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**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)	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
1	3.14				FILL					0.00m-1.00m: Non destructive drilling.			
2	2.14			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		
3				B	GRAVEL (Fill) Brown and Black, wet, loose. Fine to medium grained, angular.						4, 3, 4 N=7 SPT		
4						(GP)							
5				C							17, 2, 2 N=4 SPT		
6	-1.86			D	CLAY with Sand (Alluvium) Dark grey, wet, soft. High plasticity.	CH				LL=59% PI= 39% LS= 16% <75µm= 79%	U50		
7	-2.26				SAND (Alluvium) Dark grey, wet, loose. Fine to coarse grained, angular	(SP)							
8	-3.06			E	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		
9	-4.26		(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) PI/Ro, OP, Fe St.	MW				8.40m-8.70m: HFZ	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



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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**

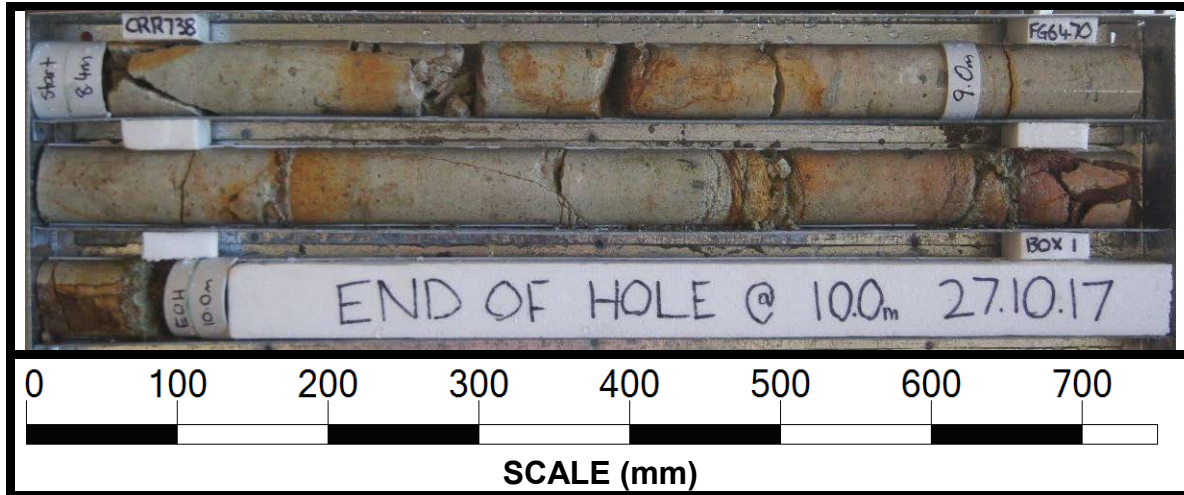
PROJECT	Cross River Rail CRR2017 - Additional Geotechnical Investigation		
LOCATION	QR land (Mayne Yard)	COORDINATES 503886.4 E; 6964918.2 N	
PROJECT No	FG6470	SURFACE RL 4.14m	PLUNGE 90°
			DATE STARTED 27/10/2017
			GRID DATUM MGA94
JOB No		HEIGHT DATUM AHD	BEARING °
			DATE COMPLETED 27/10/2017
			DRILLER Geodrill

DEPTH (m)	R.L. (m)	LITHOLOGY	MATERIAL DESCRIPTION	Standpipe Construction Details		
				Depth (m) / RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill Details
1	3.14	FILL				
2	2.14	GRAVELLY CLAY with Sand(Fill) Brown, moist, soft. Medium plasticity. Fine to medium grained gravel, angular. Fine to coarse grained sand, angular.				Grout: Cement / Bentonite mix
3		GRAVEL(Fill) Brown and Black, wet, loose. Fine to medium grained, angular.	3.00m / 1.14 AHD			
4			4.00m / 0.14 AHD			Bentonite Seal Top of Slotted Pipe
5						
6	-1.86	CLAY with Sand(Alluvium) Dark grey, wet, soft. High plasticity.				
7	-2.26	SAND(Alluvium) Dark grey, wet, loose. Fine to coarse grained, angular				Filter: Washed / Graded Sand
8	-3.06	Clayey SAND(Residual) Pale grey and white, moist, very dense. Fine to coarse grained, angular. Medium to high plasticity clay.				
9	-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.				
	-5.86		10.00m / -5.86 AHD			

Borehole completed at 10.00m

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

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



# 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.

<b>Project Name</b>		<b>Cross River Rail</b>				<b>Project No.</b> FG6470			
<b>Site ID / Borehole No.</b>		CRR738				<b>Surface RL</b> 13.85			
<b>Geologist</b>		S.B.				<b>Date</b>		27/10/2017	
						<b>Page</b>		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 / TI	Infilling Cn / St / Vr / Ct <sup>1</sup>	Zones <sup>1</sup> 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)

F:GEOT 533/9 – 2014