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Queensland Government

GEOTECHNICAL BOREHOLE LOG

FINAL 27/09/2018

BOREHOLE No CRR913

Sheet 1 of 2

		Go	V	ernment	SYN		GEOTECHNICAL TER REFER FORM F:GEO			REFERENCE No	H1	3115
ROJECT	Cros	s River	Rail	(CRR) Project - Additional Geotechnic	cal In	nvesti _į	gation					
OCATION	Wilk	ie St, Ye	ero	ngpilly						COORDINATES 501442.2	E; 695554	1.1 N
ROJECT No	FG6	FG6470 SURFACE RL 12.87m				inge 9	0°	DATE START	09/07/201	8 GRID DATUM MGA94		
OB No				HEIGHT DATUM AHD	BEAF	RING °		DATE COMPLET	TED 10/07/201	8 DRILLER G	eodrill	
(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
12.72 12.27 - 1 - 2 - 3 - 4 - 5 - 6			АВ	GRAVEL with COBBLES (Fill) Grey, dry, medium dense. Medium to coarse, sub-angular to angular. Cobbles (ballast). Sandy Gravelly CLAY (Fill) Brown, moist, stiff. Medium plasticity. Fine to coarse grained, sub-angular gravel. Medium grained sand. Silty CLAY with Sand (Residual) Pale red mottled grey and trace orange mottling, moist, stiff to very stiff. High plasticity. Fine grained sand. at 2.5m: trace fine, sub-angular gravel. at 3.5m: pale grey mottled pale orange and red, firm. at 4.5m: Becoming Silty CLAY trace Sand; trace organic matters (fibres, wood, rootlets) at 6.0m: Stiff to very stiff. Trace fine to medium, sub-angular to sub-rounded gravel.		(GP) (CI)				MC=20 LL= MC=23	4, 5, 6 N=11 6, 7, 10 N=17 51% PI= 42% 4.9% LS= 19% .75μm= 83% 1, 2, 5 N=7 3, 2, 4 N=6 52% PI= 45% 6.5% LS= 18% .75μm= 94%	SPT SPT SPT SPT SPT SPT
3.62				at 9.0m: Pale grey, pale brown- orange. Trace of organic matter (fibre and wood). SILTSTONE (Rin)		xw					4, 8, 13 N=21	SPT
DEVIVD	KC· L	Pin ^	cnl.	Continued on next sheet	mo+	tor i-	ostalled			100055 577	D=1 **-	
REMAR	ν2: ŀ	кıр - А	sple	ey Formation. Standpipe piezoi	met	ier ir	istailed.			LOGGED BY		WED BY
				TAID (EOTEC	UNICAL PA	DREHOLF LOG - CREATED WI	TH HOLEBASE SI		ND	S.F	-oley

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GEOTECHNICAL BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND

FINAL 27/09/2018 BOREHOLE No **CRR913**

Sheet 2 of 2

- 6	10000	-05	ì	-	•			SY	MBOLS	REFER FORM F:GE	OT 017/8-2014		REFERENCE N	No _	H	13115
PROJEC	Т	Cr	oss	River f	Rail	(CRR) Project - Additio	onal Geotechn	ical Ir	nvesti	gation						
LOCATIO	NC	W	/ilkie	e St, Ye	ero	ngpilly							COORDINATES 501	442.2 E; 6	95554	41.1 N
PROJEC	T No	F	G64	170		SURFACE RL	12.87m	PLU	JNGE S	90°	DATE STAF	O9/07/201	8 GRID DA	атим MGA	\94	
JOB No						HEIGHT DATUM	AHD	BEA	RING °		DATE COMPLE	TED 10/07/201	18 DRILLER Geodrill			
DEРТН (m)	R.L. (m)	AUGER CASING	CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESC	CRIPTION	LITHOLOGY	USCS WEATHERING	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS			SAMPLES TESTS
11	0.87					SILTSTONE (Rip) XW: Recovered as da mottled pale orange- hard CLAY with grave layers throughout.	brown, moist,	X X X X X X X X X X X X X X X X X X X							5, 26, 14 N=40	SPT
- 12						SILTSTONE (Rip) HW: Dark grey with r minor pale grey, fine laminated to thinly b low to low strength. I and interbedded with	grained, edded, very Interlaminated	** ** ** ** ** ** ** ** ** ** ** ** **	нw					30,	/55 mm	SPT
- - - - - -			H	(0)	K	at 13.6m: Becoming	low to medium	× × ×		_	_			30,	/90 mm	SPT D (13.70m)
14 			_	94 (8)		strength.		× × × × × × × × × × × × × × × × × × ×	HW	LM		13.93m: BZ, coal 13.93m: BZ, coal 14.78m-14.81m: ⟩	w ci	Is(50)=0. Is(50)=0. Is(50)=0. Is(50)=0.	.63 MPa .12 MPa	A (13.71m) D (14.15m) A (14.16m)
- - - - - -				00				× × × × × × × × × × × × × × × × × × ×	VIA	LM	vc	15.41m-15.45m:)	xw Cly	Is(50)=0. Is(50)=0.		D (15.35m) A (15.36m)
- 16 	-4.43			98 (0)				× × × × × × × × × × × × × × × × × × ×	HW MW HW XW	LM	C C	→ 15.92m-15.95m:) → 16.51m-16.52m:) → 17.26m-17.30m: 1	w Cly	Is(50)=0. Is(50)=1. Is(50)=0. Is(50)=0.	.20 MPa .09 MPa	D (16.48m) A (16.49m) D (16.70m) A (16.71m)
			<u>-</u>	98 (27)		SILTSTONE (Rip) SW: Dark grey and bl. grey, fine grained, lar thinly bedded, with c medium to high strer	minated to coal layers,	2 ××××××××××××××××××××××××××××××××××××	MW	M0H	C C				37 MPa 30 MPa 63 GPa = 0.088 10 MPa	D (17.90m) ⁻ A (17.91m)- (18.35m) - D (18.52m) A (18.53m)-
— 19 - - -	-6.73			100		Borehole complete	d at 19.60m	× × × × × × × × × × × × × × × × × × ×	нw	M		→ 19.15m-19.17m: λ	w cly			- - - - - - - - - -
RE	MAR	KS:	R	ip - As	sple	ey Formation. Star	ndpipe piezo	ome	ter ii	nstalled.			LOGGED	BY F	REVIE	WED BY
													ND		S.I	Foley
							774.44	CEOTES	LINUCAL		WITH HOLEDACE CL		_ t			

Detailed Discontinuity Description Log



Project Nan	ne	Cross Rive	r Rail - Stag	je 2		Project No	FG6470			
Site ID / Boi	rehole No.	CRR913				Surface RL 12.87				
Geologist		N.DEWAR				Date 10/07/2018				
						Page	1	of	4	
Traverse	Туре	Dip ° / Dip	Planarity	Roughness	Roughness		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		TI	Ct 1	AZ		
13.62	J	10-40°	Stp	Sm		OP	Cn			
13.66	BP	10°	Pl	Sm		OP	Cn			
13.74	BP	10°	Pl	Sm		OP	Vr		COAL	
13.75	BP	10°	PI	Sm		OP	Vr		COAL	
13.81	BP	0°	Un	Sm		OP	Cn			
13.82-13.87	J	85°	Un			TI/CD				
13.87	BP	10°	Un	Sm		OP	Vr		COAL	
13.88								HFZ(COAL)		
13.89	BP	0°	Un	Sm		OP	Vr		COAL	
13.89-13.95	J	90°	Stp			TI/CD				
13.96	BP	0°	Un	Sm		OP	Vr		COAL	
13.96-13.99								HFZ(COAL)		
14.05-14.13								HFZ(COAL)		
14.13	BP	0°	PI	Sm		OP	Cn			
14.19	BP	0°	PI	Sm		OP	Cn			
14.19-14.35	J	80-90°	Stp	Sm		OP	Vr		COAL	
14.29	BP	10°	Un	Sm		OP	Vr		COAL	
14.35-14.38	J	90°	Un			TI/CD				
14.39	BP/SM	5°	Un	Sm		OP/DIS	Ct		COAL(10mm)	
14.40	BP	0°	PI	Sm		OP	Vr		COAL	
14.4-14.51								HFZ(COAL)		
14.51	BP	0°	Un	Sm		OP	Vr		COAL	
14.58	BP	5°	PI	Sm		OP	Vr		COAL	
14.61	BP	0°	PI	Sm		OP	Vr		COAL	
14.68	BP	20°	Un	Sm		OP	Cn			
14.68-14.79	J	90°	Un	Sm		OP	Cn			
14.71	J	20°	Un	Sm		OP	Cn			
14.76	BP	5°	Un	Sm		OP	Cn			
14.76-14.79			PI	Sm				FZ		
14.88	BP	10°	PI	Sm		OP	Cn			
14.90	BP	15°	Un	Sm		OP	Cn			
14.88-14.9								FZ(COAL)		

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

Detailed Discontinuity Description Log



Project Name		Cross Rive	r Rail - Stag	je 2	Project No FG6470				
Site ID / Bo	rehole No.	CRR913			Surface RL 12.87				
Geologist		N.DEWAR			Date	10/07/2018			
		•			Page	2	of	4	
14.96	BP	5°	Un	Sm	OP	Vr		COAL	
14.97-15.06	J	80-90°	Stp	Sm	OP	Cn			
15.06-15.1							FZ(COAL)		
15.15	J	30°	Stp		TI/CD				
15.16-15.27	J	90°	Un	Sm	OP	Vr	HFZ	COAL	
15.26	J	30°	Stp	Sm	OP	Cn			
15.34	BP	0°	Un		TI/CD				
15.39	BP	5°	Un	Sm	OP	Cn			
15.42	BP	0°	Un	Sm	OP	Vr		CLAY	
15.48	BP	5°	Un	Sm	OP	Vr		CLAY	
15.52	BP	0°	Un	Sm	OP	Cn			
15.54	BP	0°	Un	Sm	OP	Cn			
15.65	BP	15°	Un	Sm	OP	Cn			
15.70	BP	10°	PI	Sm	OP	Cn			
15.80	BP	5°	Un	Sm	OP	Vr			
15.98	BP	10°	PI	Sm	OP	Cn			
15.98-16.03							HFZ(COAL)		
16.03	BP	10°	PI	Sm	OP	Vr		COAL	
16.03-16.15	J	70°	Un	Sm	OP	Vr		COAL	
16.13	BP	5°	Un	Sm	OP	Vr		COAL	
16.15	BP	10°	PI	Sm	OP	Vr		COAL	
16.21	BP	10°	Un	Sm	OP	Ct		COAL(4mm)	
16.21-16.24							FZ(COAL)		
16.24	BP	0°	Un	Sm	OP	Vr		COAL	
16.30	BP	0°	PI	Sm	OP	Vr		COAL	
16.38	BP	0°	Stp	Sm	OP	Vr	FZ(COAL)	COAL	
16.39-16.46	J	80-90°	Un	Sm	TI				
16.42	J	20°	Stp	Sm	OP	Cn			
16.43	BD	5°	Un	Sm	OP	Cn			
16.52	BP/SM	0°	PI	Sm	FL	Ct		CLAY(12mm)	
16.61	BP	10°	Un	Sm	OP	Cn			
16.71	BP	5°	Un	Sm	TI				
16.73	BP	5°	PI	Sm	OP	Cn			
16.73-16.81	J	80°	Un	Sm	TI				
16.81	BP	10°	Un	Sm	OP	Cn			
16.83-16.94	J	70-90°	Un	Sm		Vr		COAL	
16.88	BP	0°	Un	Sm	OP	Vr		COAL	
16.88-16.94	J	70-90°	Un	Sm	OP	Vr		COAL	

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

F:GEOT 533/9 - 2014

Detailed Discontinuity Description Log



Project Name		Cross Rive	r Rail - Staç	ge 2	 Project No	FG6470			
Site ID / Bo	rehole No.	CRR913			Surface RI	12.87			
Geologist		N.DEWAR			Date	10/07/2018			
					Page	3	of		
16.88	BP	0°	Un	Sm	OP	Vr		COAL	
16.88-16.94	J	70-90°	Un	Sm	OP	Vr		COAL	
16.90	BP	10°	Un	Sm	OP	Cn			
16.94-16.98							HFZ		
16.99	J	70°	Un	Sm	OP	Vr		COAL	
17.07	BP	10°	PI	Sm	OP	Cn			
17.16	BP	10°	Un	Sm	OP	Vr		COAL	
17.23	BP	0°	Un	Sm	OP	Vr		COAL	
17.26-17.3							HFZ(COAL)		
17.07-17.26	J	80-90°	Un	Sm	TI				
17.37	BP	15°	Un	Sm	OP	Cn			
17.41	BP	5°	Un		TI/CD				
17.43	J	10°	Un		TI/CD				
17.45	BP	20°	Un	Sm	OP	Vr		COAL	
17.43-17.51	J	70-90°	Un	Sm	OP	Vr		COAL	
17.51	BP	10°	PI	Sm	OP	Vr		COAL	
17.51-17.59	J	85°	Un	Sm	OP	Vr		COAL	
17.59-17.65	CORE BSS								
17.71	J	20°	Stp	Sm	OP	Vr		COAL	
17.71-17.75							FZ(COAL)		
17.75	BP	10°	Un	Sm	OP	Vr		COAL	
17.81	BP	10°	Un	Sm	OP	Cn			
17.96	BP	10°	Un	Sm	OP	Cn			
17.97	J	70°	Un	Sm	OP	Cn			
17.98	J	90°	Un	Sm	OP	Cn			
18.00	BP	5°	PI	Sm	OP	Cn			
18-18.1							FZ		
18.11	BP	10°	PI	Sm	OP	Vr		CLAY	
18.12	J	40°	Un	Sm	OP	Vr		CLAY	
18.12-18.2							HFZ		
18.20	J	70°	Un	Sm	OP	Cn			
18.23	BP	0°	Un	Sm	OP	Cn			
18.46	BP	10°	PI	Sm	OP	Cn			
18.64	BP	10°	PI	Sm	OP	Cn			
18.74	BP	5°	PI		TI				
18.83	BP	5°	Un	Sm	OP	Cn			
18.90	BP	5°	PI	Sm	OP	Cn			

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

Detailed Discontinuity Description Log



o:: ID / D	Project Name		r Rail - Stag		Project No. FG6470					
Site ID / Bor	ehole No.	CRR913			Surface RL 12.87					
Geologist		N. DEWAR			Date 10/07/2018					
		•			Page	4	of	4		
19.00	BP	10°	Un	Sm	OP/TI					
19.1-19.15	J	10-80°	Un	Sm	OP	Cn				
19.15-19.17	BP/SM	50°	PI	Sm	FL	Ct		CLAY(14mm		
19.2-19.25	J	0°/70°	PI	Sm	OP/TI					
19.31	BP	0°	Un	Sm	OP	Cn				
19.31-19.42	J	70°	Un	Sm	OP	Cn				
19.36	BP	0°	Un	Sm	OP	Cn				
19.40	BP	5°	Un	Sm	OP	Cn				
19.42	BP	10°	Un	Sm	OP	Cn				
19.50	BP	10°	PI	Sm	OP	Cn				
19.51	J	40°	Un	Sm	TI	Cn				
						+				
						+				
						+				
						1				
						1				
						+				
						1				
						1				

STANDPIPE PIEZOMETER INSTALLATION LOG

BOREHOLE No CRR913

FINAL 27/09/2018

Sheet 1 of 2 FOR GEOTECHNICAL TERMS AND **CRR913** PIEZOMETER No SYMBOLS REFER FORM F:GEOT 017/8-2014 Cross River Rail (CRR) Project - Additional Geotechnical Investigation PROJECT Wilkie St, Yeerongpilly COORDINATES 501442.2 E; 6955541.1 N LOCATION SURFACE RL 12.87m DATE STARTED 09/07/2018 FG6470 PLUNGE 90° GRID DATUM MGA94 PROJECT No DRILLER Geodrill BEARING ° DATE COMPLETED 10/07/2018 JOB No HEIGHT DATUM AHD **Standpipe Piezometer Construction Details** Ξ LITHOLOG) R.L. DEPTH (MATERIAL DESCRIPTION Depth (m) /RL 50mm PVC Class No. 18 (m) **Backfill Details** (AHD) Stick Up = 0.80m 12.72 GRAVEL with COBBLES (Fill) Grey, dry, medium dense. Medium to coarse, subangular to angular. Cobbles (ballast). 12.27 Sandy Gravelly CLAY (Fill) Brown, moist, stiff. Medium plasticity. Fine to coarse grained, sub-angular gravel. Medium grained sand. Grout: Cement / Bentonite mix Silty CLAY with Sand (Residual) Pale red mottled grey and trace orange mottling, moist, stiff to very stiff. High plasticity. Fine grained sand. 2.00m / 10.87 AHD Bentonite seal at 2.5m: trace fine, sub-angular gravel. 3.00m / 9.87 AHD at 3.5m: pale grey mottled pale orange and red, at 4.5m: Becoming Silty CLAY trace Sand; trace organic matters (fibres, wood, rootlets) at 6.0m: Stiff to very stiff. Trace fine to medium, subangular to sub-rounded gravel at 7.5m: pale grey to white with pale orange mottling. at 9.0m: Pale grey, pale brown-orange. Trace of organic matter (fibre and wood). 3.62 SILTSTONE (Rin) XW: Continued on next sheet REMARKS: Rip - Aspley Formation. Standpipe piezometer installed. **LOGGED BY REVIEWED BY**

TMR STANDPIPE PIEZOMETER INSTALLATION LOG - CREATED WITH HOLEBASE SI

ND

S.Foley



STANDPIPE PIEZOMETER INSTALLATION LOG

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

BOREHOLE No CRR913

Sheet 2 of 2

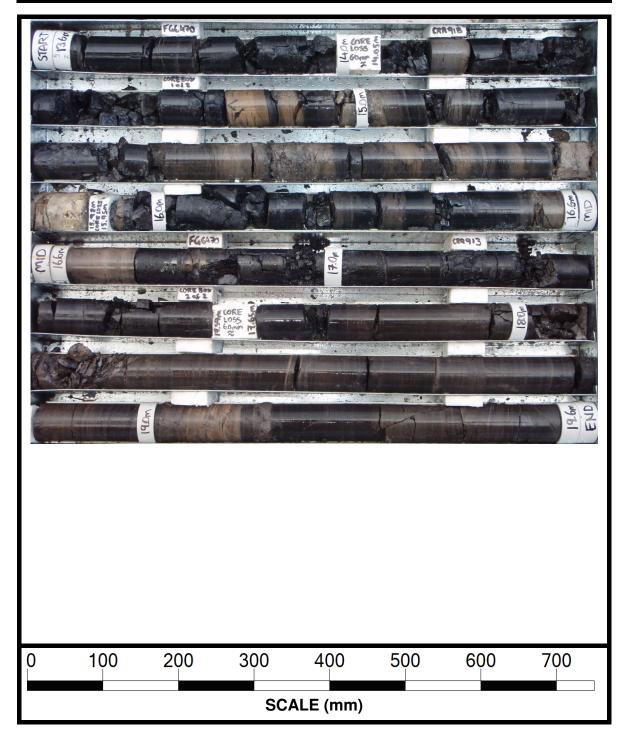
PIEZOMETER No CRR913

ROJE	СТ	(Cross River Rail (CRR) Project - Additional Geotechnical	Investigation			
OCAT	ION	_	Wilkie St, Yeerongpilly			DORDINATES <u>501442.2</u>	E; 6955541.1 N
ROJE	CT No	_	FG6470 SURFACE RL 12.87m PI	lunge <u>90°</u>	DATE STARTED 09/07/2018	GRID DATUM N	/IGA94
OB N)	_	HEIGHT DATUM AHD BE	ARING	DATE COMPLETED 10/07/2018	DRILLER C	Geodrill
E		ξ	;	;	Standpipe Piezometer Co	nstruction Deta	ils
DEPTH (m)	R.L. (m)	\sim	MATERIAL DESCRIPTION	Depth (m) /RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.80m	Backfill	Details
- 11	0.87	× × × × × × × × × × × × × × × × × × ×	SILTSTONE (Rip) XW: Recovered as dark grey, grey mottled pale orange-brown, moist, hard CLAY with gravel. With coal layers throughout.				
- 12 - 13 - 14		X X X X X X X X X X X X X X X X X X X	HW: Dark grey with minor black, minor pale grey, fine grained, laminated to thinly bedded, very low to low strength. Interlaminated and interbedded with coal layers. at 13.6m: Becoming low to medium strength.				
- 15 - 16		X X X X X X X X X X X X X X X X X X X		16.60m / -3.73 AHD		Filter: Washed	
- 17 - 18 - 19	<u>-4.43</u>	X X X X X X X X X X X X X X X X X X X	SILTSTONE (Rip) SW: Dark grey and black minor pale grey, fine grained, laminated to thinly bedded, with coal layers, medium to high strength. Borehole completed at 19.60m	19.60m / -6.73 AHD		rop or sto	шей ріре
RI	EMAI	RKS	g: Rip - Aspley Formation. Standpipe piezometer instal	lled.		LOGGED BY	REVIEWED BY
						ND	S.Foley
			TAMP STANINDIDE	PIFZOMETER INSTALLATION LOG - C	PEATED WITH HOLEBASE SI		5 5 7

CORE PHOTO LOG DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Cross River Rail CRR 2018 – Geotechnical Investigation								
Project No.	FG6470	Date	09/07/2018						
Borehole No.	CRR913	Reference No.	H13115						
Location	Yerongpilly	Start Depth (m)	13.60						
Submitted By	J. Armstrong	Finish Depth (m)	19.60						



1