

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/>



**Queensland
Government**

GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 1 of 3

REFERENCE No **H12905**

PROJECT **Boyne River Bridge Repalcement**

LOCATION **Pier 2, LHS**

COORDINATES **323468.9 E; 7159905.7 N**

PROJECT No **FG6482**

SURFACE RL **114.55m**

PLUNGE **90°**

DATE STARTED **10/07/2017**

GRID DATUM **MGA Z56**

JOB No **249/435/375550**

HEIGHT DATUM **AHD**

BEARING **°**

DATE COMPLETED **11/07/2017**

DRILLER **NorthCoast Drilling**

DEPTH (m)	R.L. (m)	AUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
1				A	Gravelly SAND trace Cobbles (Alluvium) Brown grey, moist, loose. Fine to medium grained sand. Fine grained gravel. Trace clay.					0.80m: Cobbles ~100mm	04/09/2017 4, 5, 4 N=9 SPT
2				B							2, 2, 4 N=6 SPT
3				C	3.00m: Becoming medium dense and trace medium grained gravel.	(SP)				3.60m: Cobbles ~200mm	2, 2, 13 N=15 SPT
4				D							12, 9, 11 N=20 SPT
5				E	5.00m: Trace coarse grained gravel.					4.70m: Cobbles ~100mm	7, 6, 5 N=11 SPT
6	108.35			F	Silty CLAY trace Sand (Alluvium) Dark grey, moist, very stiff. High plasticity. Fine grained sand.					6.00m: Cobbles ~200mm	4, 14, 14 N=28 SPT
7				G	7.00m: Becomes with Sand, pale brown mottled pale grey.	(CH)				7.20m: Cobbles ~100mm 7.40m: Cobbles ~100mm	5, 4, 12 N=16 SPT
8	106.55			H	Silty Sandy CLAY (Alluvium) Pale brown mottled pale grey, moist, hard. Medium to high plasticity. Fine grained sand.	(CI)					16, 20/80mm hb SPT
9	105.55			I	Silty SAND (Residual) Pale grey, moist, very dense. Fine grained sand. Trace fine grained gravel.	(SM)					19, 15/30mm hb SPT
	104.55										

Continued on next sheet

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley



**Queensland
Government**

GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM E:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 2 of 3

REFERENCE No **H12905**

PROJECT	Boyne River Bridge Replacement
---------	--------------------------------

LOCATION	Pier 2, LHS
----------	-------------

COORDINATES 323468.9 E; 7159905.7 N

PROJECT No	FG6482
------------	--------

SURFACE RL 114.55m

PLUNGE 90°

DATE STARTED 10/07/2017

GRID DATUM MGA Z56

JOB No 249/435/375550

HEIGHT DATUM AHD

BEARING °

DATE COMPLETED 11/07/2017

DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	AUGER CASING	WASHBORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH											DEFECT SPACING											ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
										EH	VH	H	M	L	VL	EL	EC	VC	C	WC	W	EW											
						J	Silty SAND (Residual) Cont'd.																				25/90mm hb	SPT					
11						K			(SM)																		30/90mm hb	SPT					
12						L																					30/145mm hb	SPT					
13	101.45					M																					30/65mm hb	SPT					
					(30)		SANDSTONE (Je1) MW: Pale grey to grey minor mottled pale brown, fine grained, thinly bedded, mainly low strength. - BP: 10° to 30° (5-7/m); Pl/Ro; TI; some Cly Vr - Js: 30° to 50° (1-2/m); Pl/Ro; TI; some Cly Vr - Js: 80° to 90° (<1/m); Un/Ro; TI; Cn or Cly Vr		MW																			Is(50)=0.24 MPa Is(50)=0.29 MPa	D (13.16m) A (13.17m)				
14					100 (8)				HW																				13.85m-13.89m: XW, Sand 14.00m-14.07m: BZ, DI				
									MW																				Is(50)=0.32 MPa Is(50)=0.09 MPa	D (14.40m) A (14.41m)			
15					100 (0)				XW																								
									HW																								
									XW																								
16					100 (11)				HW																					15.35m-15.39m: BZ, HW	Is(50)=0.01 MPa	D (15.30m)	
17																																	
18					100 (0)																										15.88m-15.91m: BZ, HW 15.97m-16.03m: BZ, HW 16.10m-16.33m: BZ	Is(50)=0.23 MPa Is(50)=0.12 MPa	D (15.65m) A (15.66m)
19																																	
																				</													

Continued on next sheet

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley



**Queensland
Government**

GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM E:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 3 of 3

REFERENCE No **H12905**

PROJECT	Boyne River Bridge Replacement
---------	--------------------------------

LOCATION	Pier 2, LHS
----------	-------------

COORDINATES 323468.9 E; 7159905.7 N

PROJECT No	FG6482
------------	--------

SURFACE RL 114.55m

PLUNGE 90°

DATE STARTED 10/07/2017

GRID DATUM MGA Z56

JOB No 249/435/375550

HEIGHT DATUM AHD

BEARING °

DATE COMPLETED 11/07/2017

DRILLER NorthCoast Drilling

[illegible]

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley



**Queensland
Government**

STANDPIPE PIEZOMETER INSTALLATION LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 1 of 3

PIEZOMETER No **BH05**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 2, LHS COORDINATES 323468.9 E; 7159905.7 N

PROJECT No FG6482 SURFACE RL 114.55m PLUNGE 90° DATE STARTED 10/07/2017 GRID DATUM MGA Z56

JOB No 249/435/375550 HEIGHT DATUM AHD BEARING ° DATE COMPLETED 11/07/2017 DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Piezometer Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.60m Encased in Steel Monument	Backfill Details
1			Gravelly SAND trace Cobbles (Alluvium) Brown grey, moist, loose. Fine to medium grained sand. Fine grained gravel. Trace clay.	0.20m / 114.35 AHD		Rapid-set concrete
2				04/09/2017		
3			3.00m: Becoming medium dense and trace medium grained gravel.			
4						
5			5.00m: Trace coarse grained gravel.			Grout
6	108.35					
7			Silty CLAY trace Sand (Alluvium) Dark grey, moist, very stiff. High plasticity. Fine grained sand.			
8	106.55		7.00m: Becomes with Sand, pale brown mottled pale grey.			
9	105.55		Silty Sandy CLAY (Alluvium) Pale brown mottled pale grey, moist, hard. Medium to high plasticity. Fine grained sand.			
	104.55		Silty SAND (Residual) Pale grey, moist, very dense. Fine grained sand. Trace fine grained gravel.			

Continued on next sheet

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley



**Queensland
Government**

STANDPIPE PIEZOMETER INSTALLATION LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 2 of 3

PIEZOMETER No **BH05**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 2, LHS COORDINATES 323468.9 E; 7159905.7 N

PROJECT No FG6482 SURFACE RL 114.55m PLUNGE 90° DATE STARTED 10/07/2017 GRID DATUM MGA Z56

JOB No 249/435/375550 HEIGHT DATUM AHD BEARING ° DATE COMPLETED 11/07/2017 DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Piezometer Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.60m Encased in Steel Monument	Backfill Details
11			Silty SAND (Residual) Cont'd.	11.05m / 103.50 AHD		
12				11.85m / 102.70 AHD		Bentonite
13	101.45					
14			SANDSTONE (Je1) MW: Pale grey to grey minor mottled pale brown, fine grained, thinly bedded, mainly low strength. - BP: 10° to 30° (5-7/m); Pl/Ro; TI; some Cly Vr - Js: 30° to 50° (1-2/m); Pl/Ro; TI; some Cly Vr - Js: 80° to 90° (<1/m); Un/Ro; TI; Cn or Cly Vr			
15				15.85m / 98.70 AHD		
16						Top of slotted pipe Graded Sand
17						
18						
19						
94.55						

Continued on next sheet

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley



**Queensland
Government**

STANDPIPE PIEZOMETER INSTALLATION LOG

FOR GEOTECHNICAL TERMS AND
SYMBOLS REFER FORM F:GEOT 017/8-2014

BOREHOLE No **BH05**

Sheet 3 of 3

PIEZOMETER No **BH05**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 2, LHS COORDINATES 323468.9 E; 7159905.7 N

PROJECT No FG6482 SURFACE RL 114.55m PLUNGE 90° DATE STARTED 10/07/2017 GRID DATUM MGA Z56

JOB No 249/435/375550 HEIGHT DATUM AHD BEARING ° DATE COMPLETED 11/07/2017 DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Piezometer Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.60m Encased in Steel Monument	Backfill Details
21	93.35	•	SANDSTONE (Je1) • MW: Cont'd.			
22		•	Interbedded SANDSTONE/SILTSTONE (Je1) • MW: Pale grey, fine grained, very thinly bedded, mainly low strength. • - BP: 10° to 30° (5-7/m); Pl/Sm-Ro; TI; Cn or Cly Vr • - Js: 60° to 80° (2-3/m); Pl/Sm-Ro; TI; Cn or Cly Vr • - Js: 80° to 90° (1-2/m); Un/Sm-Ro; TI-CD; Cn or Cly Vr			
23		•				
24		•				
25	89.70	•	Borehole completed at 24.85m	24.85m / 89.70 AHD		
26		•				
27		•				
28		•				
29		•				

REMARKS: Je1 - Evergreen Formation. Standpipe piezometer installed.

LOGGED BY

REVIEWED BY

S. Louei

S. Foley

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	12/07/2017
Borehole No.	BH05	Reference No.	H12905
Location	Pier 2, LHS	Start Depth (m)	13.10
Submitted By	S. Louei	Finish Depth (m)	24.85
Remarks			



0	100	200	300	400	500	600	700
---	-----	-----	-----	-----	-----	-----	-----

SCALE (mm)

CORE PHOTO LOG

DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	12/07/2017
Borehole No.	BH05	Reference No.	H12905
Location	Pier 2, LHS	Start Depth (m)	13.10
Submitted By	S. Louei	Finish Depth (m)	24.85
Remarks			

The photograph shows four soil core samples arranged horizontally in a metal tray. The cores are light brown, silty, and show vertical cracking. Handwritten labels on the cores include '23.55 m', '24.0 m', and 'EOH @ 24.85 m BH05'.

0	100	200	300	400	500	600	700
---	-----	-----	-----	-----	-----	-----	-----

SCALE (mm)