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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH402
SHEET 1 of 3
REFERENCE No H11490

PROJECT Townsville Ring Road Section 4
LOCATION Geaney Lane Overpass COORDINATES 464704.7 E; 7871646.0 N
PROJECT No FG6020 SURFACE R.L. 12.48m PLUNGE DATE STARTED 2/5/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 3/5/13 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	H	M	L				
0	12.48																
12.18						Clayey SAND (TOPSOIL) Pale brown, dry, loose.											
					A	Clayey SAND Pale brown, dry, very dense. Fine to medium grained sand.										12,28,30/90 N>50	SPT
					B											30/135 N>50	SPT
					C		(SC)									30/110 N>50	SPT
					D											30/100 N>50	SPT
8.18					E	Silty SAND Brown, slightly moist, very dense. Fine to medium grained sand.										30/140 N>50	SPT
					F											19,30/120 N>50	SPT
					G		(SM)									18,30/100 N>50	SPT
					H											23,30/130 N>50	SPT
10																	

14/06/13

REMARKS Standpipe Piezometer Installed

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BOREHOLE No BH402
SHEET 2 of 3
REFERENCE No H11490

PROJECT Townsville Ring Road Section 4
LOCATION Geaney Lane Overpass COORDINATES 464704.7 E; 7871646.0 N
PROJECT No FG6020 SURFACE R.L. 12.48m PLUNGE DATE STARTED 2/5/13 GRID DATUM GDA 94
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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				
10	2.48																
10.5	2.18					Silty SAND (Cont'd)	(SM)										
11					J	Clayey SAND Brown to pale brown, moist, very dense. Fine to medium grained sand.									15,29,30/105 N>50	SPT	
12					K	Becoming medium to coarse grained sand and iron stained.									19,30/100 N>50	SPT	
13					L	Trace fine gravel.									25,30/100 N>50	SPT	
14					M		(SC)										
15					M										19,30/125 N>50	SPT	
16					N										18,30/140 N>50	SPT	
17																	
18					P										15,30/135 N>50	SPT	
18.5	-5.77					VOLCANIC BRECCIA Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix. XW: Generally exhibits the engineering properties of a pink, red brown, medium to coarse grained, massive, very dense, clayey sand. Some fine gravel. Very low strength HW bands throughout.											
19															30/50 N>50	SPT	
20																	

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BOREHOLE No	<u>BH402</u>
SHEET	<u>3</u> of <u>3</u>
REFERENCE No	<u>H11490</u>

PROJECT Townsville Ring Road Section 4 -----
 LOCATION Geaney Lane Overpass ----- COORDINATES 464704.7 E; 7871646.0 N
 PROJECT No FG6020 SURFACE R.L. 12.48m PLUNGE _____ DATE STARTED 2/5/13 GRID DATUM GDA 94
 JOB No 268/10M/5 HEIGHT DATUM AHD BEARING _____ DATE COMPLETED 3/5/13 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	H	M	J	VL				
20	-7.52					VOLCANIC BRECCIA XW:(Cont'd)	△											
21	-8.52		(32)		R	MW: Pink, red brown, medium to coarse grained, massive, mainly low to medium strength. Some very low strength zones. Sub angular clasts up to 5cm diameter. Defects: - Joints @ 10°-20° (1/m) - Joints @ 40°-50° (1/m) - Joints @ 60°-70° (1/m) - Irregular Joint (2/m) Defects are generally planar (some irregular), rough, open, clay infilled (some up to 2mm). Defect spacing: close to medium.	△									30/30 N>50 Is(50) = 0.80MPa	SPT	
22							△										Is(50) = 0.76MPa	o
23							△										Is(50) = 0.67MPa UCS=2.79 MPa	o
24			100 (40)				△										Is(50) = 0.28MPa	o
25							△										Is(50) = 0.08MPa	o
26							△										Is(50) = 0.58MPa	o
27	-14.32		100			Borehole terminated at 26.8m	△										Is(50) = 0.53MPa	o
28							△										Is(50) = 0.39MPa	o
29							△										Is(50) = 0.11MPa	o
30							△											

REMARKS Standpipe Piezometer Installed -----

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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	Townsville Ring Road Section 4		
Project No	FG 6020	Date	03/05/13
Borehole No	BH 402	TMR H No	11490
Location	Geaney Lane Overpass	Start Depth (m)	21.00
Detail	Abutment A (Left)	Finish Depth (m)	26.80
Chainage		Submitted By	MS
Remarks			

