FINAL 02/03/2018

Queensland Government

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **CRR735**

Sheet 1 of 2

REFERENCE No **H12961**

PROJECT Cross River Rail CRR2017 - Additional Geotechnical Investigation

LOCATION QR land (Mayne Yard) COORDINATES 503751.1 E; 6964658.8 N

PROJECT No FG6470 SURFACE RL 4.46m PLUNGE 90° DATE STARTED 26/10/2017 GRID DATUM MGA94

JOB No HEIGHT DATUM AHD BEARING ° DATE COMPLETED 26/01/2017 DRILLER Geodrill

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					COBBLES with Gravel and Sandy Clay (Fill)					0.30m-1.50m: Auger sample between taken between Non Destructive Drilling Trenches.	MC=18.4%
1	3.46				Sandy CLAY (Fill) Pale brown, moist, firm. Fine to medium grained sand, sub angular. Medium plasticity.		(CI)			0.90m: CBR=15	BULK
	2.76			A	CLAY (Fill) Dark brown, moist, firm. High plasticity.		(CH)				3, 2, 2 N=4 SPT
2	2.26				Clayey SAND (Residual) Orange brown, moist, very dense. Fine to coarse grained sand, sub angular. Medium plasticity clay.		(SC)				
	1.96		(85)		TUFF (Rif) SW: Brown and pale brown-grey, fine to medium grained gravel sized clasts within fine grained matrix, massive, high to very high strength. -Js: 0°-5° (6-8/m), Un/Ro, OP, Cn-St		HW	L VC			
3							SW	M	M	Is(50)=0.90 MPa Is(50)=0.65 MPa	D (3.10m) A (3.12m)
							HW			3.74m-3.76m: XW	
4							MW				
							SW	H	C		
							HW			4.32m-4.36m: XW	
5			100 (91)				SW	H	M	Is(50)=0.14 MPa Is(50)=0.86 MPa UCS=31.50 MPa E=2.47 GPa v= 0.126 Is(50)=0.67 MPa Is(50)=2.30 MPa	D (4.40m) A (4.41m) (4.55m) D (4.92m) A (4.93m)
							MW				
6								H-VH	M	Is(50)=5.10 MPa Is(50)=6.30 MPa	D (5.92m) A (5.93m)
										6.31m-6.33m: XW	
7										Is(50)=4.10 MPa Is(50)=0.59 MPa	D (6.41m) A (6.42m)
8			100 (92)		From 7.8m: Becoming mainly grey, high to very high strength.		SW	H-VH	M	Is(50)=0.37 MPa Is(50)=3.20 MPa UCS=60.40 MPa E=11.4 GPa v= 0.063 Is(50)=3.80 MPa Is(50)=0.44 MPa	D (8.05m) A (8.07m) (8.23m) D (8.37m) A (8.38m)
9											
	-5.54									Is(50)=2.20 MPa Is(50)=2.20 MPa	D (9.85m) A (9.86m)

Continued on next sheet

REMARKS: Rif - Brisbane Tuff

LOGGED BY	REVIEWED BY
SB	S. Foley

Queensland Government

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11			100		TUFF (Rif) SW: Cont'd.		SW	H-VH		Is(50)=1.80 MPa Is(50)=3.50 MPa	D (11.08m) A (11.09m)
			(70) 100								
	-7.54		(93) 100							Is(50)=3.40 MPa Is(50)=3.30 MPa	D (11.90m) A (11.91m)
12					Borehole completed at 12.00m						
13											
14											
15											
16											
17											
18											
19											

REMARKS: Rif - Brisbane Tuff

LOGGED BY	REVIEWED BY
SB	S. Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

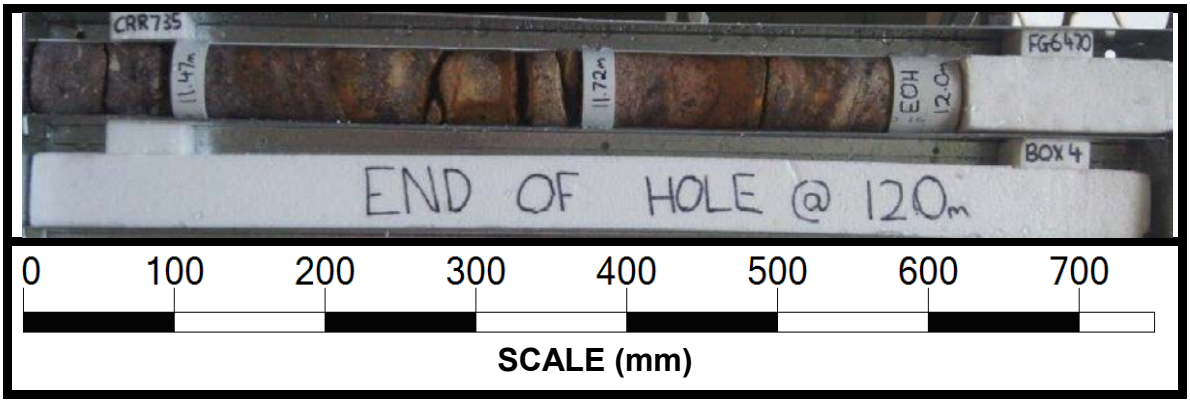
Queensland Government

Project Name	**Cross River Rail CRR2017 – Geotechnical Investigation**		
Project No.	FG6470	Date	26/10/2017
Borehole No.	CRR735	Reference No.	H12961
Location	QR land (Mayne Yard)	Start Depth (m)	2.50
Submitted By	M. de Gee	Finish Depth (m)	12.00

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	26/10/2017
Borehole No.	CRR735	Reference No.	H12961
Location	QR land (Mayne Yard)	Start Depth (m)	2.50
Submitted By	M. de Gee	Finish Depth (m)	12.00



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.	**CRR735**	**Surface RL**	**4.46**		
Geologist	**S.B.**	**Date**	**26/10/2017**		
		Page	**1**	**of**	**3**

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
2.56	J	0-10	Un	Ro	IV	OP	St		
2.61	J	0-10	Un	Ro	IV	OP	St		
2.64	J	0-10	Un	Ro	IV	OP	St		
2.66	J	0-10	Un	Ro	IV	OP	St		
2.97	J	5	Un	Ro	IV	OP	St		
3.31	J	0-10	Un	Ro	IV	OP	St		
3.45	J	5	Un	Ro	IV	CD	St		
3.71	J	0-10	Un	Ro	IV	OP	St		
3.72	J	0-10	Un	Ro	IV	OP	St		
3.74	J	0-10	Un	Ro	IV	OP	St		
3.76-3.78								CZ	
3.81	J	0-10	Un	Ro	IV	OP	Cn		
3.82	J	0-10	Un	Ro	IV	OP	Cn		
3.93	J	10	Un	Ro	IV	OP	Cn		
4.12	J	0-10				CD	St		
4.135	J	0-10	Un	Ro	IV	OP			
4.16	J	0-10	Un			CD			
4.18-4.20	J	0-10	Un	Ro	IV	CD	Ct	CZ	
4.33-4.38	J	0-10	Un	Ro	IV	OP	St		
4.84-4.85	J	0-10	Un	Ro	IV	OP	St		
5.04	J	0-10	Un	Ro	IV	CD	St		
5.07	J	0-10	Un	Ro	IV	OP	St		
5.555	J	0-10	Un	Ro	IV	OP	St		
5.56	J	0-10	Un	Ro	IV	OP	St		
5.61	J	15	Un	Ro	IV	OP	Cn		
5.63	J	0-10	Un	Ro	IV	OP	Cn		
5.82	J	10	Un	Ro	IV	OP	St		
6.13	J	20	Un	Ro	IV	OP	Cn		
6.18	J	15	Un	Ro	IV	OP	Cn		
6.53	J	30	Un	Ro	IV	OP	Cn		

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

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Geologist	**S.B.**	**Date**	**26/10/2017**		
		Page	**2**	**of**	**3**

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
6.71	J	25	Un	Ro	IV	OP	Cn		
6.82	J	30	Un	Ro	IV	OP	Cn		
6.93	J	15	Un	Ro	IV	OP	Cn		
7.40	J	0-10	Un	Ro	IV	OP	Cn		
7.48	J	30	Un	Ro	IV	OP	Ct		
7.50	J	30	Un	Ro	IV	OP	Cn		
7.60	J	0-10	Un	Ro	IV	OP	St		
7.65	J	0-10	Un	Ro	IV	OP	St		
8.10	J	5	Un	Ro	IV	OP	St		
8.33	Hardness test break								
8.43-8.53								HFZ	
8.65	J	5	Un	Ro	IV	OP	Cn		
8.76	J	45	Un	Ro	IV	OP	Cn		
8.84	DI								
9.18	J	30	Un	Ro	IV	OP	St		
9.21	J	15	Un	Ro	IV	OP	St		
9.24	J	15	Un	Ro	IV	OP	St		
9.78	J	30	Un	Ro	IV	OP	St		
9.80	J	15	Un	Ro	IV	OP	St		
10.05	J	45	Un	Ro	IV	OP	St		
10.39	J	20	Un	Ro	IV	OP	Cn		
10.82	J	15	Un			CD			
10.85	J	30	Un			CD			
10.88	J	15	Un	Ro	IV	OP	St		
10.90	J	15	Un	Ro	IV	OP	St		
11.30	J	20	Un	Ro	IV	OP	Cn		
11.44	J	15	Un	Ro	IV	OP	Cn		
11.65	J	30	Un	Ro	IV	OP	Cn		
11.70	J	0-10	Un	Ro	IV	OP	Cn		
11.72	DI								

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

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						Page	**3**	**of**	**3**
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11.87	J	0-10	Un	Ro	IV	OP	Cn		

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