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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH102
SHEET	<u>1</u> of <u>3</u>
REFERENCE No	12049

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

 PROJECT
 Mackay Ring Road Geotechnical Investigation - Stage 1

 LOCATION
 Schmidtke's Road Overpass Abutment A; CH: 3825m;
 COORDINATES
 720708.1 E; 7656199.0 N

 PROJECT No
 FG6184
 SURFACE R.L.
 11.78m
 PLUNGE
 DATE STARTED
 18/9/14
 GRID DATUM
 GDA 94 /MGA Zone 55

 JOB No
 HEIGHT DATUM
 AHD
 BEARING
 DATE COMPLETED
 19/9/14
 DRILLER
 Saxon Drilling

 R.L.
 RQD
 INTACT
 DEFECT
 INTACT
 DEFECT

o DEPTH (m)	R.L. (m) 11.78	AUGER WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	гітногоду	USC	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
					Silty CLAY (ALLUVIUM) Dark brown mottled orange, moist, firm. High plasticity. Trace fine grained sand.		(CH					
	9.98			A							2,2,4 N=6	SPT
-22		Ļ		В	Silty SAND (ALLUVIUM) Pale brown and grey, moist, loose to medium dense. Fine grained sand. Trace medium gravel.						2,3,4 N=7	SPT
+/03/2015 10:49 + 1 - 1 - 1 - 1 - 1 - 2				С			(SM)			6,5,5 N=10	SPT
70 U-1 4 1 1 4 4 4 4.70	7.08			D							4,4,5 N=9	SPT -
FG8184 - BOREHOLES.GPJ < <drawingfile>> Datget CPT Tool ght Add-In 04/03/2015 10:49</drawingfile>				E	Silty CLAY (ALLUVIUM) Pale brown and grey, moist, very stiff.						6,11,15 N=26	SPT
- BOREHOLES.GPJ <<				F	5.70m: Becoming Sandy Silty CLAY.						8,11,15 N=26	SPT
ю W LITHOLOGY FG6184 1 1 1 1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1				G	6.80m: Becoming Silty CLAY.		(CH				7,9,12 N=21	SPT
INEERING BOREHOLE LC	2.98			н	8.00m: Becoming hard.						9,13,21 N=34	SPT
TMR.JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY	2.00			J	Silty SAND (ALLUVIUM) Pale grey and orange-brown, moist, very dense. Medium grained sand.		(SM)			11,23,30 N=53	SPT -
	1.78	S Kgwu	 uWunda	aru G			_		<u></u>	L	LOGGED BY	<u>-</u>
					ng existing defect surface.						ME	

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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH102
SHEET	<u>2</u> of <u>3</u>
REFERENCE No	12049

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

PROJECT	Mackay Ring R	oad Geotechr	nical Investig	ation - Stage	1	 						
LOCATION	Schmidtke's Ro	pad Overpass	Abutment A	; <u>CH: 3825m;</u>		 		COOF	RDINATES	72070	8.1 E; 7656199.	<u>0 N</u>
PROJECT N	lo_F <u>G6184</u>	SUR	RFACE R.L.	<u>11.78m</u>	PLUNGE	 DATE S	TARTED	18/9/14	GRID	DATUM	<u>GDA 94 /MG</u>	<u>A Zone 55</u>
JOB No		HEIGH	HT DATUM	_AHD	BEARING	 DATE COM	IPLETED	19/9/14	D	RILLER	Saxon Drilling	L
R.L.	RQD					INTACT	DEFECT					

DEPTH (m)	R.L. (m) 1.78	R H BORING E DRILLING		RQD ()%	LE	MATERIAL	ГІТНОГОСУ	THERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND	LES
出 10	1.78	AUGE WASH CORE		CORE REC %	SAMPLE			USC WEAT	TH TE TE	00 ₩>0∑≥>>₩	GRAP	TEST RESULTS	SAMPLES TESTS
					к	Silty CLAY (ALLUVIUM) Pale grey and orange-brown, moist, very stiff. High plasticity. Trace fine grained sand.		(CH)				7,11,14 N=25	SPT -
	0.08				L			(0)				9,12,17 N=29	SPT
- 					М	Silty SAND (ALLUVIUM) Pale grey, moist, dense. Medium to coarse grained sand.		(SM)				11,21,17 N=38	SPT
12.80	-1.02				N	Silty CLAY (ALLUVIUM) Pale grey and brown, moist, very stiff. High plasticity. Trace fine grained sand. Trace medium gravel.						 11,11,12 N=23	SPT
2PT ToolgINt Add-In 04/03	-2.92				Р			(CH)				9,11,16 N=27	SPT -
Daties Date: 2 12 12 12 12 12 12 12 12 12 12 12 12 12	-3.82				Q	Silty Clayey SAND (RESIDUAL) Brown, moist, medium dense.		(SC)				8,10,14 N=24	SPT
FG6184 - BOREHOLES.GPJ < <dreamingfile>> Datgel CPT Tool glNt Add-In 04.03/2015 10:49 91</dreamingfile>	-5.02				R	Silty CLAY (RESIDUAL) Brown and grey, moist, hard. High plasticity. Trace fine grained sand.		(CH)				8,15,18 N=33	SPT
	-3.02				S	GRANODIORITE (Kgwu) HW: Pale grey and brown, medium to coarse grained, extremely low to very low strength.	+ + + + + + + + + + + + + + + + + + + +					12,21,30/115	SPT -
14. 14. <td></td> <td></td> <td></td> <td></td> <td>Т</td> <td></td> <td>+ + - + +</td> <td>нw</td> <td></td> <td></td> <td></td> <td>12,30/135</td> <td>SPT -</td>					Т		+ + - + +	нw				12,30/135	SPT -
∠	-7.35			(0)	U		+					30/135	SPT -
TMR JAN 15.GLB Lo				(0) 100 (0) 100		MICRODIORITE (Kgwu) SW: Grey, fine to medium grained, massive, mainly very high strength.	+ + + + + + + + + + + + + + + + + + +	SW				□- 19.35m-19.39m: Cly seam. - 19.72m-19.74m: Cly seam. Is(50) = 0.06MPa; #	A (19.75m)-
	EMARK	s <u>Kg</u> v	vu -	Wunda	iru G	ranodiorite;						LOGGED BY	
		<u># S</u>	am	ple faile	<u>d alo</u>	ng existing defect surface.	(. ME	

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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH102
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	12049

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

PRC	JECT	Mack	<u>ay Ring F</u>	Road	Geotechnical Investigation - Stage	<u>1</u>									
LOC	ATION	<u>Schm</u>	nidtke's R	oad (Dverpass Abutment A; CH: 3825m	<u> </u>					CO	ORDINATES	720708	B.1 E; 7656199	<u>.0 N</u>
PRC	JECT N	lo <u>FG61</u>	84		SURFACE R.L. <u>11.78m</u>	PLUNGE			DATE S	TARTED	<u>18/9/</u>	<u>14</u> GRID	DATUM	<u>GDA 94 /MG</u>	<u>A Zone 55</u>
JOB	No				HEIGHT DATUM <u>AHD</u>	BEARING			DATE COM	IPLETED _	<u>19/9/</u>	<u>14</u> D	RILLER	Saxon Drilling	<u>g</u> _
DEPTH (m)	R.L. (m)	JGER ASH BORING DRE DRILLING	RQD ()% CORE	MPLE	MATERIAL		THOLOGY	SC FATHERING		DEFECT SPACING (mm)	EW RAPHIC LOG		ITIONAL AND ST RESU		(MPLES STS

100 100 MCRODORTE (Kgwa) + 100 500 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m . 100 Borehole terminated at 22 2m .	2	0 -8	22 <	WASH	COR	RE	SAMPL	DESCRIPTION	Н ГІТНОІ	USC	GRAPH GRAPH GRAPH GRAPH	TEST F	RESULTS	SAMPL TESTS
-7 + + + + + - 0.000 TV (by care.) - 0.000 TV (by care.) - 0.000 TV (by care.) 0	-	-0.			(50)		MICRODIORITE (Kgwu) SW: (Cont'd)				⊐— 20.20m-20.24m: C	-	
100 21 (0) 27 2000; 10(0) 27 200; 10(0) 27 200; <td< td=""><td>-</td><td></td><td></td><td></td><td>(58</td><td>5)</td><td></td><td></td><td></td><td></td><td></td><td>_— 20.65m-20.73m: C</td><td></td><td>D _(20.45m)</td></td<>	-				(58	5)						_— 20.65m-20.73m: C		D _(20.45m)
Hermitian Hermitian <t< td=""><td>-2</td><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td>[+]</td><td>sw</td><td></td><td>21.10m-21.20m: Cly seam.</td><td>UCS=189MPa ls(50) = 8.75MPa ls(50) = 7.49MPa</td><td>A (21.00m) D (21.05m)_</td></t<>	-2	1							[+]	sw		21.10m-21.20m: Cly seam.	UCS=189MPa ls(50) = 8.75MPa ls(50) = 7.49MPa	A (21.00m) D (21.05m)_
			.42		10	0			 - + - - + - - + -	•		21.83m: Cly seam 21.90m: Cly seam 21.98m: Cly seam	Is(50) = 7.73MPa Is(50) = 10.08MPa 50°, 10mm. 30°, 5mm. 10°, 5mm.	A (21.53m) D (21.60m)-
REWARK Komonomic Incrementation								Borehole terminated at 22.2m						
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	E													
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	Nt Add-In 04/03/2	4												
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	tgel CPT Tool gl													-
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	TawingFile>> Da	5												
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	HOLES.GPJ <<[6												
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	FG6184 - BORE													
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	2 1 1 1 1 1 M LITHOLOGY	7												
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	OREHOLE LOG	8												
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	NGINEERING B													
REMARKS Kgwu - Wundaru Granodiorite; LOGGED BY	15.GLB Log A_E	9												
	TMR JAN	0												-
		REMA	RKS											

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CORE PHOTO LOG

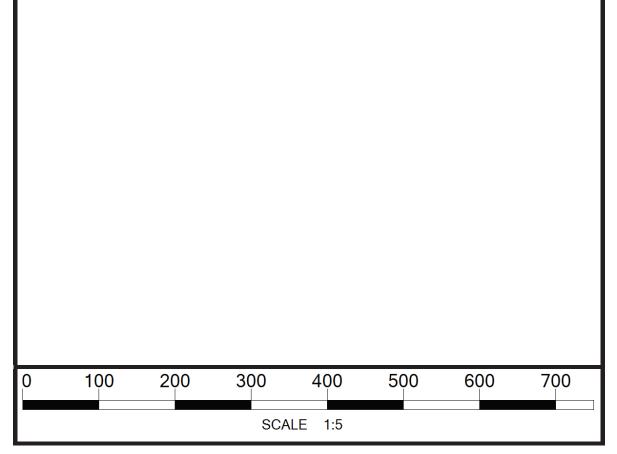
DEPARTMENT OF TRANSPORT & MAIN ROADS Geotechnical Branch 35 Butterfield Street, HERSTON Qld 4006 Phone 07 3066 3336



Department of Transport and Main Roads

Project Name	Mackay – Ring Road		
Project No	FG6184	Date	16/09/14
Borehole No	BH 102	TMR H No	12049
Location	Schmidtke's Road Overpass	Start Depth (m)	19.13
Detail	Abutment A	Finish Depth (m)	22.2
Chainage	3825m	Submitted By	M. Ensor
Remarks		÷	





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