FINAL 02/11/2017

Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH12**

Sheet 1 of 3

REFERENCE No **H12908**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 5, RHS

COORDINATES 323425.4 E; 7159863.7 N

PROJECT No FG6482 | SURFACE RL 116.02m | PLUNGE 90° | DATE STARTED 07/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 09/07/2017 | 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					Silty SAND (Alluvium) Brown, moist, loose. Fine to medium grained sand. Trace gravel. Zones of Sandy CLAY <50mm thick.						
1				A			(SM)			1, 3, 5 N=8	SPT
2	114.02			B	Gravelly SAND (Alluvium) Grey brown, moist, very loose to loose. Medium to coarse grained sand. Fine to medium grained gravel, sub rounded. Trace Silt.					1, 2, 2 N=4 2.20m: Cobbles ~60mm	SPT
3				C	3.00m: Becoming medium dense.		(SP)			6, 7, 9 N=16	SPT
4	112.02			D	Sandy GRAVEL (Alluvium) Grey brown, wet, medium dense. Medium to coarse grained sand. Fine to medium grained gravel, sub rounded <20mm. Trace Cobbles <~80mm.					10, 11, 5 N=16 4.20m: Cobbles ~80mm	SPT
5				E						8, 9, 6 N=15 5.20m: Cobbles ~80mm	SPT
6				F						5, 7, 5 N=12	SPT
7				G			(GP)			6, 11, 9 N=20	SPT
8				H						7, 16, 13 N=29	SPT
9				I	9.00m: Becoming Sandy GRAVEL with Clay					7, 10, 14 N=24	SPT
	106.02										

Continued on next sheet

REMARKS: Je1 - Evergreen Formation.

LOGGED BY	REVIEWED BY
J. Armstrong	S. Foley

FINAL 02/11/2017

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BOREHOLE No **BH12**

Sheet 2 of 3

REFERENCE No **H12908**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 5, RHS

COORDINATES 323425.4 E; 7159863.7 N

PROJECT No FG6482 | SURFACE RL 116.02m | PLUNGE 90° | DATE STARTED 07/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 09/07/2017 | 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
	105.82			J	Sandy GRAVEL (Alluvium) Cont'd.		(SM)			18, 30/110mm hb	SPT
	105.02				Clayey SAND (Alluvium) Pale grey, moist, very dense. Fine to medium grained sand.		(SC)				
11				K	Silty CLAY with Sand (Alluvium) Pale brown, wet, very stiff. Medium plasticity. Fine grained sand.					9, 10, 12 N=22	SPT
12				L	12.0m: Becoming hard.					8, 30/120mm	SPT
13				M	13.00m: Sandy CLAY, hard.		(CI)			12, 17, 26 N=43	SPT
14				N	14.00m: Silty CLAY with Sand.					10, 23, 30/110mm	SPT
15				O						12, 30/140mm	SPT
	100.52				SANDSTONE (Je1) XW: Recovered as Clayey SAND. Pale grey to brown, moist, very dense. Fine to medium grained sand.						
16				P						30/130mm	SPT
17				Q			XW			30/80mm	SPT
18				R	18.00m: Recovered as Clayey SAND with Gravel. Fine to medium grained gravel, angular.					30/50mm hb	SPT
	97.02			S						30/50mm hb	SPT
19			(27)		SANDSTONE (Je1) MW: Pale grey and brown, fine grained, medium bedded, low to medium strength.		HW / MW	VL / LM / VC / M		19.19m-19.21m: XW, Clayey SAND; 19.67m-19.73m: HW, BZ	
	96.02										

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REMARKS: Je1 - Evergreen Formation.

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BOREHOLE No **BH12**

Sheet 3 of 3

REFERENCE No **H12908**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 5, RHS

COORDINATES 323425.4 E; 7159863.7 N

PROJECT No FG6482 | SURFACE RL 116.02m | PLUNGE 90° | DATE STARTED 07/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 09/07/2017 | DRILLER NorthCoast Drilling

DEPTH (m)	R.L. (m)	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USCS WEATHERING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
21		100 (21)		SANDSTONE (Je1) MW: Cont'd. - BP: 20° to 40° (2-3/m); Pl-Un/Ro; TI; Fe St; Cly Vr - Js: 0° to 30° (1-2/m); Pl-Un/Ro; TI-OP; Fe St; Cly Vr - Js: 30° to 60° (2-3/m); Pl-Un/Ro; TI-CD; Fe St; Cly Vr; Ct <50mm	MW HW MW HW MW HW	Is(50)=1.60 MPa 20.38m-20.44m: HW, BZ 20.58m-20.60m: HW, BZ Is(50)=2.30 MPa 21.14m-21.18m: HW, BZ Is(50)=0.62 MPa Is(50)=0.95 MPa	D (20.10m) A (20.50m) D (21.10m) A (21.30m)
22						21.73m-21.75m: HW, BZ 22.00m-22.02m: XW, Clay 22.14m-22.16m: HW, Cly	
23		100 (25)			MW	22.77m-22.82m: BZ 22.78m-22.82m: BZ Is(50)=0.32 MPa Is(50)=0.50 MPa	D (23.64m) A (23.78m)
24					HW MW HW	24.16m-24.23m: XW, Cly 24.52m-24.62m: HW, BZ	
25					SW MW HW	Is(50)=0.54 MPa Is(50)=1.10 MPa 25.18m-25.20m: HW, BZ 25.30m-25.35m: XW, Cly	D (24.88m) A (24.90m)
	90.52	100 (0)			MW	25.48m-25.50m: HW, BZ	
26		50 (13)	CORE LOSS	SANDSTONE (Je1) HW: Brown to grey, fine grained, medium bedded, very low to low strength. Bedding is indistinct. Brecciated zones throughout. - BP: 40° to 50° (<1/m); Pl/Ro; TI; Cly Vr - Js: 0° to 20° (8-10/m); Pl-Un/Ro; TI-OP; Cly Vr - Js: 70° to 90° (2-3/m); Un/Ro; TI-CD; Cly Vr	HW	25.80m-26.10m: HW, brecciated zone. 26.10m-26.70m: Core loss 26.70m-27.00m: Brecciated	
27		78 (61)	CORE LOSS		HW MW HW	Is(50)=1.30 MPa Is(50)=0.39 MPa 27.28m-27.40m: HW, BZ 27.40m-27.60m: Core loss 27.60m-27.90m: Brecciated zones	A (27.00m) D (27.24m)
28					MW	Is(50)=1.00 MPa Is(50)=1.70 MPa	A (27.74m) D (27.84m)
	87.67				HW MW	28.15m-28.26m: Dark grey to grey bed.	
29				SANDSTONE (Je1) SW: Pale grey, medium to coarse grained, medium bedded, medium to high strength. - BP: 5° to 15° (3-4/m); Pl-Un/Ro; TI; some Fe St From 27.0m: MW zone, medium to high strength.	SW MW SW	Is(50)=0.49 MPa Is(50)=0.40 MPa UCS=17.80 MPa 29.42m-29.67m: Coarse grained.	D (28.38m) A (28.40m) (28.44m)
	86.22	100			MW	Is(50)=1.90 MPa Is(50)=0.97 MPa	D (29.60m) A (29.62m)
				Borehole completed at 29.80m			

REMARKS: Je1 - Evergreen Formation.

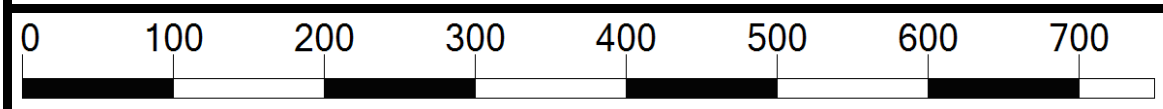
LOGGED BY	REVIEWED BY
J. Armstrong	S. Foley

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	09/07/2017
Borehole No.	BH12	Reference No.	H12908
Location	Pier 5, RHS	Start Depth (m)	19.05
Submitted By	S. Louei	Finish Depth (m)	29.80
Remarks			

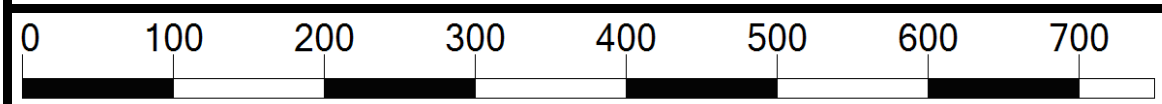


SCALE (mm)

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Queensland Government

Project Name	**Boyne River Bridge Replacement**		
Project No.	FG6482	Date	09/07/2017
Borehole No.	BH12	Reference No.	H12908
Location	Pier 5, RHS	Start Depth (m)	19.05
Submitted By	S. Louei	Finish Depth (m)	29.80
Remarks			



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