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GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 17/03/2016

BH213

Sheet 1 of 3

BOREHOLE No

REFERENCE No

H12222

PROJE	СТ	Mackay Ring Road												
LOCATION		P	ion	eer Rive	er Bi	ridge, Pier 4 (LHS)					C	OORDINATES 721287.2	E; 766014	4.0 N
PROJECT No		F	FG6184			SURFACE RL 6.64m	PLUNGE 90°		90°	DATE STARTED 27/08/2015		GRID DATUM GDA 94 / MGA		/IGA Z55
JOB No		2	242/10G/906		6	HEIGHT DATUM A.H.D.	BEARING			DATE COMPLI	ETED 28/08/2015	DRILLER C	airns Drill	ing
DEPTH (m)	R.L. (m)	AUGER CASING	VASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH 표근구구우구, 거리		,	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
- - - - - - - - - - - - - - - - - - -	6.04					Silty SAND (Topsoil) Dark brown, moist, very loose to loose. Rootlets and organics throughout. Silty SAND (Alluvium) Dark brown, dry, loose. Fine grained sand.							4, 4, 5 N=9	SPT
- - - - - - - - - - - - - -					в		XXXXXXXXXX	(SM)					3, 4, 4 N=8	SPT
- 3 	3.64	-			С	SAND trace silt (Alluvium) Brown, wet, very loose to loose. Fine grained sand.		(SP)					2, 2, 2 N=4	SPT
- 4 	2.64	-			D	Clayey SAND (Alluvium) Dark brown, wet, very loose to loose. Fine grained sand, low plasticity.		(SC)					1, 2, 2 N=4	SPT
- - - -	0.74	-				SAND (Alluvium) Dark brown, wet, very loose to loose. Fine to medium grained sand.		(SP)					1, 2, 2 N=4	SPT
- 6 	0.71	-			F	SAND trace gravel (Alluvium) Brown, wet, medium dense. Fine to coarse grained sand.							7, 7, 7 N=14	SPT
- - - - - - -					G			(SP)					9, 10, 8 N=18	SPT
- - - - -	-1.41	-			п	Clayey SAND (Alluvium) Pale brown grey, wet, medium dense. Fine to medium grained sand, low		(SC)					8, 6, 11 N=17	SPT
- - - - - - -	-2.36				I	plasticity. Sandy CLAY (Alluvium) Orange brown and pale grey, moist, very stiff. Fine grained sand, high plasticity.		(СН)					6, 11, 12 N=23	SPT
	5.00			·	·	Continued on next sheet			J		·			
RI	EMAR	KS:	ŀ	(gwu =	= W	'undaru Granodiorite						LOGGED BY	REVIE	WED BY
												T.Goosey	S.I	oley
L	TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI													

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GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 17/03/2016

BH213

Sheet 2 of 3

BOREHOLE No

REFERENCE No

H12222

PROJEC	T	Mackay Ring Road												
LOCATI	ON	ŀ	Pion	eer Rive	er B	ridge, Pier 4 (LHS)						COORDINATES 721287.2	E; 766014	44.0 N
PROJEC	T No	ŀ	G61	L84		SURFACE RL 6.64m	plunge 90°		90°	DATE STARTED 27/08/2015		GRID DATUM GDA 94 / MG		MGA Z55
JOB No		2	242/10G/906		6	HEIGHT DATUM A.H.D.	BEAF	RING_		DATE COMPLETED 28/08/2015		DRILLER Cairns Drilling		ling
DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표구고고기			ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
		A	<u>× 0</u>		J	Silty CLAY trace sand (Alluvium) Mottled pale grey and orange brown, moist, very stiff. Fine grained sand, high plasticity.		(CH)		<u></u>			5, 9, 12 N=21 6, 7, 10	SPT
- - - - - - - - - - - - - - - - - - -	-5.36					Clayey SAND (Alluvium)				- - - - - -			N=17	
	-6.36				L	Mottled pale grey and orange brown, moist, medium dense. Fine grained sand, high plasticity.		(SC)					6, 6, 9 N=15	SPT
- 13 - - - - - - -						Silty SAND trace clay (Alluvium) Pale grey, moist, medium dense. Fine to medium grained sand.	× × × × × ×	(SM)		-			7, 10, 14 N=24	SPT
- 14 - - - - -	-7.36					Silty CLAY trace sand (Alluvium) Pale grey, moist, very stiff. Low plasticity.		(CL)					8, 12, 17 N=29	SPT
- - - - - - -	-8.71				0	MICRODIORITE (Kgwu	++					1	6, 21, 30/100	SPT
- - - - - - - - - - - - - - - - - - -) XW: Recovered as green grey, moist, hard, sandy gravelly clay. Fine to medium grained gravel.	+ + + + + + + + + + + +	xw		- - - - - - - - - - - - - - - - - - -			30/110	
- 17 - 17 	11 20				Q		+ · + · + · + · + ·						30/60 hb	
- 18 - - - - - - -	<u>-11.38</u>			(0) <u>100</u> (17)		MICRODIORITE (Kgwu) MW: Pale brown grey, fine grained, massive, low to medium strength.		нw мw	L	E VC	18.02m-18.30m: HV FL 18.65m-18.97m: HV	V zone. Cly FL	30/20 hb 50)=2.70 MPa	SPT (18.40m)
- - - - - - - - -	<u>-12.36</u>			<u>100</u> (21)		Zones of highly weathered, low strength dolerite. MICRODIORITE (Kgwu) SW: Pale blue grey, fine grained, massive, high strength.		sw	M	c vc c			50)=1.40 MPa	 D (19.20m)
-	-13.36					Continued on next sheet	V.							
RE	MAR	KS	: k	(gwu =	= W	/undaru Granodiorite						LOGGED BY	REVIE	WED BY
												T.Goosey		Foley
	TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI													

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											_		FINAL 1	7/03/2016
***	會於	Ma.						GE	OTECHN	NICAL		BOREHOLE No	В	H213
X					ensland		BOREHOLE LOG					Shee	t 3 of 3	
No.		° (30	Ve	ernment		SY		GEOTECHNICAL T			REFERENCE No	Н	12222
PROJECT	M	ackay	/ Ring	Ro	ad									
LOCATION	Pi	onee	r Rive	r Br	idge, Pier 4 (LHS)							COORDINATES 721287.2	2 E; 76601	44.0 N
PROJECT No	FC	66184	1		SURFACE RL 6.64	m	PLU	JNGE S	90°	DATE STAF	RTED 27/08/2015	GRID DATUM	GDA 94 / I	MGA Z55
JOB No	24	12/10	G/906	5	HEIGHT DATUM A.H.	D.	BEA	RING	,	DATE COMPLI	ETED 28/08/2015	DRILLER	Cairns Dri	lling
		F	RQD					U				ADDITIONAL DATA		
(₩) HL d∃C (m)			() % CORE EC %	SAMPLE	MATERIAL DESCRIPTI		ГІТНОГОСУ	USCS WEATHERING	INTACT STRENGTH 표 _[부 _] エ _[호],-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			AND TEST RESULTS		SAMPLES TESTS
-					s: 5° to 10°; (5-6/m); PI/R \$t;	lo; TI; Fe	ĸ			с		Is	(50)=0.02 MPa	A (20.05m)
					MICRODIORITE (Kgwu		Ŵ			С				-
-					SW: (Cont'd) s: 20° to 30°; (2/m); Pl/Ro		.[^,			c				-
- 21					.s: 70° to 75°; (3-4/m); Pl/		'K			M			(50)=9.20 MPa (50)=4.90 MPa	D (21.15m) A (21.16m) ⁻
					CA and Fe St; From 20.00m: Js: 15° to 25°; (3-4/m); Pl/	Ro: TI:	Ň			м				-
-		(52)		Fe St; Js: 55° to 65°; (2-3/m); Pl/		X,	sw	VH	EC- VC VC	21.70m-21.87m: BZ	Z; DI		-
- 22					Fe St and some Chl;		X			м		U	CS=70.20 MPa E=95.9 GPa	(22.18m) –
-							Ň						v= 0.29	-
-										с				-
- 23							X			VC		Is	(50)=5.30 MPa	A (23.05m)_
							Ŵ			c	23.60m-24.02m: M ¹	W zone, HFZ,		-
			100				K,	MW	мн	VC C	some Cly and sand i	infill		-
24							X			G		Is	(50)=0.06 MPa	D (24.00m)
-							Ŵ			C		ls	(50)=2.90 MPa	- A (24.55m)_
					From 24.66m: Js: 10° to 20° (1/m); Pl/Rc	; TI; Fe	$\langle \rangle$							-
25					St; Js: 40° to 55°; (1/m); PI/Re St;	o; TI; Fe	X				25.00m-25.15m: GF			-
-							K			м			(50)=4.20 MPa (50)=5.20 MPa	D (25.35m)_ A (25.36m)_
-							ĺ,					U	CS=62.10 MPa	- - (25.90m) ⁻
26							X	sw	VH		26.20m-26.55m: C0 Un/-,C	DNTACT; 80°,		-
			100				K		vii		MICRODIORITE (SW high strength.): High to very		-
			(81)				ĺ,			м			(50)=4.80 MPa (50)=7.20 MPa	– D (26.80m) <u>–</u> A (26.81m) –
- 27							$\langle \cdot \rangle$							-
							K					In .	(50)=7.20 MPa	– – D (27.65m)–
							ľ,			w		IS	,,- <i>1</i> .20 IVIP'a	_(וווכט.עבן ט _
- 28 												ls	(50)=3.80 MPa	A (28.10m)
					28.56 to 29.00m: MW zon	e	K			M	28.56m-28.88m: : N			
					Js: 10° to 20°; (10/m); Pl/F Cly Vr, Fe St;	Ro; TI;	Ň	MW		vc	medium to high stre 28.78m-28.80m: B2 28.88m-28.93m: XV	Ζ;		
- 29 - -					Js: 70° to 80°; (2/m); PI/Re Vr, Fe St;	o; TI; Cly		sw	VH	с	strength. 28.93m-29.00m: M strength.		50)=11.00 MPa (50)=7.30 MPa	D (29.15m) A (29.16m) ⁻
22.9	96		100		Porobolo correlated + 2	9.60~	X				29.30m-29.60m: CC PI/-, CD MICRODIORITE (SW	DNTACT; 75°,	-	
					Borehole completed at 2	5.0011			-	-	high strength.			-
DELA	DKC	17												
	кк5:	Кg	wu =	vv	undaru Granodiorite							LOGGED BY		EWED BY
						TMR	GEOTEC	HNICAL B	OREHOLE LOG - CREATED	WITH HOLEBASE SI		T.Goosey	<u> </u>	Foley

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CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS Geotechnical Section 35 Butterfield Street, Herston Qld 4006 Phone 07 3066 3336



Project Name	Mackay – Ring Road (Stage 2)			
Project No.	FG6184		Date	28/08/15
Borehole No.	BH 213		TMR H No.	H12222
Location	Pioneer River Bridge		Start Depth (m)	18.02
Detail	Pier 4, LHS		Finish Depth (m)	29.60
Chainage			Submitted By	M.Ensor
Remarks				
FGEIB	AL TIME		M.R.F M.R.F BOX1	
			20 OF	Liozu
2-00	FG6184		M.R.R. BOX 2	State Stat
	53 53 53	23 On		
FGEI	34	KI	M.R.R	24.02
24.02			0 ()	Contract -
BH2	13		BOX 3	
	VES		26.0M	
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0 100	200 300	400	500 600	700
	SCALE	1:5		

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CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS Geotechnical Section 35 Butterfield Street, Herston Qld 4006 Phone 07 3066 3336



Project Name	Mackay – Ring Road (Stage 2)	Data	00/00/45
Project No.	FG6184	Date	28/08/15
Borehole No.	BH 213	TMR H No.	H12222
Location	Pioneer River Bridge	Start Depth (m)	18.02
Detail	Pier 4, LHS	Finish Depth (m)	29.60
Chainage		Submitted By	M.Ensor
Remarks			
FGGI	34	//\.R.R	0
BH2	13	B0X4	<u>+</u>
Constant . The	C 28.0		
			internet and
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0 100	200 300 40	0 500 600	700
	200 000 40		,00
	SCALE 1	5	

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