Queensland Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH137**
SHEET 1 of 4
REFERENCE No **12082**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Bridge Abutment A; CH: 9056m; COORDINATES 721483.8 E; 7661372.2 N
PROJECT No FG6184 SURFACE R.L. 7.63m PLUNGE DATE STARTED 3/11/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 4/11/14 DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (EC VC C M W VW EW)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	7.63				**Sandy Silty CLAY (TOPSOIL)** Brown, moist, soft. Low plasticity. Some plant roots.		(CL)							
0.50	7.13				**Silty SAND (ALLUVIUM)** Brown, moist, loose. Fine grained sand.									
1				A								4,3,4 N=7		SPT
2				B			(SM)					3,2,3 N=5		SPT
3				C								3,3,4 N=7		SPT
3.50	4.13				**SAND with silt (ALLUVIUM)** Brown, moist to wet, loose. Fine to medium grained sand. Some coarse grained sand.									
4				D								3,4,6 N=10		SPT
5				E			(SP-SM)					2,3,4 N=7		SPT
6				F								2,2,2 N=4		SPT
6.50	1.13				**Gravelly SAND (ALLUVIUM)** Brown, wet, medium dense. Medium to coarse grained sand. Fine to medium, subrounded to subangular gravel. Trace silt.									
7				G								6,8,12 N=20		SPT
8				H			(SP)					16,9,15 N=24		SPT
9				J	9.00m: Becoming dense to very dense.							11,23,30/140		SPT
10														

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.

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BOREHOLE No **BH137**
SHEET 2 of 4
REFERENCE No **12082**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Bridge Abutment A; CH: 9056m; COORDINATES 721483.8 E; 7661372.2 N
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DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH EH VH H M L VL EL	DEFECT SPACING (mm) EC VC C M W VW EW	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
10	-2.37			K	**Gravelly SAND (ALLUVIUM)** (Cont'd)		(SP)					12,21,18 N=39	SPT
11				L								14,20,24 N=44	SPT
12				M								20,25,27 N=52	SPT
13.00	-5.37			N	**GRANODIORITE (Kgwu)** **XW:** Recovered as dark grey, brown and white, moist, very dense Clayey SAND. Fine to coarse grained sand.		XW					9,29,30/70	SPT
14				P								30,30/100	SPT
15				Q								30/120	SPT
16				R								26,30/100	SPT
17				S								30/110	SPT
18				T								30/90	SPT
19				U								30/90	SPT
20													

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Sample failed along existing defect surface.

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TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 04/03/2015 10:51

ENGINEERING BOREHOLE LOG

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BOREHOLE No **BH137**
SHEET 3 of 4
REFERENCE No **12082**

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LOCATION Fursden Creek Bridge Abutment A; CH: 9056m; COORDINATES 721483.8 E; 7661372.2 N
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DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (mm) (EC VC C M W VW EW)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
20	-12.37			V	**GRANODIORITE (Kgwu)** **XW:** (Cont'd)							30/100		SPT
21				W			XW					30/60		SPT
22				X								30/90		SPT
			(0)											
			47											
			(0)				XW							
22.94	-15.31		100											
23			(60)		**GRANODIORITE (Kgwu)** **HW:** Brown, grey and white, fine to coarse grained, massive, mainly very low strength. Defects: - Js; 15°-30° (2/m); Pl/Ro, Tl-CD: - Js; 75°-85° (1/m); Pl/Ro, Tl-CD:									
			100				HW					23.43m-23.50m: BZ; DI?		
			(84)									q_u=93kPa;		UCS
24			100											
			(0)				XW							
			100											
			(0)											
			100											
			(80)											
			100											
25			(85)				HW							
			100									25.85m-26.10m: BZ; DI?		
26			(0)											
			100											
			(27)				MW							
							HW							
27							MW							
27.37	-19.74						HW							
			100		**GRANODIORITE (Kgwu)** **SW:** Grey to pale grey and pink, fine to coarse grained, massive, very high strength. Defects: - Js; 10°-30° (1/m); Pl/Ro, Tl, Cn; - Js; 40°-60° (1/m); Pl/Ro, Tl, Cn;									
28			(96)									Is(50) = 7.01MPa Is(50) = 5.49MPa UCS=96.4MPa	D (27.94m) A (27.98m)	
							SW							
29												Is(50) = 8.61MPa Is(50) = 12.84MPa	A (28.85m) D (28.90m)	
			100											
			(100)									Is(50) = 6.32MPa; # Is(50) = 8.81MPa	A (29.52m) D (29.58m)	
30														

REMARKS Kgwu - Wundaru Granodiorite;
Sample failed along existing defect surface.

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BOREHOLE No **BH137**
SHEET 4 of 4
REFERENCE No **12082**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
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30	-22.37				**GRANODIORITE (Kgwu)** **SW:** (Cont'd)									
			100 (80)				SW							
31														
32												Is(50) = 8.45MPa Is(50) = 9.51MPa	D (31.87m) A (31.92m)	
32.50	-24.87		100											
					Borehole terminated at 32.5m. .									
33														
34														
35														
36														
37														
38														
39														
40														

TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 04/03/2015 10:51

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Sample failed along existing defect surface.

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CORE PHOTO LOG

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

Queensland Government

Department of Transport and Main Roads

Project Name	**Mackay – Ring Road**		
Project No	FG6184	Date	04/11/14
Borehole No	BH137	TMR H No	12082
Location	Fursden Creek Bridge	Start Depth (m)	22.1
Detail	Abutment A	Finish Depth (m)	32.5
Chainage	**9056m**	Submitted By	J. Lopez
Remarks			

0 100 200 300 400 500 600 700

SCALE 1:5

GEOT043/1