ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No **BH118**
SHEET 1 of 3
REFERENCE No **H10899**

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Near entrance to disused Fire Station (Bridge BR22) COORDINATES 497239.5 E; 6950621.4 N
PROJECT No FG5779 SURFACE R.L. 25.23m PLUNGE -90 ° DATE STARTED 28/10/10 GRID DATUM GDA94
JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 29/10/10 DRILLER Foundrill Pty Ltd

DEPTH (m)	R.L. (m)	OTHER / WASH BORING / CORE DRILLING	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	25.23				**Embankment FILL**						Non destructive digging up to 1.5m depth Based on drillers logs only		
1													
	23.73				**Silty CLAY (Engineered Fill)** Reddish brown, moist, soft.						Based on Drillers logs only		
2					High plasticity.	(CH)							
	22.73												
3				A	**Silty CLAY (Residual)** Mottled grey-brown to dark red, very stiff to mainly hard.						7,11,15 N=26	SPT	
					Medium to high plasticity; iron concretions nodules below 4.5m depth.								
4				B							12,17,20 N=37	SPT	
				C		(CI-CH)					18,18,19 N=37	SPT	
5													
				D							16,30/120mm N>50	SPT	
6													
				E							15,19,20 N=39	SPT	
7	18.03												
				F	**MUDSTONE** **FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF CLAY SIZED PARTICLES** **XW:**Generally exhibits engineering properties of brownish grey, moist, mainly very stiff.	XW					6,7,11 N=18	SPT	
8					Mainly high plasticity.								
				G	Contains interbeds of carbonaceous mudstone below 8.4m depth app. 600mm thick.						Carbonaceous mudstone. 6,7,12 N=19	SPT	
	16.23												
9					**CLAYSTONE** **FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF SILT SIZED PARTICLES.**	HW							
				H	(See over)						20,27,30/120mm N>50	SPT	
10													

REMARKS Observation well installed, infiltration zone from 5.0m to 28.7m.

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QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG FG5779 IPSWICH MWY_ROCKLEA TO DARRA.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 14/02/2011 17:35

ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No **BH118**
SHEET 2 of 3
REFERENCE No **H10899**

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Near entrance to disused Fire Station (Bridge BR22) COORDINATES 497239.5 E; 6950621.4 N
PROJECT No FG5779 SURFACE R.L. 25.23m PLUNGE -90 ° DATE STARTED 28/10/10 GRID DATUM GDA94
JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 29/10/10 DRILLER Foundrill Pty Ltd

DEPTH (m)	R.L. (m)	OTHER / WASH BORING / CORE DRILLING	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
10	15.23				**CLAYSTONE (Cont'd)** **HW:** Generally exhibits engineering properties of pale grey, moist, hard.								
				I	Medium to high plasticity.						30/150mm N>50		SPT
11					Minor traces of fine grained sand in parts; yellow iron staining below 12.5m depth.								
				J		HW					12,16,20 N=36		SPT
12													
				K							11,16,28 N=44		SPT
13													
	11.73			L							30/70mm N>50		SPT
14					**SANDSTONE** **FINE TO MEDIUM GRAINED, MASSIVE, POORLY CEMENTED SEDIMENTARY ROCK.** **HW:** Generally exhibits engineering properties of grey to yellow, moist, very dense clayey sand.	HW							
	10.73			M	Sand fraction fine to medium grained.						16,21,30/105mm N>50		SPT
15					**CLAYSTONE** **HW:** Pale grey, moist, hard clayey silt / silty clay. Low to medium plasticity.	HW							
	9.73			N	**SANDSTONE** **HW:** Generally exhibits engineering properties of pale grey, moist, very dense clayey sand.						30/150mm N>50 ▽ 2/2/2011 ▽ 11/2/2011		SPT
16					Sand fraction fine grained.								
				O		HW					▽ 22/12/2010 27,30/110mm N>50		SPT
17													
	7.73			P	**MUDSTONE** **HW:** Generally exhibits engineering properties of dark grey to black, moist, hard silty clay.						30/70mm N>50		SPT
18					Medium to high plasticity.								
				Q	Gradually grading into low strength rock.	HW					13,22,26 N=48		SPT
19													
				R							14,23,28 N>50		SPT
20													

REMARKS Observation well installed, infiltration zone from 5.0m to 28.7m.

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ENGINEERING BOREHOLE LOG

Queensland Government

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No **BH118**
SHEET 3 of 3
REFERENCE No **H10899**

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Near entrance to disused Fire Station (Bridge BR22) COORDINATES 497239.5 E; 6950621.4 N
PROJECT No FG5779 SURFACE R.L. 25.23m PLUNGE -90 ° DATE STARTED 28/10/10 GRID DATUM GDA94
JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 29/10/10 DRILLER Foundrill Pty Ltd

DEPTH (m)	R.L. (m)	OTHER / WASH BORING / CORE DRILLING	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
20	5.23				**MUDSTONE HW (Cont'd)**								
				S							15,20,31 N>50		SPT
21							HW						
				T							15,19,28 N=47		SPT
22	3.03		(94)		**SW:**Dark grey to black, thinly laminated, mainly very low to low strength.						Sandstone band Joint @ 20°, clay infill		
					Contains vein of fine grained sandstone along lamination.						Is(50) = 0.02MPa Is(50) = 0.22MPa		x o
23					Numerous drilling induced partings.								
					Defects: - Drilling induced lamination partings @ 5 - 10° (2/m)						DD = 1.66t/m^3; WD = 2.05t/m^3; MC = 23%; UCS=1744KPa		
			100								Clay zone Joint @ 35°, clay infill		
24			(96)		- Joints @ 25° and 35° (2/m)						Is(50) = 0.08MPa Is(50) = 0.10MPa		x o
					Defects are close to medium spaced, planar, mainly smooth, but often slickensided and polished, open and closed with clay infill or iron stained.		SW						
25											Is(50) = 0.00MPa Is(50) = 0.13MPa		x o
26													
	-1.67		100								BZ		
27			(100)		**SILTSTONE** **SW:** Light grey, massive, fine grained with clay matrix, low strength.						Is(50) = 0.09MPa Is(50) = 0.13MPa		x o
					Generally defects are rare.		SW						
28	-2.87				**SANDSTONE** **SW:** Pale grey, fine to medium grained, mainly low strength.		SW				Is(50) = 0.09MPa Is(50) = 0.08MPa		x o
	-3.47		100		Defects same as above.								
29					Borehole terminated at 28.7m								
30													

REMARKS Observation well installed, infiltration zone from 5.0m to 28.7m.

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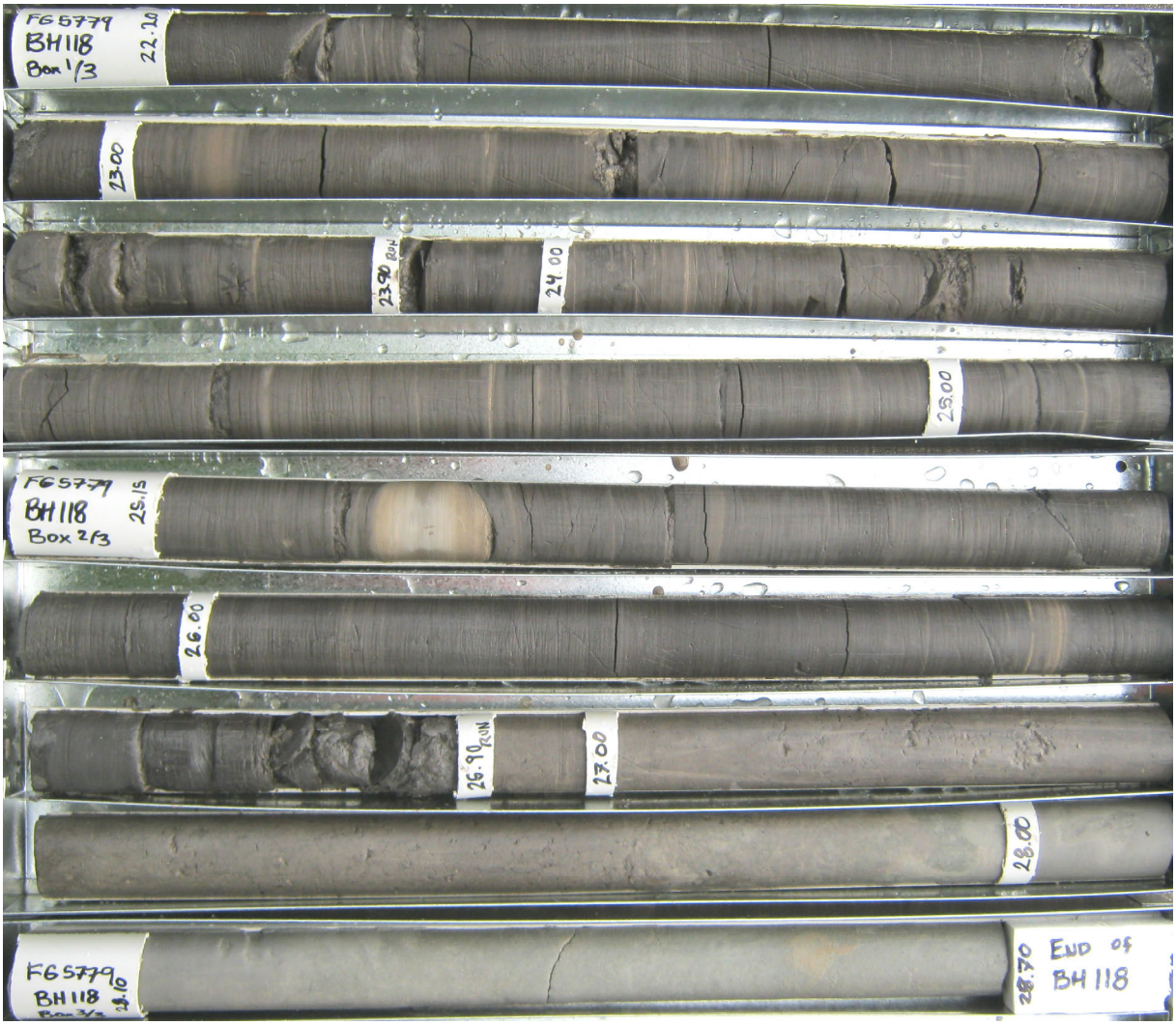
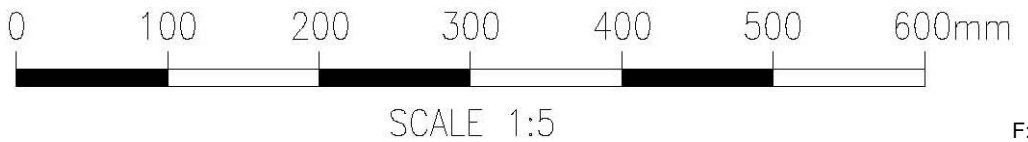
Project: **Ipswich Motorway Upgrade - Rocklea to Darra**
Borehole No: **BH 118**
Start Depth: 22.20m
Finish Depth: 28.70m
Project No: FG5779
H No: H10889





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