#### **COPYRIGHT NOTICE**

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the <u>Creative Commons Attribution 4.0 Licence</u> (CC BY 4.0). When reusing the Document, in whole or in part, please attribute the Department as follows: "(c) State of Queensland (Department of Transport and Main Roads) 2020, licensed under the CC BY 4.0 Licence". This licence does not apply to the Queensland Government logo or trademarks.

#### **LIMITATION OF LIABILITY**

The CC BY 4.0 Licence contains a comprehensive Disclaimer of Warranties and Limitation of Liability. In addition, please note that this Document was prepared for Departmental use only. Reuse of the Document by anyone for any other purpose could result in error and/or loss. You should obtain professional advice before making decisions based on the contents of the Document.

When reproducing any part of this Document, you must also reproduce this limitation of liability notice in addition to the italicised attribution statement above.

Retrieved from the Queensland Geotechnical Database http://qgd.org.au/

## Queensland Government

# GEOTECHNICAL BOREHOLE LOG

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

**FINAL** 18/03/2016

BOREHOLE No BH226

Sheet 1 of 3

EFERENCE No H12235

	AUDAK	AT FIDELIS	1					SYN	MBOLS	REFER FORM F:GE	OT 017/8-2014		REFERENCE NO		
PROJECT Mackay Ring Road Mackay Ring Road															
LOCATION Pi			Pioneer River Bridge, Pier 8 (CL)									COORDINATES 721317.4 E; 7660281.7 N			
PROJECT No		FG	FG6184 SURFACE RL 7.17m						PLUNGE 90° DATE STARTED 08/			TED 08/10/2015	2015 GRID DATUM GDA 94 / MGA Z55		
10B No 242/10G/906 HEIGHT DATUM A				HEIGHT DATUM A.H.D.	_ в	BEARING DATE COMPLETED 11/10/				TED 11/10/2015	DRILLER C	airns Drill	ing		
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING	CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION		LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 프	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
						SAND trace silt (Topsoil) Pale grey brown, dry, very loos	se to			- -	-				=
-	6.67				Α	loose. Fine to medium grained cotlets throughout.	I sand,	<u>}}</u>			- - - -			1, 1, 2	SPT
- 1					В	Silty SAND (Alluvium) Dark brown, dry, very loose. Fine grained sand.		Š, ×,	(SM)	_	- - - -			N=3	SPT
						1.00m: becoming very loose to loose 1.50m: becoming very loose.		×		=	- - -			1, 2, 2 N=4	
- <sub>2</sub>	5.37				С	Clayey SAND (Alluvium)  Dark brown, dry, very loose.					- - -			1, 1, 1 N=2	SPT
-	4.67				D	fine to medium grained sand.  2.00m: becoming moist, loose to medium dense.	to		(SC)		- - - -			5, 5, 5 N=10	SPT
- 3					Е	Sandy CLAY (Alluvium) Dark brown, moist, stiff.			(CL)	_ =	- - -			3, 5, 7 N=12	SPT
э	3.97	$\left\  \cdot \right\ $			F	Fine to medium grained sand, plasticity.  SAND trace gravel (Alluvium)	low	_			- - -			3, 4, 5 N=9	SPT
-		Ш			G	Brown, moist, loose. Fine to coarse grained sand, fir			(SP)		- - - -			1, 3, 5 N=8	SPT
<b>-</b> 4		Ш			Н	medium grained gravel, subrou grains. 4.00m: becoming medium dens								5, 10, 14 N=24	SPT
-	2.67	111			1	Gravelly SAND (Alluvium) Brown, moist, medium dense.					- - - -			6, 11, 15	SPT
- 5		Ш			J	Fine to coarse grained sand, fir coarse grained gravel, subroun grains.					- - - -			N=26 9, 9, 7	SPT
-		Ш			K	grams.	-			=	- - - -			N=16 6, 9, 15	SPT
- 6		Ш								=	- - - -			N=24	SPT
-		Ш			_						- - -			14, 11, 10 N=21	
- 7					M				(SP)	=======================================	- - -			11, 9, 9 N=18	SPT
					N	7.50m: becomes wet, increasin	ng .				- - - -			8, 13, 11 N=24	SPT
- 8					0	gravel content					- - - -	─8.00m-8.45m: No sa	mple	12, 12, 13 N=25	SPT
-					Р						- - - -	recovered 8.50m-8.95m: No sa	mple	14, 8, 6 N=14	SPT
	-1.83				Q						- - -	recovered		11, 10, 10 N=20	SPT
- 9					R	SAND (Alluvium) Grey brown, moist, medium de Fine to coarse grained sand.	ense.		(SP)		- - -			7, 7, 10 N=17	SPT
-	-2.43 -2.83	-			S	Silty SAND (Alluvium) Grey, moist, medium dense. Fi	ine	×	(SM)		- - - -			6, 8, 8 N=16	SPT
						Continued on next sheet	Į,		ı	<u>.                                    </u>				f	
RI	MAF	RKS:	K	gwu =	= W	undaru Granodiorite							LOGGED BY	REVIE	WED BY
					_								T.Goosey	S.I	oley

# **Queensland** Government

## **GEOTECHNICAL BOREHOLE LOG**

FINAL 18/03/2016

**BH226** BOREHOLE No

Sheet 2 of 3

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12235 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 8 (CL) COORDINATES 721317.4 E; 7660281.7 N LOCATION SURFACE RL 7.17m FG6184 PLUNGE 90° DATE STARTED 08/10/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 11/10/2015 JOB No BEARING ADDITIONAL DATA AND TEST RESULTS USCS WEATHERING INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY STRENGTH RΙ DEPTH SAMPI MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᄫᅴᅿᆿᆸᇝᇰᄓᄫᇂᇂᇕ grained sand. 6, 8, 10 Clayey SAND (Alluvium) Grey brown, moist, medium dense. Fine to medium grained sand, low SPT 7, 9, 13 plasticity. SPT 9, 11, 14 N=25 (SC) SPT 8, 8, 12 N=19 SPT 6, 8, 10 SPT 4, 11, 15 N=26 -6.03 SPT Sandy CLAY trace gravel (Residual) N=29 Brown grey, moist, hard. Fine to medium grained sand, low SPT 9, 15, 21 plasticity. N=36 ΑB SPT 9, 14, 24 (CL) N=38 SPT 9, 15, 22 15 -8.33 GRANODIORITE (Kgwu) SPT XW: Recovered as pale grey and 8, 17, 30 brown, moist, hard, sandy clay. Fine 16 to medium grained sand, low plasticity. XW SPT 16, 28, 30/100 -10.33 MICRODIORITE (Kgwu) SPT XW: Recovered as dark brown, 14, 30/120 moist, hard gravelly clay. Low to medium plasticity. XW 30/90 19 -12.23 (21) MICRODIORITE (Kgwu) MW: Brown grey, fine to medium 19.69m-19.79m: XW Cly zone MW grained, massive, high to very high Is(50)=2.60 MPa D (19.90m)<sup>-1</sup>
Is(50)=2.30 MPa A (19.94m) Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** T.Goosey S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# **Queensland** Government

## **GEOTECHNICAL BOREHOLE LOG**

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

FINAL 18/03/2016

**BH226** BOREHOLE No

Sheet 3 of 3

H12235 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 8 (CL) COORDINATES 721317.4 E; 7660281.7 N LOCATION SURFACE RL 7.17m FG6184 PLUNGE 90° DATE STARTED 08/10/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 11/10/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % ᇁᆂᆂᆂᅬᅿᆏᇜᆼᇰᇰᄛᇂᆘᇹ strength. 100 Js: 10° -20°(5/m); Pl-Un/Ro; OP; SW UCS=145.00 MPa (20.30m) -13.25 GRANODIORITE (Kgwu) SW: Pale red grey, coarse grained, М SW porphyritic, high to very high strength. Is(50)=7.50 MPa A (21.10m) <u>-14.</u>09 Us: 10° to 15°; (4/m); PI/Ro; TI; Fe St; MICRODIORITE (Kgwu) SW: Blue grey, fine grained, massive, very high strength. Calcite Is(50)=6.20 MPa D (21.75m)\_ -14.73 veins throughout. 22 s: 20°; <u>(1/m); Pl/Ro; TI; Fe St;</u> GRANODIORITE (Kgwu) SW: Pale red grey, coarse grained, porphyritic, high to very high Is(50)=7.00 MPa Is(50)=11.00 MPa D (22.70m) strength. A (22.71m)-7 22.90m-23.05m: Microdiorite band 23 Js: 10° to 15°; (5/m); PI/Ro; TI; Fe St; (84) Js: 50° to 60°; (1/m); PI/Ro; TI; Fe St; SW UCS=53.90 MPa (23.70m) □ 24.45m-24.50m: HW zone: Fe St; HW -17.43 MICRODIORITE (Kgwu) SW: Blue grey, fine grained, Is(50)=8.30 MPa D (24.90m) 25 25.00m-25.15m: Granodiorite clasts massive, very high strength. Js: 5° to 15°; (<2/m); PI/Ro; TI; Fe St; SW Is(50)=3.30 MPa A (25.50m) -18.88 100 26 Borehole completed at 26.05m 27 REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** T.Goosey S.Foley 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)		
Project No.	FG6184	Date	16/08/15
Borehole No.	BH 226	TMR H No.	H12235
Location	Pioneer River Bridge	Start Depth (m)	19.40
Detail	Pier 8 (CL)	Finish Depth (m)	26.05
Chainage		Submitted By	M.Ensor
Remarks			

