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# GEOTECHNICAL BOREHOLE LOG

**FINAL** 02/11/2017

BOREHOLE No BH03

Sheet 1 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12966 REFERENCE No PROJECT Boyne River Bridge Repalcement COORDINATES 323481.1 E; 7159921.9 N Pier 1, LHS LOCATION GRID DATUM MGA Z56 FG6482 SURFACE RL 118.12m PLUNGE 90° DATE STARTED 30/08/2017 PROJECT No DRILLER NorthCoast Drilling 249/435/375550 HEIGHT DATUM AHD DATE COMPLETED 31/08/2017 JOB No BEARING ° USCS WEATHERING ADDITIONAL DATA INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY AND TEST RESULTS DEPTH ( RΙ SAMP MATERIAL DESCRIPTION CORE REC % ᇳᆃᆂᄝᅿᆿᇜᇬᇬᄝᇂᇂᇕ Sandy SILT (Alluvium) Brown, moist, soft. Low plasticity. (ML) SPT 116.32 Sandy SILT (Alluvium) Brown, moist, stiff to very stiff. Low N=15 SPT plasticity. (ML) 115.04 N=15 SAND (Alluvium) D SPT Pale orange brown, moist, medium grained, very dense. 4, 6, 30/110 (SW) SPT 113.12 7, 9, 13 N=22 SAND with Clay (Alluvium) SPT Pale orange brown, moist, medium grained, medium dense. (SC) With bands of grey Silty Clay, medium plasticity. 112.12 15, 15, 7 GRAVEL (Alluvium) SPT (GP) 111.82 Grey, fine to coarse grained. SPT Medium dense. Silty CLAY (Residual) (CI) Grey mottled pale orange brown, 111.12 moist, very stiff, medium plasticity. 5, 10, 15 N=25 Trace fine to medium grained SPT gravel, fine to medium grained and. Silty CLAY (Residual) Grey mottled pale orange brown, moist, very stiff, medium plasticity. SPT Trace fine to medium grained gravel. (CI) 14. 24. 30 9.0m: Becomes hard. SPT Continued on next sheet REMARKS: Je1 - Evergreen Formation. **LOGGED BY REVIEWED BY** M. de Gee S. Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BOREHOLE No BH03

Sheet 2 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12966 REFERENCE No PROJECT Boyne River Bridge Repalcement COORDINATES 323481.1 E; 7159921.9 N Pier 1, LHS LOCATION GRID DATUM MGA Z56 FG6482 SURFACE RL 118.12m PLUNGE 90° DATE STARTED 30/08/2017 PROJECT No DRILLER NorthCoast Drilling 249/435/375550 HEIGHT DATUM AHD DATE COMPLETED 31/08/2017 JOB No BEARING S USCS WEATHERING RQD ADDITIONAL DATA INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY AND TEST RESULTS ()% DEPTH ( RΙ SAMP MATERIAL DESCRIPTION CORE REC % ᇳᆃᆂᄝᅿᆿᇜᇬᇬᄝᇂᇂᇕ Silty CLAY (Residual) 15, 25, 30/140 SPT Cont'd (CI) 30/120 М SPT 106.12 14, 21, 26 Silty CLAY with Sand (Residual) N=47 SPT Grey mottled brown and pale grey, moist, hard. Fine to medium (CI) grained, medium plasticity. Fine grained sand. 105.12 18, 30/140 SANDSTONE (Je1) SPT XW: Recovered as Silty Clay, grey mottled brown, medium plasticity xw with fine grained sand. 104.12 (36) SANDSTONE (Je1) HW: Pale brown grey, fine to coarse D (14.25m) Is(50)=0.14 MPa A (14.26m) grained with some fine grained ¬ 14.53m-14.58m; XW layers up to 200mm, medium bedded, low strength. ☐ 14.94m-15.03m: XW -BP: 0°-15° (4-5/m), PL/Ro, OP, 15 Sandy Clay Ct Is(50)=0.14 MPa Is(50)=0.13 MPa D (15.20m) -Js: 40°-50° (1/m), Stp/Ro, OP-TI, Cly HW A (15.21m) \_\_ 15.65m-15.71m: XW 100 -J: 85° (1/m), Pl/Ro, OP, Ct (26) 16 16.43m-16.47m: XW

□ 16.43m-16.47m: XW - 16.73m-16.74m: XW XW 89 (79) Is(50)=0.15 MPa Is(50)=0.15 MPa D (17.82m) A (17.83m) MW 100 (59) 19 Is(50)=0.14 MPa D (19.45m) Is(50)=0.03 MPa HW A (19.47m) Continued on next sheet REMARKS: Je1 - Evergreen Formation. **LOGGED BY REVIEWED BY** M. de Gee S. Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# GEOTECHNICAL BOREHOLE LOG

**FINAL** 02/11/2017

BOREHOLE No BH03

Sheet 3 of 4

FOR GEOTECHNICAL TERMS AND H12966 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 PROJECT Boyne River Bridge Repalcement COORDINATES 323481.1 E; 7159921.9 N Pier 1, LHS LOCATION FG6482 SURFACE RL 118.12m PLUNGE 90° DATE STARTED 30/08/2017 grid datum MGA Z56 PROJECT No DRILLER NorthCoast Drilling 249/435/375550 DATE COMPLETED 31/08/2017 JOB No HEIGHT DATUM AHD BEARING USCS WEATHERING RQD ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY AND TEST RESULTS ()% STRENGTH DEPTH ( RΙ SAMP MATERIAL DESCRIPTION CORE REC % SANDSTONE (Je1) HW: Cont'd. 100 D (20.60m) Is(50)=0.28 MPa Is(50)=0.18 MPa (27) HW A (20.64m) ¬ 20.82m-20.87m; CZ 100 XW (86)Is(50)=0.13 MPa Is(50)=0.09 MPa D (21.54m)\_ A (21.55m) 22 Is(50)=0.20 MPa D (22.58m)-Is(50)=0.15 MPa A (22.59m) 23 HW Is(50)=0.16 MPa Is(50)=0.17 MPa D (23.30m) ⊐ 23.40m-23.44m: HFZ A (23.32m) 100 (59) 93.46 Is(50)=0.13 MPa D (24.64m) SILTSTONE (Je1) A (24.66m)-Is(50)=0.18 MPa Is(50)=0.09 MPa MW: Pale brown-grey, fine grained, D (24.92m) 25 medium bedded, medium strength. A (25.00m) Interbedded with fine to medium MW grained orange grey sandstone up to 150mm thick, low to medium LM strength. 26 -BP: 20°-30° (4-6/m), PI/Ro, OP-TI, 26.00m-26.40m: SZ XW St, Sinf -Js: 40°-60° (6-8/m), Pl/Ro, Tl-CD, St-Vr, Sinf 26.55m-26.93m: SZ XW LM 27 (93) Is(50)=0.19 MPa D (27.05m)\_ Is(50)=0.56 MPa A (27.06m)-27.34m-27.35m: BP: 10°, PI/Ro, OP, Ct, Sinf D (27.82m) Is(50)=0.65 MPa A (27.83m) MW Is(50)=1.10 MPa D (28.60m) Is(50)=0.50 MPa A (28.62m)-Is(50)=0.10 MPa Is(50)=0.18 MPa A (29.82m) Continued on next sheet REMARKS: Je1 - Evergreen Formation. **LOGGED BY REVIEWED BY** M. de Gee S. Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BOREHOLE No BH03

Sheet 4 of 4

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12966 REFERENCE No PROJECT Boyne River Bridge Repalcement COORDINATES 323481.1 E; 7159921.9 N Pier 1, LHS LOCATION SURFACE RL 118.12m GRID DATUM MGA Z56 FG6482 PLUNGE 90° DATE STARTED 30/08/2017 PROJECT No DRILLER NorthCoast Drilling 249/435/375550 HEIGHT DATUM AHD BEARING ° DATE COMPLETED 31/08/2017 JOB No USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS RQD INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ ()% LITHOLOGY SAMPLE DEPTH ( RΙ MATERIAL DESCRIPTION CORE REC % (97) SILTSTONE (Je1) UCS=1.69 MPa Is(50)=0.73 MPa (30.16m) MW: Cont'd. D (30.23m) Is(50)=0.46 MPa A (30.24m) Is(50)=0.57 MPa D (31.60m)-Is(50)=0.32 MPa A (31.61m) MW 100 (75) 33 Is(50)=0.35 MPa Is(50)=0.17 MPa D (33.23m) A (33.24m)-Becoming very thinly to thinly bedded. Dark grey to brown-grey. Is(50)=1.20 MPa D (34.44m)\_ Is(50)=1.20 MPa A (34.95m) 35 82.64 SANDSTONE (Je1) MW: Grey brown, fine to coarse MW Is(50)=0.33 MPa Is(50)=0.33 MPa D (35.85m)\_ grained, massive, medium strength. 100 A (35.86m)\_ 82.02 Borehole completed at 36.10m REMARKS: Je1 - Evergreen Formation. **LOGGED BY REVIEWED BY** M. de Gee S. Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# **CORE PHOTO LOG**DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement					
Project No.	FG6482	Date	30/08/2017			
Borehole No.	BH03	Reference No.	H12966			
Location	Pier 1, LHS	Start Depth (m)	14.00			
Submitted By	M. de Gee	Finish Depth (m)	36.10			
Remarks						
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0 100	200 300 400	500 600	700			
SCALE (mm)						

Page 1 of 3

# **CORE PHOTO LOG**DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



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Project Name Project No.	Boyne River Bridge Replacement FG6482	Date	30/08/2017				
Borehole No.	BH03	Reference No.	H12966				
Location	Pier 1, LHS		14.00				
Submitted By	M. de Gee	Start Depth (m) Finish Depth (m)	36.10				
Remarks	W. de Gee	Fillish Depth (III)	30.10				
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0 100	200 300 400	500 600	700				
SCALE (mm)							

Page 2 of 3

# **CORE PHOTO LOG**DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Destruction	D D	Danlass		
Project Name	Boyne River Bridge	Replacement	Data	20/00/0047
Project No.	FG6482		Date Deference No.	30/08/2017
Borehole No.	BH03		Reference No.	H12966
Location	Pier 1, LHS		Start Depth (m)	14.00
Submitted By	M. de Gee		Finish Depth (m)	36.10
Remarks				
		EVO 38/100		Story (Story Control of the Control
0 100	200 3	00 400 SCALE (mm)	500 600	700