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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND  
SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No   BH109    
SHEET   1   of   3    
REFERENCE No   H10864  

PROJECT   WALKERSTON BYPASS PROJECT GEOTECHNICAL INVESTIGATION - BAKER'S CREEK BRIDGE    
LOCATION   Pier 2, RHS   COORDINATES   718783.8 E; 7655016.5 N    
PROJECT No   FG5635   SURFACE R.L.   7.37m   PLUNGE            DATE STARTED   13/10/10   GRID DATUM   MGA94 Zone 55    
JOB No            HEIGHT DATUM   AHD   BEARING            DATE COMPLETED   14/10/10   DRILLER   Cairns Drilling  

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	VI	IV					J	VL
0	7.37																		
6.97					AS1	<b>Silty SAND (ALLUVIAL)</b> Brown, moist, very loose, minor tree roots.	(SM)											Based on Driller's logs only Pushed SPT sample	SPT
						<b>Clayey SAND (ALLUVIAL)</b> Brown, moist, medium dense.	(SC)												
6.17					A	<b>Silty Sandy CLAY (ALLUVIAL)</b> Dark brown, moist, mainly firm to occasionally stiff.												3,4,7 N=11; pH <sub>F</sub> = 5.3 pH <sub>Fox</sub> = 6.3	SPT
					B	Medium to high plasticity; fine grained sand; roots.	(CH)											2,2,4 N=6	SPT
					C													PP=75kPa	U50
																		2,2,4 N=6	SPT
																		PP=140kPa	U50
3.47						<b>Silty Clayey SAND (ALLUVIAL)</b> Dark grey-brown, wet, very loose.													
					D													0,0,0 N<1	SPT
					E		(SC)											1,1,1 N=2; pH <sub>F</sub> = 5.8 pH <sub>Fox</sub> = 3.2	SPT
																			U50
1.37					F	<b>Silty Gravelly SAND (ALLUVIAL)</b> Grey-orange-brown, moist, medium dense.												4,11,14 N=25; pH <sub>F</sub> = 6.9 pH <sub>Fox</sub> = 5.2	SPT
						Fine to coarse grained sand.	(SM)												
0.37					G	<b>GRANODIORITE</b> Intrusive, coarse grained, massive, crystalline, acidic igneous rock <b>XW:</b> Generally exhibits the engineering properties of brown, moist, very stiff to hard, clayey sandy silt.												8,12,17 N=29	SPT
							XW												
					H													6,10,15 N=25	SPT
10																			

REMARKS \_\_\_\_\_

LOGGED BY  
**ME**



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

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	IM	J	VL	EL				
10	-2.64					<b>GRANODIORITE XW:</b> (Cont'd)												
11					J		XW										8,14,19 N=33	SPT
12	-4.44				K	<b>GRANODIORITE HW:</b> Grey, yellow, orange-brown, moist, dense to very dense, gravelly silty sand.											11,21,30/120mm N>50	SPT
13					L												11,21,29 N=50	SPT
14					M												20,30/149mm N>50	SPT
15					N												8,16,19 N=35	SPT
16					O		HW										10,12,16 N=28	SPT
17					P												10,16,16 N=32	SPT
18					Q												8,15,18 N=33	SPT
19					R	Becoming more gravelly @ 18.80m.  Becoming very low strength rock with depth.											30/120mm N>50	SPT
20																		

REMARKS \_\_\_\_\_

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										EH	VH	I	M	J						VL	EL
20	-12.64		(0)			<b>GRANODIORITE</b> HW: (Cont'd)												30/50mm N>50	SPT		
			33																		
			(0)																		
21			100	(0)																Is(50) = 0.04MPa	o
			(0)																		
22			100	(0)		Is(50) = 0.05MPa	o														
			(0)																		
			100	(0)																	
23			100	(0)																	
			(0)																		
24			100	(0)																	
			(0)																		
	-17.09		100	(46)		<b>DOLERITE / BASALT</b> Extrusive, fine grained, massive, crystalline, mafic igneous rock MW: Dark grey, fine grained, massive, mainly medium to high strength.  Defects: - Clay infilled joints @ 5-90°, generally 5mm thick.	MW										Is(50) = 0.37MPa	o			
			(46)																		
25			100	(46)															UCS = 45.3 MPa Is(50) = 10.58MPa	x	
			(46)																		
	-17.94		100	(46)																	
			(46)																		
26	-18.64		100			<b>DOLERITE / BASALT</b> SW: Dark grey, fine grained, massive, crystalline, very high to extremely high strength. Borehole terminated at 26m	SW														
27																					
28																					
29																					
30																					

REMARKS \_\_\_\_\_

LOGGED BY  
**ME**

Project: **Walkerston Bypass (Bakers Ck)**

Borehole No: **BH109**

Start Depth: 20.05 m

Finish Depth: 26.00 m

Project No: FG5635

H No:



SCALE 1:5

F:GEOT043/1