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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH181

SHEET 1 of 3

REFERENCE No 12122

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
 LOCATION Fursden Creek Overflow Bridge Abutment B; CH: 8789m; COORDINATES 721444.9 E; 7661108.8 N
 PROJECT No FG6184 SURFACE R.L. 7.25m PLUNGE DATE STARTED 14/10/14 GRID DATUM GDA 94 /MGA Zone 55
 JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 15/10/14 DRILLER Saxon Drilling


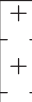

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD () %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC WEATHERING	INTACT STRENGTH											DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS		
									EH	VH	H	M	J	VL	EL	EC	VC	WC	W					VW	EW
0	7.25					Clayey SILT (TOPSOIL) Dark brown, moist, soft. Low plasticity. Some roots.	(ML)																		
0.50	6.75				A	Silty CLAY (ALLUVIUM) Dark brown, moist, stiff. Low plasticity.	(CL)																		3.5.5 N=10
1.60	5.65				B	Silty SAND (ALLUVIUM) Brown, moist, loose. Fine grained.	(SM)																		2.3.3 N=6
					C																				2.3.4 N=7
					D	4.00m: Becoming loose to medium dense.	(SM)																		2.4.6 N=10
					E	5.00m: Becoming loose Clayey SAND.	(SM)																		1.2.2 N=4
					F	6.00m: Fine to medium grained sand.	(SM)																		2.3.3 N=6
6.50	0.75				G	Sandy GRAVEL (ALLUVIUM) Grey-brown, moist, dense. Fine to medium gravel. Fine to coarse grained sand.	(GP)																		19.25.20 N=45
7.70	-0.45				H	Silty SAND (ALLUVIUM) Brown, moist, medium dense. Fine grained sand.	(SM)																		7.7.8 N=15
					J																				5.8.8 N=16
9.70	-2.45					Silty Sandy CLAY (RESIDUAL)	(CH)																		

TMR 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;
 # Sample failed along existing defect surface.

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MS

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								USC	WEATHERING	EH	VH	H	M	J	VL	EL	EC	VC					W	VW
10	-2.75				K	Silty Sandy CLAY (RESIDUAL) (Cont'd) Grey and yellow mottled brown, moist, stiff to mainly very stiff. High plasticity.	 (CH)														4,5,8 N=13	SPT		
11					L																	7,10,12 N=22	SPT	
12					M																	6,10,10 N=20	SPT	
13					N	13.00m: Becoming hard.																11,15,20 N=35	SPT	
13.70	-6.45																							
14					P	GRANODIORITE (Kgwu) XW: Recovered as grey, brown and pink moist, hard Sandy CLAY. Low plasticity. Some HW rock fragments.	 XW														25,27,25 N=52	SPT		
15					Q																	10,17,30 N=47	SPT	
16					R	16.00m: Recovered as Clayey SAND / Sandy CLAY. High medium grained sand content.																14,26,23 N=49	SPT	
17					S																	16,25,22 N=47	SPT	
18					T																21,30/140	SPT		
18.50	-11.25																							
19					U	GRANODIORITE (Kgwu) HW: Grey and pink, medium grained, very low strength.	 HW														30/60	SPT		
20																								

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ENGINEERING BOREHOLE LOG

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BOREHOLE No BH181
SHEET 3 of 3
REFERENCE No 12122

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LOCATION Fursden Creek Overflow Bridge Abutment B; CH: 8789m; COORDINATES 721444.9 E; 7661108.8 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	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
															EH
20	-12.75				V	GRANODIORITE (Kgwu) HW: (Cont'd)								30/130	SPT
21					W				HW					9,30/40	SPT
21.50	-14.25					GRANODIORITE (Kgwu) MW: Brown-grey, fine to medium grained, massive, highly fractured, high strength. Some CA veins throughout the rock mass. Defects: - Js: 20°-30° (4/m); Un/Ro, OP-TI, some CA; - Js: 50°-60° (4/m); Un/Ro, OP-TI, some CA; - Js: 85°-90° (1/m); Un/Ro, OP-TI, some CA;									
22			(0)												
23			100												
23			(0)						MW						
24															
24			100												
24.50	-17.25														
24.50						Borehole terminated at 24.5m .									
25															
26															
27															
28															
29															
30															

REMARKS Kgwu - Wundaru Granodiorite;
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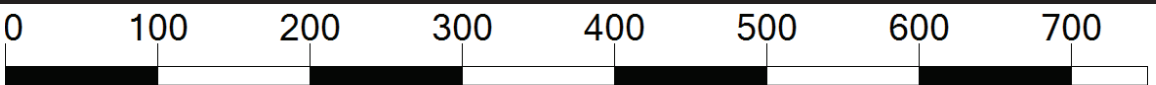
CORE PHOTO LOG

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	15/10/14
Borehole No	BH181	TMR H No	12122
Location	Fursden Creek Overflow Bridge	Start Depth (m)	21.5
Detail	Abutment B	Finish Depth (m)	24.5
Chainage	8789m	Submitted By	J. Lopez
Remarks			



SCALE 1:5