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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH121
SHEET 1 of 4
REFERENCE No 12067

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5649m;
COORDINATES 720978.7 E; 7658003.6 N
PROJECT No FG6184 SURFACE R.L. 12.81m PLUNGE DATE STARTED 7/10/14 GRID DATUM GDA 94 /MGA Zone 56
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 8/10/14 DRILLER Saxon Drilling

Table with columns: 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. Includes soil descriptions like Silty CLAY, Clayey SAND, and Sandy CLAY with SPT test results.

TMJR JAN 15.GLB Log A - ENGINEERING BOREHOLE LOG W/ LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Dataget CPT Tool gInt Add-In 04/03/2015 10:50

REMARKS # Sample failed along existing defect surface.

LOGGED BY MS



# ENGINEERING BOREHOLE LOG

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

BOREHOLE No	<u>  BH121  </u>
SHEET	<u>  2  </u> of <u>  4  </u>
REFERENCE No	<u>  12067  </u>

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1  
 LOCATION Peak Downs Hwy Overpass Abutment B; CH: 5649m; COORDINATES 720978.7 E; 7658003.6 N  
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 JOB No \_\_\_\_\_ HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 8/10/14 DRILLER Saxon Drilling

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD ( ) %	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	INTACT STRENGTH											DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS			
								WEATHERING																	
								USC	EH	VH	H	M	J	VL	EL	EC	VC	W	WW	VW	EW				
10	2.81				K	<b>Silty CLAY (ALLUVIUM)</b> (Cont'd) 10.00m: Colour change to pale grey and brown.		(CH)																3,6,7 N=13	SPT
10.70	2.11				L	<b>Clayey SAND (ALLUVIUM)</b> Pale grey-brown, moist, medium dense. Fine grained.		(SC)																2,4,7 N=11	SPT
11.70	1.11				M	<b>Sandy CLAY (ALLUVIUM)</b> Grey mottled brown, moist, stiff. Low to medium plasticity.		(CL-CI)																3,3,6 N=9	SPT
13.80	-0.99				N	13.00m: Becoming Silty Sandy CLAY. Medium plasticity.																		4,5,6 N=11	SPT
15.70	-2.89				P	<b>Silty CLAY (ALLUVIUM)</b> Grey mottled brown, moist, very stiff. High plasticity.		(CH)																5,7,8 N=15	SPT
17.00					Q																			4,8,9 N=17	SPT
18.30	-5.49				R	<b>Clayey SAND (ALLUVIUM)</b> Pale brown-grey, moist, medium dense. Fine to medium grained.		(SC)																6,12,12 N=24	SPT
					S	17.00m: Colour change to pale brown and red patches.																		7,11,13 N=24	SPT
					T	18.00m: Fine to coarse grained sand.																		11,8,12 N=20	SPT
					U	<b>Silty CLAY (ALLUVIUM)</b> Grey and brown, moist, very stiff. High plasticity.		(CH)																6,10,12 N=22	SPT
20.20	-7.19																								

REMARKS # Sample failed along existing defect surface.

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# ENGINEERING BOREHOLE LOG

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

BOREHOLE No   BH121    
SHEET   3   of   4    
REFERENCE No   12067  

PROJECT   Mackay Ring Road Geotechnical Investigation - Stage 1    
LOCATION   Peak Downs Hwy Overpass Abutment B; CH: 5649m;   COORDINATES   720978.7 E; 7658003.6 N    
PROJECT No   FG6184   SURFACE R.L.   12.81m   PLUNGE            DATE STARTED   7/10/14   GRID DATUM   GDA 94 /MGA Zone 55    
JOB No            HEIGHT DATUM   AHD   BEARING            DATE COMPLETED   8/10/14   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
20	-7.19				V	<b>Sandy CLAY (RESIDUAL)</b> Grey-brown, moist, very stiff. Low to medium plasticity.	(CL-CI)					5,6,9 N=15	SPT
21					W							5,7,10 N=17	SPT
21.50	-8.69												
22					X	<b>Clayey SAND (RESIDUAL)</b> Grey, moist, medium dense. Fine to medium grained.	(SC)					7,7,8 N=15	SPT
23					Y							4,9,12 N=21	SPT
24	-11.19				Z	<b>MICRODIORITE (Kgwu)</b> XW: Recovered as yellow-brown, moist to dry, medium dense to very dense Clayey Gravelly SAND. Fine to coarse grained sand.						10,11,17 N=28	SPT
25								XW				hb	SPT
26	-13.19												
26.00					(31)	<b>MICRODIORITE (Kgwu)</b> MW: Grey and pink, fine to medium grained, massive, very high strength. Defects: - Js; 30° (2/m); PI/Ro, OP; - Js; 70° (2/m); PI/Ro, OP;		MW				Is(50) = 7.04MPa; #	D (26.24m)
27					100 (0)			XW				27.03m-27.42m: XW Microdiorite recovered as Sandy CLAY.	
27.70	-14.89							MW XW				27.65m-27.70m: XW zone.	D (27.63m)
28					100 (60)	<b>MICRODIORITE (Kgwu)</b> SW: Grey and black, mainly fine to medium grained, massive, very high to extremely high strength. Defects: - Js; 10°-20° (2/m); PI/Ro, OP, Fe St, some Cly; - Js; 40° (2/m); PI/Ro, OP, Fe St, some Cly; - Js; 50°-60° (2/m); PI/Ro, OP, Fe St, some Cly; - Js; 70°-75° (1/m); PI/Ro, OP, Fe St, some Cly;		SW				UCS=268MPa; Is(50) = 13.28MPa	D (28.95m)
29					100 (66)			HW SW				29.25m-29.32m: HW zone, very low strength. Is(50) = 9.61MPa Is(50) = 5.78MPa; #	A (29.43m) D (29.48m)
30													

REMARKS # Sample failed along existing defect surface.

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# ENGINEERING BOREHOLE LOG

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

BOREHOLE No   BH121    
 SHEET   4   of   4    
 REFERENCE No   12067  

PROJECT   Mackay Ring Road Geotechnical Investigation - Stage 1    
 LOCATION   Peak Downs Hwy Overpass Abutment B; CH: 5649m;   COORDINATES   720978.7 E; 7658003.6 N    
 PROJECT No   FG6184   SURFACE R.L.   12.81m   PLUNGE            DATE STARTED   7/10/14   GRID DATUM   GDA 94 /MGA Zone 55    
 JOB No            HEIGHT DATUM   AHD   BEARING            DATE COMPLETED   8/10/14   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	L	VL	EL	EC	VC	C	W	WV	WVW	EW						
30	-17.19					<b>MICRODIORITE (Kgwu) SW: (Cont'd)</b>				[Intact Strength Data]											[Defect Spacing Data]									
31			100 (38)																											
32			100 (92)																											
33.90	-21.09		100																											
34						Borehole terminated at 33.9m .																								
35																														
36																														
37																														
38																														
39																														
40																														

REMARKS # 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



Department of  
 Transport and Main Roads

Project Name	<b>Mackay – Ring Road</b>		
Project No	FG6184	Date	08/10/14
Borehole No	BH 121	TMR H No	12067
Location	Peak Downs Hwy Overpass	Start Depth (m)	26.0
Detail	Abutment B	Finish Depth (m)	33.9
Chainage	<b>5649</b>	Submitted By	J. Lopez
Remarks			

