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# ENGINEERING BOREHOLE LOG

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

BOREHOLE No   BH309    
SHEET   1   of   3    
REFERENCE No   11487  

PROJECT   Townsville Ring Road Section 4    
LOCATION   Stony Creek Bridge   COORDINATES   464711.7 E; 7871590.6 N    
PROJECT No   FG6020   SURFACE R.L.   12.89m   PLUNGE            DATE STARTED   15/4/13   GRID DATUM   GDA 94    
JOB No   268/10M/5   HEIGHT DATUM   AHD   BEARING            DATE COMPLETED   16/4/13   DRILLER   Saxon 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
0	12.89					<b>Silty CLAY (TOPSOIL)</b> Dark grey, grey, moist, soft. Medium plasticity. Some tree roots.							
12.59					A	<b>Sandy CLAY</b> Dark grey - grey, moist, firm. Medium plasticity. Very fine grained sand.  Becoming brown, very stiff to hard sandy clay.	(CL-CI)						U50
1					B	Low to medium plasticity.						7,15,15 N=30	SPT
2													
10.64					C	<b>Silty SAND</b> Pale grey, pale brown, moist to dry, very dense.  Fine grained sand. Weakly cemented.  Becoming fine to coarse grained sand.	(SM)					19,30/130mm,30/100mm N>50	SPT
3					D							17,30/90mm N>50	SPT
4													
8.59					E	<b>Sandy SILT</b> Pale grey, moist, hard.  Fine grained sand.						21,30/100mm N>50	SPT
5					F							18,30,30/90mm N>50	SPT
6													
7					G	Clayey silt lens at 7.0m. Very stiff to hard.	(ML)					10,11,19 N=30	SPT
8													
9					H							10,16,23 N=39	SPT
10	2.89												

REMARKS \_\_\_\_\_

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# ENGINEERING BOREHOLE LOG

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

BOREHOLE No	<b>BH309</b>
SHEET	2 of 3
REFERENCE No	<b>11487</b>

PROJECT Townsville Ring Road Section 4  
 LOCATION Stony Creek Bridge COORDINATES 464711.7 E; 7871590.6 N  
 PROJECT No FG6020 SURFACE R.L. 12.89m PLUNGE \_\_\_\_\_ DATE STARTED 15/4/13 GRID DATUM GDA 94  
 JOB No 268/10M/5 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 16/4/13 DRILLER Saxon 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	H	M	L				
10	2.89				J	<b>Sandy SILT (Cont'd)</b> Grey, orange patches.		(ML)							12,16,24 N=40	SPT	
11	1.89				K	<b>Clayey SAND</b> Pale brown, pale grey, moist, very dense. Fine grained sand.									13,22,30 N>50	SPT	
12					L										17,27,30/120mm N>50	SPT	
13					M	Becoming medium to coarse grained sand.		(SC)							18,21,30 N>50	SPT	
14					N	Becoming dense clayey sand. Trace of fine grained gravel.									12,13,18 N=31	SPT	
15					P										13,20,30/50mm N>50: (30/50mm HB)	SPT	
16	-4.91				Q	<b>VOLCANIC BRECCIA</b> Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix. <b>XW:</b> Generally exhibits the engineering properties of pale orange, brown, moist, very dense clayey sand.		XW							22,30/120mm,HB N>50	SPT	
17						Medium to coarse grained. Some fragments of HW rock.											
18																	
19																	
20	-7.11																

REMARKS \_\_\_\_\_

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# ENGINEERING BOREHOLE LOG

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

BOREHOLE No	<u>BH309</u>
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	<u>11487</u>

PROJECT Townsville Ring Road Section 4  
 LOCATION Stony Creek Bridge COORDINATES 464711.7 E; 7871590.6 N  
 PROJECT No FG6020 SURFACE R.L. 12.89m PLUNGE \_\_\_\_\_ DATE STARTED 15/4/13 GRID DATUM GDA 94  
 JOB No 268/10M/5 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 16/4/13 DRILLER Saxon Drilling

Q.L.D. D.M.R. LIB. 01A.GLB Log A. ENGINEERING BOREHOLE LOG W. LITHOLOGY TOWNVILLE RING ROAD 4 STONY CREEK GPJ <<DrawingFile>> Datagel CPT Tool.gINT Add-In 17/10/2013 11:55

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	VL				
20	-7.11					<b>VOLCANIC BRECCIA XW (Cont'd):</b>												
21					R		XW										30/60mm N>50	SPT
22	-9.31																	
23			(0)	100		<b>HW:</b> Dark brown, orange, medium to coarse grained, massive to fractured, mainly low to medium strength. Some MW bands. Secondary mineralisation along joints.											Is(50) = 0.28MPa	o
24			(0)	100													Is(50) = 0.29MPa	o
25			(21)	100		Defects: - Joints @ 45°-50° (3/m) - Joints @ 25°-30° (2/m) - Joints @ 70°-75° (1/m) - Irregular joints (3/m)											Is(50) = 0.34MPa UCS=10.9MPa	o
26			(70)	100		Defect surfaces are generally planar or irregular, rough, open, weathered, secondary mineralisation, clayey coated.	HW										Is(50) = 1.05MPa	o
27	-13.61			100		Borehole terminated at 26.5m											Is(50) = 0.25MPa	o
28																	Is(50) = 0.08MPa	o
29																	Is(50) = 0.38MPa	o
30																	Is(50) = 0.29MPa	o

REMARKS \_\_\_\_\_

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**CORE PHOTO LOG**

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



Department of  
**Transport and Main Roads**

Project Name	<b>Townsville Ring Road Section 4</b>		
Project No	FG 6020	Date	16/04/13
Borehole No	BH 309	TMR H No	11487
Location	Stony Creek Bridge	Start Depth (m)	22.20
Detail	Abutment B (Right)	Finish Depth (m)	26.50
Chainage		Submitted By	BW
Remarks			

