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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH117
SHEET	<u>1</u> of <u>4</u>
REFERENCE No	12063

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

F	PROJECT	Mack	<u>ay Ring F</u>	Road (<u>Geotechnical Investig</u>	ation - Stage	1	 							
L	OCATION	_Peak	<u>Downs H</u>	wy O	verpass_Pier 2; CH: 5	5 <u>609m;</u>		 		(COORDIN	ATES <u>72</u>	0960.6 E; 76579	<u>65.7 N</u>	
F	PROJECT No	<u>FG61</u>	84		SURFACE R.L.	<u>12.87m</u>	PLUNGE		DATE STARTED	0 <u>1/1</u>	10/14	GRID DAT	UM <u>GDA 94 /</u>	<u>/IGA Zone</u>	<u>55</u>
J	JOB No				HEIGHT DATUM	_AHD	BEARING		DATE COMPLETED	0 _4/1	10/14	DRILL	.ER <u>Saxon Dr</u> i	lling	
ſ	R.L.	00	RQD						INTACT DEFECT		(1)				

(E	(m)	LLING	()%		MATERIAL	≻	DN N	STRENGTH	SPACING (mm)	DG	ADDITIONAL DATA	
DEPTH (m)		ER H BORING E DRILLING		ГE	DESCRIPTION	LITHOLOGY	THERING			GRAPHIC LOG	AND	S
0 D	12.87	AUGE WASH CORE	CORE REC %	SAMPLE		ГТНС	USC WEA ⁻	₩¥±≈⊐≯¤	uoo ∭>oz≥≥≥∭	GRAF	TEST RESULTS	SAMPLES TESTS
-	12.07	TTT			Silty CLAY (TOPSOIL)	<u>x 1/</u>						-
E					Brown, dry, stiff. High plasticity.	<u>1</u> 7	(CH)					
0.70	12.17				ingri plactory.							-
2					Silty CLAY (ALLUVIUM)							
-1					Orange-brown mottled grey, moist, stiff. High plasticity.						0.5.5	-
F				А	Trace fine grained sand.						2,5,5 N=10	SPT _
F							(CH)					
E												-
-2												-
2.30	10.57			в							3,4,5 	SPT -
Ł					Sandy CLAY (ALLUVIUM) Orange-brown, moist, stiff to very stiff.			· · · · · · · · ·	_			
F					High plasticity.		(CH)					
3.90	9.87									L_		-
2				с	Silty CLAY (ALLUVIUM) Brown and grey, moist, very stiff.						5,7,10	SPT -
10:50					High plasticity.						N=17	-
V2015							(CH)					
04/0												-
U-9₽₽											3.6.13	
1.30	8.57			D	Silty Clayey SAND (ALLUVIUM)						3,6,13 	SPT -
T T00					Brown, moist, medium dense.							-
Jel CP												-
5 Date							(SC)					
JFile>				Е			(00)				6,8,8 N=16	SPT _
rawing												-
₹ E	0.07											
GD'S	6.97				SAND (ALLUVIUM)						+	
HOLE				F	Brown, moist, medium dense.	****					11,12,15 N=27	SPT -
B B C					Fine to coarse grained.						N=27	-
184 -							(SW					-
E E E E					6.00m: Becoming grouply at hace, ecores	****		· · · · · · ·				-
				G	6.90m: Becoming gravelly at base, coarse grained sand and fine gravel.	••••					8,12,7 N=19	SPT -
9 - 1 - 7.50	5.37			0							N=19	-
N E					Silty CLAY (ALLUVIUM)							
TMR.Jan 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY F66184 - BOREHOLES.GPJ <					Brown and grey, moist, stiff to very stiff. High plasticity.							
위 - 8 - 8					Trace medium, angular gravel.						4,8,9	-
080				Н							N=17	SPT -
												-
NGINE							(CH)					
9								· · · · · · · · · · · · · · · · · · ·				
B Log				J							4,5,9 N=14	SPT -
15.GL												-
ANN CAN												
									+			-
F	REMARKS	S <u>Kgw</u> i	ı - Wunda	aru G	Granodiorite;						LOGGED BY	
		<u># Sa</u> r	mple faile	d alo	ng existing defect surface.						- ME	



ENGINEERING BOREHOLE LOG

BOREHOLE No	BH117
SHEET	<u>2</u> of <u>4</u>
REFERENCE No	12063

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

PRC	JECT	<u>Mack</u>	<u>ay Ring F</u>	<u>Road</u>	Geotechnical Investig	<u>jation - Stage</u>	1	 							
LOC	ATION	<u>Peak</u>	Downs H	<u>lwy C</u>	<u>)verpass Pier 2; CH: 5</u>	5 <u>609m;</u>		 			СО	ORDINATE	s <u>72096</u>	0.6 E; 7657965.	7 <u>N</u>
PRC	JECT N	o <u>FG61</u>	84		SURFACE R.L.	<u>12.87m</u>	PLUNGE _	 	DATE S	TARTED _	<u>1/10/</u>	<u>14</u> GRI	D DATUM	<u>GDA 94 /MG/</u>	<u>A Zone 5</u> 5
JOB	No				HEIGHT DATUM	<u>AHD</u>	BEARING _	 	DATE COM	PLETED _	<u>4/10/</u>	14	DRILLER	<u>Saxon Drilling</u>	
Ê	R.L. (m)	NG	RQD ()%					U	INTACT STRENGTH	DEFECT SPACING	Q	AD	DITIONAL	DATA	

Ê	(m)	R BORING DRILLING	()%		MATERIAL	7	HERING	STRENGTH	ی SPACING (mm)		
DEPTH (m)				Ë	DESCRIPTION	000				AND	SAMPLES TESTS
10	2.87	AUGE WASI CORI	CORE REC %	SAMPLE		ГІТНОГОGY	USC WEA	T T T T T T T T T T T T T T T T T T T	SS NA NA NA NA NA NA NA NA NA NA NA NA NA N	TEST RESULTS	SAMPLI TESTS
	2.07			к	Silty CLAY (ALLUVIUM) (Cont'd)					4,4,7 N=11	SPT
				L			(CH)			5,9,11 N=20	SPT -
- 12				М			(CH)			6,8,11 N=19	SPT -
- 13 	-0.83			N						7,8,10 N=18	SPT
7 14 14 14 14 10 10 10 10 10 10 10 10 10 10 10 10 10				Р	Sandy Silty CLAY (ALLUVIUM) Pale grey and brown, moist, stiff to very stiff. High plasticity. Fine grained sand.		(CH)			4,7,8 N=15	SPT -
FG6184 - BOREHOLES.GPJ < <dress 04.03="" 10:50<br="" 2015="" add-in="" cpt="" datget="" glikt="" tool="">10.10 - 1.10 - 1.10 - 1.02/2015 10:50 10.10 - 1.10 - 1.10 - 1.02/2015 10:50 10.10 - 1.02/2015 1</dress>	-1.93			Q	Silty SAND (ALLUVIUM) Pale brown, grey and black, moist, medium dense. Fine grained.		(SM)			8,12,14 N=26	SPT -
- BOREHOLES.GPJ <<0	-2.93			R	Sandy Silty CLAY (ALLUVIUM) Pale grey and brown, moist, very stiff. High plasticity. Fine grained sand.		(CH)			5,7,10 N=17	SPT -
⁺ 81984 - <u>16.80</u> - 17 - 17 - 17 - 17 - 17 - 17 - 17 - 17	-3.93 -4.58			S	Silty Clayey SAND (ALLUVIUM) Pale grey and brown, moist, medium dense.		(SC)			10,12,14 N=26	SPT -
ERING BOREHOLE LOG				т	Pale grey and brown, moist, very stiff. High plasticity.					8,12,15 N=27	SPT -
TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG WLITHOLOGY 0 1 1 1				U			(CH)			7,10,14 N=24	SPT
	EMARK				Granodiorite;	/// 				LOGGED BY ME	-



ENGINEERING BOREHOLE LOG

BOREHOLE No	BH117
SHEET	<u>3</u> of <u>4</u>
REFERENCE No	12063

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

PRO	JECT	Mack	ay Ring F	Road_	Geotechnical Investigation - Stage 1										
LOC	ATION	<u>Peak</u>	Downs H	<u>lwy O</u>	overpass Pier 2; CH: 5609m;						COOR	DINATES 72096	0.6 E; 7657965	.7 <u>N</u>	-
PRO	JECT N	0_ <u>FG61</u>	84		SURFACE R.L. <u>12.87m</u> PLUNGE				DATE S	TARTED 1	1/10/14	_ GRID DATUM	<u>GDA 94 /MG</u>	<u>A Zone 5</u>	5
JOB	No				HEIGHT DATUM <u>AHD</u> BEARING				DATE COM	PLETED _	<u>10/14</u>	DRILLER	<u>Saxon</u> Drilling	9	-
TH (m)	R.L. (m)	R BORING DRILLING	RQD ()%	щ	MATERIAL	OGY	-	HERING	INTACT STRENGTH	DEFECT SPACING (mm)	HC LOG	ADDITIONAL AND	DATA	ES	

DEPTH (I	BOR		ш		οGY	THERIN	(mm)	AND	ES
	AUGER AUGER CORE DRILL	CORE	SAMPLE	DESCRIPTION	ГІТНОГОСУ	ISC VEATH	EH HHH CC CC CC CC CC CC CC CC CC CC CC C	TEST RESULTS	SAMPLES TESTS
 		REC %	V	Silty CLAY (ALLUVIUM) (Cont'd)		(CH)		6,10,12 N=22	SPT
20.70 	-7.83		W	Sandy SILT (RESIDUAL) Pale grey, moist, very stiff. High plasticity. Fine grained sand.		(MH)		5,8,10 N=18	SPT -
- 22			x	Silty SAND (RESIDUAL) Pale grey, moist, medium dense. Fine grained.		(SM)		8,11,11 N=22	SPT
	-9.83		Y	Sandy SILT (RESIDUAL) Pale grey, moist, stiff. High plasticity. Fine grained sand.		(MH)		4,6,7 N=13	SPT
11 200 gINt Add-In 04/03/2015 1	-10.73		Z	Silty SAND (RESIDUAL) Pale grey, moist, medium dense to dense. Fine to medium grained sand. Trace medium gravel.				8,14,13 N=27	SPT
DrawingFile>> Datgel CPT TC			AA			(SM)		5,16,20 N=36	SPT
34 - BOREHOLES.GPJ <<	-13.23		AB	26.00m: Becoming gravelly. MICRODIORITE (Kgwu) XW : Pale blue-grey, fine grained, extremely low strength.	+++++++++++++++++++++++++++++++++++++++			14,29,30/130	SPT -
ж LITHOLOGY FG618			AC			xw		10,15,21 N=36	SPT -
1 - 28 28 	-15.68		AD	27.70m: Becoming HW, very low strength.		HW		30/30 =	- - - - - - - -
TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY F66184- BOREHOLES.GPJ <		(25)		GRANODIORITE (Kgwu) SW: Pale grey to grey, medium to coarse grained, massive, medium to high strength. Zones of MW rock up to 1m thick. Defects: - Js; 0°-30° (5/m); PI/Ro, TI-OP; - Js; 30°-60° (2/m); PI/Ro, TI-OP; Fine grained inclusions (xenoliths) throughout.	+ + + + + + + +	sw		ls(50) = 1.23MPa	D (28.90m)
	EMARKS Kgw	u - Wund	aru G					LOGGED BY	
	<u># Sa</u>	mple faile	ed alc	ng existing defect surface.				ME	



ENGINEERING BOREHOLE LOG

BOREHOLE No	BH117
SHEET	<u>4</u> of <u>4</u>
REFERENCE No	12063

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

PR	OJECT	Mack	ay Ring F	Road	<u>Geotechnical Investic</u>	gation - Stage	1									
LOO	CATION	<u>Peak</u>	Downs H	wy O	verpass Pier 2; CH: {	5 <u>609m;</u>						C00	RDINATES	720960	0.6 E; 7657965.	<u>7 N </u>
PR	OJECT N	o <u>FG61</u>	84		SURFACE R.L.	<u>12.87m</u>	PLUNGE			DATE S	TARTED <u>1</u>	/ <u>10/1</u> 4	GRID	DATUM	<u>GDA 94 /MG/</u>	<u>A Zone 55</u>
JOE	3 No				HEIGHT DATUM	_ <u>AHD</u>	BEARING			DATE COM	PLETED 4	/ <u>10/1</u> 4	<u> </u>	RILLER	Saxon Drilling	L
(iii)	R.L. (m)	ING	RQD ()%						NG	INTACT STRENGTH	DEFECT SPACING	90	ADDI	TIONAL	DATA	
1.5						MATERIAL		>	Z		(mm)	0				

Ê	(m)			()%		MATERIAL	≻	U Z	SIRENGIN	(mm)	-0G	ADDITIONAL DATA	
DEPTH (m)	(m) -17.13	DRIID			щ		LITHOLOGY			()	GRAPHIC LOG	AND	ES
DEF		ASH		CORE	SAMPLE	DESCRIPTION	THO	SC			RAP	TEST RESULTS	SAMPLES TESTS
30	-17.13	₹\$ö	F	REC %	\$			ĭ≥					S E
F				100 (52)		GRANODIORITE (Kgwu) SW: (Cont'd)	+					☐ 30.00m-30.20m: BZ;	
FI				(52)			+	мw					
FI													-
FI							+			· · · · ·			
-31													-
FI							+						
El				100			+	sw				ls(50) = 0.16MPa ls(50) = 0.08MPa; #	D (31.37m)
ΕI				(44)									
Εl							+		::			ls(50) = 2.13MPa; #	D (31.80m)
- 32				100					╡┊╚┍┲═╋┲			ls(50) = 2.18MPa; #	D (32.00m)
				(21)			+	HW	╡┊┊┢╧┻┻╋╋		Ш	- 32.05m-32.25m: BZ; HW zone;	
ΕI													
							+	SW					
							+		┤┊┊┖╌┎╼╋╼				
- 33								HW				☐ 32.85m-33.10m: HW zone.	
-							+						
E				100				MW			Ш	- 33.35m-33.50m: BZ.	-
-				(46)			+	10100					
-							+		╽┊┊┟───┨──	4::::			
- 34													-
FI							+	SW					
34.60	-21.73			100								ls(50) = 2.38MPa	
						Borehole terminated at 34.6m							(34.58m)
- 35													
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			/11 -	Wunda		ranodiorite;		I	<u> </u>	I		LOGGED BY	
К												. ME	
		<u># Sa</u>	amp	ple faile	<u>d alo</u>	ng existing defect surface.							

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	04/10/14
Borehole No	BH 117	TMR H No	12063
Location	Peak Downs Highway Overpass	Start Depth (m)	28.55
Detail	Pier 2	Finish Depth (m)	34.6
Chainage	5609	Submitted By	M.Ensor
Remarks			

