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**Queensland
Government**

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **CRR727**

Sheet 1 of 2

REFERENCE No **H12953**

PROJECT **Cross River Rail CRR2017 - Additional Geotechnical Investigation**

LOCATION **QR Land / Portal (Northern)**

COORDINATES **502056.0 E; 6962898.2 N**

PROJECT No **FG6470**

SURFACE RL **24.50m**

PLUNGE **90°**

DATE STARTED **06/09/2017**

GRID DATUM **MGA94**

JOB No

HEIGHT DATUM **AHD**

BEARING °

DATE COMPLETED **06/09/2017**

DRILLER **Geodrill**

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
1	23.23			A	COBBLES with Gravel and Sandy Clay (Fill)					0.00m-1.10m: Non destructive drilling	
2				B	ARGILLITE (DCf) XW: Recovered as Silty Sandy GRAVEL, orange brown, moist, medium dense. With clay.						3, 4, 7 N=11 LL=39% PI= 16% MC=12.8% LS= 8% <75µm= 32%
3					From 2.7m: Becoming very dense. Trace clay. Some quartz gravel	XW					6, 15, 15/80mm hb LL=41% PI= 24% MC=5.7% LS= 10% <75µm= 15%
4	20.10			C							hb
5			(19)		ARGILLITE (DCf) HW: Grey, fine grained, foliated, medium strength. With frequent quartz bands parallel to foliation, up to 5mm thick. -FP: 35°-50° (4-5/m), Pl-Un/Ro, OP-CD, FeSt and Vr-Ct	HW				4.61m-4.66m: CZ 4.76m-4.77m: Qtz Vn 4.85m-4.90m: CZ 4.96m-4.98m: Cly seam 5.03m-5.07m: CZ	Is(50)=0.59 MPa Is(50)=0.71 MPa
6	18.57		100 (50)		-Js: 35°-80° (1-2/m), Pl-Stp/Ro, OP, FeSt and Ct					5.37m: CAI=1.84 5.45m-5.48m: XW	Is(50)=0.20 MPa Is(50)=0.38 MPa
7			100 (53)		ARGILLITE (DCf) MW: Grey, fine grained, foliated, medium to high strength. With frequent quartz bands parallel to foliation, up to 5mm thick. -FP: 35°-50° (4-5/m), Pl-Un/Ro, OP-CD, FeSt and Vr-Ct -Js: 35°-80° (1-2/m), Pl-Stp/Ro, OP, FeSt and Ct	MW				5.71m-5.78m: HFZ with Cly seam 5.85m-5.90m: HFZ	Is(50)=0.35 MPa Is(50)=1.60 MPa
8	16.33					HW				6.94m-6.96m: Qtz Vn 7.03m-7.05m: Qtz Vn	Is(50)=0.43 MPa Is(50)=1.70 MPa
9			100 (56)		ARGILLITE (DCf) SW: Grey, fine grained, foliated, generally high strength. With frequent quartz bands parallel to foliation, up to 5mm thick. -FP: 35°-50° (4-5/m), Pl-Un/Ro, OP-CD, Vr-Ct and FeSt -Js: 35°-80° (1-2/m), Pl-Stp/Ro, OP, FeSt-Ct	SW				7.71m-7.86m: BZ 8.10m-8.13m: CZ	Is(50)=0.81 MPa Is(50)=0.30 MPa
	14.50					MW					Is(50)=0.58 MPa Is(50)=0.33 MPa
						SW					Is(50)=0.52 MPa Is(50)=1.10 MPa
											UCS=16.00 MPa E=33.8 GPa v= 0.05

Continued on next sheet

REMARKS: DCf - Neranleigh Fernvale Beds

LOGGED BY

REVIEWED BY

GP

S. Foley



GEOTECHNICAL
BOREHOLE LOG

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

BOREHOLE No **CRR727**

Sheet 2 of 2

REFERENCE No **H12953**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation								
LOCATION	QR Land / Portal (Northern)				COORDINATES 502056.0 E; 6962898.2 N				
PROJECT No	FG6470	SURFACE RL	24.50m	PLUNGE	90°	DATE STARTED	06/09/2017	GRID DATUM	MGA94
JOB No		HEIGHT DATUM	AHD	BEARING	°	DATE COMPLETED	06/09/2017	DRILLER	Geodrill

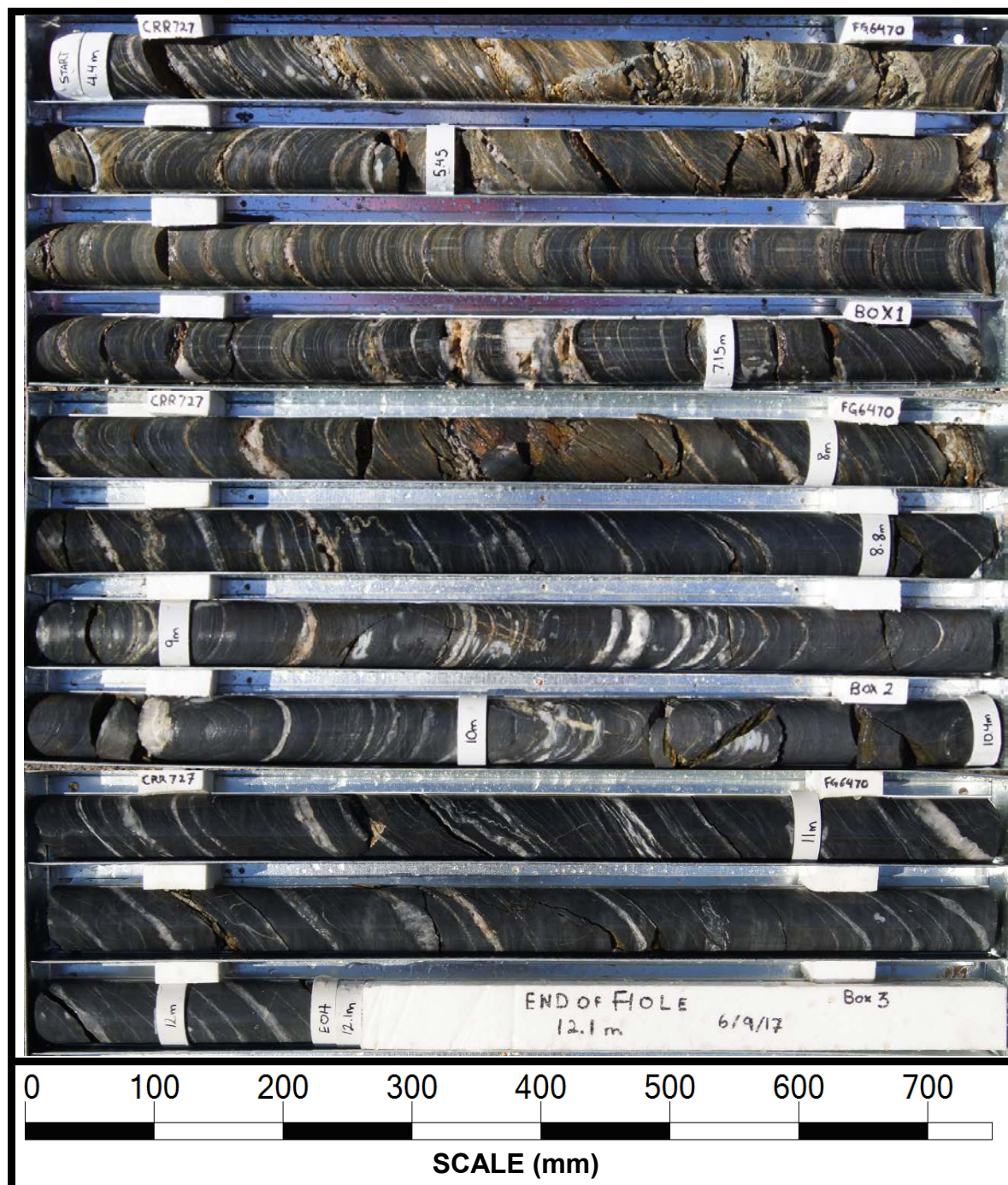
DEPTH (m)	R.L. (m)	AUGER CASING WASHBORING CORE DRILLING	RQD (%) CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH											DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J	VL	EL	EC	VC	C	M	W	VW		
			100 (76)		ARGILLITE (DCf) SW: Cont'd.		SW	<														

REMARKS: DCf - Neranleigh Fernvale Beds	LOGGED BY	REVIEWED BY
	GP	S. Foley

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	06/09/2017
Borehole No.	CRR727	Reference No.	H12953
Location	QR land / Portal	Start Depth (m)	4.40
Submitted By	M. de Gee	Finish Depth (m)	12.10



Detailed Discontinuity Description Log

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.		CRR727				Surface RL		24.5	
Geologist		G.P.				Date		6/09/2017	
						Page		1	of
									2
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 / TI	Infilling Cn / St / Vr / Ct ¹	Zones ¹ SZ / CZ / HFZ / AZ	Other
4.50	FP	60	Pl	Ro	VII	OP	St		
4.54	FP	60	Pl	Ro	VII	OP	St		
4.60	FP	60	Pl	Ro	VII	CD	Cn		
4.61-4.65	FP	60-80	Stp	Ro	I	FL	Vr		Qz
4.75	FP	70	Un	Ro	VI	OP	St		
4.81-5.11	FP	0-60	St	Ro	I	FL	St		Cly
5.20	FP	60	Pl	Ro	VII	OP	Cn		
5.23	FP	60	Pl	Ro	VII	OP	Cn		
5.30	FP	80	Un	Ro	VI	CD	Cw		
5.42	J	0	Un	Ro	VI	OP	St		
5.49	FP	60	Stp	Ro	I	FL	Vr		Qz VN
5.59	FP	60	Pl	Ro	VII	OP	St		
5.65	FP	60	Un	Ro	VI	OP	St		
5.70	J	10	Un	Ro	VI	OP	Cn		
5.70-5.80	FP	20-80	Stp	Ro	I	FL	Vr	CZ	Qz VN
5.87-5.90	J	0	Pl	Ro	VII	FL	Vr		Qz VN
5.92	FP	50	Pl	Ro	VII	OP	St		
5.92-6.76	FPs	50	Pl	Ro	VII	OP	Cn	0.1m spacings	
6.76	J	10	Stp	Ro	I	OP	St		
6.88	FP	60	Pl	Sm	VIII	OP	Cn		
6.98	FP	80	St	Ro	I	FL	Vr		Qz VN
7.07	FP	60	Un	Ro	VI	OP	Cn		
7.23	J	0	St	Ro	I	OP	Cn		
7.27	J	0	St	Ro	I	OP	Cn		
7.48	FP	60	Un	Ro	VI	OP	Cn		
7.66	J	85	Un	Ro	VI	OP	Cn		
7.70-7.90	FP	60	Pl	Ro	VII	CD	St		
7.94	FP	60	Pl	Ro	VII	OP	St		
8.02	FP	60	Pl	Ro	VII	OP	Cn		
8.10-8.15	FP	60	Un	Ro	VI	FL	Cly		
8.17	J	0	Un	Ro	VI	OP	St		

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

F:GEOT 533/9 – 2014

Detailed Discontinuity Description Log

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Project Name		Cross River Rail				Project No.		FG6470	
Site ID / Borehole No.		CRR727				Surface RL		24.5	
Geologist		G.P.				Date		6/09/2017	
						Page		2 of 2	
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 / SI	Roughness Class I to IX	Aperture CD / OP / FL / TI	Infilling Cn / St / Vr / Ct ¹	Zones ¹ SZ / CZ / HFZ / AZ	Other
8.20	FP	70	Un	Ro	VI	FL	Vr		Qz VN
8.32	J	10	Un	Ro	VI	OP	Cn		
8.52	FP	60	Un	Ro	VI	OP	Cn		
8.66	FP	60	Un	Ro	VI	FL	Vr		Qz VN
8.82	FP	60	Un	Ro	VI	OP	Cn		
8.94	J	0	St	Ro	I	OP	St		
8.96	J	70	Un	Ro	VI	OP	St		
9.15	Js	30	Un	Ro	VI	OP	Cn		
9.44	J	0	Un	Ro	VI	OP	Cn		
9.57	J	80	Un	Ro	VI	OP	Cn		
10.00-10.30	J	30-60	Un	Ro	VI	OP	Cn		
10.66	J	30	Pl	Ro	VII	OP	Cn		
10.72	FP	50	Un	Ro	VI	OP	Cn		
10.92	FP	50	Un	Ro	VI	OP	Cn		
11.08	FP	50	Un	Ro	VI	OP	Cn		
11.28	FP	50	Stp	Ro	I	OP	St		
11.32	FP	50	Un	Ro	VI	OP	Cn		
11.45	J	80	Un	Ro	VI	OP	Cn		
11.45-11.59	J	70	St	Ro	I	OP	St		
11.62	J	60	Un	Ro	VI	OP	Cn		
11.72	FP	60	Un	Ro	VI	OP	Cn		
12.02	FP	60	Un	Ro	VI	OP	Cn		

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

F:GEOT 533/9 – 2014