FINAL 02/03/2018

Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **CRR738**

Sheet 1 of 1

REFERENCE No **H12964**

PROJECT Cross River Rail CRR2017 - Additional Geotechnical Investigation

LOCATION QR land (Mayne Yard) COORDINATES 503886.4 E; 6964918.2 N

PROJECT No FG6470 SURFACE RL 4.14m PLUNGE 90° DATE STARTED 27/10/2017 GRID DATUM MGA94

JOB No HEIGHT DATUM AHD BEARING ° DATE COMPLETED 27/10/2017 DRILLER Geodrill

DEPTH (m)	R.L. (m)	RQD ( ) % / CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USCS WEATHERING	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
						0.00m-1.00m: Non destructive drilling.	
1	3.14			FILL			
			A	Gravelly CLAY with Sand (Fill) Brown, moist, soft. Medium plasticity. Fine to medium grained gravel, angular. Fine to coarse grained sand, angular.	(CI)	1, 2, 3 N=5	SPT
2	2.14			GRAVEL (Fill) Brown and Black, wet, loose. Fine to medium grained, angular.			
3			B			4, 4, 4 N=7	SPT
4					(GP)		
			C			17, 2, 2 N=4	SPT
5							
6	-1.86		D	CLAY with Sand (Alluvium) Dark grey, wet, soft. High plasticity.	CH	LL=59% PI= 39% LS= 16% <75µm= 79%	U50
	-2.26			SAND (Alluvium) Dark grey, wet, loose. Fine to coarse grained, angular	(SP)		
7	-3.06			Clayey SAND (Residual) Pale grey and white, moist, very dense. Fine to coarse grained, angular. Medium to high plasticity clay.	(SC)	30/110mm hb	SPT
8	-4.26		E				
		(52.5)		TUFF (Rif) MW: Pale brown-grey, fine to medium clasts in a fine grained matrix, massive, very high strength. -Js: 10°-20° (6/m) Pl/Ro, OP, Fe St.	MW	8.40m-8.70m: HFZ	
9						Is(50)=6.50 MPa Is(50)=4.30 MPa UCS=61.50 MPa E=31.2 GPa v= 0.17 Is(50)=7.70 MPa Is(50)=4.70 MPa Is(50)=4.60 MPa Is(50)=3.30 MPa Is(50)=0.17 MPa Is(50)=0.65 MPa	D (8.80m) A (8.81m) (8.95m) D (9.08m) A (9.09m) D (9.20m) A (9.21m) D (9.69m) A (9.70m)
	-5.86	100			HW	9.80m-10.00m: HFZ	

Borehole completed at 10.00m

REMARKS: Rif - Brisbane Tuff

LOGGED BY	REVIEWED BY
SB	S. Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

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STANDPIPE INSTALLATION LOG

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

BOREHOLE No **CRR738**

Sheet 1 of 1

PIEZOMETER No **CRR738**

PROJECT Cross River Rail CRR2017 - Additional Geotechnical Investigation

LOCATION QR land (Mayne Yard) COORDINATES 503886.4 E; 6964918.2 N

PROJECT No FG6470 SURFACE RL 4.14m PLUNGE 90° DATE STARTED 27/10/2017 GRID DATUM MGA94

JOB No HEIGHT DATUM AHD BEARING ° DATE COMPLETED 27/10/2017 DRILLER Geodrill

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION
	3.14		FILL
1			Gravelly CLAY with Sand(Fill) Brown, moist, soft. Medium plasticity. Fine to medium grained gravel, angular. Fine to coarse grained sand, angular.
	2.14		GRAVEL(Fill) Brown and Black, wet, loose. Fine to medium grained, angular.
2			
3			
4			
5			
6	-1.86		CLAY with Sand(Alluvium) Dark grey, wet, soft. High plasticity.
	-2.26		SAND(Alluvium) Dark grey, wet, loose. Fine to coarse grained, angular
7	-3.06		Clayey SAND(Residual) Pale grey and white, moist, very dense. Fine to coarse grained, angular. Medium to high plasticity clay.
8	-4.26		TUFF Pale brown-grey, fine to medium clasts in a fine grained matrix, massive, very high strength. -Js: 10°-20° (6/m) Pl/Ro, OP, Fe St.
9	-5.86		

Borehole completed at 10.00m

Standpipe Construction Details

Depth (m) /RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill Details
3.00m / 1.14 AHD		Grout: Cement / Bentonite mix
4.00m / 0.14 AHD		Bentonite Seal Top of Slotted Pipe
10.00m / -5.86 AHD		Filter: Washed / Graded Sand

REMARKS: Rif - Brisbane Tuff

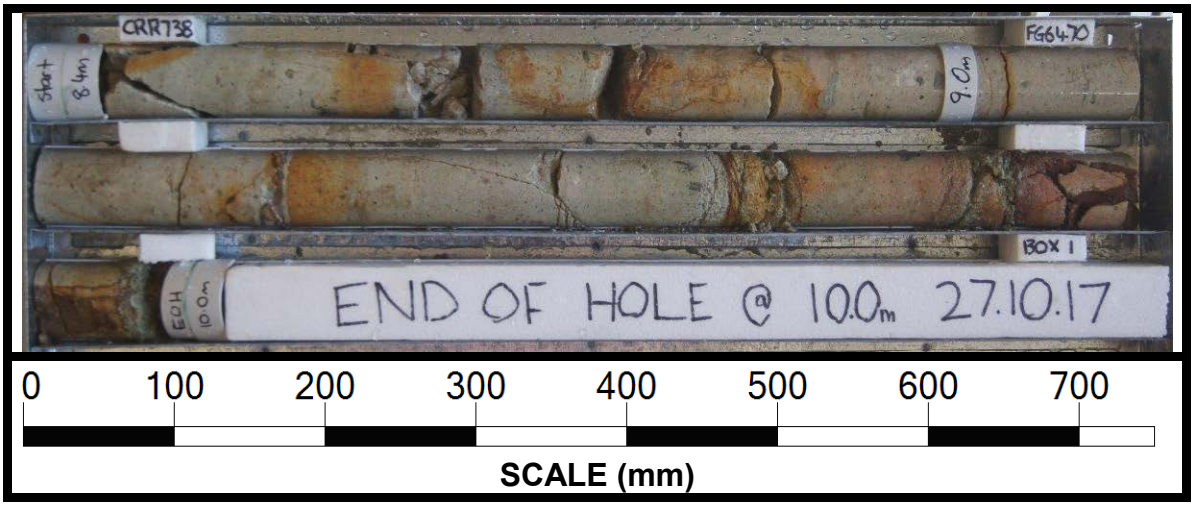
LOGGED BY	REVIEWED BY
SB	S. Foley

TMR STANDPIPE INSTALLATION LOG - CREATED WITH HOLEBASE SI

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Queensland Government

Project Name	**Cross River Rail CRR2017 – Geotechnical Investigation**		
Project No.	FG6470	Date	27/10/2017
Borehole No.	CRR738	Reference No.	H12964
Location	QR land (Mayne Yard)	Start Depth (m)	8.40
Submitted By	M. de Gee	Finish Depth (m)	10.00



Detailed Discontinuity Description Log

Queensland Government

This form is intended for the detailed description of discontinuities and defects as measured in outcrop by line mapping, or as they occur downhole in drilled rock core. The descriptions and abbreviations used shall be in accordance with Australian Standard AS1726-1993 Geotechnical site investigations and TMR Geotechnical Terms and Symbols Form F:GEOT017/8.

Project Name	**Cross River Rail**	**Project No.**	**FG6470**		
Site ID / Borehole No.	**CRR738**	**Surface RL**	**13.85**		
Geologist	**S.B.**	**Date**	**27/10/2017**		
		Page	**1**	**of**	**1**

Traverse Chainage; or Down hole depth (rock core)	Type LP / BP / FP / J etc.	Dip ° / Dip Direction °; or Angle ° from horizontal (rock core)	Planarity Stp / Un / Pl	Roughness Ro / Sm / Sl	Roughness Class I to IX	Aperture CD / OP / FL / Tl	Infilling Cn / St / Vr / Ct [1]	Zones [1] SZ / CZ / HFZ / AZ	Other
8.47	J	60	Un	Ro	IV	OP	Cn		Int
8.47	J	60	Un	Ro	IV	OP	Cn		Int
8.53	J	0	Un	Ro	IV	OP	Cn		
8.47-8.69	J	80	Un	Ro	IV	OP	Cn		Half int
8.61	J	0	Pl	Ro	VII	OP	Cn		Half int
8.65-8.69								HFZ	
8.77-8.79	J	30	Un	Ro	IV	OP	Cn		
8.89	J	15	Un	Ro	IV	OP	Cn		
9.05	J	0	Un	Ro	IV	OP	St		
9.23	J	15	Un	Ro	IV	OP	Cn		
9.30	J	0	Un			CD	Ct		Clay (5mm)
9.38-9.50	J	60	Un	Ro	IV	CD/OP	Cn		
9.48	J	0	Un	Ro	IV	OP	Cn		Int
9.59-9.64									Clayey sand
9.76	J	30	Un	Ro	IV	OP	Ct	CZ	
9.79	J	30	Un	Ro	IV	OP	Ct	CZ	
9.82	J	30	Stp	Ro	I	OP	St		
9.76-9.92	J	70	Pl	Ro	VII	OP	St		
9.89	J	30	Un	Ro	IV	OP	Cn		
9.92-10.00									Clayey sand

Note: 1. Describe zones and coatings in terms of composition and thickness (mm)