#### **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

FINAL 18/03/2016

**BH252** BOREHOLE No

Sheet 1 of 5

H12261 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT COORDINATES 721350.2 E; 7660594.9 N Pioneer River Bridge, Pier 17 (LHS) LOCATION FG6184 SURFACE RL 4.21m PLUNGE 90° DATE STARTED 03/08/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/08/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY STRENGTH RΙ DEPTH SAMPI MATERIAL DESCRIPTION (m) CORE REC % Silty SAND trace clay (Alluvium) Pale brown, moist, loose. Fine grained sand. (SM) 1.00m: becoming clayey sand. Medium plasticity. SPT 2.81 SAND trace silt (Alluvium) Pale brown, moist, medium dense. Fine grained sand. SPT (SP) 3.00m: becomes orange grey. SPT 0.71 Gravelly SAND (Alluvium) Brown, wet, loose. Medium to coarse grained sand, fine to coarse grained gravel, SPT rounded grains. (SW) 5.0m: Becoming dense. -1.09 SPT 11, 16, 14 N=30 Sandy GRAVEL (Alluvium) Orange and dark grey, wet, dense. Medium to coarse grained sand, fine to coarse grained gravel. SPT N=3: 6.80m: interbedded with SAND (Alluvium): pale grey, wet, medium dense. Fine to medium grained SPT G N=15 (GW) SPT 20, 14, 8 N=22 9.00m: fine to medium grained gravel, subrounded grains. SPT 12, 11, 17 N=28 Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes 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

BOREHOLE No BH252

Sheet 2 of 5

REFERENCE No H12261

Mackay Ring Road PROJECT Pioneer River Bridge, Pier 17 (LHS) COORDINATES 721350.2 E; 7660594.9 N LOCATION FG6184 SURFACE RL 4.21m PLUNGE 90° DATE STARTED 03/08/2015 GRID DATUM GDA 94 / MGA Z55 PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 05/08/2015 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 % ᅾᆃᆂᆂᄝᆛᆛᆿᆝᇝᇰᄓᄫᇂᆘᇂᇦ Sandy GRAVEL (Alluvium) (GP) -6.09 (Cont'd) Sandy CLAY (Residual) Mottled pale orange brown and grey, moist, hard. Fine to medium grained sand, high plasticity. 11, 15, 16 (CH) N=31 -8.09 SPT 13, 17, 23 GRANODIORITE XW: Recovered as speckled grey, dark grey and brown, moist, dense, clayey sand. Fine to medium grained 13.00m-13.10m: DOLERITE (XW): sand, pyrite throughout. Recovered as CLAY: green, moist, very stiff. Medium to high plasticity SPT 13.0m: Becoming very dense. N=52 SPT 16, 29, 30/110 15 15.00 to 15.30m: becomes pink to 0 SPT dark grey. Coarse grained sand. 25, 30/130 16 Р SPT Q SPT -13.29 MICRODIORITE XW: Recovered as green grey, moist, very dense, clayey sand with gravel. Fine grained sand, fine grained 30/70 gravel, angular grains. -14.49 GRANODIORITE XW: Recovered as speckled pink and dark grey, moist, very dense, clayey 30/100 sand. Medium to coarse grained sand, medium plasticity. Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes 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

**BH252** BOREHOLE No

Sheet 3 of 5

H12261 REFERENCE No Mackay Ring Road PROJECT COORDINATES 721350.2 E; 7660594.9 N Pioneer River Bridge, Pier 17 (LHS) LOCATION DATE STARTED 03/08/2015 GRID DATUM GDA 94 / MGA Z55 FG6184 SURFACE RL 4.21m PLUNGE 90° PROJECT No DATE COMPLETED 05/08/2015 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING SAMPLES TESTS LITHOLOGY Ξ SAMPLE DEPTH ( RΙ MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓᄫᇂᆘᇂᄪ GRANODIORITE XW: (Cont'd) hb hb 18.79 (0) ORE CORE LOSS -19.01 hb GRANODIORITE XW XW: Recovered as speckled pink, (g) grey and dark grey, moist, very dense, gravelly sand. Coarse grained 99 ΧW and, angular grains. 24.00m: End coring, start 30/40 hb washboring to 30.00m 25 ht 26 27 hŧ hb 30/50 Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** C.Boyes S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# GEOTECHNICAL BOREHOLE LOG

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

**FINAL** 18/03/2016

BOREHOLE No BH252

Sheet 4 of 5

REFERENCE No H12261

Mackay Ring Road PROJECT Pioneer River Bridge, Pier 17 (LHS) COORDINATES 721350.2 E; 7660594.9 N LOCATION FG6184 SURFACE RL 4.21m DATE STARTED 03/08/2015 GRID DATUM GDA 94 / MGA Z55 PLUNGE 90° PROJECT No 242/10G/906 HEIGHT DATUM A.H.D. DATE COMPLETED 05/08/2015 DRILLER Saxon Drilling JOB No BEARING USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ê LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION CORE REC % (0) GRANODIORITE MW MW: Speckled grey, dark grey and 30.40m-30.80m: CORE LOSS (77) pink, coarse grained, massive, very low to medium strength, broken in parts -26.73 HW 30.94m: Boundary is 70°, PI/Sm; GRANODIORITE SW: Speckled grey, dark grey and Is(50)=9.60 MPa A (31.22m) Is(50)=12.00 MPa D (31.32m)pink, coarse grained, massive, very high strength. Js: 20° to 35°; (<1/m); PI/Sm; OP; CA VN <1mm; □ 32.02m-32.05m; XW BZ; Js: 5° to 15°; (~2/m); Pl-Un/Sm-Ro; Boundaries are 15°, PI/Sm, some Is(50)=11.00 MPa D (32.25m) OP; Cn; UCS=144.00 MPa (32.39m) Js: 60° to 70°; (<1/m); PI/Sm; OP; CA VN <1mm; (32.85m) UCS=72.60 MPa 33.00m: J: 70°; PI/Sm; OP; CA VN 33 85 С (93) 33.39m: J: 70°; PI/Sm; OP; CA VN Is(50)=9.80 MPa A (33.46m) 100 (96) Is(50)=8.40 MPa Is(50)=14.00 MPa A (34.19m) D (34.29m) .51m-34.53m: VN: 70°; PI/Sm-Ro; OP; CA; 35 35.16m-35.17m: VN: 60°: PI/Sm: OP; CA <4mm Is(50)=10.00 MPa D (35.42m) SW 35.50m: VN: Pl-Un/Sm; CD; CA 100 36.10m: (98)Js: 5° to 15°; (<4/m); PI-Un/Sm-Ro; Is(50)=12.00 MPa Is(50)=12.00 MPa D (36.50m) A (36.60m)-37 UCS=120.00 MPa (37.11m) Is(50)=9.10 MPa A (38.23m) Is(50)=11.00 MPa D (38.42m) 38.58m: VN: Un/Sm; OP; CA (84)Is(50)=11.00 MPa A (39.31m) Is(50)=15.00 MPa D (39.42m)-Continued on next sheet REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** S.Foley C.Boyes TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# Queensland

## **GEOTECHNICAL BOREHOLE LOG**

**FINAL** 18/03/2016

BH252

Sheet 5 of 5

BOREHOLE No

		<b>%</b>		GO	V	ernment	SY			EOTECHNICAL TE REFER FORM F:GE			REFERENCE No	H:	12261
ROJECT Mackay Ring Road															
OCATION Pioneer River Bridge, Pier 17 (LHS					ridge, Pier 17 (LHS)							COORDINATES 721350	.2 E; 76605	94.9 N	
ROJECT No		F	FG6184 SURFACE RL 4.21m			PLU	JNGE	90	)°	DATE STAF	TED 03/08/2015	2015 GRID DATUM GDA 94 / MGA Z55			
OB No		2	242/10G/906		)6	HEIGHT DATUM A.H.D.		BEARING °			DATE COMPLETED 05/08/2015				ling
DEPTH (m)	R.L. (m)	AUGER	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS	WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
						GRANODIORITE SW: (Cont'd)	+ + + + +				С	40.05m-40.08m: Jo Js: 5°; (x4); PI/Sm; C Js: 60°; (x4); PI/Sm; <1mm;	OP; Cn; OP; CA VN	ls(50)=2.90 MPa	D (40.45m)
- 41 - 42 - 43 - 44 - 45	<u>-37.24</u>			100		40.59m: becomes more pink, wiminor dark grey and grey, coars grained, very high strength. Js: 5° to 15°; (5/m); Pl/Ro; OP; some CA; Js: 30° to 50°; (1/m); Pl/Ro; OP. some CA;  Borehole completed at 41.45m	e +	sw				40.85m-40.94m: C2 VN <4mm; multiple joints.	veins and	(50)=10.00 MPa (50)=11.00 MPa	A (41.15m) D (41.32m) S S S S S S S S S S S S S S S S S S S
- 47															- - - - - - - -
- 48 - 49											- - - - - - - - - - - - - - - - - - -				
											=				
REMARKS: Kgwu = Wundaru Granodiorite										LOGGED BY	Y REVIEWED BY				
									C.Boyes	S.	Foley				
	_			_		·		_				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·

### **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 (Stag	ge 2)								
Project No.	FG6184		Date	02/08/15						
Borehole No.	BH 252		TMR H No.	H12261						
Location	Pioneer River Bridge		Start Depth (m)	23.00						
Detail	Pier 17 (LHS)		Finish Depth (m)	41.45						
Chainage Submitted By M.Ensor										
Remarks										
8 LOSS 800 97	8H252	ZP.ZZ.	ch Loss							
FABR		BH252								
800	13 0.0			- B 2 B 2						
R	b/84	B+QS2	gox di m	3 1 ,						
		\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$								
	24.00 M	0,1								
0 100	200 300	400	500 600	700						
	SC	ALE 1:5								

### **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	02/08/15				
Borehole No.	BH 252	TMR H No.	H12261				
Location	Pioneer River Bridge	Start Depth (m)	23.00				
Detail	Pier 17 (LHS)	Finish Depth (m)	41.45				
Chainage		Submitted By	M.Ensor				
Remarks							

