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Retrieved from the Queensland Geotechnical Database <http://qgd.org.au/>

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation
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LOCATION	The Cliffs Boardwalk
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COORDINATES 503401.6 E; 6960678.9 N

PROJECT No FG6470

SURFACE RL 2.26m

PLUNGE 90°

DATE STARTED 07/11/2017

GRID DATUM MGA94

JOB No

HEIGHT DATUM AHD

BEARING °

DATE COMPLETED 10/11/2017

DRILLER Geodrill

DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD (%) % CORE REC %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH							DEFECT SPACING						ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS				
									EH	VH	H	M	L	VL	EL	EC	VC	C	M	W	VW			EW			
	2.06					Silty SAND (Topsoil) Dark brown, moist. Fine to medium grained sand, sub angular. Low plasticity fines.		(SM)																			
1						Clayey SAND with Gravel (Fill) Pale brown, moist, medium dense. Fine to coarse grained sand, angular. Low plasticity clay. Fine to coarse grained gravel, angular. Trace cobbles and boulders.		(SC)																			
2	0.76				A	Silty Sandy GRAVEL (Fill) Brown and dark grey, moist, loose to medium dense. Fine to medium grained gravel, angular. Fine to coarse grained sand, angular.																			4, 4, 5 N=9	SPT	
3					B																				5, 4, 7 N=11	SPT	
4								GM																			
5					C																				4, 4, 4 N=8 LL=28% PI= 11% MC=12.5% <75µm= 26%	SPT	
6	-3.34			(79)		TUFF (Rif) SW: Pink and pale brown, fine to coarse grained gravel size clasts within fine grained matrix, massive, very high strength. With some iron staining. -Js: 0°-30° (1-2/m), Un/Ro, OP, Cn-FeSt -Js: 60°-65° (1/m), Un/Ro, OP, Cn-FeSt																			Is(50)=4.50 MPa Is(50)=1.90 MPa	D (5.87m) A (5.89m)	
7																										Is(50)=3.50 MPa Is(50)=4.00 MPa	D (7.45m) A (7.46m)
8				100 (63)				SW		VH															7.86m-8.43m: -J: 50°-90°, Un/Sm-Ro, OP-Tl, Vr		
9																											
	-7.74																									Is(50)=3.70 MPa	D (9.95m)

Continued on next sheet

Is(50)=3.70 MPa	D (9.95m)
Is(50)=5.80 MPa	A (9.96m)

REMARKS: Rip - Aspley Formation. Rif - Brisbane Tuff.

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REVIEWED BY

SB

S. Foley



**Queensland
Government**

GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No **CRR711**

Sheet 2 of 5

REFERENCE No **H12937**

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

LOCATION **The Cliffs Boardwalk**

COORDINATES **503401.6 E; 6960678.9 N**

PROJECT No **FG6470**

SURFACE RL **2.26m**

PLUNGE **90°**

DATE STARTED **07/11/2017**

GRID DATUM **MGA94**

JOB No

HEIGHT DATUM **AHD**

BEARING °

DATE COMPLETED **10/11/2017**

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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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	-8.52				TUFF (Rif) HW: Orange and brown, fine to coarse grained gravel size clasts within fine grained matrix, medium strength. Iron stained throughout.		HW				M			C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</

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REMARKS: Rip - Aspley Formation. Rif - Brisbane Tuff.

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GEOTECHNICAL
BOREHOLE LOG

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

BOREHOLE No **CRR711**

Sheet 3 of 5

REFERENCE No **H12937**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation				
LOCATION	The Cliffs Boardwalk			COORDINATES 503401.6 E; 6960678.9 N	
PROJECT No	FG6470	SURFACE RL	2.26m	PLUNGE	90°
				DATE STARTED	07/11/2017
JOB No		HEIGHT DATUM	AHD	BEARING	°
				DATE COMPLETED	10/11/2017
				DRILLER	Geodrill

DEPTH (m)	R.L. (m)	AUGER CASING	WASHBORING	CORE DRILLING	RQD (%)	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH						DEFECT SPACING						ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
					CORE REC %					EH	VH	H	M	L	VL	EL	EC	VC	C	M	W			VW	EW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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29.99m-30.02m: XW
30.00m-30.19m: CZ

REMARKS: Rip - Aspley Formation. Rif - Brisbane Tuff.	LOGGED BY	REVIEWED BY
	SB	S. Foley



GEOTECHNICAL BOREHOLE LOG

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

BOREHOLE No. **CRR711**

Sheet 4 of 5

REFERENCE No **H12937**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation
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LOCATION	The Cliffs Boardwalk
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COORDINATES 503401.6 E; 6960678.9 N

PROJECT No	FG6470
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SURFACE RL 2.26m

PLUNGE 90°

DATE STARTED 07/11/2017

GRID DATUM MGA94

JOB No

HEIGHT DATUM AHD

BEARING °

DATE COMPLETED 10/11/2017

DRILLER Geodrill

[illegible]

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REMARKS: Rip - Aspley Formation. Rif - Brisbane Tuff.

LOGGED BY

REVIEWED BY

SB

S. Foley



GEOTECHNICAL
BOREHOLE LOG

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

BOREHOLE No **CRR711**

Sheet 5 of 5

REFERENCE No **H12937**

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

LOCATION **The Cliffs Boardwalk** COORDINATES **503401.6 E; 6960678.9 N**

PROJECT No **FG6470** SURFACE RL **2.26m** PLUNGE **90°** DATE STARTED **07/11/2017** GRID DATUM **MGA94**

JOB No HEIGHT DATUM **AHD** BEARING **°** DATE COMPLETED **10/11/2017** 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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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41	-39.34				CONGLOMERATE (Rip) SW: Cont'd.		SW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</

REMARKS: Rip - Aspley Formation. Rif - Brisbane Tuff.	LOGGED BY	REVIEWED BY
	SB	S. Foley

CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	10/11/2017
Borehole No.	CRR711	Reference No.	H12937
Location	Kangaroo Cliffs Boardwalk	Start Depth (m)	5.60
Submitted By	M. de Gee	Finish Depth (m)	43.16



CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	10/11/2017
Borehole No.	CRR711	Reference No.	H12937
Location	Kangaroo Cliffs Boardwalk	Start Depth (m)	5.60
Submitted By	M. de Gee	Finish Depth (m)	43.16



CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	10/11/2017
Borehole No.	CRR711	Reference No.	H12937
Location	Kangaroo Cliffs Boardwalk	Start Depth (m)	5.60
Submitted By	M. de Gee	Finish Depth (m)	43.16



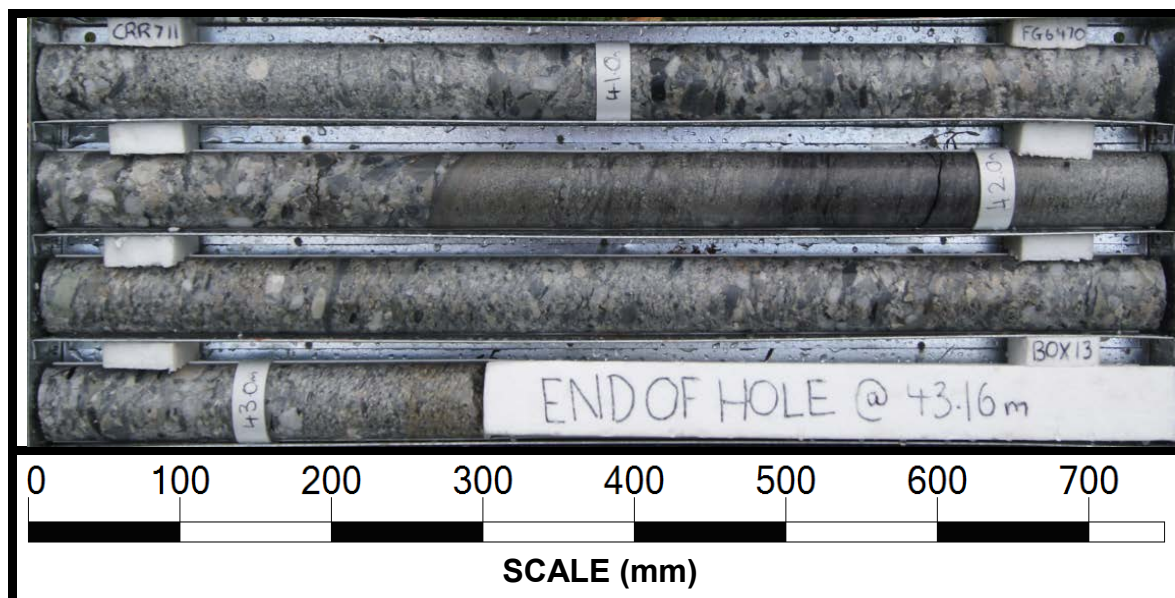
CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	10/11/2017
Borehole No.	CRR711	Reference No.	H12937
Location	Kangaroo Cliffs Boardwalk	Start Depth (m)	5.60
Submitted By	M. de Gee	Finish Depth (m)	43.16



CORE PHOTO LOG
DEPARTMENT OF TRANSPORT AND MAIN ROADS
GEOTECHNICAL SECTION

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	10/11/2017
Borehole No.	CRR711	Reference No.	H12937
Location	Kangaroo Cliffs Boardwalk	Start Depth (m)	5.60
Submitted By	M. de Gee	Finish Depth (m)	43.16



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.		CRR711				Surface RL		2.23	
Geologist		S.B.				Date		7/11/2017	
						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 / SI	Roughness Class I to IX	Aperture CD / OP / FL / TI	Infilling Cn / St / Vr / Ct ¹	Zones ¹ SZ / CZ / HFZ / AZ	Other
5.63	J	5	Un	Ro	IV	OP	Cn		
5.71	J	60	Un	Ro	IV	OP	Cn		Int
5.71	J	60	Un	Ro	IV	OP	Cn		Int
5.76-5.77	J	0	Un	Ro	IV	OP	Cn	CZ	
5.96	J	30	Un	Ro	IV	OP	Cn		
6.14	J	20	Un	Ro	IV	OP	Cn		
7.60-7.72	J	60	Un	Ro	IV	OP	Cn		
7.70-7.86	J	65	Un	Ro	IV	OP	St		
7.86-8.43	J	50-90	Un	Sm - Ro	IV - V	OP - TI	Vr		
8.37	J	5	Un	Ro	IV	OP	Vr		
8.40	J	0	Un	Ro	IV	OP	Cn		
8.42	J	0	Un	Ro	IV	OP	Cn		
10.30-10.60	J	70	Un	Ro	IV	OP	Cn	CZ	
10.69-10.73	J	15	Un	Ro	IV	OP		HFZ	
13.55	J	10	Un	Ro	IV	OP	Cn		
14.15	DI								
14.39	J	10	Pl	Ro	VII	OP	Cn		
14.65	J	0	Un	Ro	IV	OP	Cn		
18.66	DI								
19.68	J	15	Pl	Ro	IV	OP	Cn		
20.28	J	5	Un	Ro	IV	OP	Ct	CZ	
20.38	J	5	Un	Ro	IV	OP	Cn		
21.29	J	10	Un	Ro	IV	OP	Cn		
21.56	J	0	Pl	Ro	VII	OP	Cn		
26.92-26.99	J	60	Stp	Ro	I	OP	Cn		
27.60	J	60	Pl	Ro	VII	OP	Cn		
28.06	J	30	Un	Ro	IV	OP	Cn		
28.10	J	0	Un	Ro	IV	OP	Cn		
28.21	J	10	Un	Ro	IV	OP	Cn		
29.37	J	65	Un	Ro	IV	OP	Cn		
29.57	J	30	Stp	Ro	I	OP	Cn		

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

F:GEOT 533/9 – 2014

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.		CRR711				Surface RL	2.23		
Geologist		S.B.				Date	7/11/2017		
						Page	2	of	3
Traverse Chainage; or Down hole depth (rock core)	Type	Dip ° / Dip Direction °;	Planarity	Roughness	Roughness Class	Aperture	Infilling	Zones ¹	Other
	LP /	or				CD /	Cn /	SZ /	
	BP /	Angle ° from	Stp /	Ro /	I to IX	OP /	St /	CZ /	
	FP /	horizontal	Un /	Sm /		FL /	Vr /	HFZ /	
J etc.	(rock core)	PI	SI			TI	Ct ¹	AZ	
29.91	J	0	PI	Ro	VII	CD			
30.19-30.22								HFZ	
30.22	J	15	Un	Ro	IV	OP	Cn		
30.22-30.29	J	80	Un	Ro	IV	TI	Vr	AZ	
30.49	FP	60	Un	Ro	IV	OP	Cn		
30.52	J	60	Un	Ro	IV	OP	Cn		
30.59-30.60	J	0	Un	Ro	IV	OP	Ct	HFZ	
30.77	J	0	Un	Ro	IV	OP	Ct	CZ	
31.26	J	0	Stp	Ro	I	OP	Cn		
31.80	J	10	Un	Ro	IV	OP	Cn		
31.80-31.84								HFZ	
31.84	J	10	PI	Ro	VII	OP	Cn		
31.87	J	10	PI	Ro	VII	OP	Cn		
32.17	J	10	Un	Ro	IV	OP	Cn		
32.30	J	0	Un	Ro	IV	OP	Cn		
32.50	J	0	Un	Ro	IV	OP	Cn		
32.64	J	10				CD			
33.29	J	30	Un	Ro	IV	OP	Cn		
33.73	J	15	Stp	Ro	I	OP	Cn		
34.17-34.81	J	90	Un	Ro	IV	OP	Ct	HFZ	
34.81-34.96	J	90	Un	Ro	IV	CD			
35.04-35.39	J	90	Un	Ro	IV	OP	Ct	HFZ	
25.30	J	0	Un	Ro	IV	OP	Cn		
35.74	J	0	Un	Ro	IV	OP	Cn		
35.94	J	90	Un	Ro	IV	OP	Ct	HFZ	
35.84-35.99	J	90	Un	Ro	IV	OP	Ct	HFZ	
36.15								Packing break	
36.75	J	10	Un	Ro	IV	OP	Cn		
37.19-37.25									Coal seam
40.47	J	0	Un	Ro	IV	OP	Cn		
41.57	J	10	Un	Ro	IV	OP	Cn		

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

F:GEOT 533/9 – 2014

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.		CRR711				Surface RL		2.23	
Geologist		S.B.				Date		7/11/2017	
						Page		3	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 / SI	Roughness Class I to IX	Aperture CD / OP / FL / TI	Infilling Cn / St / Vr / Ct ¹	Zones ¹ SZ / CZ / HFZ / AZ	Other
41.98	J	10	Un	Ro	IV	OP	Cn		

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

F:GEOT 533/9 – 2014