FINAL 02/11/2017

Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH04**

Sheet 1 of 4

REFERENCE No **H12904**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 1, RHS

COORDINATES 323473.6 E; 7159927.6 N

PROJECT No FG6482 | SURFACE RL 117.78m | PLUNGE 90° | DATE STARTED 11/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 12/07/2017 | 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 (Fill) Disturbed alluvium used as drill pad. Brown, dry to moist, loose. Fine to medium grained. Low plasticity fines.		(SM)				
1	116.78			A	Silty SAND (Alluvium) Dark brown, moist, very loose. Fine to medium grained. Low plasticity fines.		(SM)			1, 1, 1 N=2	SPT
2	115.78			B	Clayey SAND (Alluvium) Dark brown, moist to wet, loose. Fine to medium grained. Low plasticity fines.		(SC)			2, 3, 5 N=8	SPT
3	114.78			C	Sandy CLAY (Alluvium) Grey mottled dark brown, moist to wet, stiff. Low to medium plasticity. Fine to medium grained sand.		(CL)			3, 5, 7 N=12	SPT
4	113.78			D	Clayey SAND (Alluvium) Grey brown, moist to wet, medium dense, fine to coarse grained, low plasticity clay, trace silt.		(SC)			6, 8, 12 N=20	SPT
5	112.78			E	SAND (Alluvium) Brown mottled grey, wet, medium dense. Fine to coarse grained. Trace low plasticity clay.		(SP)			10, 11, 13 N=24	SPT
6				F	6.0m: Becomes dense to very dense.					14, 24, 26 N=50	SPT
7	110.64			G	CLAY (Alluvium) Grey, dark grey, wet, firm to stiff, high plasticity.		(CH)			3, 2, 6 N=8	SPT
8	109.78			H	Silty CLAY (Residual) Brown with minor grey mottling, wet, very stiff to hard. High plasticity. Trace fine to medium grained sand. Trace fine, sub rounded gravel.		(CH)			6, 10, 17 N=27	SPT
9											
	107.78			I						8, 14, 23 N=37	SPT

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REMARKS: Je1 - Evergreen Formation.

LOGGED BY	REVIEWED BY
S. Louei	S. Foley

FINAL 02/11/2017

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

BOREHOLE No **BH04**

Sheet 2 of 4

REFERENCE No **H12904**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 1, RHS

COORDINATES 323473.6 E; 7159927.6 N

PROJECT No FG6482 | SURFACE RL 117.78m | PLUNGE 90° | DATE STARTED 11/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 12/07/2017 | 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
11				J	Silty CLAY (Residual) Cont'd. At 11.00m: Becoming grey mottled brown, hard.		(CH)			23, 22, 30/140mm hb	SPT
12				K						10/20mm hb	SPT
13											
14	103.78			L	Silty CLAY (Residual) Dark brown, brown, wet, hard. Medium plasticity. With fine grained sand.					11, 14, 21 N=35	SPT
15											
16				M			(CI)			14, 30/145mm hb	SPT
17				N						10/20mm hb	SPT
18											
19	99.18			O	Sandy Silty CLAY (Residual) Pale grey, moist, hard. Low to medium plasticity. Fine to medium grained sand.		(CL)			18, 30/140mm hb	SPT
	97.78										

Continued on next sheet

REMARKS: Je1 - Evergreen Formation.

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GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH04**

Sheet 3 of 4

REFERENCE No **H12904**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 1, RHS

COORDINATES 323473.6 E; 7159927.6 N

PROJECT No FG6482 | SURFACE RL 117.78m | PLUNGE 90° | DATE STARTED 11/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 12/07/2017 | 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
21				P	Sandy CLAY (Residual) Pale grey and white, wet, hard, medium to high plasticity. Fine to coarse grained sand. Trace silt.		(CI)			30/80mm hb	SPT
	96.28		(25)		SANDSTONE (Je1) HW: Pale grey, minor pale brown in parts, fine grained, thinly bedded, mainly very low to low strength. - BP: 15° to 35° (3-4/m); Pl/Ro-Sm; Tl; some Fe St; some Cly Vr - Js: 50° to 70° (1-2/m); Pl/Ro-Sm; Tl-CD; some Fe St; some Cly Vr					30/70mm hb	SPT D (21.57m) A (21.58m) (21.68m)
22										Is(50)=0.10 MPa Is(50)=0.08 MPa UCS=2.03 MPa	
							HW			22.37m-22.39m: XW, Recovered as Clayey SAND Is(50)=0.07 MPa Is(50)=0.29 MPa	D (22.57m) A (22.68m)
23										Is(50)=0.04 MPa Is(50)=0.04 MPa	D (23.30m) A (23.32m)
			100				XW				
24			(0)							Is(50)=0.04 MPa Is(50)=0.06 MPa	D (24.20m) A (24.21m)
25							HW				
26							XW			26.10m-26.23m: BZ	D (25.90m) A (25.92m)
							HW			26.41m-26.45m: BZ	
			100				XW			26.55m-26.67m: BZ	
27			(0)								
28							HW			Is(50)=0.08 MPa Is(50)=0.03 MPa	D (27.25m) A (27.26m)
29										Is(50)=0.06 MPa Is(50)=0.01 MPa	D (28.60m) A (28.61m)
			100							29.09m-29.17m: BZ, DI	
	88.48		(26)		SANDSTONE (Je1) MW: Pale grey minor pale brown in parts, fine grained,		MW			Is(50)=0.07 MPa Is(50)=0.03 MPa	D (29.50m) A (29.51m)
	87.78										

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REMARKS: Je1 - Evergreen Formation.

LOGGED BY	REVIEWED BY
S. Louei	S. Foley

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Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **BH04**

Sheet 4 of 4

REFERENCE No **H12904**

PROJECT Boyne River Bridge Repalcement

LOCATION Pier 1, RHS

COORDINATES 323473.6 E; 7159927.6 N

PROJECT No FG6482 | SURFACE RL 117.78m | PLUNGE 90° | DATE STARTED 11/07/2017 | GRID DATUM MGA Z56

JOB No 249/435/375550 | HEIGHT DATUM AHD | BEARING ° | DATE COMPLETED 12/07/2017 | 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
31						100 (0)		SANDSTONE (Je1) MW: Cont'd. Thinly bedded, mainly low to medium strength. - BP: 40° to 60° (2-3/m); Pl/Ro-Sm; Tl; some Fe St; some Cly Vr - Js: 30° to 50° (3-4/m); Pl/Ro-Sm; Tl-CD; some Fe St; some Cly Vr - Js: 80° to 90° (<1/m); Un/Ro; Tl; some Cly Vr		MW HW MW HW XW MW	VL-L, EL-VL, L, L, VL, EL-VL, L, L, L, L, L, VL-L, VL-L, M, M, VL-L	VC, VC, C, C, C, C, C, C, EC-VC, C, EC, C, VC	30.35m-30.40m: BZ 30.88m-30.95m: BZ, DI	
32													Is(50)=0.05 MPa Is(50)=0.13 MPa	D (31.90m) A (31.91m)
33													32.27m-32.30m: BZ, HW 32.46m-32.50m: BZ, HW 33.13m-33.35m: HFZ 33.30m-33.35m: BZ, DI	
34						100 (0)				HW MW HW			Is(50)=0.01 MPa Is(50)=0.12 MPa 33.96m-34.00m: MW 34.00m-34.20m: HFZ, HW	D (33.45m) A (33.46m)
35	82.44					100		Borehole completed at 35.35m		MW			Is(50)=0.10 MPa Is(50)=0.03 MPa 35.05m-35.35m: HFZ	D (34.75m) A (34.76m)
36														
37														
38														
39														

REMARKS: Je1 - Evergreen Formation.

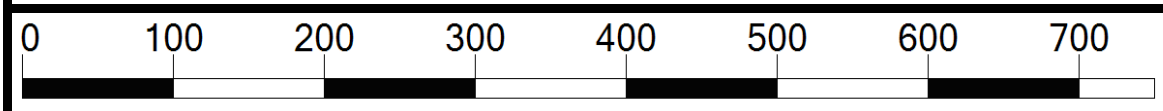
LOGGED BY	REVIEWED BY
S. Louei	S. Foley

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	14/07/2017
Borehole No.	BH04	Reference No.	H12904
Location	Pier 1, RHS	Start Depth (m)	21.50
Submitted By	S. Louei	Finish Depth (m)	35.35
Remarks			

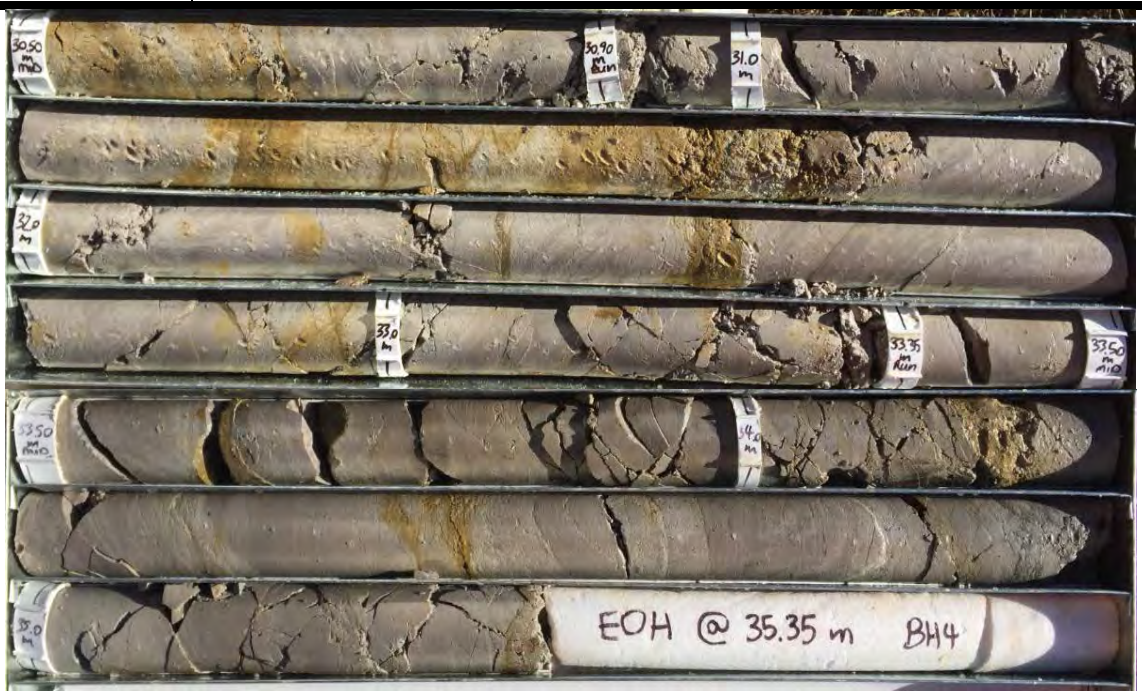


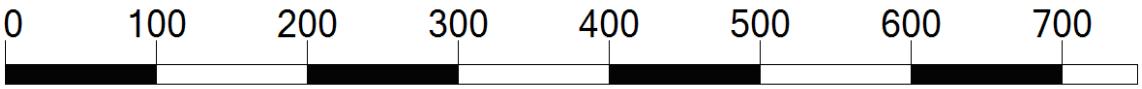
SCALE (mm)

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Queensland Government

Project Name	**Boyne River Bridge Replacement**		
Project No.	FG6482	Date	14/07/2017
Borehole No.	BH04	Reference No.	H12904
Location	Pier 1, RHS	Start Depth (m)	21.50
Submitted By	S. Louei	Finish Depth (m)	35.35
Remarks			





SCALE (mm)