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

Note: Sovernment Interpretational metros and structures from protocol (1970) (GE	OTECHNICAL		BOREHOLE No	CR	R701
Description Description Description STAT Code Rheef Nail CRN0017 - Additional Geochemical Investigation International Construction (Statistics) International Construction (Statistics) STAT Code Rheef Nail CRN0017 - Additional Geochemical Investigation International Construction (Statistics) International Construction (Statistics) International Construction (Statistics) STAT Code Rheef Nail CRN0017 - Additional Geochemical Investigation International Construction (Statistics) International Construction (Statistics) International Construction (Statistics) STAT Code Rheef Nail CRN0017 - Additional Geochemical Investigation International Construction (Statistics) International Construction (Statistics) International Construction (Statistics) Name International Construction (Statistics) International Constenal Construction (Stati		💓 Queensland	BO	REHOLE LOG		Sheet 2	L of 2	
Dation Park Station (Qk land)/Portal (southern) concessors (19/02017) concessors (19/02017) <thconcessor< th=""><th>BE</th><th>Government</th><th></th><th></th><th></th><th>REFERENCE No</th><th>H1</th><th>2927</th></thconcessor<>	BE	Government				REFERENCE No	H1	2927
Sact Tue FEG6470 LANACE 10 39m PLANE 10" Date to constance 19/10/2017 Secture Genometries 21/09/2017	ROJECT	Cross River Rail CRR2017 - Additional G	eotechnical Investigatio	n				
NUM INFORM INFORM <thinform< th=""> <thinform< th=""></thinform<></thinform<>	OCATION	Dutton Park Station (QR land)/Portal (se	outhern)		CC	DORDINATES 503099.1	E; 695852	26.9 N
Image: Second	ROJECT No	FG6470 SURFACE RL 1	9.93m PLUNGE 9	0° DATE STAF	RTED 19/10/2017		1GA94	
PERF Sandy Clayer GRAVEL (Fill) Perform of the operation of the oper	IB No	HEIGHT DATUM A	HD BEARING	DATE COMPLE	TED 21/09/2017	DRILLER G	ieodrill	
1 18.73 18.73 Image: Second Clayey GAND (Fill) Dark grey, and hown, div, loose. Fine to coarse grained, sub angular to sub rounded. Medium plasticity fines. Image: Second Clayey GAND (Fill) A Dark grey, div, loose. Fine to coarse grained, clayer to medium plasticity clayer, fine to medium gravel, sub angular to sub rounded gravel. Image: Second Clayer Fine to coarse grained, clayer to sub angular growth, the sade coarse grained, angular to sub angular gravel, trace sade Image: Second Clayer Fine to coarse grained, clayer to sub angular gravel, trace sade Image: Second Clayer Fine to sub angular gravel, trace sade Image: Second Fine Fine to sub angular gravel, trace sade			LITHOLOGY USCS WEATHERING	STRENGTH SPACING		AND		SAMPLES TESTS
7 12.93 Image: Second sec	¹ <u>18.73</u> 2	Sandy Clayey GRAVEL (Dark grey and brown, of Fine to coarse grained, to sub rounded. Mediu fines.	Fill) dry, loose. sub angular im plasticity Fill) Fill)					SPT
7 12.93 Image: Second sec	3		(SC)					SPT
0 12.93 7 12.93 8 F 9 9 9 9 9 9 9 9 0 0	⁴ <u>15.73</u> 5	Pale grey with Graver (Allow Pale grey with orange b soft to firm. Medium plasticity. With fine to medium g	prown, moist, — — rained, —					SPT
9 9 9.93 9 9.93 9 9.93 9 0 0 0 next sheet	6	sand.						SPT
9 9.93 9.93 Continued on next sheet	7 <u>12.93</u> 8	E Pale grey, moist, very s High plasticity. Trace fine grained, ang angular, gravel.	ular to sub					SPT
Continued on next sheet		yellow, hard.	сн			MC=:	N=46 72% PI= 52% 14% LS= 14%	SPT
REMARKS: Rip - Aspley Formation. Standpipe piezometer installed. LOGGED BY REVIEWED B	9.93	Continued on nex	t sheet	II				
	REMARK	KS: Rip - Aspley Formation. Stand	pipe piezometer ir	stalled.		LOGGED BY	REVIE	WED B

TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

														FINAL 0	2/03/2018
		ÈC.						GE	OTECHN	ICAL		BOREHOL	E No	CR	R701
			Qu	le	ensland			BO	REHOLE	LOG			Sheet	2 of 2	
	N.S.	K.	GO	Ve	ernment		SYM		GEOTECHNICAL TER REFER FORM F:GEO			REFERENC	E No	H:	12927
PROJE	СТ	Cros	s River	Rail	CRR2017 - Additional	Geotechnical In	vest	igatic	'n						
LOCAT	ION	Dutt	on Park	sta	tion (QR land)/Portal (southern)						COORDINATES 50	03099.1	E; 695852	26.9 N
PROJE	CT No	FG6	470		SURFACE RL	19.93m	PLU	NGE 9	0°	DATE STA	RTED 19/10/201	.7 GRID		/IGA94	
JOB N	0				HEIGHT DATUM	AHD	BEAF			DATE COMPL	ETED 21/09/201	.7	DRILLER G	Geodrill	
Ê			RQD				۲	Ű	INTACT	DEFECT		ADDITIONAL DA	ΓA		(0
DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	()% CORE REC%	SAMPLE	MATERIAL DESC	CRIPTION	ГІТНОГОСУ	USCS WEATHERING	STRENGTH ਜ਼ੵੑੑੑੑਸ਼ੵੑਸ਼ੵੑਸ਼ੵੑਗ਼ੵਗ਼	SPACING		AND TEST RESULTS	3		SAMPLES TESTS
-				G	Silty CLAY (Residual) Cont'd.		×						LL=	8, 30/130mm 61% PI= 40%	SPT
-					Cont d.		×		-	-				1.3% LS= 16% <75μm= 93%	
_								СН	-	-					
11							×_			 					
	8.40						×		+	-			14, 2	28, 32/90mm	-
_				н	CLAY trace Sand (Resi Pale grey, dry to mois	t, hard.			-	-					SPT
12					High plasticity, mediu sand.	m grained				 					
-									-	-					
_									-	-					-
13 										 			LL=	7, 30/130mm 72% PI= 53%	SPT
-								СН	-	-				0.2% LS= 16% <75μm= 88%	
-							E-			-					-
14										-					
-				L					-	-				30/130mm	
-				J					-	-					SPT -
- 15	4.93		(100)		SILTSTONE (Rip)		× × × × ×			F					
-					XW: Recovered as CL moist to wet, hard.	AY: Pale grey,	$\begin{array}{c} \times \times \\ \times \times \\ \times \times \\ \times \times \\ \times \end{array}$								-
-			100 (100)		Friable, low to mediu	m plasticity.	<								-
16							× × × × × × × × × × × × × × × × × × ×		- 1	F					
-							****	xw		E. -					-
-			100				(X X X)								
17			(33) 100				~ × × × ×		- 1	F				21/09/2017	
-			(50)				****								-
-	2.23	$\left\{ \left \left \right \right \right\}$			SANDSTONE (Rip)		* *				17.75m-17.81m: E	3P: 20°, PI/Ro, OP,		0)=0.28 MPa	 D (17.74m)
- 18	1.78		100		MW: Pale grey, fine to grained, indistinctly b		•••	MW	MH	vc	Cn 18.00m-18.10m: - Cn.	J: 70°, Stp/Ro, OP,	ls(5	50)=0.76 MPa 50)=1.10 MPa 50)=0.13 MPa	A (17.75m <u>)</u> D (17.94m)_
Ē					generally medium to Borehole complete	high strength.			-	- - -					A (17.95m)
					Sorenoie complete	- 30 10:15/11				-					-
- - 19										-					-
									-	-					-
-				1						-					-
-			<u> </u>	1											
RI	emar	KS: F	Rip - A	spl	ey Formation. Star	ndpipe piezor	net	er in	stalled.			LOGGEI) BY	REVIE	WED BY
												GP		S.	Foley
						TMR G	EOTECH	INICAL BO	REHOLE LOG - CREATED W	ITH HOLEBASE SI					

								FINAL 06/03/201
1 TH	EX.C	3		STAND	PIPE		BOREHOLE No	CRR701
	1 2 (Queensland	I	NSTALLATI	ON LOG		Sheet	1 of 2
1SS	R	🖞 Government	s	FOR GEOTECHNICAL YMBOLS REFER FORM F:			PIEZOMETER No	CRR701
OJECT			chnical Inve	stigation				
CATION	-	Dutton Park Station (QR land)/Portal (southe		ougation.			coordinates 503099.1	F: 6958526.9 N
OJECT No	_	FG6470 SURFACE RL 19.93r		unge 90°	DATE ST	ARTED 19/10/202		
B No	_	HEIGHT DATUM AHD		ARING °		LETED 21/09/201		
B NO	-		DE/	ARING	DATE COMP	LETED 21/05/20.		
E R.L.	LOGY				Stand	pipe Constr	uction Details	
(E) R.L. (m)	ГІТНОГОGY	MATERIAL DESCRIPTION		Depth (m) /RL (AHD)	50mm PVC 0 Stick Up		Backfill D	etails
1 18.73 2		Sandy Clayey GRAVEL(Fill) Dark grey and brown, dry, loose. Fine to co grained, sub angular to sub rounded. Med plasticity fines. Gravelly Clayey SAND(Fill) Dark grey, dry, loose. Fine to coarse grained. Low to medium plasticity clay. Fine to med gravel, sub angular to sub rounded gravel. CLAY with Gravel(Alluvium) Pale grey with orange brown, moist, soft t Medium plasticity. With fine to medium grained, angular to s angular gravel, trace sand. From 5.5m: Becoming stiff Silty CLAY(Residual) Pale grey, moist, very stiff. High plasticity. Trace fine grained, angular to sub angular, From 8.15m: becoming pale yellow, hard.	dium dium o firm. ub				Grout: Cement / E	Bentonite mix
9.93	×	Continued on next sheet						
REMAR	KS:		meter instal	led.			LOGGED BY	REVIEWED BY
							GP	S. Foley
			ThaD CTAN	DPIPE INSTALLATION LOG - CREATE				

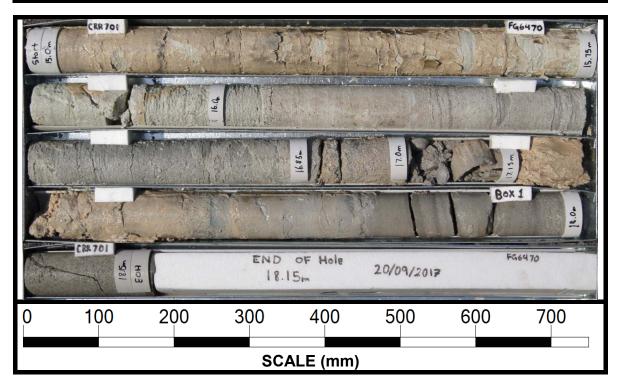
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							FINAL 06/03/2013
	* 34	e ante	5 7 Mil	STANDF	PIPE	BOREHOLE No	CRR701
		1 2 2 0	Queensland	INSTALLATI	ON LOG	Sheet	2 of 2
	ß	K	f Government	FOR GEOTECHNICAL SYMBOLS REFER FORM F:C		PIEZOMETER No	CRR701
ROJE	T	C	ross River Rail CRR2017 - Additional Geotechnica	I Investigation			
CAT	ON	D	outton Park Station (QR land)/Portal (southern)		(COORDINATES 503099.1	E; 6958526.9 N
OJE	CT No	F	G6470 SURFACE RL 19.93m	plunge 90°	DATE STARTED 19/10/2017	GRID DATUM	MGA94
B No	,		HEIGHT DATUM AHD	BEARING	DATE COMPLETED 21/09/2017	DRILLER	Geodrill
(m)		УGV			Standpipe Constru	ction Details	
עברוח (m)	R.L. (m)	ГІТНОГОGY	MATERIAL DESCRIPTION	Depth (m) /RL (AHD)	50mm PVC Class No. 18 Stick Up = 0.00m	Backfill D	etails
		×	Silty CLAY(Residual) Cont'd.	10.60m / 9.33 AHD			
11	8.40			11.60m / 8.33 AHD		Bentonite	Seal
			CLAY trace Sand(Residual) Pale grey, dry to moist, hard.	12.00m / 7.93 AHD		Top of Slott	ed Pine
12			High plasticity, medium grained sand.	12:001171:33 ATD			
14	4.93	XX XX	SILTSTONE Recovered as CLAY: Pale grey, moist to wet, harc Friable, low to medium plasticity.	J.		Filter: Washed / (Graded Sand
16	2.23	***************************************	SANDSTONE	21/09/2017			
18	1.78	::	Pale grey, fine to coarse grained, indistinctly bedded, generally medium to high strength.	18.00m / 1.93 AHD 18.15m / 1.78 AHD		Drill Cut	ings
19			Borehole completed at 18.15m				
RE	MAR	≀KS:	Rip - Aspley Formation. Standpipe piezometer	installed.		LOGGED BY	REVIEWED BY
						GP	S. Foley

CORE PHOTO LOG DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Cross River Rail CRR20	17 – Geotechnical Inve	stigation
Project No.	FG6470	Date	21/09/2017
Borehole No.	CRR701	Reference No.	H12927
Location	Dutton Park Station	Start Depth (m)	15
Submitted By	M. de Gee	Finish Depth (m)	18.15



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	ail			FG6470			
Site ID / Bo	rehole No.	CRR701				Surface RL	19.93			
Geologist		GP				Date	21/09/2017			
		•				Page	1	of	1	
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		
16.88	handlin	ng break								
16.9	handlin	ng break								
17-17.15	handlin	ng break								
17.75	BP	20	PI	Ro	VII	OP	Cn			
17.81	BP	20	PI	Ro	VII	OP	Cn			
17.87	DI									
18.00-18.10	J	70	Stp	Ro	I	OP	Cn			

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