#### **COPYRIGHT NOTICE**

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the <u>Creative Commons Attribution 4.0 Licence</u> (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/



PROJECT

## **ENGINEERING BOREHOLE LOG**

BOREHOLE No	BH138
SHEET	<u>1</u> of <u>4</u>
REFERENCE No	12083

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

Mackay Ring Road Geotechnical Investigation - Stage 1

LOC	ATION	<u>Furs</u>	s <u>de</u> r	<u>n Creek</u>	Brid	ge Pier 1; CH: 9091m;				COOR	DINATES 721473.7 E; 7661409	<u>.1 N </u>
PRO	JECT No	<u>FG6</u>	6 <u>18</u> 4	<u> </u>		SURFACE R.L. <u>6.25m</u> PLUNGE						
JOB	No		_			HEIGHT DATUM <u>AHD</u> BEARING			DATE COMPLETE	D <u>6/11/14</u>	DRILLER Saxon Drilling	<u>g</u>
DEPTH (m)	R.L. (m)	GER SING SH BORING	DRILLING	RQD ( )% CORE	SAMPLE	MATERIAL DESCRIPTION	<b>ГІТНОLOGY</b>	C ATHEDING		C. C. D. T. E.W. C. D. T. GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	6.25		S F	REC %	SAI		E.	USU N	!₩>±≥¬≥₩₩>∪≥	11 8≥⊡ 8 8		SAN
- - - - - - - - - - - -	5.45					Clayey SILT (TOPSOIL) Brown, dry, firm.	<u>1/ 1/</u>	(ML				
- 1 - - -					A	Sandy SILT (ALLUVIUM) Brown, dry, very stiff. Low plasticity. Fine grained sand.		(ML			6,9,10 N=19	SPT -
<u>1.60</u> - - - - 2 -	4.65				В	SAND (ALLUVIUM) Pale brown, dry to moist, loose. Fine grained sand. Trace silt.					3,4,4 N=8	SPT
- - - - - - - - - - - - - - - - - - -											2,3,4	
					С	3.70m: Becoming medium dense. Fine to coarse grained sand. Trace fine gravel.		(SP			2,0, <del>1</del> N=7	SPT -
					D						5,7,7 N=14	
	1.25				E	Gravelly SAND (ALLUVIUM) Brown, moist to wet, medium dense. Fine to coarse grained sand. Fine to medium gravel.		>				SPT -
6.70	-0.45				F			(SW			5,6,5 N=11	SPT
					G	Sandy GRAVEL (ALLUVIUM) Grey, wet, loose to medium dense. Fine to medium, subrounded gravel. Coarse grained sand.					4,3,3 N=6	SPT
- 8					Н			(GP			5,5,11 N=16	SPT -
8.90 - 8.90	-2.65				J	SAND (ALLUVIUM) Grey, wet, medium dense. Fine to coarse grained sand. Gravel lenses throughout.		(SW	↓ ↓ + }		8,8,8 N=16	SPT
10100	-3.75							> >				

REMARKS Kgwu - Wundaru Granodiorite; \_\_\_\_\_ # Sample failed along existing defect surface.

LOGGED BY ME



## ENGINEERING BOREHOLE LOG

BOREHOLE No	BH138
SHEET	<u>2</u> of <u>4</u>
REFERENCE No	12083

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

PROJECT	Mackay Ring Road G	eotechnical Investic	ation - Stage	1	 							
LOCATION	_Fursden_Creek Bridg	e_Pier <u>1;</u> CH: 9091m	ı <u>;                                    </u>		 			CO	ORDINATE	S <u>72147</u>	3.7 E; 7661409	<u>1 N</u>
PROJECT No	<u>FG6184</u>	SURFACE R.L.	6.25m	PLUNGE	 	DATE S	TARTED	3/11/	<u>14</u> GF	RID DATUM	<u>GDA 94 /MG</u>	<u>A Zone 55</u>
JOB No		HEIGHT DATUM	_ <u>AHD</u>	BEARING	 	DATE COM	IPLETED _	6/11/	14	DRILLER	Saxon Drilling	L
R.L.	RQD					INTACT	DEFECT					

Ê	R.L. (m)		RQD ()%		MATERIAL		ğ	INTACT STRENGTH	DEFECT	g	ADDITIONAL DATA	
DEPTH (m)		BOR DRIL		щ		LOG	HERI		(mm)	HC L	AND	S L
当 10	-3.75	AUGER CASING WASH BORING CORE DRILLING	CORE REC %	SAMPLE	DESCRIPTION	ГІТНОГОСУ	USC	STRENGTH	∪∪ Ш>∪≥≥≥≥Ш	GRAPHIC LOG	TEST RESULTS	SAMPLES TESTS
-	-5.75				<b>GRANODIORITE (Kgwu)</b> <b>XW:</b> Recovered as grey, brown and white, moist, very stiff Clayey SAND.	+ + + 					6,7,12 N=19	SPT -
- 				L		 +  +					13,28,30/130	SPT -
- 				М		+ + + +					8,14,30/135	SPT -
5 10:51				N		 +  +					12,27,30/100	SPT -
ol gINt Add-In 04/03/201				Р		+ +  +					22,30/95	SPT -
ingFile>> Datgel CPT To				Q		+ +  +	xw				27,30/120	SPT ]
FG6184 - BOREHOLES.GPJ < <drawingfile>&gt; Datgel CPT Tool glint.Add-in 04/03/2015 10:51 </drawingfile>				R		 +  + 					30/150	SPT -
ПНОLOGY FG6184 - BC				S		 +  + 					27,30/115	SPT -
18 BOREHOLE LOG WI				Т		 +  +					26,30/120	SPT _
TMR.Jan 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY         11         12         12         13         14         14         14         14         14         14         14         14         14         14         14         14         14         15         16          16         16				U		+ + + + + + + + + + + + + + + + + + + +					24,27,23 N=50	SPT
TMR JAN 15						+  +						
F	REMARK	s <u>Kgw</u> u	<u>- Wunda</u>	aru G							LOGGED BY	
		<u># Sa</u> r	nple faile	d alo	ng existing defect surface.	1					. ME	

Queensland Government
--------------------------

# ENGINEERING BOREHOLE LOG

BOREHOLE No	BH138
SHEET	<u>3</u> of <u>4</u>
REFERENCE No	12083

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

PRC	ROJECT Mackay Ring Road Geotechnical Investigation - Stage 1												
LOC	ATION	<u>Fursder</u>	<u>n Creek</u>	Brid	ge Pier 1; CH: 9091m;						COO	ORDINATES 721473.7 E; 7661409	<u>.1 N </u>
PRC	PROJECT No_FG6184 SURFACE R.L6.25mPLUNGE DATE STARTED _3/11/14 GRID DATUM _GDA 94 /MGA Zone 55												
JOB	JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 6/11/14 DRILLER Saxon Drilling												
	R.L.		RQD						INTACT	DEFECT			
Ê	(m)	D NG NG	()%					υ	STRENGTH	SPACING	ŋ	ADDITIONAL DATA	
TH (n		LUGER ASING VASH BORING ORE DRILLING		ш	MATERIAL		OGΥ	HERING		(mm)	IC LC	AND	ß
DEP		GER ASH B ASH B	CORE	MPLI	DESCRIPTION		HOL	EATH	프로그르 ㅋㅋ	00.5>>>>	APH	TEST RESULTS	STS
20	12 7	E B S S S I	REC %	S			5	1918	<u>س&lt;ىخى&lt;</u> س	ш <i>&gt;</i> ∪≥́≤>Ш	15		I S E

	DEPT	-13.75	UGER ASING	ASH B ORE DI	CORE	SAMPLE	DESCRIPTION	LITHOLC	USC WEATHE	MAKE COCHE	GRAPHIC	TEST RESULTS	SAMPLE TESTS
	_20 -	-13.75	40	≤0 	REC %	S V	GRANODIORITE (Kgwu)				0	30/95 .	
	-						XW: (Cont'd)	   +					-
	-												-
	- 21				100			+ 	-	÷ · · · · · · · · · · · · · · · · · · ·			-
					(0) (0)			+					-
	-			ſ	100	$\vdash$		+			$\bowtie$	21.24m-21.41m: Core Loss	-
	-				0			   +	1				-
	- 22					W			-			30/115	SPT _
								+ 	-				-
	-							+	xw				-
	- - - 23							+				30/55 .	- - 
10	:							   +				hb	
15 10:5	-							   +	1				-
4/03/20	-								-				-
Vdd-In C	-24					Y		+ 				30/95	SPT
ol gINt /	-							+					-
PT Too	-							+					-
Datgel CPT Tool gINt Add-In 04/03/2015 10:51	- 25					_		   +				30/50	
		-18.93			100 (0)	F	GRANODIORITE (Kgwu)		-			hb Is(50) = 2.66MPa	
< <drawingfile>&gt;</drawingfile>	-				(0) 100		<b>SW:</b> Grey and pink, medium to coarse grained, massive, high to very high		sw				-
	-				(41)		strength.	+ 	MW			Is(50) = 2.03MPa 25.75m-25.95m: Is(50) = 1.40MPa MW zone, HFZ;	D (25.65m) A (25.70m)
LES.GF	- 26				100		Occasional Microdiorite inclusions	+				_ MW zone, HFZ;	-
REHO					100 (87)		(xenoliths)	+					-
84 - BC	-						Defects: - Js; 0°-30° (3/m); PI/Ro, TI-OP; - Js; 30°-60° (<1/m); PI/Ro, TI-OP;	   +				UCS=157MPa	-
FG61	- 27						- Js; 30°-60° (<1/m); Pl/Ro, Tl-OP;	  +				ls(50) = 3.07MPa ls(50) = 5.86MPa; #	A (26.84m)-
OLOGY	- "							— 	-			10(00) 0.00111 a, #	- (20.9011)
W LITH	-							+ 					-
FOG	-				100 (88)			+					-
REHOL	- 28				()			+	sw			ls(50) = 3.65MPa ls(50) = 4.05MPa	D (28.05m)-
NG BOF	-							   +-				Is(50) = 4.05MPa	A (28.10m)
NEERII	-												-
ENG	- 20				100			+ 	-				-
Log A	-				(84)			+					-
15.GLB	-							+					-
IR JAN	- 27 - 27 - 27 - 28 							   +	1			ls(50) = 2.29MPa ls(50) = 4.52MPa; #	A <sub>(29.62m)</sub> D <sub>(29.67m)</sub>
Ę		EMADR	s Ki	gwu	l ı - Wund	aru G	iranodiorite;	L				LOGGED BY	
	rı						ng existing defect surface.			<b></b>		ME	
			_										



## ENGINEERING BOREHOLE LOG

BOREHOLE No	BH138
SHEET	<u>4</u> of <u>4</u>
REFERENCE No	12083

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

PROJECT	<u>Mackay Ring R</u>	oad G	eotechnical Investic	<u>gation - Stage</u>	1	 							
LOCATION	Fursden Creek	Bridge	<u>e Pier 1; CH: 9091m</u>	n <u>;</u>		 			CO	ORDINATES	721473	3.7 E; 7661409.	<u>1 N </u>
PROJECT No	o <u>FG6184</u>		SURFACE R.L.	6.25m	PLUNGE	 	DATE S	TARTED	<u>8/11/</u>	14GRID	DATUM	<u>GDA 94 /MG/</u>	<u>A Zone 55</u>
JOB No			HEIGHT DATUM	_ <u>AHD</u>	BEARING	 	DATE COM	IPLETED	<u>6/11/</u>	<u>14</u> D	RILLER	Saxon Drilling	L
R.L.	RQD						INTACT	DEFECT					

Ê	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD ()%		MATERIAL		Q	STRENGTH	SPAC	CING	ЭG	ADDITIONAL DATA	
DEPTH (m)		R BOR DRIL		Щ	DESCRIPTION	год	HERIN		(mr	m)	HIC L(	AND	E ES
30	22.75	AÚGEI CASIN NASH CORE	CORE REC %	SAMPLE	DESCRIPTION	<b>LITHOLOGY</b>	JSC VEAT	STRENGTH	ပပ ။>ပ:	ZXXXX	<b>GRAPHIC LOG</b>	TEST RESULTS	SAMPLES TESTS
	-23.75		ILC //	•,	GRANODIORITE (Kgwu) SW: (Cont'd)	+					0		
30.50	-24.25		100		SW: (Cont'd)	+	SW			· · · ·			-
-					Borehole terminated at 30.5m								-
-31										· · ·			-
-									-	· · ·			-
F									-				-
Ē										· · ·			-
- 32										· · ·			-
F										· · ·			-
F									-	· · ·			-
Ē										· · · ·			-
- 33									-				-
10:51													-
3/2015													-
04/0										· · · ·			-
I-ppe I									-				-
													-
										· · ·			-
- Datge - 35										· · ·			-
Elle>													-
Drawing									-				-
]× -										· · ·			-
9.S= - 36									-				-
DREHO										· · ·			-
84 - BC													-
FG61													-
2010GY									-	· · · ·			-
										· · ·			-
										· · ·			-
비 - 38									-				-
BORE													-
ERINO									-				-
										• • •			-
a 8 8										· · · ·			-
GLB L													-
TMR.JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY FG6184 - BOREHOLES.GPJ < CHATTALTALTALTALTALTALTALTALTALTALTALTALTA													-
T WL 40													-
		s <u>Kgwu</u>	- Wunda	aru G								LOGGED BY	
		<u># San</u>	nple faile	<u>d alo</u>	ng existing defect surface.							ME	

#### CORE PHOTO LOG

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



Department of Transport and Main Roads

Project Name	Mackay – Ring Ro	ad				
Project No	FG6184			Date		06/11/14
Borehole No	BH138			TMR H N	0	12083
Location	Fursden Creek Brid	lge		Start Dep	oth (m)	21.0
Detail	Pier 1			Finish De	epth (m)	30.50
Chainage	9091m			Submitte		M.Ensor
Remarks				·		
25: -B)	SSIS		28.38			
		29.07				
	26					305
	A CONTRACT OF A	1				
0 100	200	300	100	500	600	700
0 100	200	300	400	500	600	700