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# Queensland

### **GEOTECHNICAL BOREHOLE LOG**

**FINAL** 11/12/2018

BOREHOLE No **CRR907** 

Sheet 1 of 3

		1%	\$	Ċ	ıO'	ve	ernment	SYI		GEOTECHNICAL TERN REFER FORM F:GEOT			REFERENCE No	H1	3107
ROJE	СТ	(	Cros	ss Riv	er F	Rail	(CRR) Project - Additional Geotechnic	al Ir	nvesti	gation					
OCAT	CATION Clapham Yard COORDINATES 501291.2 E; 6954219										19.1 N				
ROJE	CT No		FG	5470			surface rl 8.70m	PLUNGE 90° DATE STARTED			DATE START	TED 27/06/2018 GRID DATUM MGA94			
OB No	)	-	HEIGHT DATUM AHD								DATE COMPLET	LETED 29/06/2018 DRILLER Geodrill			
DEPTH (m)	R.L. (m)	AUGER	ASH BORING	()	QD % PRE C %	SAMPLE	MATERIAL DESCRIPTION	LITHOLOGY	USCS	INTACT STRENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
	8.40	<b>∢</b> U	) <b>&gt;</b> (		$\dashv$		Silty Sandy GRAVEL (Fill)		(GM)		1.1.1.1.1.1				DIST
- 1						D	Dark grey and brown, dry, loose to medium dense. Fine to coarse, subangular to sub-rounded. Fine to coarse grained sand. Trace rail ballast. Minor Silty CLAY lenses throughout. Silty CLAY (Alluvium) Red-brown and grey, moist, stiff. High plasticity. from 1.0m: very stiff to hard	× × × × × × × × × × × × × × × × × × ×	(CH)	+ + + + + + + + + + + + + + + + + + +	-			4, 13, 20 N=33	DIST DIST  DIST  SPT
	6.50	1	П				Sandy CLAY (Alluvium)	×_		‡					=
- 3						F	Grey minor yellow-brown mottling, moist, very stiff to hard. Medium to high plasticity. Fine grained sand. Trace silt. Occasionally interbedded with Silt and Sand layers <400mm.			± ± ± ±	-			7, 12, 17 N=29	SPT
										丰				10, 15, 19	
						G				<b>#</b>			LL=	N=34 51% PI= 32%	SPT
- 4					Ī					$\pm$	-				
						Н				1				8, 15, 17 N=32	SPT
- 5										<u> </u>	-				
						I			(CI)	+			LL=	7, 16, 23 N=39 37% PI= 19%	SPT
- 6											-				
7						J					-			10, 16, 16 N=32	SPT
- 8										<u>+</u> +	-				 
	-0.10					K	Clayey GRAVEL (Alluvium)			+			17, 3	0, 30/80mm	SPT
- 9	-0.60						dense. Medium, rounded to sub- rounded. Trace fine to coarse grained sand. Sandy GRAVEL (Alluvium)		(GC) (GW)		_	9.30m-9.80m: Grey brown. wet, dense. grained. Some fine gravel. Trace clay.	Fine to coarse		- - - - - - - - -
							Continued on next sheet								
REMARKS: Rip - Aspley Formation										LOGGED BY	WED BY				
													MH	S.F	oley

## **Queensland** Government

#### **GEOTECHNICAL BOREHOLE LOG**

FINAL 11/12/2018 **CRR907 BOREHOLE No** 

Sheet 2 of 3 FOR GEOTECHNICAL TERMS AND H13107 REFERENCE No SYMBOLS REFER FORM F:GEOT 017/8-2014 Cross River Rail (CRR) Project - Additional Geotechnical Investigation PROJECT Clapham Yard COORDINATES 501291.2 E; 6954219.1 N LOCATION FG6470 SURFACE RL 8.70m PLUNGE 90° DATE STARTED 27/06/2018 GRID DATUM MGA94 PROJECT No HEIGHT DATUM AHD DATE COMPLETED 29/06/2018 DRILLER Geodrill JOB No BEARING S RQD USCS WEATHERING ADDITIONAL DATA INTACT DEFECT SPACING SAMPLES TESTS Ξ LITHOLOGY AND TEST RESULTS STRENGTH RΙ DEPTH SAMP MATERIAL DESCRIPTION CORE REC % ᇳᆂᆂᄝᅴᅿᆿᆙᇬᇬᄝᇂᇂᇕ 4, 27, 30/130mr Sandy GRAVEL (Alluvium) SPT Cont'd. Orange-brown and grey, moist, very dense. Fine to medium, sub-rounded to sub-angular. Medium to coarse grained sand. Trace clay. Trace silt. 15, 30/75mn SPT М (GW) from 12.0m: Minor interbedded sand layers -5.30 Clayey SAND (Alluvium) Orange-brown, moist, very dense. Fine to medium grained. Trace Silt. 30/110mm SPT Ν Minor interbred Sandy CLAY layers. (SC) 15 -7.10 SANDSTONE (Rip) XW -7.35 16 30/50mn (93) XW: Recovered as grey, medium to coarse grained sand. Fine to D (16.26m)-HW medium sub-angular gravel. Some A (16.28m) ☐ 16.53m-16.57m: XW Cly XW Is(50)=0.02 MPa Is(50)=0.09 MPa dlay. SANDSTONE (Rip) 16.81m-16.83m: XW Cly MW SW: Grey, alternating fine grained Is(50)=0.09 MPa Is(50)=0.31 MPa and medium to coarse grained beds, D (17.13m)\_ A (17.14m) 100 (93) thinly to medium bedded, medium strength. -BP: 5°-10° (3-4/m), PI/Sm, TI to CD, SW Cn, trace FeSt, trace Cly Ct. From 17.15: interbedded UCS=23.20 MPa (18.12m) \_ E=4.9 GPa v= 0.042 Conglomerate layers throughout D (18.27m)-¬ 18.32m-18.45m: HW BZ From 17.30: interlaminated minor HW A (18.28m)\_ Is(50)=0.64 MPa coal layers throughout. Is(50)=1.10 MP 19 SW Is(50)=0.35 MPa D (19.25m). Is(50)=0.68 MPa A (19.28m) Is(50)=0.24 MPa D (19.95m) A (19.96m) Continued on next sheet REMARKS: Rip - Aspley Formation LOGGED BY **REVIEWED BY** MH S.Foley TMR GEOTECHNICAL BOREHOLE LOG - CREATED WITH HOLEBASE SI

# Queensland

#### **GEOTECHNICAL BOREHOLE LOG**

**FINAL** 11/12/2018

BOREHOLE No **CRR907** 

Sheet 3 of 3

E		<b>%</b>		GO	ve	ernment		SY				RMS AND OT 017/8-2014		REFERENCE No	H:	13107
PROJECT		С	ross	River I	Rail	(CRR) Project - Additio	onal Geotechni	cal Ir	nvesti	gation						
LOCATION	I	С	laph	ıam Yaı	rd									COORDINATES 501291.2	E; 69542	19.1 N
PROJECT No FG6				170		SURFACE RL	8.70m	PLU	INGE S	0°		DATE STAR	27/06/2018	8 GRID DATUM	MGA94	
JOB No						HEIGHT DATUM	AHD	BEA	RING °			DATE COMPLE	TED 29/06/2018	8 DRILLER (	Geodrill	
DEPTH (m)	R.L. (m)	AUGER	WASH BURING SORE DRILLING	RQD ()% CORE REC%	SAMPLE	MATERIAL DESC	CRIPTION	LITHOLOGY	USCS WEATHERING	STRI	ENGTH	DEFECT SPACING		ADDITIONAL DATA AND TEST RESULTS		SAMPLES TESTS
21	4.73	A A		100 (99)		SANDSTONE (Rip) SW: Cont'd  from 21.10m: mainly grained  Borehole complete			sw		M	M W			50)=0.82 MPa 50)=0.52 MPa 50)=0.43 MPa 55=10.00 MPa 60)=0.43 MPa 50)=0.45 MPa 50)=0.65 MPa 50)=0.61 MPa	A (21.06m)
DEV/	1 V D L	<u>ر</u> ر.	D	in - ^-	spl	ey Formation								100000	DE: ""	WED DY
VEIV	ıAKİ	<b>\</b> 3:	K	ıh - A;	sh16	zy FUITHAUUH								LOGGED BY	+	WED BY
														MH	S.	Foley

### **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 - Sta	ge 2		Project No. FG6470					
Site ID / Bor	rehole No.	CRR907				Surface RL 8.7					
Geologist		MARK HAY	ES			Date	28/06/2018				
						Page	1 of				
Traverse	Туре	Dip ° / Dip	Planarity	Roughness	Roughness		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	OP /	St /	CZ/			
depth	FP/	horizontal	Un /	Sm /		FL/	Vr/	HFZ /			
(rock core)	J etc.	(rock core)	PI	SI		TI	Ct 1	AZ			
16.49	В	5°	PI	Sm	VIII	CD	CN				
16.56	В	5°	Un	Sm	V	CD	St	FE			
16.60	В	5°	PI	Sm	VIII	FL	Ct	CLAY 40mm			
16.81	В	5°	PI	Sm	VIII	CD	CN				
17.05	В	5°	PI	Sm	VIII	CD	CN				
17.32	В	5°	Un	Sm	VIII	CD	CS10mm				
17.52	В	5°	Un	Sm	VIII	CD	CN				
17.57	В	10°	Un	Sm	V	OP	CS10mm				
17.61	В	5°	PI	Sm	VIII	CD	CS10mm				
17.72	В	0°	PI	Sm	VIII	CD	CN				
18.37	J	60°	Un	Sm	V	OP	CN				
18.40	В	10°	PI	Sm	VIII	CD	CN				
18.42	В	10°	PI	Sm	VIII	CD	CS10mm				
18.43	В	10°	PI	Sm	VIII	CD	CS10mm				
18.46	В	15°	PI	Sm	VIII	CD	CN				
18.57	В	10°	PI	Sm	VIII	CD	CN				
18.76	В	5°	PI	Sm	VIII	CD	CN				
19.15	В	5°	Un	Sm	V	CD	CN				
19.80	J	5°	Un	Sm	V	CD	CS10mm				
20.43	В	5°	PI	Sm	VIII	FL	Ct	CLAY 20mm			
20.90	В	5°	PI	Sm	VIII	CD	CN				
23.00	В	5°	PI	Sm	VIII	CD	CN				

### CORE PHOTO LOG DEPARTMENT OF TRANSPORT AND MAIN ROADS GEOTECHNICAL SECTION



Project Name	Cross River Rail CRR 2018 – Geotechnical Investigation							
Project No.	FG6470	Date	28.06.18					
Borehole No.	CRR907	Reference No.	H13107					
Location	Clapham Yard	Start Depth (m)	16.05					
Submitted By	J. Armstrong	Finish Depth (m)	23.43					



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