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TMR JAN 15.GLB Log A\_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool glNt Add-In 04/03/2015 10:52

# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No	BH177
SHEET	_1_ of _3_
REFERENCE No	12118

PROJECT LOCATION		ad Geotechnical Investigation - Stage 1		 TES 721438.9 E; 7661069.7 N
		SURFACE R.L. 6.77m PLUNG	DATE STARTED <u>17/10/14</u> C	GRID DATUM <u>GDA 94 /MGA Zone 55</u> DRILLER <u>Saxon Drilling</u>
R.L. (m)	RQD RQD RQD	MATERIAL  DESCRIPTION	INTACT DEFECT STRENGTH SPACING (mm) OO	ADDITIONAL DATA  AND SAMPLES S
0 6.77 		Clayey SILT (TOPSOIL) Dark brown, moist, soft. Low plasticity. Some roots.  Silty CLAY (ALLUVIUM) Dark brown, moist, stiff. Low plasticity.	(CL)	3,6,6 N=12
2,00 4.77		Silty SAND (ALLUVIUM)  Brown, moist, loose to medium dense. Fine grained sand.		2,5,5 N=10 SPT -
-4		4.00m: Becoming fine to medium graine	ed. (SM)	3,5,6 N=11
-5		6.00m: Some fine to medium subrounde gravel.	ed	5,6,7 N=13 SPT =
6.50 0.27		Sandy GRAVEL (ALLUVIUM) Brown to black, moist, medium dense. Fine, subrounded gravel. Fine to coarse grained sand.	e (GP)	6,7,7 N=14 SPT
		Gravelly SAND (ALLUVIUM) Brown, moist, medium dense. Fine to coarse grained sand. Fine, subrounded gravel.	(SW)	6,5,7 N=12
8.90 -2.13 -9 -		Silty CLAY (RESIDUAL) Brown-yellow mottled grey, moist, stiff to very stiff. High plasticity.	O (CH)	5,6,7 N=13
	S Kgwu - Wundaru # Sample failed	u Granodiorite; along existing defect surface.		LOGGED BY MS



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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No \_\_BH177\_\_

SHEET \_\_2\_ of \_\_3\_\_

REFERENCE No \_\_12118\_\_\_

PROJ LOCA	ECT					Geotechnical Investigation - Stage 1				co	ORDINATES 721438.9 E; 7661069	
PROJ JOB N		o <u>F</u> 9				SURFACE R.L. <u>6.77m</u> PLUNGE _ HEIGHT DATUM <u>AHD</u> BEARING _						
DEPTH (m)	R.L. (m)		ORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	JSC WEATHERING	INTACT DEFECT STRENGTH SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA  AND  TEST RESULTS	SAMPLES
	-3.23			NEC //	K	Silty CLAY (RESIDUAL) (Cont'd)		2 2			5,10,16 N=26	SPT =
11          					L			(CH)			5,7,7 N=14	SPT -
12        					М						5,9,11 N=20	SPT =
- 13 - - - - - - 13.60	-6.83	<u>.</u>			N				Ŧ		7,15,13 N=28	SPT :
- - - - 14 - - - - - -					Р	Silty Sandy CLAY (RESIDUAL) Dark brown and grey, moist, hard. Medium plasticity. Some angular, fine gravel.		(CI)			13,17,30 N=47	SPT -
- - - - - - - - - - - - - - - - - - -	-9.03				Q						12,16,30/60	SPT -
- - - - - - - - - - - - - - - - - - -	-10.03				R	GRANODIORITE (Kgwu) XW: Recovered as dark grey, moist to dry, very dense Clayey SAND. Fine to medium grained sand. Some fine gravel.	+ + + + + + + + + + + + + + + + + + + +	XW			12,30/50	SPT -
				(10) 100 (57) 100 (53)		GRANODIORITE (Kgwu) HW: Grey, pink, white and brown, fine to coarse grained, massive, very low to low strength. Some XW zones with EL strength.	+ + + + + + + + + + + + + + + + + + + +	HW XW XW HW XW XW HW XW		-	17.40m-17.50m: XW, EL strength.  17.65m-17.90m: XW, EL strength.  18.03m-18.13m: XW, EL strength.  18.55m-18.65m: XW, EL strength.  Is(50) = 0.05MPa	D (19.50m)
RI	EMARK					Granodiorite;				 	LOGGED BY MS	



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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014

PROJEC <sup>*</sup>					Geotechnical Investigation - Stage 1								 NATES _72143	 8.9 E; 7661069	- — — - 9.7 N
	Γ Νο <u></u> <u></u> <u> </u>	6 <u>184</u>			SURFACE R.L. <u>6.77m</u> PLUNGE HEIGHT DATUM <u>AHD</u> BEARING			-	DATE S	TART	ED <u>17/</u>	10/14	GRID DATUM		— — — — GA Zone 5
(m)	)	SE DRILLING	RQD )% :ORE EC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	/EATHERING EH VH	TACT ENGTH	DEFE SPAC (mn	ING n)	GRAPHIC LOG	ADDITIONAL AND TEST RESU		SAMPLES
	.43		100 (61)		GRANODIORITE (Kgwu) HW: (Cont'd)  GRANODIORITE (Kgwu)  MW: Brown, grey, pink, fine to medium grained, massive, medium strength.  Defects:  - Js; 5°-20° (3/m); Un/Ro, OP;  - Js; 50° (1/m); Un/Ro, OP;  GRANODIORITE (Kgwu)  SW: Grey and pale orange, fine to	+ + + + + + + + + + + + + + + + + + + +	M\	W					ls(	50) = 0.73MPa	D (20.95m)
			100 (75)		medium grained, massive, high to very high strength. Defects: - Js; 0°-10° (2/m); Pl/Ro, OP, Fe St; - Js; 30° (1/m); Pl/Ro, OP, Fe St; - Js; 40° (3/m); Pl/Ro, OP, Fe St; 22.55m: Becoming very high to extremely high strength, and dark grey.	- + - - + - - + - - + - - + - - + -	SV	w -					ls( ls(50 ls(5	50) = 3.74MPa JCS=17.5MPa; 50) = 5.50MPa ) = 1.26MPa; # 0) = 11.55MPa 0) = 11.87MPa	D (22.90m) A (22.95m) D (23.40m)
- - 23.80 -17 - - - 24	.03	+	100		Borehole terminated at 23.8m	+			<u>-</u>				ls(	50) = 5.82MPa 0) = 10.23MPa	A <sub>(23.70m)</sub>
25 25 26 26 27 27 28 28 29 29															
					ranodiorite; ng existing defect surface.	 	_					-		LOGGED BY MS	

DEPARTMENT OF TRANSPORT & MAIN ROADS Geotechnical Branch 35 Butterfield Street, HERSTON Qld 4006 Phone 07 3066 3336



Project Name	Mackay – Ring Road		
Project No	FG6184	Date	18/10/14
Borehole No	BH177	TMR H No	12118
Location	Fursden Creek Overflow Bridge	Start Depth (m)	16.8
Detail	Pier 3	Finish Depth (m)	23.8
Chainage	8750m	Submitted By	J. Lopez
Remarks		·	
FG	AN A	80x 1	22.0 19.0 19.0 19.0 19.0 19.0 19.0 19.0 19
22.8	BH177	Box	3
0 100	200 300 400 SCALE 1:5	500 600	700