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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH168**
SHEET **1** of **2**
REFERENCE No **12109**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Embankment - North of QR Port Rail Overpass; CH: 11180m; COORDINATES 721161.5 E; 7663403.2 N
PROJECT No FG6184 SURFACE R.L. 29.74m PLUNGE _____ DATE STARTED 17/1/15 GRID DATUM GDA 94 /MGA Zone 55
JOB No _____ HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 21/1/15 DRILLER ND Drilling Pty Ltd

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0	29.74					Sandy CLAY (TOPSOIL) Black, dry, stiff to very stiff. Medium plasticity. Fine to coarse grained sand. With gravel, rounded to subrounded <100mm. Roots & root fibres.	(CI)					0.05m: <10% subangular to subrounded cobbles ~ 100mm 0.20m: <5% subangular to subrounded cobbles ~90mm	
0.40	29.34					Sandy Clayey GRAVEL (RESIDUAL) Orange mottled grey, dry, medium dense. Fine to coarse, angular to subangular gravel. Fine to coarse grained sand.	(GC)					0.80m: Subangular to subrounded cobbles & boulders ~250mm	
1	28.54				A	Gravelly Sandy CLAY (RESIDUAL) Orange, dry, hard. Medium plasticity. Fine to coarse grained sand. Fine to coarse, angular to subangular gravel.	(CI)					26,18,12 N=30	SPT
2	27.34				B	2.00-2.40m: Becoming dry, very dense Clayey SAND.						16,31,32 N=63	SPT
3					C	MICRODIORITE (Kgwu) HW: Grey, fine grained to medium, massive, extremely low to medium strength.	XW					15,31,30/90	SPT
4						3.40m: Becoming HW.	HW					4.15m: XW and MW rock fragments.	
4.55	25.19				(20)	MICRODIORITE (Kgwu) MW: Grey-brown, black, fine grained, generally medium to high strength.	MW					4.55m-4.66m: BZ;	
5					100	Defects: - Js; 5°-25° (~8/m); PI/Ro, TI or OP, some Fe St;	SW					4.76m-5.00m: BZ;	
6					(20)	- Js; 40°-50° (2/m); PI/Ro, TI or OP, some Fe St;						5.09m-5.17m: BZ;	Is(50) = 2.11MPa Is(50) = 7.70MPa Is(50) = 1.40MPa
7					100	- Js; 60°-70° (2/m); PI/Ro, TI or OP, some Fe St;						5.50m-6.00m: Core Loss	
8					(15)		MW					6.00m-6.26m: BZ;	Is(50) = 8.16MPa
9					50							6.42m-6.50m: BZ;	
10					(46)							6.50m-7.00m: Core Loss	
11						MICRODIORITE (Kgwu) SW: Brown-grey to orange-brown, massive, mainly very high strength. Altered throughout.	MW					7.00m-7.14m: BZ;	Is(50) = 6.86MPa
12					61	Defects: - Js; 5°-20° (3/m); PI/Ro, TI, some Fe St;	SW					7.74m-7.80m: BZ;	Is(50) = 0.68MPa
13					(65)	- Js; 40°-50° (3/m); PI/Ro, TI, some Fe St;	MW					7.88m-8.00m: BZ;	
14					100	- Js; 70°-85° (2-3/m); PI/Ro, TI, some Fe St;	SW						Is(50) = 1.23MPa Is(50) = 1.58MPa
15					(72)	7.30-7.70m: Becomes pale brown-grey.	HW					8.96m-9.20m: BZ;	Is(50) = 2.77MPa Is(50) = 3.54MPa Is(50) = 3.27MPa
16					100		SW						
17					(100)								

REMARKS Kgwu - Wundaru Granodiorite;

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MR JAN 15 GLB Log A ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <DrawingFile>> Datagel CPT Tool.qnt Add-In 04/03/2015 10:52

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CORE PHOTO LOG

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
35 Butterfield Street, HERSTON Qld 4006
Phone 07 3066 3336



Department of
Transport and Main Roads

Project Name	Mackay – Ring Road		
Project No	FG6184	Date	21/01/15
Borehole No	BH168	TMR H No	12109
Location	North of QR Port Rail Overpass	Start Depth (m)	4.5
Detail	Embankment	Finish Depth (m)	10.11
Chainage	11180m	Submitted By	DC
Remarks			

Scale (mm)									
100	200	300	400	500	600	700	800	900	1000