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GEOTECHNICAL BOREHOLE LOG

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

BH265

Sheet 1 of 4

BOREHOLE No

REFERENCE No

H12274

PROJEC	T	Ma	ackay Rin	g Ro	ad								
LOCATI	ON	Fursden Creek Bridge, Pier 2 (RHS) COORDINATES 721491.8 E; 7661440.2 N											
PROJEC	CT No	FG	6184		SURFACE RL 5.50m	PLU	INGE S	0°	DATE STAF	RTED 31/07/2015	GRID DATUM	ida 94 / N	/IGA Z55
JOB No)	24	2/10G/90)6	HEIGHT DATUM A.H.D.	BEA	RING_		DATE COMPLE	TED 01/08/2015	DRILLER S	axon Drilli	ing
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING	RQD ()% CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표구구구주,구,주,급	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
- - - -				01x	Silty CLAY (Topsoil) Dark brown, dry, very stiff. Medium plasticity, trace rootlets.		(CI)					6, 10, 9 N=19	SPT
- - - - - - - - - -	4.60			02x	Silty Sandy CLAY (Alluvium)							5, 9, 12 N=21	SPT
- - - - - - - -	3.90			A	Brown, dry, very stiff. Fine grained sand, medium plasticity.	×	(CI)		-			8, 10, 10 N=20	SPT
					Silty SAND (Alluvium) Brown, dry, very loose to loose. Fine grained sand.	X X X V						4, 1, 1 N=2	SPT
- 2 - - - - - - -				В	rine grunned sand.	x x x	(SM)		-			1, 2, 5 N=7	SPT
	2.50			Bx	SAND (Alluvium)	×						4, 4, 6 N=10	SPT
3 = 4 4 4 4				С	Brown, wet, loose. Medium to coarse grained sand.							1, 3, 5 N=8	SPT
- - - 4				Cx			(SP)		- - - -			1, 3, 6 N=9	SPT
- - - -	1.00			D	Silty SAND (Alluvium)	×						2, 4, 4 N=8	SPT
-	0.50				Dark grey, wet, medium dense. Fine to medium grained sand. SAND (Alluvium)	××	(SM)					2, 6, 6 N=12	SPT
— 5 - - - - - - -				E Ex	Pale grey, wet, loose. Fine to medium grained sand.		(SP)					2, 4, 5 N=9	SPT
- - 6 - -	-0.50			_	Clayey SAND (Alluvium)				 			1, 1, 3 N=4 8, 16, 22	SPT
- - - -	-1.30			Fx	Pale grey, moist, dense. Fine grained sand.		(SC)					N=38	SPT
- - - - - - - - - - - - - - - - - - -				G	Sandy CLAY (Alluvium) Mottled pale grey and orange, moist, very stiff to hard.							N=29 6, 12, 14	SPT
- - - -				Gx	Fine grained sand, high plasticity.		(CH)					N=26 8, 18, 21 N=39	SPT
	-2.50			н	Silty CLAY trace sand (Alluvium) Grey, moist, very stiff.	×						N=39 7, 10, 10 N=20	SPT
— 8 · - - - - - - -				Нx	Fine grained sand, high plasticity.	×						6, 8, 9 N=17	SPT
9 - - - - -				Ι			(CH)		 			7, 8, 11 N=19	SPT
	-4.50			lx	9.50m: trace calcite nodules.							8, 7, 11 N=18	SPT
			- I		Continued on next sheet			,		·			
RE	MAR	KS:	Kgwu =	= W	'undaru Granodiorite						LOGGED BY		WED BY
											C.Boyes	S.F	oley

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							_		FINAL 1	8/03/2016
				GE	OTECHN	IICAL		BOREHOLE No	В	H265
		ensland		BC	REHOLE	LOG		Sheet	2 of 4	
	Se Gov	ernment	SYI		GEOTECHNICAL TE REFER FORM F:GE			REFERENCE No	H:	12274
PROJECT	Mackay Ring Ro	oad								
LOCATION	Fursden Creek	Bridge, Pier 2 (RHS)						COORDINATES 721491.8	E; 76614	40.2 N
PROJECT No	FG6184	SURFACE RL 5.50m	PLU	INGE S	0°	DATE STAF	RTED 31/07/2015	GRID DATUM	MGA Z55	
JOB No	242/10G/906 HEIGHT DATUM A.H.D. BEARING DATE COMPLETED 01/08/20					ETED 01/08/2015	DRILLER S	axon Dril	ling	
DEPTH (m) (m)	RQD ())% ())% HILLING CORE SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОСУ	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
DE	CORE DI CORE NO CORE N		ГІ	WEA	ਜ਼ੵੑਙੵੑਸ਼ੵਙੵਜ਼					/S
-4.80	J	Silty CLAY trace sand (Alluvium) (Cont'd)	×	(CH)	-	_			8, 9, 11	SPT
-		GRANODIORITE (Kgwu) XW: Recovered as speckled orange	- + + + + + +		-	-			N=20	-
-		brown and grey, moist, dense to	″ ト + + -			-				
- 11 -	к	very dense clayey sand. Fine to medium grained sand.	++			-			11, 14, 17	SPT
		-	++	xw	-				N=31	
-			++		-	-				-
12			÷.			 		1	4, 21, 30/140	SPT
-			++			-		1	4, 21, 30/140	
-7.30			++		-	-				
13	M	MICRODIORITE (Kgwu) XW: Recovered as pale green grey,		xw						SPT
		moist, hard, gravelly clay. Fine grained gravel, medium plasticity.		~~~	-				30/120 hb	-
8.10		GRANODIORITE (Kgwu)	++			-				-
- - 14	N	XW: Recovered as orange brown, grey and dark grey, moist, very	+++		-	-				SPT
-		dense, clayey sand. Fine to mediur grained sand.	+		-	-			26, 30/140	
-			++		-	_				-
- 15	0		++			-				SPT
-			+		-	-			23, 30/100	
-			[+]		-	-				
- 16	P		++		-	-				SPT
			+++		-	_			30/120	-
-			++			-				
- - - 17			+	xw	-	-				-
-	<u>Q</u>		+++			-			30/140 hb	SPT _
-			++			-			10	
- - - 18			+		-	_				
- 10	R				-	_			30/90	SPT
-			+++		-	-			hb	-
			+++++++++++++++++++++++++++++++++++++++			-				-
- 19 -		1	[+]			- - -			30/70	
			++			-			hb	
14.50			++	1						-
		Continued on next sheet			J		I	I		
REMAR	KS: Kgwu = V	Vundaru Granodiorite						LOGGED BY	REVIE	EWED BY
								C.Boyes	S.	Foley

							_		FINAL 1	8/03/2016
	NG			GE	OTECHN	ICAL		BOREHOLE No	В	H265
		ensland		REHOLE		Sheet	3 of 4			
1 Ste	Cove	ernment	FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014					REFERENCE NO	H	12274
PROJECT	Mackay Ring Ro	bad								
LOCATION	Fursden Creek I	Bridge, Pier 2 (RHS)					0	COORDINATES 721491.8	E; 766144	10.2 N
PROJECT No	FG6184	SURFACE RL 5.50	m PLUI	NGE 9	0°	DATE STAI	RTED 31/07/2015	GRID DATUM	6DA 94 / N	/IGA Z55
JOB No	242/10G/906 HEIGHT DATUM A.H.D. BEARING DATE COMPLETED 01/08/20					ETED 01/08/2015	DRILLER S	axon Drill	ing	
DEPTH (m) (m)	REC % CORE DUILING CORE DUILING REC % SWMPLE	MATERIAL DESCRIPTIO	2 LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 표근구구목구구리 [ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
21 22 23 - 22 - 23 - 23 - 18.50 - 19.40 - 25 - 26 - 21.30 - 27 - 28		GRANODIORITE (Kgwu) XW: (Cont'd) GRANODIORITE (Kgwu) XW: Speckled brown, grey grey, medium to coarse gr- extremely low to low strer GRANODIORITE (Kgwu) HW: Speckled pink, dark g grey, coarse grained, mass medium to high strength. Js: 20° to 30°; (<2/m); PI/S some Sinf; Js: 50° to 70°; (<4/m); PI/S CD; CA Vr; GRANODIORITE (Kgwu) SW: Pale grey and grey, co grained, massive, very high strength. Js: 0° to 30°; (<2/m); PI-Un OP; some CA Vn & Sinf;	r and dark ained, ngth. rerey and ive, im-Ro; OP; im; OP or arrse h	xw xw xw xw hw			25.10m: J: 70°; Un/Si Sinf; 25.78m-25.88m: XW 25.94m-26.00m: XW 26.80m-27.05m: Mic (SW	Is(5 izone, sandy; izone, sandy; CA; irodiorite band Is(5	30/95 hb 0/10 hb 0/10 hb 0/10 0)=0.12 MPa 0)=0.17 MPa 0)=0.35 MPa 0)=2.10 MPa	SP1 SP1
- 29 - 29 24.50	<u>100</u> (82)	- Continued on next she	++++++++++++++++++++++++++++++++++++++	SW	H VHEH MH	C M	28.53m-29.00m: XW Un/Ro; 28.67m-28.74m: XW 29.35m-29.52m: BZ;	CA VN;70°; Pl- zone Is(50)=14.00 MPa)=20.00 MPa 0)=9.00 MPa	D (28.30m)
RFMAR		/undaru Granodiorite						LOGGED BY	PE\/I	WED BY
			TMR GEOTECH	INICAL BO	DREHOLE LOG - CREATED WI	TH HOLEBASE SL		C.Boyes	٥.	Foley

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				_						FINAL 1	.8/03/2016
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N.			ensland		В	OREHOLE	LOG		Sh	eet 4 of 4	
B		Gov	ernment			DR GEOTECHNICAL T LS REFER FORM F:GI			REFERENCE No	Н	12274
PROJECT	Mac	kay Ring R	oad								
LOCATION	Furs	den Creek	Bridge, Pier 2 (RHS)						COORDINATES 72149	L.8 E; 76614	40.2 N
PROJECT No	FG6	184	SURFACE RI	5.50m	PLUNGE	90°	DATE STAF	RTED 31/07/201	.5 GRID DATU	M GDA 94 /	MGA Z55
JOB No	242,	/10G/906	HEIGHT DATUM	A.H.D.	BEARING	0	DATE COMPLE	TED 01/08/201	.5 DRILLE	_R Saxon Dril	ling
		RQD			> <u></u>		DEFEOT		ADDITIONAL DATA		
(m) R.L (m)		()% III CORE REC%	MATERIAL DES	CRIPTION	LITHOLOGY USCS WEATHERING	を INTACT STRENGTH H H H H H H H H H H H H H H H H H H			AND TEST RESULTS		SAMPLES TESTS
- - - -			GRANODIORITE (Kgv SW: (Cont'd) Increas zeolite veining. Js: 5° to 30°; (<5/m);	ed calcite &	+ + + + + + + +		C	30.05m-30.06m: H VN: 60°; Pl/Ro; OP		ls(50)=0.72 MPa ls(50)=5.10 MPa	D (30.17m) A (30.28m)
- - - 31 -			OP; some CA Vn & S Js: 60° to 90°; (<2/m some CA Vn;	inf;	• + • + • +		vc-c			UCS=11.70 MPa	(31.00m)
					• + • + • +	V H-VH	м			ls(50)=4.40 MPa	A (31.50m)
- 32 					• + + • + +		c	32.26m-32.49m: H			
- <u>-27.3</u> - ³³	35	100	Borehole complet	ed at 32.85m	• +			<5mm;		ls(50)=1.30 MPa ls(50)=2.00 MPa	A (32.60m)_ D (32.67m)_
- - 34 - -											
 - - - - - 35											
						-					
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			Nundary Cranadi-	rito							
REIVIA	11172.	ive war = A	Vundaru Granodic	IILE					LOGGED BY C.Boyes		EWED BY
				TMR	GEOTECHNICAL	L BOREHOLE LOG - CREATED	WITH HOLEBASE SI		C.DOYES) S.	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	011190 27	Date	01/08/15
Borehole No.	BH 265		TMR H No.	H12274
Location	Fursden Creek Bridge		Start Depth (m)	24.00
Detail	Pier 2, RHS		Finish Depth (m)	32.85
Chainage	,		Submitted By	M.Ensor
Remarks				
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