

## **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 BH401  
SHEET 1 of 3  
REFERENCE No H11489

PROJECT Townsville Ring Road Section 4  
LOCATION Geaney Lane Overpass COORDINATES 464715.5 E; 7871645.0 N  
PROJECT No FG6020 SURFACE R.L. 12.33m PLUNGE \_\_\_\_\_ DATE STARTED 18/4/13 GRID DATUM GDA 94  
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 19/4/13 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
0	12.33												
1					A	<b>Clayey SAND (FILL)</b> Dark grey to dark brown, dry to slightly moist, dense to very dense. Fine to medium grained sand with coarse grained bands in part.	(SC)					10,21,28 N=49	SPT
2	10.73				B	<b>Clayey SAND</b> Pale brown/brown to orange, dry to slightly moist, very dense. Fine to medium grained sand.						20,30/130 N>50	SPT
3					C	Iron staining in part.						23,30/120 N>50	SPT
4					D							30/100/ N>50	SPT
5					E	Becoming fine grained sand with trace fine gravel.						25,30/80 N>50	SPT
6					F	Becoming medium to coarse grained sand.	(SC)					30/140 N>50	SPT
7													
8					G	Sandy Clay band. Pale brown to yellow brown.						10,21,30/110 N>50	SPT
9					H							22,30/90 N>50	SPT
10	2.33												

REMARKS \_\_\_\_\_

LOGGED BY  
VP

# ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH401  
SHEET 2 of 3  
REFERENCE No H11489

PROJECT Townsville Ring Road Section 4  
LOCATION Geaney Lane Overpass COORDINATES 464715.5 E; 7871645.0 N  
PROJECT No FG6020 SURFACE R.L. 12.33m PLUNGE \_\_\_\_\_ DATE STARTED 18/4/13 GRID DATUM GDA 94  
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 19/4/13 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
10	2.33												
11	1.13				J	<b>Silty CLAY</b> Pale brown to brown, moist, hard. Low plasticity.	(CL)					9,16,29 N=45	SPT
12					K	<b>Clayey SAND</b> Pale brown, brown, slightly moist, very dense. Medium to coarse grained sand.						18,30/130 N>50	SPT
13													
14					L		(SC)					19,27,30/110 N>50	SPT
15					M							17,30/120 N>50	SPT
16	-3.87												
17					N	<b>Silty CLAY</b> Pale brown, slightly moist, hard. Low plasticity.	(CL)					22,30/100 N>50	SPT
18					P							12,23,30/135 N>50	SPT
19	-6.37												
20					Q	<b>VOLCANIC BRECCIA</b> <b>Pyroclastic rock consisting of angular fragments embedded in a finer grained matrix. XW:</b> Generally exhibits the engineering properties of a red, pink to grey, brown, slightly moist, very dense, Clayey Gravelly Sand. Fine to coarse grained, subangular gravel.	XW					21,30/105 N>50	SPT

REMARKS \_\_\_\_\_

LOGGED BY  
VP

# ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH401  
SHEET 3 of 3  
REFERENCE No H11489

PROJECT Townsville Ring Road Section 4  
LOCATION Geaney Lane Overpass COORDINATES 464715.5 E; 7871645.0 N  
PROJECT No FG6020 SURFACE R.L. 12.33m PLUNGE \_\_\_\_\_ DATE STARTED 18/4/13 GRID DATUM GDA 94  
JOB No 268/10M/5 HEIGHT DATUM AHD BEARING \_\_\_\_\_ DATE COMPLETED 19/4/13 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	EL
20	-7.67					VOLCANIC BRECCIA XW: (Cont'd)	Δ											
21					R		Δ						30/50 N>50	SPT				
22							Δ	XW										
23					S		Δ						30/125 N>50	SPT				
24	-11.72		(0)			MW: Red, pink to brown, grey, fine to coarse grained, very low to medium strength. Clasts (sizing from 2mm to 50mm diameter) in a finer grained matrix. Defects: - Joints @ 30° (1/m) - Joints @ 45° (1/m) - Irregular Joints (2-3/m) Defects are generally planar to irregular, rough, open, clay infilled. Defect spacing: close to medium.	Δ						30/50 N>50; No recovery	SPT				
25			100 (0)				Δ						Is(50) = 0.09MPa Is(50) = 0.17MPa	o				
26							Δ	MW					Is(50) = 0.17MPa Is(50) = 0.52MPa Is(50) = 0.52MPa	o				
27	-14.67		100			Borehole terminated at 27m	Δ						UCS=14.9 MPa Is(50) = 0.68MPa	o				
28																		
29																		
30																		

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	<b>Townsville Ring Road Section 4</b>		
Project No	FG 6020	Date	19/04/13
Borehole No	BH 401	TMR H No	11489
Location	Geaney Lane Overpass	Start Depth (m)	24.00
Detail	Abutment A (Right)	Finish Depth (m)	27.00
Chainage		Submitted By	MS
Remarks			

  

The photograph shows four soil core samples arranged horizontally in a metal tray. Each sample is labeled with its depth in meters. From top to bottom, the labels are: 24.0, 24.65, 25.0, 26.0, 26.5, and 27.0. A color calibration strip is visible at the top left of the image.

  

A scale bar is provided at the bottom of the form, ranging from 0 to 700 mm. The scale is labeled SCALE 1:5.