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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 10:50

ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH121
SHEET	<u>1</u> of <u>4</u>
REFERENCE No	12067

PROJECT	_!	<u>Macka</u>	ay Ring F	Road_	Geotechnical Investigation - Stage 1								
LOCATION	1 1	Peak_	Downs H	wy C	overpass Abutment B; CH: 5649m;					COORDIN	ATES 720978	3.7 E; 7658003.	6 <u>N</u>
PROJECT	No_I				SURFACE R.L. <u>12</u> .81m PLUNGE _							GDA 94 /MG/	<u> Zone 55</u>
JOB No	-				HEIGHT DATUM <u>AHD</u> BEARING _		_	-	DATE COMPLETED <u>8/1</u>	10/14	DRILLER	Saxon Drilling	
R.L. (m)	œ	CASING WASH BORING CORE DRILLING		SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	JSC	VEATHERING	INTACT DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL AND TEST RESU		SAMPLES TESTS
0 12.i	81		REC 76	0)	Silty CLAY (TOPSOIL)	1/1/		-					
- - - 0.60 12.2	21				Dark brown, moist, soft to firm. Low plasticity. Some fine gravel to 0.30m.	1/ 1/	(C	L)	<u> </u>				-
- - - -1					Silty CLAY (ALLUVIUM) Brown-orange, moist, stiff. Low plasticity.				<u> </u>				-
- - - -				Α	Low pladdory.							2,4,6 N=10	SPT =
- - - - -2													-
- - - -				В			(C	CL)	<u> </u>			3,6,7 N=13	SPT -
- - - -3 -					3.00m: Colour change to dark brown.							3,6,8	- - -
- - -				С	· ·							N=14	SPT -
3.80 9.1 - 4 4				D	Clayey SAND (ALLUVIUM) Brown, moist, loose. Fine grained.		(S	iC)				3,4,6 N=10	SPT -
-4.60 8.3 - - - - - - - - - -	21			E	Sandy CLAY (ALLUVIUM) Brown-orange, moist, firm to stiff. Low to medium plasticity. Fine grained sand.			CL-		-		3,3,5	SPT
5.50 7. 3	31				Clayey SAND (ALLUVIUM) Brown, moist, medium dense.							N=8 	-
- -6 - - - - -6.50 6.1	31			F	Fine grained.		(S	C)	<u>+</u>			2,6,5 N=11	SPT =
- - - - - 7					Silty CLAY (ALLUVIUM) Grey, moist, stiff to very stiff. High plasticity.								-
- - - - - -				G								4,7,11 N=18	SPT -
- - 8 - - - - -				Н			(C	H)				4,7,11 N=18	SPT -
- - - - - 9 -				J								3,5,7 N=12	SPT
- - - - - 10													-
	RKS	# San	nple faile	d alo	ng existing defect surface.		_	_		 	l	OGGED BY	



ENGINEERING BOREHOLE LOG

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

BOREHOLE No __BH121 __

SHEET __2 __ of __4 __

REFERENCE No __12067 ___

PROJECT LOCATION		Geotechnical Investigation - Stage 1 Overpass Abutment B; CH: 5649m;		 NATES 720978.7 E; 7658003.6 N
		SURFACE R.L. <u>12.81m</u> PLUNGE _		
JOB No		HEIGHT DATUM <u>AHD</u> BEARING _		
R.L. (m)	RQD RQD ROSING RASH ROSING ROS	MATERIAL DESCRIPTION	INTACT DEFECT SPACING (mm) OCC C C C C C C C C C C C C C C C C C	ADDITIONAL DATA AND STRESULTS REST RESULTS
10 2.81	K	Silty CLAY (ALLUVIUM) (Cont'd) 10.00m: Colour change to pale grey and brown.	(CH)	3,6,7 N=13
- 11 - 11 - 11 - 11.70 1.11	L	Clayey SAND (ALLUVIUM) Pale grey-brown, moist, medium dense. Fine grained.	(SC)	2,4,7 N=11
- -12 - - - - -	M	Sandy CLAY (ALLUVIUM) Grey mottled brown, moist, stiff. Low to medium plasticity.	(CL- CI)	3,3,6 N=9
- 13 - 13 09:01 9:00 - 13 - 107:00 - 13:00 - 0.99	N	13.00m: Becoming Silty Sandy CLAY. Medium plasticity.		4,5,6 N=11
0\$0 - 0.99	P	Silty CLAY (ALLUVIUM) Grey mottled brown, moist, very stiff. High plasticity.	(CH)	5,7,8 N=15
50p - 15 - 15 - 15 - 15 - 15 - 15 - 15 - 1	Q			4,8,9 N=17
	R	Clayey SAND (ALLUVIUM) Pale brown-grey, moist, medium dense. Fine to medium grained.		6,12,12 N=24 SPT
ELOG W LITHOLOGY	s	17.00m: Colour change to pale brown and red patches.	(SC)	7,11,13 N=24 SPT
70 - 18 - 18 - 18 - 18 - 18 - 18 - 18 - 1	Т	18.00m: Fine to coarse grained sand. Sitty CLAY (ALLUVIUM) Grey and brown, moist, very stiff. High plasticity.		11,8,12 SPT - N=20
100 PT 100	U		(CH)	6,10,12 N=22 SPT
	S # Sample failed ald	ong existing defect surface.		LOGGED BY MS



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ENGINEERINGBOREHOLE LOG

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

BOREHOLE No __BH121___

SHEET __3_ of __4__

REFERENCE No __12067___

PROJ LOCA						Geotechnical Investigation - Stage 1							
PROJ JOB N			618	84		SURFACE R.L. 12.81m PLUNGE HEIGHT DATUM AHD BEARING			DATE S		7/ <u>10/</u>	14 GRID DATUM <u>GDA 94 /MG/</u>	<u> Zone 5</u>
DEPTH (m)	R.L. (m)		ASH BOKING ORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	SC EATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	EW GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20	-7.19	1	≥ ŏ	REC %	/S >	Sandy CLAY (RESIDUAL) Grey-brown, moist, very stiff. Low to medium plasticity.		š ×			9 5	5,6,9 N=15	SPT
 - - - - - 21 - - - -	-8.69				W	, ,		(CL- CI)				5,7,10 N=17	SPT -
- - - - 22 - - - -					X	Clayey SAND (RESIDUAL) Grey, moist, medium dense. Fine to medium grained.						7,7,8 N=15	SPT =
- - - -23 - - - - -					Υ			(SC)				4,9,12 N=21	SPT -
- 24 <u>00</u> - - - -	<u>-11.19</u>				Z	MICRODIORITE (Kgwu) XW: Recovered as yellow-brown, moist to dry, medium dense to very dense Clayey Gravelly SAND. Fine to coarse grained	+ + +					10,11,17 N=28	SPT -
- - - - 25 - - - - - - -						sand.	- + - - + - - + - - + -	xw				hb	SPT
-26.00 - 26 	<u>-13.19</u>			(31)		MICRODIORITE (Kgwu) MW: Grey and pink, fine to medium grained, massive, very high strength. Defects: - Js; 30° (2/m); Pl/Ro, OP; - Js; 70° (2/m); Pl/Ro, OP;	+ - + - + - + - +	MW				Is(50) = 7.04MPa; #	D _(26.24m) -
- 27 - - - - - - - 27.70	-14.89	<u>)</u>		(0)		MICRODIORITE (Kgwu)	+ + + + + + + + + + + + + + + + + + + +	XW MW XW			/ <u>></u>	27.03m-27.42m: XW Microdiorite recovered as Sandy CLAY. 27.65m-27.70m: Is(50) = 6.30MPa_XW zone:	D _(27.63m)
- -28 - - - - - - - - - - - - - - - - -				100 (60)		SW: Grey and black, mainly fine to medium grained, massive, very high to extremely high strength. Defects: - Js; 10°-20° (2/m); Pl/Ro, OP, Fe St, some Cly; - Js; 40° (2/m); Pl/Ro, OP, Fe St, some Cly; - Js; 50°-60° (2/m); Pl/Ro, OP, Fe St, some Cly; - Js; 70°-75° (1/m); Pl/Ro, OP, Fe St, some	+ - + - + - + - + - + - - +	SW				UCS=268MPa; Is(50) = 13.28MPa 29.25m-29.32m: HW zone, very low	D (28.95m)
- - - - - 30		(S#S	Sam	100 (66) nple faile	d alc	Cly;	+ ₋ + ₋ + ₋ + ₋	SW				Is(50) = 9.61MPa Is(50) = 5.78MPa; #	A (29.43m) D (29.48m)
		_										MS	



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ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH121
SHEET	_4_ of _4_
REFERENCE No	12067

PROJECT				Geotechnical Investigation - Stage										
				overpass Abutment B; CH: 5649m;									3 <u>.7 E; 7658003</u>	
PROJECT No				SURFACE R.L. <u>12.81m</u>										
JOB No				HEIGHT DATUM <u>AHD</u>	BEARING			DATE COMP	LETED 8	3/10/14	. DF	RILLER	Saxon Drilling	<u> </u>
R.L. (m) HLdd 30 -17.19	AUGER CASING WASH BORING CORE DRILLING		SAMPLE	MATERIAL DESCRIPTIC	N	- LITHOLOGY	WEATHERING	INTACT STRENGTH :	DEFECT SPACING (mm)	GRAPHIC LOG		TIONAL I AND T RESU		SAMPLES TESTS
-3132333334353637373737373737		100 (38)		MICRODIORITE (Kgwu) SW: (Cont'd) Borehole terminated at 33.9m		+ + + + + + + + + + + + + + + + + + + +	SW					Is(50	60) = 5.31MPa 60) = 9.90MPa 0) = 10.10MPa 80) = 4.45MPa	D (22 200)
REMARK	S#San	nple faile	d alo	ong existing defect surface.			_					L	OGGED BY	
													MS	

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



Project Name	Mackay - Ping Pood		
Project Name Project No	Mackay – Ring Road FG6184	Date	08/10/14
Borehole No	BH 121	TMR H No	12067
Location	Peak Downs Hwy Overpass	Start Depth (m)	26.0
Detail	Abutment B	Finish Depth (m)	33.9
Chainage	5649	Submitted By	J. Lopez
Remarks	3049	Oublinitied by	J. Lopez
FG618A FG618A FG618A	9 BH121	Box 1	MAN SALAN SA
0 100	200 300 400	500 600	700
	SCALE 1:5		