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<b>Queensland</b> Government
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# **GEOTECHNICAL BOREHOLE LOG**

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

FINAL 27/09/2018

CRR923

Sheet 1 of 2

COORDINATES 503634.3 E; 6964702.5 N

GRID DATUM MGA94

DRILLER Geodrill

BOREHOLE No

REFERENCE No

DATE STARTED 25/05/2018

DATE COMPLETED 28/05/2018

H13047

	()	1	2	4		GO	ve	emment	SYI		GEOTEC REFER F
PROJE	СТ		C	rc	oss	s River	Rail	(CRR) Project - Additional Geotech	nnical Ir	nvesti	gation
LOCAT	ION		C	١R	N	/layne Y	′ard				
PROJE	CT No		ł	G	i64	470		SURFACE RL 4.26m	PLU	INGE 9	0°
JOB N	D							HEIGHT DATUM AHD	BEAI	RING	
DEPTH (m)	R.L. (m)	AUGER	CASING	WASH BORING	CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОСУ	USCS WEATHERING	
-	4.01							Asphalt			
- - - - - - - - - - - - - - - - - - -	1.06						A	Sandy GRAVEL with clay (Fill) Orange-brown and grey, moist, loose. Medium to coarse grained sand, fine to medium grained gravel.		(GP- GC)	•
-	1.96	$\mathbf{H}$					A		<u>~~</u> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1

DEPTH (m)	R.L. (m)	AUGER CASING	WASH BORING CORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESCRIPTION	ГІТНОГОGY	USCS WEATHERING	INTACT STRENGTH 표근구구, 구, 구, 그, 그, 그, 그			ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	4.01					Asphalt			-	-	0.00m-2.00m: N.D.D			_
	4.01					Sandy GRAVEL with clay (Fill)	<b>**</b>		-					_
-						Orange-brown and grey, moist,	***			-				_
						loose.		5	-	-				-
- 1						Medium to coarse grained sand, fine to medium grained gravel.				-				_
						inte to meanan granea graven		(GP-	-	_				-
-							*	GC)	-	_				-
							8		-	-				-
- 2									-				2, 4, 3	_
	1.96				A				-	_			2, 4, 3 N=7	SPT
	1.00				~	Silty CLAY (Alluvium)	×_	-	-	-				
						Grey, moist, firm.	×		-	_				
						Medium plasticity.	×_	(CI)	-	_				_
— 3								()		-		(	MC=31.6% DD= 1.5 t/m3	
					В			-	-			W	D= 1.97 t/m3	U50
-	0.76					CLAY (Alluvium)	_							-
						Grey and orange-brown, moist, very	_		-	-				-
- 4						soft.	_			-			67% PI= 41%	
					С	High plasticity, with wood fragments to 4.5m.	=		-	_		D	5.9% LS= 18% D= 1.05 t/m3	U50
-							E			_		W	D= 1.63 t/m3	
							<u>–</u>		-	-				-
							_		-	-				-
5									-	-				_
							-			-				-
-									-	-			hw, hw, hw N<1	
					D		_			_				SPT
- 6							<u> </u>	(CH)						
									-	-				-
-						6.50-7.00m: Silty SAND layer, fine	<u> </u>		-	-				-
						to medium grained sand.	-		-	_				_
- 7							_			-			1, hw, hw	-
					Е	7.20m: Silty SAND layers, fine to	_		-	-			N<1	SPT
						medium grained, less than 30mm			-					
						thickness, with wood and coal fragments.	F	1	-	_				-
							F_		-	-				-
8							E							
	-4.24						<u> </u>		-	_				-
	-7.24					Clayey SAND (Alluvium)	T		-	-				
						Grey and yellow-brown, wet.		(SC)	-	-				-
- 9	-4.74					Fine grained sand.	×	-					1, 3, 6 N=9	
					F	Silty SAND (Alluvium) Grey, wet, loose.	×		=	-			N=9	SPT
-						Fine grained sand.	×	SM	-	-				_
						9.20m: With gravel, grey-brown, fine to medium grained.	×	2						_
	-5.74						×		-	-				
						Continued on next sheet								
RE	MAR	KS:	F	Rif - B	risb	ane Tuff. Standpipe piezometer	rin	stalle	ed.			LOGGED BY	REVIE	WED BY
												MH	51	-oley
						TMD C	FOTEC	HNICAL P	DREHOLE LOG - CREATED	VITH HOLEBASE SI				,
						1MR G	LUTEU	CONCAL BI	SHENOLE LOG - CREATED	HOLLDHOL 31				

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												FINAL 2	7/09/2018
	. A.C.	àc		(dec) 55			GE	OTECHN	ICAL		BOREHOLE No	, <b>C</b> F	RR923
		500 Q	ue	ensland			BC	REHOLE	LOG		:	Sheet 2 of 2	
	B	ST G	ovo	ernment		SY		GEOTECHNICAL TE REFER FORM F:GE			REFERENCE NO	• <u>H</u>	13047
PROJEC	т	Cross Rive	r Rail	 (CRR) Project - Additional G	ieotechnia	cal Ir	nvesti	gation					
OCATI	NC	QR Mayne	e Yard							(	coordinates 5036	34.3 E; 696470	02.5 N
PROJEC	T No	FG6470		SURFACE RL 4.26r	n	PLU	UNGE S	90°	DATE STA	RTED 25/05/2018	GRID DAT	TUM MGA94	
OB No				HEIGHT DATUM AHD		BEA	RING		DATE COMPL	ETED 28/05/2018	DRI	LLER Geodrill	
		RQE	,				U				ADDITIONAL DATA		
DEPTH (m)	R.L. (m)	% ( ) % WASH BORING CORE DRILLING CORE DRILLING	SAMPI	MATERIAL DESCRIPTIC	ON	ГІТНОГОСУ	USCS WEATHERING		DEFECT SPACING		AND TEST RESULTS		SAMPLES TESTS
			G	Silty SAND (Alluvium) Cont'd		×	Ś	-				9, 6, 8 N=14	SPT
				10.00m: Becoming medium	n dense.	××××	SM						-
- 11 -	-6.74			Sandy GRAVEL (Alluvium) Brown and brown-grey, mo	oist,	×	(GW)						_
-	-7.39 -7.54		н	medium dense. Medium to grained sand, fine to coars gravel.			CI		-	11.40m-11.50m: Cla	yey SAND layer.	6, 15, 30/80mm	SPT
- 12				Sandy CLAY (Residual) Green-grey, grey and orang hard.	ge-brown,		xw		 - - -				
- 13 -	-8.74	(05)		Medium plasticity. Tuff (Rif) XW: Recovered as grey and									
		(65)		brown, hard, clayey gravel. Tuff (Rif) MW: Pink-green, grey and brown, massive, fine grain	orange-	9.9.9.9		н	м			ls(50)=0.55 MPa ls(50)=0.63 MPa	D (13.44m) A (13.45m)
- 14				with gravel sized clasts, hig strength. Js: 10, (3-8/m), Pl/Sm-Ro, (	βh		MW	н		13.95m-13.99m: CW			-
					- , -,	6.6	нw	н	c			Is(50)=0.73 MPa Is(50)=1.00 MPa	D (14.50m) A (14.51m)
- 15							мw	н	C	— 15.18m-15.20m: HW	,	UCS=60.60 MPa	_ (15.31m)
	-11.74	100					sw	н	м			E=12.6 GPa	- (10101111)
- 16	-11.74		Γ	Borehole completed at 16	.00m				-				=
													-
- 17													-
									-				
18									_ _ 				-
									-				
									-  -				-
									- - -				
- 19									-				_
									-				-
									-				
				1		1	1						l
RE	MAR	KS: Rif-E	Brisb	oane Tuff. Standpipe pie	zomete	r in	stall	ed.			LOGGED B	Y REVIE	EWED BY
											MH	S.	Foley
					TMD C	COTEC						I	

# **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 - Stag	ge 2		Project No FG6470					
Site ID / Bo	rehole No.	CRR923				Surface RL 4.26					
Geologist		Mark Hayes	5			Date	Date 25/05/2018				
						Page	1	of	1		
Traverse	Туре	Dip ° / Dip	Planarity	Roughness	Roughness	Aperture	Infilling	Zones <sup>1</sup>	Other		
Chainage;		Direction °;			Class						
or	LP /	or				CD /	Cn /	SZ /			
Down hole	BP /	Angle ° from	Stp /	Ro /	I to IX	<b>OP</b> /	St /	<b>CZ</b> /			
depth	FP /	horizontal	Un /	Sm /		FL /	Vr /	HFZ /			
(rock core)	J etc.	(rock core)	PI	SI		ті	Ct <sup>1</sup>	AZ			
13.08	J	20	Stp	Sm	II	CD	St		Fe		
13.13	J	40	Un	Sm	V	CD	St		Fe		
13.16	J	10	PI	Sm	VIII	FL		BZ	10mm		
13.23	J	10	PI	Sm	VIII	CD	St		Fe		
13.25	J	10	PI	Sm	VIII	CD	Cn				
13.27	J	10	PI	Sm	VIII	OP	St		Fe		
13.54	J	10	PI	Sm	VIII	CD	St		Fe		
13.83	J	15	Un	Sm	V	CD	Vr		Cly		
13.95	J	10	PI	Sm	VIII	FL	St		Cly(50mm)		
14.04	J	10	Un	Sm	V	CD	Cn				
14.08	J	10	PI	Sm	VIII	CD	St		Fe		
14.16	J	10	PI	Sm	VIII	CD	Ct		Cly(10mm)		
14.35	J	10	PI	Sm	VIII	CD	Cn				
14.40	J	15	Un	Sm	V	FL	Ct		Cly(3mm)		
14.42	J	10	PI	Sm	VIII	CD	St		Fe		
14.57	J	10	PI	Sm	VIII	CD	St		Fe		
14.71	J	10	Stp	Sm	П	CD	Cn				
15.00	J	65	PI			TI/CD	St		Fe		
15.18									HW 20mm		
15.28	J	20	PI	Sm	VIII	CD	Cn				
15.63	J	15	PI	Sm	VIII	CD	Vr		Cly		
T											

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

F:GEOT 533/9 - 2014

									FINAL 27/09/201	
4	3種	Ì	5	STA	NDPIPE PIE	ZOMETE	R	BOREHOLE No	CRR923	
Queensland					INSTALLATIO	on log		Sheet 1 of 2		
K	<u>بالا</u>	X	🖞 Government	:	FOR GEOTECHNICAL T SYMBOLS REFER FORM F:G			PIEZOMETER No	CRR923	
DJECT		C	Cross River Rail (CRR) Project - Additiona	I Geotechnical	Investigation					
CATION	I	С	QR Mayne Yard				C	COORDINATES 503634.3	E; 6964702.5 N	
OJECT I	No	F	FG6470 SURFACE RL 4.2	26m F	PLUNGE 90°	DATE STA	RTED 25/05/2018	GRID DATUM	MGA94	
B No			HEIGHT DATUM AH	ID ві	EARING	DATE COMPL	ETED 28/05/2018	DRILLER	Geodrill	
		۶			S	tandpipe P	iezometer Co	onstruction Deta	ils	
	t.L. m)	гітногобу	MATERIAL DESCRIPTION	N	Depth (m) /RL (AHD)		Class No. 18 = 0.00m	Backfill	Details	
1 2 3 0 4	.96		Asphalt Sandy GRAVEL with clay (Fill) Orange-brown and grey, moist, loose. Medium to coarse grained sand, fine t grained gravel. Silty CLAY (Alluvium) Grey, moist, firm. Medium plasticity. CLAY (Alluvium) Grey and orange-brown, moist, very so High plasticity, with wood fragments to		5.00m / -0.74 AHD			Grout: Bentonit	e / Cement Mix	
6			6.50-7.00m: Silty SAND layer, fine to me grained sand. 7.20m: Silty SAND layers, fine to mediu less than 30mm thickness, with wood an	m grained,	7.30m / -3.04 AHD			Bentonite F	Pellet Seal	
9 -4		× ×	fragments. Clayey SAND (Alluvium) Grey and yellow-brown, wet. Fine grained sand. Silty SAND (Alluvium) Grey, wet, loose. Fine grained sand. 9.20m: With gravel, grey-brown, fine to grained.					Filter: Washed	/ Graded Sand	
	1		Continued on next sheet						1	
REN	1ARI	KS:	Rif - Brisbane Tuff. Standpipe piezom	eter installed.				LOGGED BY	REVIEWED B	

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							FINAL 27/09/2018
	in the	制造		STANDPIPE PIE	ZOMETER	BOREHOLE No	CRR923
		10	Queensland	INSTALLATI	ON LOG	Sheet	2 of 2
	NS.	K	Government	FOR GEOTECHNICAL SYMBOLS REFER FORM F:C		PIEZOMETER No	CRR923
ROJE	ст	0	Cross River Rail (CRR) Project - Additional Geoted	chnical Investigation			
OCAT	ION	C	QR Mayne Yard			COORDINATES 503634.3	E; 6964702.5 N
ROJE	CT No		FG6470 SURFACE RL 4.26m	PLUNGE 90°	DATE STARTED 25/05/2018	GRID DATUM	MGA94
OB No	c		HEIGHT DATUM AHD	BEARING	DATE COMPLETED 28/05/2018	B DRILLER	Geodrill
(ר		≿			Standpipe Piezometer Co	onstruction Deta	ils
DEPTH (m)	R.L. (m)	ГІТНОГОGY	MATERIAL DESCRIPTION	Depth (m) /RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill	Details
- 11 - 12 - 12 - 13 13 	-6.74 -7.39 -7.54 -8.74		<ul> <li>\$ilty SAND (Alluvium)</li> <li>Cont'd</li> <li>10.00m: Becoming medium dense.</li> <li>Sandy GRAVEL (Alluvium)</li> <li>Brown and brown-grey, moist, medium dense.</li> <li>Medium to coarse grained sand, fine to coarse grained gravel.</li> <li>Sandy CLAY (Residual)</li> <li>Green-grey, grey and orange-brown, hard.</li> <li>Medium plasticity.</li> <li>Tuff (Rif)</li> <li>TWF Recovered as grey and orange-brown, har clayey gravel.</li> <li>Tuff (Rif)</li> <li>MW: Pink-green, grey and orange-brown, mas fine grained matrix with gravel sized clasts, hig strength.</li> <li>Js: 10, (3-8/m), Pl/Sm-Ro, CD, Fe, St.</li> </ul>	d, <u>12.50m / -8.24 AHD</u>		Top of Sk Fall in during pu	
- 16 - 17 - 18	<u>-11.74</u>		Borehole completed at 16.00m	<u>15.90m / -11.64 AHE</u>			
			1				
R	EMAF	RKS:	Rif - Brisbane Tuff. Standpipe piezometer inst	alled.		LOGGED BY	REVIEWED BY
						MH	S.Foley

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GEOT043/3

CORE PHOTO LOG DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	ame Cross River Rail CRR 2018 – Geotechnical Investigation									
Project No.	FG6470	Date	25/05/2018							
Borehole No.	CRR923	Reference No.	H13047							
Location	QR Rail Corridor	Start Depth (m)	13.00							
Submitted By	J. Armstrong	Finish Depth (m)	16.00							

