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## GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH219**

Sheet 1 of 4

REFERENCE No **H12228**

PROJECT Mackay Ring Road

LOCATION Pioneer River Bridge, Pier 6 (LHS) COORDINATES 721297.2 E; 7660213.6 N

PROJECT No FG6184 SURFACE RL 7.74m PLUNGE 90° DATE STARTED 01/09/2015 GRID DATUM GDA 94 / MGA Z55

JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 08/09/2015 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
1				A	Silty SAND (Alluvium) Dark brown, dry, very loose to loose. Fine grained sand. <u>1.00m: loose</u>	(SM)					3, 4, 3 N=7 SPT
2	5.74			B	SAND (Alluvium) Brown, dry, loose. Fine grained sand, trace silt.	(SP)					4, 5, 4 N=9 SPT
3	4.74			C	Clayey SAND (Alluvium) Dark brown, wet, loose. Fine grained sand, low plasticity clay.	(SC)					3, 3, 3 N=6 SPT
4	3.74			D	SAND (Alluvium) Pale brown, moist, medium dense. Fine to medium grained sand, trace silt.						4, 5, 7 N=12 SPT
5				E	Becoming wet. Trace fine to medium gravel.						3, 5, 9 N=14 SPT
6				F							8, 7, 8 N=15 SPT
7				G	<u>7.00m: becoming loose</u>	(SP)					5, 4, 3 N=7 SPT
8				H	<u>8.00m: becoming medium dense, increasing grain size and gravel component</u>						7, 7, 7 N=14 SPT
9				I	<u>9.05m: boulder/cobble</u>					9.00m-9.45m: Boulder at 9.05m. No Sample Recovered.	13, 18, 17 N=35 SPT
-2.26											

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REMARKS: Kgwu = Wundaru Granodiorite

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REVIEWED BY

T.Goosey

S.Foley

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# GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH219**

Sheet 2 of 4

REFERENCE No **H12228**

PROJECT	Mackay Ring Road
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LOCATION	Pioneer River Bridge, Pier 6 (LHS)
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COORDINATES 721297.2 E; 7660213.6 N

PROJECT No. FG6184

SURFACE RI 7.74m

PLUNGE 90°

DATE STARTED 01/09/2015

GRID DATUM GDA 94 / MGA Z55

JOB No 242/10G/906

HEIGHT DATUM A.H.D.

BEARING °

DATE COMPLETED 08/09/2015

DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	AUGER CASING	WASTEBORING CORE DRILLING	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH											DEFECT SPACING				ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS			
									EH	VH	H	M	L	VL	EL	EC	VC	C	W	WV	EW							
11					J	Silty SAND (Alluvium) Pale grey, wet, medium dense. Fine to medium grained sand, trace fines.	(SM)																			7, 9, 11 N=20	SPT	
					K																						8, 11, 16 N=27	SPT
12					L																						9, 13, 16 N=29 UCS=87.80 MPa	SPT (12.30m)
13	-5.26				M	Silty CLAY (Alluvium) Grey-brown, moist, very stiff. Medium plasticity, trace fine grained sand.	(CI)																			6, 11, 14 N=25	SPT	
14					N	14.00m: becoming hard																					8, 13, 19 N=32	SPT
15					O																						16, 18, 31 N=49	SPT
16	-7.86				P	GRANODIORITE (Kgwu) XW: Recovered as Clayey SAND: Brown-grey, moist, very dense. Fine to medium grained sand, low plasticity clay.																				30/80 hb	SPT	
17					Q																						25, 30/120 hb	SPT
18	-9.96			(12)																								
19	-10.72					MICRODIORITE (Kgwu) SW: Blue-grey, fine to medium grained, massive, high strength. Js; 5°-15° (7/m); PI/Ro, FL, Cly Vr; GRANODIORITE (Kgwu) MW: Pale grey mottled dark grey, coarse grained, porphyritic, high strength. Js; 5°-10° (3/m); PI-Un/Ro, TI-FL, Cly and Sinf, Fe St;	SW		VH																	18.03m-18.08m: XW Clay seam, extremely low strength.	Is(50)=3.30 MPa Is(50)=2.30 MPa	A (17.74m) D (17.95m)
							MW		VH																	18.45m-18.70m: J; 90°, PI-Un/Ro, FL, Sinf and Cly; 18.45m: Contact; 65°, PI/Ro, CD; 18.70m-18.72m: XW sand and clay seam	Is(50)=11.00 MPa	D (18.80m)
																										19.10m-19.30m: XW sand and clay seam, extremely low strength.	Is(50)=6.90 MPa	A (19.60m)

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REMARKS: Kgwu = Wundaru Granodiorite

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## GEOTECHNICAL BOREHOLE LOG

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BOREHOLE No **BH219**

Sheet 3 of 4

REFERENCE No **H12228**

PROJECT	Mackay Ring Road				
LOCATION	Pioneer River Bridge, Pier 6 (LHS)			COORDINATES 721297.2 E; 7660213.6 N	
PROJECT No	FG6184	SURFACE RL	7.74m	PLUNGE	90°
				DATE STARTED	01/09/2015
				GRID DATUM	GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM	A.H.D.	BEARING	°
				DATE COMPLETED	08/09/2015
				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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	-12.46				- Js; 20°-30° (2/m); Pl/Ro, Tl, Fe St; - Js; 60°-70° (1-2/m); Tl, Sinf and Fe St; MICRODIORITE (Kgwu)	+	XW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

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REMARKS: Kgwu = Wundaru Granodiorite

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BOREHOLE No **BH219**

Sheet 4 of 4

REFERENCE No **H12228**

PROJECT	Mackay Ring Road
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LOCATION	Pioneer River Bridge, Pier 6 (LHS)
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COORDINATES 721297.2 E; 7660213.6 N

PROJECT No	FG6184
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SURFACE RL 7.74m

PLUNGE 90°

DATE STARTED 01/09/2015

GRID DATUM GDA 94 / MGA Z55

JOB No 242/10G/906

HEIGHT DATUM A.H.D.

BEARING °

DATE COMPLETED 08/09/2015

DRILLER Cairns Drilling

REMARKS: Kgwu = Wundaru Granodiorite

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# CORE PHOTO LOG

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Phone 07 3066 3336



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Phone 07 3066 3336



Project Name	<b>Mackay – Ring Road (Stage 2)</b>		
Project No.	FG6184	Date	08/09/15
Borehole No.	BH 219	TMR H No.	H12228
Location	Pioneer River Bridge	Start Depth (m)	17.70
Detail	Pier 6, LHS	Finish Depth (m)	31.05
Chainage		Submitted By	M.Ensor
Remarks			

  
  

0
100
200
300
400
500
600
700

SCALE 1:5