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**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH201**

Sheet 1 of 4

REFERENCE No **H12210**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Abutment A (LHS)	COORDINATES 721268.2 E; 7660021.3 N	
PROJECT No	FG6184	SURFACE RL 7.19m	PLUNGE 90°
			DATE STARTED 14/09/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 16/09/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
												EH	VH
1	6.09				Silty CLAY (Topsoil) Brown, dry, soft. Low plasticity, trace rootlets. 0.50m: clay content increasing	(CL)							
				A	Silty CLAY trace sand (Alluvium) Mottled brown and orange brown, moist, stiff. Fine grained sand, medium to high plasticity, trace organics.	(CH)					2, 3, 5 N=8		
2				B	2.20m: sand content increasing						3, 6, 8 N=14		
3	4.29			C	CLAY trace sand (Alluvium) Brown, moist, stiff. Medium to high plasticity.	(CH)					3, 4, 7 N=11		
4	3.19			D	Silty Clayey SAND (Alluvium) Pale grey and brown, wet, loose. Fine grained sand.						4, 4, 3 N=7		
5				E	5.00m: becomes grey, medium dense. Clay content decreasing.						9, 11, 13 N=24		
6				F	6.00m: becomes dense. Fine to coarse grained sand.	(SC)					11, 15, 19 N=34		
7				G	7.40m: clay content increasing						13, 17, 13 N=30		
8	-0.61			H	Silty CLAY trace sand (Alluvium) Pale grey and mottled brown, moist, very stiff. Fine grained sand, medium plasticity.	(CI)					7, 9, 10 N=19		
9				I							6, 8, 9 N=17		
	-2.81												

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REMARKS: Kgwu = Wundaru Granodiorite

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C.Boyes	S.Foley



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BOREHOLE No **BH201**

Sheet 2 of 4

REFERENCE No **H12210**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Abutment A (LHS)		COORDINATES 721268.2 E; 7660021.3 N
PROJECT No	FG6184	SURFACE RL 7.19m	PLUNGE 90°
			DATE STARTED 14/09/2015
			GRID DATUM GDA 94 / MGA 255
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 16/09/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	FAUGER CASING WASHBORING CONE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
													EH
11					J	Silty CLAY trace sand (Alluvium) Cont'd.						6, 7, 8 N=15	SPT
					K		(Cl)					9, 9, 12 N=21	SPT
12					L	12.00m: sand content increasing.						6, 9, 9 N=18	SPT
13	-5.81				M	Clayey SAND (Alluvium) Pale grey mottled orange brown, moist, medium dense. Fine grained sand.						2, 8, 14 N=22	SPT
14					N	14.00m: becomes pale grey. Medium to coarse grained sand. Clay content decreasing.		(SC)				5, 6, 6 N=12	SPT
15					O	15.00m: trace fine to medium grained gravel, rounded grains.						6, 6, 7 N=13	SPT
16	-8.51				P	Silty CLAY trace sand (Alluvium) Pale grey, moist, very stiff. Fine grained sand, low plasticity.		(CL)				11, 10, 15 N=25	SPT
17	-9.81				Q	Silty CLAY trace sand (Residual) Pale green grey and dark grey, moist, hard. Fine grained sand. Trace gravel.		(Cl)				22, 20, 23 N=43	SPT
18					R	18.00m: gravel content decreasing.						15, 19, 21 N=40	SPT
19	-11.16				S	MICRODIORITE (Kgwu) XW: Recovered as green grey, moist, hard, sandy clay trace gravel. Fine grained sand and angular gravel.		XW				30, 28, 27 N=55	SPT
	-12.81												

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Sheet 3 of 4

REFERENCE No **H12210**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Abutment A (LHS)		COORDINATES 721268.2 E; 7660021.3 N
PROJECT No	FG6184	SURFACE RL 7.19m	PLUNGE 90°
			DATE STARTED 14/09/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 16/09/2015
			DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASHINGTON CONE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH										DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J	V	EL	EC	VC	C			
					MICRODIORITE (Kgwu) XW: (Cont'd)														30/100	SPT
21				U	21.00m: gravel content increasing, angular grains.		XW												30/100	SPT
22				V														22.00m-22.02m: No sample recovered	30/20 hb	SPT
23	-15.51		(50) 100		MICRODIORITE (Kgwu) MW: Green grey, fine to medium grained, massive, medium to high strength. Js: 5° to 15° (<5/m); Pl/Sm-Ro; OP; some Sinf and Cly Vr; Js: 80° (<2/m); Pl/Sm; CD; GRANODIORITE (Kgwu) SW: Grey, dark grey and pink, medium to coarse grained, porphyritic, mainly very high strength. Minor		MW		H									23.06m-23.13m: HFZ;	Is(50)=0.18 MPa	A (22.80m)
	-16.24		(34)				SW											23.38m-23.43m: HFZ; 23.45m: Contact: 75°; Pl/Sm; OP; CA Vr <2mm;	Is(50)=0.77 MPa	D (23.33m)
24			100				HW											24.12m-24.30m: HFZ;	Is(50)=11.00 MPa Is(50)=13.00 MPa	A (23.87m) D (23.95m)
			(54)				SW												UCS=148.00 MPa	(24.40m)
25							MW											24.97m-25.12m: HFZ, MW;	Is(50)=9.40 MPa Is(50)=11.00 MPa	A (24.83m) D (24.93m)
							MW											25.25m-25.43m: HFZ, MW;		
26			100				SW												Is(50)=1.80 MPa Is(50)=8.90 MPa	A (25.75m) D (25.85m)
			(71)				MW													
27							SW											26.76m-26.97m: J: 90°; Un/Ro; CD; 26.97m-26.98m: MW zone	Is(50)=5.10 MPa UCS=134.00 MPa E=62.9 GPa	D (26.75m) (27.10m)
28	-20.72																	27.72m-27.82m: HFZ; 27.91m: Contact: 70°; Pl/Sm; CD; 28.01m-28.05m: DI	Is(50)=3.00 MPa Is(50)=2.60 MPa	A (28.10m) D (28.20m)
29			100				SW											28.67m-28.85m: GRANODIORITE (SW): Grey, dark grey and pink, medium grained, porphyritic, very high strength. Upper contact: 70°; Un/Sm; CD; Lower contact: 70°; Pl/Sm; CD; CA Vr <1mm;	Is(50)=0.88 MPa	A (29.23m)
	-22.81		(77)																	

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REFERENCE No H12210

PROJECT	Mackay Ring Road				
LOCATION	Pioneer River Bridge, Abutment A (LHS)			COORDINATES 721268.2 E; 7660021.3 N	
PROJECT No	FG6184	SURFACE RL	7.19m	PLUNGE	90°
				DATE STARTED	14/09/2015
				GRID DATUM	GDA 94 / MGA 255
JOB No	242/10G/906	HEIGHT DATUM	A.H.D.	BEARING	°
				DATE COMPLETED	16/09/2015
				DRILLER	Saxon Drilling

DEPTH (m)	R.L. (m)	TAUBER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS									
												USCS WEATHERING		EC	VC	C	M	W	VW	EW
												EH	VH							
31.00	-26.36		100 (87)		MICRODIORITE (Kgwu) \$W: (Cont'd) 30.14 to 30.28m: GRANODIORITE (SW): Grey, dark grey and pale red, medium grained, porphyritic, very high strength. Upper contact: 70°; Pl/Sm; OP; CA Vr <3mm; Lower contact: 70°; Pl-Un/Sm; OP; Fe St;	SW		VH	C M M M	30.28m-30.29m: HFZ; Contact: 70°; Pl-Un/Sm;	Is(50)=8.10 MPa Is(50)=9.20 MPa UCS=67.50 MPa	A (30.60m) D (30.70m) (31.22m)								
32.00										32.03m: VN: 60°; Pl/Sm; FL; CA <4mm; 32.20m: DI	Is(50)=4.10 MPa Is(50)=6.60 MPa Is(50)=3.10 MPa	A (32.13m) D (32.60m) A (32.78m)								
33.00			100		Borehole completed at 33.55m					Is(50)=4.80 MPa	A (33.50m)									
34.00																				
35.00																				
36.00																				
37.00																				
38.00																				
39.00																				

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LOGGED BY
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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 No.	FG6184	Date	16/09/15
Borehole No.	BH 201	TMR H No.	H12210
Location	Pioneer River Bridge	Start Depth (m)	22.70
Detail	Abutment A, LHS	Finish Depth (m)	33.55
Chainage		Submitted By	M.Ensor
Remarks			



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Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	16/09/15
Borehole No.	BH 201	TMR H No.	H12210
Location	Pioneer River Bridge	Start Depth (m)	22.70
Detail	Abutment A, LHS	Finish Depth (m)	33.55
Chainage		Submitted By	M.Ensor
Remarks			



SCALE 1:5