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Queensland Government

GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BH07 BOREHOLE No

Sheet 1 of 4 FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 H12968 REFERENCE No PROJECT Boyne River Bridge Repalcement COORDINATES 323458.0 E; 7159891.2 N Pier 3, LHS LOCATION DATE STARTED 01/09/2017 GRID DATUM MGA Z56 FG6482 SURFACE RL 114.35m PLUNGE 90° PROJECT No DRILLER NorthCoast Drilling 249/435/375550 DATE COMPLETED 02/09/2017 JOB No HEIGHT DATUM AHD BEARING ° USCS WEATHERING ADDITIONAL DATA AND TEST RESULTS INTACT STRENGTH DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY SAMPLE DEPTH (RΙ MATERIAL DESCRIPTION CORE REC % Sandy GRAVEL (Fill) (GP) Brown, dry, very loose to loose. 113.85 Fine to coarse grained gravel, sub kounded. Trace cobbles. Sandy GRAVEL (Alluvium) Brown, moist, very loose. Fine to medium grained gravel, sub SPT rounded. Medium to coarse grained sand. Trace cobbles. 2, 1, hv SPT 3.0m: Becoming loose. SPT (GP) D SPT SPT 5, 5, 14 6.0m: Becoming medium dense. SPT 2. 1. 3 107.15 SPT Silty CLAY (Alluvium) (CI) Grey brown, wet, soft. DIST 106.65 Sandy GRAVEL (Alluvium) Grey brown, wet, medium dense to 15, 16, 14 dense. SPT Fine to medium grained gravel, sub angular to sub rounded. Medium to coarse grained sand. Trace cobbles, (GW 15, 11, 10 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

Queensland Government

GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BOREHOLE No BH07

Sheet 2 of 4

FOR GEOTECHNICAL TERMS AND H12968 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 PROJECT Boyne River Bridge Repalcement COORDINATES 323458.0 E; 7159891.2 N Pier 3, LHS LOCATION FG6482 SURFACE RL 114.35m PLUNGE 90° DATE STARTED 01/09/2017 $\mathsf{GRID}\,\mathsf{DATUM}\,\,\mathsf{MGA}\,\mathsf{Z56}$ PROJECT No DRILLER NorthCoast Drilling 249/435/375550 DATE COMPLETED 02/09/2017 JOB No HEIGHT DATUM AHD BEARING RQD USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING Ê LITHOLOGY AND TEST RESULTS SAMPLES TESTS ()% STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION CORE REC % ᇳᆃᆂᄝᅿᆿᇜᇬᇬᄝᇂᇂᇕ Sandy GRAVEL (Alluvium) Cont'd. Becoming very dense. (GW 10.46m-11.80m: HFZ 103.75 (64) SANDSTONE (Je1) HW: Pale grey and brown, fine to medium grained, medium bedded, Is(50)=0.15 MPa D (11.12m) low strength. With highly fractured Is(50)=0.19 MPa A (11.13m)-BP: 0°-15° (2-3/m), PI/Ro, OP-TI, Vr and Clayey Sand Ct. Js: 45°-75° (2/m), Pl-Un/Ro, OP-CD, Vr-Clay Ct. = 12.45m-12.47m: CZ = 12.57m-12.60m: BZ HW D (12.73m) 12.85m-13.00m: BZ Is(50)=0.14 MPa A (12.74m)-100 13.04m-13.10m: XWZ (17) □ 13.38m-13.44m; CZ 13.50m-13.75m: BZ (86) Is(50)=0.16 MPa Is(50)=0.13 MPa D (14.70m) MW A (14.72m)-15 100 HW 15.20m-15.33m: HFZ XW HW 15.46m-15.80m: HFZ XW 98.66 SILTSTONE (Je1) (0) __ 15.90m-15.98m: HFZ MW: Pale grey minor brown, fine 16 HW grained, medium bedded, mainly 16.18m-16.20m: XW 16.20m-16.30m: BZ 100 low strength. (46) Is(50)=0.26 MPa D (16.37m) 16.25m-16.30m: XW With interbeds of fine to medium Is(50)=0.20 MPa A (16.38m) MW grained sandstone, <150mm. Is(50)=0.25 MPa D (16.78m)-Frequent HW zones. ¬ 16.84m-16.90m: HFZ Is(50)=0.19 MPa A (16.79m) BP: 5°-15° (1-3/m), Un/Ro, OP-TI, HW ∃ 17.12m-17.17m: CZ 17.14m-17.18m: XW Vr-Cly Ct. Js: 30°-45° (1/m), PI/Ro, OP, St-Vr. Js: 55°-70° (1/m), PI-Stp/Ro, OP-CD, MW Is(50)=0.15 MPa D (17.63m) St-Vr. Is(50)=0.33 MPa A (17.64m) 17.90m-18.25m; BZ XW 100 (55)Is(50)=0.17 MPa D (18.32m) Is(50)=0.09 MPa MW A (18.33m)-7 18.85m-19.00m: HFZ 19 HW MW HW (19.81m) -MW 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

Queensland Government

GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BOREHOLE No BH07

Sheet 3 of 4

FOR GEOTECHNICAL TERMS AND H12968 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 PROJECT Boyne River Bridge Repalcement COORDINATES 323458.0 E; 7159891.2 N Pier 3, LHS LOCATION FG6482 SURFACE RL 114.35m PLUNGE 90° DATE STARTED 01/09/2017 $\mathsf{GRID}\,\mathsf{DATUM}\,\,\mathsf{MGA}\,\mathsf{Z56}$ PROJECT No 249/435/375550 DATE COMPLETED 02/09/2017 DRILLER NorthCoast Drilling JOB No HEIGHT DATUM AHD BEARING RQD USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY AND TEST RESULTS ()% STRENGTH DEPTH (RΙ SAMP MATERIAL DESCRIPTION CORE REC % ᇳᆃᆂᄝᅿᆿᇜᇬᇬᄝᇂᇂᇕ MW SILTSTONE (Je1) Is(50)=0.39 MPa Is(50)=0.44 MPa 20.10m-20.20m: BZ D (20.04m) MW: Cont'd. A (20.05m)-□ 20.52m-20.57m: HFZ D (20.70m)_ Is(50)=0.08 MPa 20.74m-20.80m: HFZ Is(50)=0.16 MPa A (20.71m)-20.90m-21.20m: HFZ MW (15) 21.75m-21.85m: HW BZ 100 (14)22 22.28m-22.37m: CZ 22.40m-22.60m: BZ HW 100 (58) Is(50)=1.20 MPa Is(50)=0.42 MPa D (22.73m) A (22.75m)-23 D (23.07m)-MW Is(50)=0.77 MPa Is(50)=0.50 MPa A (23.08m)_ HW 23.72m-23.86m: XW XW VL С MW 24.17m-24.25m: HW 90.10 100 24.19m-24.25m: HFZ 24.38m-24.45m: XW HW CONGLOMERATE (Je1) MW: Pale grey minor brown, fine to MW 89.62 medium gravel, clay matrix, medium MW to high strength. 24.85m-25.05m: HFZ LM HW 25 : 10° Pl/Ro, OP, Cn. Is(50)=0.35 MPa D (25.15m)_ 100 J: 90° Un/Ro, OP, Cn. Is(50)=0.07 MPa (49) A (25.25m) SANDSTONE (Je1) MW: Grey pale brown, fine to Is(50)=0.74 MPa D (25.75m)_ medium grained, medium to thickly Is(50)=1.20 MPa A (25.78m) bedded, medium strength. 26 BP: 0°-10 (3-4/m), PI/Ro, OP, Vn-Ct. Js: 30°-40° (1/m), Pl/Ro, OP, CN. J: 80° (1/5m), Pl/Ro, OP, CN. 26.70m-26.80m: HFZ MW Is(50)=0.65 MPa D (26.90m) 27 Is(50)=0.59 MPa A (26.92m)-100 Is(50)=0.21 MPa D (27.30m) (97) Is(50)=0.31 MPa A (27.31m) UCS=2.35 MPa (27.47m) _ Is(50)=0.80 MPa D (28.26m)-Is(50)=1.10 MPa A (28.27m) 29 SW D (29.55m)_ Is(50)=0.64 MPa A (29.60m) 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

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GEOTECHNICAL BOREHOLE LOG

FINAL 02/11/2017

BOREHOLE No BH07

12 25	Queensland BOREHOLE LOG			Sheet 4 of 4						
ATTOMA AT	Gove	ernment	SY		GEOTECHNICAL T REFER FORM F:G			REFERENCE No	H1	12968
PROJECT	Boyne River Bri	dge Repalcement								
LOCATION	Pier 3, LHS							COORDINATES 323458.0	E; 715989	91.2 N
PROJECT No	FG6482	SURFACE RL 114.35m	PLU	JNGE 9	90°	DATE STAF	RTED 01/09/201	7 GRID DATUM M	IGA Z56	
JOB No	249/435/37555	60 HEIGHT DATUM AHD	BEA	RING_		DATE COMPLE	ETED 02/09/201	7 DRILLER N	IorthCoas	t Drilling
DEPTH (m)	RODE DAILUNG CORE DAILUNG CORE CORE SAMPLE SAMPLE	MATERIAL DESCRIPTION	ПТНОГОСУ	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
31 31 32 33 80.95 34 35 36 36 37 37 37 37 38 38 38 38 38 38 38 38 38 38 38 38 38	100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100	SANDSTONE (Je1) MW: Cont'd. Borehole completed at 33.40m		sw	世 ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・			Is(5)	0)=0.39 MPa 0)=0.34 MPa 0)=0.57 MPa 0)=0.57 MPa 0)=0.39 MPa 0)=0.48 MPa 0)=0.41 MPa 0)=0.41 MPa 0)=0.41 MPa	D (30.58m)— A (30.59m)— D (31.43m)— A (31.44m)— D (32.05m)— A (32.06m)— D (32.60m)— A (32.61m)— D (33.35m)— A (33.36m)— ———————————————————————————————————
REMARK	(S: Je1 - Ever	green Formation.						LOGGED BY	REVIE	WED BY
								M. de Gee	S. I	Foley

CORE PHOTO LOGDEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Droin at Name	Dayma Divar Dridge Daylessans		
Project Name	Boyne River Bridge Replacement FG6482	Date	01/09/2017
Project No. Borehole No.	BH07	Reference No.	H12968
Location			10.60
	Pier 3, LHS M. de Gee	Start Depth (m)	33.40
Submitted By Remarks	M. de Gee	Finish Depth (m)	33.40
		CORE LID mm	THE GOD
0 100	200 300 400	500 600	700
	SCALE (mm)		

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CORE PHOTO LOGDEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



D I			
Project Name	Boyne River Bridge Replacement	I p	04/00/00:5
Project No.	FG6482	Date	01/09/2017
Borehole No.	BH07	Reference No.	H12968
Location	Pier 3, LHS	Start Depth (m)	10.60
Submitted By	M. de Gee	Finish Depth (m)	33.40
Remarks			
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100	200 300 400	300 000	700
	SCALE (mm)		

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CORE PHOTO LOGDEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Duois et Nieur	Davina Divar Dridge Davidson		
Project Name	Boyne River Bridge Replacement	Doto	04/00/2047
Project No.	FG6482	Date Deference No.	01/09/2017
Borehole No.	BH07	Reference No.	H12968
Location	Pier 3, LHS	Start Depth (m)	10.60
Submitted By	M. de Gee	Finish Depth (m)	33.40
Remarks			
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4,			
	E.O.B.H.O.	7 AT 33.40)m
0 100	200 300 400 SCALE (mm)	500 600	700

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