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ENGINEERING BOREHOLE LOG

BOREHOLE No BH161
 SHEET 1 of 2
 REFERENCE No 12102

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

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
 LOCATION Ring Road Stage 2 Overpass Abutment A; CH: 10975m; COORDINATES 721219.1 E; 7663208.6 N
 PROJECT No FG6184 SURFACE R.L. 14.26m PLUNGE DATE STARTED 12/12/14 GRID DATUM GDA 94 /MGA Zone 55
 JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 13/12/14 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
									EH	VH	H	M	J	VL	EL	EC	VC	W	WW	VW	EW	C	W	WW	VW			
0	14.26					Clayey SAND (TOPSOIL) Black, moist, loose. Fine to coarse grained. Roots & root fibres.	(SC)																					
-0.15	14.11				A	Sandy CLAY (RESIDUAL) Orange, red, moist, stiff. Medium plasticity. Fine to coarse grained sand. 1.50m: Becoming dry and hard.	(CI)																				3,6,8 N=14	SPT
1.80	12.46				B	GRANODIORITE (Kgwu) XW: Recovered as white, grey, orange, moist, hard, Sandy CLAY.	XW																				14,19,41 N=60	SPT
2.50	11.76				C	GRANODIORITE (Kgwu) HW: White, grey, orange, medium to coarse grained, very low to low strength.	HW																				41,5/10	SPT
4					D																						16,33,35 N=68	SPT
5					E																						30,12/30	SPT
7					F																						25,35/100	SPT
7.55	6.71																											
8				(0)		MICRODIORITE (Kgwu) MW: Grey, brown, fine grained, massive, medium strength. Broken throughout.	MW																					
				64																								
				(0)																								
8.50	5.76			50																							Is(50) = 1.36MPa	L (8.38m)
8.73	5.53			(34)		Core Loss																					Is(50) = 0.81MPa	A (8.38m)
9				54		MICRODIORITE (Kgwu) HW: Grey, brown, orange, fine grained, massive, very low strength. Defects: - Js: 45°-60° (11m); Pl/Ro; - Js: 60°-75° (11m); Pl/Ro;	HW																				20,43,40 N=83 UCS=114MPa	SPT
				(60)																								
9.85	4.41																											
10																												

REMARKS Kgwu - Wundaru Granodiorite;

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ENGINEERING BOREHOLE LOG

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

BOREHOLE No	<u> BH161 </u>
SHEET	<u> 2 </u> of <u> 2 </u>
REFERENCE No	<u> 12102 </u>

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
 LOCATION Ring Road Stage 2 Overpass Abutment A; CH: 10975m; COORDINATES 721219.1 E; 7663208.6 N
 PROJECT No FG6184 SURFACE R.L. 14.26m PLUNGE DATE STARTED 12/12/14 GRID DATUM GDA 94 /MGA Zone 55
 JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 13/12/14 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
									EH	VH	H	M	J	L	VL	EL	EC	VC	C	W	WW	VW	EW										
10	4.26					MICRODIORITE (Kgwu) SW: (Cont'd) Grey, fine grained, massive, very high strength. Defects: - Js: 0°-20° (10/m); Pl-St/Ro, TI; - Js: 45°-60° (2/m); Pl-Un/Ro, TI, some Cly, <5mm; - Js: 70°-80° (1/m); Pl-Un/Ro, TI;			[Graphical representation of intact strength data]											[Graphical representation of defect spacing data]												Is(50) = 12.69MPa 10.20m-10.35m: HW zone, VL strength. Is(50) = 10.08MPa	D (10.17m) A (11.36m)
11				100 (84)																													
11.78	2.50					GRANODIORITE (Kgwu) SW: Grey, white, black, medium to coarse, massive, very high strength. Defects: - Js: 15°-30° (4/m); Pl/Ro, TI; - Js: 30°-45° (2/m); Pl-Un/Ro, TI;			[Graphical representation of intact strength data]											[Graphical representation of defect spacing data]												Is(50) = 2.54MPa Is(50) = 4.70MPa	A (12.20m) D (12.25m)
12				100 (88)																													
12.80	1.46					MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, very high strength. Defects: - Js: 0°-15° (1/m); Pl/Ro, TI, Cly Vr; - Js: 30°-45° (1/m); Pl/Ro, TI, Cly Vr; From 13.75m: No defects.			[Graphical representation of intact strength data]											[Graphical representation of defect spacing data]												Is(50) = 8.12MPa Is(50) = 5.75MPa UCS=63.7MPa Is(50) = 6.67MPa Is(50) = 6.44MPa Is(50) = 6.60MPa	D (13.03m) L (13.03m) A (14.02m) D (14.04m) A (14.05m)
13				100 (81)																													
14					100 (100)																												
15	-0.87			100		Borehole terminated at 15.13m.																											
15.13																																	
16																																	
17																																	
18																																	
19																																	
20																																	

TMW JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datget CPT Tool gInt Add-In 04/03/2015 10:52

REMARKS Kgwu - Wundaru Granodiorite;

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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	13/12/14
Borehole No	BH161	TMR H No	12102
Location	Ring Road Stage 2 Overpass	Start Depth (m)	7.55
Detail	Abutment A	Finish Depth (m)	15.13
Chainage	10975m	Submitted By	DC
Remarks			

