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**GEOTECHNICAL  
BOREHOLE LOG**

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

BOREHOLE No **BH250**

Sheet 1 of 4

REFERENCE No **H12259**

PROJECT Mackay Ring Road  
 LOCATION Pioneer River Bridge, Pier 16 (CL) COORDINATES 721358.2 E; 7660558.7 N  
 PROJECT No FG6184 SURFACE RL 3.27m PLUNGE 90° DATE STARTED 09/11/2015 GRID DATUM GDA 94 / MGA Z55  
 JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 11/11/2015 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
0					SAND (Fill) Orange brown, dry to moist, very loose to loose. Trace silt; trace gravel <80mm, rounded; sand is fine to medium grained.	(SP)					
0.37				FIL L							1, hw, 1 N=1 SPT
3				A	SAND (Alluvium) Dark orange grey, moist, loose to medium dense. Trace silt; trace gravel, rounded to subrounded; sand is fine to coarse grained.	(SP)					3, 5, 6 N=11 SPT
4				A1							7, 5, 3 N=8 SPT
				B	4.0m: Becoming pale grey.						2, 3, 6 N=9 SPT
-1.23				B1	Gravelly SAND (Alluvium) Pale grey, wet, loose. Sand is fine to coarse grained; gravel is fine, <30mm, subrounded.	(SW)				5.00m: Invalid SPT	1, 4, 5 N=9 SPT
				C							SPT
				C1	Silty SAND (Alluvium) Pale grey, moist, medium dense.						5, 5, 5 N=10 SPT
				D	Sand is fine grained; trace clay.						3, 5, 7 N=12 SPT
				D1							4, 7, 9 N=16 SPT
				E							4, 8, 10 N=18 SPT
				E1	7.5m: Clay content increasing.	(SM)					6, 9, 10 N=19 SPT
				F	7.9m: Sand becoming medium to coarse grained.						5, 9, 10 N=19 SPT
				F1							6, 6, 7 N=13 SPT
				G							6, 13, 13 N=26 SPT
				G1	CLAY (Alluvium) see over	(CL)					6, 10, 13 N=23 SPT
-6.23											
-6.73											

Continued on next sheet

REMARKS: Kgwu = Wundaru Granodiorite

LOGGED BY	REVIEWED BY
C. Boyes	S.Foley



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BOREHOLE No **BH250**

Sheet 2 of 4

REFERENCE No **H12259**

PROJECT	Mackay Ring Road		
LOCATION	Pioneer River Bridge, Pier 16 (CL)	COORDINATES 721358.2 E; 7660558.7 N	
PROJECT No	FG6184	SURFACE RL 3.27m	PLUNGE 90°
			DATE STARTED 09/11/2015
			GRID DATUM GDA 94 / MGA 255
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °
			DATE COMPLETED 11/11/2015
			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	VH
-7.13				H	CLAY (Alluvium) Cont'd. Grey mottled orange brown, moist, very stiff. Low plasticity; trace sand; trace fine gravel.	(CL)					9, 14, 19 N=33	SPT	
11				I	GRANODIORITE (Kgwu) XW: Recovered as Sandy Silty CLAY. Pale grey brown, moist, hard. Low plasticity; trace gravel.	XW					14, 22, 26 N=48	SPT	
12				J							15, 30/140mm	SPT	
-9.43				K	GRANODIORITE (Kgwu) HW: Brown and grey, medium to coarse grained, massive, very low strength.						30/70mm hb	SPT	
14				L							18, 30/100mm	SPT	
15				M							30/110mm	SPT	
16				N							30/40mm hb	SPT	
17				O							15, 29, 30/50mm hb	SPT	
-14.73				P	MICRODIORITE (Kgwu) HW: Grey, fine grained, massive, very low strength.						30/90mm hb	SPT	
19				Q							hb	SPT	
-16.73													

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BOREHOLE No **BH250**

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REFERENCE No **H12259**

PROJECT	Mackay Ring Road				
LOCATION	Pioneer River Bridge, Pier 16 (CL)			COORDINATES 721358.2 E; 7660558.7 N	
PROJECT No	FG6184	SURFACE RL 3.27m	PLUNGE 90°	DATE STARTED 09/11/2015	GRID DATUM GDA 94 / MGA Z55
JOB No	242/10G/906	HEIGHT DATUM A.H.D.	BEARING °	DATE COMPLETED 11/11/2015	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	VH
21				R	MICRODIORITE (Kgwu) HW: Cont'd.		HW				hb	SPT	
22	-18.53		(37)		MICRODIORITE (Kgwu) MW: Pale green grey, fine to medium grained, massive, medium to high strength. Calcite veins throughout. - Js: 5°-15° (<8/m) Pl-Un/Sm, OP-TI, Fe St		SW	H	M	21.92m-22.05m: GRANODIORITE SW, pale grey, fine to medium grained, high strength. 22.05m-22.34m: HFZ, Clay in part.	UCS=5.33 MPa	(21.95m)	
23	-19.95		(31)		- Js: 60°-70° (<2/m) Pl/Sm, TI, CA <1mm.		HW	MH	C	Is(50)=0.99 MPa		D (22.45m)	
24	-20.58		(0)		MICRODIORITE (Kgwu) XW: Recovered as Clayey GRAVEL. Grey and brown, moist, very dense.		MW	VC		Is(50)=3.20 MPa		A (22.76m)	
25			(0)		MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, high strength.		HW	VL	EL	23.22m-23.85m: XW-HW CZ		D (22.96m)	
26	-22.79		(17)		MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, high strength.		XW	EL	VL	24.00m-24.09m: CZ			
27	-23.39		(47)		- Js: 5°-15° (~6/m) Pl/Sm, OP-TI, Fe St		MW			24.44m-24.88m: BZ	Is(50)=1.80 MPa	D (24.30m)	
28	-23.68		(20)		- Js: 30°-45° (<3/m) Pl/Sm, TI, Fe St, some CA <1mm		HW	H	C	25.37m-25.68m: HFZ	Is(50)=0.59 MPa	A (25.16m)	
29	-25.65		(33)		- Js: 60°-80° (<3/m) Pl/Sm, TI, Fe St, some CA <1mm		SW	VC		25.86m-26.00m: BZ	Is(50)=0.70 MPa	D (25.65m)	
30	-26.71		(37)		GRANODIORITE (Kgwu) MW: Pink grey, medium to coarse grained, porphyritic, medium to high strength.		MW	M	C	26.06m-26.39m: CA VN,75°,3mm	Is(50)=0.49 MPa	I (26.30m)	
31			(33)		MICRODIORITE (Kgwu) MW: Grey, fine grained, massive, high strength.		MW	MH	VC	26.66m-26.76m: HW zone 26.68m-28.71m: CA VN,~90°, SZ			
32			(90)		MICRODIORITE (Kgwu) SW: Green grey speckled white, fine to medium grained, massive, very high strength. Altered; Calcite veins throughout.		SW	VH	C	27.12m-27.16m: CZ, Sandy.	Is(50)=1.40 MPa	D (27.24m)	
33			(17)		MICRODIORITE (Kgwu) MW: Pale green grey, fine grained, massive, medium to high strength. Calcite veins throughout.		SW	H	M	27.70m-27.85m: Granodiorite band 27.81m-27.91m: HFZ	UCS=36.20 MPa	(27.65m)	
34			(0)		- Js: 5°-15° (<3/m) Pl/Sm, OP, Fe St, some CA		SW	H	W		Is(50)=0.45 MPa Is(50)=2.10 MPa	A (28.38m) D (28.48m)	
35			(17)		- Js: 20°-30° (<2/m) Pl/Sm, OP-TI, Cn or Fe St.		SW	C		28.92m-29.02m: CA VN,70°-80°, <20mm	Is(50)=0.20 MPa	A (29.12m)	
36			(17)		MICRODIORITE (Kgwu) MW: Pale green grey, fine grained, massive, medium to high strength. Calcite veins throughout.		HW	H		29.23m-29.49m: HFZ, HW in part.			
37			(17)		- Js: 5°-20° (~5/m) Un/Ro, OP, Slnf		MW	H		29.58m-29.71m: HFZ, HW in part.	Is(50)=1.80 MPa	I (29.70m)	
38			(17)				HW	VH		29.84m-29.98m: BZ			

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BOREHOLE No **BH250**

Sheet 4 of 4

REFERENCE No **H12259**

PROJECT Mackay Ring Road

LOCATION Pioneer River Bridge, Pier 16 (CL) COORDINATES 721358.2 E; 7660558.7 N

PROJECT No FG6184 SURFACE RL 3.27m PLUNGE 90° DATE STARTED 09/11/2015 GRID DATUM GDA 94 / MGA Z55

JOB No 242/10G/906 HEIGHT DATUM A.H.D. BEARING ° DATE COMPLETED 11/11/2015 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	YH	H	M	L	VI	EL	EC	VC	C	M	W	VW	EW
31					Js: 70°-80° (<3/m) Pl-Stp/Sm-Ro, Op, Cn or Slnf Borehole completed at 29.98m																				
32																									
33																									
34																									
35																									
36																									
37																									
38																									
39																									

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<b>LOGGED BY</b>	<b>REVIEWED BY</b>
C. Boyes	S.Foley

**CORE PHOTO LOG**

DEPARTMENT OF TRANSPORT AND MAIN ROADS  
 Geotechnical Section  
 35 Butterfield Street, Herston Qld 4006  
 Phone 07 3066 3336



Project Name	<b>Mackay – Ring Road (Stage 2)</b>		
Project No.	FG6184	Date	11/11/15
Borehole No.	BH 250	TMR H No.	H12259
Location	Pioneer River Bridge	Start Depth (m)	21.80
Detail	Pier 16, centreline	Finish Depth (m)	29.98
Chainage		Submitted By	M.Ensor
Remarks			

