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

GEOTECHNICAL BOREHOLE NO Queensland BOREHOLE LOG Government For GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/8-2014 REFERENCE NO	CRR730 2 H12956
For geotechnical terms and SYMBOLS REFER FORM F:GEOT 017/8-2014 REFERENCE NO	H12956
PROJECT Cross River Rail CRR2017 - Additional Geotechnical Investigation	
LICCATION RNA showgrounds coordinates 502976.5 E;	5963669.6 N
PROJECT No FG6470 SURFACE RL 9.85m PLUNGE 90° DATE STARTED 26/09/2017 GRID DATUM MG	
JOB NO HEIGHT DATUM AHD BEARING ° DATE COMPLETED 26/09/2017 DRILLER SCH	
Image: Constraint of the second se	SAMPLES TESTS
1 Gravelity SAND (Fill) Gravelity SAND (Fill) BOD 1: Some inconstructive ending 1 8:35 Gravelity SAND (Fill) Gravelity SAND (Fill) 2 7.70 Sindy CLAY (Fill) Gravelity SAND (Fill) 3 Sindy CLAY (Fill) Fill Gravelity SAND (Fill) 4 Sindy CLAY (Fill) Fill Gravelity SAND (Fill) 7 TUFF (Rif) Fill Gravelity SAND (Fill) 100 TUFF (Rif) Fill Gravelity SAND (Fill) 101 TUFF (Rif) Fill Fill 102 TUFF (Rif) Fill Fill 103 TUFF (Rif) Fill Fill 104 Fill Fill Fill 105 100 Fill Fill 100 (75) Fill Fill 100 (76) Fill Fill 100 (76) Fill Fill 100 (76) Fill Fill 100 (78) Fill Fill 100 (78) Fill Fill 100 (79) Fill Fill 100 (79) Fill Fill 100 (79) Fill Fill	2, 2, 2, 2 N=4)=50 kPa D,79 MPa 1.30 MPa B,30 MPa L10 MPa L80 MPa L80 MPa L80 MPa L80 MPa L80 MPa L80 MPa L80 MPa L80 MPa L90 (5.30 MPa L80 MPa L90 (5.30 MPa L10 MPa
	L10 MPa 160 MPa 160 MPa 160 MPa 160 MPa 160 MPa 160 MPa 160 MPa 10 (9.11m) 10 (9.12m) 10 (9.12m) 10 (9.10m) 10 (9.
	REVIEWED BY
TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI	S. Foley

					FINAL 02/03/2018
		GEOTECHN	ICAL	BOREHOLE No	CRR730
Queens	sland	BOREHOLE	LOG	Sheet 2	2 of 2
Govern	ment	FOR GEOTECHNICAL TE SYMBOLS REFER FORM F:GE		REFERENCE No	H12956
ROJECT Cross River Rail CRR20	017 - Additional Geotechnical	Investigation		L	
DCATION RNA showgrounds				COORDINATES 502976.5	E; 6963669.6 N
ROJECT No FG6470	SURFACE RL 9.85m	plunge 90°	DATE STARTED 26/09/2	2017 GRID DATUM	/IGA94
DB No	HEIGHT DATUM AHD	BEARING	DATE COMPLETED 26/09/2	2017 DRILLER S	chneider
(LL) RQD SNLHAGENCO (L) HC HLA A CORE (M) HC NHAGHER REC %	MATERIAL DESCRIPTION	INTACT STRENGTH SSSN COLUMN SSSN SSSN SSSN SSSN SSSN SSSN SSSN S		ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
	(Rif) Cont'd. Borehole completed at 10.13m				
REMARKS: Rif - Brisbane T	Tuff. Standpipe piezomet	ter installed.		LOGGED BY ZC	REVIEWED BY

TION RNA showgrounds COORDINATES 502976.5 E; 6963669.6 N ECT No FG6470 SURFACE RL 9.85m PLUNGE 90° DATE STARTED 26/09/2017 GRID DATUM MGA94					_		FINAL 06/03/2018
Environment Image: control Image: contro Image: control Image: co	**		5	STAND	PIPE	BOREHOLE No	CRR730
				INSTALLATI	ON LOG	Sheet	1 of 2
name RAA showgrounds	N.	K	g Government			PIEZOMETER No	CRR730
Ective <u>F66470</u> surace <u>8.9 85m</u> rune <u>90'</u> and <u>and and and and and and and and and and </u>	OJECT	C	ross River Rail CRR2017 - Additional Geotechnical	Investigation			
Image: Construction of the stand o	CATION	R	NA showgrounds			coordinates 502976.5	E; 6963669.6 N
RL (m) Material Description Standpipe Construction Details 0 problem (m) / AL (ADD) Some mVC Class No. 18 Stock Up = 0.00m Baddill Details 8.35 Sindy CLW(Fill) Protective, regrated, sub angular gravel. Bitck Up = 0.00m Baddill Details 8.35 Sindy CLW(Fill) Protective, regrated, sub angular gravel. File Grout: Centerial / Bentonite mix fination most calling cutos are typically 2mm-Sinn, and grade. Grout: Centerial / Bentonite mix fination mask high strategrade material. 7.70 Tuff fination care grade angular. Sinn (4.72 AHD Bentonite Seal Bentonite mix fination care grade angular. 8.454.706 from staining Sinn (4.72 AHD Enterine Seal Enterine Seal Enterine Seal 9.15 Contract an net date: Enterine Seal Enterine Seal Enterine Seal 9.15 Contract an net date: Enterine Seal Enterine Seal Enterine Seal 9.15 Contract an net date: Enterine Stand (7.72 AHD Enterine Seal Enterine Seal 9.15 Contract an net date: Enterine Stand (7.72 AHD Enterine Seal Enterine Seal 9.15 Contract an net date: Enterine Stand (7.72 AHD Enterine Stand (7.72 AHD) Enterine Stand (7.72 AHD) <td>OJECT No</td> <td>F</td> <td>G6470 SURFACE RL 9.85m</td> <td>plunge 90°</td> <td>DATE STARTED 26/09/201</td> <td>7 GRID DATUM I</td> <td>MGA94</td>	OJECT No	F	G6470 SURFACE RL 9.85m	plunge 90°	DATE STARTED 26/09/201	7 GRID DATUM I	MGA94
Converted on next sheet EMMARS: Mf - Inclose Turk Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction Construction	B No		HEIGHT DATUM AHD	BEARING	DATE COMPLETED 26/09/201	7 DRILLER S	Schneider
Converted on next sheet EMMARS: Mf - Inclose Turk Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction next sheet EMMARS: Mf - Inclose Turk Standy CLM(Fill) Construction Construction	F	7			Standnine Constru	uction Details	
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8.35 Sandy CLAY[FiI] 9.35 Sandy CLAY[FII] 9.35 Sandy CLAY[FII] 9.35 Sandy CLAY[FII] 9.35 Figure 4, sub angular gravel. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale purple mottled brown and grey. 1 Provide the pale the pa	5			(AHD)	Stick Up = 0.00m	Backini L	
6.13m / 3.72 AHD	2		grained, sub angular gravel. Sandy CLAY(Fill) Brown mottled orange red, moist, soft to firm. H plasticity. Fine grained sand. TUFF Orange white, pale purple mottled brown and gr fine to coarse gravel sized clasts in fine grained matrix, massive, high strength. Some iron staining; clasts are typically 2mm-5mr sub angular. -Js: 0°-10° (5/m), Un/Sm, OP, FeSt -J: 80°-90° (1/m), Un/Sm, OP-CD, Ct-FeSt	n,		Grout: Cement / F	Sentonite mix
7.13m / 2.72 AHD Top of Slotted Pipe Filter: Washed / Graded Sand Filter: Washed / Graded Sand Continued on next sheet EMARKS: Rif - Brisbane Tuff. Standpipe piezometer installed.	6					Bentonite	Seal
Filter: Washed / Graded Sand Filter: Washed / Graded Sand Continued on next sheet EMARKS: Rif - Brisbane Tuff. Standpipe piezometer installed. LOGGED BY REVIEWED B		9.2.9.2.9.2.9		0.1311/ 3.72 AHD			
-0.15 Continued on next sheet EMARKS: Rif - Brisbane Tuff. Standpipe piezometer installed. LOGGED BY REVIEWED B	7			7.13m / 2.72 AHD		Top of Slott	ed Pipe
EMARKS: Rif - Brisbane Tuff. Standpipe piezometer installed.	9 -0.15					Filter: Washed / 0	Graded Sand
	RENAAL	3 K C ·		led.			
ZC S. Foley	NEWAR	15:	nii – prispane ran, stanupipe piezonieter filstal				
TMR STANDPIPE INSTALLATION LOG - CREATED WITH HOLEBASE SI							S. Foley

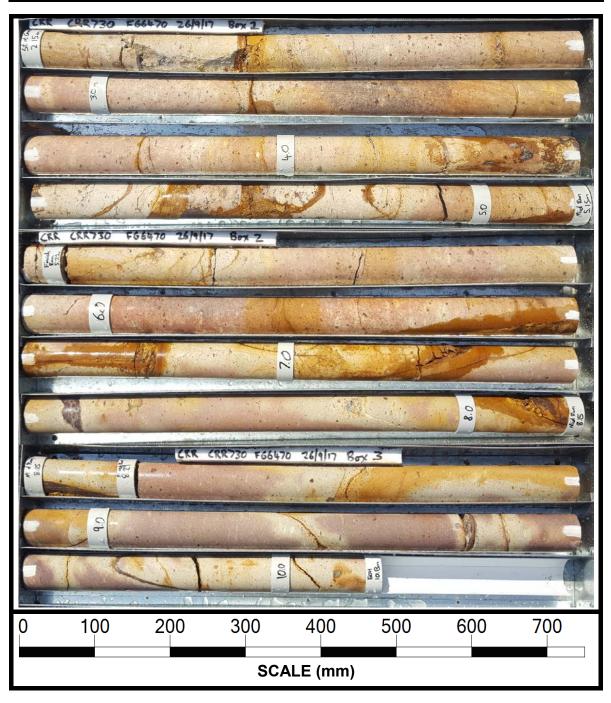
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									_	FINAL 06/03/2018
	. 31	ÀC.				STANDP	PIPE		BOREHOLE No	CRR730
Government				ensland		INSTALLATIO	on log	-	Sheet	2 of 2
	N.S.		Gov	ernment		FOR GEOTECHNICAL			PIEZOMETER No	CRR730
PROJE	ст	Cro	ss River Ra	il CRR2017 - Additional	Geotechnical Inv	estigation		1		
LOCAT	ION	RN	A showgrou	unds					coordinates 502976.5	E; 6963669.6 N
PROJE	CT No	FG	6470	SURFACE RL	9.85m F	plunge 90°	DATE STARTED	- 26/09/201	L7 GRID DATUM	MGA94
JOB No)			HEIGHT DATUM	AHD B	EARING	DATE COMPLETED	26/09/201	L7 DRILLER	ichneider
ĉ		۲					Standnin	e Constr	uction Details	
DEPTH (m)	R.L. (m)	ГІТНОГОСУ		MATERIAL DESCRIPTI	ION	Depth (m) /RL (AHD)	50mm PVC Class Stick Up = 0.0	No. 18	Backfill D	etails
- - - - - - - - - - - - - - - - - - -	-0.28	να Γ	UFF ont'd.	Borehole completed at 10.	13m	10.13m / -0.28 AHD				
- - - - - - - - - - - - - - - - - - -										
- 13 										
- - - - - -										
— 16 —										
- 17										
- - - - - - - - - - - -										
- 19										
Dr	MAR	Kc.	Rif - Brisha	ane Tuff. Standpipe piez	ometer installed					
ΝĒ		NJ.	011300		sincter instancu.				LOGGED BY ZC	S. Foley
					TMR STA	NDPIPE INSTALLATION LOG - CREATED	WITH HOLEBASE SI			J. TORY

CORE PHOTO LOG DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Cross River Rail CRR2017 – Geotechnical Investigation								
Project No.	FG6470	Date	26/09/2017						
Borehole No.	CRR730	Reference No.	H12956						
Location	RNA Showgrounds	Start Depth (m)	2.15						
Submitted By	M. de Gee	Finish Depth (m)	10.13						



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 Nan	ne	Cross Rive	r Rail			Project No FG6470			
Site ID / Bo	rehole No.	CRR730				Surface RL	Irface RL 9.85		
Geologist	Geologist		Z.C.				Date 26/01/2017		
						Page	1	of	2
Traverse	Туре	Dip ° / Dip	Planarity	Roughness	Roughness	Aperture	Infilling	Zones ¹	Other
Chainage;		Direction °;			Class				
or	LP /	or				CD /	Cn /	SZ /	
Down hole	BP /	Angle ° from	Stp /	Ro /	I to IX	OP /	St /	CZ /	
depth	FP /	horizontal	Un /	Sm /		FL /	Vr /	HFZ /	
(rock core)	J etc.	(rock core)	PI	SI		ТІ	Ct ¹	AZ	
2.15	J	80	Un	Sm	V	OP	Cn		
2.28	J	10	Un	Sm	V	OP	Cn	CZ, 20mm	
2.45	J	8	Un	Sm	V	TI	St	CZ, 40mm	Fe, Cly
2.51	J	10	Un	Sm	V	CD	Cn		
2.59	J	10	Un	Sm	V	OP	Cn		
2.78	J	20	Un	Ro	IV	TI	St	CZ, 10mm	Fe, Cly
3.21	J	10	Un	Sm	V	OP	St		
3.80	J	5	Un	Sm	V	TI	St		Fe
4.12	J	12	Un	Sm	V	CD	Cn		
4.21	J	15	Un	Sm	V	CD	St		Fe
4.69	J	10	Un	Ro	IV	CD	St		Fe
4.95	J	20	Un	Sm	V	OP	Cn		
5.00	J	90	PI	Sm	VIII	CD	St		Fe
5.17	J	5	Un	Sm	V	OP	Cn		
5.21	J	5	Un	Sm	V	OP	Cn		
5.40	J	5	Un	Sm	V	OP	Cn		
5.60	J	12	Un	Sm	V	OP	Cn		
6.04	J	10	Un	5m	V	CD	Cn		
6.23	J	5	Un	Sm	V	OP	St		Fe
6.35	J	18	Un	Sm	V	OP	Cn		
6.58	J	85	PI	Sm	VII	CD	St		Fe
6.80	J	10	Un	Ro	IV	CD	St		Fe
7.18	J	70	PI	Sm	VIII	OP	St		Fe
7.33	J	70	Un	Sm	V	CD	St		Fe
7.85	J	70	PI	Sm	VIII	CD	Cn		
8.10	J	70	Un	Ro	IV	OP	St		Fe
8.29	J	3	Un	Sm	V	OP	Cn		
8.56	J	35	Un	Sm	V	OP	St		Fe
9.29	J	45	PI	Sm	VIII	OP	St		Fe
9.49	J	10	Un	Sm	V	OP	Cn		
9.51	J	10	Un	Sm	V	OP	Cn	l	

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 Nan	ne	Cross Rive	r Rail			Project No.	lo.FG6470			
Site ID / Bo	rehole No.	CRR730				Surface RL	9.85			
Geologist		Z.C.				Date	26/01/2017			
		•				Page	2	of	2	
Traverse	Туре	Dip ° / Dip	Planarity	Roughness	Roughness	Aperture	Infilling	Zones ¹	Other	
Chainage;		Direction °;			Class					
or	LP /	or				CD /	Cn /	SZ /		
Down hole	BP /	Angle ° from	Stp /	Ro /	I to IX	OP /	St /	CZ /		
depth	FP /	horizontal	Un /	Sm /		FL /	Vr /	HFZ /		
(rock core)	J etc.	(rock core)	PI	SI		ті	Ct ¹	AZ		
9.72	J	10	Un	Sm	V	OP	St		Fe	
9.78	J	80	PI	Sm	VIII	OP	St		Fe	
9.89	J	10	Un	Sm	V	OP	St		Fe	
9.89	J	80	PI	Sm	VIII	CD	St		Fe	
10.04	J	40	Un	Sm	V	OP	St		Fe	
10.04	J	85	Un	Sm	V	CD	St		Fe	

Note: 1. Describe zones and coatings in terms of composition and thickness (mm) *F:GEOT 533/9 – 2014*