

# Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

**Project Name:**

Clive Road

**Site Location:**

Cardiff

**Client:**

Project No:  
8711

**Drilling method**

CP

**Equipment**

**Ground Level:** 11.00 mOD

**Easting:** 315995 m

**Northing:** 176715 m

# WS01

**Start date:** 13/12/2023

**Driller:** DM, Lewis

**End date:** 13/12/2023

**Logged by:** SW

**Backfill date:** 13/12/2023

**Date logged:** 13/12/2023

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	
0.25	ES	SOIL						Firm to stiff, dark brown, slightly gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium and consists of brick fragments. Black speckly spots seen throughout. Rootlets present at surface boundary. (MADE GROUND)			(0.30)		
0.30 - 0.40	D	SOIL									0.30	10.70	
0.50 - 0.59	D	SOIL						Soft to firm, brown, gravelly, slightly sandy CLAY. Sand is fine to coarse.			(0.25)		
0.60 - 1.00	B	SOIL						Gravel is dark grey, medium to coarse and angular. (GLACIOFLUVIAL SHEET DEPOSITS)			0.55	10.45	
1.00 - 2.00	B	SOIL	SPT	38 (6,6/9,7,10,12)			1.45	Very stiff, light grey / brown, fine to coarse, gravelly SAND. Gravel is light / dark grey, fine to medium and angular. (GLACIOFLUVIAL SHEET DEPOSITS)			1		
2.00 - 3.00	B	SOIL	SPT	28 (4,6/8,5,8,7)			2.45	1.9 to 3m: Hole collapse.			(2.45)		
			SPT	45 (9,14/12,11,10,12)			3.45	End of Borehole at 3.000m			3.00	8.00	
			SPT	50 (11,15/50 for 220mm)			3.95						

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

**General Remarks**

- Co-ordinates and ground levels of investigation points obtained by a Handheld GPS.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- Groundwater not encountered.
- 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 0.5 and 1.9m.

# Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

**Project Name:**

Clive Road

**Site Location:**

Cardiff

**Client:**

Project No:

8711

**Drilling method**

CP

**Equipment**

**Ground Level:** 11.00 mOD

**Easting:** 315997 m

**Northing:** 176710 m

# WS02

**Start date:** 13/12/2023

**Driller:** DM, Lewis

**End date:** 13/12/2023

**Logged by:** SW

**Backfill date:** 13/12/2023

**Date logged:** 13/12/2023

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	
0.20	ES	SOIL						Firm, dark brown, slightly gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is fine to medium, consisting of brick fragments. Black spots present throughout. Rootlets present at surface boundary. (MADE GROUND)			(0.22)	10.78	
0.29 - 0.30	D	SOIL						Stiff, dark brown CLAY. (Possible GLACIOFLUVIAL SHEET DEPOSITS)			0.22	10.70	
0.30 - 0.60	D	SOIL										(0.08)	0.30
0.70 - 0.80	D	SOIL						Very stiff, dark brown, gravelly, sandy CLAY. Sand is fine to coarse. Gravel is grey, fine to coarse and angular. Pockets of coarse sand throughout. (GLACIOFLUVIAL SHEET DEPOSITS)			(0.70)		
1.00 - 2.00	B	SOIL	SPT	37 (9,14/10,8,9,10)			1.45	Very stiff, grey / brown, fine to coarse, slightly clayey, gravelly SAND. Gravel is grey, fine to medium and sub-angular. (GLACIOFLUVIAL SHEET DEPOSITS)			1.00	10.00	
2.00 - 3.00	B	SOIL	SPT	34 (10,10/9,7,9,9)			2.45				(2.00)		
			SPT	38 (7,7/8,9,10,11)			3.45	End of Borehole at 3.000m			3.00	8.00	
			SPT	48 (12,12/48 for 255mm)			3.95						

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

**General Remarks**

- Co-ordinates and ground levels of investigation points obtained by a Handheld GPS.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- Groundwater not encountered.
- Upon completion boreholes backfilled with arising/bentonite.

# Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

**Project Name:**

Clive Road

**Site Location:**

Cardiff

**Client:**

Project No:  
8711

**Drilling method**

CP

**Equipment**

**Ground Level:** 11.00 mOD

**Easting:** 316007 m

**Northing:** 176712 m

# WS03

**Start date:** 13/12/2023

**Driller:** DM, Lewis

**End date:** 13/12/2023

**Logged by:** SW

**Backfill date:** 13/12/2023

**Date logged:** 13/12/2023

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	
0.35	ES	SOIL						Firm to stiff, brown, gravelly, sandy CLAY. Sand is fine to coarse. Gravel is fine to medium, angular and consists of brick fragments. (MADE GROUND)			(0.50)		
0.50 - 0.60	D	SOIL						Stiff, brown, gravelly CLAY. Gravel is grey, rounded to sub-rounded and fine grained. (GLACIOFLUVIAL SHEET DEPOSITS) 0.66 to 1m: Increase in quantity and size of gravels.			0.50	10.50	
0.60 - 1.00	B	SOIL								(0.50)			
1.00 - 2.00	B	SOIL	SPT	27 (6,6/6,9,6,6)			1.45	Very stiff, grey / brown, fine to coarse, slightly clayey, gravelly SAND. Gravel is grey, fine to medium and sub-angular. (GLACIOFLUVIAL SHEET DEPOSITS)			1.00	10.00	
2.00 - 3.00	B	SOIL	SPT	36 (8,9/9,8,10,9)			2.45	End of Borehole at 2.900m			(1.90) 2		
			SPT	50 (11,12/50 for 255mm)			3.35						2.90

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	

**General Remarks**

- Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- Groundwater not encountered.
- 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 0.5 and 2.9m/ Upon completion boreholes backfilled with arising/ bentonite.

# Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

**Project Name:**

Clive Road

**Site Location:**

Cardiff

**Client:**

Project No:  
8711

**Drilling method**

CP

**Equipment**

**Ground Level:** 11.00 mOD

**Easting:** 316016 m

**Northing:** 176722 m

# WS04

**Start date:** 13/12/2023

**Driller:** DM, Lewis

**End date:** 13/12/2023

**Logged by:** SW

**Backfill date:** 13/12/2023

**Date logged:** 13/12/2023

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	
0.50	ES	SOIL						Soft, dark brown, slightly sandy CLAY. Sand is fine to coarse. Rootlets and grass present throughout. (MADE GROUND)		(0.20)			
								Grey, sub-angular COBBLE. (MADE GROUND)		0.20	10.80		
								Zone of minimal recovery. Assumed to be; Dark brown CLAY (MADE GROUND).		(0.10)		10.70	
								Stiff, brown, gravelly, slightly sandy CLAY. Sand is fine to coarse and angular and crystalline. (GLACIOFLUVIAL SHEET DEPOSITS)		0.30			
										(0.20)		10.50	
0.80 - 0.90	D	SOIL	SPT	13 (1,0/1,4,4,4)			1.45						
1.50 - 1.60	D	SOIL											
1.60 - 2.00	B	SOIL											
			SPT	50 (10,18/50 for 265mm)			2.45	Very stiff, grey / brown, fine to coarse, slightly clayey, gravelly SAND. Gravel is grey, fine to medium and sub-angular. (GLACIOFLUVIAL SHEET DEPOSITS)		1			
										(1.10)			
											1.60	9.40	
											(0.85)		
											2.45	8.55	
								End of Borehole at 2.450m					
											3		

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	

**General Remarks**

- Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- Groundwater not encountered.
- 50mm diameter gas and groundwater monitoring well installed upon completion with a response zone between 0.5 and 2m.

# Earth Science Partnership

Consulting Engineers | Geologists | Environmental Scientists

**Project Name:**

Clive Road

**Site Location:**

Cardiff

**Client:**

Project No:  
8711

**Drilling method**

CP

**Equipment**

**Ground Level:** 11.00 mOD

**Easting:** 316019 m

**Northing:** 176717 m

# WS05

**Start date:** 13/12/2023

**Driller:** DM, Lewis

**End date:** 13/12/2023

**Logged by:** SW

**Backfill date:** 13/12/2023

**Date logged:** 13/12/2023

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	
0.30 - 0.50	ES	SOIL						Reddish brown, fine to coarse, gravelly SAND. Gravel is fine and angular. (MADE GROUND)		(0.20)	10.80		
0.50 - 0.70	B	SOIL						Soft, dark brown, slightly gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is fine grained, angular and comprises of brick fragments. Black speckly spots present. (MADE GROUND)		(0.50)			
0.80 - 1.00	B	SOIL						Stiff, brown, slightly gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is fine grained, angular and dark grey. Black speckly spots present. (MADE GROUND)		0.70	10.30		
0.80 - 1.00	D	SOIL	SPT	13 (1,2/3,4,3,3)			1.45	Stiff, brown, gravelly, slightly sandy CLAY. Sand is fine to coarse. Gravel is dark grey, medium to coarse and angular. (GLACIOFLUVIAL SHEET DEPOSITS)		(0.30)			
1.30 - 1.40	D	SOIL						Very stiff, grey / brown, fine to coarse, slightly clayey, gravelly SAND. Gravel is grey, fine to medium and sub-angular. (GLACIOFLUVIAL SHEET DEPOSITS)		1.00	10.00		
1.60 - 2.50	B	SOIL								(0.45)			
			SPT	43 (10,9/8,11,13,11)			2.45			1.45	9.55		
			SPT	50 (11,12/50 for 255mm)			2.95			(1.05)			
								End of Borehole at 2.500m		2.50	8.50		
										3			

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

**General Remarks**

- Co-ordinates and ground levels of investigation points obtained by a GPS Survey undertaken upon completion of site works.
- Service plans reviewed and area CAT scanned prior to breaking ground. Hand excavated service inspection pit dug to 1.2m depth.
- Groundwater was not encountered.
- Upon completion boreholes backfilled with arising/bentonite.