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**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH208**

Sheet 1 of 4

REFERENCE No **H12217**

PROJECT Mackay Ring Road
 LOCATION Pioneer River Bridge, Pier 2 (CL) COORDINATES 721286.7 E; 7660073.7 N
 PROJECT No FG6184 SURFACE RL 7.04m PLUNGE 90° DATE STARTED 25/09/2015 GRID DATUM GDA 94 / MGA Z55
 JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 28/09/2015 DRILLER Cairns 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
6.54					Clayey SAND (Topsoil) Brown, moist, very loose to loose. Rootlets and organics.		(SC)						
				A	CLAY trace sand (Alluvium) Brown, moist, very stiff. Low to medium plasticity.		(CI)			5, 10, 13 N=23	SPT		
5.54				B						6, 9, 13 N=22	SPT		
				C	Sandy CLAY (Alluvium) Brown, moist, very stiff. Fine grained sand, low to medium plasticity.		(CI)			7, 10, 17 N=27	SPT		
4.54				D						5, 8, 11 N=19	SPT		
4.04				E	CLAY (Alluvium) Dark brown, moist, very stiff. Medium to high plasticity.		(CH)			6, 8, 12 N=20	SPT		
3.54				F	Sandy CLAY (Alluvium) Dark brown, moist, very stiff. Fine to medium grained sand, medium to high plasticity.		(CH)			6, 9, 16 N=25	SPT		
				G	Clayey SAND (Alluvium) Grey brown, moist, dense.					7, 10, 25 N=35	SPT		
				H	fine to medium grained sand. 4.00m: becomes grey, very dense 4.50m: becoming dense.		(SC)			15, 26, 30/130	SPT		
2.04				I						14, 17, 22 N=39	SPT		
				J	SAND trace clay (Alluvium) Grey brown, moist, medium dense. Fine to medium grained. 5.50m: becomes dense					7, 12, 16 N=28	SPT		
				K						8, 14, 17 N=31	SPT		
				L			(SP)			9, 12, 20 N=32	SPT		
				M						11, 13, 21 N=34	SPT		
				N						15, 19, 24 N=43	SPT		
-0.46				O	CLAY trace sand (Alluvium) Grey brown, moist, hard. Fine grained sand, low to medium plasticity.		(CI)			7, 14, 20 N=34	SPT		
				P	8.00m: becomes very stiff					8, 11, 14 N=25	SPT		
				Q	8.50m: becomes very stiff to hard					7, 13, 17 N=30	SPT		
-2.06				R	9.00m: becomes very stiff					8, 12, 16 N=28	SPT		
				S	Clayey SAND (Alluvium) Brown grey, moist, medium dense to dense. Fine to medium grained sand, low		(SC)			6, 10, 21 N=31	SPT		

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REMARKS: Kgwu = Wundaru Granodiorite

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T.Goosey	S.Foley



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BOREHOLE No **BH208**

Sheet 2 of 4

REFERENCE No **H12217**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 2 (CL)	COORDINATES 721286.7 E; 7660073.7 N	
PROJECT No	FG6184	SURFACE RL 7.04m	PLUNGE 90°
			DATE STARTED 25/09/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 28/09/2015
			DRILLER Cairns 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	VH	H	M	J	VJ	EU	EC	VC	C	M	W		
	-3.26				T	plasticity. Clayey SAND (Alluvium)		(SC)												16, 17, 18 N=35	SPT	
					U	Brown grey, moist, dense. fine to medium grained sand. CLAY (Alluvium)		(CI)												5, 8, 12 N=20	SPT	
11	-4.26				V	Grey, moist, very stiff. Low to medium plasticity.		(CI)												4, 7, 12 N=19	SPT	
	-4.51				W	Sandy CLAY (Alluvium)		(CI)												5, 7, 9 N=16	SPT	
					Q	Grey, moist, very stiff. Fine to medium grained sand, low to medium plasticity.		(CI)												4, 5, 9 N=14	SPT	
					Y	CLAY trace sand (Alluvium)		(CI)												4, 7, 10 N=17	SPT	
					Z	Grey, moist, mainly very stiff to stiff. Fine grained sand, low to medium plasticity.		(CI)												4, 7, 10 N=17	SPT	
	-6.46				AA	Sandy CLAY (Alluvium)		(CI)												5, 7, 11 N=18	SPT	
					AB	Brown grey, moist, very stiff. Fine to medium grained sand, low to medium plasticity. 14.00m: becomes very stiff to hard.		(CI)												5, 9, 13 N=22	SPT	
	-7.46				AC	Clayey SAND (Residual)		(SC)												7, 12, 18 N=30	SPT	
					AD	Brown grey, moist, medium dense. Fine to coarse grained sand, low to medium plasticity.		(SC)												8, 12, 16 N=28	SPT	
					AE	15.50m: becomes dense.		(SC)												9, 12, 14 N=26	SPT	
	-8.96				AF	SAND (Residual)		(SP)												9, 10, 23 N=33	SPT	
					AG	Brown grey, moist, very dense. Fine to coarse grained sand.		(SP)												13, 21, 30/130	SPT	
					AH			(SP)												30/140	SPT	
	-11.96				AI	Gravelly SAND (Residual)		(SP)												30/60 hb	SPT	
					AI	Brown grey, moist, very dense. Fine to coarse grained sand, fine grained gravel.		(SP)												30/80 hb	SPT	
	-12.96							(SP)													SPT	

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REMARKS: Kgwu = Wundaru Granodiorite

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BOREHOLE No **BH208**

Sheet 4 of 4

REFERENCE No **H12217**

PROJECT	Mackay Ring Road				
LOCATION	Pioneer River Bridge, Pier 2 (CL)			COORDINATES 721286.7 E; 7660073.7 N	
PROJECT No	FG6184	SURFACE RL	7.04m	PLUNGE	90°
				DATE STARTED	25/09/2015
				GRID DATUM	GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM	A.H.D.	BEARING	°
				DATE COMPLETED	28/09/2015
				DRILLER	Cairns Drilling

DEPTH (m)	R.L. (m)	FAUGER 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
31	-24.81		100 (0)		GRANODIORITE (Kgwu) \$W: (Cont'd) From 30.10m: Js: 5° to 10°; (10/m); Pl/Ro; TI-FL; some Cly Vr and Fe St; Js: 30° to 40°; (6-8/m); Pl/Ro; TI-FL; some Cly Vr and Fe St; Js: 65° to 75°; (2/m); Pl/Ro; TI-FL; some Cly Vr and Fe St;	+	SW			30.36m-30.41m: HW BZ 30.45m-30.60m: HW zone			
32	-25.56		100 (0)		GRANODIORITE (Kgwu) HW: Pale brown grey, coarse grained, porphyritic, extremely low to very low strength. Highly fractured.	+	HW			32.35m-32.60m: XW Cly zone	Is(50)=5.60 MPa I (31.54m)		
33	-26.01		100 (100)		GRANODIORITE (Kgwu) SW: Pale red grey, coarse grained, porphyritic, high to very high strength.	+	XW			33.05m: Contact; 70°, Pl/Ro, TI, Fe St	Is(50)=3.60 MPa A (33.03m)		
34	-27.56		100		MICRODIORITE (Kgwu) SW: Green grey, fine to medium grained, massive, high to very high strength.	+	SW				Is(50)=4.70 MPa Is(50)=6.50 MPa UCS=38.10 MPa UCS=62.90 MPa A (33.55m) D (33.73m) (33.92m) (34.12m)		
35					Borehole completed at 34.60m					34.50m: J; 20°, Pl/Ro, TI, Cn			

REMARKS: Kgwu = Wundaru Granodiorite

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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	28/09/15
Borehole No.	BH 208	TMR H No.	H12217
Location	Pioneer River Bridge	Start Depth (m)	20.00
Detail	Pier 2, centreline	Finish Depth (m)	34.60
Chainage		Submitted By	M.Ensor
Remarks			

0 100 200 300 400 500 600 700

SCALE 1:5

CORE PHOTO LOG

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 Geotechnical Section
 35 Butterfield Street, Herston Qld 4006
 Phone 07 3066 3336



Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	28/09/15
Borehole No.	BH 208	TMR H No.	H12217
Location	Pioneer River Bridge	Start Depth (m)	20.00
Detail	Pier 2, centreline	Finish Depth (m)	34.60
Chainage		Submitted By	M.Ensor
Remarks			

