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# GEOTECHNICAL BOREHOLE LOG

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

BH240

Sheet 1 of 4

BOREHOLE No

REFERENCE No

H12249

PROJE	ст	Ν	/lac	kay Ring	g Ro	ad								
LOCAT	ION	Ρ	ion	eer Rive	er Bi	ridge, Pier 13 (LHS)					C	OORDINATES 721333.6	E; 766045	56.4 N
PROJE	CT No	F	G61	L84		SURFACE RL 3.83m	PLU	UNGE	90°	DATE STAF	RTED 05/12/2015	GRID DATUM	GDA 94 / N	/IGA Z55
JOB No	0	2	42/	10G/90	6	HEIGHT DATUM A.H.D.	BEA	RING		DATE COMPLE	ETED 07/12/2015	DRILLER (	Cairns Dril	ing
DEPTH (m)	R.L. (m)	AUGER CASING	VASH BORING JORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОБУ	USCS WEATHERING	INTACT STRENGTH 프_兲_ㅜ_ੲ,ㄱ,ㅊ,茴		, , , , , , , , , , , , , , , , , , ,	ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	-2.17				A B C	SAND (Fill) Brown, moist, loose. Fine to coarse grained; trace silt; trace gravel. Clayey Silty SAND (Alluvium) Grey brown, wet, loose. Fine to coarse sand; trace gravel. 8.0m: Becoming medium dense.		(SM)					3, 3, 3 N=6 2, 2, 3, 3 N=5 3, 3, 4 N=7 2, 3, 3 N=6 5, 4, 4 N=8 4, 7, 9 N=16 7, 10, 11 N=21	SPT  SPT  SPT  SPT  SPT  SPT  SPT  SPT
-	-6.17						×		-	E				-
DI		KC		( ( ( ( ) ) ) ) - - - - - - - - - - - - -	- \/	Continued on next sheet /undaru Granodiorite							05.05	
ΓÌ		123	r	gwu =	- vv						-	LOGGED BY		WED BY
						тмя	GEOTEC	HNICAI F	BOREHOLE LOG - CREATED V	VITH HOLEBASE SI		T. Goosey	5.1	Foley
						IMR	. GEUIEC	. mitcAL b	SOMETIOLE LOG - CREATED V	HOLEDADE DI	· · · · · · · · · · · · · · · · · · ·			

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						_		FINAL 18	3/03/2016
				GE	OTECHNICAL		BOREHOLE No	BH	1240
	🔊 Que	ensland		BO	REHOLE LOG		Sheet 2 of 4		
12 ye	Gove	ernment	SYI		GEOTECHNICAL TERMS AND REFER FORM F:GEOT 017/8-2014		REFERENCE No	H1	2249
PROJECT	Mackay Ring Ro	bad							
LOCATION	Pioneer River B	ridge, Pier 13 (LHS)					COORDINATES 721333.6	E; 766045	6.4 N
PROJECT No	FG6184	SURFACE RL 3.83m	PLU	INGE 9	DO° DATE STAR	RTED 05/12/2015	GRID DATUM	GDA 94 / N	1GA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEAF	RING_	DATE COMPLE	TED 07/12/2015	DRILLER C	Cairns Drilli	ng
(m) R-LLH (m) (m)	ROD ())% MASHING CORE DHILLING CORE DHILLING CORE REC W SWDEC REC W	MATERIAL DESCRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH DEFECT SPACING 표, 독, 파, 파, 루, 쿄 입, 옥, 아, 폭, 독, 휴		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	H	Sandy CLAY (Alluvium) Grey brown, moist, very stiff. Low to medium plasticity; fine to medium grained sand.		(CI)				7, 10, 14 N=24 7, 10, 17	SPT
		Gravelly Sandy CLAY (Residual)						7, 8, 7 N=27	SPT    
- 13	J	Pale grey, moist, very stiff. Low plasticity; fine to coarse grained sand; relict rock fabric evident.						8, 18, 20 N=38	SPT 
- - - - - - - - - - - - - - - - - - -	K L	14.0m: Becoming very stiff.		(CL)				12, 12, 17 N=29	SPT
	м	15.0m: Becoming hard.					1	19, 30/50mm	SPT
- 12.17	N	Clayey Silty SAND (Residual) Brown, moist, very dense. Fine to medium grained sand; trace gravel.					2	6, 30/110mm	SPT
17			XXXXXXXXX					30/60mm	SPT 
- 18 - 18 				(SM)				30/70mm 30/120mm	SPT
-			×						-
-16.17		Continued on next sheet	<u>1.55</u>	1	I	l			
REMARI	KS: Kgwu = W	/undaru Granodiorite					LOGGED BY	REVIE	WED BY
							T. Goosey	S.F	oley
		TMR	GEOTECH	HNICAL BO	DREHOLE LOG - CREATED WITH HOLEBASE SI				

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							_		FINAL 1	8/03/2016
	AG			GE	OTECHN	IICAL		BOREHOLE No	В	H240
	Que Que	eensland		BO	REHOLE	LOG		Sheet 3 of 4		
	COV GOV	vernment	SI		GEOTECHNICAL TE REFER FORM F:GE			REFERENCE No	H	12249
PROJECT	Mackay Ring I	Road								
LOCATION	Pioneer River	Bridge, Pier 13 (LHS)						COORDINATES 721333.6	E; 76604	56.4 N
PROJECT No	FG6184	SURFACE RL 3.	83m PL	JNGE 9	0°	DATE STA	RTED 05/12/2015	GRID DATUM	GDA 94 / I	MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.	.H.D. BEA	RING		DATE COMPL	ETED 07/12/2015	DRILLER	Cairns Dril	ling
(m) R.L. (m)	ADDER ADDER MASH BORING CORE DRILLING CORE DRILLING CORE C SAMD CORE CORE CORE CORE CORE CORE CORE CORE	MATERIAL DESCRI	иотория и и и и и и и и и и и и и и и и и и	USCS WEATHERING	INTACT STRENGTH 표구구,구,주,구,주,쿄			ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
21		Silty Clayey SAND (Resi Brown grey, moist, very Fine to coarse grained s gravel; relict rock fabric	v dense.	(SC)					30/90mm 30/100mm 30/50mm	
18.57	(50)					-	🗖 22.40m-22.45m: Gra	anite Clast		
-	(50)	MICRODIORITE (Kgwu) SW: Blue grey, fine grai	ned, 📈						50)=3.60 MPa	A (22.50m)
- - - 23		massive, high to very hi - Js: 5°-10° (1/m) Pl/Sm		sw	H-VH	с		ls(	50)=7.90 MPa	 D (22.90m)
	100 (0) 100 (0)	<ul> <li>Js: 20°-30° (4/m) PI/Sr</li> <li>Js: 60°-70° (2/m) PI/Sr</li> <li>some CA</li> <li>GRANODIORITE (Kgwu)</li> <li>MW: Brown pale grey, or grained, porphyritic, much high strength.</li> <li>Js: 5°-10° (7/m) PI/Ro,</li> <li>SInf</li> <li>Js: 50°-60° (3/m) PI/Ro</li> </ul>	n, OP, Fe St, coarse edium to OP, Fe St,	•	MH	W VCC	23.75m-23.81m: BZ		50)=0.16 MPa 50)=0.18 MPa	– – – – – – – – – – – – – – – – – – –
- 25		SInf - Js: 70°-80° (1-2/m) Pl/	Ro, OP, Fe St,		MH	VC-C		ls(	50)=0.55 MPa	D (25.07m)- 
-	100	SInf	÷.	нw	VL	E	25.40m-25.60m: HW strength, BZ	/, very low		-
- <u>-21.92</u> - 26 - 26	(74)	GRANODIORITE (Kgwu) SW: Pale grey, coarse g porphyritic, high to ver strength.	rained,	sw	H-VH	M C		U	CS=20.00 MPa	 (25.86m)  
22.90		- Js: 5°-10° (5/m) Pl/Ro, MICRODIORITE (Kgwu)		•		м			50)=1.10 MPa 50)=1.30 MPa	A (26.46m) D (26.56m) -
- 27 - 27 	<u>100</u> (62)	SW: Blue grey, fine grai massive, high to very hi - Js: 5°-15° (4/m) Pl/Ro, - Js: 40°-50° (1-2/m) Pl/	igh strength. 🗸	sw	HVH	M C M	27.34m: J:20°,Pl/Ro,		50)=3.40 MPa	  A (27.52m)  
29	<u>100</u> (92)			sw HW sw	H-VH	M	28.50m-28.56m: BZ/	is(	50)=3.10 MPa 50)=8.10 MPa 50)=7.00 MPa	D (28.81m)- - - - - - - - - - -
-26.17		Continued on next	sheet				I			
REMARI	KS: Kgwu = '	Wundaru Granodiorit	e					LOGGED BY	REVIE	EWED BY
								T. Goosey	S.	Foley
			TMR GEOTE	HNICAL BO	DREHOLE LOG - CREATED \	VITH HOLEBASE SI				

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													FINAL 1	18/03/2016
	1.31	ÀC.						GE	OTECHN	IICAL		BOREHOLE	No <b>B</b>	H240
			Qu	e	ensland			BC	REHOLE	LOG		Sheet 4 of 4		
	N.S.		GO	ve	ernment		SY		GEOTECHNICAL TE REFER FORM F:GE			REFERENCE	No <b>H</b>	12249
PROJEC	T	Mac	kay Ring	Ro	ad							L		
LOCATI	ON	Pion	eer Rive	r Bı	ridge, Pier 13 (LHS)							coordinates 721	L333.6 E; 76604	56.4 N
PROJEC	T No	FG6	184		SURFACE RL	3.83m	PLU	JNGE S	0°	DATE STA	RTED 05/12/201	L5 GRID D	DATUM GDA 94 /	MGA Z55
JOB No		242/	/10G/90	6	HEIGHT DATUM	A.H.D.	BEA	RING		DATE COMPL	ETED 07/12/201	L5 D	<sub>RILLER</sub> Cairns Dri	lling
			RQD					U				ADDITIONAL DATA		
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	()% CORE REC%	SAMPLE	MATERIAL DESC	RIPTION	гітногоду	USCS WEATHERING	INTACT STRENGTH			AND TEST RESULTS		SAMPLES TESTS
-		<u>4080</u>			MICRODIORITE (Kgwi	ı)	7						UCS=122.00 MPa	
-					SW: Cont'd.		X			с				
							Ŵ	sw	H-VH		30.85m-30.94m: (	Granite Clast		-
31										м				
	-27.67												Is(50)=6.80 MPa	D (31.32m)
Ē					GRANODIORITE (Kgw SW: Pale red grey, coa	arse grained,	÷							-
32					porphyritic, very high - Js: 20°-30° (3/m) Pl/			1	VH	w			Is(50)=11.00 MPa	A (32.16m)
	-28.57		100		Borehole complete	d at 32.40m		sw	_		32.35m-32.40m: I	DOLERITE, SW	Is(50)=3.60 MPa	D (32.26m)
									-	-				
— 33 - -										 				
										- - -				
										-				
34										 				
-									-	-				
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- - 37										<u> </u>				
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- 39 -										<u>-</u>				
E									-	-				-
										-				
										<u> </u>				-
RE	MAR	KS: I	<gwu =<="" td=""><td>W</td><td>/undaru Granodior</td><td>ite</td><td></td><td></td><td></td><td></td><td></td><td>LOGGED</td><td>BY REVI</td><td>EWED BY</td></gwu>	W	/undaru Granodior	ite						LOGGED	BY REVI	EWED BY
												T. Goose	ey S.	.Foley
						TMP	GEOTEC	HNICAL B	DREHOLE LOG - CREATED V	VITH HOLEBASE SI		•	1	

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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 Name Project No.	FG6184	Date	07/12/15
Borehole No.	BH 240	TMR H No.	H12249
Location	Pioneer River Bridge	Start Depth (m)	22.40
Detail	Pier 13, LHS	Finish Depth (m)	32.40
Chainage		Submitted By	M.Ensor
Remarks			
START START	NB-44 H12.400	M.R.R OC	
Min and Andrews		M.R.R	23.4m
25.44	5 cg 8 H 2 H 0	B0X2	
Lton			
FGGIBU	B B B B B B B B B B B B B B B B B B B	M.R.	4-162 R
# 821 BH240		Box 3	C.C.
	29 45c		
30.04			31.4m
0 100	200 300 400 SCALE 1:5	500 600	700

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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



Designation	Neekey Ding Deed (Otrace 0)		
Project Name	Mackay – Ring Road (Stage 2)	Data	07/40/45
Project No.	FG6184	Date	07/12/15
Borehole No.	BH 240	TMR H No.	H12249
Location	Pioneer River Bridge	Start Depth (m)	22.40
Detail	Pier 13, LHS	Finish Depth (m)	32.40
Chainage		Submitted By	M.Ensor
Remarks			
	FG6184	M.R.R.	•
31.4m		32.ion	
	01/2+0		
A CONTRACTOR OF THE OWNER	8H240	B0X4	
	C T T		
			5
0 100	200 300 400	500 600	700
- 100	200 000 400		,
	SCALE 1:5		
	SCALE 1.3		

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