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# Queensland

### **GEOTECHNICAL BOREHOLE LOG**

**FINAL** 18/03/2016

BOREHOLE No BH253

Sheet 1 of 4

		200		ΙΟV		eniment	SY		GEOTECHNICAL TER REFER FORM F:GEO			REFERENCE No	H1	.2262	
PROJEC <sup>*</sup>	Г	Ma	ackay	Ring I	Roa	ad									
LOCATIO	ON	Pic	Pioneer River Bridge, Pier 17 (CL)  coordinates 721361.0 E; 7660593.5 N												
PROJECT No		FG	FG6184			SURFACE RL 4.43m	PLU	JNGE S	90°	DATE STAR	RTED 12/08/201	5 GRID DATUM	GDA 94 / N	MGA Z55	
JOB No		24	242/10G/906			HEIGHT DATUM A.H.D.	BEA	RING	·	DATE COMPLE	TED 14/08/201	5 DRILLER	DRILLER Saxon Drilling		
DEРТН (m)	R.L. (m)	AUGER CASING WASH BORING	CO CO	% II	SAINITLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH 플루파폴리루네	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS	
- - -	4.34			,	4	Silty SAND (Topsoil) Pale brown, dry, loose. Fine to medium grained.	X// X X			-			2, 2, 7 N=9	SPT	
- - - - - 1				E	В	Silty SAND (Alluvium) Pale brown, dry, very loose. Fine to medium grained.	/ loose. ned.	(SM)	<u>‡</u>		2, 2, 3 N=5		2, 2, 3 N=5	SPT	
				(	С	0.65m: becomes loose. Fine grained sand.						4, 3, ; N=!		SPT	
				ı	D		× × ×						3, 4, 5 N=9	SPT	
				E	E	2.00m: becomes medium dense.	X X X			- - - -			4, 6, 9 N=15	SPT	
- - - - - 3				1	F		× × ×			_		4, 6, 9 N=15		SPT	
- ·	0.94			(	3		×	2		- - - -			4, 5, 6 N=11	SPT	
- - - - - - - - -				н	Н	SAND trace silt (Alluvium) Pale grey brown, wet, medium dense.						5, 7, N=1:		SPT	
					I	Fine to medium grained sand.		(SP)		- - - -			9, 8, 7 N=15	SPT	
- - - - 5	-0.32					Gravelly SAND trace silt (Alluvium) Dark grey brown, wet, medium				- - - -			8, 12, 14 N=26	SPT	
- - - -	-2.56			k	K	dense. Fine to coarse grained sand, fine to medium grained gravel, subrounded grains.  6.00m: gravelly bands throughout.				‡		18,		SPT	
- - - - - 6				ı			d .	(SP)	<u> </u>	- - -		21, 18, 1 N=2 12, 10, N=1		SPT	
-				ľ	И					- - -				SPT	
- - - - - - - 7				1	N				<u> </u>	· · ·		16, 9, N=1		SPT	
- ´   - -				(	C	Clayey SAND (Alluvium) Pale grey, wet, medium dense. Fine grained sand.				- - -			8, 6, 9 N=15	SPT	
- - - - - - - - - - 8				í	Р			(SC)				8, 10, 11 N=21 10, 9, 10 N=19		SPT	
-				Q	2									SPT	
- - - - - - - -				F	R					- - - -			5, 4, 6 N=10	SPT	
— 9 - - - - - - -					S	9.30 to 9.35m: grey, wet, stiff, clay lens. Medium to high plasticity.	et, stiff, clay					7, 6, 7 N=13		SPT	
- - -	-5.42				Т					-			5, 5, 12 N=17	SPT	
		VC	IZ =			Continued on next sheet						T			
REMARKS: Kgwu = Wundaru Granodiorite										LOGGED BY REVIEWED E					
T.Goosey S.Fole  TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI										-oiey					

# **Queensland** Government

#### **GEOTECHNICAL BOREHOLE LOG**

FINAL 18/03/2016

**BH253** BOREHOLE No

Sheet 2 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12262 REFERENCE No Mackay Ring Road PROJECT COORDINATES 721361.0 E; 7660593.5 N Pioneer River Bridge, Pier 17 (CL) LOCATION FG6184 PLUNGE 90° DATE STARTED 12/08/2015 GRID DATUM GDA 94 / MGA Z55 SURFACE RL 4.43m PROJECT No 242/10G/906 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. DATE COMPLETED 14/08/2015 JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY SAMPLE STRENGTH RΙ DEPTH MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇂᇕ Clayey SAND trace gravel (Alluvium) 13, 13, 12 Pale brown, wet, medium dense. Fine to coarse grained sand, low (SC) plasticity. SPT 28, 26, 14 10.5m: Becoming dense. -6.56 Silty CLAY (Residual) SPT Brown grey, moist, very stiff. (CH) 7. 8. 10 N=18 -7.06 High plasticity. GRANODIORITE (Kgwu) SPT 8, 14, 20 XW: Recovered as pale brown grey, N=34 moist, hard, sandy clay trace gravel. Fine grained sand, high plasticity. SPT 16, 17, 30 N=47 XW -8.56 GRANODIORITE (Kgwu) SPT XW: Recovered as pale grey brown 21, 30/120 mottled black and white, wet, very dense, clayey sand. Fine to coarse grained sand, high plasticity. SPT 18, 30, 29 ΧW 15 AB SPT 16 30/120 -12.56 GRANODIORITE (Kgwu) HW: Brown grey, coarse grained, porphyritic, extremely low to very low strength. HW 19 AF 30/100 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

**FINAL** 18/03/2016

BOREHOLE No BH253

Sheet 3 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12262 REFERENCE No Mackay Ring Road PROJECT COORDINATES 721361.0 E; 7660593.5 N Pioneer River Bridge, Pier 17 (CL) LOCATION DATE STARTED 12/08/2015 FG6184 PLUNGE 90° GRID DATUM GDA 94 / MGA Z55 SURFACE RL 4.43m PROJECT No 242/10G/906 DATE COMPLETED 14/08/2015 DRILLER Saxon Drilling HEIGHT DATUM A.H.D. JOB No BEARING USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY SAMPLE DEPTH ( RΙ MATERIAL DESCRIPTION CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇂᇕ GRANODIORITE (Kgwu) HW: (Cont'd) HW 30/100 -17.57 AL GRANODIORITE (Kgwu) XW: Recovered as brown grey, wet, 30/100 very dense, gravelly sand. Fine to coarse grained sand, fine grained gravel, angular grains. xw 23 30/120 -19.57 AK GRANODIORITE (Kgwu) 30/100 XW: Recovered as brown grey, wet, very dense, sandy gravel. Fine to coarse grained sand, fine to medium grained gravel, angular grains. 25 26 ¬ 26.00m-26.05m: No sample xw 27 29.00m-29.01m: No sample 30-Oct Continued on next sheet recovered 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

**FINAL** 18/03/2016

BOREHOLE No BH253

Sheet 4 of 4

FOR GEOTECHNICAL TERMS AND H12262 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Mackay Ring Road PROJECT Pioneer River Bridge, Pier 17 (CL) COORDINATES 721361.0 E; 7660593.5 N LOCATION FG6184 PLUNGE 90° DATE STARTED 12/08/2015 GRID DATUM GDA 94 / MGA Z55 SURFACE RL 4.43m PROJECT No 242/10G/906 HEIGHT DATUM A.H.D. DATE COMPLETED 14/08/2015 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 (m) CORE REC % ᇁᆂᆂᆂᅬᅿᅿᆿᅟᅴᇜᇰᄓॾᇂᆘᇂᇕ GRANODIORITE (Kgwu) 30/20 XW: (Cont'd) XW -26.26 30.70m-30.85m: XW zone (42) GRANODIORITE (Kgwu) XW 30.90m-31.25m: J: 85°; PI/Ro; FL; SW: Grey mottled black and pale Is(50)=1.00 MPa I (31.00m) QZ and Fe St; red, coarse grained, porphyritic, very high to extremely high strength. Js: 10° to 20°; (5/m); PI/Ro; TI; QZ FL, Fe St; 100 s: 35° to 45°; (2/m); Pl/Ro; TI; Fe St; (82) s: 65° to 75°; (2/m); PI/Ro; TI; Fe St; From 32.00m: Is(50)=7.40 MPa A (32.44m) Js: 5° to 15°; (2-3/m); PI/Ro; TI; Fe Is(50)=11.00 MPa D (32.55m) Js: 35° to 50°; (2/m); PI/Ro; TI; Fe St, some QZ FL; SW 33 Js: 65° to 75°; (<1/m); PI/Ro ;TI-FL; QZ, Fe St; Is(50)=11.00 MPa D (33.40m) Is(50)=10.00 MPa Is(50)=9.70 MPa D (34.30m) A (34.40m) 34.89m-35.00m: HW zone, medium strength, some Cly FL 35.10m-35.25m: MW zone, high 35 100 (67) strength UCS=99.30 MPa (35.40m) <sup>-</sup> E=70.2 GPa v= 0.122 SW Is(50)=8.00 MPa Is(50)=8.30 MPa A (36.50m) D (36.60m)-37 Is(50)=9.20 MPa D (37.50m) 100 -33.26 Borehole completed at 37.70m REMARKS: Kgwu = Wundaru Granodiorite **LOGGED BY REVIEWED BY** S.Foley T.Goosey 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 Ro	oad (Stage 2)		
Project No.	FG6184		Date	13/08/15
Borehole No.	BH 253		TMR H No.	H12262
ocation	Pioneer River Bridg	ge	Start Depth (m)	30.70
Detail	Pier 17, centreline	-	Finish Depth (m)	37.70
Chainage			Submitted By	M.Ensor
Remarks			·	
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