

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name: Godre'r Graig Primary School
Site Location: Godre'r Graig

Drilling method

Equipment
Cut-down Rig

BH01

Start date: 28/10/2019
End date: 29/10/2019
Backfill date: 29/10/2019

Driller: Jacksons - DS
Logged by: EK
Date logged: 29/10/2019

Client: Neath Port Talbot CBC
Project No: 7234e.02

Ground Level: 157.00 mOD
Easting: 275044 m
Northing: 206992 m

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.00 - 0.50	B							Vegetation and topsoil over; greyish brown slightly clayey sandy GRAVEL with medium cobble content and abundant rootlets and vegetation. Gravel is fine to coarse, subangular to subrounded fresh grey sandstone (MADE GROUND - COARSE DISCARD)			(0.50)		
1.00 - 1.50	B D		S	21 (3,3/4,5,7,5)			1.00	Medium dense dark grey sandy GRAVEL with medium cobble content. Gravel fine to coarse, angular to subrounded fresh grey sandstone. Cobbles are angular to subangular predominantly fresh with occasional orange staining sandstone (MADE GROUND - COARSE DISCARD)			1		
2.00 - 2.50	B D		S	11 (3,3/4,3,1,3)			2.00				(2.50)		
3.00 - 3.50	B D		S	5 (1,1/1,1,1,2)			3.00	Soft greyish brown mottled orange sandy gravelly CLAY with low cobble content. Gravel is fine to coarse, angular to subrounded sandstone with fine coal gravels. Soils are damp. (MADE GROUND - COARSE DISCARD)			3.00	154.00	
4.00 - 4.50	B D		S	24 (1,4/6,6,6,6)			4.00	Stiff dark grey mottled orange/brown sandy silty gravelly CLAY. Gravel is angular sandstone with occasional orange weathering (Possible weathered PENNANT SANDSTONE FORMATION - Grade E)			4.00	153.00	
5.00 - 5.30	D D		S	50 (4,12/50 for 125mm)			4.00	Very stiff friable dark grey mottled orange gravelly CLAY (Probable weathered PENNANT SANDSTONE FORMATION - Grade D)			5.00 (0.30) 5.30	152.00 151.70	
End of Borehole at 5.300m													

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												5.00	5.30	01:00	4.00 5.30	250 150	250	4.00

General Remarks

- Co-ordinates and ground levels interpolated from topographical survey.
- Borehole refused at 5.3m depth on possible bedrock/obstruction.
- Groundwater not encountered.
- 70mm inclinometer casing installed to 5.3m depth with bentonite/cement surround.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name: Godre'r Graig Primary
School: Godre'r Graig
Site Location: Godre'r Graig

Drilling method

Equipment
Cut-down Rig

BH02

Start date: 30/10/2019
End date: 30/10/2019
Backfill date: 30/10/2019

Driller: Jacksons - DS
Logged by: EK
Date logged: 30/10/2019

Client: Neath Port Talbot CBC
Project No: 7234e.02

Ground Level: 157.90 mOD
Easting: 275054 m
Northing: 207001 m

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.00 - 0.50	B							Vegetation and topsoil over; brown slightly clayey sandy GRAVEL with medium cobble content with abundant rootlets and vegetation. Gravel is fine to coarse, subangular to subrounded fresh grey sandstone (MADE GROUND - COARSE DISCARD)			(1.00)		
1.00	B		S	7 (1,2/2,2,2,1)			1.00	Soft becoming firm greyish brown sandy gravelly CLAY with low cobble content. Gravel fine to coarse, angular to subrounded fresh grey sandstone. Occasional pockets of saturated clay noted throughout. (MADE GROUND - COARSE DISCARD)			1.00	156.90	
1.00 - 2.00	D												
2.00	B		S	15 (2,2/5,4,4,2)			2.00				(2.10)		
2.00 - 2.50	D												
3.00	D		S	50 (25 for 75mm/50 for 0mm)			3.00				3		
3.10	D		S	50 (25 for 0mm/50 for 0mm)			3.00	End of Borehole at 3.100m			3.10	154.80	
											4		
											5		
											6		
											7		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												3.10	3.10	01:00	3.00	250	250	3.00

General Remarks

- Co-ordinates and ground levels interpolated from topographical survey.
- Borehole refused at 3.1m depth on possible bedrock/obstruction.
- Groundwater not encountered.
- 19mm groundwater monitoring well installed with a response zone between 2.0 and 3.0m depth.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name: Godre'r Graig Primary School
Site Location: Godre'r Graig

Drilling method

Equipment
Cut-down Rig

BH03

Ground Level: 157.60 mOD
Easting: 275051 m
Northing: 206998 m

Start date: 31/10/2019
End date: 31/10/2019
Backfill date: 31/10/2019

Driller: Jacksons - DS
Logged by: EK
Date logged: 31/10/2019

Client: Neath Port Talbot CBC
Project No: 7234e.02

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.00 - 0.50	B							Vegetation and topsoil over; greyish brown slightly clayey sandy GRAVEL with medium cobble content with abundant rootlets and vegetation. Gravel is fine to coarse, subangular to subrounded fresh grey sandstone (MADE GROUND - COARSE DISCARD)			(1.00)		
1.00	D		S	8 (2,2/3,3,1,1)			1.00	Firm brownish grey sandy gravelly CLAY with low cobble content. Gravel fine to coarse, angular to subrounded fresh grey sandstone. Occasional pockets of saturated clay noted throughout. (MADE GROUND - COARSE DISCARD)			1.00	156.60	
2.00 - 2.00 - 3.00	B D		S	8 (2,2/1,2,2,3)			2.00				2	(2.60)	
3.00 - 3.00 - 3.60	B D		S	50 (1,1/50 for 70mm)			3.00				3		
3.60 - 3.80	D		S	50 (25 for 135mm/50 for 35mm)			3.80	Very stiff dark grey mottled orange/brown slightly sandy silty slightly gravelly CLAY.			3.60	154.00	
4.00 - 4.20	B D		S	50 (25 for 95mm/50 for 85mm)			4.00	Gravel is angular sandstone with rare orange weathering (MADE GROUND - SPOIL TIP)			(0.60)	4	
							4.00	End of Borehole at 4.200m			4.20	153.40	
											5		
											6		
											7		

Progress & Standing Water Levels					Water Strikes							Chiselling			Hole Diameter		Casing Diameter	
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												4.00	4.20	02:00	4.00	250	250	4.00

General Remarks

- Co-ordinates and ground levels interpolated from topographical survey.
- Borehole refused at 4.2m depth on possible bedrock/obstruction.
- Groundwater not encountered.
- 19mm groundwater monitoring well installed with a response zone between 3.2 and 4.2m depth.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name: Godre'r Graig Primary
School:
Site Location: Godre'r Graig

Drilling method

Equipment
 Cut-down Rig

BH04

Start date: 04/11/2019
End date: 04/11/2019
Backfill date: 05/11/2019

Driller: Jacksons - DS
Logged by: EK
Date logged: 04/11/2019

Client: Neath Port Talbot CBC
Project No: 7234e.02

Ground Level: 143.80 mOD
Easting: 275062 m
Northing: 206971 m

Depth	Sample		Test Details		TCR (%)	Water Depth	Casing Depth	Strata Details		Water Strikes/Standing	Depth		Backfill/Installations
	Type	Class	Type	Result				Description	Legend		Depth (Thickness)	mOD	
0.00 - 0.50	B							Vegetation and topsoil over; greyish brown clayey sandy GRAVEL with medium cobble content and abundant rootlets and vegetation. Gravel is fine to coarse, subangular to subrounded fresh grey sandstone and fine coal fragments (MADE GROUND - COARSE DISCARD)			(1.00)		
1.00 - 1.00	B		S	14 (1,3/4,5,3,2)			1.00	Medium dense brownish grey sandy GRAVEL with medium cobble content and occasional pockets of saturated clay. Gravel is fine to coarse, angular to subrounded fresh grey sandstone and fine coal fragments (MADE GROUND - COARSE DISCARD)			1.00	142.80	
1.00 - 2.00	D												
2.00 - 2.00	B		S	12 (2,2/4,4,3,1)			2.00				(2.00)		
2.00 - 2.50	D												
2.50 - 3.00	B		S	8 (1,2/2,2,2,2)			3.00	Soft brownish grey sandy gravelly CLAY with medium cobble content. Gravel is fine to coarse, subangular to subrounded fresh grey sandstone. Cobbles are angular to subrounded predominantly fresh with rare orange staining (MADE GROUND - COARSE DISCARD)			(1.00)	140.80	
3.00 - 3.00	D												
3.00 - 3.50	B		S	11 (1,2/3,3,2,3)			3.00	Firm and locally soft pale brown mottled orange and black sandy gravelly CLAY. Gravel is fine to coarse, angular to subrounded sandstone with fine coal fragments. Material is wet throughout (MADE GROUND - COARSE DISCARD)			(1.00)	139.80	
3.50 - 4.00	D												
4.00 - 4.50	B		S	28 (5,4/5,12,7,4)			3.00	Medium dense brownish grey sandy GRAVEL with low cobble content and occasional pockets of clay. Gravel is fine to coarse predominantly angular to subangular with rare subrounded sandstone (MADE GROUND - COARSE DISCARD)			(1.00)	138.80	
4.50 - 5.00	D												
5.00 - 5.00	B		S	50 (5,5/50 for 225mm)			3.00	Very stiff dark grey mottled orange/brown sandy silty gravelly CLAY. Gravel is angular sandstone with rare subrounded sandstone and occasional orange weathering (Possible PENNANT SANDSTONE FORMATION - Grade D)			(1.00)	137.80	
5.00 - 5.50	D												
5.50 - 6.00	B		S	50 (5,8/50 for 180mm)			3.00	Very stiff friable greyish gravelly sandy CLAY. Gravel is angular weak to medium strong weathered sandstone with occasional grey fresh sandstone. (Probable PENNANT SANDSTONE FORMATION - Grade D)			(0.20)	136.80	
6.00 - 6.00	D												
6.00 - 6.50	B		S				3.00						
6.50 - 7.00	D												
7.00 - 7.00	B		S				3.00						
7.00 - 7.20	D												
7.20 - 7.20	B		S				3.00						
7.20 - 7.20	D												

Progress & Standing Water Levels					Water Strikes					Chiselling			Hole Diameter		Casing Diameter			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Depth Top	Depth Base	Duration	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
												7.20	7.20	01:00	3.00	250	250	3.00
															7.20	150		

General Remarks

- Co-ordinates and ground levels interpolated from topographical survey.
- Rig winched to borehole position.
- Groundwater not encountered.
- Borehole refused at 5.3m depth on competent bedrock.
- Vibrating wire piezometer and 70mm inclinometer casing installed to 7.2m depth with bentonite/cement surround.

Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

Project Name:

Godre'r Graig Primary School

Drilling method

Rotary cored

Site Location:

Godre'r Graig

Equipment

Beretta T44

Client:

Neath Port Talbot CBC

Ground Level: 157.50 mOD

Easting: 275036 m

Project No:

7234e.02

Northing: 206985 m

BH05

Start date: 25/11/2019

Driller: Apex - CY

End date: 27/11/2019

Logged by: EK

Backfill date: 27/11/2019

Date logged: 28/11/2019

Core Details and SPT Data					Strata Details			Water	Depth	Backfill/Installations
Depth (Length)	TCR (%)	SCR (%)	RQD (%)	FI	SPT-N	Depth	Description	Legend	Strikes/Standing	Depth (Thickness) mOD
0.00 - 1.10 (1.10)	82				10 (3,3/3,3,2,2)	0.5	Medium dense dark grey mottled brown slightly sandy clayey GRAVEL with medium cobble content. Gravel is fine to coarse subangular to angular dark grey sandstone (fresh and with occasional orange and purple staining). Occasional sandstone cobbles. (MADE GROUND - COARSE DISCARD).			
1.10 - 2.60 (1.50)	60				7 (1,1/2,2,1,2)	1.5	at 0.5 to 0.65m and 1.45 to 1.75m depth: bands of clay rich material noted.			(4.30)
2.60 - 4.10 (1.50)	77				13 (5,7/4,3,2,4)	2.5	at 2.6m depth: becoming loose.			
4.10 - 5.00 (0.90)	56					4.0	at 4.1m depth: becoming medium dense.			4.30 153.20
5.00 - 5.60 (0.60)	67					4.5	Firm brown and mottled dark grey silty gravelly CLAY. Gravel is fine to medium subrounded to angular sandstone and siltstone with fine coal fragments (MADE GROUND - COARSE DISCARD)			(0.95)
5.60 - 7.00 (1.40)	100	24	0	>20	50 (8,15/50 for 90mm)	5.0	between 4.3 to 4.45m depth: band of thinly laminated clay			5.25 152.25
				20		5.5	between 4.6 to 5.0m depth: poor recovery - presumed sandstone cobble			(0.35)
				14		6.0	Weak thinly laminated friable dark grey mottled orange and black MUDSTONE (PENNANT SANDSTONE FORMATION - Grade C)			5.60 151.90
				NI		6.5	Medium strong and strong thinly bedded dark grey SILTSTONE with occasional fossilised plant debris. Bedding fractures are generally horizontal and sub-horizontal (<5°), rough stepped and undulating with orange/brown iron oxide staining (PENNANT SANDSTONE FORMATION - Grade B)			(2.10)
				NR		7.0	at 6.7m depth: 50mm band of thinly laminated siltstone.			
7.00 - 8.50 (1.50)	80	49	76	8		7.5				7.70 149.80
				NI		8.0	Strong thinly-medium bedded fresh grey micaceous fine grained SANDSTONE with rare fossilised plant debris. Bedding fractures are generally horizontal to sub-horizontal (<5°), smooth, planar and undulating with rare orange iron oxide staining (PENNANT SANDSTONE FORMATION - Grade A)			(2.70)
8.50 - 9.80 (1.30)	85	84	75	5		8.5				
				13		9.0				
						9.5				

Progress & Standing Water Levels					Water Strikes					Hole Diameter		Casing Diameter			
Date	Time	Hole Depth	Casing Depth	Water Depth	Date	Time	Strike Depth	Casing Depth	Elapsed Minutes	Depth to Water	Depth Sealed	Hole Depth	Hole Diameter	Casing Diameter	Casing Depth
26-11-2019	12:00	5.60	5.60	5.3	25/11/2019	12:00	5.30		0.00	0.00		5.30	127	127	5.30
27-11-2020	12:00	11.10	5.60	Dry								11.10	75		

General Remarks

- Co-ordinates and ground levels interpolated from topographical survey.
- Vibrating wire piezometer and 70mm inclinometer casing installed to 11.1m depth with bentonite/cement surround.
- Groundwater encountered at 5.3m depth. Groundwater standing at 5.3m the following morning. Borehole dry on morning of installation.
- Borehole terminated at 11.1m depth.

