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**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **BH11**
Sheet 1 of 3
REFERENCE No **H12970**

PROJECT Boyne River Bridge Repalcement
LOCATION Pier 5, LHS COORDINATES 323433.1 E; 7159857.8 N
PROJECT No FG6482 SURFACE RL 114.05m PLUNGE 90° DATE STARTED 01/09/2017 GRID DATUM MGA Z56
JOB No 249/435/375550 HEIGHT DATUM AHD BEARING ° DATE COMPLETED 02/09/2017 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
0 - 1				A	SAND (Alluvium) Orange brown, medium to coarse grained, dry, loose. Trace fine to coarse grained gravel and cobbles. From 2.5m: Some sandy clay layers to 3m.	(SW)					2, 5, 5 N=10	SPT	
1 - 2				B		(SW)					2, 2, 1 N=3	SPT	
2 - 3				C	From 3m: With silt, medium dense.						4, 8, 9 N=17	SPT	
3 - 4	110.25			D	Sandy GRAVEL with Silt (Alluvium) Grey and brown grey, moist, medium dense. Fine to coarse grained gravel, medium to coarse grained sand, trace cobbles.	(GP-GM)					8, 9, 8 N=17	SPT	
4 - 5				E		(GP-GM)					9, 9, 8 N=17	SPT	
5 - 6				F							7, 6, 6 N=12	SPT	
6 - 7	107.35			G	Gravelly SAND with Silt (Alluvium) Grey and brown grey, moist, medium dense. Medium to coarse grained sand, fine grained gravel.	(SP-SM)					3, 9, 9 N=18	SPT	
7 - 8				H	8.0m: Becoming very dense.						6, 30/40	SPT	
8 - 9	105.35												
9 - 10	104.95		(0)		Clayey SAND (Residual) Light grey, some yellow brown mottling, very dense, fine to coarse grained sand.	(SW)					30/90	SPT	
10 - 11	104.05		(0)		SANDSTONE (Je1) XW: Pale grey and orange brown, medium to coarse grained		XW		EL- VL VC				
							XW		EL- VL VC				
							HW						

Continued on next sheet

REMARKS: Je1 - Evergreen Formation.

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M. Hayes	S. Foley



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GEOTECHNICAL BOREHOLE LOG

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BOREHOLE No **BH11**

Sheet 2 of 3

REFERENCE No **H12970**

PROJECT	Boyne River Bridge Repalcement				
LOCATION	Pier 5, LHS	COORDINATES 323433.1 E; 7159857.8 N			
PROJECT No	FG6482	SURFACE RL	114.05m	PLUNGE	90°
				DATE STARTED	01/09/2017
				GRID DATUM	MGA Z56
JOB No	249/435/375550	HEIGHT DATUM	AHD	BEARING	°
				DATE COMPLETED	02/09/2017
				DRILLER	NorthCoast Drilling

DEPTH (m)	R.L. (m)	FAUGER 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		EC		EW	
													VH	H	M	L	VL	EU
103.20						SANDSTONE (Je1) XW: Cont'd. With fine conglomerate clasts, extremely low to very low strength. Defects overprinted by pervasive weathering. -J: 45° Pl/Sm, FD, Cly -J: 65° Un/Sm, FD, Cly	HW XW				10.25m-10.85m: XW: Recovered as hard sandy clay. Yellow brown grey, fine grained sand.							
11			100 (100)			SANDSTONE (Je1) HW: Yellow brown and pale grey, medium to coarse grained, very low to low strength, weak bedding at 45°. -J 10°-20° (1-2/m), Pl/Sm, TI, Fe St, Cly Vr	HW				11.20m-11.25m: XW: 50mm clayey sand zone	Is(50)=0.47 MPa Is(50)=0.40 MPa D (11.65m) A (11.70m)						
101.05			100 (94)			SANDSTONE (Je1) MW: Pale grey and yellow brown, medium grained, medium bedded, medium to mainly high strength. Bedding dips at 30°-40°. -Js: 30°-45° (3-5/m), Pl/Un-Ro, TI, Fe St -Js: 10°-20° (1-2/m), Pl/Ro, TI, Fe St 14.5m to 15.0m: Bedding 80°	MW SW MW				12.30m-12.34m: XW	Is(50)=0.28 MPa Is(50)=1.10 MPa D (12.59m) A (12.66m)						
14			100 (81)				HW				13.90m-14.20m: HW-MW with some clayey sand bands. 13.95m-13.97m: XW	Is(50)=1.30 MPa Is(50)=0.54 MPa UCS=10.80 MPa D (13.32m) D (13.43m) D (13.66m) D (13.82m) A (13.93m)						
15			100 (86)				SW				14.50m-14.55m: XW	Is(50)=2.10 MPa Is(50)=2.10 MPa D (15.10m) A (15.14m)						
16							HW				15.33m-15.35m: XW 15.35m-15.40m: HW 15.50m-15.52m: HW 15.68m-15.70m: HW							
17	96.85						SW					Is(50)=1.20 MPa Is(50)=1.40 MPa D (16.22m) A (16.30m)						
18	96.10					SANDSTONE (Je1) HW: Yellow brown and grey, medium to coarse grained, very low to low strength.	MW				17.20m-17.22m: XW	Is(50)=0.25 MPa Is(50)=0.23 MPa D (17.12m) A (17.19m)						
19			100 (68)			SANDSTONE (Je1) SW: Yellow brown, medium to coarse grained, medium to thickly bedded, medium strength. -Js: 20°-30° (1-3/m), Pl/Ro, TI, Fe St or Cn	MW SW				19.00m-19.50m: Fine grained conglomerate interbedded, SW. 19.20m-19.40m: XW Sandy Clay	Is(50)=1.70 MPa Is(50)=2.70 MPa A (18.10m) D (18.12m)						
94.05							HW SW					UCS=9.16 MPa (19.13m) Is(50)=0.52 MPa Is(50)=0.73 MPa A (19.60m) D (19.63m)						
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REMARKS: Je1 - Evergreen Formation.

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M. Hayes	S. Foley



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GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No BH11
Sheet 3 of 3
REFERENCE No H12970

PROJECT	Boyne River Bridge Repalcement				
LOCATION	Pier 5, LHS	COORDINATES	323433.1 E; 7159857.8 N		
PROJECT No	FG6482	SURFACE RL	114.05m	PLUNGE	90°
		DATE STARTED	01/09/2017	GRID DATUM	MGA Z56
JOB No	249/435/375550	HEIGHT DATUM	AHD	BEARING	°
		DATE COMPLETED	02/09/2017	DRILLER	NorthCoast Drilling

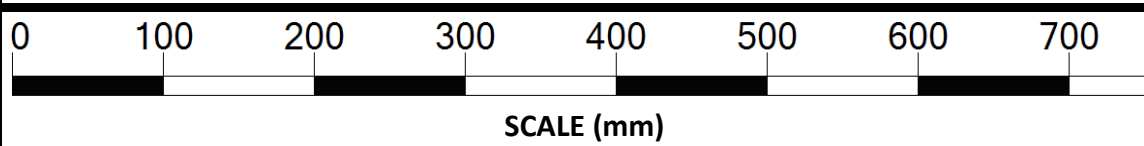
DEPTH (m)	R.L. (m)	AUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
93.80					SANDSTONE (Je1)	SW	M	M			
93.45					SW: Cont'd.	HW	VL	VC			
21			100 (93)		HW: Yellow brown, medium to coarse grained, very low strength. -Js: 5°-20° (10-20/m), Pl/Sm, Tl, Fe \$t	SW	H	M	20.95m-20.98m: HW	Is(50)=1.80 MPa Is(50)=1.30 MPa	D (20.84m) A (20.89m)
22					SANDSTONE (Je1) SW: Light grey, medium to coarse grained, medium bedded at 45°, medium to high strength. -J: 30° (2-3/m), Pl/Ro, Tl, Cn -BP: 30°-45° (3/m), Pl/Sm, Tl, Cn	MW	MH	M		Is(50)=0.99 MPa Is(50)=0.88 MPa	D (22.20m) A (22.28m)
23						SW	M	M		Is(50)=0.41 MPa Is(50)=0.13 MPa	D (23.10m) A (23.16m)
24	90.15		100		Borehole completed at 23.90m		MH			Is(50)=1.00 MPa Is(50)=0.82 MPa	D (23.81m) A (23.89m)
25											
26											
27											
28											
29											

REMARKS: Je1 - Evergreen Formation.	LOGGED BY	REVIEWED BY
	M. Hayes	S. Foley

CORE PHOTO LOG
 DEPARTMENT OF TRANSPORT AND MAIN ROADS
 GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	02/09/17
Borehole No.	BH11	Reference No.	H12970
Location	Pier 5, LHS	Start Depth (m)	9.10
Submitted By	M. de Gee	Finish Depth (m)	23.90
Remarks			



CORE PHOTO LOG
 DEPARTMENT OF TRANSPORT AND MAIN ROADS
 GEOTECHNICAL SECTION



Project Name	Boyne River Bridge Replacement		
Project No.	FG6482	Date	02/09/17
Borehole No.	BH11	Reference No.	H12970
Location	Pier 5, LHS	Start Depth (m)	9.10
Submitted By	M. de Gee	Finish Depth (m)	23.90
Remarks			

