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QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG FG5779 IPSWICH MWY_ROCKLEA TO DARRA.GPJ <<DrawingFiles> Datgel CPT Tool gilht Add-in 14/02/2011 17:34

ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH111
SHEET	_1_ of _4_
REFERENCE No	H10895

PROJEC	Т.	Ipswich Motorway Upgrade - Rocklea to Darra											
LOCATIO	N .	<u>Ox</u>	<u>ey</u>	<u>Creek</u>	<u>Ove</u>	<u>rflow</u>					CC	OORDINATES 498781.2 E; 6951053.	<u>7 N</u>
PROJEC	T No	<u>FG</u>	<u>57</u>	7 <u>9</u>		SURFACE R.L. <u>2.38 m</u> PLUNGE <u>-90 °</u>			DATE S	TARTED _	02/11	1/10 GRID DATUM GDA94	
JOB No	B No <u>140/U16/902</u>			<u>16/902</u>	. -	HEIGHT DATUM <u>AHD</u> BEARING		-	DATE COM	PLETED _	<u>03/1</u> 1	1/10 DRILLER R&D Drilling F	Pty Ltd _
0 DEPTH (m)	n)	RQD ()% ()% MATERIAL DEFECT SPACING (mm) CORE REC % W S SOOOOO REC % W S SOOOOOO REC % W S SOOOOO REC % W S SOOOOOO REC % W S SOOOOOO REC % W S SOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOOO					GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS				
						Silty CLAY Brown to grey, moist, firm. stiff Medium plasticity. Becoming grey with depth.		:H)				— Based on drillers logs only 2,3,4 inferred GWT	SPT
-2).13				В	Sandy CLAY (Alluvium)					- — -	p'c=96kPa OCR=2.9	U100 -
- - - - - 3 - -					С	Grey to brown, moist, firm to very stiff. Low to medium plasticity. Sand fraction fine grained; clayey sand below 4m depth.						RW,1,3 N=4	SPT
- - - - - - - - - - - - -					D	Sand fraction decreasing with depth.	CI/I	'ML)			4,4,3 N=7	SPT
-5 5 	3.62				Е							RW,2,4 N=6	SPT -
-6 - - - - - - - - - - - - - - - - - - -					F	Silty SAND (Residual) Brown to grey, moist , very loose to mainly medium dense. Sand fraction fine grained; occasional silty clay layers in parts.						4,6,13 N=19	SPT -
- - - - - - - - - - - - - - - - - - -					G		(SI	M)				9,9,9 N=18	SPT
					Н	Becoming very soft silty clay below 9.0m app.		,				7,8,8 N=16	SPT =
-	7.02				J	400mm thick. (See over)						1,2,0 N=2	SPT -
[_10] DEM/	\DV0	Oh	LL ser	/ation w	ell in	stalled, infiltration zone from 6.3m to 35.0m.				L		LOGGED BY	
KEIVIA	~!\r\S						_	_		 		BW / SG	



QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG FG5779 IPSWICH MWY_ROCKLEA TO DARRA.GPJ <<DrawingFiles> Datgel CPT Tool gilht Add-in 14/02/2011 17:34

ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH111
SHEET	_2_ of _4_
REFERENCE No	H10895

PROJECT	Ipswich Motorway Upgrade - Rocklea to Darra								
LOCATION	Oxley Creek C	<u>verflow</u>				CO	ORDINATES <u>498781.2 E; 6951053.7 N</u>		
PROJECT No	FG5779	SURFACE R.L. <u>2.38 m</u> PLUNGE <u>-90 °</u>			DATE STARTED _	02/11/	10 GRID DATUM <u>GDA94</u>		
JOB No	140/U16/902	_ HEIGHT DATUM <u>AHD</u> BEARING			DATE COMPLETED _	<u>03/11/</u>	DRILLER R&D Drilling Pty Ltd		
R.L. (m)	RQD () % MATERIAL DESCRIPTION ADMINISTRATION WANTERIAL ADMINISTRATION WANTERIAL ADMINISTRATION WANTERIAL DESCRIPTION Silty SAND (Residual) Cont'd				INTACT DEFECT STRENGTH SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS SYMPLES SYMPLES TEST RESULTS		
- - - - - - - - - - - - - - - - - - -		Silty SAND (Residual) Cont u	(SN	M)			4,7,5 N=12 SPT -		
-8.82 		Silty CLAY (Residual) Grey, moist, firm. stiff High plasticity; minor traces of organic material.	(CI	H)					
- 12 -9.02		SILTSTONE FINE GRAINED SEDIMENTARY ROCK COMPRISED MAINLY OF SILT SIZED PARTICLES. XW:Generally exhibits engineering properties of pale brown to grey, moist, very stiff to hard					5,9,13 N=22		
13 		clayey silt. High plasticity. Traces of organic material.	XV	N			8,11,16 N=27 SPT		
- 14 		P					9,15,23 N=38 SPT		
- 15 - - - - - - - - - - - - - - - - - - -		HW:Generally exhibits engineering properties of pale grey to brown, moist, hard, clayey silt. Low plasticity. Occasional fine grained HW sandstone bands.					19,25,30/140mm N>50		
- 10 		R	HV	<i>N</i>			11,20,27 N=47 SPT		
- - - - - - - - - - - - - - - - - - -		S					12,22,29 N>50 SPT		
- - - - - -		T			± + + +		18,20,27 N=47 SPT -		
-16.62		CLAYSTONE FINE GRAINED SEDIMENTARY ROCK COMPRISED MAINLY OF CLAY SIZED PARTICLES.	HV	N			DD = 1.76t/m ³ ; WD = 2.09t/m ³ ; MC = 18.8%; UCS=1222KPa 14,20,23 N=43 SPT =		
20		(See over)			<u>:::::</u>		DD = 1.76t/m ³ ; WD = 2.10t/m ³ ;		
REMARK	S Observation wel	l installed, infiltration zone from 6.3m to 35.0m.	_	_			LOGGED BY BW / SG		



QLD_DMR_LIB_01.GLB Log A_ENGINEERING BOREHOLE LOG FG5779 IPSWICH MWY_ROCKLEA TO DARRA.GPJ <<DrawingFiles> Datgel CPT Tool gilht Add-in 14/02/2011 17:34

ENGINEERING BOREHOLE LOG

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

BOREHOLE No ______BH111___

SHEET ____3__ of ___4__

REFERENCE No _____H10895___

	JECT ATION											 7 N	
PROJECT No. <u>FG5779</u> SURFACE R.L. <u>2.38 m</u> PLUNGE <u>-90 °</u> DATE STARTED <u>02/11/10</u> GRID DATUM <u>GDAS</u> JOB No <u>140/U16/902</u> HEIGHT DATUM <u>AHD</u> BEARING DATE COMPLETED <u>03/11/10</u> DRILLER <u>R&D</u>								 Ptv I td					
R.L. RQI				 	TILIOTI DATONI _ALID DEAKINO		INTACT	DEFECT	<u> </u>				<u> </u>
Œ	(m)	R VG H BORING DRILLING	()%		MATERIAL	2	STRENGTH	SPACING (mm)	LOG	AL	ODITIONAL I	JATA	
DEPTH (m)				J.E	DESCRIPTION			` ′	GRAPHIC LOG		AND		S S
四 20	-17.62	AUGE CASII WAS	CORE REC %	SAMPLE		USC	출퍼국프로그국교	2000	GRAF	-	TEST RESU	LTS	SAMPLES
- 20	-17.02	111	(86)		CLAYSTONE (Cont'd)					N	IC = 19.4%;	UCS=873KPa	
-					HW: Brown, bedded with minor lamination, fine grained, mainly very low strength.			 		Mudstone	interbeds app.	400mm thick.	-
- - - 21					Generally defects are rare -Drilling induced bedding/lamination partings @5-10°(1/m)						ls(5	0) = 0.07MPa	0 =
- - -			100		Defects are close to wide spaced, planar, smooth, tight, clean.								-
-			(98)		Occasional fine grained sand in parts.						le/5	0) = 0.07MPa	
- - 22 -										DD :	ls(5 1.90t/m³; V =	0) = 0.07MFa 0) = 0.06MPa /D = 2.20t/m ³ ; UCS=804KPa	x]
						HW	, : : : : :					0) = 0.06MPa 0) = 0.04MPa	x -
			100								,	,	1
23 			(100)										1
-]
								:			ls(5	0) = 0.09MPa	x =
- 24 -											= 1.81t/m³; \v	0) = 0.09MPa /D = 2.12t/m ³ ; CS=2300KPa	0]
-			100								ls(5	0) = 0.04MPa	0 =
- - -			(92)							DD :	= 1.73t/m³; W C = 18.8%; U	/D = 2.05t/m³; CS=2397KPa	-
- 25 - - - -	-22.69				Interbedded SANDSTONE and MUDSTONE HW: Grey to dark grey, fine grained, bedded, very low strength.					∑ 22/12/2	2010		-
- - - - 26			400		Sand particles are fine grained; dark grey mudstone interbeds are generally >50mm thick.								-
-			(50)		Defects: - Bedding / lamination parting @ 10° (3/m)	нν	/ :::: <u>:</u>						1
-					- Bedding / Iariination parting @ 10 (3/m) - Joint @ 10° (3/m)			 					1
-					Defects are close to medium spaced, planar,						ls(5	0) = 0.02MPa	0 -
- 27 -					smooth, tight and clean.								1
	-25.02				MUDSTONE							0) = 0.06MPa	x _
-			100		MW: Dark grey, fine grained, laminated, mainly very low to low strength.						ls(5	0) = 0.10MPa	0 =
- 28			(77)										
-					Defects: - Lamination parting @ 10° (1-2/m)]
-					- Joint @ 40° (<1/m)							0) = 0.14MPa	x -
-					Defects are close to medium spaced, planar, smooth, tight and clean.	MW	/ : : : :				•	0) = 0.24MPa	0]
- - 29			100		ng and order							0) = 0.09MPa 0) = 0.07MPa	x -
			(72)										=
-			('2)										7
30					(See over)						ls(5 ls(5	0) = 0.08MPa 0) = 0.06MPa	х О
R	EMARK	S Obse	ervation w	ell in	stalled, infiltration zone from 6.3m to 35.0m.						L	OGGED BY BW / SG	



ENGINEERING BOREHOLE LOG

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

BOREHOLE No __BH111__

SHEET __4_ of __4_

REFERENCE No __H10895__

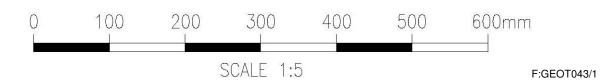
	Ipswich Motorway Upgrade - Rocklea to Darra COORDINATES 498781.2 E; 6951053.7 Ignorphisms									
				SURFACE R.L. <u>2.38 m</u> PLUNGE <u>-90 °</u>						<u>., in</u>
				HEIGHT DATUM _AHD _ BEARING						
30D NO		2 10/302		TEIGHT DATOM _ALD DEARING	_	DATE CON		03/1	NICELLA TABLETINING	<u> </u>
R.L.	ဗ္ဗဗ	RQD ()%				INTACT STRENGTH	DEFECT SPACING	(D	ADDITIONAL DATA	
DEPTH (m)	LG BORING DRILLING	, ,		MATERIAL		STRENGTH	(mm)	GRAPHIC LOG	AND	တ္တ
DEPT	SING SING BED	CORE	SAMPLE	DESCRIPTION	o F	Ë Kui J		APHI	TEST RESULTS	SAMPLES
30 -27.62	\$\$\$8 8\$\$\$	REC %			nsc	MINITE IN THE	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	GR	TEOT REGOLTO	SAI
-	''			MUDSTONE MW: (Cont'd) Occasional high strength bands below @31m					DD = 1.74t/m ³ ; WD = 2.08t/m ³ ;	-
				depth.					MC = 19.2%; UCS=1305KPa	-
		100							├── Jt @ 40 Is(50) = 0.08MPa	x -
-31		(70)							Is(50) = 0.08MPa	0 -
		100							Is(50) = 3.14MPa	x -
-		(98)							Is(50) = 8.03MPa	0 _
							- :		Is(50) = 3.74MPa Is(50) = 1.25MPa	0 .
-32									DD = 1.68t/m ³ ; WD = 2.04t/m ³ ; MC = 21.6%; UCS=1589KPa	x -
							:		Is(50) = 0.06MPa Is(50) = 0.09MPa	o :
-					MV	v : : : : :	:		DD = 1.65t/m ³ ; WD = 2.02t/m ³ ;	_
<u>[</u>		100							MC = 22.6%; UCS=2074KPa	
33		(93)					:		Piezometer tip @ 30.0m depth	-
		` '					:		Is(50) = 0.08MPa Is(50) = 0.10MPa	0 -
									DD = 1.58t/m ³ ; WD = 1.97t/m ³ ; MC = 24.8%; UCS=1891KPa	x -
									Is(50) = 0.08MPa Is(50) = 0.09MPa	0 -
34							:			-
		100							Is(50) = 0.05MPa Is(50) = 0.11MPa	x -
		(100)								-
-32.62		100							Is(50) = 0.08MPa Is(50) = 0.15MPa DD = 1.62t/m³; WD = 2.02t/m³;	0 -
35				Borehole terminated at 35m			+ : : : : :		MC = 24.2%; UCS=1606KPa DD = 1.78t/m ³ ; WD = 2.10t/m ³ ;	-
							‡:::::::		MC = 18%; UCS=799KPa	-
-							Ŧ: : : : : : : : : : : : : : : : : : :			-
36							<u> </u>			-
5-30							‡ : : : : :			-
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REMARKS	<u>Obse</u>	rvation w	ell in	stalled, infiltration zone from 6.3m to 35.0m.					LOGGED BY BW / SG	
					— -				-	

Project: **Ipswich Motorway Upgrade - Rocklea to Darra**

Page 1 of 2

Borehole No: BH 111
Start Depth: 20.00m
Finish Depth: 35.00m
Project No: FG5779
H No: H10895





Project: <u>Ipswich Motorway Upgrade - Rocklea to Darra</u> Page 2 of 2

Borehole No: BH 111
Start Depth: 20.00m
Finish Depth: 35.00m
Project No: FG5779
H No: H10895



