

COPYRIGHT NOTICE

This geotechnical log and its associated data (the Document) is licensed by the Queensland Department of Transport and Main Roads under the [Creative Commons Attribution 4.0 Licence](#) (CC BY 4.0). When reusing the Document, in whole or in part, please attribute the Department as follows: "*(c) State of Queensland (Department of Transport and Main Roads) 2020, licensed under the CC BY 4.0 Licence*". This licence does not apply to the Queensland Government logo or trademarks.

LIMITATION OF LIABILITY

The CC BY 4.0 Licence contains a comprehensive Disclaimer of Warranties and Limitation of Liability. In addition, please note that this Document was prepared for Departmental use only. Reuse of the Document by anyone for any other purpose could result in error and/or loss. You should obtain professional advice before making decisions based on the contents of the Document.

When reproducing any part of this Document, you must also reproduce this limitation of liability notice in addition to the italicised attribution statement above.

Retrieved from the Queensland Geotechnical Database <http://qgd.org.au/>

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH408
SHEET 1 of 3
REFERENCE No H11496

PROJECT Townsville Ring Road Section 4
LOCATION Geaney Lane Overpass COORDINATES 464709.5 E; 7871710.9 N
PROJECT No FG6020 SURFACE R.L. 13.34m PLUNGE DATE STARTED 30/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 1/5/13 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING						DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
									EH	VH	H	M	L	VL					EL
0	13.34					FILL Based on drillers log.													
1																		Non destructive digging techniques used.	
2	11.34					Clayey SAND Pale brown to brown, moist, dense. Fine to medium grained sand.													
2.7					C													7,14,21 N=35	SPT
4.1					D	Becoming very dense.												19,30/85 N>50	SPT
5.1					E													30/100 N>50	SPT
6.1					F		(SC)											28,30/80 N>50	SPT
7.6					G	Becoming medium to coarse grained sand.												21,30/120 N>50	SPT
8.6					H	Trace gravel.												16,30/150 N>50	SPT
10																			

REMARKS _____

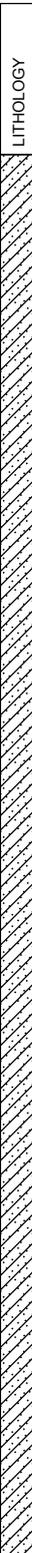
LOGGED BY
VP

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH408
SHEET 2 of 3
REFERENCE No H11496

PROJECT Townsville Ring Road Section 4
LOCATION Geaney Lane Overpass COORDINATES 464709.5 E; 7871710.9 N
PROJECT No FG6020 SURFACE R.L. 13.34m PLUNGE DATE STARTED 30/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 1/5/13 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USC	WEATHERING						DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS					
									EH	VH	H	M	L	VL					EL	20	60	200	600
10	3.34					Clayey SAND (Cont'd) Becoming dense.																	
11					J															12,20,24 N=44	SPT		
12								K													10,13,17 N=30	SPT	
13								L														10,14,17 N=31	SPT
14								M														8,14,20 N=34	SPT
15								Iron stained zones	(SC)														
16								N														12,20,30/130 N>50	SPT
17						Becoming very dense.																	
18						P															13,19,27 N=46	SPT	
19	-5.97					Becoming dense.																	
20						VOLCANIC BRECCIA Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix.		XW												30/25 N>50	SPT		

REMARKS _____

LOGGED BY
VP

ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH408
SHEET 3 of 3
REFERENCE No H11496

PROJECT Townsville Ring Road Section 4
LOCATION Geaney Lane Overpass COORDINATES 464709.5 E; 7871710.9 N
PROJECT No FG6020 SURFACE R.L. 13.34m PLUNGE DATE STARTED 30/4/13 GRID DATUM GDA 94
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING DATE COMPLETED 1/5/13 DRILLER Cairns Drilling

DEPTH (m)	R.L. (m)	CASING OTHER 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	EH	H	M	J					V
20	-6.67					VOLCANIC BRECCIA XW: Generally exhibits the engineering properties of a pale brown to pink, slightly moist, very dense, Clayey Sand. Trace gravel. HW in parts.	△											
21					R		△										30/60 N>50	SPT
22							△											
23	-9.17		(65)		S	MW: Brown, pink, red, medium to coarse grained, massive, generally medium to high strength. Defects: - Joints @ 0°-30° (2/m) - Joints @ 30°-60° (1/m) Defects are generally planar, rough, open, clay infilled (up to 2mm thick). Defect spacing: Close to mainly medium.	△										30/60 N>50	SPT
24							△										Is(50) = 0.31MPa	o
25							△										Is(50) = 0.26MPa	o
26						Becoming medium strength.	△										Is(50) = 0.30MPa UCS=3.67 MPa	o
27							△										Is(50) = 0.44MPa	o
28							△										Is(50) = 0.98MPa	o
29							△										Is(50) = 1.42MPa	o
30	-14.17						△										Is(50) = 1.39MPa	o
31							△										Is(50) = 1.10MPa	o
32							△										Is(50) = 3.63MPa	o
33							△										Is(50) = 3.00MPa	o
34							△										Is(50) = 2.62MPa	o
35	-16.17					SW: Pink, red, medium to coarse grained, massive, high strength. Defects: - Joints @ 0°-30° (1/m) - Joints @ 30°-60° (3/m) Defects are generally planar, rough, open, clayey coated. Defect spacing: Wide.	△											
36						Borehole terminated at 29.5m	△											

REMARKS _____

LOGGED BY
VP

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	01/05/13
Borehole No	BH 408	TMR H No	11496
Location	Geaney Lane Overpass	Start Depth (m)	22.50
Detail	Abutment B (Left)	Finish Depth (m)	29.50
Chainage		Submitted By	MS
Remarks			

