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# GEOTECHNICAL BOREHOLE LOG

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

BH212

Sheet 1 of 3

BOREHOLE No

REFERENCE No

H12221

PROJE	ст	Mackay Ring Road												
LOCAT	ION	Р	ion	eer Riv	ver B	ridge, Pier 3 (RHS)					CO	ordinates 721301.5	E; 766010	)8.5 N
PROJE	CT No	F	G61	.84		SURFACE RL 5.70m	PLU	INGE S	90°	DATE STAF	RTED 26/08/2015	GRID DATUM	GDA 94 / N	/IGA Z55
JOB No	)	2	42/	10G/9	06	HEIGHT DATUM A.H.D.	BEAR	RING		DATE COMPLE	ETED 27/08/2015	DRILLER	Saxon Drill	ing
DEPTH (m)	R.L. (m)	JGER ASING	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ПТНОГОСУ	USCS WEATHERING	INTACT STRENGTH 표준고전	DEFECT SPACING		DDITIONAL DATA AND 'EST RESULTS		SAMPLES TESTS
	4.70	CA				Silty CLAY (Topsoil) Dark brown, moist, firm.								
- 1 					A	Silty CLAY trace sand (Alluvium) Brown, moist, firm. Fine grained sand, low to medium plasticity.		(CI)					3, 3, 3 N=6	SPT
-	2.90				В	Clayey SAND (Alluvium)				-			3, 3, 3 N=6	SPT
- 3 	1.70				с	Pale brown, moist, loose. Fine grained sand.		(SC)					2, 3, 3 N=6	SPT
- 4 	0.70				D	Silty SAND (Alluvium) Brown, moist, medium dense. Fine to medium grained sand. 4.50m: gravel lens		(SM)					5, 8, 9 N=17	SPT
5	0.10				F	Gravelly SAND (Alluvium) Brown, moist, medium dense. Fine to coarse grained sand, fine to medium grained gravel, subrounded grains. 6.00m: becomes fine to coarse grained gravel, subrounded to		(SP)					4, 5, 9 N=14 9, 10, 18	SPT
- - - - - - 7	-0.80					rounded grains, trace clay. Silty CLAY trace sand (Alluvium) Pale grey and orange brown, moist, very stiff.							N=28	
					G	Fine grained sand, medium to high plasticity.	×   ×   ×   ×						7, 8, 10 N=18	SPT
8					н	8.00m: becomes stiff		(CI)					4, 4, 6 N=10	SPT 
9 - - - - - - - - -	-4.30				1	9.00m: becomes stiff to very stiff. With fine grained sand.							5, 7, 8 N=15	SPT
			,			Continued on next sheet								
R	IVIAR	KS:	k	gwu	= W	/undaru Granodiorite					-	LOGGED BY		WED BY
						TMR G	EOTECH	HNICAL B	OREHOLE LOG - CREATED V	VITH HOLEBASE SI		C.Boyes	S.I	oley
L														

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	<b>Queensland</b> Government
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# GEOTECHNICAL BOREHOLE LOG

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

BH212

Sheet 2 of 3

BOREHOLE No

REFERENCE No

H12221

PROJE	PROJECT Mackay Ring Road													
LOCAT	ION	F	Pion	eer Rive	er Bi	ridge, Pier 3 (RHS)					C	COORDINATES 721301.5	5 E; 766010	08.5 N
PROJECT No		F	FG6184			SURFACE RL 5.70m PLL		NGE 9	0°	DATE STARTED 26/08/2015		5 GRID DATUM GDA 94 / MGA Z5		MGA Z55
JOB No	)	2	242/	10G/90	6	HEIGHT DATUM A.H.D.	BEAR			DATE COMPLE	ETED 27/08/2015	DRILLER	Saxon Drill	ling
DEPTH (m)	R.L. (m)	JGER	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표구구,ㅜ,폰,ᅩ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
-	-4.80		N D		J	Silty CLAY trace sand and gravel (Alluvium) (Cont'd) Sandy CLAY (Alluvium)		(CI)		   			6, 9, 12 N=21	SPT
- - - - - - -					к	Mottled grey and orange brown, moist, stiff. Fine to medium grained sand, medium to high plasticity.		(CH)					6, 6, 8 N=14	SPT
- - - 12	-6.30					Clayey SAND (Alluvium) Mottled grey and orange brown,				- - - - - -			8, 14, 18	SPT
- - - - - - - -	-7.30					rained single and orange brown, moist, dense. Fine to medium grained sand. Medium to high plasticity clay. 12.00m: clay content decreasing.		(SC)					N=32	
	0.00				IVI	Sandy CLAY trace gravel (Alluvium) Pale grey, orange, white, moist, very stiff. Fine to coarse grained sand, fine grained gravel, subrounded to subangular grains, medium to high		(CH)					9, 12, 17 N=29	SPT
14	-8.30				Ν	plasticity Silty CLAY trace sand and gravel (Residual) Mottled green grey and orange							6, 6, 8 N=14	SPT
- - - - - - -					0	Frown, moist, very stiff. Fine grained sand. 14.40m: Fine grained gravelly band, angular grains.		(CL)					11, 12, 13 N=25	SPT
- - 16 - -	<u>-10.30</u>					MICRODIORITE (Kgwu XW: Recovered as green grey, moist,		xw		-			30/130	 
- - - - - - - -	-11.40			(65)		hard, sandy silt trace gravel. Fine grained sand. 16.00m: becoming pale green grey, very dense. MICRODIORITE (Kgwu	+ + + + + + + +						hb	  A (17.20m)
- - - - - - - - - - - - - - - - - - -						) SW: Grey speckled dark grey, fine to medium grained, massive, high strength. Calcite veins throughout	+ + + + + + + + + +			м	17.60m-18.20m: CA ' <2mm	ls Is	(50)=1.50 MPa (50)=2.70 MPa CS=50.20 MPa	D (17.45m) 
- - - - - - - - - - - - - - - - - - -				<u>100</u> (83)		<1mm thick. Js: 5° to 15°; (<5/m); Pl-Un/Sm; OP; some Fe St and Cly Vr; Js: 40° to 50°; (<4/m); Pl/Ro-Sm; OP; Fe St or CA VN; 19.00m: core becomes more intact, joint frequency decreasing.	· + + + + + + + + + +	sw	н-үн	c	18.55m-19.96m: CA ' <5mm 18.94m-18.96m: HW Sm, "20mm	VN; 90°, Ir, Is	(50)=3.10 MPa	-
	<u>-14.30</u>					Continued on next sheet	+ + + + + + + +			м			(50)=7.40 MPa (50)=2.80 MPa	  D (19.75m) A (19.76m) <sup></sup>
RI	EMAR	KS	ŀ	(gwu =	= W	'undaru Granodiorite						LOGGED BY	REVIE	WED BY
	C.Boyes S.Foley													

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											FINAL 1	.7/03/2016
***	àc					GE	OTECHN	IICAL		BOREHOLE No	В	H212
		lue	ensland			BC	REHOLE	LOG		Sh	eet 3 of 3	
1SS	KI G	iove	ernment		SYI		GEOTECHNICAL TI REFER FORM F:GE			REFERENCE No	н	12221
PROJECT	Mackay I	Ring Ro	ad									
LOCATION			ridge, Pier 3 (RHS)							coordinates 72130	1.5 E; 76601	08.5 N
PROJECT No	FG6184		SURFACE RL	5.70m	PLU	INGE S	0°	DATE STA	 rted 26/08/201	.5 GRID DATU	м GDA 94 /	MGA Z55
JOB No	242/10G	i/906	HEIGHT DATUM	A.H.D.	BEA	RING °			ETED 27/08/201		<sub>ER</sub> Saxon Dril	ling
	BC	QD								ADDITIONAL DATA		
(m) HL AJO (m)	() ()	% and the second	MATERIAL DESC	CRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH 표天고독고, 국교			AND TEST RESULTS		SAMPLES TESTS
_	4		MICRODIORITE (Kgwi	u	+++++	MW	н		20.02m-20.27m: E			-
			sW: (Cont'd)		+ + + + + +	sw	H-VH	M VC-C VC	Sm, <1mm	A VIV, 50 , OIY	ls(50)=3.90 MPa ls(50)=1.70 MPa	
<u>-15.30</u>			GRANODIORITE (Kgw	<i>r</i> u	+ + + + + +			c			ls(50)=1.40 MPa	 D (21.25m)
-	10	2)	) SW: Speckled pink, gi grey, fine to coarse gi	-	+++			vc-c			15(50) 1110 11110	- - -
-			porphyritic, high to m		++			M				-
- 22			strength. Js: 5° to 15°; (<5/m);	Pl-Un/Sm; OP;	++		VH				Is(50)=3.60 MPa	 A (22.30m) <sup></sup>
-			Fe St; Js: 40° to 60°; (<5/m)	; PI/Sm; OP; QZ	+++	sw		C	22.49m: J; 80°, Pl/ 22.59m-22.77m: H		13(30)=3.00 1411 a	A (22.3011)_
-	10		VN <1mm or Cn; .s: 70°; (<2/m); Pl/Sm	n; OP; QZ VN	++		Н	vc	water loss			
- 23 - -	(94		<pre>1mm or Cn; 22.23 to 22.26m: Mic</pre>		++			M				
-			(SW): green grey, fin massive, very high st Contact: 70°; Un/Sm	trength.	+ + + +				23.50m-23.97m: 0 irregular, <10mm	CA VN; Un/Sm,	Is(50)=8.80 MPa UCS=19.50 MPa Is(50)=2.30 MPa	(23.40m) _
18.16			MICRODIORITE (Kgwi		• + /``\			w	23.86m: Contact;	60°, Un/Sm, CD	-(,	A (23.41m)
-			) SW: Green grey, fine		$\bigotimes$						Is(50)=3.80 MPa	D (24.10m)
	10	00	grained, massive, ver strength. Calcite vein	y high	Ŵ				24.55m: DI			-
- 25			<5mm. Js: 5° to 15°; (3/m); P		М							-
-			VN <0.5mm; Js: 40° to 70°; (<2/m)		$\bigotimes$		VH	м			Is(50)=6.20 MPa	
-			VN <0.5mm;	; PI/SM; OP; CA	Ň	SW					Is(50)=3.00 MPa	A (25.31m)
- 26	10	00			X							-
-	(10				$\bigotimes$							
-					Ŵ			w				
- 27					М							
					$\bigotimes$			м			ls(50)=6.30 MPa	A (27.20m)
	10		Borehole complete	d at 27.50m	Ľ,		-	-				
28								± +				-
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								<u>+</u>				
-								+				
REMAR	KS: Kgw	/u = W	/undaru Granodioi	rite						LOGGED BY	REVI	EWED BY
										C.Boyes		Foley

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TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

#### 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	2)			
Project No.	FG6184	(enago I	-1	Date		27/08/15
Borehole No.	BH 212			TMR H No.		H12221
Location	Pioneer River B	ridge		Start Depth (	m)	17.10
Detail	Pier 3, RHS	3		Finish Depth		27.50
Chainage				Submitted B		M.Ensor
Remarks					,	
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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 R	oad (Stage 2)		
Project No.	FG6184	···· (···· g· _/	Date	27/08/15
Borehole No.	BH 212		TMR H No.	H12221
Location	Pioneer River Bric	lge	Start Depth (m)	17.10
Detail	Pier 3, RHS	0	Finish Depth (m)	27.50
Chainage			Submitted By	M.Ensor
Remarks			,	
	F46184	BHZIZ		ROXU
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