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**Queensland
Government**

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH145
SHEET 1 of 3
REFERENCE No 12086

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Bridge Abutment B; CH: 9194m; COORDINATES 721502.5 E; 7661509.2 N
PROJECT No FG6184 SURFACE R.L. 8.64m PLUNGE DATE STARTED 5/9/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 6/9/14 DRILLER ND Drilling Pty Ltd

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
							USC	WEATHERING	EH	VH	H	M	J	VL	EL	EC	VC				
0	8.64																				
0.30	8.34				Sandy CLAY (TOPSOIL) Dark brown, dry, soft. Medium plasticity. Fine to medium grained sand. Roots throughout.	(CI)															
				A	Sandy CLAY (ALLUVIUM) Black mottled orange, dry, stiff. Medium plasticity. Fine to medium grained sand.	(CI)														3.4,6 N=10	SPT
1.90	6.74			B	Clayey SAND (ALLUVIUM) Brown mottled orange, moist, medium dense. Fine to coarse grained.	(SC)														4.6,5 N=11	SPT
3.90	5.64			C	Sandy CLAY (ALLUVIUM) Brown mottled grey, moist, very stiff. Medium plasticity. Fine to coarse grained sand.	(CI)														Su _(PP) =120kPa;	U50
				D		(CI)														3.8,9 N=17	SPT
4.90	3.74			E	Silty CLAY (ALLUVIUM) Grey mottled orange, moist, stiff to very stiff. High plasticity. With fine to medium grained sand.	(CH)														Su _(PP) =110kPa;	U50
				F		(CH)														2.4,8 N=12	SPT
7.20	1.44			G	Sandy CLAY (ALLUVIUM) Grey mottled orange, moist, stiff. Medium plasticity. Fine to coarse grained sand.	(CI)														Su _(PP) =70kPa;	U50
				H	Clayey SAND (ALLUVIUM) Pale grey, moist, medium dense. Fine to medium grained sand.	(SC)														8,14,15 N=29	SPT
9.90	-0.36			J	Sandy CLAY (ALLUVIUM) Grey, moist, stiff. Medium plasticity. Fine to medium grained.	(CI)														Su _(PP) =48kPa;	U50
					Silty SAND (ALLUVIUM) Grey, wet, medium dense. Fine to medium grained sand.	(SM)															
9.30	-0.66																				
10																					

TMR JAN 15.GLB Log_A_ENGINERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Datget CPT Tool gInt Add-In 04/03/2015 10:51

REMARKS Kgwu - Wundaru Granodiorite;
 # 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 BH145
SHEET 2 of 3
REFERENCE No 12086

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1
LOCATION Fursden Creek Bridge Abutment B; CH: 9194m;
COORDINATES 721502.5 E; 7661509.2 N
PROJECT No FG6184 SURFACE R.L. 8.64m PLUNGE DATE STARTED 5/9/14 GRID DATUM GDA 94 /MGA Zone 55
JOB No HEIGHT DATUM AHD BEARING DATE COMPLETED 6/9/14 DRILLER ND Drilling Pty Ltd

Table with columns: DEPTH (m), R.L. (m), AUGER CASING, CORE REC %, RQD (%), SAMPLE, MATERIAL DESCRIPTION, LITHOLOGY, USC WEATHERING, INTACT STRENGTH, DEFECT SPACING (mm), GRAPHIC LOG, ADDITIONAL DATA AND TEST RESULTS, SAMPLES TESTS. Includes soil types like Silty SAND, Clayey SAND, Sandy CLAY, and MICRODIORITE.

TMR JAN 15.GLB Log_A_ENGINERING BOREHOLE LOG W LITHOLOGY FG6184 - BOREHOLES.GPJ <<DrawingFile>> Dataget CPT Tool gInt.Add-In 04/09/2015 10:51

REMARKS Kgwu - Wundaru Granodiorite;
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 **BH145**

SHEET **3** of **3**

REFERENCE No **12086**

PROJECT Mackay Ring Road Geotechnical Investigation - Stage 1

LOCATION Fursden Creek Bridge Abutment B; CH: 9194m; COORDINATES 721502.5 E; 7661509.2 N

PROJECT No FG6184 SURFACE R.L. 8.64m PLUNGE _____ DATE STARTED 5/9/14 GRID DATUM GDA 94 / MGA Zone 55

JOB No _____ HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 6/9/14 DRILLER ND Drilling Pty Ltd

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	V	L	EL	EC	VC	C	W				VW	W	EW										
20	-11.36					GRANODIORITE (Kgwu) HW: (Cont'd)	+																													
21					R																						30/25	SPT								
22					0			HW																			30/10	SPT								
23					T																															
23.65	-15.01																																			
24.09	-15.36					GRANODIORITE (Kgwu) MW: Grey, black and pink, massive, fine to coarse grained, medium strength. Highly fractured throughout.	+	MW																		23.80m: J; 10°, Un/Ro;										
24			(0)	100																						24.10m: J; 10°, Un/Ro, Sinf;	Is(50) = 9.14MPa	D (24.10m)								
24			(100)	100		GRANODIORITE (Kgwu) SW: Grey, black and pink, fine to coarse grained, massive, very high strength.	+	SW																		Is(50) = 4.56MPa; # UCS=106MPa	D (24.25m)	A (24.25m)								
24			(100)	100																						24.70m: J; 10°, Un/Ro;	Is(50) = 9.72MPa	D (24.75m)								
25			(100)	100																						Is(50) = 7.05MPa	D (24.80m)	A (24.80m)								
25.49	-16.85					MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, very high strength. Occasional thin calcite veins.	+	SW																		25.62m: J; 30°, Pl/Ro, Tl, Co;	Is(50) = 7.73MPa; # Is(50) = 8.52MPa	D (25.70m)	A (25.75m)							
26																																				
26.66	-18.02					GRANODIORITE (Kgwu) SW: Grey, black and pink, fine to coarse grained, massive, very high to extremely high strength. Defects: - Js; 35° (1/m); Pl/Ro, Tl, slight Fe St;	+	SW																												
27			100	(100)																																
27																																				
27.90	-19.26					MICRODIORITE (Kgwu) SW: Grey, fine grained, massive, very high strength.	+	SW																												
28																																				
29				100																																
29.20	-20.56					Borehole terminated at 29.2m.																														
30																																				

REMARKS Kgwu - Wundaru Granodiorite;
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	Mackay – Ring Road		
Project No	FG6184	Date	06/09/14
Borehole No	BH145	TMR H No	12086
Location	Fursden Creek Bridge	Start Depth (m)	13.81
Detail	Abutment B	Finish Depth (m)	29.20
Chainage	9194m	Submitted By	DC
Remarks			

