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**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **CRR704**

Sheet 1 of 3

REFERENCE No **H12930**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation		
LOCATION	Longwood Street	COORDINATES 503152.2 E; 6959362.0 N	
PROJECT No	FG6470	SURFACE RL 19.48m	PLUNGE 90°
			DATE STARTED 30/10/2017
			GRID DATUM MGA94
JOB No		HEIGHT DATUM AHD	BEARING °
			DATE COMPLETED 03/11/2017
			DRILLER Geodrill

DEPTH (m)	R.L. (m)	FAUGER 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
0.00m-0.80m:											Non destructive drilling		
1					A	Clayey SAND (Residual) Red brown, moist, very dense. Fine to coarse grained, angular. Medium plasticity clay.	(SC)					30/90mm hb	
2	17.38		(10)			TUFF (Rif) HW: Pale grey red and orange brown, fine to coarse grained, low to medium strength. Iron stained in parts. Sub angular clasts within fine grained matrix.	HW				Is(50)=0.69 MPa Is(50)=0.49 MPa	A (2.49m) D (2.58m)	
3			100 (71)			-Js: 0°-30° (10/m), Un/Ro, OP-CD, St-Cn -Js: 60°-70° (<1/m), Pl/Sm, OP, Cly Ct.	HW				Is(50)=0.49 MPa Is(50)=0.67 MPa	D (3.45m) A (3.52m)	
4	15.23		100 (80)			TUFF (Rif) MW: Pale grey red and orange brown, fine to coarse grained, low to medium strength. Iron stained in parts. Sub angular clasts within fine grained matrix.	MW				Is(50)=0.12 MPa Is(50)=0.16 MPa	D (4.68m) A (4.85m)	
5						-Js: 0°-30° (10/m), Un/Ro, OP-CD, St-Cn -Js: 60°-70° (<1/m), Pl/Sm, OP, Cly Ct.	HW				Is(50)=0.55 MPa Is(50)=0.93 MPa	D (5.72m) A (5.76m)	
6	13.71		97 (77)			TUFF (Rif) HW: Pale grey and grey, fine to coarse grained, massive, extremely low to mainly low strength. Iron stained in parts. Sub angular clasts within fine grained matrix.	HW						
7						-Js: 0°-30° (4-7/m), Un/Ro, OP, St-Cn	HW						
8			100 (92)				HW				Is(50)=0.17 MPa Is(50)=0.22 MPa	D (8.28m) A (8.37m)	
9	9.48		100 (30)				HW				Is(50)=0.56 MPa Is(50)=0.17 MPa	D (9.55m) A (9.72m)	

Continued on next sheet

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds

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SB	S. Foley



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**GEOTECHNICAL
BOREHOLE LOG**

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

BOREHOLE No **CRR704**

Sheet 2 of 3

REFERENCE No **H12930**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation				
LOCATION	Longwood Street		COORDINATES 503152.2 E; 6959362.0 N		
PROJECT No	FG6470	SURFACE RL	19.48m	PLUNGE	90°
		DATE STARTED	30/10/2017	GRID DATUM	MGA94
JOB No		HEIGHT DATUM	AHD	BEARING	°
		DATE COMPLETED	03/11/2017	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				
												EH		EC	
												VH	H	V	C
9.14					TUFF (Rif) HW: Cont'd.	HW									
					TUFF (Rif) MW: Brown, fine to coarse grained, massive, generally medium strength.	MW				10.34m-10.45m: HFZ 10.34m-11.00m: -J: 70°-90°, Un/Sm, V, FL, Qz Vn 10mm with Cly Ct 10.74m-10.83m: HFZ 10.98m-11.07m: Core loss					
11			92 (30)		Iron stained in parts. Sub angular clasts within fine grained matrix.	MW		M		11.43m-11.70m: Clay bands	Is(50)=0.73 MPa Is(50)=0.58 MPa				
					-Js: 0°-35° (5-7/m), Pl-Un/Ro, OP, Cn-Cly Ct	XW									
					-Js: 40°-70° (4-6/m), Un/Ro, OP, Cn	MW		M		11.90m-11.91m: XW 12.02m-12.12m: Core loss	Is(50)=0.63 MPa Is(50)=0.81 MPa				
12			90 (71)								D (12.18m) A (12.33m)				
						MW		M		13.07m-13.40m: -J: 90° 13.30m-13.40m: HFZ					
13															
			100 (68)			HW		L		14.25m-14.55m: SZ	Is(50)=0.57 MPa Is(50)=0.87 MPa				
14											D (14.08m) A (14.17m)				
						MW		M		15.34m-15.43m: XW					
15															
			100 (26)			HW									
16															
						MW				16.62m-16.71m: HFZ, HW 16.71m-16.83m: CAI=0.48	Is(50)=0.72 MPa Is(50)=0.93 MPa				
17											D (15.75m) A (15.78m)				
						XW		VL							
			92 (75)							17.60m-17.65m: HFZ 17.70m-17.80m: Core loss					
18															
						MW		M		18.03m-18.10m: HFZ	Is(50)=1.00 MPa Is(50)=0.57 MPa UCS=15.90 MPa E=1.72 GPa v= 0.025				
19											A (17.92m) D (17.95m) (18.21m)				
			100 (55)												
						MW					Is(50)=0.30 MPa Is(50)=0.26 MPa				
19										19.29m-19.40m: Slake Durability Index Test 19.58m-19.71m: CAI=0.48 19.74m-19.78m: XW	A (18.81m) D (18.82m)				
			100 (41)			MW									
-0.52															

Continued on next sheet

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds

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

BOREHOLE No **CRR704**

Sheet 3 of 3

REFERENCE No **H12930**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation		
LOCATION	Longwood Street	COORDINATES 503152.2 E; 6959362.0 N	
PROJECT No	FG6470	SURFACE RL 19.48m	PLUNGE 90°
			DATE STARTED 30/10/2017
			GRID DATUM MGA94
JOB No		HEIGHT DATUM AHD	BEARING °
			DATE COMPLETED 03/11/2017
			DRILLER Geodrill

DEPTH (m)	R.L. (m)	FAUGER 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
-0.84						TUFF (Rif) MW: Cont'd. ARGILLITE (DCf) FR: Dark grey, fine grained, foliated, mainly high strength.	MW			L	C			
21			100 (75)			Frequent quartz bands parallel to foliation <50mm thick. Some crenulated. Foliation 20°-40°.	XW					20.51m-21.00m: SZ, XW		
22			100 (100)			-Js: 40°-60° (3/m), Un-Pl/Ro, OP, Cn -Js: 0°-30° (3/m), Un-Pl/Ro, OP, Cn						Is(50)=0.43 MPa A (21.20m) Is(50)=0.75 MPa D (21.39m) UCS=7.87 MPa (21.53m) E=5.48 GPa v= 0.209 Is(50)=0.50 MPa D (21.86m) Is(50)=0.83 MPa A (21.97m)		
23			100 (96)									21.10m-21.23m: CAI=1.57 Is(50)=0.50 MPa D (22.84m) Is(50)=0.17 MPa A (22.87m)		
24			100 (38)									Is(50)=0.74 MPa A (24.32m) Is(50)=3.60 MPa D (24.45m)		
25			100 (71)				FR		H					
26			100 (22)									Is(50)=1.80 MPa D (26.58m) Is(50)=1.60 MPa A (26.60m) Is(50)=1.80 MPa D (26.67m)		
27			100 (45)									27.40m-27.60m: -J: 70°, Un/Ro, IV, OP, Qz Vn 5mm Is(50)=0.35 MPa D (28.51m) Is(50)=1.00 MPa A (28.56m)		
28			100									Is(50)=1.90 MPa A (29.74m)		
-10.52			100											

Borehole completed at 30.00m

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds

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STANDPIPE INSTALLATION LOG

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

BOREHOLE No **CRR704**

Sheet 1 of 3

PIEZOMETER No **CRR704**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation								
LOCATION	Longwood Street				COORDINATES 503152.2 E; 6959362.0 N				
PROJECT No	FG6470	SURFACE RL	19.48m	PLUNGE	90°	DATE STARTED	30/10/2017	GRID DATUM	MGA94
JOB No		HEIGHT DATUM	AHD	BEARING	°	DATE COMPLETED	03/11/2017	DRILLER	Geodrift

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Construction Details		
				Depth (m) /RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill Details
1			Clayey SAND(Residual) Red brown, moist, very dense. Fine to coarse grained, angular. Medium plasticity clay.			
2	17.38		TUFF Pale grey red and orange brown, fine to coarse grained, low to medium strength. Iron stained in parts. Sub angular clasts within fine grained matrix. -Js: 0°-30° (10/m), Un/Ro, OP-CD, St-Cn -Js: 60°-70° (<1/m), Pl/Sm, OP, Cly Ct.			
3						
4	15.23		TUFF Pale grey red and orange brown, fine to coarse grained, low to medium strength. Iron stained in parts. Sub angular clasts within fine grained matrix. -Js: 0°-30° (10/m), Un/Ro, OP-CD, St-Cn -Js: 60°-70° (<1/m), Pl/Sm, OP, Cly Ct.			
5						
6	13.71		TUFF Pale grey and grey, fine to coarse grained, massive, extremely low to mainly low strength. Iron stained in parts. Sub angular clasts within fine grained matrix. -Js: 0°-30° (4-7/m), Un/Ro, OP, St-Cn			
7						
8						
9						
	9.48					

Continued on next sheet

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds	LOGGED BY	REVIEWED BY
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STANDPIPE INSTALLATION LOG

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

BOREHOLE No **CRR704**

Sheet 2 of 3

PIEZOMETER No **CRR704**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation								
LOCATION	Longwood Street				COORDINATES 503152.2 E; 6959362.0 N				
PROJECT No	FG6470	SURFACE RL	19.48m	PLUNGE	90°	DATE STARTED	30/10/2017	GRID DATUM	MGA94
JOB No		HEIGHT DATUM	AHD	BEARING	°	DATE COMPLETED	03/11/2017	DRILLER	Geodrill

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill Details
9.14		TUFF Cont'd.				
11		TUFF Brown, fine to coarse grained, massive, generally medium strength. Iron stained in parts. Sub angular clasts within fine grained matrix.				
12		-Js: 0°-35° (5-7/m), Pl-Un/Ro, OP, Cn-Cly Ct -Js: 40°-70° (4-6/m), Un/Ro, OP, Cn				
13						
14						
15						Grout: Cement / Bentonite mix
16						
17						
18						
19						
-0.52						

Continued on next sheet

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds	LOGGED BY	REVIEWED BY
	SB	S. Foley



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**STANDPIPE
INSTALLATION LOG**

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

BOREHOLE No **CRR704**

Sheet 3 of 3

PIEZOMETER No **CRR704**

PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation		
LOCATION	Longwood Street	COORDINATES 503152.2 E; 6959362.0 N	
PROJECT No	FG6470	SURFACE RL 19.48m	PLUNGE 90°
			DATE STARTED 30/10/2017
			GRID DATUM MGA94
JOB No		HEIGHT DATUM AHD	BEARING °
			DATE COMPLETED 03/11/2017
			DRILLER Geodrill

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill Details
-0.84		TUFF Cont'd.				
21		ARGILLITE Dark grey, fine grained, foliated, mainly high strength. Frequent quartz bands parallel to foliation <50mm thick. Some crenulated. Foliation 20°-40°. -Js: 40°-60° (3/m), Un-Pl/Ro, OP, Cn -Js: 0°-30° (3/m), Un-Pl/Ro, OP, Cn	21.00m / -1.52 AHD			
22			22.00m / -2.52 AHD			Bentonite Seal
24			24.00m / -4.52 AHD			
26						Filter: Washed / Graded Sand
30.00			30.00m / -10.52 AHD			

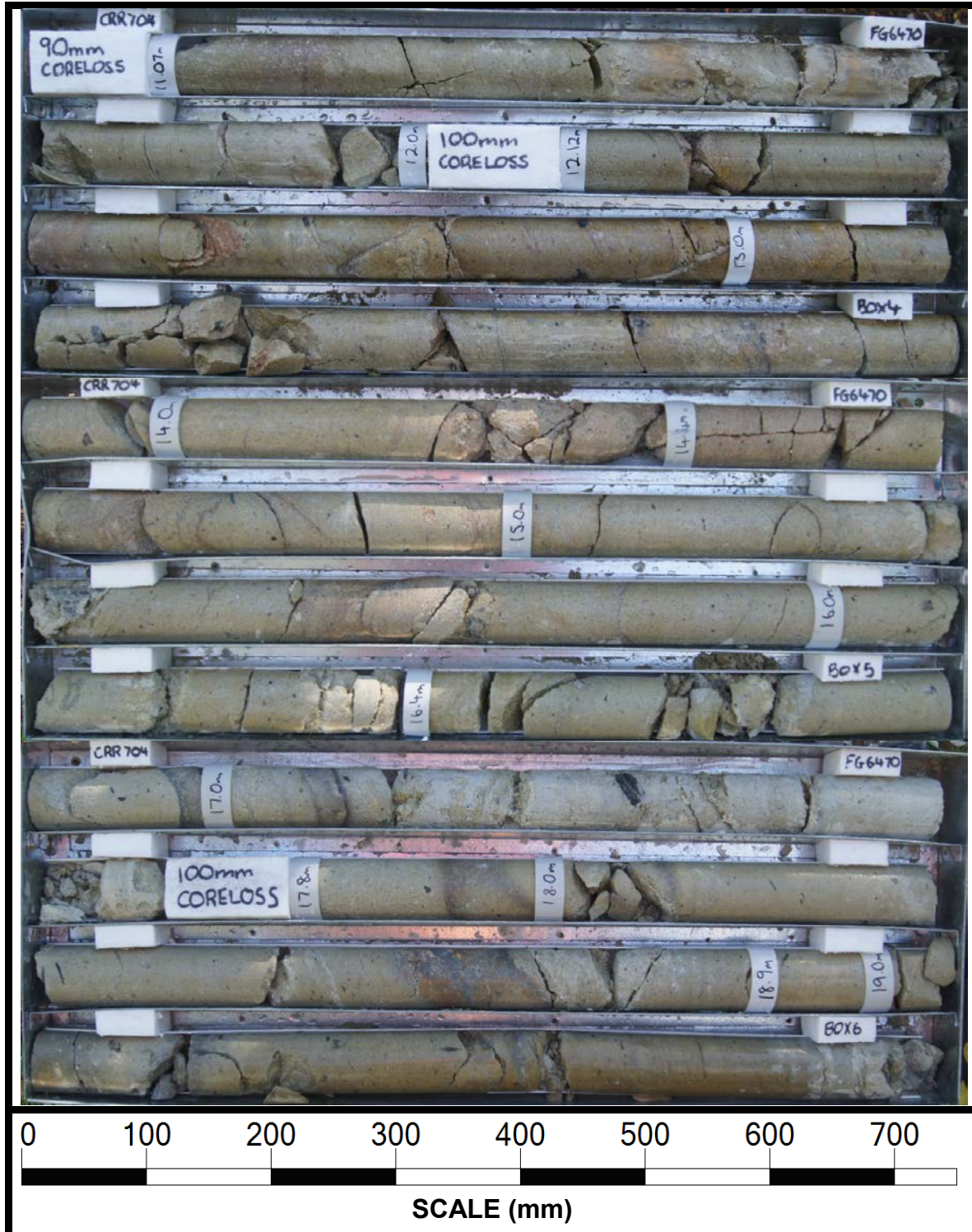
Borehole completed at 30.00m

REMARKS: Rif - Brisbane Tuff. DCf - Neranleigh Fernvale Beds	LOGGED BY	REVIEWED BY
	SB	S. Foley

Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	03/11/2017
Borehole No.	CRR704	Reference No.	H12930
Location	Longwood Street	Start Depth (m)	2.10
Submitted By	M. de Gee	Finish Depth (m)	30.00



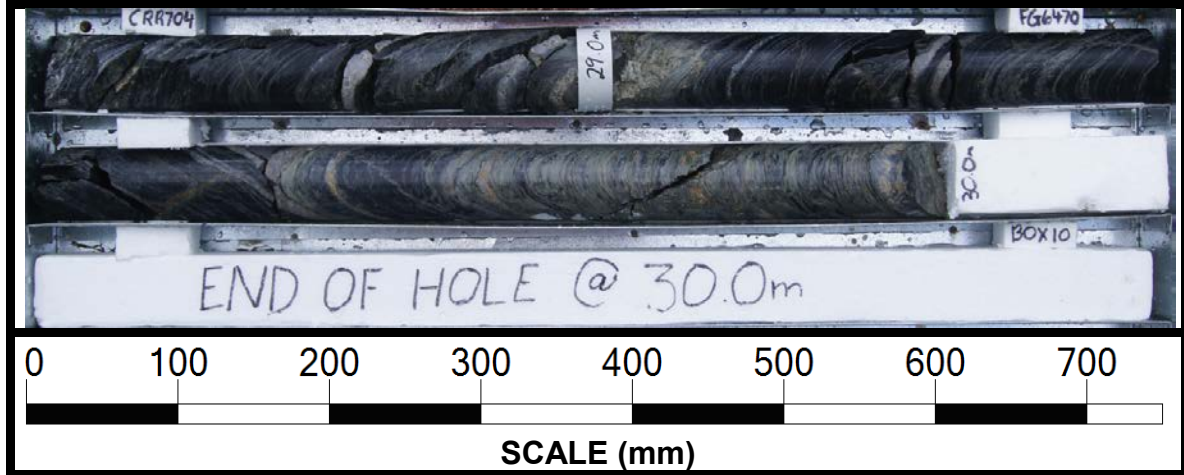
Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	03/11/2017
Borehole No.	CRR704	Reference No.	H12930
Location	Longwood Street	Start Depth (m)	2.10
Submitted By	M. de Gee	Finish Depth (m)	30.00



Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	03/11/2017
Borehole No.	CRR704	Reference No.	H12930
Location	Longwood Street	Start Depth (m)	2.10
Submitted By	M. de Gee	Finish Depth (m)	30.00



Project Name	Cross River Rail CRR2017 – Geotechnical Investigation		
Project No.	FG6470	Date	03/11/2017
Borehole No.	CRR704	Reference No.	H12930
Location	Longwood Street	Start Depth (m)	2.10
Submitted By	M. de Gee	Finish Depth (m)	30.00



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.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
						Page		1	of 7
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
2.13	J	30	Un	Ro	IV	OP	Cn		
2.19	J	20	Un	Ro	IV	OP	Cn		
2.28	J	20	Un	Ro	IV	OP	Cn		
2.37	J	10	Un	Ro	IV	OP	Cn		
2.49	J	20	Un	Ro	IV	OP	Cn		
2.54	J	5	Un	Ro	IV	CD	Cn		
2.70	J	60	Pl	Sm	VIII	OP	Ct		Clay
2.84	J	5	Un	Ro	IV	OP	Ct		Clay 1mm
2.90	J	20	Un	Ro	IV	CD	St		
2.95	J	30	Un	Ro	IV	CD	St		
3.00	J	20	Un	Ro	IV	CD	St		Int
3.02	J	20	Un	Ro	IV	OP	Cn		Int
2.93-3.10	J	70	Pl	Ro	VII	OP	Cn		
3.15	J	30	Stp	Ro	I	OP	Cn		
3.30	J	60	Pl	Ro	VII	OP	St		Int
3.30	J	15	Un	Ro	IV	OP	Cn		Int
3.59	J	10	Un	Ro	IV	OP	Cn		
3.66	J	0	Un	Ro	IV	OP	Ct	CZ	
3.77	J	0	Un	Ro	IV	OP	Cn		
3.72-3.87	J	60	Pl	Sm	VIII	OP	Ct		Clay
3.88	J	10	Un	Ro	IV	OP	Ct		Clay 1mm
3.98	J	0	Un	Ro	IV	OP	Ct		Clay 1mm
4.15-4.25	J	70	Stp	Ro	I	OP	St		
4.38-4.48	J	60	Pl	Ro	VII	OP	Cn		
4.48	J	0	Un	Ro	IV	OP	Cn		
4.48-4.55	J	60	Un	Ro	IV	OP	Cn		
4.53	J	0	Un	Ro	IV	OP	Cn		
4.93	J	60	Un	Ro	IV	CD	Vr		
4.96	J	0	Un	Ro	IV	OP	St		
4.98	J	60	Un	Ro	IV	CD	Vr		
5.24	J	25	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



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Project Name		Cross River Rail				Project No.		FG6470	
Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
						Page		2 of 7	
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
5.43	J	25	Un	Ro	IV	OP	Cn		
5.56	J	25	Un	Ro	IV	OP	Cn		
5.95	J	20	Un	Ro	IV	OP	Cn		
6.16	J	5	Un	Ro	IV	OP	Cn		
6.60	J	5	Un	Ro	IV	OP	Cn		
6.42	J	5	Un	Ro	IV	OP	Vr		Clay
6.42								CZ	
6.55	J	0	Un	Ro	IV	OP	St		
6.62	J	10	Un	Ro	IV	OP	St		
6.65	J	10	Un	Ro	IV	OP	St		
6.71	J	10	Un	Ro	IV	CD			
6.77	J	30	Pl	Ro	VII	OP	Ct		Clay
6.83	J	0	Stp	Ro	I	OP	Cn		
6.92	J	0	Un	Ro	IV	OP	Cn		
6.92-7.02	Handling Break								
7.21	J	60	Un	Ro	IV	OP	Cn		
7.27	J	0	Un	Ro	IV	OP	Cn		
7.33	J	10	Un	Ro	IV	OP	Cn		
7.46	J	30	Un	Ro	IV	OP	Ct		Clay 10mm
7.62	J	15	Stp	Ro	I	OP	Cn		
7.83	J	0	Un	Ro	IV	OP	Cn		
7.94	J	5	Un	Ro	IV	OP	Cn		
8.10	J	60	Un	Ro	IV	OP	Cn		
8.46	J	0	Un	Ro	IV	OP	Cn		
8.79	J	0	Un	Ro	IV	OP	Cn		
9.10-9.12	J	0	Un	Ro	IV	OP	Ct	CZ	
9.28	J	10	Un	Ro	IV	OP	Cn		
9.39	J	10	Un	Ro	IV	OP	Cn		
9.43	J	10	Un	Ro	IV	OP	Cn		
9.83	J	5	Un	Ro	IV	OP	Cn		
10.01	J	15	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



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Project Name		Cross River Rail				Project No.		FG6470	
Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
						Page		3 of 7	
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
10.24	J	30	Un	Ro	IV	OP	Cn		
10.34-11.07 Clay & Vein Zone									
11.27	J	70	Pl	Ro	VII	OP	Cn		
11.21-11.33	J	70	Pl	Ro	VII	CD	Cn		
11.43-11.70								CZ	Clay
11.72	J	45	Un	Ro	IV	CD			
11.84	J	30	Un	Ro	IV	OP			Int
11.84	J	30	Un	Ro	IV	OP			Int
11.92-12.00								HFZ	
12.23	J	0	Un	Ro	IV	OP	Ct		Clay Sand
12.28	J	30	Stp	Ro	I	OP	Cn		
12.58	J	60	Un	Ro	IV	OP	Cn		
12.73	J	60	Un	Ro	IV	CD	Cn		
12.78	J	20	Un	Ro	IV	OP	Ct	CZ	
12.98	J	20	Un	Ro	IV	OP	Ct	CZ	
13.11	J	20	Un	Ro	IV	OP	Cn		
13.07-13.30	J	90	Un	Ro	IV	OP	Ct		Clay
13.30-13.40	J	60	Un	Ro	IV	OP	Cn		
13.50	J	40	Un	Ro	IV	OP	Cn		
13.52	J	30	Pl	Ro	VII	OP	Cn		
13.66	J	30	Pl	Ro	VII	OP	Cn		
13.84	J	20	Un	Ro	IV	OP	Cn		
13.89	J	20	Stp	Ro	I	OP	Cn		
13.97	J	30	Pl	Ro	VII	OP	Cn		
13.97-14.00 Packing fractures									
14.22	J	30	Pl	Ro	VII	OP	Cn		
14.25-14.31								CZ	*
* Clay, Sand, 60mm									
14.32	J	30	Un	Ro	IV	OP	Ct		Clay
14.40-14.55	J	90	Un	Ro	IV	OP	Cn		Int
14.48	J	30	Un	Ro	IV	OP	Cn		Int

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

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Detailed Discontinuity Description Log



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Project Name		Cross River Rail				Project No.		FG6470	
Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
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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
14.51	J	0	Stp	Ro	I	OP	Cn		Int
14.55	J	0	Un	Ro	IV	OP	Cn		
14.56	J	45	Un	Ro	IV	OP	Cn		
14.71	J	60	Un	Ro	IV	OP	Ct	CZ	
14.88	J	20	Un	Ro	IV	OP	Cn		
15.07	J	30	Un	Ro	IV	OP	Cn		
15.22	J	45	Pl	Ro	VII	OP	Cn		
15.34	J	15	Un	Ro	IV	OP	Ct		Clay
15.19	J	45	Un	Ro	IV	OP	Cn		Int with 15.22
15.34-15.43								CZ	Clay
15.59	J	30	Pl	Ro	VII	OP	Cn		
15.66	J	60	Pl	Ro	VII	OP	St		Int
15.70	J	45	Pl	Ro	VII	OP	St		Int
15.73	J	45	Un	Ro	IV	OP	St		Int
15.94	J	45	Un	Ro	IV	OP	Cn		
16.20	J	50	Un	Ro	IV	OP	Ct		Sand + clay 10mm
16.28	J	30	Un	Ro	IV	OP	Ct		Sand 1mm
16.33	J	60	Un	Ro	IV	OP	Ct		Clay 8mm
16.48	J	5	Un	Ro	IV	OP	Cn		
16.51	J	60	Un	Ro	IV	OP	Cn		
16.90	J	60	Pl	Ro	VII	OP	Cn		
17.00	J	20	Un	Ro	IV	OP			
17.15-17.80							Ct	CZ	Clay
17.15	J	10	Un	Ro	IV	OP	Ct		Clay
17.25	J	0	Un	Ro	IV	OP	Ct		Clay
17.42	J	30	Un	Ro	IV	OP	Ct		Clay
17.49	J	15	Un	Ro	IV	OP	Ct		Clay
17.60-17.65								HFZ	
18.03-18.10								HFZ	
18.51	J	30	Un	Ro	IV	OP	Cn		
18.62	J	45	Stp	Ro	I	OP	Cn		

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

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Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
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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 / PI	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
18.74	J	40	Un	Ro	IV	OP	Cn		
18.79	J	40	Un	Ro	IV	OP	Cn		
18.82	J	40	PI	Ro	VII	OP	Cn		
19.02-19.11	Packing Break								
19.19	J	20	Un	Ro	IV	OP	Cn		
19.27	J	60	Un	Ro	IV	OP	Cn		
19.33-19.41	J	70	Un	Ro	IV	OP	Cn		Int
19.41	J	45	Un	Ro	IV	OP	Cn		Int
19.49	J	20	Un	Ro	IV	OP	Ct	CZ	15mm
19.72	J	20	Un	Ro	IV	OP	Cn		
19.74-19.77									
19.81	J	15	Un	Ro	IV	OP	Cn		
19.84	J	20	Un	Ro	IV	OP	Cn		
19.90	J	5	Un	Ro	IV	OP	Cn		
20.02	J	0	Un	Ro	IV	OP	Cn		
20.32	J	30	Un	Ro	IV	OP	Ct		Clay+Sand
20.40	J	60	Un	Ro	IV	OP	Ct		Clay+Sand
21.10	J	30	Un	Ro	IV	OP	Cn		
21.34	J	45	Un	Ro	IV	OP	Cn		
21.45	J	45	Un	Ro	IV	OP	Cn		
21.58	J	45	Un	Ro	IV	OP	Cn		
21.63	J	5	Un	Ro	IV	OP	Cn		
21.67	J	45	Un	Ro	IV	OP	Cn		
21.76	J	20	Un	Ro	IV	OP	Ct	CZ	15mm
21.82	J	15	Un	Ro	IV	OP	Cn		
22.27	J	15	Un	Ro	IV	OP	Cn		
22.95	Grinding from NQ packer								
23.11	J	45	PI	Ro	VII	OP	Cn		
23.43	J	40	Un	Ro	IV	OP	Cn		
23.51	J	60	Un	Ro	IV	OP	Cn		

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

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Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
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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
23.81	J	20	Un	Ro	IV	OP	Cn		
24.02	J	0	Pl	Ro	VII	OP	Cn		
24.09-24.20	J	60	Un	Ro	IV	OP	Cn		
24.20	J	15	Un	Ro	IV	OP	Cn		
24.26	J	60	Un	Ro	IV	OP	Cn		
24.37	J	30	Pl	Ro	VII	OP	Cn		Int
24.40	J	60	Stp	Ro	I	OP	Cn		Int
24.59	J	20	Un	Ro	IV	OP	Cn		
24.64	J	30				CD			
24.80-24.90	J	90	Stp	Ro	I	OP	Cn		
24.93	J	45	Un	Ro	IV	OP	Cn		
24.97	J	70	Un	Ro	IV	OP	Cn		
25.05-25.13	J	70	Un	Ro	IV	OP	Cn		Int
25.05-25.13	J	50	Un	Ro	IV	OP	Cn		Int
25.25	J	60	Un	Ro	IV	OP	Cn		
25.31	J	60	Un	Ro	IV	OP	Cn		
25.49	J	45	Pl	Ro	VII	OP	Cn		
25.57	J	30	Stp	Ro	I	OP	Cn		
25.57	J	60	Un	Ro	IV	OP	Cn		
25.67	J	20				CD			
25.77	J	5	Un	Ro	IV	OP	Cn		
25.74	J	60	Un	Ro	IV	OP	Cn		
25.93	J	60	Un	Ro	IV	OP	Cn		
26.11	J	20	Un	Ro	IV	OP	Cn		
26.34	J	5	Un	Ro	IV	OP	Cn		
26.72	J	60	Pl	Ro	VII	OP	Cn		
26.77-26.95	J	90	Un	Ro	IV	OP	Cn		
27.03	J	20	Un	Ro	IV	OP	Cn		
27.06								HFZ	
27.33	J	30	Un	Ro	IV	OP	Cn		
27.39	FP	60	Un	Ro	IV	OP	Cn		

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

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Project Name		Cross River Rail				Project No.		FG6470	
Site ID / Borehole No.		CRR704				Surface RL		19.75	
Geologist		S.B.				Date		30/10/2017	
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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
24.40-27.60	J	70	Un	Ro	IV	OP			Qz Vn 5mm
27.72	FP	30	Un	Ro	IV	OP	Cn		
27.77	J	30	Un	Ro	IV	OP	Cn		
27.88	J	30	Un	Ro	IV	OP	Cn		
27.96	J	30	Un	Sm	IV	OP	Vr		
27.98	J	60	Un	Sm	IV	OP	Vr		
28.00	J	30	Un	Sm	IV	OP	Vr		
28.05	J	60	Un	Sm	IV	OP	Vr		
28.14	J	60	Un	Sm	IV	OP	Vr		
28.14	J	30	Un	Sm	IV	OP	Vr		
28.19	J	10	Un	Ro	IV	OP	Cn		
28.21-28.25								HFZ	
28.25-28.35	J	60	Un	Ro	IV	OP	Cn		Int
28.33-28.43	J	60	Un	Ro	IV	OP	Cn		Int
28.56	J	45	Stp	Ro	I	OP	Cn		
28.65-28.76	J	70	Un	Ro	IV	OP	Cn		
28.72	J	30	Un	Ro	IV	OP	Cn		
28.85	J	15	Un	Ro	IV	OP	Cn		Int
28.87	J	5	Un	Ro	IV	OP	Cn		Int
28.92	J	45				CD			
28.95	J	60	Un	Ro	IV	OP	Cn		
28.98	J	45	Un	Ro	IV	OP	Cn		
28.99-29.06	J	60	Un	Ro	IV	OP	Ct	CZ	
29.18	J	45	Un	Ro	IV	OP	Cn		
29.20	J	45-60	Un	Ro	IV	OP	Cn		
29.25	J	5	Un	Ro	IV	OP	Cn		
29.39-28.46	J	60	Un	Ro	IV	OP	Cn		
29.54	J	5	Un	Ro	IV	OP	Cn		
29.70-29.86	J	60	Un	Ro	IV	OP	Cn		

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

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