#### **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** 17/03/2016

BOREHOLE No BH205

Sheet 1 of 3

EFERENCE NO H12214

Ţ	AUDAS A	a ribrili				SYI	MBOLS	REFER FORM F:GEO	T 017/8-2014		REFERENCE NO		2214
PROJECT		Mad	ckay Ring	g Ro	ad								
LOCATION	١	Pior	neer Rive	er B	ridge, Pier 1 (CL)						COORDINATES 721281.5	E; 766003	39.2 N
PROJECT	No	FG6	184		SURFACE RL 6.50m	PLU	INGE S	90°	DATE START	TED 13/09/2015	GRID DATUM G	iDA 94 / N	лGA Z55
OB NO 242/10G/906 HEIGHT DATUM A.H.D. BEARING * DATE COMPLETED 15/09/20						15/09/2015	DRILLER C	airns Dril	ing				
	R.L. (m)	AUGER CASING WASH BORING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
					Sandy CLAY (Alluvium) Dark brown, moist, soft. Fine grained sand, low plasticity.			+	_				- - - -
- 1				В			(CL)	+	_			1, 2, 3 N=5	SPT
5	5.00			С	Clayey SAND (Alluvium)			<u> </u>	-			1, 2, 2 N=4	SPT
- 2				D	Dark brown, moist, very loose to loose. Fine grained sand.			#	_			, 1, 2 N=3	SPT
-				E	2.50m: fine to coarse grained sand	· 图图 · 图图	(SC)		.			2, 2, 2 N=4	SPT
- з	5.50	$\left\{ \left  \cdot \right  \right\ $		F G	trace fine grained gravel.  CLAY (Alluvium)				-			2, 3, 2 N=5	SPT ————————————————————————————————————
-				Н	Pale brown grey, moist, firm. Fine grained sand, low to medium plasticity, trace organics.		(CI)	± ±	-			1, 2, 4 N=6 3, 4, 8	SPT
_ 4 2	2.50	-		1	3.50m: becomes grey, stiff.  Clayey SAND (Alluvium)  Grey mottled brown, moist, medir				-			N=12 6, 9, 12	SPT
-				J	dense. Fine to medium grained sand, low plasticity clay.			± ± ±	-			N=21 8, 12, 19 N=31	SPT
- 5				K	4.50m: becomes dense. 5.00m: becomes medium dense.		(SC)	<u> </u>	-			7, 10, 15 N=25	SPT
-				L				± ±	-			7, 11, 14 N=25	SPT
- 6				М				<u> </u>	-			7, 11, 16 N=27	SPT
- 7	<u>).10</u>			N	Silty CLAY (Alluvium) Pale grey and brown, moist, very	×_ ×_			_			6, 10, 16 N=26	SPT
-				0	stiff. fine grained sand, low plasticity. 7.00m: becomes hard. 7.50m: becomes very stiff.	×_	(CL)	‡				7, 13, 20 N=33	SPT
- 8   <u>-</u>	1.64			Р	8.00m: becomes hard	×_ ×_			_			7, 10, 15 N=25	SPT
. [	2.14			Q	Clayey SAND (Alluvium) Pale grey and brown, moist to we dense. Fine to medium sand.	t, 景	(SC)					6, 13, 18 N=31	SPT
- 9 <del>-2</del>	2.50				Sandy CLAY (Alluvium) Grey brown, moist, very stiff. Medium grained sand, low to		(CI)	<u> </u>	-			8, 10, 14 N=24	SPT
.				S	medium plasticity. Silty CLAY trace sand (Alluvium) Grey brown, moist, very stiff to		(CI)		-			5, 10, 15 N=25	SPT
-3	3.50				hard.	×_						5, 12, 28 N=40	SPT
	4.5		17 -		Continued on next sheet								
REN	/IAR	KS:	Kgwu =	= W	undaru Granodiorite						LOGGED BY		WED BY
											T.Goosey	S.I	-oley

## Queensland Government

## GEOTECHNICAL BOREHOLE LOG

**FINAL** 17/03/2016

BOREHOLE No BH205

Sheet 2 of 3

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12214 REFERENCE No Mackay Ring Road PROJECT Pioneer River Bridge, Pier 1 (CL) COORDINATES 721281.5 E; 7660039.2 N LOCATION FG6184 SURFACE RL 6.50m PLUNGE 90° DATE STARTED 13/09/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 15/09/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION (m) CORE REC % Silty CLAY trace sand (Alluvium) 8, 8, 10 (Cont'd) Becoming very stiff. Fine grained sand, low to medium plasticity. SPT N=18 11.00m: becomes brown. SPT (CI) 6. 8. 12 N=20 11.50m-11.95m: No sample ecovered SPT 6, 11, 15 N=26 12.00m-12.45m: No sample recovered SPT 8, 11, 17 -6.00 Clayey SAND (Alluvium) SPT 11, 13, 17 Grey, moist, medium dense. N=30 Fine to medium grained sand. 13 SPT N=19 SPT (SC) 6, 8, 13 SPT 5, 10, 11 14.50m: becomes dense. SPT 10, 16, 24 -8.49 15 Sandy Silty CLAY (Residual) (CI) SPT Grev brown, moist, hard. -8.99 Fine to medium grained sand, low SPT to medium plasticity. 30/140 GRANODIORITE (Kgwu) XW: Recovered as pale brown, 16 moist, very dense, silty clayey sand. 30/140 Fine to coarse grained. xw 30/70 ΑI 30/140 -11.50 (25)MICRODIORITE (Kgwu) 18.15m-18.16m: J; 20°, PI/Ro, FL, MW: Blue grey, fine grained, Cly 10mm; Is(50)=9.20 MPa A (18.35m) massive, very high strength. MW 100 Js: 20°-30°(2/m); PI/Ro; TI-FL; some → 18.65m-18.75m: HFZ; DI (42) 12.38 Cly and Fe St XW ☐ 18.94m-18.99m: XW Cly zone s: 40°-50°(2/m); PI/Ro; TI; Fe St 19 s: 80°-85°; (2/m); Un/Ro; TI; Fe St Is(50)=8.60 MPa A (19.29m) GRANODIORITE (Kgwu) 100 SW SW: Pale red grey, coarse grained, (19.55m) (100)porphyritic, high to very high strength. 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** 17/03/2016

BOREHOLE No BH205

Sheet 3 of 3

REFERENCE No H12214

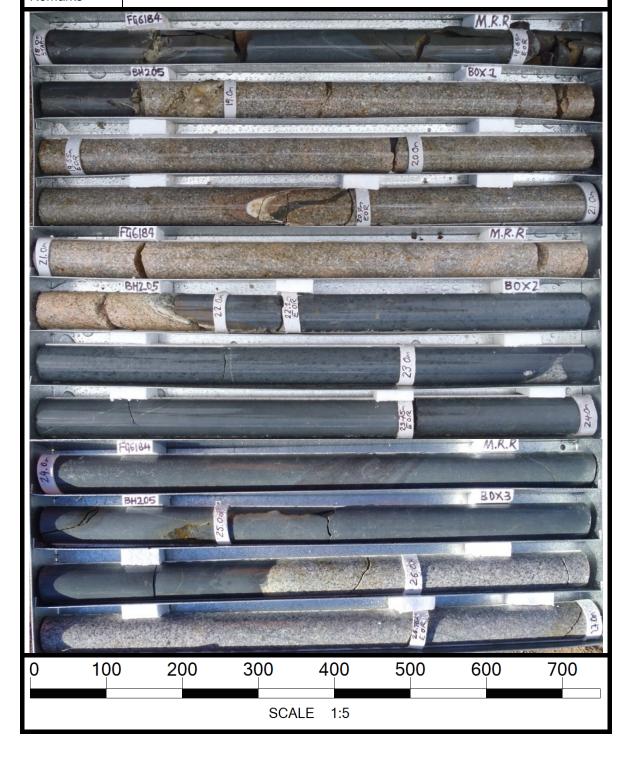
Mackay Ring Road PROJECT Pioneer River Bridge, Pier 1 (CL) COORDINATES 721281.5 E; 7660039.2 N LOCATION SURFACE RL 6.50m DATE STARTED 13/09/2015 FG6184 PLUNGE 90° GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DATE COMPLETED 15/09/2015 DRILLER Cairns Drilling HEIGHT DATUM A.H.D. JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY SAMPLE STRENGTH RΙ DEPTH MATERIAL DESCRIPTION CORE REC % ᄪᆍᆂᆂᄝᄀᅿᆿᆸᇝᇬᅁᄫᇂᇂᄬ GRANODIORITE (Kgwu) SW: (Cont'd) Js: 10° to 20°; (2-3/m); PI/Ro; TI; Fe (76) Js: 70° to 80°; (<1/m); PI/Ro; FL; CA Is(50)=9.60 MPa A (20.80m) Is(50)=7.40 MPa SW D (20.90m) and Fe St; Is(50)=12.00 MPa D (21.30m) 15.44 21.95m: Contact; 70°, PI/Ro, Fe St, 100 MICRODIORITE (Kgwu) CA, Cly Vr; (100) SW: Blue grey, fine grained, Is(50)=5.10 MPa Is(50)=7.80 MPa A (22.30m) massive, very high strength. D (22.40m) Js: 5° to 10°; (<1/m); PI/Ro; TI; Cn; Js: 25° to 35°; (1;/m); PI/Ro; TI; Cn; UCS=89.90 MPa (22.88m) Js: 40° to 50° (<1/m); PI/Ro; T;I Cn; E=71 GPa 23 v= 0.16 100 (100) SW Is(50)=14.00 MPa D (23.90m) 24.95m-25.20m; J; 80°, St/Ro, TI, Fe 25 Is(50)=10.00 MPa Is(50)=11.00 MPa A (25.28m)-D (25.40m)\_ -19.30 25.80m: Contact; 10°, Un/CD; GRANODIORITE (Kgwu) 26 SW: Pale grey, coarse grained, Is(50)=11.00 MPa A (26.18m)porphyritic, very high strength. Js: 5° to 10°; (1/m); PI/Sm; TI; Cn; Js: 20° to 40°; (1/m); PI/Ro; TI; Fe St; 100 (100) М 27 Is(50)=8.60 MPa A (27.05m)\_ SW Is(50)=9.70 MPa D (27.85m)\_ UCS=173.00 MPa (28.13m) -22.54 100 Borehole completed at 29.05m 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	14/09/15
Borehole No.	BH 205	TMR H No.	H12214
Location	Pioneer River Bridge	Start Depth (m)	18.00
Detail	Pier 1, RHS	Finish Depth (m)	29.05
Chainage		Submitted By	M.Ensor
Remarks			



### **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	age 2)		
Project No.	FG6184	Da	ite	14/09/15
Borehole No.	BH 205	TM	/IR H No.	H12214
Location	Pioneer River Bridge	Sta	art Depth (m)	18.00
Detail	Pier 1, LHS	Fir	nish Depth (m)	29.05
Chainage		Su	bmitted By	M.Ensor
Remarks				
	FG6184		M.R.R	
S. Comments			FALL VIN	
23	A Marie Committee of the Committee of th	Market State of the State of th	and the area of the second	
751616	BH205		B0X.4	
	2800			+ 40.170
2 - 10 6 10 6 1 F 10 10 10 10 10 10 10 10 10 10 10 10 10		A CONTRACT OF THE PARTY OF THE	The state of the s	
A STATE OF THE STA		F	F. C. F.	G L
		62	20 05 80 05 80 80 80 80 80 80 80 80 80 80 80 80 80	
3				
100	200 300	400 50	00 600	700
		1		700
				700
	90	CALE 1:5		700