Queensland Government

ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH303**
SHEET 1 of 3
REFERENCE No **11481**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464706.5 E; 7871514.3 N
PROJECT No FG6020 SURFACE R.L. 12.24m PLUNGE DATE STARTED 18/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 18/4/13 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 (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
0	12.24				**Sandy CLAY (TOPSOIL)** Dark brown, moist, soft to firm. Low to medium plasticity. Some tree roots.									
	11.94			A	**Silty Sandy CLAY** Mottled grey, brown, moist, stiff to very stiff. Medium to high plasticity.							2,3,9 N=12		SPT
1				B	Becoming sandy clay of low plasticity.		(CI-CH)					6,12,15 N=27		SPT
2				C								4,8,11 N=19		SPT
3	9.24			D	**Sandy SILT** Grey, brown, moist, hard. Low plasticity. Fine grained sand. High content of silt in some places.							14,21,30/110mm N>50		SPT
4				E			(ML)					16,29,30/75mm N>50		SPT
5				F								14,25,30/110mm N>50		SPT
6	5.74			G	**Clayey SAND** Pale grey, pale brown, moist, generally dense. Mainly fine to medium grained sand.							30/130mm,30/75mm,HB N>50		SPT
7														
8				H			(SC)					10,19,28 N=47		SPT
9														
10	2.24													

REMARKS

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BOREHOLE No **BH303**
SHEET 2 of 3
REFERENCE No **11481**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464706.5 E; 7871514.3 N
PROJECT No FG6020 SURFACE R.L. 12.24m PLUNGE DATE STARTED 18/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 18/4/13 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 (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES / TESTS
10	2.24			J	**Clayey SAND (Cont'd)**							11,16,20 N=36	SPT
11				K								10,15,23 N=38	SPT
12													
13				L	Becoming medium grained sand.							12,15,21 N=36	SPT
14													
15				M			(SC)					8,11,21 N=32	SPT
16				N	Becoming medium dense with medium to coarse grained sand.							9,12,16 N=28	SPT
17													
18				P	Becoming very dense with medium to coarse grained sand.							13,23,30/130mm N>50	SPT
19				Q								16,21,30/130mm N>50	SPT
20	-7.76												

REMARKS

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BOREHOLE No **BH303**
SHEET 3 of 3
REFERENCE No **11481**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge — COORDINATES 464706.5 E; 7871514.3 N
PROJECT No FG6020 — SURFACE R.L. 12.24m — PLUNGE — DATE STARTED 18/4/13 — GRID DATUM GDA 94
JOB No 268/10M/5 — HEIGHT DATUM AHD — BEARING — DATE COMPLETED 18/4/13 — 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 (EH VH H M L VL EL)	DEFECT SPACING (mm) (20 60 200 600 2000)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
20	-7.76													
	-7.86			R	**VOLCANIC BRECCIA** **Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix.** **XW:** Generally exhibits the engineering properties of red, brown, moist to dry, very dense silty sand.		XW					30/50mm,HB N>50		SPT
21	-8.86		(25)		Medium to coarse grained sand. Some HW rock fragments.		HW					ls(50) = 0.09MPa		o
					HW: Grey, brown, pink, medium to coarse grained, massive, mainly low strength.		XW							
22			75		Defects: - Irregular joints (>5/m) Joints are generally irregular, rough, weathered, open, clay filled.		HW							
			(0) 100				XW							
23			(0) 100		From 21.48 - 21.95m: XW, very low strength. From 22.6 - 23.1m: XW, very low strength.							ls(50) = 0.13MPa		o
			(68) 100				HW							
			(40) 100											
24			(44) 100											
	-12.11		(65)		**MW:** Brown, pink, medium to coarse grained, massive to fractured, medium to high strength. Some zones of low strength.							ls(50) = 0.35MPa		o
												ls(50) = 0.69MPa UCS=27.2MPa		o
25					Some HW bands with low strength.							ls(50) = 0.21MPa		o
			100		Defects: - Joints @ 50-60° (2/m) - Joints @ 70° (1/m) - Irregular Joints (1/m) Defect surfaces are generally planar or irregular, rough, weathered, open, clayey coated.		MW					ls(50) = 0.39MPa		o
26			(43)									ls(50) = 0.76MPa		o
	-14.11		100		Borehole terminated at 26.33m									
27														
28														
29														
30														

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

Queensland Government

Department of Transport and Main Roads

Project Name	**Townsville Ring Road Section 4**		
Project No	FG 6020	Date	18/04/13
Borehole No	BH 303	TMR H No	11481
Location	Stony Creek Bridge	Start Depth (m)	21.10
Detail	Pier 1 (Right)	Finish Depth (m)	26.33
Chainage		Submitted By	BW
Remarks			

0 100 200 300 400 500 600 700

SCALE 1:5

GEOT043/2