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ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH122
SHEET	_1_ of _4_
REFERENCE No	12068

PRO	JECT	_M	<u>acka</u>	ay Ring F	Road	Geotechnical Investigation - Stage 1								
LOC	ATION	<u>P</u>	eak_	Downs H	lwy C	Overpass Abutment B; CH: 5652m;					COC	ORDINATES 7209	89.5 E; 7658004	.6 <u>N</u>
PRO	JECT N	lo_F	<u>G618</u>	84		SURFACE R.L. <u>12.79m</u> PLUNGE _				DATE STARTED	<u>5/10/1</u>	4 GRID DATUM	M <u>GDA 94 /MG/</u>	<u> Zone 5</u>
JOB	No	_				HEIGHT DATUM <u>AHD</u> BEARING _				DATE COMPLETED	6/10/14	4 DRILLER	R Saxon Drilling	L
DEPTH (m)	R.L. (m)		ASH BORING ORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	SC	/EATHERING	INTACT DEFECT STRENGTH SPACING (mm)	EW GRAPHIC LOG	ADDITIONA AND TEST RES		SAMPLES
0	12.79	9 < 0	≶0 	REC %	Ŋ	Silty CLAY (TOPSOIL)	711/	⊃ 	5	 	. 0			- S ⊢
0.60	12.19					Dark brown, moist, soft to firm. Low plasticity.	7 V	(C	L)					-
- - - -1						Silty CLAY (ALLUVIUM) Brown-orange, moist, stiff. High plasticity.								-
- - - -					А								4,5,6 N=11	SPT =
- - - - -2														=
- - - -					В			(CI	H)				2,4,6 N=10	SPT -
- - - - -3						2 COurse Colours the same to short								-
- - - -					С	3.00m; Colour change to dark brown-orange.							3,6,8 N=14	SPT =
4.90	8.79	9				Sandy CLAY (ALLUVIUM)			4		·			-
- - - - - -					D	Orange-brown, moist, firm to stiff. Medium plasticity. Fine grained sand.							5,6,9 N=15	SPT -
- -5 - - -					Е	5.00m: Increasing sand content with depth. Becoming low plasticity.		(C	:1)				2,2,4 N=6	SPT :
5.90	6.89	9				Silty CLAY (ALLUVIUM)			_					-
-6 - - - - - -					F	Orange-brown, moist, mainly stiff to very stiff. High plasticity. Trace fine grained sand.							2,3,4 N=7	SPT :
- - - -7 -					G	7.00m: Colour change to grey.							4,9,12 N=21	SPT
- - - - -					0								N=21	
-8 - - - -					Н			(CI	H)				3,5,6 N=11	SPT =
- - - - - 9													.	-
- - - - -					J								3,4,7 N=11	SPT -
10										<u> </u>				-
R	EMARK					Granodiorite;		_					LOGGED BY MS	
		<u></u>		<u> </u>				_						



ENGINEERINGBOREHOLE LOG

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

BOREHOLE No __BH122__

SHEET __2_ of __4__

REFERENCE No __12068___

	JECT ATION					Geotechnical Investigation - Stage 1					COORI		 58004.	 .
PRO JOB	JECT N	0 <u>F</u> G	618	<u>84</u>		SURFACE R.L. <u>12.79m</u> PLUNGE HEIGHT DATUM <u>AHD</u> BEARING			DATE S	STARTED <u>5</u>	10/14	GRID DATUM GDA 9	4 /MG/	<u> Zone 5</u>
DEPTH (m)	R.L. (m)	JGER ASING	ORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	SC FATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
10	2.79	₹8	}ŏ 	REC %	S	Silty CLAY (ALLUVIUM)	<u> </u>	≝ ≥			9			<i>y</i> s
10.60	2.19				K	(Cont'd) Colour change to mainly pale grey and brown.		(CH		‡:::::::::::::::::::::::::::::::::::::			3,4,8 N=12	SPT -
- - - - 11 - -					L	Clayey SAND (ALLUVIUM) Brown-orange mottled grey, moist, loose. Fine grained.							3,3,5 N=8	SPT]
- - - - - - -														- - - - - -
- - - - -					М	12.00m: Colour change to pale grey.		(SC					2,3,4 N=7	SPT -
- - - 13 - - - -					N	13.00m: Increase in clay content with depth. Colour change to grey-brown. Becoming medium dense.							4,5,5 N=10	SPT -
13.70 - - - 14 - - -	-0.91	-			Р	Silty CLAY (ALLUVIUM) Brown-orange mottled grey, moist, very stiff. High plasticity.					_		6,8,10 N=18	SPT :
 - - - - - 15 - -					Q			(CH				,	6,8,10 N=18	SPT]
- - - 15.80 - -	-3.01	-				Clayey SAND (ALLUVIUM)				± 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				- - - - -
- 10 - - - - -					R	Pale grey-brown, moist, medium dense. Fine to coarse grained.						4	,11,15 N=26	SPT :
- - - 17 - - - -					S			(SC				8	,14,13 N=27	SPT -
- - - - 18 - - -					Т	18.00m: Increase in clay content with depth.				T		9	,11,16 N=27	SPT -
18.60 - - - - - 19 - -	-5.81				U	Sandy CLAY (RESIDUAL) Pale grey, moist, very stiff. Low plasticity. Fine to coarse grained sand.		(CL)					4,7,8 N=15	SPT -
- - - - - 20								,,		<u>+</u> ::::::::::::::::::::::::::::::::::::			١	- - - - -
	EMARK					oranodiorite;	·					LOGGEI MS		



ENGINEERING BOREHOLE LOG

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

BOREHOLE No	BH122
SHEET	_3_ of _4_
REFERENCE No	12068

LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5652m	<u>ı;</u>			COORDIN	ATES 720989).5 E; 7658004.	0.11
				000.12	AILS <u>12000</u>	7.5 L, 7050004.	<u> </u>
PROJECT No <u>FG6184</u> SURFACE R.L. <u>12.79m</u>						GDA 94 /MG/	<u> Zone 55</u>
JOB No HEIGHT DATUM _AHD _	BEARING		DATE COMPLETED 6	6/10/14	DRILLER	Saxon Drilling	L
R.L. (m) SON (1)% MATERIA BUNE BUNE BUNE BUNE BUNE BUNE BUNE BUNE	L NO NO LITHOLOGY	USC WEATHERING	INTACT DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL I		SAMPLES
Sandy CLAY (RESIDUAL)						6,11,12	SPT -
V (Cont'd) Colour change to pale grey a mottled orange.	and brown	(CL)	-			N=23	
						6,9,12 N=21	SPT -
Clayey SAND (RESIDUAL) Red-brown and yellow, mois mainly very dense. Fine to coarse grained sand Trace fine, angular gravel.			+			8,28,27 N=55	SPT -
-23 		(SC)				18,30/110	SPT :
-24 						12,17,15 N=32	SPT -
AA GRANODIORITE (Kgwu) XW: Recovered as dark brown dense to very dense Sandy angular. Fine to coarse grain	GRAVEL. Fine, $ + $	XW				30/100	SPT
	+ + 					13,15,27 N=42	SPT =
GRANODIORITE (Kgwu) HW: Brown, white and grey, grained, massive, very low s Some XW zones throughout	strength. $ + $		-			17,30/100	SPT :
AD AD	+ + 	HW				30/120	SPT
AE (69)						hb ·	SPT -
REMARKS Kgwu - Wundaru Granodiorite; # Sample failed along existing defect surface.					L	OGGED BY	



ENGINEERING BOREHOLE LOG

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

BOREHOLE No __BH122 __

SHEET __4__ of __4__

REFERENCE No __12068 ___

PRO					Geotechnical Investigation - Stage 1							 989.5 E; 7658004.	
					Overpass Abutment B; CH: 5652m;						ORDINATES <u>720</u> 4		
JOB I												R Saxon Drilling	
DEPTH (m)	R.L. (m)	ÜGER ASING ASH BORING ORE DRILLING	CODE	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	SC	/EATHERING	INTACT DEFE STRENGTH SPAC (mm		ADDITION/ ANI TEST RE	D .	SAMPLES
30	-17.21	₹0≥0	REC %	Ŝ	GRANODIORITE (Kgwu)	+	[ס	>		0			S F
- - - - -			100 (11)		HW: (Cont'd)	+	н	w					-
- - - - -	-18.21		100 (61)		GRANODIORITE (Kgwu) MW: Pink, white and grey, fine to coarse grained, massive, medium strength. Defects:	+ +	M	w				ls(50) = 0.07MPa	A (31.35m)-
31.80	<u>-19.01</u>		100		- Js; 10°-20° (4/m); PI/Ro, OP; - Js; 50° (1/m); PI/Ro, OP; GRANODIORITE (Kgwu) SW: Grey-white, fine to coarse grained, massive, high to mainly very high strength. Defects:	+	-				ls(50) = 0.78MPa; # 50) = 0.81MPa; # 50) = 3.79MPa; # UCS=97.3MPa;	A
- - - - 33			(33)		Jerects. Js; 10°-20° (3/m); PI/Ro, OP, Cn; Js; 30° (2/m); PI/Ro, OP, Cn; Js; 45° (1/m); PI/Ro, OP, Cn; Js; 70° (1/m); PI/Ro, OP, Cn;	+ + +	-						-
- - - - - - - -34			100			+ + + +	-				ls(50) = 2.95MPa; #	D _(33.30m)
- 35			(76)			+ + + + + + + + + + + + + + + + + + + +	SI	w			IS	ls(50) = 5.91MPa s(50) = 11.01MPa ls(50) = 7.30MPa	A (24 46m)
- - - - - - -			100 (64)			+	-					ls(50) = 8.38MPa	A (35.55m)-
- 36 - - - - - - -					36.20m: Becoming MICRODIORITE.	+ + + + + + + + + + + + + + + + + + + +	-						
- 37 -37.15	-24.36		100			- ' - - <u>-</u>						ls(50) = 7.13MPa ls(50) = 6.13MPa	A (36.83m) D (36.88m)
-38					Borehole terminated at 37.15m								
R	EMARK				sranodiorite;		_	_				LOGGED BY MS	
		<u># 5a</u> r	ilbie talle	<u>u alo</u>	ong existing defect surface.		_	-					

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	06/10/14
Borehole No	BH122	TMR H No	12068
Location	Peak Downs Hwy Overpass	Start Depth (m)	29.1
Detail	Abutment B	Finish Depth (m)	37.15
Chainage	5652	Submitted By	J. Lopez
Remarks			
FG E	0 8 8 H122	Box 1	AND
0 100	200 300 400	500 600	700
0 100	200 300 400 SCALE 1:5	500 600	700