	
Contractor				Sheet 1 of 1



STRATA			SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)	0.40	B	
0.30-0.80		(Firm) orange brown slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint and quartzite. (DOLLIS HILL GRAVEL MEMBER)			
0.80-3.70		Firm brown occasionally grey CLAY with occasional gravel-sized lithorelicts of mudstone. (LONDON CLAY FORMATION)			
		1.20 - 1.80 Becoming firm to stiff	1.20	B	
			1.20	HV	75 KPa
		1.80 - 3.30 Becoming firm	1.80	HV	71 KPa
			2.10	HV	71 KPa
		2.50 - 2.60 With occasional cobbles of ironstone			
		2.60 - 3.70 Becoming brown occasionally grey and orange brown friable			
		3.00 - 3.70 With some gravel-sized mudstone lithorelicts			
		3.30 - 3.70 Becoming (stiff to very stiff)			

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. Isolated slow seepage of groundwater encountered at 2.50m. 2. Excavation difficult from 3.20m. 3. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client Brookbanks Consulting Ltd

Method/
Plant Used

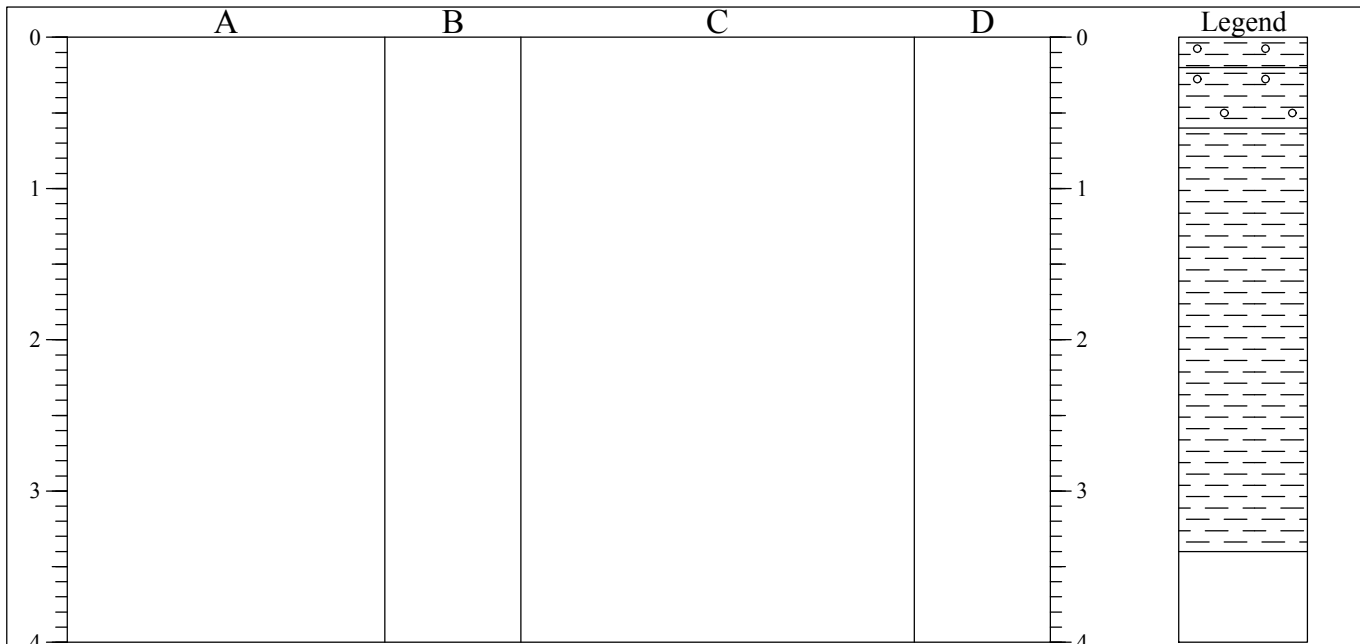
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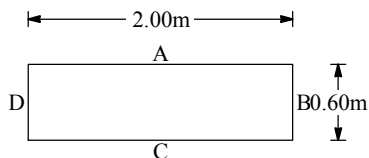
TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP05
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 62.75	Co-Ordinates () E 530,470.2 N 202,076.9	
Contractor				Sheet 1 of 1



STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.20		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite.	0.10	D		
0.20-0.60		(TOPSOIL)	0.30	B		
0.60-3.40		(Firm) orange brown slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint and quartzite.				
		(DOLLIS HILL GRAVEL MEMBER)				
		Firm brown CLAY.	1.00	B	62 KPa	
		(LONDON CLAY FORMATION)	1.00	HV		
		0.60 - 2.80 Becoming occasionally light brown with gravel-sized mudstone lithorelicts	1.50	HV	85 KPa	
		1.50 - 3.20 Becoming stiff	2.00	HV	106 KPa	
		1.60 - 3.40 Becoming occasionally orange brown friable				
		2.80 - 2.85 With occasional cobbles of sandstone and gravel-sized gypsum crystals				
		2.80 - 3.40 Becoming some lithorelicts of mudstone				
		3.00 - 3.40 Becoming very stiff				

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Excavation difficult from 3.00m. 3. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client Brookbanks Consulting Ltd

Method/
Plant Used

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TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP06
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 67.75	Co-Ordinates () E 530,501.3 N 202,123.8	
Contractor				Sheet 1 of 1

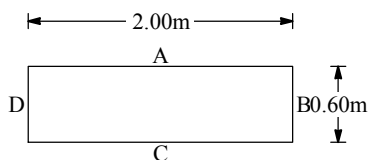
A	B	C	D	Legend
0				0
1				1
2				2
3				3
4				4

STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)			
0.30-1.00		(Firm) orange brown slightly gravelly CLAY. Gravel is sub-angular to sub-rounded flint. (DOLLIS HILL GRAVEL MEMBER)	0.50	B	
1.00-3.30		Stiff brown CLAY. (LONDON CLAY FORMATION)	1.20	B	
		1.60 - 3.30 Becoming slightly friable	1.20	HV	93 KPa
		2.30 - 2.40 With occasional cobbles			

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Excavation difficult from 3.10m. 3. Infiltration test undertaken in trial pit. 4. Upon completion trial pit backfilled with arisings.

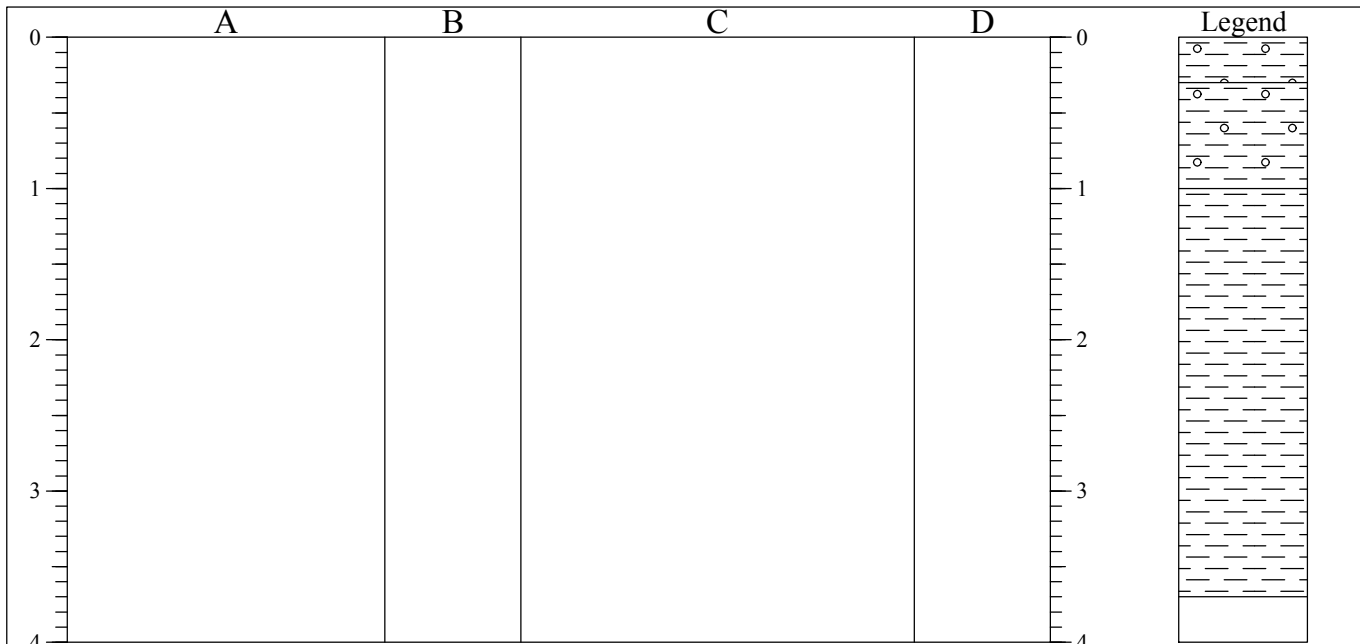
AGS3 UK TP GEG-14-356 CUFFLEY.GPJ GINT STD AGS 3_1.GDT 18/11/14

All dimensions in metres Scale 1:50	Client Brookbanks Consulting Ltd	Method/ Plant Used JCB-3CX	Logged By SA
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TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP07
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 62.50	Co-Ordinates () E 530,519.2 N 202,048.7	
Contractor				Sheet 1 of 1



STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)	0.10	D		
0.30-1.00		(Firm) orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)	0.50	B		
1.00-3.70		Firm brown CLAY. (LONDON CLAY FORMATION)	1.10	B		
			1.10	HV		
			1.50	HV		
			1.80	HV		
			2.10	HV		
		1.80 - 3.00 Becoming stiff				
		2.00 - 3.70 Becoming occasionally grey friable with occasional gravel-sized mudstone lithorelicts				
		3.00 - 3.70 Becoming (very stiff)				

Shoring/Support: None Stability: Sides Stable	GENERAL REMARKS

All dimensions in metres Scale 1:50	Client Brookbanks Consulting Ltd	Method/ Plant Used JCB-3CX	Logged By SA
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TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP08
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 63.25	Co-Ordinates () E 530,571.5 N 202,066.5	
Contractor				Sheet 1 of 1

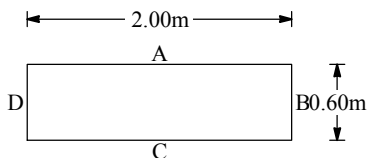
A		B		C		D		Legend	
0							0		
1							1		
2							2		
3							3		
4							4		

STRATA

SAMPLES & TESTS

Depth	No	DESCRIPTION	Depth	No	Remarks/Tests
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-angular flint and sub-rounded quartzite. (TOPSOIL)			
0.30-1.00		(Firm) orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)	0.40	B	
1.00-2.00		Stiff brown CLAY. (LONDON CLAY FORMATION)	1.00	B	
		1.50 - 2.00 Becoming slightly gravelly with sub-angular to sub-rounded mudstone	1.00	HV	110 KPa
			1.70	HV	85 KPa
2.00-3.50		Stiff brown occasionally grey CLAY. (LONDON CLAY FORMATION)	2.00	HV	78 KPa
		2.80 - 3.00 Becoming friable	3.00	HV	82 KPa

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Excavation difficult from 3.40m. 3. Infiltration test undertaken in trial pit. 4. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client Brookbanks Consulting Ltd

Method/
Plant Used

JCB-3CX

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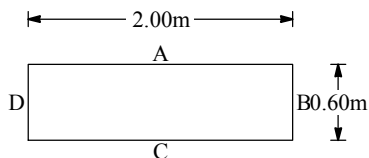
TRIAL PIT LOG

Project Northhaw Road East, Cuffley				TRIAL PIT No TP09
Job No GEG-14-356	Date 17-09-14	Ground Level (m) 59.00	Co-Ordinates () E 530,514.8 N 202,012.4	
Contractor				Sheet 1 of 1

A	B	C	D	Legend
0				0
1				1
2				2
3				3
4				4

STRATA				SAMPLES & TESTS		
Depth	No	DESCRIPTION	Depth	No	Remarks/Tests	
0.00-0.30		(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)				
0.30-1.00		(Firm) brown slightly gravelly to 1.00m CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)	0.50	B		
1.00-3.70		Stiff brown CLAY. (LONDON CLAY FORMATION) 1.20 - 2.00 Becoming stiff	1.10	B		
			1.20	D		
			1.20	HV	81 KPa	
		2.00 - 2.40 Becoming firm	2.00	HV	56 KPa	
		2.30 - 2.40 With occasional cobbles	2.40	HV	79 KPa	
		2.40 - 3.70 Becoming stiff	2.90	HV	101 KPa	
			3.30	HV	93 KPa	

Shoring/Support: None
Stability: Sides Stable



GENERAL REMARKS

1. No groundwater encountered. 2. Infiltration test undertaken in trial pit. 3. Upon completion trial pit backfilled with arisings.

All dimensions in metres
Scale 1:50

Client **Brookbanks Consulting Ltd**

Method/
Plant Used

JCB-3CX

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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS01	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 61.25	Co-Ordinates () E 530,363.9 N 202,181.0		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
				60.95		0.30		
						(0.70)		
				60.25		1.00		
1.00	U100	N12						
1.50								
2.00		N13						
3.00								
4.00		N16				(5.45)		
5.00		N20						
6.00		N21						
				54.80		6.45		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. Upon completion backfilled with arisings.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS02	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 61.25	Co-Ordinates () E 530,319.8 N 202,133.8		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
0.10	D			60.95		0.30	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)	
						(0.60)	(Soft to firm) orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)	
0.90	D			60.35		0.90	Firm brown occasionally orange brown and grey CLAY. (LONDON CLAY FORMATION)	
1.00	D							
1.00		N12						
1.50	U100							
2.00		N12					2.20 - 6.45 Occasional mudstone lithorelicts	
3.00		N16					3.00 - 6.45 Becoming stiff	
4.00		N21				(5.55)		
5.00		N19						
6.00		N22						
				54.80		6.45		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. 50mm standpipe installed to 5.00m with response zone 5-1m, bentonite seal 1-0.3m and concreted cover 0.3-0m.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS03	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 67.25	Co-Ordinates () E 530,481.6 N 202,146.7		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
				66.95		0.30	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)	
				66.65		0.60	(Stiff) brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)	
1.00		N22					Stiff brown occasionally light grey and orange CLAY. (LONDON CLAY FORMATION)	
1.45	U100							
2.00		N24					2.00 - 6.45 Occasional mudstone lithorelicts	
3.00		N23						
4.00		N21				(5.85)		
5.00		N19						
6.00		N22						
				60.80		6.45		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. 50mm standpipe installed to 5.00m with response zone 5-1m, bentonite seal 1-0.3m and concreted cover 0.3-0m.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By SA	

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



Geo Environmental Group
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Malvern, WR14 2HR
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Fax: 01684 576917

BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS04	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 60.75	Co-Ordinates () E 530,427.3 N 202,114.5		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)		
				60.45		0.30		
				59.95		(0.50) 0.80		
1.00		N8						
2.00		N10						
2.50	U100							
3.00		N16						
4.00		N17				(5.65)		
5.00		N16						
6.00		N21						
				54.30		6.45		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. Upon completion backfilled with arisings.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS05	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 58.75	Co-Ordinates () E 530,461.3 N 202,025.8		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				58.35		(0.40) 0.40	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)		
				57.95		(0.40) 0.80	(Stiff) friable orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite. (DOLLIS HILL GRAVEL MEMBER)		
1.00	U100	N19					Stiff brown occasionally orange brown and grey CLAY. (LONDON CLAY FORMATION)		
1.50									
2.00		N19					2.00 - 6.45 Occasional cobble-sized pockets of mudstone lithorelicts		
3.00		N16							
4.00		N21				(5.65)			
5.00		N19							
6.00		N23							
				52.30		6.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. 50mm standpipe installed to 5.00m with response zone 5-1m, bentonite seal 1-0.3m and concreted cover 0.3-0m.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By SA	

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS06	
Job No GEG-14-356	Date 19-09-14	Ground Level (m) 64.75	Co-Ordinates () E 530,505.3 N 202,078.1		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA				Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		
				64.45		0.30		
				64.05		(0.40) 0.70		
1.00	U100	N12						
1.50								
2.00		N13						
3.00		N15						
4.00	N16							
5.00	N18							
6.00	N21							
				58.30		6.45		

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. Upon completion backfilled with arisings.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS07	
Job No GEG-14-356	Date 19-09-14	Ground Level (m) 67.50	Co-Ordinates () E 530,542.1 N 202,108.3		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)	DESCRIPTION		
1.00	U100	N19		67.20		0.30	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)		
				66.70		(0.50)	(Firm) brown and orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite and sub-angular flint. (DOLLIS HILL GRAVEL MEMBER)		
						0.80	Stiff brown occasionally light grey CLAY. (LONDON CLAY FORMATION)		
									
									
2.00	U100	N18							
2.50									
3.00									
4.00									
5.00									
6.00	U100	N22							
									
									
									
									
6.00	U100	N20				4.00 - 6.45 Occasional orange brown sandy partings			
									
									
									
									
6.00	U100	N21							
									
									
									
									
6.00	U100	N24							
									
									
									
									
				61.05		6.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. Upon completion backfilled with arisings.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS08	
Job No GEG-14-356	Date 19-09-14	Ground Level (m) 59.75	Co-Ordinates () E 530,565.9 N 202,019.9		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA			Geology	Instrument/ Backfill	
Depth	Type No	Test Result		Reduced Level	Legend	Depth (Thick-ness)			DESCRIPTION
1.00		N6		59.45		0.30	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)		
				58.85		(0.60)	0.90	(Firm) brown and orange brown slightly gravelly CLAY. Gravel is sub-rounded quartzite and sub-angular flint. (DOLLIS HILL GRAVEL MEMBER)	
2.00		N12					2.00 - 3.00 Becoming firm		
3.00		N16					3.00 - 6.45 Becoming stiff		
4.00		N18				(5.55)	3.50 - 6.45 Occasional mudstone lithorelicts		
5.00		N19							
6.00		N22							
				53.30		6.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. No groundwater encountered. 2. Upon completion backfilled with arisings.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By	SA

AGS3 UK BH GEG-14-356 CUFFLEY GPJ GINT STD AGS 3 1 GDT 18/11/14



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BOREHOLE LOG

Project Northaw Road East, Cuffley				BOREHOLE No WS09	
Job No GEG-14-356	Date 18-09-14	Ground Level (m) 56.50	Co-Ordinates () E 530,587.7 N 201,945.2		
Contractor				Sheet 1 of 1	

SAMPLES & TESTS			STRATA					Geology	Instrument/ Backfill
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick-ness)	DESCRIPTION		
				56.20		0.30	(Soft) dark brown gravelly CLAY. Gravel is sub-rounded quartzite. (TOPSOIL)		
							Firm brown, orange brown and grey CLAY. (LONDON CLAY FORMATION)		
1.00		N11							
1.50	U100								
2.00		N8					2.00 - 3.00 Becoming soft to firm 2.00 - 6.45 Occasional cobble-sized pockets of mudstone lithorelicts		
3.00		N13					3.00 - 4.00 Becoming firm		
4.00		N16				(6.15)	4.00 - 6.45 Becoming stiff		
5.00		N21							
6.00		N20							
				50.05		6.45			

Boring Progress and Water Observations						Chiselling			Water Added		GENERAL REMARKS
Date	Time	Depth	Casing Depth	Casing Dia. mm	Water Dpt	From	To	Hours	From	To	
											1. Ground wet from 3.1-3.5m and 4.3-4.7m. 2. 50mm standpipe installed to 5.00m with response zone 5-1m, bentonite seal 1-0.3m and concreted cover 0.3-0m.
All dimensions in metres Scale 1:43.75			Client	Brookbanks Consulting Ltd		Method/ Plant Used	Archway Dart Window Sampling Rig			Logged By SA	



APPENDIX D

CHEMICAL ANALYSIS RESULTS

Scientific Analysis Laboratories Ltd

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 424354-1

Date of Report: 01-Oct-2014

Customer: Geo Environmental Group
17 Graham Road
Malvern
Worcestershire
WR14 2HR

Customer Contact: Mr Matthew Perks

Customer Job Reference: GEG-14-356
Customer Purchase Order: 1458
Customer Site Reference: Cuffley
Date Job Received at SAL: 24-Sep-2014
Date Analysis Started: 24-Sep-2014
Date Analysis Completed: 01-Oct-2014

The results reported relate to samples received in the laboratory
Opinions and interpretations expressed herein are outside the scope of UKAS accreditation
This report should not be reproduced except in full without the written approval of the laboratory
Tests covered by this certificate were conducted in accordance with SAL SOPs
All results have been reviewed in accordance with QP22



Report checked
and authorised by :
Mr Ross Walker
Customer Services Manager
(Land)

Issued by :
Mr Ross Walker
Customer Services Manager
(Land)



SAL Reference: 424354 Project Site: Cuffley Customer Reference: GEG-14-356 Soil Analysed as Soil MCERTS Preparation								
SAL Reference					424354 001	424354 003	424354 006	424354 007
Customer Sample Reference					TP03 0.10	TP05 0.10	TP07 0.10	WS02 0.10
Date Sampled					17-SEP-2014	17-SEP-2014	18-SEP-2014	18-SEP-2014
Type					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Moisture @ 105 C	T162	AR	0.1	%	13	18	20	23

SAL Reference: 424354 Project Site: Cuffley Customer Reference: GEG-14-356 Soil Analysed as Soil GEG Suite 1								
SAL Reference					424354 001	424354 003	424354 006	424354 007
Customer Sample Reference					TP03 0.10	TP05 0.10	TP07 0.10	WS02 0.10
Date Sampled					17-SEP-2014	17-SEP-2014	18-SEP-2014	18-SEP-2014
Type					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Antimony	T6	M40	1	mg/kg	2	3	3	2
Arsenic	T6	M40	2	mg/kg	12	10	9	10
Boron (water-soluble)	T6	AR	1	mg/kg	<1	<1	<1	<1
Cadmium	T6	M40	1	mg/kg	<1	<1	<1	<1
Chromium	T6	M40	1	mg/kg	39	45	44	34
Chromium VI	T6	AR	1	mg/kg	<1	<1	<1	<1
Copper	T6	M40	1	mg/kg	20	17	17	14
Lead	T6	M40	1	mg/kg	48	33	34	31
Mercury	T6	M40	1	mg/kg	<1	<1	<1	<1
Nickel	T6	M40	1	mg/kg	20	21	19	15
Selenium	T6	M40	3	mg/kg	<3	<3	<3	<3
Zinc	T6	M40	1	mg/kg	76	66	63	55
Cyanide(Total)	T4	AR	1	mg/kg	<1	<1	<1	<1
Cyanide(free)	T4	AR	1	mg/kg	<1	<1	<1	<1
Phenols(Mono)	T4	AR	1	mg/kg	<1	<1	<1	<1
Soil Organic Matter	T287	M40	0.1	%	4.7	3.4	4.4	2.7
SO4(Total)	T6	M40	0.01	%	0.10	0.07	0.08	0.06
Sulphide	T4	AR	10	mg/kg	<10	<10	<10	<10

SAL Reference: 424354 Project Site: Cuffley Customer Reference: GEG-14-356 Soil Analysed as Soil GEG PAH (USEPA 16)								
SAL Reference					424354 001	424354 003	424354 006	424354 007
Customer Sample Reference					TP03 0.10	TP05 0.10	TP07 0.10	WS02 0.10
Date Sampled					17-SEP-2014	17-SEP-2014	18-SEP-2014	18-SEP-2014
Type					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
PAH(total)	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1

SAL Reference: 424354 Project Site: Cuffley Customer Reference: GEG-14-356 Soil Analysed as Soil Total Petroleum Hydrocarbons CWG								
SAL Reference					424354 001	424354 003	424354 006	424354 007
Customer Sample Reference					TP03 0.10	TP05 0.10	TP07 0.10	WS02 0.10
Date Sampled					17-SEP-2014	17-SEP-2014	18-SEP-2014	18-SEP-2014
Type					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Benzene	T209	M105	10	µg/kg	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10
Toluene	T209	M105	10	µg/kg	<10	<10	<10	<10
EthylBenzene	T209	M105	10	µg/kg	<10	<10	<10	<10
M/P Xylene	T209	M105	10	µg/kg	<10	<10	<10	<10
O Xylene	T209	M105	10	µg/kg	<10	<10	<10	<10
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	<10	<10	<10	<10
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100	<0.100
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T206	M105	1	mg/kg	<1	<1	<1	<1
TPH (C12-C16 aliphatic)	T206	M105	2	mg/kg	<2	<2	<2	<2
TPH (C16-C21 aliphatic)	T206	M105	1	mg/kg	<1	<1	<1	<1
TPH (C21-C35 aliphatic)	T206	M105	4	mg/kg	<4	<4	<4	<4
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T206	M105	1	mg/kg	<1	<1	<1	<1
TPH (C12-C16 aromatic)	T206	M105	1	mg/kg	<1	<1	<1	<1
TPH (C16-C21 aromatic)	T206	M105	1	mg/kg	<1	<1	<1	<1
TPH (C21-C35 aromatic)	T206	M105	1	mg/kg	<1	<1	<1	<1

T206	GC/FID (MCERTS)
T4	Colorimetry
T16	GC/MS
T6	ICP/OES
T209	GC/MS(Head Space)(MCERTS)
T162	Grav (1 Dec) (105 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
SVOC Pesticide Screen	T16	AR	0.1	mg/kg	N	001,003,006-007
Antimony	T6	M40	1	mg/kg	N	001,003,006-007
Arsenic	T6	M40	2	mg/kg	M	001,003,006-007
Boron (water-soluble)	T6	AR	1	mg/kg	N	001,003,006-007
Cadmium	T6	M40	1	mg/kg	M	001,003,006-007
Chromium	T6	M40	1	mg/kg	M	001,003,006-007
Chromium VI	T6	AR	1	mg/kg	N	001,003,006-007
Copper	T6	M40	1	mg/kg	M	001,003,006-007
Lead	T6	M40	1	mg/kg	M	001,003,006-007
Mercury	T6	M40	1	mg/kg	M	001,003,006-007
Nickel	T6	M40	1	mg/kg	M	001,003,006-007
Selenium	T6	M40	3	mg/kg	M	001,003,006-007
Zinc	T6	M40	1	mg/kg	M	001,003,006-007
Cyanide(Total)	T4	AR	1	mg/kg	U	001,003,006-007
Cyanide(free)	T4	AR	1	mg/kg	U	001,003,006-007
Phenols(Mono)	T4	AR	1	mg/kg	U	001,003,006-007
Soil Organic Matter	T287	M40	0.1	%	N	001,003,006-007
SO4(Total)	T6	M40	0.01	%	N	001,003,006-007
Sulphide	T4	AR	10	mg/kg	N	001,003,006-007
Naphthalene	T207	M105	0.1	mg/kg	M	001,003,006-007
Acenaphthylene	T207	M105	0.1	mg/kg	U	001,003,006-007
Acenaphthene	T207	M105	0.1	mg/kg	M	001,003,006-007
Fluorene	T207	M105	0.1	mg/kg	M	001,003,006-007
Phenanthrene	T207	M105	0.1	mg/kg	M	001,003,006-007
Anthracene	T207	M105	0.1	mg/kg	U	001,003,006-007
Fluoranthene	T207	M105	0.1	mg/kg	M	001,003,006-007
Pyrene	T207	M105	0.1	mg/kg	M	001,003,006-007
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	M	001,003,006-007
Chrysene	T207	M105	0.1	mg/kg	M	001,003,006-007
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	M	001,003,006-007
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	M	001,003,006-007
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	M	001,003,006-007
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	M	001,003,006-007
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	M	001,003,006-007
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	M	001,003,006-007
PAH(total)	T207	M105	0.1	mg/kg	U	001,003,006-007
Benzene	T209	M105	10	µg/kg	M	001,003,006-007
Toluene	T209	M105	10	µg/kg	M	001,003,006-007
EthylBenzene	T209	M105	10	µg/kg	M	001,003,006-007
M/P Xylene	T209	M105	10	µg/kg	M	001,003,006-007
O Xylene	T209	M105	10	µg/kg	M	001,003,006-007
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	M	001,003,006-007
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	N	001,003,006-007
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	N	001,003,006-007
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	N	001,003,006-007
TPH (C10-C12 aliphatic)	T206	M105	1	mg/kg	M	001,003,006-007
TPH (C12-C16 aliphatic)	T206	M105	2	mg/kg	M	001,003,006-007
TPH (C16-C21 aliphatic)	T206	M105	1	mg/kg	M	001,003,006-007
TPH (C21-C35 aliphatic)	T206	M105	4	mg/kg	M	001,003,006-007
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	N	001,003,006-007
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	N	001,003,006-007
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	N	001,003,006-007
TPH (C10-C12 aromatic)	T206	M105	1	mg/kg	M	001,003,006-007
TPH (C12-C16 aromatic)	T206	M105	1	mg/kg	M	001,003,006-007
TPH (C16-C21 aromatic)	T206	M105	1	mg/kg	M	001,003,006-007
TPH (C21-C35 aromatic)	T206	M105	1	mg/kg	M	001,003,006-007
pH	T7	AR			M	001,003,006-007
pH	T7	AR			U	002,004-005,008
SO4(2:1)	T6	AR	0.1	g/l	N	001-008
Magnesium water soluble	T6	AR	0.1	g/l	N	002,004-005,008

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Moisture @ 105 C	T162	AR	0.1	%	N	001,003,006-007

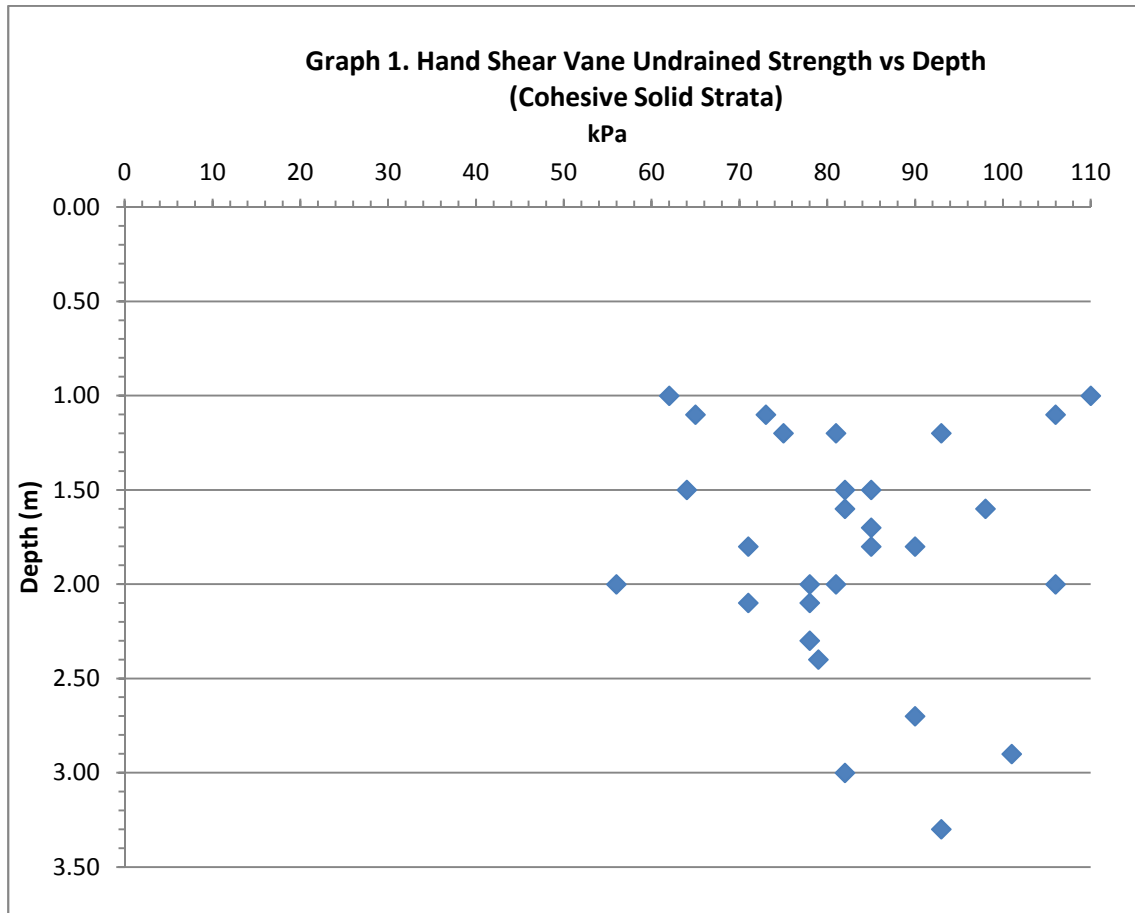


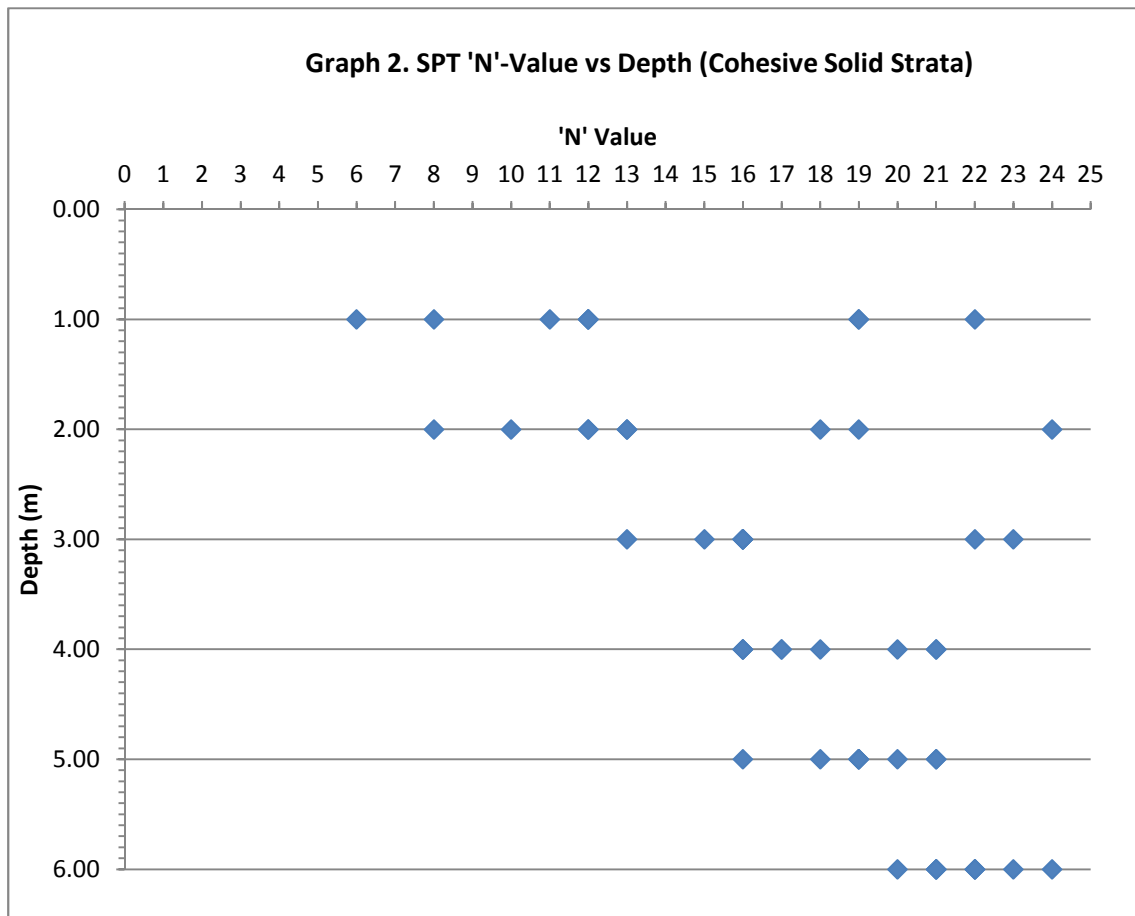


APPENDIX E

GEOTECHNICAL TESTING

Appendix E







Contract Number: 24568

Client's Reference: **GEG-14-356 PO 1459**

Report Date: **07-10-2014**

Client **GEG Limited**
GEG House
17 Graham Road
Malvern
Worcestershire
WR14 2HR

Contract Title: **Cuffley**
For the attention of: **Matthew Perks**

Date Received: **22-09-2014**
Date Commenced: **22-09-2014**
Date Completed: **07-10-2014**

Test Description	Qty
Moisture Content 1377 : 1990 Part 2 : 3.2 - * UKAS	8
4 Point Liquid & Plastic Limit (LL/PL) 1377 : 1990 Part 2 : 4.3 & 5.3 - * UKAS	8
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	8
Dry Den/MC (4.5kg Rammer Method 1 Litre Mould) 1377 : 1990 Part 4 : 3.5 - * UKAS	8

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

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Approved Signatories:

Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - D V Edwards (Managing Director)
Emma Williams (Office Manager) - Paul Evans (Quality/Technical Manager)

Contract Number: 24568



**Test Report: Method of the Determination of the plastic limit and plasticity index
BS 1377 : Part 2 : 1990 Method 5**

Client ref: GEG-14-356

Location: Cuffley

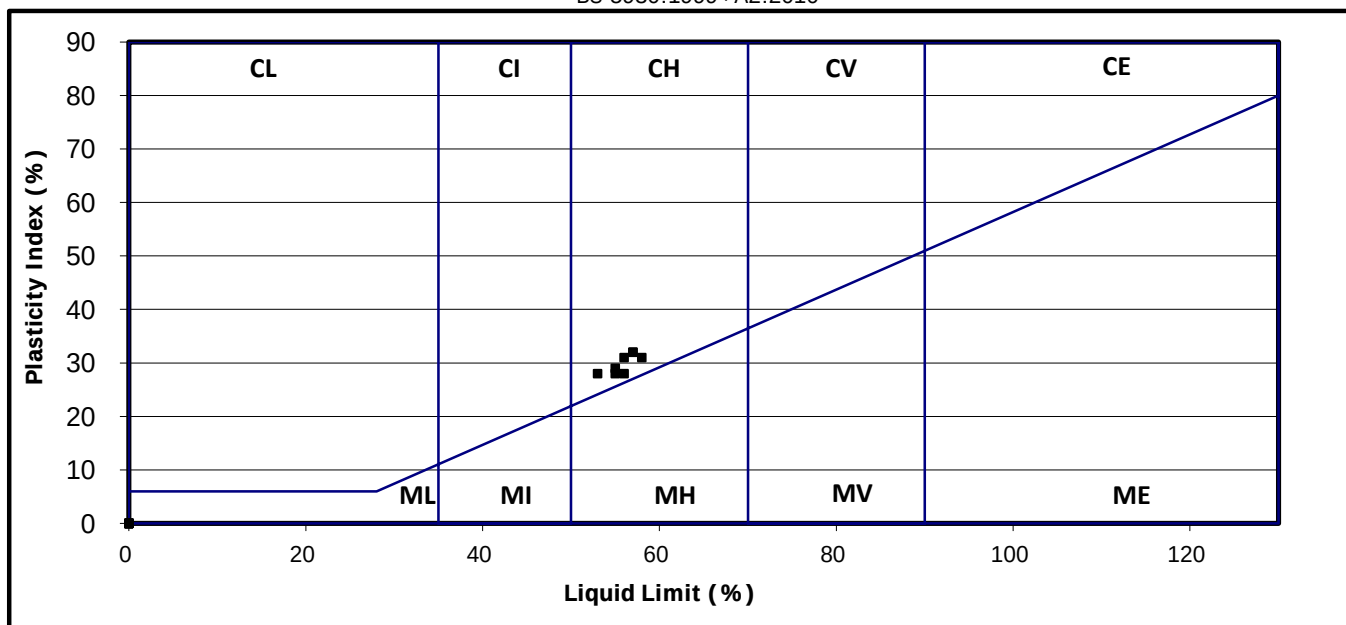
Contract Number: 24568

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
TP01	D	1.10	29	57	25	32	96	CH High Plasticity
TP04	D	1.20	27	55	26	29	97	CH High Plasticity
TP05	D	1.00	28	55	27	28	98	CH High Plasticity
TP06	D	1.20	29	58	27	31	100	CH High Plasticity
TP07	D	1.10	30	56	28	28	91	CH High Plasticity
TP08	D	1.00	27	56	25	31	93	CH High Plasticity
TP09	D	1.20	28	53	25	28	100	CH High Plasticity
WS02	D	1.00	27	57	25	32	100	CH High Plasticity

Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

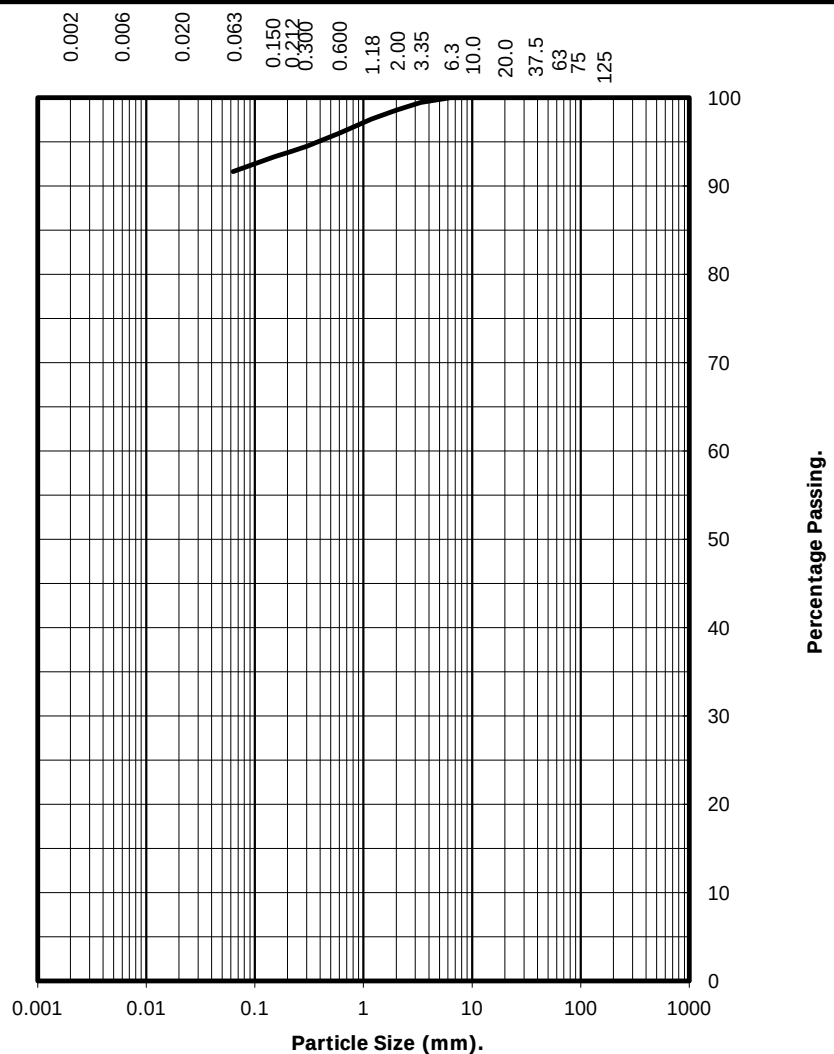
BS 5930:1999+A2:2010



Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP01****Sample Number:****Depth from (m):****1.10****Depth to (m):****Description:****Brown gravelly (fine) sandy silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2.00	99
1.18	98
0.60	96
0.300	95
0.212	94
0.150	93
0.063	92

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	92	7	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

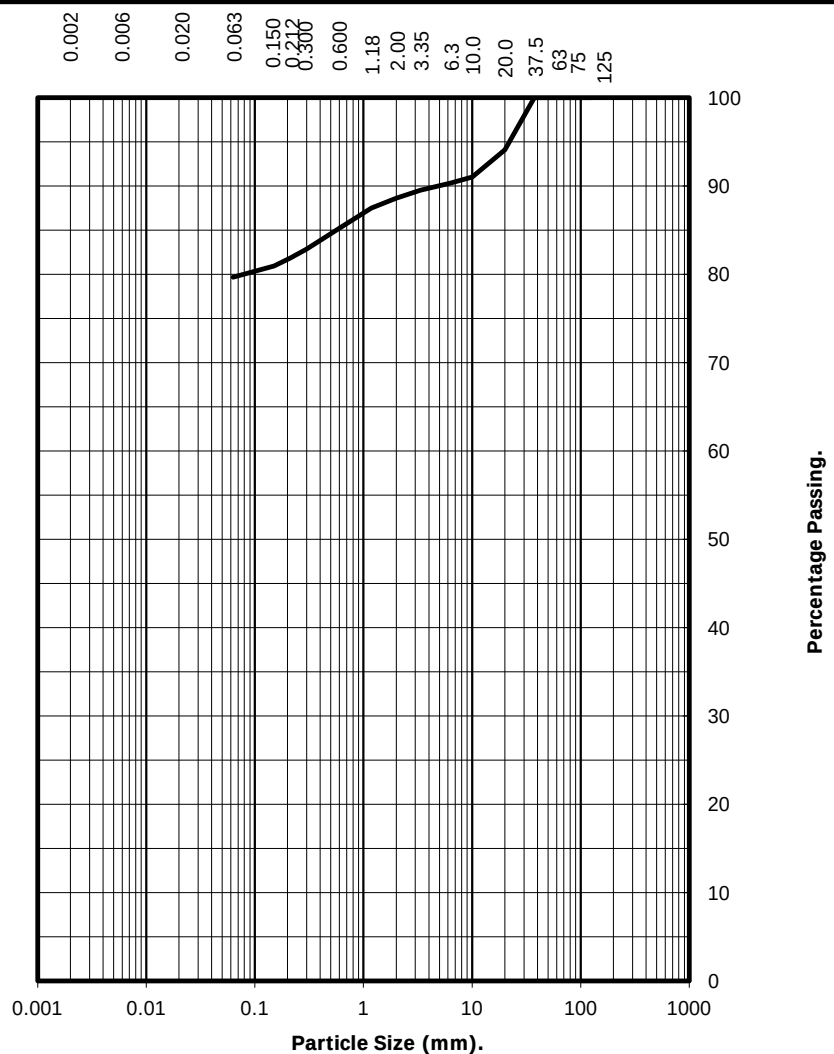
Ben Sharp (Contracts Manager)

Date: 30.9.14

Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP02****Sample Number:****Depth from (m):****1.10****Depth to (m):****Description:****Brown sandy gravelly (fine-coarse) silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	94
10	91
6.3	90
3.35	90
2.00	89
1.18	87
0.60	85
0.300	83
0.212	82
0.150	81
0.063	80

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	80	9	11	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

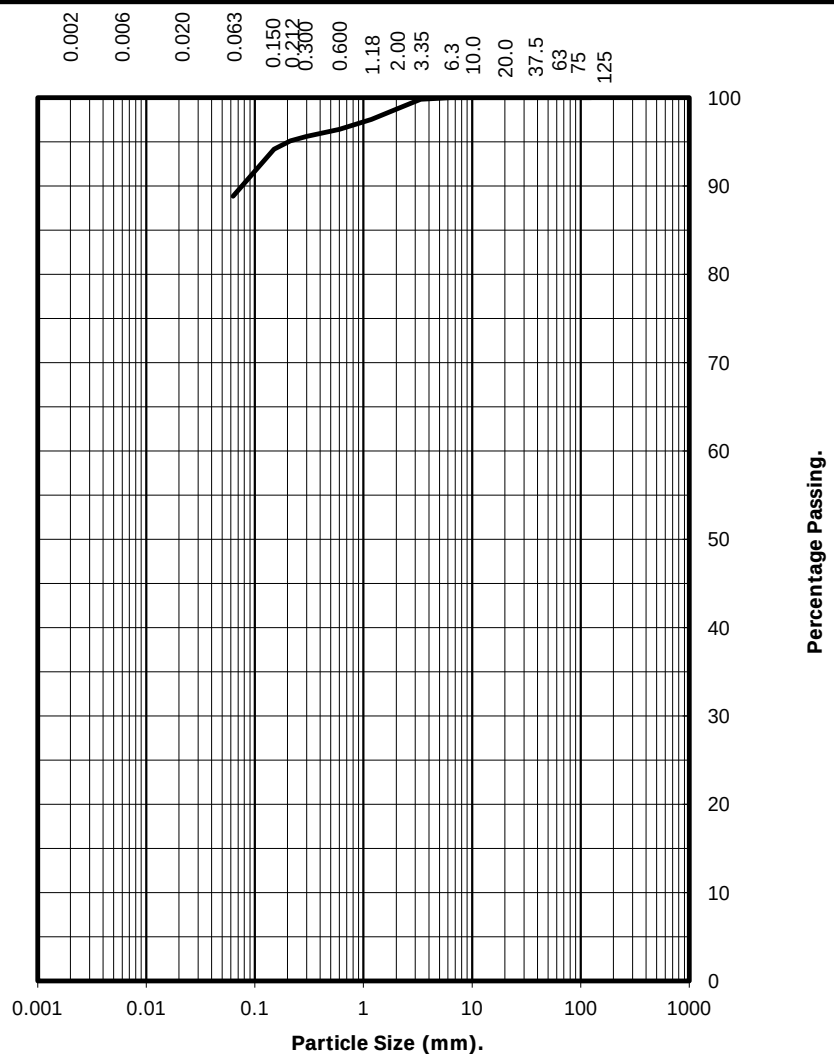
Ben Sharp (Contracts Manager)

Date: 30.9.14

Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP04****Sample Number:****Depth from (m):****1.20****Depth to (m):****Description:****Brown gravelly (fine) sandy silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2.00	99
1.18	98
0.60	96
0.300	96
0.212	95
0.150	94
0.063	89

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	89	10	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

Ben Sharp (Contracts Manager)

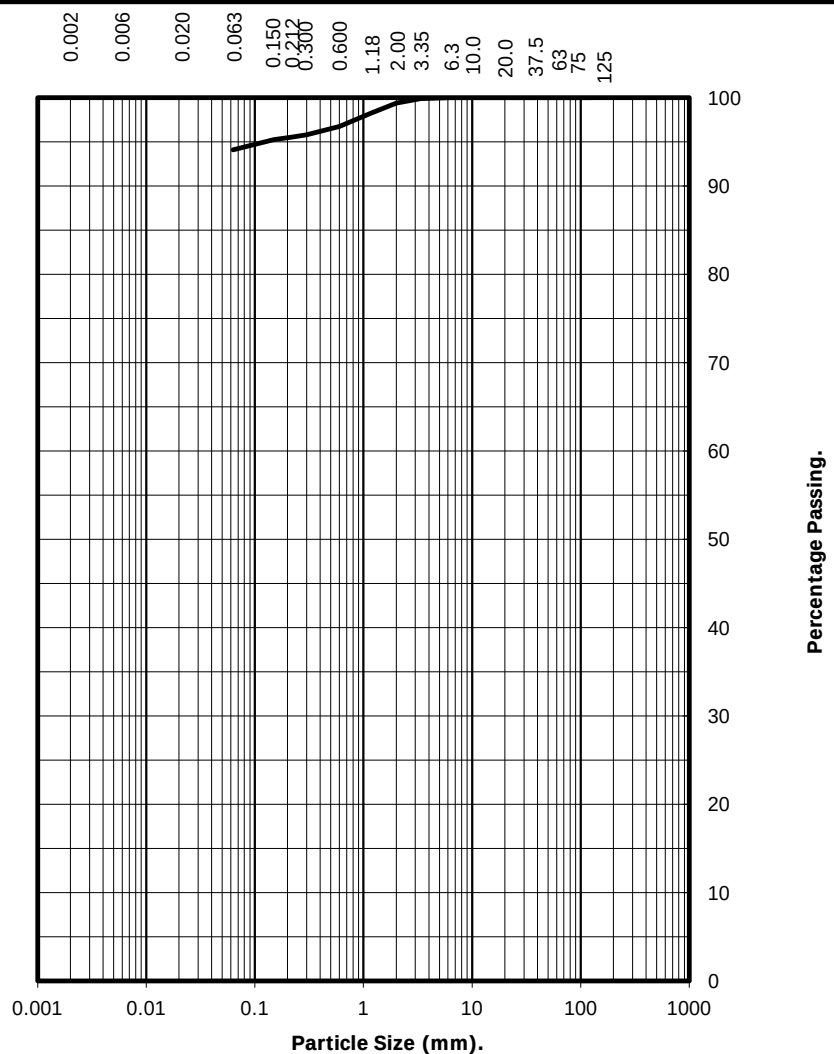
Date:

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Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP05****Sample Number:****Depth from (m):****1.00****Depth to (m):****Description:****Brown gravelly (fine) sandy silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2.00	99
1.18	98
0.60	97
0.300	96
0.212	96
0.150	95
0.063	94

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	94	5	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

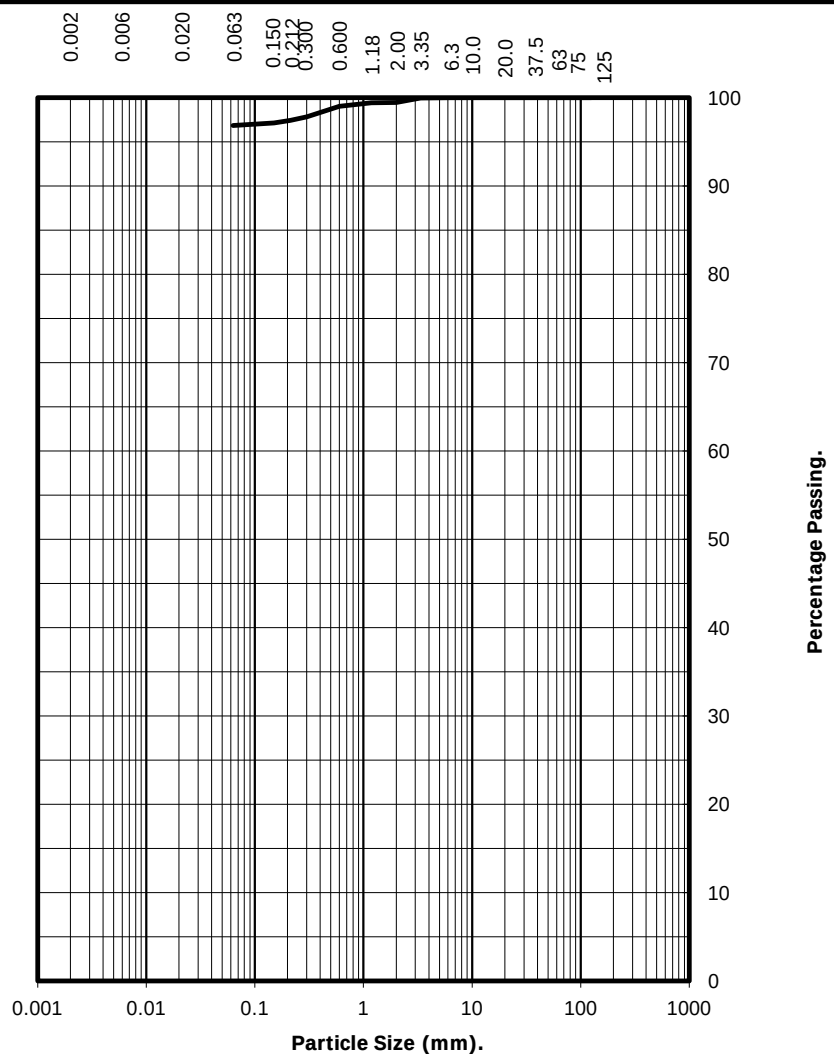
Ben Sharp (Contracts Manager)

Date: 30.9.14

Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP06****Sample Number:****Depth from (m):****1.20****Depth to (m):****Description:****Brown gravelly (fine) sandy silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2.00	99
1.18	99
0.60	99
0.300	98
0.212	97
0.150	97
0.063	97

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	97	2	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

Ben Sharp (Contracts Manager)

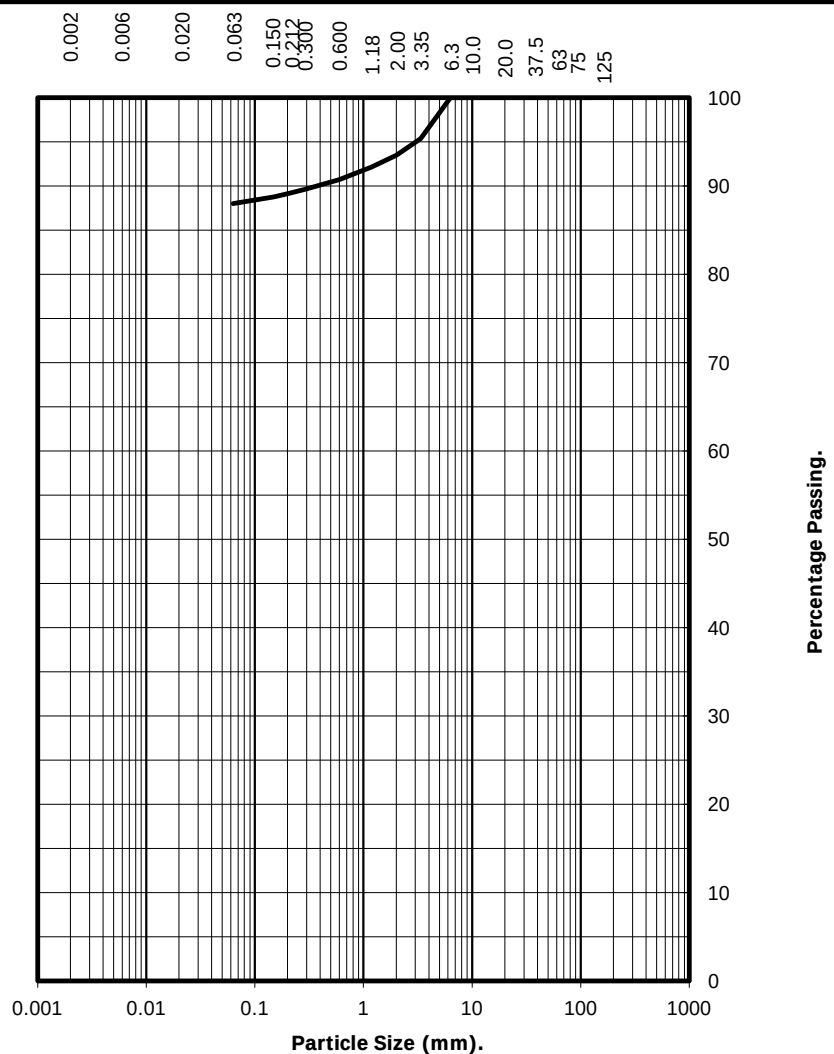
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Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP07****Sample Number:****Depth from (m):****1.10****Depth to (m):****Description:****Brown sandy gravelly (fine) silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	95
2.00	93
1.18	92
0.60	91
0.300	90
0.212	89
0.150	89
0.063	88

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	88	5	7	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

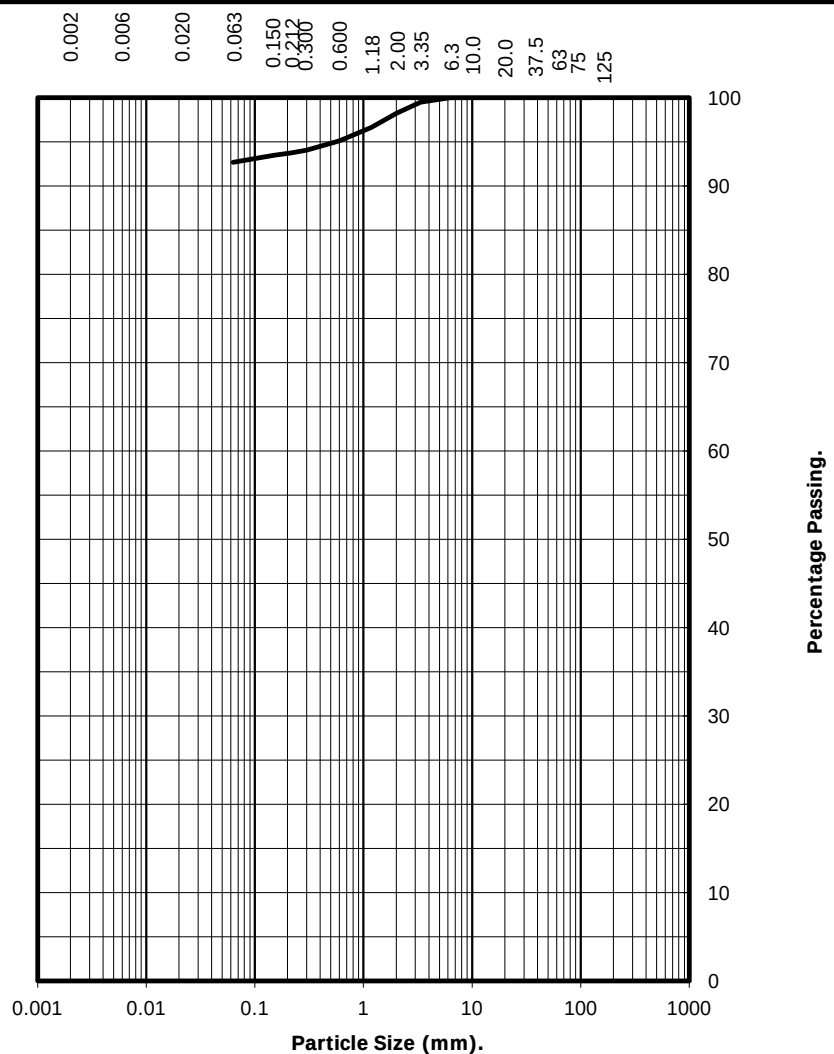
Ben Sharp (Contracts Manager)

Date: 30.9.14

Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP08****Sample Number:****Depth from (m):****1.00****Depth to (m):****Description:****Brown sandy gravelly (fine) silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2.00	98
1.18	97
0.60	95
0.300	94
0.212	94
0.150	93
0.063	93

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	93	5	2	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

Ben Sharp (Contracts Manager)

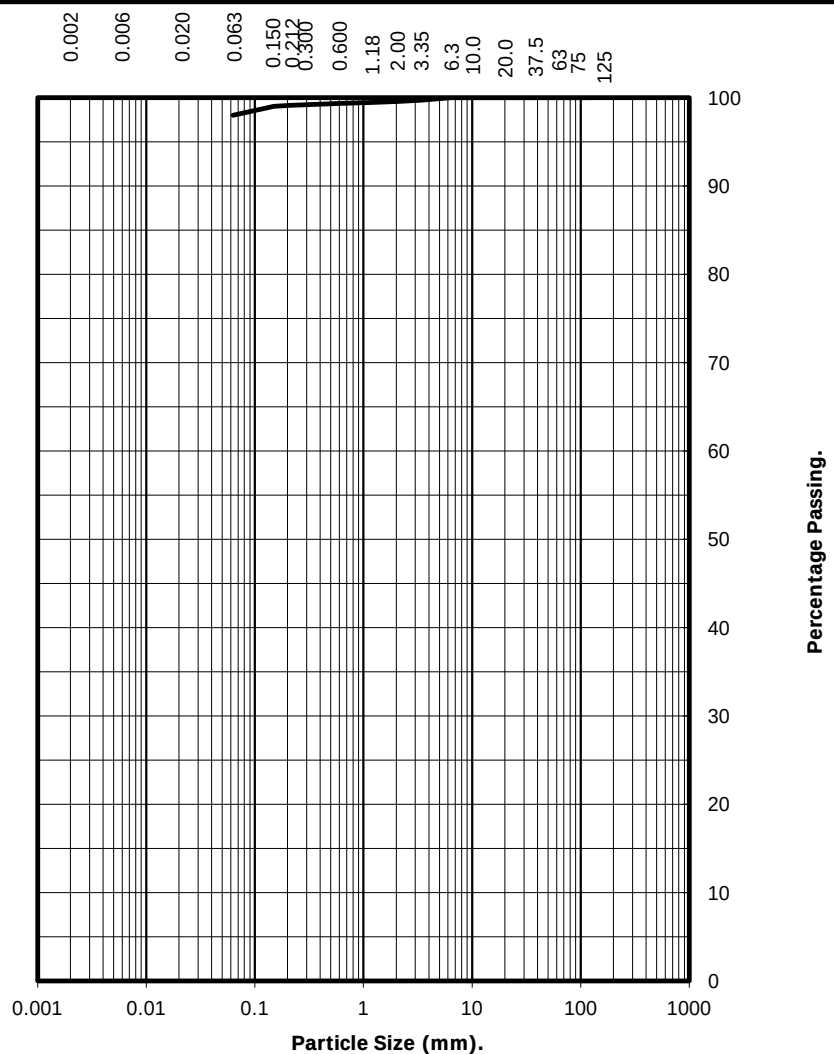
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Test Report: Particle Size Distribution Test**BS 1377 Part 2:1990.****Wet Sieve, Clause 9.2****Client ref:****GEG-14-356****Location:****Cuffley****Contract Number:****24568-220914****Hole Number:****TP09****Sample Number:****Depth from (m):****1.10****Depth to (m):****Description:****Brown sandy silty CLAY****Sample Type:****B**

BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2.00	100
1.18	99
0.60	99
0.300	99
0.212	99
0.150	99
0.063	98

Particle Diameter	Percentage Passing
0.02	#
0.006	#
0.002	#



	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	98	2	0	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:

Ben Sharp (Contracts Manager)

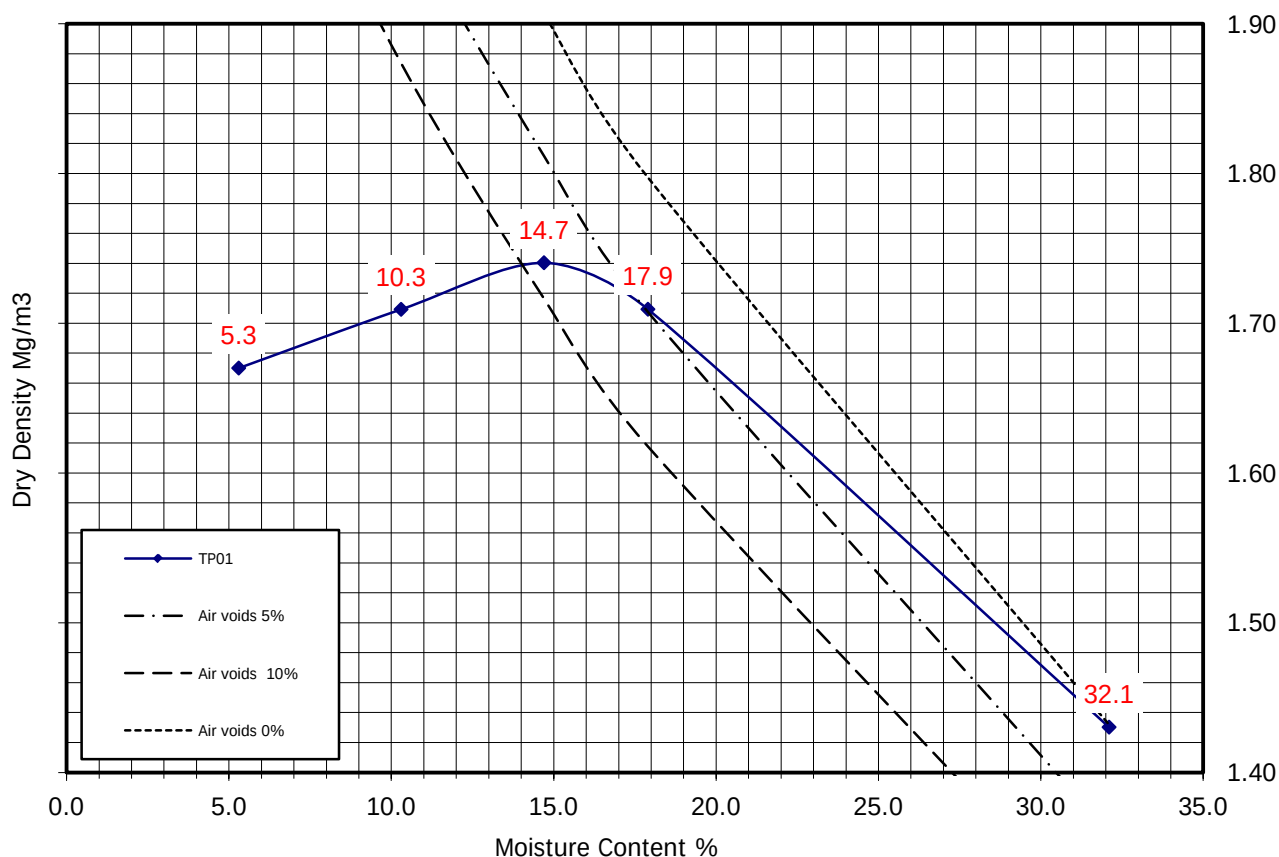
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29.9.14

Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP01
 Sample Number: N/A
 Depth (m) : 0.70 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	5.3	10.3	14.7	17.9	32.1
Bulk Density (Mg/m³):	1.76	1.89	2.00	2.02	1.89
Dry Density (Mg/m³):	1.67	1.71	1.74	1.71	1.43

Initial Moisture Content: **32.1** Method of Compaction: **4.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.74** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **14.7** Sample Preparation Clause : **3.2.4.1**

Remarks:



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Date Approved:

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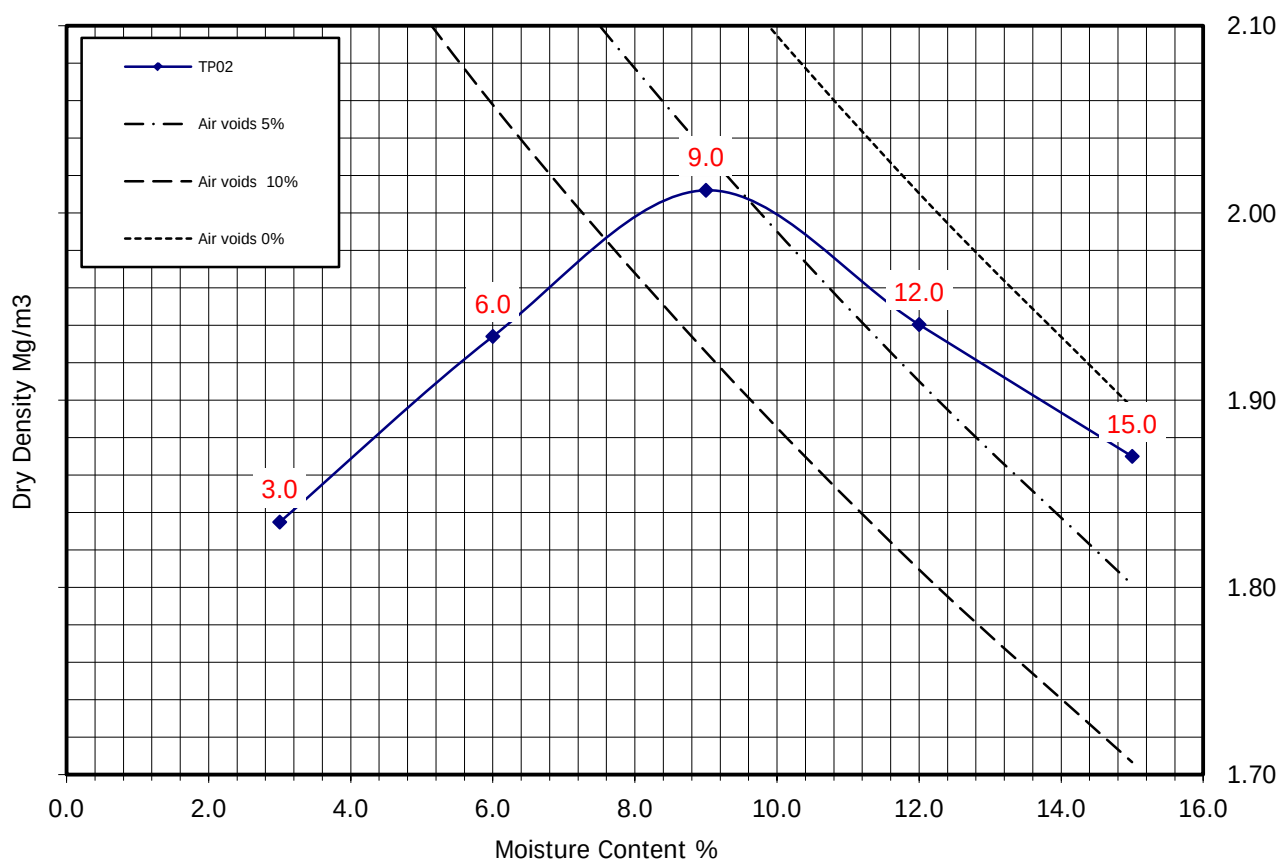
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
Location: Cuffley
Contract Number: 24568
Hole Number: TP02
Sample Number: N/A
Depth (m) : 0.50 to N/A
Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	3.0	6.0	9.0	12.0	15.0
Bulk Density (Mg/m³):	1.89	2.05	2.19	2.17	2.15
Dry Density (Mg/m³):	1.83	1.93	2.01	1.94	1.87

Initial Moisture Content:	12.0	Method of Compaction	4.5kg Rammer
Particle Density (Mg/m³):	2.65 Assumed	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (mg/m³):	2.01	Material Retained on 20.0 mm Test Sieve (%):	5
Optimum Moisture Content (%):	9.0	Sample Preparation Clause :	3.2.4.1

Remarks:



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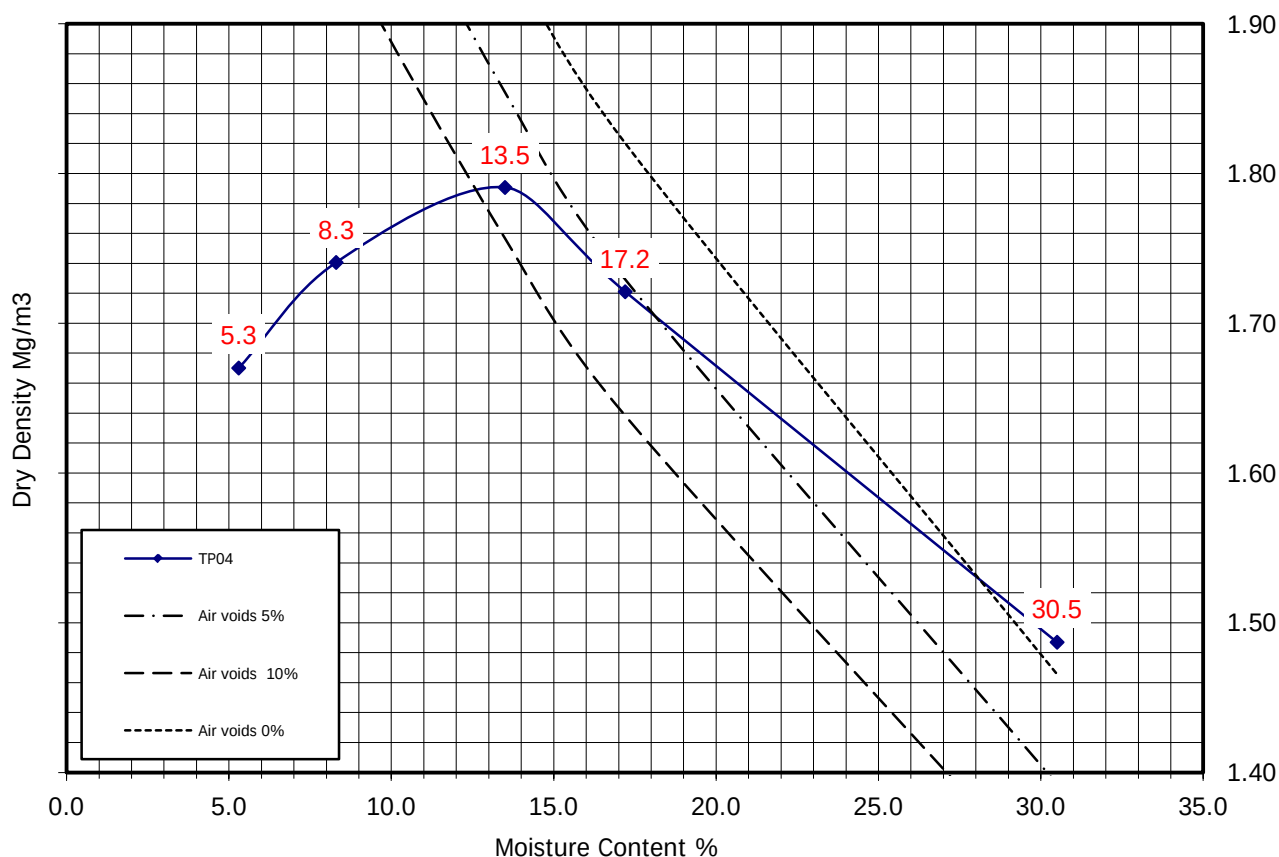
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP04
 Sample Number: N/A
 Depth (m) : 0.40 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	5.3	8.3	13.5	17.2	30.5
Bulk Density (Mg/m ³):	1.76	1.89	2.03	2.02	1.94
Dry Density (Mg/m ³):	1.67	1.74	1.79	1.72	1.49

Initial Moisture Content: **30.5** Method of Compaction: **4.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.79** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **13.5** Sample Preparation Clause : **3.2.4.1**

Remarks:



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Date Approved:

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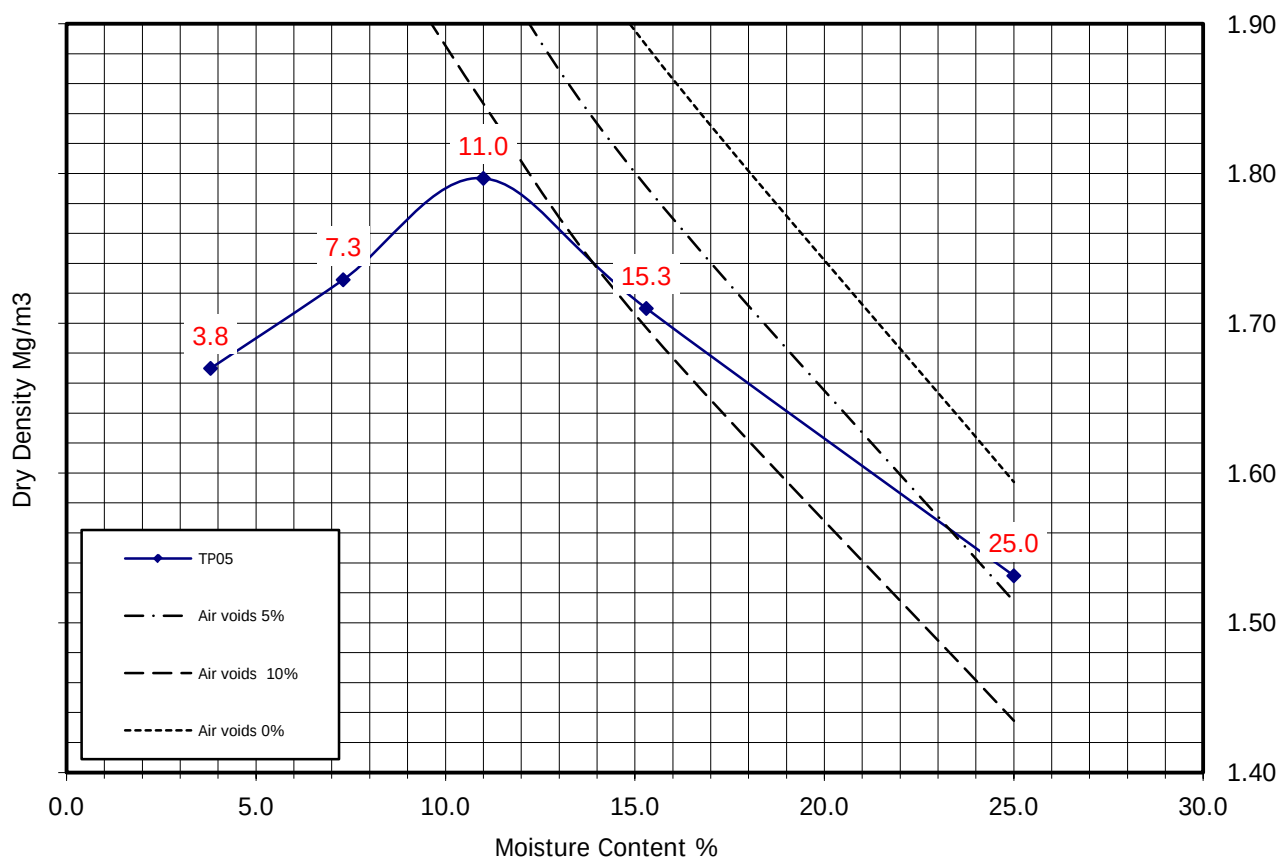
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP05
 Sample Number: N/A
 Depth (m) : 0.30 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	3.8	7.3	11.0	15.3	25.0
Bulk Density (Mg/m³):	1.73	1.86	1.99	1.97	1.91
Dry Density (Mg/m³):	1.67	1.73	1.80	1.71	1.53

Initial Moisture Content: **25.0** Method of Compaction: **4.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.80** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **11.0** Sample Preparation Clause : **3.2.4.1**

Remarks:



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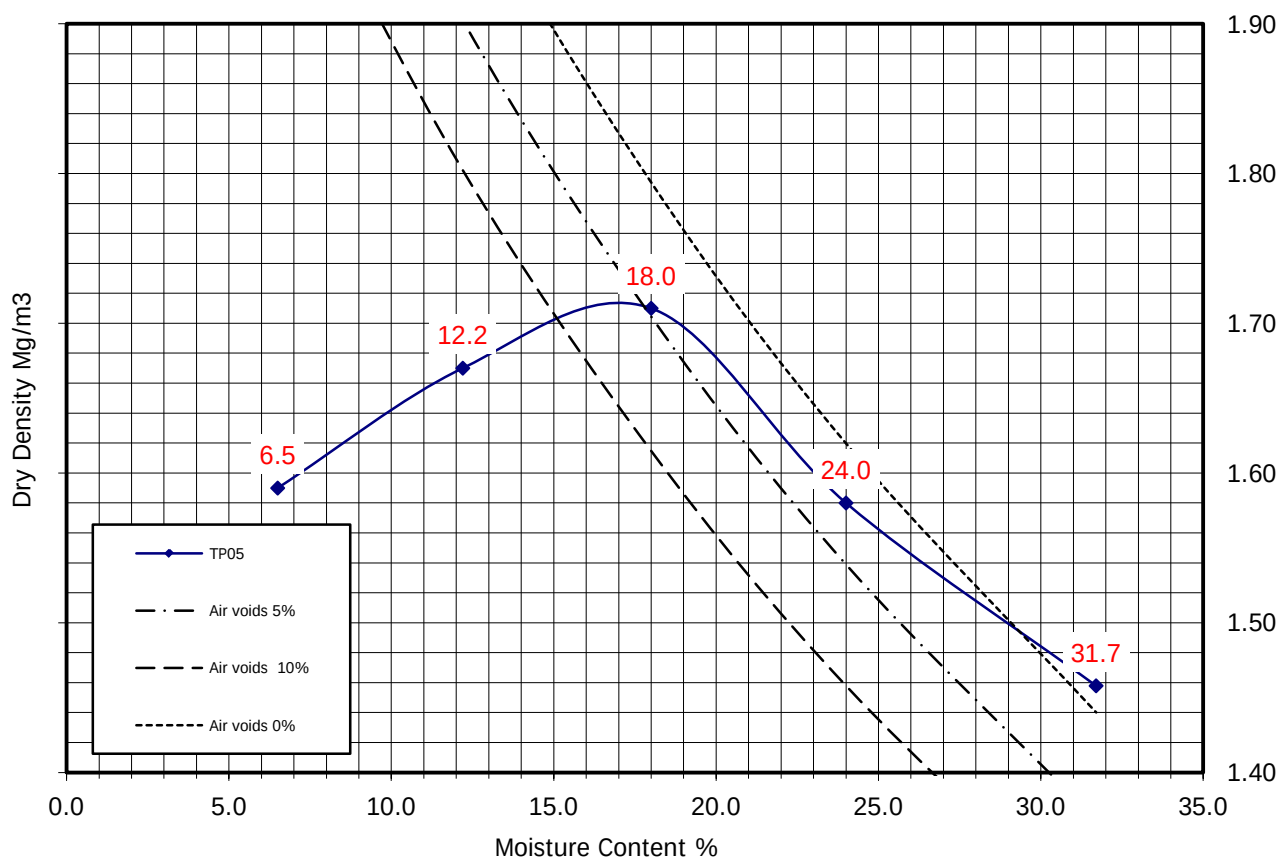
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP05
 Sample Number: N/A
 Depth (m) : 0.50 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	6.5	12.2	18.0	24.0	31.7
Bulk Density (Mg/m ³):	1.69	1.87	2.02	1.96	1.92
Dry Density (Mg/m ³):	1.59	1.67	1.71	1.58	1.46

Initial Moisture Content: **31.7** Method of Compaction: **2.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.71** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **18.0** Sample Preparation Clause : **3.2.4.1**

Remarks:



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Date Approved:

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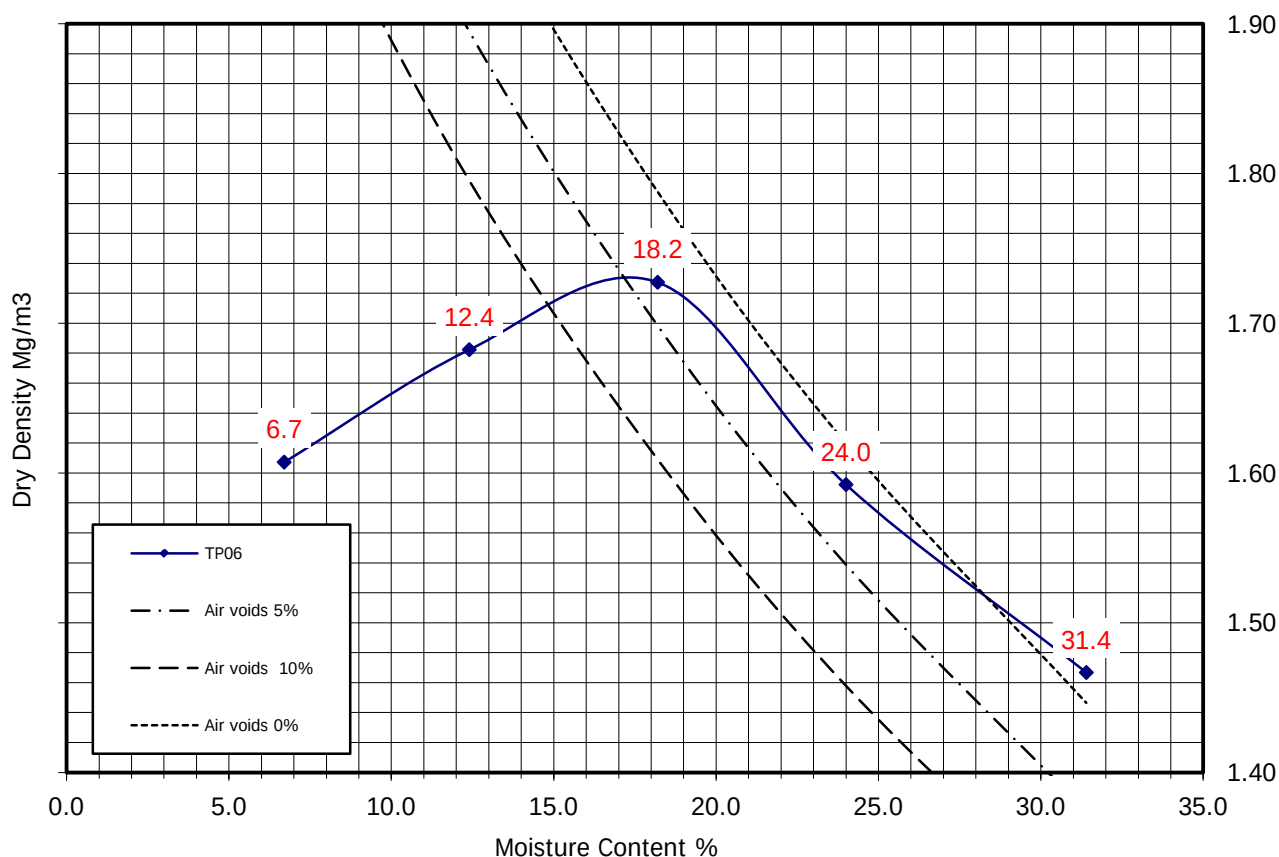
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP06
 Sample Number: N/A
 Depth (m) : 0.50 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	6.7	12.4	18.2	24.0	31.4
Bulk Density (Mg/m³):	1.71	1.89	2.04	1.97	1.93
Dry Density (Mg/m³):	1.61	1.68	1.73	1.59	1.47

Initial Moisture Content: **31.4** Method of Compaction: **2.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.73** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **18.2** Sample Preparation Clause : **3.2.4.1**

Remarks:



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Date Approved:

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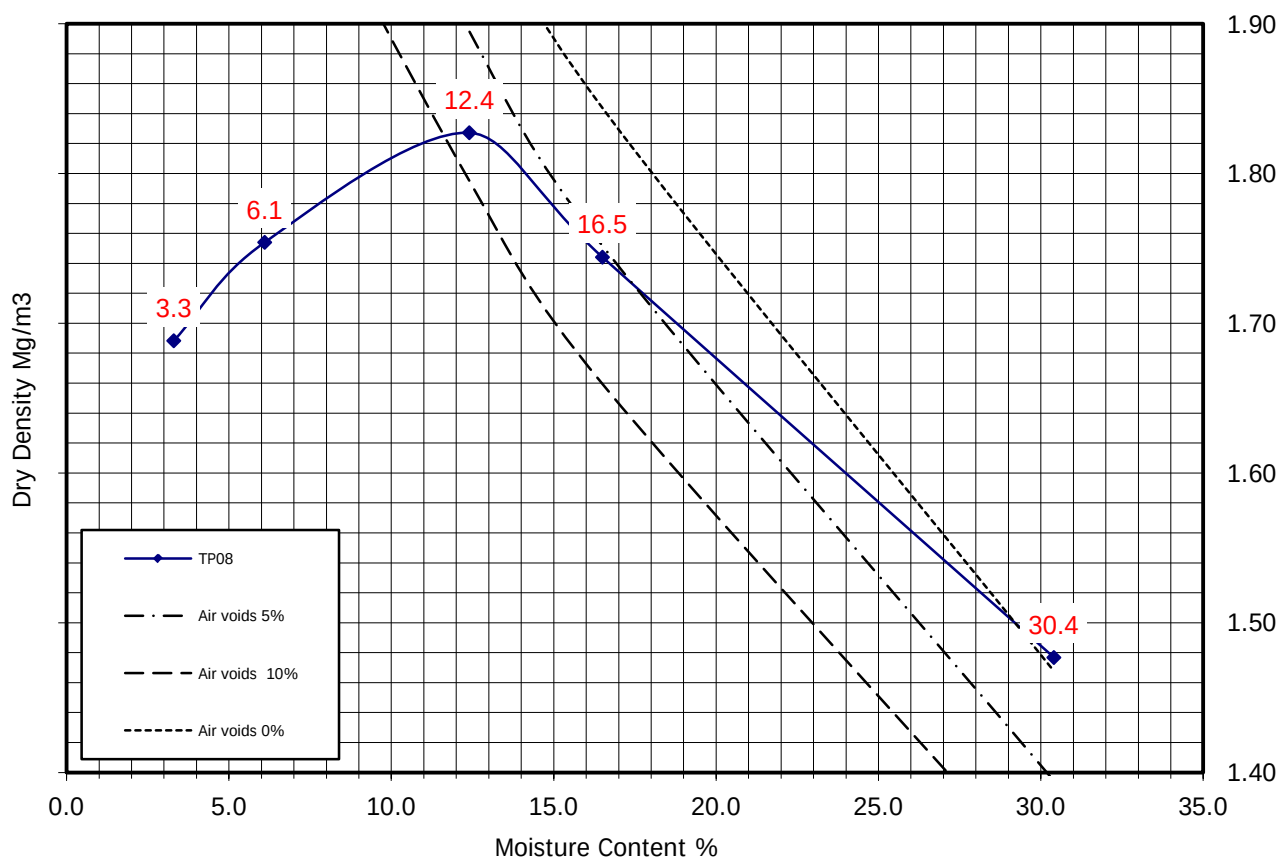
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Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP08
 Sample Number: N/A
 Depth (m) : 0.40 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	3.3	6.1	12.4	16.5	30.4
Bulk Density (Mg/m³):	1.74	1.86	2.05	2.03	1.93
Dry Density (Mg/m³):	1.69	1.75	1.83	1.74	1.48

Initial Moisture Content: **30.4** Method of Compaction: **4.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.83** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **12.4** Sample Preparation Clause : **3.2.4.1**

Remarks:



[Signature]

Checked By

Date Approved:

[Signature]

Approved By:

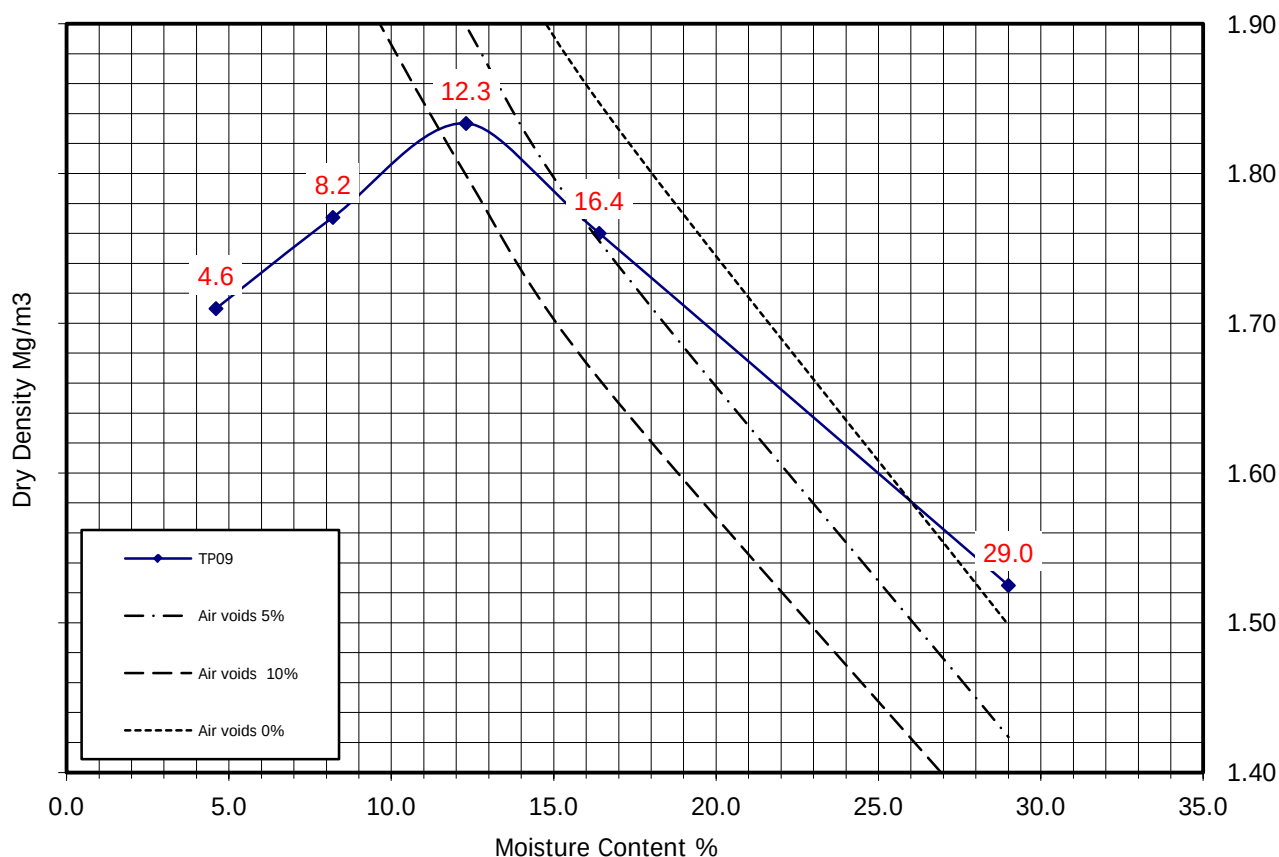
6.10.14



Dry Density/Moisture Content Relationship

BS 1377:Part 4:1990

Client ref: GEG-14-356
 Location: Cuffley
 Contract Number: 24568
 Hole Number: TP09
 Sample Number: N/A
 Depth (m) : 0.50 to N/A
 Sample Type: B



Compaction Point:	1	2	3	4	5
Moisture Content	4.6	8.2	12.3	16.4	29.0
Bulk Density (Mg/m³):	1.79	1.92	2.06	2.05	1.97
Dry Density (Mg/m³):	1.71	1.77	1.83	1.76	1.52

Initial Moisture Content: **29.0** Method of Compaction: **4.5kg Rammer**
 Particle Density (Mg/m³): **2.65 Assumed** Material Retained on 37.5 mm Test Sieve (%): **0**
 Maximum Dry Density (mg/m³): **1.83** Material Retained on 20.0 mm Test Sieve (%): **0**
 Optimum Moisture Content (%): **12.3** Sample Preparation Clause : **3.2.4.1**

Remarks:



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Date Approved:

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Approved By:

6.10.14





Laboratory Report



Contract Number: 24592

Client's Reference: **GEG-14-356 PO 1460**

Report Date: **11-10-2014**

Client **GEG Limited**
GEG House
17 Graham Road
Malvern
Worcestershire
WR14 2HR

Contract Title: **Cuffley**
For the attention of: **Matthew Perks**

Date Received: **24-09-2014**
Date Commenced: **24-09-2014**
Date Completed: **11-10-2014**

Test Description	Qty
One-dimensional Consolidation 75mm or 50mm diameter specimens (5 days) 1377 : 1990 Part 5 : 3 - * UKAS	8
As 4.01 each additional day 1377 : 1990 Part 5 : 3	8

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

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced in full, without the prior written approval of the laboratory.

Approved Signatories:

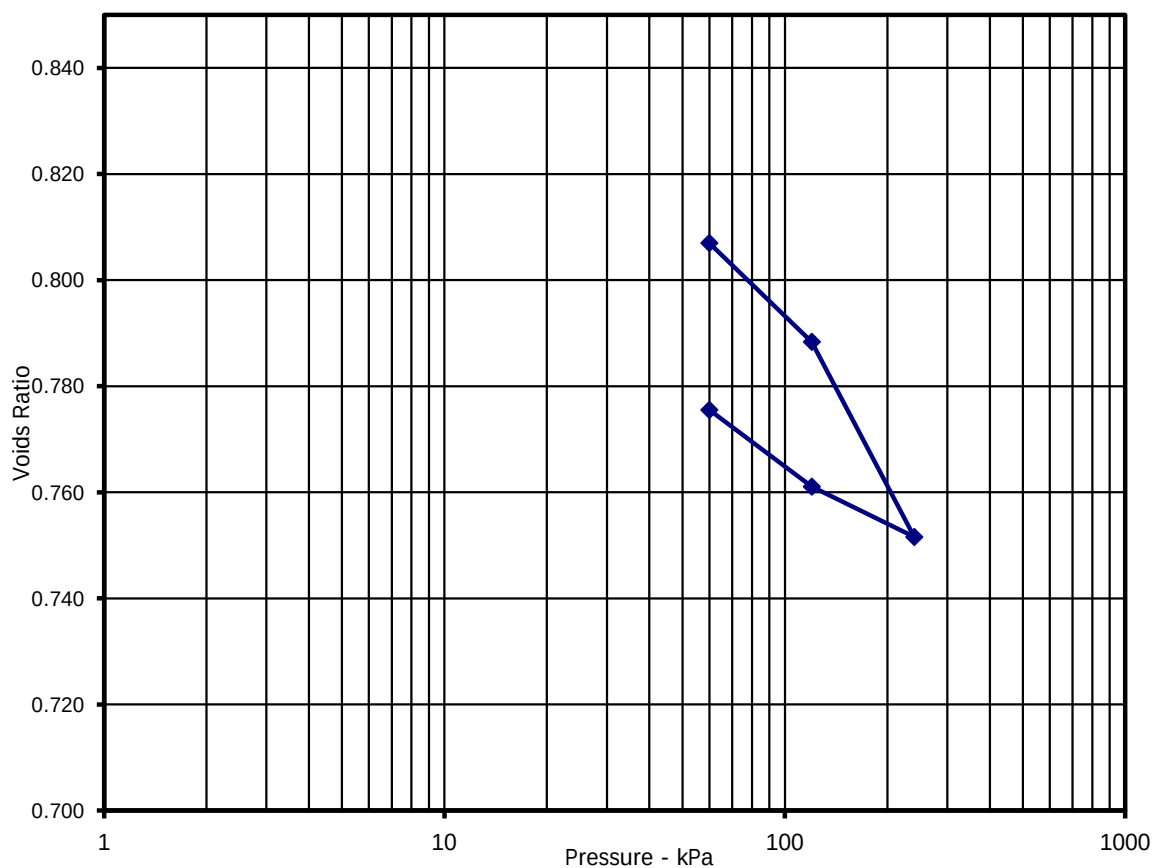
Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - D V Edwards (Managing Director)
Emma Williams (Office Manager) - Paul Evans (Quality/Technical Manager)

Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS01**
 Depth (m) : **1.50 - 1.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	32	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.94	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.47	30 - 60	0.14	16.08	20'C
Voids Ratio:	0.804	60 - 120	0.17	5.86	Location of specimen with sample
Degree of saturation:	105.6	120 - 240	0.17	5.05	top
Height (mm):	19.96	240 - 120	0.05	3.07	Remarks:
Diameter (mm)	50.06	120 - 60	0.14	1.03	
Particle Density (Mg/m3)	2.65				
Assumed					



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Date approved:

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Approved by

11/10/14

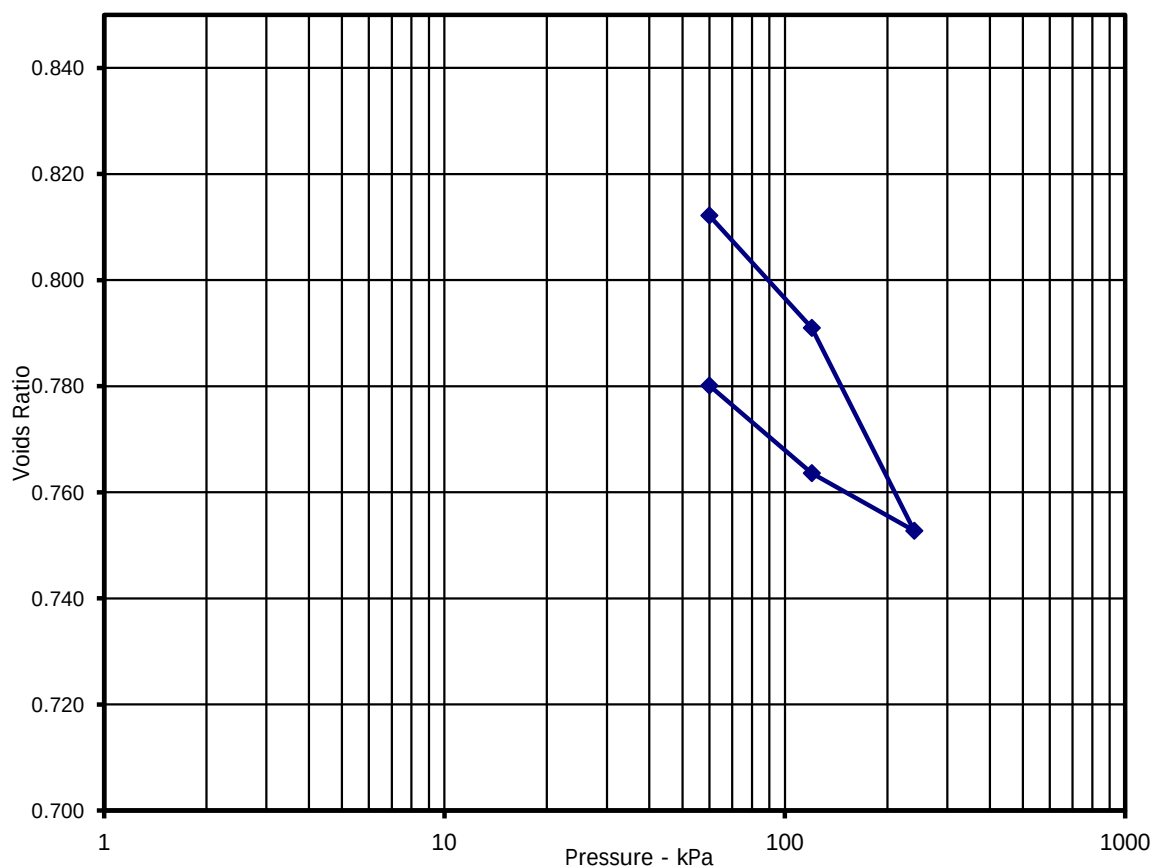


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS02**
 Depth (m) : **1.50 - 1.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	32	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.95	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.47	30 - 60	0.13	6.18	20'C
Voids Ratio:	0.799	60 - 120	0.19	4.42	Location of specimen with sample
Degree of saturation:	106.9	120 - 240	0.18	6.92	top
Height (mm):	20.04	240 - 120	0.05	5.49	Remarks:
Diameter (mm)	50.02	120 - 60	0.16	7.60	
Particle Density (Mg/m3)	2.65				
Assumed					



GSTL
 GEO Site & Testing Services Limited

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Date approved:

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Approved by

11/10/14

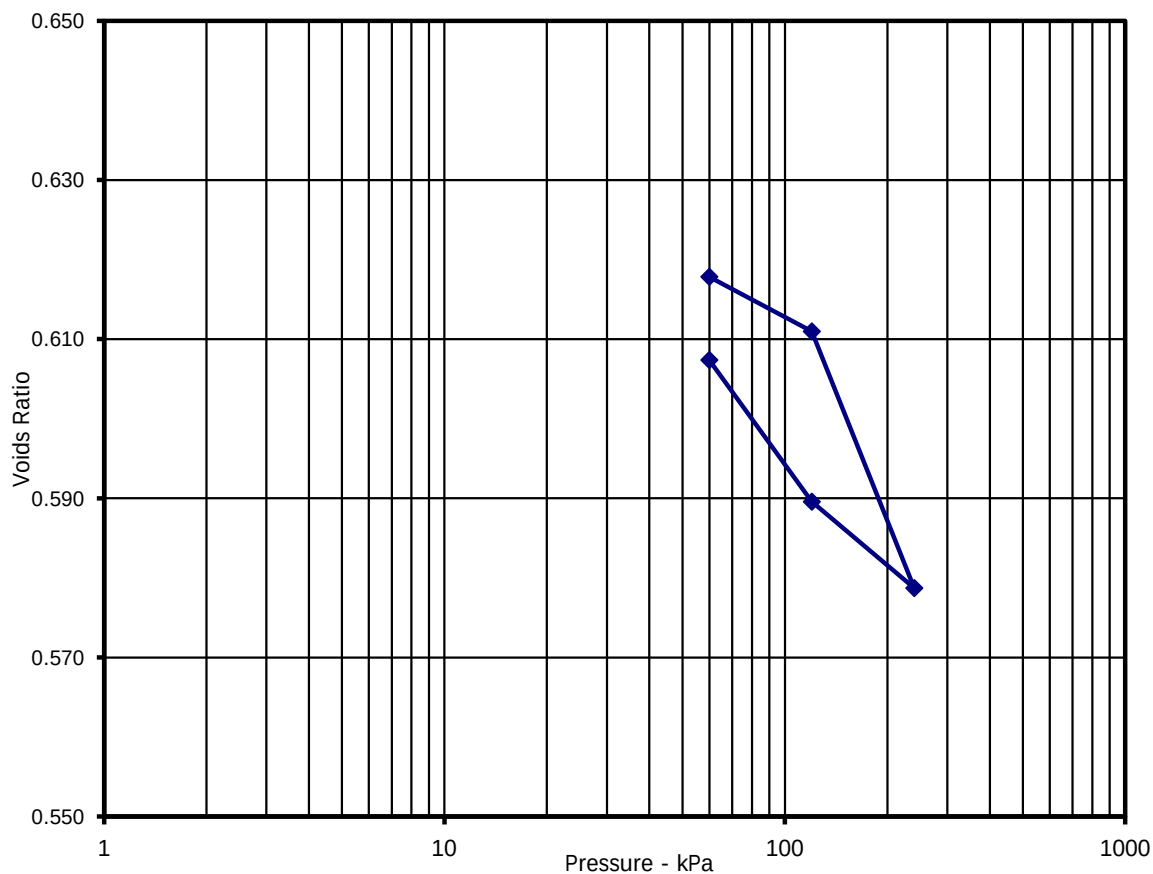


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS03**
 Depth (m) : **1.45 - 1.63**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	24	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	2.06	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.66	30 - 60	1.17	35.00	20'C
Voids Ratio:	0.598	60 - 120	0.07	0.33	Location of specimen with sample
Degree of saturation:	107.1	120 - 240	0.17	7.09	top
Height (mm):	20.02	240 - 120	0.06	12.24	Remarks:
Diameter (mm)	50.05	120 - 60	0.19	0.37	
Particle Density (Mg/m3)	2.65				
Assumed					



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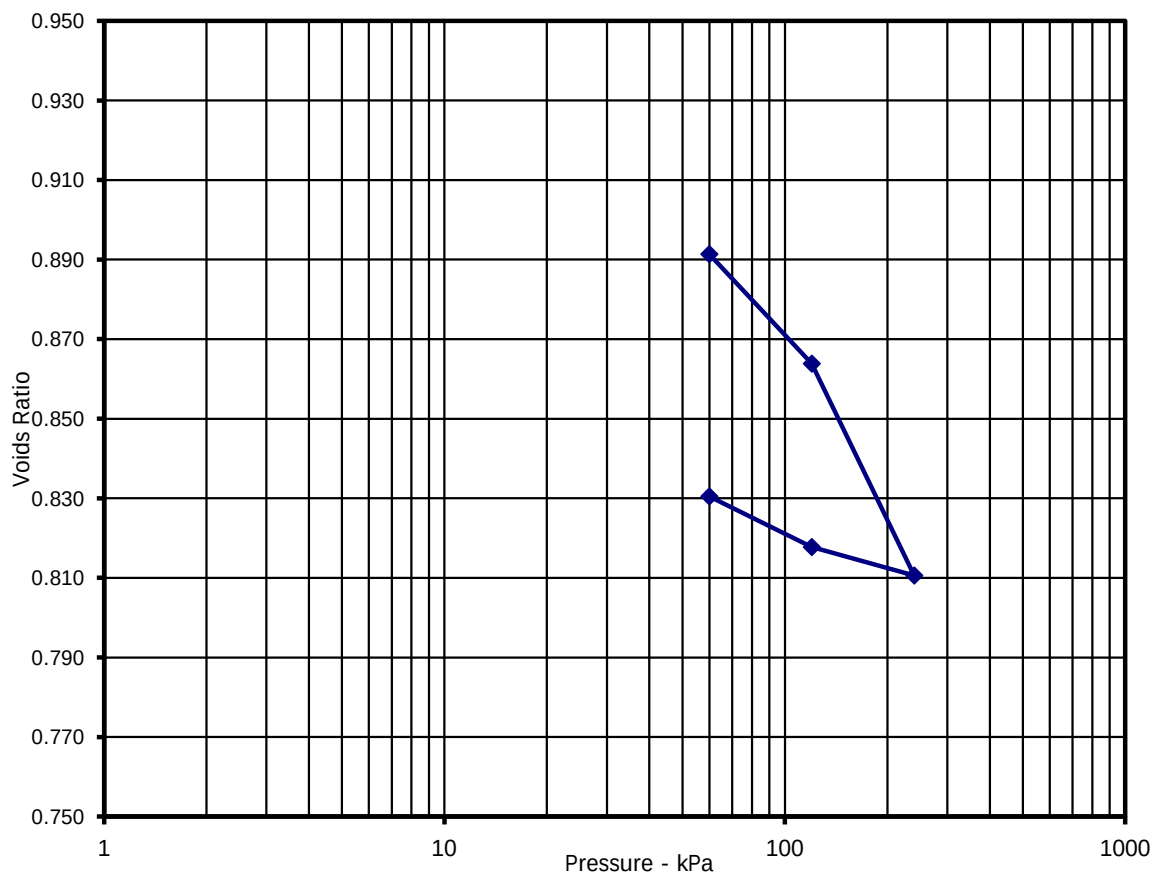


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS04**
 Depth (m) : **2.50 - 2.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	32	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.85	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.40	30 - 60	0.14	8.25	20'C
Voids Ratio:	0.888	60 - 120	0.24	4.60	Location of specimen with sample
Degree of saturation:	94.1	120 - 240	0.24	7.15	top
Height (mm):	20.03	240 - 120	0.03	3.05	Remarks:
Diameter (mm)	50	120 - 60	0.12	7.73	
Particle Density (Mg/m3)	2.65				
Assumed					



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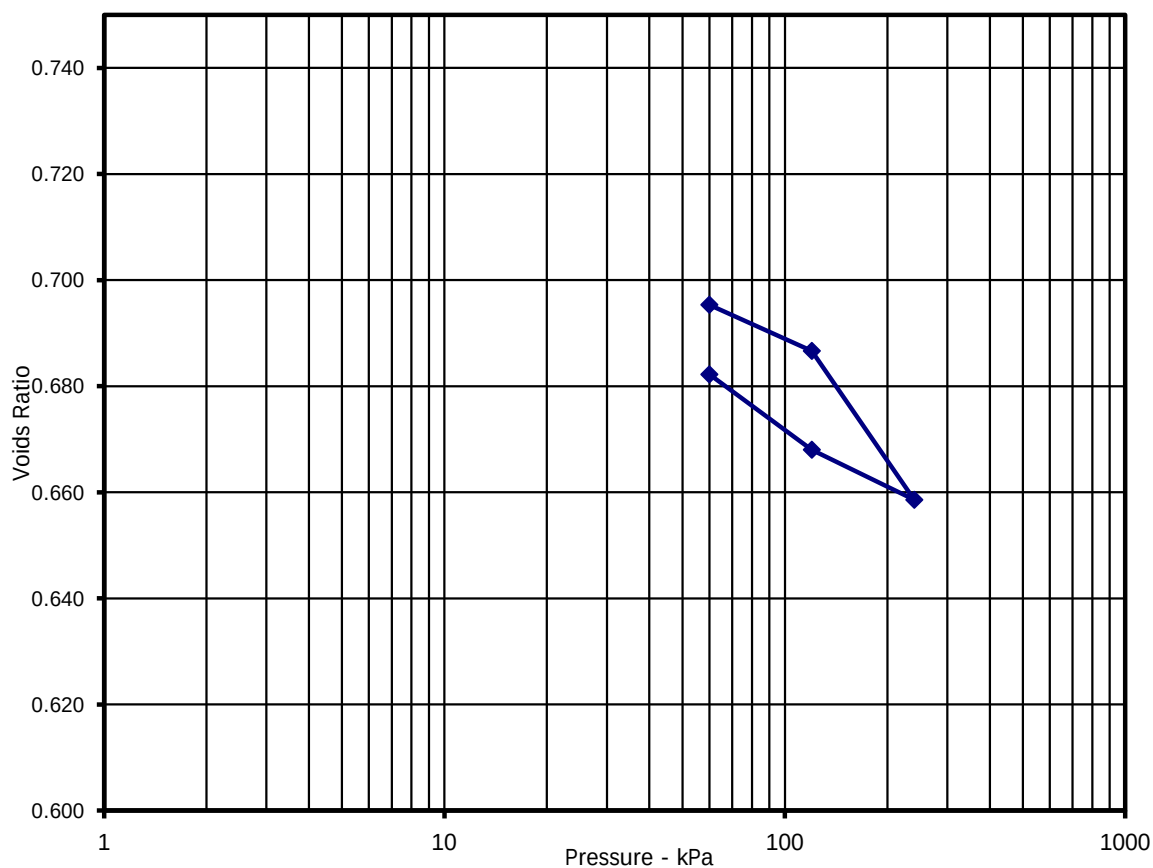


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS05**
 Depth (m) : **1.50 - 1.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	24	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	2.02	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.63	30 - 60	0.01	35.09	20'C
Void Ratio:	0.629	60 - 120	0.09	15.60	Location of specimen with sample
Degree of saturation:	102.9	120 - 240	0.14	26.34	top
Height (mm):	19.85	240 - 120	0.05	8.47	Remarks:
Diameter (mm)	75.04	120 - 60	0.14	12.40	
Particle Density (Mg/m3)	2.65				
Assumed					



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Date approved:

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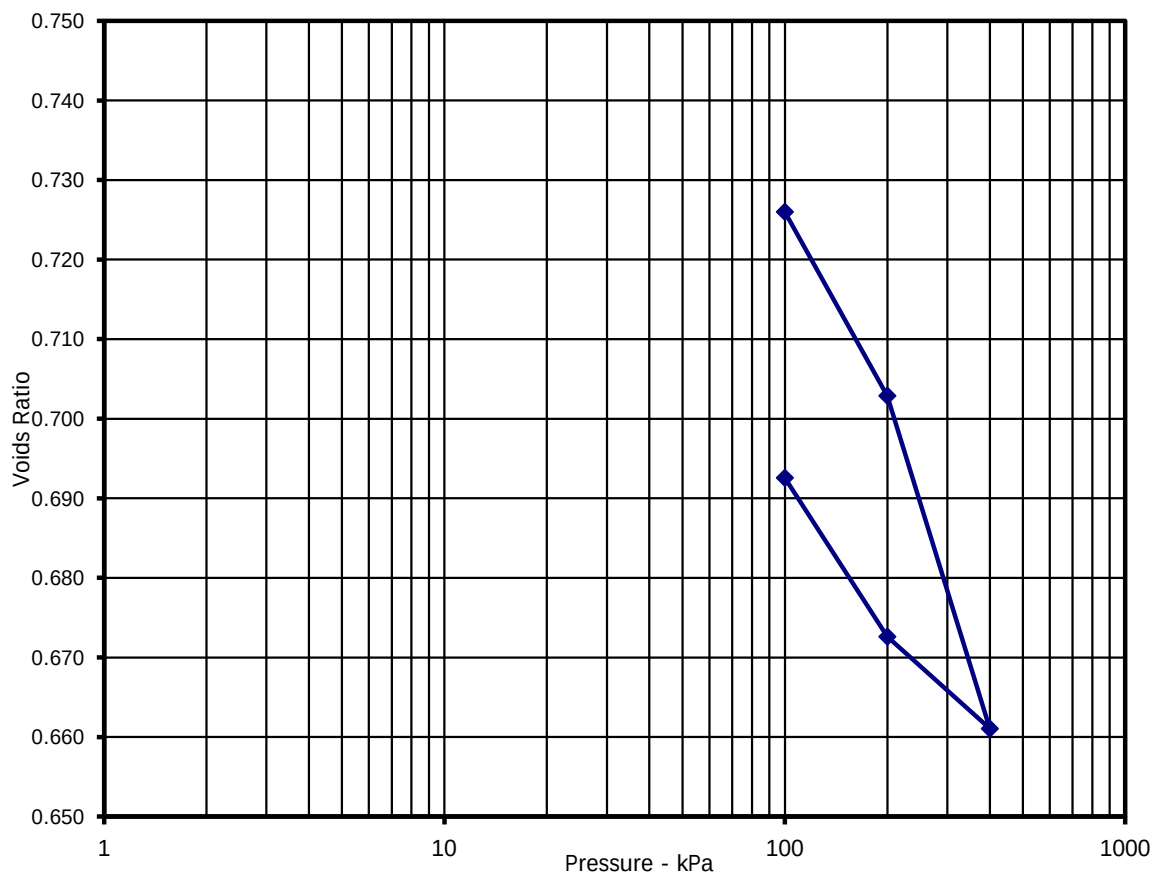


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS07**
 Depth (m) : **2.50 - 2.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	27	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	2.00	0 - 50	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.58	50 - 100	0.11	17.18	20'C
Voids Ratio:	0.674	100 - 200	0.13	8.67	Location of specimen with sample
Degree of saturation:	104.3	200 - 400	0.12	11.24	top
Height (mm):	20.13	400 - 200	0.03	24.11	Remarks:
Diameter (mm)	50.01	200 - 100	0.12	8.35	
Particle Density (Mg/m3)	2.65				
Assumed					



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Date approved:

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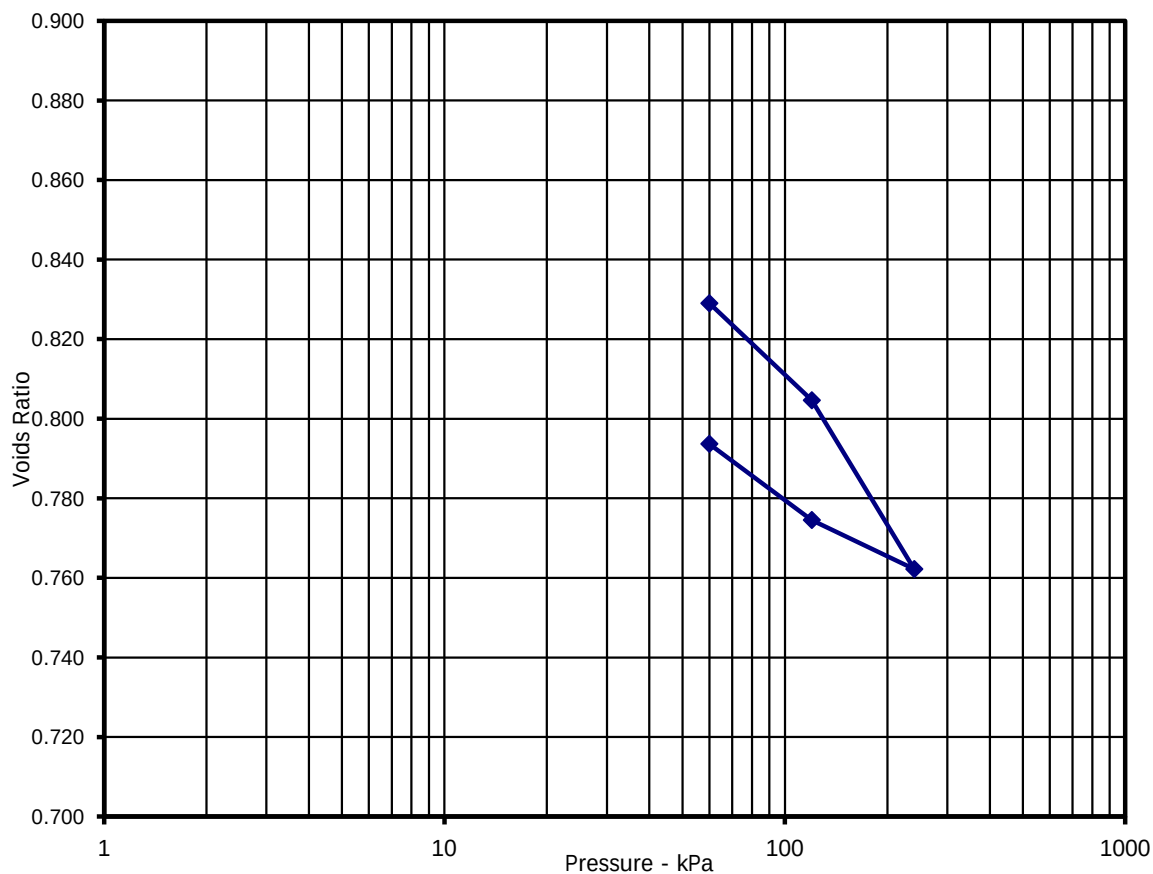


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS08**
 Depth (m) : **1.50 - 1.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	31	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.92	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.46	30 - 60	0.21	4.90	20'C
Voids Ratio:	0.812	60 - 120	0.22	7.95	Location of specimen with sample
Degree of saturation:	102.7	120 - 240	0.20	14.48	top
Height (mm):	19.69	240 - 120	0.06	3.75	Remarks:
Diameter (mm)	75.05	120 - 60	0.18	0.36	
Particle Density (Mg/m3)	2.65				
Assumed					



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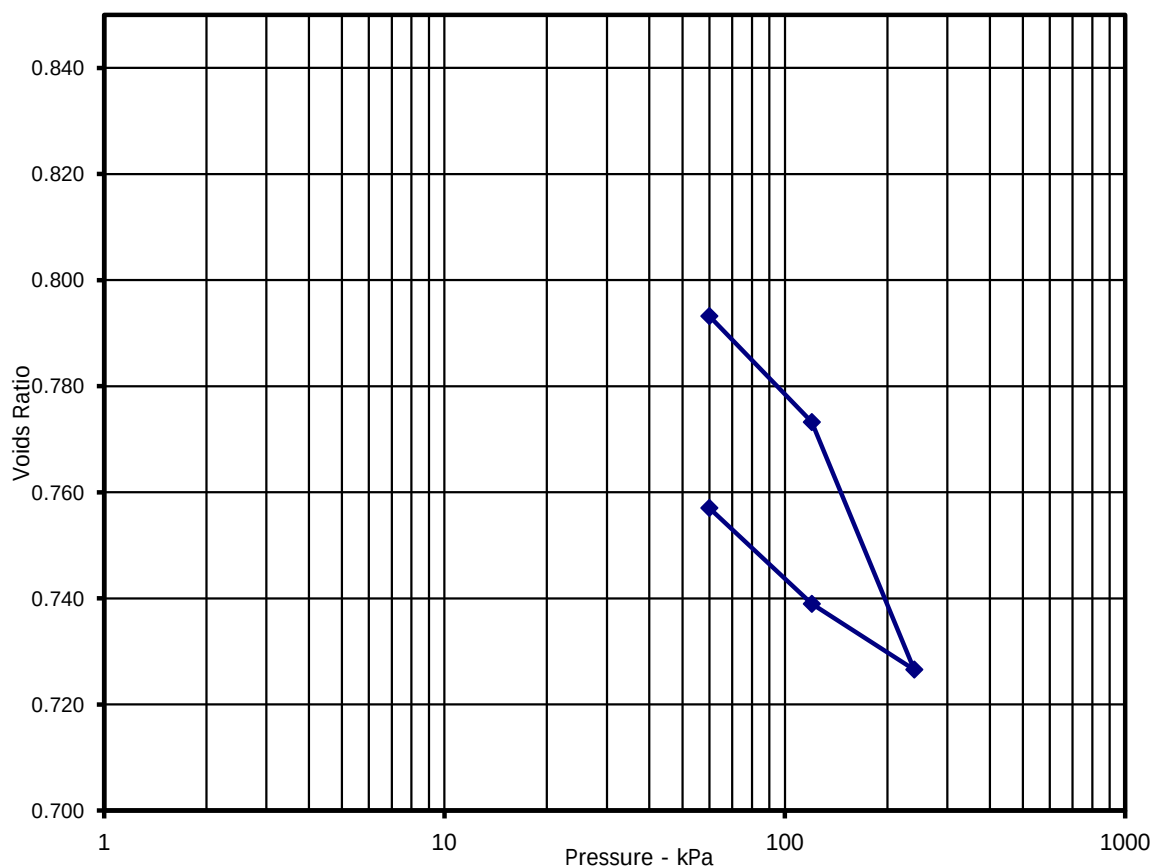


Test Report: ONE DIMENSIONAL CONSOLIDATION

BS1377: Part 5: 1990

Client ref: **GEG-14-356**
 Location: **Cuffley**
 Contract Number: **24592-240914**
 Hole/Sample Number: **WS09**
 Depth (m) : **1.50 - 1.70**
 Sample Type: **U100**

Initial Conditions		Pressure Range	Mv	Cv	Method of time fitting used
Moisture Content (%):	33	kPa	m2/MN	m2/yr	Cv Calculated using t90
Bulk Density (Mg/m3):	1.95	0 - 30	Swelling	Stage	Nominal Laboratory Temperature
Dry Density (Mg/m3):	1.47	30 - 60	0.00	6.57	20'C
Voids Ratio:	0.801	60 - 120	0.19	8.48	Location of specimen with sample
Degree of saturation:	108.0	120 - 240	0.22	3.52	top
Height (mm):	19.92	240 - 120	0.06	3.19	Remarks:
Diameter (mm)	50.02	120 - 60	0.17	3.25	
Particle Density (Mg/m3)	2.65				
Assumed					



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Date approved:

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Approved by

11/10/14

