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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH308**
SHEET 1 of 3
REFERENCE No **11486**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464697.2 E; 7871566.1 N
PROJECT No FG6020 SURFACE R.L. 11.30m PLUNGE DATE STARTED 1/5/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 2/5/13 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	11.30				**Silty SAND (TOPSOIL)** Pale brown, moist, loose. Fine to medium grained sand. Some tree roots.									
	11.10			A	**Silty SAND** Pale brown, moist, medium dense. Fine to medium grained sand.		(SM)					6,11,14 N=25	SPT	
1														
	9.60			B	**Sandy SILT** Brown, moist, very stiff to hard. Low plasticity. Fine grained sand.							6,8,14 N=22	SPT	
2				C	Becoming dry and hard.							5,20,30 N=50	SPT	
3				D			(ML)					30/105mm N>50	SPT	
4					Thin gravel layer, subangular, fine to medium grained.									
				E								23,29,30/120mm N>50	SPT	
5	5.80			F	**Silty SAND** Pale brown, moist, dense to very dense. Medium to coarse grained sand.							24,30/70mm N>50	SPT	
6														
7				G			(SM)					15,17,24 N=41	SPT	
8														
				H	Silt content increasing and becoming sandy silt in parts. Becoming fine grained sand.							12,17,23 N=40	SPT	
9	1.70													
10	1.30				**Sandy SILT** (See over)		(ML)							

QLD_DMR_LIB_01A.GLB Log A_ENGINEERING BOREHOLE LOG W LITHOLOGY TOWNSVILLE RING ROAD 4 STONY CREEK.GPJ <<DrawingFile>> Datgel CPT Tool gINt Add-In 17/10/2013 11:55

REMARKS

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ENGINEERING BOREHOLE LOG

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

BOREHOLE No **BH308**
SHEET 2 of 3
REFERENCE No **11486**

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge COORDINATES 464697.2 E; 7871566.1 N
PROJECT No FG6020 SURFACE R.L. 11.30m PLUNGE DATE STARTED 1/5/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 2/5/13 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	1.30			J	**Sandy SILT (Cont'd)** Dark brown, moist, hard. Low plasticity. Fine grained sand.		(ML)					11,15,23 N=38	SPT	
11														
	-0.20			K	**Silty SAND** Dark brown, moist, medium dense to dense. Fine grained sand.							12,13,17 N=30	SPT	
12														
13				L								11,14,20 N=34	SPT	
14							(SM)							
				M	Sand content increasing and becoming medium grained.							11,11,15 N=26	SPT	
15														
16				N								9,14,17 N=31	SPT	
17														
	-6.10			O	**VOLCANIC BRECCIA** **Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix.**		HW					30/20mm N>50	SPT	
18	-6.70		(17) 100 (13)		**XW:** Generally exhibits the engineering properties of pale grey, red and brown, moist, very dense silty sand. Medium to coarse grained.							Is(50) = 1.71MPa		o
19			100 (0) 100 (0)		**HW:** Red, brown, pink, medium to coarse grained, massive, mainly very low to low strength with medium to high strength core stones.		HW					Clay seam Is(50) = 0.08MPa		o
20	-8.70		100											

REMARKS

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ENGINEERING BOREHOLE LOG

Queensland Government

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

BOREHOLE No BH308
SHEET 3 of 3
REFERENCE No 11486

PROJECT Townsville Ring Road Section 4
LOCATION Stony Creek Bridge
COORDINATES 464697.2 E; 7871566.1 N
PROJECT No FG6020 SURFACE R.L. 11.30m PLUNGE DATE STARTED 1/5/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 2/5/13 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	-8.70		(0) 100 (0) 100 (0) 100		**VOLCANIC BRECCIA** **HW: (Cont'd)** Defects: - Broken and clayey throughout. Defects are generally irregular, rough, open, clay infilled.		HW				Clay seam Is(50) = 0.34MPa		o
21	-9.76		(0)		**MW:** Pink, grey, brown, medium to coarse grained, massive, medium to mainly high strength. Defects: - HW broken zones <200mm - Joint @ 20°-30° (3-4/m) - Joint @ 50°-60° (2-3m) - Joint @ 70° (1/m) Defect spacing is mainly medium. Defect surfaces are planar or irregular, rough, open, clay infilled.						Is(50) = 0.21MPa		o
22			100 (50)								Is(50) = 0.63MPa HW Broken Zone		o
23			100 (73)								HW Broken Zone Is(50) = 3.07MPa Is(50) = 0.81MPa		o o
24			100 (62)				MW				Is(50) = 3.03MPa Is(50) = 1.44MPa UCS=48.7MPa		o o
25											Is(50) = 2.09MPa		o
26											Is(50) = 1.49MPa		o
	-15.30		100								Is(50) = 1.06MPa		o
27					Borehole terminated at 26.6m								
28													
29													
30													

REMARKS

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CORE PHOTO LOG

DEPARTMENT OF TRANSPORT & MAIN ROADS
Geotechnical Branch
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Queensland Government
Department of Transport and Main Roads

Project Name	**Townsville Ring Road Section 4**		
Project No	FG 6020	Date	02/05/13
Borehole No	BH 308	TMR H No	11486
Location	Stony Creek Bridge	Start Depth (m)	18.00
Detail	Pier 3 (Left)	Finish Depth (m)	26.60
Chainage		Submitted By	MS
Remarks			

GEOT043/1
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