ENGINEERING BOREHOLE LOG

Queensland Government

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

BOREHOLE No **BH177**
SHEET 1 of 3
REFERENCE No **12118**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Overflow Bridge Pier 3; CH: 8750m; COORDINATES 721438.9 E; 7661069.7 N
PROJECT No FG6184 SURFACE R.L. 6.77m PLUNGE DATE STARTED 17/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 18/10/14 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	6.77				**Clayey SILT (TOPSOIL)** Dark brown, moist, soft. Low plasticity. Some roots.		(ML)							
0.50	6.27				**Silty CLAY (ALLUVIUM)** Dark brown, moist, stiff. Low plasticity.									
1				A			(CL)					3,6,6 N=12		SPT
2.00	4.77													
2				B	**Silty SAND (ALLUVIUM)** Brown, moist, loose to medium dense. Fine grained sand.							2,5,5 N=10		SPT
3				C								1,2,5 N=7		SPT
4				D	4.00m: Becoming fine to medium grained.		(SM)					3,5,6 N=11		SPT
5				E								5,6,7 N=13		SPT
6				F	6.00m: Some fine to medium subrounded gravel.							4,4,3 N=7		SPT
6.50	0.27				**Sandy GRAVEL (ALLUVIUM)** Brown to black, moist, medium dense. Fine, subrounded gravel. Fine to coarse grained sand.									
7				G			(GP)					6,7,7 N=14		SPT
7.50	-0.73				**Gravelly SAND (ALLUVIUM)** Brown, moist, medium dense. Fine to coarse grained sand. Fine, subrounded gravel.									
8				H			(SW)					6,5,7 N=12		SPT
8.90	-2.13				**Silty CLAY (RESIDUAL)** Brown-yellow mottled grey, moist, stiff to very stiff. High plasticity.									
9				J			(CH)					5,6,7 N=13		SPT
10														

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

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BOREHOLE No **BH177**
SHEET 2 of 3
REFERENCE No **12118**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Overflow Bridge Pier 3; CH: 8750m; COORDINATES 721438.9 E; 7661069.7 N
PROJECT No FG6184 SURFACE R.L. 6.77m PLUNGE DATE STARTED 17/10/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 18/10/14 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
10	-3.23			K	**Silty CLAY (RESIDUAL)** (Cont'd)		(CH)					5,10,16 N=26		SPT
11				L								5,7,7 N=14		SPT
12				M								5,9,11 N=20		SPT
13				N								7,15,13 N=28		SPT
13.60	-6.83				**Silty Sandy CLAY (RESIDUAL)** Dark brown and grey, moist, hard. Medium plasticity. Some angular, fine gravel.		(CI)							
14				P								13,17,30 N=47		SPT
15				Q								12,16,30/60		SPT
15.80	-9.03				**GRANODIORITE (Kgwu)** **XW:** Recovered as dark grey, moist to dry, very dense Clayey SAND. Fine to medium grained sand. Some fine gravel.		XW							
16				R								12,30/50		SPT
16.80	-10.03		(10)		**GRANODIORITE (Kgwu)** **HW:** Grey, pink, white and brown, fine to coarse grained, massive, very low to low strength. Some XW zones with EL strength.		HW							
17			100 (57)				XW HW XW					17.40m-17.50m: XW, EL strength. 17.65m-17.90m: XW, EL strength.		
18							HW XW HW XW					18.03m-18.13m: XW, EL strength. 18.55m-18.65m: XW, EL strength.		
19			100 (53)				HW					Is(50) = 0.05MPa		D (19.50m)
20														

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BOREHOLE No **BH177**
SHEET 3 of 3
REFERENCE No **12118**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Overflow Bridge Pier 3; CH: 8750m; COORDINATES 721438.9 E; 7661069.7 N
PROJECT No FG6184 SURFACE R.L. 6.77m PLUNGE DATE STARTED 17/10/14 GRID DATUM GDA 94 /MGA Zone 55
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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	-13.23													
20.20	-13.43				**GRANODIORITE (Kgwu) HW:** (Cont'd)		HW							
			100 (61)		**GRANODIORITE (Kgwu)** **MW:** Brown, grey, pink, fine to medium grained, massive, medium strength. Defects: - Js; 5°-20° (3/m); Un/Ro, OP; - Js; 50° (1/m); Un/Ro, OP;		MW					Is(50) = 0.73MPa	D	(20.95m)
21														
21.25	-14.48													
22			100 (75)		**GRANODIORITE (Kgwu)** **SW:** Grey and pale orange, fine to medium grained, massive, high to very high strength. Defects: - Js; 0°-10° (2/m); Pl/Ro, OP, Fe St; - Js; 30° (1/m); Pl/Ro, OP, Fe St; - Js; 40° (3/m); Pl/Ro, OP, Fe St; 22.55m: Becoming very high to extremely high strength, and dark grey.		SW					Is(50) = 3.74MPa UCS=17.5MPa; Is(50) = 5.50MPa Is(50) = 1.26MPa; # Is(50) = 11.55MPa Is(50) = 11.87MPa	A D A D A	(22.30m) (22.90m) (22.95m) (23.10m) (23.15m)
23														
23.80	-17.03		100									Is(50) = 5.82MPa Is(50) = 10.23MPa	A D	(23.70m) (23.75m)
					Borehole terminated at 23.8m. .									
24														
25														
26														
27														
28														
29														
30														

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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 10:52

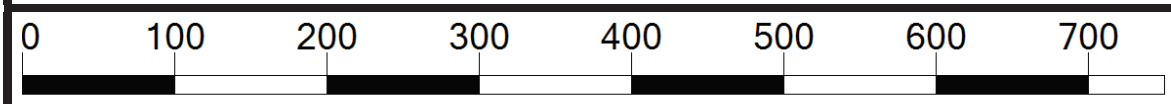
CORE PHOTO LOG

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	18/10/14
Borehole No	BH177	TMR H No	12118
Location	Fursden Creek Overflow Bridge	Start Depth (m)	16.8
Detail	Pier 3	Finish Depth (m)	23.8
Chainage	**8750m**	Submitted By	J. Lopez
Remarks			



SCALE 1:5

GEOT043/1