FINAL 02/11/2017

Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH16**

Sheet 1 of 3

REFERENCE No **H12910**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 7, RHS

COORDINATES 323401.6 E; 7159831.3 N

PROJECT No FG6482 | SURFACE RL 117.06m | PLUNGE 90° | DATE STARTED 04/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 05/07/2017 | DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH (EH VH H M L VL EL)	DEFECT SPACING (EC VC C M W VW EW)	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
0					Sandy SILT (Alluvium) Brown, moist, stiff. Low plasticity. Fine grained sand. Trace roots.						
1				A			(ML)			5, 5, 6 N=11	SPT
2	115.01			B	Clayey SAND (Alluvium) Grey brown, moist, medium dense. Fine to medium grained sand. Trace rootlets.					3, 7, 8 N=15	SPT
3				C			(SC)			6, 7, 7 N=14	SPT
4				D						5, 8, 8 N=16	SPT
	112.66				Gravelly SAND (Alluvium) Brown grey, wet, medium dense. Medium to coarse grained gravel, sub rounded. Cobbles <~100mm. Trace Clay.						
5				E			(SP)			13, 12, 11 N=23	SPT
6										5.80m-6.00m: Cobbles	
	110.76			F						19, 25, 30/100mm	SPT
					Silty CLAY (Residual) Pale grey mottled brown, moist, hard. Medium plasticity.		(CI)				
7	109.96			G	Trace fine grained sand.					30/140mm hb	SPT
			100 (35)		SANDSTONE (Je1) HW: Pale grey mottled red brown, fine grained, medium bedded, mainly very low strength. Iron cemented zones <100mm. - BP: 0° to 10° (2-3/m); Pl-Un/Ro; Tl; Fe St; Cly Vr			VL / M			D (7.35m) A (7.40m)
8			100 (73)				HW	VL / C VL / VL-L / VL / VL-L / C		Is(50)=0.05 MPa Is(50)=0.07 MPa	
9										8.72m-8.88m: Iron cemented, 90°	
	107.06							VL / M		Is(50)=0.29 MPa Is(50)=0.17 MPa	D (9.75m) A (9.80m)

Continued on next sheet

REMARKS: Je1 - Evergreen Formation.

LOGGED BY	REVIEWED BY
J. Armstrong	S. Foley

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BOREHOLE No **BH16**

Sheet 2 of 3

REFERENCE No **H12910**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 7, RHS

COORDINATES 323401.6 E; 7159831.3 N

PROJECT No FG6482 | SURFACE RL 117.06m | PLUNGE 90° | DATE STARTED 04/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 05/07/2017 | DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
11	106.21	100 (75)		SANDSTONE (Je1) HW: Cont'd.	HW	VL			
		100 (63)		SANDSTONE (Je1) MW: Pale grey, fine grained, medium bedded, low strength. - BP: 0° to 10° (1/m); Pl/Ro; Tl; Cly Vr - J: 50° to 70° (3/m); Pl/Sm; Tl; Cly Vr	MW	VL-L / LM / L	VC / CM / VC / M / VC / M	10.85m-11.30m: Brecciated zone Is(50)=0.24 MPa Is(50)=0.08 MPa	D (11.80m) A (11.95m)
12	104.11							Is(50)=0.15 MPa Is(50)=0.10 MPa	D (12.70m) A (12.75m)
13		100 (71)		SANDSTONE (Je1) HW: Pale grey, fine grained, medium bedded, very low strength. - BP: 20° to 30° (<1/m); Pl/Sm; Tl; Cly Vr	HW	VL	C		
14		100 (31)			XW	EL / EL		Is(50)=0.10 MPa Is(50)=0.08 MPa 14.55m-14.80m: XW, recovered as Sandy CLAY	A (14.10m) D (14.15m)
15	102.06				HW	LM	C		
16		100 (14)		SANDSTONE (Je1) MW: Pale grey, fine grained, thinly to medium bedded, medium strength. - BP: 10° to 20° (2-4/m); Pl/Sm; Tl; Cly Vr - J: 30° to 50° (2-3/m); Pl/Sm-Ro; Tl; Cly Vr	MW	VC / M / M / VC-C	C / M	Is(50)=0.50 MPa Is(50)=0.67 MPa Is(50)=0.99 MPa Is(50)=0.65 MPa Is(50)=0.18 MPa Is(50)=0.13 MPa	D (15.60m) A (15.69m) D (16.10m) A (16.15m) D (16.35m) A (16.37m)
17		100 (56)			HW	EL / EL / VC / VL / EL		17.02m-17.12m: HW, BZ 17.37m-17.54m: BZ 17.65m-17.72m: BZ	
18	98.48				MW	M / M / C	M	Is(50)=0.35 MPa Is(50)=0.53 MPa	A (18.05m) D (18.10m)
19		100 (10)		SANDSTONE (Je1) HW: Pale grey, fine grained, thinly to medium bedded, very low strength. - BP: 20° to 30° (3-4/m); Pl/Sm; Tl; Cly Vr	HW	VL / L / VL	VC	18.58m-18.85m: BZ	
					XW	EL / EL		19.40m-19.57m: XW, Clayey SAND, medium grained gravel.	
	97.06				HW	VL / VL	VC		

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REMARKS: Je1 - Evergreen Formation.

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BOREHOLE No **BH16**

Sheet 3 of 3

REFERENCE No **H12910**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 7, RHS

COORDINATES 323401.6 E; 7159831.3 N

PROJECT No FG6482 | SURFACE RL 117.06m | PLUNGE 90° | DATE STARTED 04/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 05/07/2017 | DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	AUGER / CASING / WASH BORING / CORE DRILLING	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH (EH VH H M J VL EL)	DEFECT SPACING (EC VC C M W VW EW)	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
	96.71		100 (11)		SANDSTONE (Je1) HW: Cont'd.		HW	VL, L		20.25m-20.35m: BZ, DI	
					SANDSTONE (Je1) MW: Pale grey, fine grained, medium bedded, low to medium strength. - BP: 15° to 20° (2/m); Pl/Ro; TI; Cly Vr - J: 40° to 60° (3/m); Pl/Ro; TI-CD; Cly Vr; Ct <5mm - J: 80° to 90° (5/m); Un/Ro; TI; Cly Vr		MW	LM, LM	VC, CD, VC	Is(50)=0.63 MPa Is(50)=0.22 MPa 20.95m-21.10m: BZ 21.20m-21.35m: HW, Cly	D (20.40m) A (20.57m)
21	95.71		100				HW	VL			
22					Borehole completed at 21.35m						
23											
24											
25											
26											
27											
28											
29											

REMARKS: Je1 - Evergreen Formation.

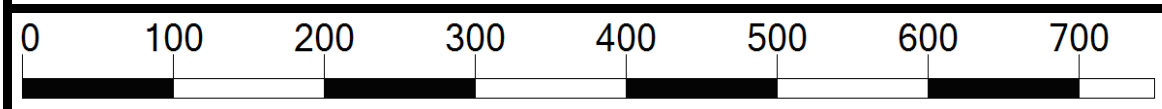
LOGGED BY	REVIEWED BY
J. Armstrong	S. Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Queensland Government

Project Name	**Boyne River Bridge Replacement**		
Project No.	FG6482	Date	05/07/2017
Borehole No.	BH16	Reference No.	H12910
Location	Pier 7, RHS	Start Depth (m)	7.15
Submitted By	S. Louei	Finish Depth (m)	21.35
Remarks			



SCALE (mm)

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Queensland Government

Project Name	**Boyne River Bridge Replacement**		
Project No.	FG6482	Date	05/07/2017
Borehole No.	BH16	Reference No.	H12910
Location	Pier 7, RHS	Start Depth (m)	7.15
Submitted By	S. Louei	Finish Depth (m)	21.35
Remarks