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## ENGINEERING BOREHOLE LOG

BOREHOLE No	BH154
SHEET	<u>1</u> of <u>3</u>
REFERENCE No	12095

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

 PROJECT
 Mackay Ring Road Geotechnical Investigation - Stage 1

 LOCATION
 Sugarshed Road Overpass Abutment A; CH: 10011m;
 COORDINATES
 721573.6 E; 7662320.7 N

 PROJECT No
 FG6184
 SURFACE R.L.
 10.88m
 PLUNGE
 DATE STARTED
 30/10/14
 GRID DATUM
 GDA 94 /MGA Zone 55

 JOB No
 HEIGHT DATUM
 AHD
 BEARING
 DATE COMPLETED
 31/10/14
 DRILLER
 Saxon Drilling

 R.L.
 RQD
 INTACT
 DEFECT
 INTACT
 DEFECT
 INTACT

O DEPTH (m)	R.L. (m)	AUGER ROCK ROLLER WASH BORING CORE DRILLING		SAMPLE	MATERIAL DESCRIPTION Sandy Silty GRAVEL (FILL)	🗙 LITHOLOGY	USC WEATHERING	INTACT STRENGTH	DEFECT SPACING (mm) USUSSS LIIIII	<b>GRAPHIC LOG</b>	ADDITIONAL DATA AND TEST RESULTS	SAMPLES
È	10.38					$\bigotimes$	(GM)					
  1 1	10.00				<b>Silty CLAY (ALLUVIUM)</b> Dark grey to black, moist, soft to firm. High plasticity.						100	
-				A			(CH)				1,2,2 N=4	SPT -
-2				В							2,2,3 N=5	SPT -
2.70	8.18				Silty SAND (ALLUVIUM)							
015 10:51 	7.28			С	Brown, moist, loose to medium dense. Medium grained sand.		(SM)				3,4,6 N=10	SPT
FG6184 - BOREHOLES GPJ         <-Datget CPT				D	Silty CLAY (ALLUVIUM) Pale brown-grey, moist, firm to stiff. Medium plasticity. Trace fine gravel.						1,3,3 N=6	SPT -
<pre></pre> <pre>c<drawingfile>&gt; Datgel C </drawingfile></pre>				E	5.00m: Becoming stiff.		(CI)				3,4,7 N=11	SPT
6184 - BOREHOLES.GP. 9 - 1 - 1 - 1 - 1 - 0 9 - 9	4.08			F							3,6,8 N=14	SPT
	3.18			G	<b>Clayey Silty SAND (ALLUVIUM)</b> Pale brown-grey, moist, medium dense. Fine to coarse grained sand.		(SM)				5,8,12 N=20	SPT
TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY         2 <th2< th="">         2         <th2< th=""></th2<></th2<>	5.15			Н	Silty SAND (ALLUVIUM) Pale grey, moist, medium dense. Fine to medium grained sand.		(SM)			<b>—</b> —	7,12,14 N=26	SPT
IR JAN 15.GLB Log A_EI				J							9,11,15 N=26	SPT
		 <u>κgw</u> ι	 <u>  - W</u> unda	aru G	ranodiorite;				<u> </u>		LOGGED BY	
	REMARKS Kgwu - Wundaru Granodiorite;       LOGGED BY         # Sample failed along existing defect surface.       ME											

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# ENGINEERING BOREHOLE LOG

BOREHOLE No	BH154
SHEET	<u>2</u> of <u>3</u>
REFERENCE No	12095

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

PROJECT	Mackay Ring Road	Seotechnical Investig	ation - Stage	.1				
LOCATION	Sugarshed Road Ove	erpass Abutment A;	<u>CH: 10011m;</u>			COORDIN	ATES 721573	8.6 E; 7662320.7 N
PROJECT No	<u>FG6184</u>	SURFACE R.L.	<u>10.88m</u>	PLUNGE	DATE STARTED	30/10/14	GRID DATUM	<u>GDA 94 /MGA Zone 55</u>
JOB No		HEIGHT DATUM	_AHD	BEARING	DATE COMPLETED	31/10/14	DRILLER	<u>Saxon Drilling</u>

DEPTH (m)	R.L. (m)	AUGER ROCK ROLLER WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	<b>LITHOLOGY</b>	JSC NEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
-	0.88				GRANODIORITE (Kgwu) XW: Recovered as brown, grey and white, moist, very stiff to hard Clayey SILT. Occasional XW Andesite dykes.	+ +	_ [-				5,9,15 N=24	- 
- - - - - - - - - - - - - - -				L		  					7,12,15 N=27	SPT
- - 12 - - - -				М	12.00m: Becoming hard.	+ + + + + + + + + + + + + + + + + + + +	XW				10,17,19 N=36	SPT
3/2015 10:51 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				N		+ + + + +					9,15,18 N=33	SPT
PT Tool gINt Add-In 04/0:				Р		- + - + - + - +					13,20,27 N=47	SPT
	-4.02			Q	GRANODIORITE (Kgwu)	+				+ -	14,25,30/75	
TMR.JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY FG6184 - BOREHOLES.GPJ <         ChawingFiles         Datage CPT Tool g1N1 Add-104.032015 10.51           0	-8.72		(0) 15 (73) 100 (85) 100 (90)		HW: Grey, brown and white, medium to coarse grained, massive, very low to low strength. Defects: - Js; 0°-30° (4/m); PI/Sm, CD, Cly, Fe St; GRANODIORITE (Kgwu) MW:		HW				16.05m-16.33m: Core Loss q_=84kPa;	
		S <u>Kgwu</u>	- Wunda	iru G							LOGGED BY	
	# Sample failed along existing defect surface. ME											

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# **ENGINEERING BOREHOLE LOG**

BOREHOLE No	BH154
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	12095

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

PROJECT	Mackay Ring Road	Seotechnical Investig	ation - Stage	.1				
LOCATION	Sugarshed Road Ove	erpass Abutment A;	<u>CH: 10011m;</u>			COORDIN	NATES 72157	3.6 E; 7662320.7 N
PROJECT No	<u>FG6184</u>	SURFACE R.L.	<u>10.88m</u>	PLUNGE	DATE STARTED	30/10/14	GRID DATUM	<u>GDA 94 /MGA Zone 55</u>
JOB No		HEIGHT DATUM	_ <u>AHD</u>	BEARING	DATE COMPLETED	31/10/14	DRILLER	Saxon Drilling

DEPTH (m) T (m) CGFR (m)	RQD ()%	MATERIAL	OGY	THERING	INTACT DEFECT STRENGTH SPACING (mm)	- EW GRAPHICLOG	ADDITIONAL DATA	ES
	CORE DK CORE CORE DK CORE	DESCRIPTION	ГІТНОГОСУ	USC	THUR COULT	- EW	TEST RESULTS	SAMPLES TESTS
-21	100 (64)	GRANODIORITE (Kgwu) MW: (Cont'd) Grey, brown and white, medium to coarse grained, massive, generally low to medium strength. Defects: - Js; 0°-30° (4/m); PI/Ro, CD, Fe St, CA;	+ + + + + + + + + + + + + + + + + + + +				Is(50) = 0.78MPa Is(50) = 0.51MPa Is(50) = 0.19MPa; # Is(50) = 0.37MPa → 20.90m-20.92m: Clay seam.	A (20.25m)
	100 (41)	-	+ + + + + + + + + + + + + + + + + + + +	MW			ls(50) = 0.25MPa	A (21.80m)
- 23			+ + + + +				Is(50) = 0.23MPa; # Is(50) = 0.33MPa Is(50) = 0.30MPa; #	D (22.70m) D (22.90m) A (22.92m)
2 - 24 5 - 24 5 - 24 5 - 24 5 - 13.47	(86)	-	+ + +				ls(50) = 0.29MPa	A (23.70m)
25.12 -14.24	100	<b>GRANODIORITE (Kgwu)</b> <b>SW</b> : Grey and white, medium to coarse grained, massive, high to very high strength. Defects:	+ $+$ $+$ $+$	SW				
		- Js; 0°-30° (4/m); PI/Ro, CD, Fe St; Borehole terminated at 25.12m						
REMARKS Kgv		Granodiorite;					LOGGED BY ME	<u> </u>

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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	31/10/14
Borehole No	BH154	TMR H No	12095
Location	Sugarshed Road Overpass	Start Depth (m)	16.0
Detail	Abutment A	Finish Depth (m)	25.12
Chainage	10011m	Submitted By	M.Ensor
Remarks			
Store Book	CL S		
2.91			•
89		s ( start	
		12	
	A States	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
		<u>)</u>	22
	3%		
			SF 45
		500 000	
0 100	200 300 400	500 600	700
	SCALE 1:5		

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