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-Er			Qu	ıe	e	nsland	BORE	HC	DL	E	LOG			SHEE	T	<u>_</u>	3
1	<u>J</u>	T				rnment	FOR GEOTE SYMBOLS REFER								RENCE No	<u>1208</u>	
PRO	JECT	Mad	<u>ckay Rir</u>	<u>ng R</u> o	<u></u>	Geotechnical Investigation - St	age 1										
LOC	ATION					ge Abutment B; CH: 9194m;								ORDINA	TES 72150	2.5 E; 766150	9 <u>.2 N</u>
PRO	JECT No					SURFACE R.L. <u>8.64</u> m											
JOB	No					HEIGHT DATUM <u>AHD</u>	BEARING			D	ATE CON	IPLETED	<u>6/9/1</u>	4	DRILLER	ND Drilling I	Pty Ltd
	R.L.		RQI								INTACT	DEFEC	Г			DATA	
(m) T	(m)	G G BORING				MATER	IAL	5			IRENGIH	(mm)			ADDITIONAL	DATA	
DEPTH (m)					SAMPLE	DESCRIP	TION	ГІТНОГОGY	THE			~~~~	EW GRAPHIC LOG				SAMPLES TESTS
0	8.64			%	SAN			Ē	USC ME		TRENGTH	ш>о≥≥	11 8 8 8 8		TEST RESU	JLTS	SAN
0.30	8.34		'			Sandy CLAY (TOPSOIL) Dark brown, dry, soft.		<u>\\</u> 1/	(CI))			· · ·				
-						Medium plasticity. Fine to sand. Roots throughout.	medium grained						· · ·				-
Ē						Sandy CLAY (ALLUVIUM)											
-1					_	Black mottled orange, dry, Medium plasticity. Fine to											-
E					A	sand.							· · ·			3,4,6 N=10	
-										-			· · ·				-
1.90	6.74												· · ·				
-2					в	Clayey SAND (ALLUVIUM Brown mottled orange, mo) vist, medium									4,6,5	SPT -
E						dense. Fine to coarse grained.			(SC	;)						N=11	
-						U U					· · · · · · ·		· · ·				-
- 3-90	5.64				_					;			: : ·				-
					С	Sandy CLAY (ALLUVIUM) Brown mottled grey, moist	, very stiff.						· · ·		:	Su _(PP) =120kPa	; U50 -
						Medium plasticity. Fine to sand.	coarse grained										_
4									(CI))							
					D											3,8,9 N=17	
													· · ·				-
4.90	3.74									<u> </u>			: : ·				_]
5-5					Е	Silty CLAY (ALLUVIUM) Grey mottled orange, mois	t, stiff to very								:	Su _(PP) =110kPa	U50 -
					_	stiff. High plasticity. With fine to	medium grained									(11)	
- - -						sand.	C C			-							-
6					_				(CH				· · ·				
					F				(CH	'/ .						2,4,8 N=12	SPT
					_												-
													· · ·				-
7	1.44																-
					G	Sandy CLAY (ALLUVIUM) Grey mottled orange, mois			(CI))						Su _(PP) =70kPa	; U50 <u>-</u>
7.60	1.04					Medium plasticity. Fine to	coarse grained			+							-
1_ 1_ 28						isandCallering				-							
					н	Pale grey, moist, medium Fine to medium grained sa	dense.		1				- • • • • •			8,14,15 N=29	SPT -
				-		i i i i i i i i i i i i i i i i i i i			(SC	1			· ·			N=29	
													· ·				
1 - 9 <u>8</u> 0	-0.36					Sandy CLAY (ALLUVIUM)											
9.30	-0.66				J	Grey, moist, stiff. Medium plasticity. Fine to		K	(CI)	<u>'</u>						Su _(PP) =48kPa	; U50 -
						Silty SAND (ALLUVIUM)			(SM				· ·				
						Grey, wet, medium dense. Fine to medium grained sa							· · ·				
<u>ا بار ا</u> . F	REMARK	s <u>Kg</u> v	<u>vu - Wu</u>	ndar	u G	iranodiorite;		<u> </u>	·							LOGGED BY	
	-					ng existing defect surface.		_								EB/ND	

ENGINEERING

BOREHOLE No

___<u>BH145</u>__

STARE .

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Queensland Government

ENGINEERING BOREHOLE LOG

BOREHOLE No	BH145
SHEET	<u>2</u> of <u>3</u>
REFERENCE No	12086

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

PROJECT	Mackay Ring Ro	oad_	Geotechnical Investigation - Stage 1								
LOCATION	Fursden Creek	<u>Brid</u>	ge Abutment B; CH: 9194m;					СО	ORDINATES 721502.5 E; 76	61509.	<u>2 N</u>
PROJECT No	_ <u>FG6184</u>		SURFACE R.L. <u>8.64m</u> PLUNGE			DATE S	TARTED _5/	<u>/9/14</u>	4 GRID DATUM GDA 9	<u>94 /MG/</u>	<u>A Zone 58</u>
JOB No			HEIGHT DATUM <u>AHD</u> BEARING			DATE COM	PLETED _6/	<u>/9/1</u> 4	<u>4</u> DRILLER <u>ND Dr</u>	illing Pt	y Ltd
R.L. (m)	RQD 9NINC 9NINC 100 100 100 100 100 100 100 100 100 10	SAMPLE	MATERIAL	гітногоду	C ATHERING	INTACT STRENGTH ₩>±₽	DEFECT SPACING (mm)	APHIC LOG	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
10 -1.36	BUSASS CORE CORE CORE REC %			E	US(▥⋝ェを」⋝ѿ	™>°0≥≥>≦ 	GR			SAI TES
10.20 -1.56 10.40 -1.76		к	Silty SAND (ALLUVIUM) (Cont'd) Clayey SAND (ALLUVIUM) Grey, moist, medium dense. Fine to coarse grained sand. Clayey SAND (RESIDUAL)		(SM) (SC) (SC)				9	, <u>12,12</u> N=24	SPT
- - 11 - 		L	Orange mottled grey and white, moist, medium dense. Fine to coarse grained.		(30)				9	,11,16 - N=2 7-	SPT
 <u>-3.36</u>			Sandy CLAY (RESIDUAL) Orange mottled grey-brown, moist, medium dense. High plasticity. Fine to coarse grained sand.		(CH)						
		M	MICRODIORITE (Kgwu) XW : White, grey and brown, medium grained, extremely low strength.		xw					30/20	<u>SPT</u>
- 13		N			~~~				33,5	30/120	SPT
1381 -5.17 1381 -5.17 14 14 15 15 16 16 17 18 18 18 18 18 19 19 19 19 10 10 10 10 10 10 10 10 10 10	$ \begin{array}{c} (0) \\ 100 \\ (0) \\ (0) \\ 100 \\ (0) $		MICRODIORITE (Kgwu) MW: Grey and brown, fine to medium grained, massive, low to medium strength. Broken throughout.		MW XW MW HXW HW HW HW HW MW]- 14.50m-14.60m: Clay seam.]- 15.65m-15.80m: Clay seam.]- 15.93m-16.07m: Clay seam.	-30/10-	SPT
		Q	GRANODIORITE (Kgwu) HW: Pink, white and grey, fine to coarse grained, massive, extremely low strength.		HW				23	,30/20	

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

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LOGGED BY EB/ND

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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH145
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	12086

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

PROJECT	Mackay Ring Road	d Geotechnical Investion	<u>gation - Stage</u>	1									
LOCATION	<u>Fursden Creek Bri</u>	dge Abutment B; CH: 9	9 <u>194m;</u>						COOF	RDINATES 721502	2.5 E; 7661509	.2 <u>N</u>	
PROJECT N	lo_F <u>G6184</u>	SURFACE R.L.	<u>8.64m</u>	PLUNGE _			DATE S	TARTED <u>5</u>	/ <u>9/14</u>	GRID DATUM	GDA 94 /MG	<u>A Zone 5</u>	5
JOB No		_ HEIGHT DATUM	_ <u>AHD</u>	BEARING _			DATE COM	PLETED 6	/ <u>9/14</u>	DRILLER	ND Drilling P	ty Ltd	
(m)	RQD ()%		MATERIAL		GY	RING	INTACT STRENGTH	DEFECT SPACING (mm)	C LOG		DATA	0	

E			BORI			MATERIAL) 9	HERIN	(mm)		AND	S
DEPTH (<u><u> </u></u>		CORE REC %	SAMPLE	DESCRIPTION	ГІТНОГОGY	JSC VEATH	THLSING SSSOCMTCLSISS SSSOCMTCLSISS	EW GRAPHIC LO	TEST RESULTS	SAMPLES
20 -	-11.36	405	>0	REC %	S	GRANODIORITE (Kgwu)	+					S S
						HW: (Cont'd)	- '-	-		•		
					R		+		│ : : : : : : : : : : : : : : : : : :		30/25	-SP
							 +					
21							L + -					
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					-\$		L+			•	30/10	SF
							+	HW				
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					—		+			•	30/20	SF
							ŀ'-					
23							+		: : : : : <u>=</u> : : : : : :			
								1				
										•		
3.65 -	-15.01		Ļ				+			<u>.</u>		
	45.00			(0) 100		GRANODIORITE (Kgwu) MW: Grey, black and pink, massive, fine	+	мw			— 23.80m: J; 10°, Un/Ro;	
24 -	-15.36			(100)		to coarse grained, medium strength.	+		┝╴╔╾┻╼╍┥┣┹┓╴╴╴	<u>+</u> + -	24.10m: J; 10°, Un/Ro, Sinf; IS(50) = 9.14MPa	D
				<u> 100 </u> (100)		Highly fractured throughout.	i				IS(50) = 4.56MPa; #	A (24
						GRANODIORITE (Kgwu) SW: Grey, black and pink, fine to coarse	+				UCS=106MPa	
				100 (100)		grained, massive, very high strength.	+	sw			24.70m: J; 10°, Un.Ro: (50) = 9.72MPa	D (24
25				(100)			- ' -			•	Is(50) = 7.05MPa	A (24
20							+			•		
- 25 <u>5.49</u>	-16.85							1		•		
						MICRODIORITE (Kgwu)	+					
						SW: Grey, fine grained, massive, very high strength.	+	-		• • •	ls(50) = 8.52MPa	A (25)
26						Occasional thin calcite veins.	+ + +	sw				
							- '- +			•		
	-18.02						 +					
.66 -	-10.02					GRANODIORITE (Kgwu)	+					1
27				100		SW: Grey, black and pink, fine to coarse						
				(100)		grained, massive, very high to extremely high strength.	+	0.44			ls(50) = 10.77MPa	D (27
						Defects:	+	SW			ls(50) = 8.75MPa	A (27
						- Js; 35° (1/m); Pl/Ro, TI, slight Fe St;						
7.90 -	-19.26						+					
28						MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, very	+ +	1				
						high strength.	- '	1				
							+	sw				
							[+]]				
26 - 27 - 27 - 28 - 29 -				100			[+]				ls(50) = 6.52MPa ls(50) = 1.72MPa; #	A (28)
9.20 -	-20.56			100		Borehole terminated at 29.2m.	+					(28
<u>9.20</u> -						Dorenole lenninaleu dl 29.211						
										•		
30												
PEI	MARK	s Ko	gwu	- Wunda	aru G	ranodiorite;			·		LOGGED BY	·
	1/1/17/11/1/					ng existing defect surface.					EB/ND	

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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 Road		
Project No	FG6184	Date	06/09/14
Borehole No	BH145	TMR H No	12086
Location	Fursden Creek Bridge	Start Depth (m)	13.81
Detail	Abutment B	Finish Depth (m)	29.20
Chainage	9194m	Submitted By	DC
Remarks			
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	Scale (mm)		
100	200 300 400 500 600	700 800	900 1000

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