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**Queensland
Government**

**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH214**

Sheet 1 of 3

REFERENCE No **H12223**

PROJECT Mackay Ring Road
 LOCATION Pioneer River Bridge, Pier 4 (CL) COORDINATES 721296.7 E; 7660143.3 N
 PROJECT No FG6184 SURFACE RL 6.54m PLUNGE 90° DATE STARTED 27/08/2015 GRID DATUM GDA 94 / MGA Z55
 JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 28/08/2015 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	AUGER 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
0.00 - 1.00					C	Silty SAND (Alluvium) Dark brown, moist, very loose to loose. Fine grained sand.	(SM)					4, 4, 3 N=7	SPT
1.00 - 2.00					D							2, 2, 2 N=4	SPT
2.00 - 3.00	4.04				E							2, 3, 2 N=5	SPT
3.00 - 4.00					F	SAND (Alluvium) Pale grey and dark brown, moist, loose.	(SP)					2, 2, 4 N=6	SPT
4.00 - 5.00	2.89				G	Fine grained sand.						2, 2, 4 N=6	SPT
5.00 - 6.00					H	Clayey SAND (Alluvium) Dark brown, moist, loose.	(SC)					1, 2, 3 N=5	SPT
6.00 - 7.00	1.54				I	fine to medium grained sand, low plasticity. 4.00m: becomes very loose						1, 1, 2 N=3	SPT
7.00 - 8.00	0.84				J							1	SPT
8.00 - 9.00	0.54				K	SAND (Alluvium) Brown, wet, loose to medium dense.	(SP)				5.10m-5.15m: Clayey sand lens.	1, 2, 2 N=4	SPT
9.00 - 10.00	0.04				L	fine to medium grained sand. 5.50m: becomes orange brown. Fine to coarse grained sand.	(CL)					6, 8, 9 N=17	SPT
10.00 - 11.00					M	SILT/CLAY (Alluvium) Dark grey, wet, very stiff. low plasticity.	(SP)					5, 3, 3 N=6	SPT
11.00 - 12.00					N	SAND trace gravel (Alluvium) Orange brown, wet, loose.	(SP)					8, 8, 6 N=14	SPT
12.00 - 13.00	-1.46				O	Gravelly SAND (Alluvium) Orange brown, wet, medium dense.						9, 8, 9 N=17	SPT
13.00 - 14.00					P	Fine to coarse grained sand, fine to medium grained gravel, rounded grains.						12, 12, 7 N=19	SPT
14.00 - 15.00	-1.96				Q	GRAVEL (Alluvium) Grey brown, wet, dense.	(GP)					9, 15, 16 N=31	SPT
15.00 - 16.00					R	Fine to medium grained gravel, rounded grains. Clayey SAND (Alluvium)	(SC)				8.50m-8.60m: Brown grey, moist, very stiff, sandy clay lens.	6, 8, 12 N=20	SPT
16.00 - 17.00	-2.46				S	Brown grey, wet, medium dense. Fine to medium grained sand.						7, 11, 14 N=25	SPT
17.00 - 18.00					T	Silty CLAY trace sand (Alluvium) Brown grey, moist, very stiff.	(CH)					5, 8, 11 N=19	SPT
18.00 - 19.00	-3.46					Fine grained sand, medium to high plasticity.							

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REMARKS: Kgwu = Wundaru Granodiorite

LOGGED BY	REVIEWED BY
T.Goosey	S.Foley



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BOREHOLE No **BH214**

Sheet 2 of 3

REFERENCE No **H12223**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 4 (CL)		COORDINATES 721296.7 E; 7660143.3 N
PROJECT No	FG6184	SURFACE RL 6.54m	PLUNGE 90°
			DATE STARTED 27/08/2015
			GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 28/08/2015
			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
11	-4.96				U	Silty CLAY trace sand (Alluvium) Cont'd. Becoming medium plasticity.	(CI)					5, 7, 10 N=17	SPT
					V							5, 7, 9 N=16	SPT
					W							5, 6, 9 N=15	SPT
12	-6.06				X	Sandy CLAY (Alluvium) Pale grey mottled brown, moist, very stiff.	(CI)					5, 6, 10 N=16	SPT
					Y	Fine grained sand, medium plasticity.						5, 9, 12 N=21	SPT
13	-6.96				Z	Clayey SAND (Alluvium) Grey brown, moist, medium dense.	(SC)					7, 11, 15 N=26	SPT
					AA	Fine grained sand, low to medium plasticity. 13.00m: becomes dense						11, 16, 23 N=39	SPT
14	-7.96				AB	MICRODIORITE (Kgwu)						23, 24, 20 N=44	SPT
					AC	XW: Recovered as brown grey, moist, hard, gravelly sandy clay. Fine to medium grained sand, fine grained gravel, low to medium plasticity.	XW					1, 16, 13 N=29	SPT
15					AD	14.00m: becomes brown and green grey, very stiff.						30/150 hb	SPT
16					AE	MICRODIORITE (Kgwu)						30/100 hb	SPT
17	-10.71				(0)		HW					30/50 hb	SPT
					100 (0)		HW						
18					100 (0)	MICRODIORITE (Kgwu)						Is(50)=0.41 MPa Is(50)=0.54 MPa	A (17.32m) D (17.42m)
					100 (0)	MW: Grey, fine to medium grained, massive, high strength. Js: 10° to 15°; (5/m); Pl/Ro; TI-FL; Fe St and Cly Vr;	MW						
19	-13.11				100 (0)	Js: 40° to 50°; (4/m); Pl/Ro; TI-FL; Fe St and Cly Vr;	HW					Is(50)=0.74 MPa	D (18.20m)
					100 (62)	Js: 60° to 75°; (5/m); Pl/Ro; TI-FL; Fe St and Cly Vr;	MW						
	-13.46					MICRODIORITE (Kgwu)	SW					Is(50)=2.30 MPa	I (19.10m)
												Is(50)=3.20 MPa Is(50)=8.10 MPa	A (19.63m) D (19.72m)

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REMARKS: Kgwu = Wundaru Granodiorite

LOGGED BY	REVIEWED BY
T.Goosey	S.Foley



Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No BH214

Sheet 3 of 3

REFERENCE No H12223

PROJECT Mackay Ring Road
LOCATION Pioneer River Bridge, Pier 4 (CL) COORDINATES 721296.7 E; 7660143.3 N
PROJECT No FG6184 SURFACE RL 6.54m PLUNGE 90° DATE STARTED 27/08/2015 GRID DATUM GDA 94 / MGA Z55
JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 28/08/2015 DRILLER Cairns Drilling

Table with columns: 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. Contains detailed borehole log data from 21m to 27.20m depth.

REMARKS: Kgwu = Wundaru Granodiorite

Table with 2 columns: LOGGED BY, REVIEWED BY. Values: T.Goosey, S.Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE S1

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	30/08/15
Borehole No.	BH 214	TMR H No.	H12223
Location	Pioneer River Bridge	Start Depth (m)	16.55
Detail	Pier 4, centreline	Finish Depth (m)	27.20
Chainage		Submitted By	M.Ensor
Remarks			

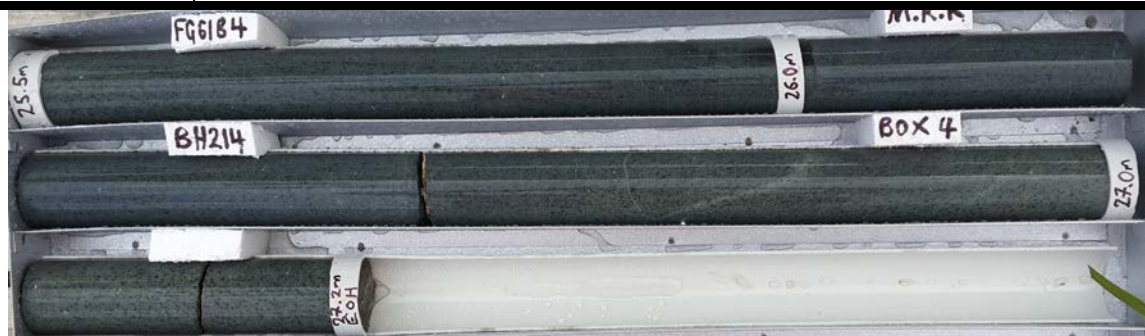


CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
 Geotechnical Section
 35 Butterfield Street, Herston Qld 4006
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Project Name	Mackay – Ring Road (Stage 2)		
Project No.	FG6184	Date	30/08/15
Borehole No.	BH 214	TMR H No.	H12223
Location	Pioneer River Bridge	Start Depth (m)	16.55
Detail	Pier 4, centreline	Finish Depth (m)	27.20
Chainage		Submitted By	M.Ensor
Remarks			



SCALE 1:5