

COPYRIGHT NOTICE

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the [Creative Commons Attribution 4.0 Licence](#) (CC BY 4.0). When reusing the Document, in whole or in part, please attribute the Department as follows: "*(c) State of Queensland (Department of Transport and Main Roads) 2020, licensed under the CC BY 4.0 Licence*". This licence does not apply to the Queensland Government logo or trademarks.

LIMITATION OF LIABILITY

The CC BY 4.0 Licence contains a comprehensive Disclaimer of Warranties and Limitation of Liability. In addition, please note that this Document was prepared for Departmental use only. Reuse of the Document by anyone for any other purpose could result in error and/or loss. You should obtain professional advice before making decisions based on the contents of the Document.

When reproducing any part of this Document, you must also reproduce this limitation of liability notice in addition to the italicised attribution statement above.

Retrieved from the Queensland Geotechnical Database <http://qgd.org.au/>

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH109
SHEET 1 of 4
REFERENCE No H10873

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Oxley Creek Overflow COORDINATES 498703.1 E; 6950898.4 N
PROJECT No FG5779 SURFACE R.L. 4.48m PLUNGE -90° DATE STARTED 26/10/10 GRID DATUM GDA94
JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/10/10 DRILLER R&D Drilling Pty Ltd

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	4.48					Silty CLAY (Possible Fill?) Brown, moist.					Non destructive digging up to 1.5m depth. Based on Drillers logs only.	
1												
2.98					A	Sandy Silty CLAY (Engineered Fill) Yellowish grey to dark brown, moist, mainly firm.	(CL-CI)				4/2/2011 11/2/2011 22/12/2010	3,4,2 N=6 SPT
					B	Medium to high plasticity. Contains thin layers of silty sand; and some angular high strength gravel fragments.						7,3,5 N=8 SPT
1.58					C	Silty CLAY (Estuarine) Dark grey to black, moist, very soft.	(CH-OH)					U100
					D	Mainly high plasticity. Contains high organic content including some peat material.						HW,HW,1 N=1 SPT
-0.72					E	Silty CLAY (Alluvium) Mottled yellow brown to grey, moist, firm to stiff.	(CL-CI)					3,2,3 N=5 SPT
					F	Medium to high plasticity. Minor trace of brown iron staining in parts.						3,5,5 N=10 SPT
-2.72					G	Silty SAND (Alluvium?) Pale grey, moist, mainly medium dense.	(SP)					12,13,13 N=26 SPT
					H	Sand fraction mainly fine to medium grained.						10,11,10 N=21 SPT
					J	(See over)						11,10,3 N=13 SPT

REMARKS Observation well installed, infiltration zone from 5.0m to 35.9m.

LOGGED BY
BW / SG



ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH109
 SHEET 2 of 4
 REFERENCE No H10873

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
 LOCATION Oxley Creek Overflow COORDINATES 498703.1 E; 6950898.4 N
 PROJECT No FG5779 SURFACE R.L. 4.48m PLUNGE -90° DATE STARTED 26/10/10 GRID DATUM GDA94
 JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/10/10 DRILLER R&D Drilling Pty Ltd

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH						DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
								EH	VH	H	M	L	VL					EL	20
10	-5.52					Silty SAND (Alluvium?) Cont'd													
					K		(SP)										7,6,5 N=11	SPT	
	-6.82					Silty CLAY (Residual) Mottled orange-brown to grey, moist, mainly very stiff. Medium to high plasticity. Becoming pale grey below @ 14.5m depth.													
					L		(CL-CI)											5,7,11 N=18	SPT
					M													10,9,9 N=18	SPT
					N													4,8,20 N=28	SPT
					P													7,10,17 N=27	SPT
	-10.72					CLAYSTONE FINE GRAINED SEDIMENTARY ROCK COMPOSED MAINLY OF CLAY SIZED PARTICLES. XW: Generally exhibits engineering properties of grey-brown, moist, hard silty clay. Medium plasticity.													
					Q		XW											11,20,26 N=46	SPT
					R	Relict rock fabric and structure visible throughout; minor brown iron staining in parts.												13,18,28 N=46	SPT
					S													14,18,25 N=43	SPT
					T													23,23,25 N=48	SPT
					U	(See over)												15,24,30 N>50	SPT

REMARKS Observation well installed, infiltration zone from 5.0m to 35.9m.

LOGGED BY
BW / SG



ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH109
 SHEET 3 of 4
 REFERENCE No H10873

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
 LOCATION Oxley Creek Overflow COORDINATES 498703.1 E; 6950898.4 N
 PROJECT No FG5779 SURFACE R.L. 4.48m PLUNGE -90° DATE STARTED 26/10/10 GRID DATUM GDA94
 JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/10/10 DRILLER R&D Drilling Pty Ltd

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH						DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	L	VL				
20	-15.52					CLAYSTONE XW (Cont'd)											
21					V		XW									15,24,32 N>50	SPT
22	-17.02				W	Interbedded MUDSTONE and SILTSTONE (Siltstone dominant) HW: Generally exhibits engineering properties of pale grey to dark grey black, moist, hard silty clay. Contains hard silty sand bands in parts.									Sandstone app. 2.5mm thick	15,25,30/115mm N>50	SPT
23					X		HW								Mudstone (displays cracking on drying)	12,17,24 N=41	SPT
24					Y										Silty sandstone app. 1.3m thick	18,27,30/120mm N>50	SPT
25					Z	MUDSTONE HW: Mottled grey, fine grained, massive with faint lamination, very low to low strength. Generally defects are rare - Drilling induced lamination partings @ 5° (1/m) - Irregular fractured joint @ 45° (1/m) Defects are medium to wide spaced, planar, smooth, closed and open with silty clay infill.									Joint @ 45°	15,19,24 N=43	SPT
26	-21.82																
27			(100)				HW									Is(50) = 0.20MPa Is(50) = 0.09MPa DD = 1.75t/m ³ ; MC = 17.6%; UCS=1.12MPa	x o
28			100													Is(50) = 0.10MPa Is(50) = 0.15MPa	x o
29	-24.27		(95)			SANDSTONE FINE TO MEDIUM GRAINED, MASSIVE, POORLY CEMENTED SEDIMENTARY ROCK. HW: Grey, fine grained, massive with interlamination, mainly very low to low strength.										Is(50) = 0.08MPa Is(50) = 0.09MPa DD = 1.73t/m ³ ; MC = 18.8%; UCS=1.84MPa	x o
30			100			(See over)	HW									Is(50) = 0.10MPa Is(50) = 0.08MPa	x o

REMARKS Observation well installed, infiltration zone from 5.0m to 35.9m.

LOGGED BY
BW / SG



ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH109
 SHEET 4 of 4
 REFERENCE No H10873

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
 LOCATION Oxley Creek Overflow COORDINATES 498703.1 E; 6950898.4 N
 PROJECT No FG5779 SURFACE R.L. 4.48m PLUNGE -90° DATE STARTED 26/10/10 GRID DATUM GDA94
 JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 27/10/10 DRILLER R&D Drilling Pty Ltd

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH					DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J				
30	-25.52					SANDSTONE (Cont'd) HW: Occasional interbeds of mudstone below 29.4m depth. Generally defects are rare. - Drilling induced lamination partings @ 5 - 10° (4/m). Defects are mainly medium spaced, planar, smooth, open and closed with clay infill.	HW						20 60 200 600 2000	High strength siliceous bands app. 5mm thick Is(50) = 0.04MPa Is(50) = 0.06MPa DD = 1.62t/m ³ ; WD = 1.93t/m ³ ; MC = 18.9%; UCS=529KPa Numerous drilling induced partings.	x o	
31	-27.12				100									Loose sand		
32					100	Interbedded SILTSTONE AND MUDSTONE FINE GRAINED SEDIMENTARY ROCK COMPOSED MAINLY CLAY AND SILT SIZED PARTICLES. MW: Grey-brown, fine grained, laminated, mainly very low strength. Generally defects are rare.	MW						20 60 200 600 2000	Is(50) = 0.08MPa Is(50) = 0.10MPa DD = 1.73t/m ³ ; WD = 2.04t/m ³ ; MC = 18%; UCS=1233KPa	x o	
33					100	- Drilling induced lamination partings @ 5 - 10° (1/m) Defects are close to medium spaced, planar, smooth, open with clay infill.	MW						20 60 200 600 2000	Clayey seam (SZ) Is(50) = 0.07MPa Is(50) = 0.15MPa	x o	
34	-29.87				100								20 60 200 600 2000	Is(50) = 0.06MPa Is(50) = 0.12MPa	x o	
35	-31.42				100	MUDSTONE MW: Dark grey to black, fine grained, lamination throughout, mainly very low to low strength. Defects as above. Displays cracking on drying.	MW						20 60 200 600 2000	Is(50) = 0.09MPa Is(50) = 0.10MPa Is(50) = 0.07MPa Is(50) = 0.08MPa DD = 1.59t/m ³ ; WD = 1.95t/m ³ ; MC = 22.5%; UCS=1062KPa	x o x o	
36						Borehole terminated at 35.9m										
37																
38																
39																
40																

REMARKS Observation well installed, infiltration zone from 5.0m to 35.9m.

LOGGED BY
BW / SG

Project: **Ipswich Motorway Upgrade - Rocklea to Darra**
Borehole No: **BH 109**
Start Depth: 27.00m
Finish Depth: 35.90m
Project No: FG5779
H No: H10873



SCALE 1:5

F:GEO043/1