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Mackay Ring Road

GEOTECHNICAL BOREHOLE LOG

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

FINAL 18/03/2016

BH223

Sheet 1 of 3

BOREHOLE No

REFERENCE No

H12232

PROJECT Mackay Ring Road														
LOCAT	ION	P	ion	eer Rive	er B	ridge, Pier 7 (CL)					cc	OORDINATES 721312.1	E; 766024	7.1 N
PROJE	CT No	F	G6:	184		SURFACE RL 7.78m	PLU	INGE	90°	DATE STAF	RTED 08/09/2015	GRID DATUM	6DA 94 / N	1GA Z55
JOB N	0	2	42/	/10G/90)6	HEIGHT DATUM A.H.D.	BEAR	RING	o 	DATE COMPLE	ETED 09/09/2015	DRILLER S	axon Drilli	ng
DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОСУ	USCS WEATHERING	INTACT STRENGTH 표天 _エ 독, 국, 국, 국, 쿄			DDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
-						Silty SAND (Alluvium) Brown, dry, loose to very loose.	× × ×	2					2, 2, 3 N=5	SPT
-					zx	Fine grained sand. 0.50m: becomes moist	× × ×	(SM					3, 2, 2 N=4	SPT
1	6.00				A	1.00m: trace clay. Fine to medium grained sand.	× × × ×						2, 2, 1 N=3	SPT
-	6.28					Sandy CLAY (Alluvium) Brown, moist, stiff.		(СН)					2, 5, 4 N=9	SPT
2	5.78					Fine grained sand, high plasticity Silty SAND trace clay (Alluvium) Brown, moist, very loose.	× ×	2					hw, hw, hw N<1	SPT
	4 70				вх	Fine to medium grained sand. 2.50m; becomes loose.	×××××	(SM					4, 5, 4 N=9	SPT
- - -	4.78					Gravelly SAND (Alluvium) Brown grey, moist, medium dense.				 			5, 7, 6 N=13	SPT
-					сх	Fine to coarse grained sand, fine to medium grained gravel; subangular to rounded.		9 9 9					5, 5, 6 N=11	SPT
4					D	4.00m: with gravel lenses.				 - - -			7, 6, 5 N=11	SPT
-					DX		9 9 9						10, 11, 11 N=22	SPT
5					E								9, 11, 10 N=21	SPT
-					EX	5.5m: Becoming dense.		, ,		-			12, 17, 17 N=34	SPT
6					F	6.0m: Becoming medium dense.		(SP)		 			7, 6, 5 N=11	SPT
-					FX			5 6					7, 8, 10 N=18	SPT
7					G								10, 11, 13 N=24	SPT
-					GX					-			6, 5, 6 N=11	SPT
8					н			9 9		 			10, 8, 10 N=18	SPT
	1.00				нх	1							11, 9, 11 N=20	SPT
9	-1.22					GRAVEL with sand (Alluvium) Pale grey, wet, medium dense.							17, 13, 8 N=21	SPT
 - - -	-2.22				IX	Fine to coarse grained sand, fine to medium gravel, subrounded to angular.		(GP)					7, 6, 8 N=14	SPT
				1		Continued on next sheet	L ~ ~ °	1		L	J		F	
R	emar	KS:	ł	Kgwu =	= W	/undaru Granodiorite						LOGGED BY	REVIE	WED BY
												C.Boyes	S.F	oley
		_				TMR G	EOTECH	HNICAL E	BOREHOLE LOG - CREATED	VITH HOLEBASE SI	_			

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GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 FINAL 18/03/2016

BH223

Sheet 2 of 3

BOREHOLE No

REFERENCE No

H12232

PROJEC	T	Μ	ack	ay Rin	g Roa	ad								
LOCATI	ON	Pi	one	er Rive	er Br	idge, Pier 7 (CL)						COORDINATES 721312.	1 E; 766024	47.1 N
PROJEC	CT No	FG	618	84		SURFACE RL 7.78m	PLU	NGE 9	0°	DATE STAF	RTED 08/09/2015	GRID DATUM	GDA 94 / 1	MGA Z55
JOB Na		24	2/1	LOG/90)6	HEIGHT DATUM A.H.D.	BEAF	RING _		DATE COMPLE	TED 09/09/2015	DRILLER	Saxon Drill	ing
DEPTH (m)	R.L. (m)	AUGER CASING WASH RORING	CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH 표구구, 파,	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
-					J	Silty SAND (Alluvium) Grey, moist, medium dense. Fine to medium grained sand.	×××××××××××××××××××××××××××××××××××××××						11, 13, 12 N=25	SPT
-					JX	10.50m: trace clay.	× × ×						10, 9, 12 N=21	SPT
- 11 - - -					к		××××	(SM)					8, 9, 10 N=19	SPT
-					кх	11.50m: becomes mottled orange brown and grey	×××						10, 10, 10 N=20	SPT
- 12 - -					L	12.00m: becomes pale grey.	× × ×			 			7, 10, 12 N=22	SPT
- - -	-5.02				LX	12.60 to 12.95m: Fine to coarse grained sand.	× × ×						7, 9, 11 N=20	SPT
- 13 - -	-5.72				м	Ċlayey SAND (Alluvium) Pale grey, moist, medium dense. Fine to coarse grained sand,		(CI)					10, 10, 10 N=20	SPT
- - - -	-0.72				мх	medium plasticity. Silty CLAY trace sand (Alluvium) Grey and orange brown, moist,	×		·				10, 12, 18 N=30	SPT
14						hard. Medium plasticity. 14.00m: becomes hard	×_ ×_						13, 18, 19 N=37	SPT
-					NX	14.50m: clayey sand lenses.	×	(CI)					17, 16, 19 N=35	SPT
15 	7 70				0	15.00m: trace gravel, angular grains.	 						19, 30, 27 N=57	SPT
- - - -	-7.72					Gravelly Sandy CLAY (Residual) Pale grey, dark grey and orange		(CI)					17, 30/120	SPT
- 16 - -	-8.22				·	brown, moist, hard. Coarse grained sand, fine to medium grained gravel, angular				- 	— 16.00m-16.01m: No recovered	sample	30-Oct hb	
- - -						grains, medium plasticity. MICRODIORITE (Kgwu) XW: Recovered as pale grey, dark	Ň						no	-
- - 17 -					Q	grey and orange brown, moist, hard, gravelly sandy clay. Coarse grained sand, fine to medium grained	Ň	xw			= 17.00m-17.02m: No recovered	sample	30/20 hb	
- - - -	-10.02			(16)		gravel, angular grains, medium plasticity. MICRODIORITE (Kgwu)	\mathbb{A}					E° braccistad		 D (17.85m)
- 18 - - - -						MW: Grey, fine grained, massive, mainly very high strength with extremely low strength sheared		sw MW	VH		PI/Sm; FL; Cly; 18.21m-18.23m: SZ: brecciated; PI/Sm; FL 18.36m-18.38m: SZ:	ا 10°; ا ; Cly;	s(50)=7.90 MPa s(50)=0.59 MPa	A (18.12m) - - -
- - - - 19				100		zones. Js: 5° to 15° (<6/m); Pl/Sm,; OP -CD; Fe St;		xw sw		vc-c	 brecciated; PI/Sm; FI 18.42m-18.46m: SZ; brecciated, Cly; 18.52m-18.64m: SZ: brecciated; PI/Sm; FI 	10°, XW, I 5° to 10°;	s(50)=5.90 MPa	(18.72m) -
- - -				<u>100</u> (0)		s: 30° to 60°; (<3/m); Pl/Sm; OP-CD; e St; s: 70° to 90°; (2/m); Pl/Sm; OP-CD;	X	MW	VH	vc	18.76m-18.83m: SZ: brecciated; PI/Sm; FI 19.20m-20.00m: HFZ	5° to 35°; ;; Cly; ?;	s(50)=6.90 MPa	
-	-12.22					e St; From 19.20m:	Ŵ	sw MW				1	אואו הבים-ניביני	l (19.65m) _
						Continued on next sheet								
RE	MAR	KS:	Κį	gwu =	= W	undaru Granodiorite						LOGGED BY		WED BY
						TMR (-)	EOTECH	INICAI B	DREHOLE LOG - CREATED V	VITH HOLEBASE SI		C.Boyes	S.	Foley
						TIVIR GI				· · · = ==== == == == == == ==				

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			_						FINAL 1	.8/03/2016
	NG.			GE	OTECHN	ICAL		BOREHOLE No	В	H223
	🔊 Que	ensland		BO	REHOLE	LOG		Shee	et 3 of 3	
	Cove	ernment			GEOTECHNICAL TE REFER FORM F:GE			REFERENCE No	Н	12232
PROJECT	Mackay Ring Ro	bad								
LOCATION	Pioneer River B	ridge, Pier 7 (CL)						COORDINATES 721312.	1 E; 76602	47.1 N
PROJECT No	FG6184	SURFACE RL	7.78m	plunge 90	D°	DATE STA	 RTED 08/09/201	.5 GRID DATUM	GDA 94 / I	MGA Z55
JOB No	242/10G/906	HEIGHT DATUM	A.H.D.	BEARING		DATE COMPL	ETED 09/09/201	L5 DRILLER	Saxon Dril	ling
	RQD	_		(1)						
(iii) HI R.L. (m) -12.27		MATERIAL DES	CRIPTION	LITHOLOGY USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
-12.27* 	2 3 5 100 (58) (58) 100 (52) (52) (52) (95) (95) 100 (95) 100 (100) 100 (100) 100 (100)	From 19.20m: Js: 70° to 90°; PI/Sm St; MICRODIORITE (Kgw VW: (Cont'd) GRANODIORITE (Kgw SW: Pink speckled gr grey, medium to coal porphyritic, very high Js: 5° to 15°; (4/m); P Cn or Fe St; Js: 60° to 75°; (2/m); DP; Fe St; From 22.41m: Js: 5° to 15°; (<2/m); Js: 20° to 30°; (<2/m) Js: 20° to 30°; (<2/m) SW: Grey, fine graine very high strength. Js: 20° to 30°; (DP; CA VN <2mm; GRANODIORITE (Kgw SW: Grey and dark gi coarse grained, porp high strength. Js: 5° to 15;° (<2/m); Cn or Fe St; Js: 65° to 75°; (<2/m); or Fe St;	u) vu) rey and dark rse grained, n strength. Pl/Sm-Ro; OP;); Pl/Sm-Ro; OP Pl-Un/Sm-Ro;); u) ed, massive, Pl-Un/Sm-Ro; vu) rey, medium to hyritic, very Pl/Sm-Ro; OP;); Pl/Sm; OP; Cr	MW SW SW SW SW SW SW SW SW			20.02m-20.17m: H 20.98m-21.02m: J 5 ⁵ ; 21.56m-21.75m: H 22.36m-22.41m: H 22.36m-22.41m: H 22.90m-22.97m: E 24.21m-24.22m: \ CD; CA; 24.45m-24.46m: [PI/Sm; CD; 24.70m: Contact: 25.28m-25.35m: H 25.70m: Contact: 25.70m: Contact:	(W zone, Cly FL, 1 +W zone: 5*; 1 +FZ; 1 3Z; DIs Is VN: 70°; PI/Sm; 1 Dolerite VN: 65°; 1 70°; Un/Sm; CD; 1 +FZ; 1 60°; PI/Sm; CD; 1 1 1	s(50)=0.25 MPa s(50)=7.30 MPa s(50)=1.40 MPa s(50)=1.40 MPa c(50)=5.50 MPa c(50)=5.50 MPa c(50)=11.00 MPa s(50)=1.30 MPa s(50)=1.90 MPa s(50)=1.90 MPa s(50)=9.40 MPa s(50)=9.10 MPa s(50)=7.30 MPa	A (20.95m) D (21.10m) D (21.10m) D (21.10m) D (22.27m) D (22.27m) (22.55m) D (22.27m) D (22.27m) C (22.57m) C (22.57m) C (22.10m) C (23.24m) C (25.10m) C
REMARK	Kgwu = W	/undaru Granodio	rite			- 		LOGGED BY		EWED BY
								C.Boyes	S.	Foley
L			TMR	GEOTECHNICAL BO	REHOLE LOG - CREATED V	/ITH HOLEBASE SI				

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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	09/09/15
Borehole No.	BH 223	TMR H No.	H12232
Location	Pioneer River Bridge	Start Depth (m)	17.80
Detail	Pier 7, centerline	Finish Depth (m)	27.95
Chainage		Submitted By	M.Ensor
Remarks			
FGU84	M.R.R. BH223		bx 1
FLUIDA	Received and the second		Box 2
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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 (Sta	200 2)		
Project No.	FG6184	age 2)	Date	09/09/15
Borehole No.	BH 223		TMR H No.	H12232
Location	Pioneer River Bridge		Start Depth (m)	17.80
Detail	Pier 7, centreline		Finish Depth (m)	27.95
Chainage			Submitted By	M.Ensor
Remarks			Submitted By	M.LIISOI
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