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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH175
SHEET	<u>1</u> of <u>3</u>
REFERENCE No	<u>12116</u>

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

PROJECT													
LOCATION										<u>.3 N</u>			
PROJECT No	p_FG6184	SURFACE R.L.	6.95m	PLUNGE			DATE S	TARTED	<u>18/10</u>	<u>/14</u> GF	RID DATUM	GDA 94 /MG	<u>A Zone 55</u>
JOB No		HEIGHT DATUM	_AHD	BEARING			DATE COM	PLETED _	<u>19/10</u>	/14	DRILLER	Saxon Drilling	9
R.L. (m)	RQD ଓଅଁ ()%					U	INTACT STRENGTH	DEFECT SPACING	ŋ	A	DDITIONAL	DATA	

Ê	(m) 6.95		SING LLING	()%		MATERIAL	≻	UN N	STRENGTH	SPACING (mm) 	-OG	ADDITIONAL DATA	
DEPTH (m)		жÀ	DRI		Щ	DESCRIPTION	LITHOLOGY	HER			GRAPHIC LOG	AND	SAMPLES TESTS
\vdash		ASIN	VASF	CORE	SAMPLE		THO	USC	H H H H H H H H H H H H H H H H H H H		BRAP	TEST RESULTS	SAMPLI
0	6.95	₹ 0	>0	REC %	0	Silty CLAY (TOPSOIL)	<u> </u>	_ >			0		
E						Dark brown, moist, firm to stiff.	1/ 1/			±:::::::::::			
E						Medium plasticity. Some roots.	<u>\\</u>]	· · · · · · · -	+::::::			-
-							1/ 1/	(CI)		+			
							<u>, 1/</u>			+ · · · · · · · ·			
E'					•		1/			Ŧ: : : : : :		3.5.7	ODT
	5.45				A							3,5,7 N=12	SPT
1.50	5.45					Silty SAND (ALLUVIUM)	T			-			-
FI						Brown, moist, loose.		•		+ : : : : : : :			
-2						Fine grained sand.			· · · · · · · ·				
					В							2,2,2 N=4	SPT
E									· · · · · · ·	±:::::::::::::::::::::::::::::::::::::			-
F										+			
F										T : : : : : :			
-3								1		Ŧ: : : : : :		3.4.5	ODT
					С							3,4,5 N=9	SPT
-													-
F													
-4						4.00mm December fine to medium anning d		(SM)	+ :::::::::			
E					D	4.00m: Becoming fine to medium grained sand.						2,3,5 N=8	SPT
EI										<u>Essess</u>		11-0	
E													
E													
-5						5.00m: Becoming loose to medium dense.						255	
FI					E	-				-		2,5,5 N=10	SPT
-								•					-
-6									· · · · · · ·	+ ::::::::::::::::::::::::::::::::::::			
-					F	6.00m: Becoming medium to coarse grained sand.				+ : : : : : : :		3,3,5 N=8	SPT
6.50	0.45									<u> </u>			
						Gravelly SAND (ALLUVIUM)		>		± · · · · · · ·		[
-						Brown and black, moist to wet, medium dense.		>		± · · · · · · ·			
-7						Fine to coarse grained sand. Fine to	•••••	>				3,4,7	
F					G	coarse, subrounded gravel.		>		+		N=11	SPT
ΕI								>		<u>_</u> ::::::::::			-
t]		± · · · · · · · ·			
-8								(SW)	+::::::::::::::::::::::::::::::::::::::			
F					н			>		† ::::::::		9,6,9 N=15	SPT
Εl								>		<u>_</u> ::::::::::::::::::::::::::::::::::::		61=vi	
								>		±:::::::::::::::::::::::::::::::::::::			
								>		‡::::::::			
-9					J]		+		29 hb	SPT
9.40	-2.45							>		Ŧ		9.15m-9.35m: SW Microdiorite boulder	
E						Silty CLAY (ALLUVIUM)			T : : : : : : : : : : : : : : : : : : :	<u>+</u>	Γ-		-
								(CH		±::::::::::			
										<u>+ · · · · · · · · · · · · · · · · · · ·</u>			
R	REMARK	s <u>K</u>	<u>gwu</u>	- Wund	aru G							LOGGED BY	
		#	San	nple faile	ed alc	ong existing defect surface.						MS	

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ENGINEERING BOREHOLE LOG

BOREHOLE No	BH175
SHEET	<u>2</u> of <u>3</u>
REFERENCE No	12116

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

PROJECT	<u>Macka</u>	iy Ring F	Road C	<u>Geotechnical Investig</u>	<u>ation - Stage</u>	1	 	 						
LOCATION	<u>Fursde</u>	en Creek	Over	fl <u>ow Bridge Pier 2; C</u>	H: 8730m;		 	 		CC	ORDINAT	ES <u>72143</u>	5.6 E; 7661050	<u>.3 N</u>
PROJECT N	D_F <u>G618</u>	<u> </u>		SURFACE R.L.	6.95m	PLUNGE	 	 DATE S	TARTED	18/10	<u>)/14</u> G	RID DATUM	<u>GDA 94 /MG</u>	<u>A Zone 55</u>
JOB No				HEIGHT DATUM	_ <u>AHD</u>	BEARING	 	 DATE COM	PLETED	19/10)/14	DRILLER	Saxon Drilling	1
R.L.		RQD						INTACT	DEFECT					

	(u)	R.L. (m)		DRILLING	RQD ()%		MATERIAL	λ	SING	INTACT STRENGTH	DEFECT SPACING (mm)	LOG	ADDITIONAL DATA	
	DEPTH (m)	-3.05	JGER ASING	ASH BC	CORE	SAMPLE	DESCRIPTION	ГІТНОГОGY	SC EATHEF	STRENGTH S		GRAPHIC LOG	AND TEST RESULTS	SAMPLES TESTS
	-	-3.05	2 S S S S	ŠÖ	REC %		Silty CLAY (ALLUVIUM) (Cont'd) Pale grey, yellow and brown, moist, very stiff. High plasticity. Trace fine grained sand.		<u>s</u>			10	11,12,15 N=27	SPT
	- 11					L							5,9,14 N=23	SPT
	- 12					М			(CH)				6,10,14 N=24	SPT
E	- 13					Ν							9,11,15 N=26	SPT
Datgel CPT Tool gINt Add-In 04/03/2015 10:52	- 14 14.50	-7.55				Р	14.00m: Becoming hard.	+					11,13,21 N=34	SPT
DrawingFile>> Datgel CPT	- 15					Q	GRANODIORITE (Kgwu) XW : Recovered as brown, white and grey, moist very stiff to hard Sandy CLAY. Low plasticity. Sand content increases with depth.	+ + + + +					7,11,17 N=28	SPT
FG6184 - BOREHOLES.GPJ < <drawingfile>></drawingfile>	- 16					R							14,14,21 N=35	SPT
	- 17					S	17.00m: Recovered as brown and grey, moist, very dense Clayey SAND. Fine to coarse grained sand.		xw				18,21,30/100	SPT -
TMR JAN 15.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY	- 18					Т		+ + + +					30/120	- - - - - -
15.GLB Log A_ENGINE	- 19				(0)		19.00m: Recovered as hard Sandy CLAY.	+ + + +				<u> </u>	30/60	- - - - - - - -
TMR JAN 1	20				40	X						X	- 19.46m-20.00m: Core Loss	-
- L		EMARK											LOGGED BY MS	
	# Sample failed along existing defect surface.													

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Mackay Ring Road Geotechnical Investigation - Stage 1

PROJECT

ENGINEERING BOREHOLE LOG

BOREHOLE No	<u>_BH175</u>
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	12116

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

LOCA	LOCATION _Fursden Creek Overflow Bridge Pier 2; CH: 8730m; COORDINATES _721435.6 E; 7661050.3 N										
PROJ	IECT No	<u>FG61</u>	84		SURFACE R.L. <u>6.95m</u> PLUNGE _			DATE S	STARTED <u>18/10/</u>	<u>14</u> GRID DATUM <u>GDA 94 /MC</u>	A Zone 5
JOB N	No				HEIGHT DATUM <u>AHD</u> BEARING _			DATE COM	/PLETED <u>19/10/</u>	14 DRILLER Saxon Drillin	<u>g</u>
DEPTH (m)	R.L. (m) -13.05	AUGER CASING WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	INTACT STRENGTH	DEFECT SPACING (mm) JUNC SPACING (mm) JUNC SPACING SPACING SPACING (mm) JUNC SPACING SPACING (mm) JUHA SPACING (mm) SPACIN SPACIN SPACIN SPACIN SPACIN SPACIN SPACIN	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
20.10 - - - - - -	-13.15 -13.95		(0) 100 (80)		GRANODIORITE (Kgwu) MW: Grey, white and pink, fine to coarse grained, massive, highly fractured, medium strength. Defects: - Js; 10°-20° (3/m); PI/Ro, OP, Fe St; - Js; 60°-70° (13/m); PI/Ro, OP, Fe St;		MW				D (20.28m)
- 22		_	100 (80)		GRANODIORITE (Kgwu) SW: Grey, white and pink, fine to coarse grained, massive, high to very high strength. Defects: - Js; 0°-10° (1/2m); Pl/Ro, OP, Cn, some Ca; - Js; 30° (1/m); OP, Cn, some Ca; - Js; 45° (1/m); OP, Cn, some Ca;		sw			Is(50) = 9.81MPa Is(50) = 4.25MPa UCS=60MPa	A (21.35m)-
- 23 - 23 	-16.75		100 (86)		MICRODIORITE (Kgwu) SW: Black, fine grained, massive, very	+	-			ls(50) = 3.48MPa ls(50) = 2.25MPa	1 D (22.75m)- 1 A (22.80m) - - - - - - - - - - - - - - - - - - -
	-17.85		100		high to extremely high strength. Defects: - Js; 45° (1/m); PI/Ro, FL, CA;		sw	,		Is(50) = 11.40MPa Is(50) = 7.24MPa	A (24.25m)
					Borehole terminated at 24.8m						

REMARKS Kgwu - Wundaru Granodiorite; # Sample failed along existing defect surface. LOGGED BY MS

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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	19/10/14
Borehole No	BH175	TMR H No	12116
Location	Fursden Creek Overflow Bridge	Start Depth (m)	19.1
Detail	Pier 2	Finish Depth (m)	24.8
Chainage	8730m	Submitted By	J. Lopez
Remarks			
		E LOSS -	
0 100	200 300 400	500 600	700
	SCALE 1:5		

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