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CLIENT: AECOM Australia Pty Ltd PROJECT: Cross River Rail - Phase 1 LOCATION: Cope Street, Annerley

SURFACE LEVEL: 22.5 m AHD **EASTING:** 502818 **NORTHING:** 6958055 DIP/AZIMUTH: -90°/--

BORE No: CRR102 PROJECT No: 74321.00 **DATE: 22 April 2010** SHEET 1 OF 4

		Description	Degree of Weathering .º	Rock Strength	Fracture	Discontinuities	Sa	mplin	g & I	n Situ Testing
귒	Depth (m)	of	Meathering of Degree of D	3 2 4 #	Spacing (m)	B - Bedding J - Joint	Туре	Core Rec. %	۵ %	Test Results &
		Strata	WH W W W W W	Ex Low Very Low Low Medium High Very High Ex High	0.00 0.10 1.00 1.00	S - Shear D - Drill Break	1	οæ	α,	Comments
22	0.1	ASPHALTIC CONCRETE FILLING - moderately compacted, grey sandy gravel filling, medium to coarse grained sand and fine to coarse gravel fraction with some silty clay, moist SILTY CLAY - stiff, grey medium plasticity silty clay with some fine to medium grained sand and trace of fine gravel, moist (Residual) - stiff to very stiff, orange-brown and grey mottled, medium to high plasticity silty clay with trace of fine								
-	1.4	grained sand, moist (Residual) SANDY CLAY - stiff to very stiff,					S			3,6,9 N = 15
	-2	orange-brown and grey mottled, low to medium plasticity sandy clay, fine to medium grained sand fraction with some silt, moist (Residual)					Α	,		
20	2.55 3	SANDSTONE - very low strength, moderately weathered, grey medium to coarse sandstone, bedding at 10° some fine conglomerate					S	Trans.		22,39/120mm (sample split into two bags)
19						(See attached sheet for abbreviations)	i de la companya de l	The state of the s		
-	-4 4.0	SANDSTONE - extremely low strength, slightly weathered, fractured, grey fine to medium sandstone, bedding at 10°, sporadic bands of coarse sandstone				4.15m: J, 50°, pl, sm, cf 8mm	С	100	0	
181	Typywyy Lance 1	- 100mm coal seam, bedding at 20°				4.45m: B, 10°, pl, sm 4.57m: frag to 4.67m, di \4.65m: B, 20°, pl, ti 4.66m: J, 20°, un, sm, cc	С	100	20	

LOGGED: MAH CASING: HW to 4.0m **RIG: MD300** DRILLER: Taberner

TYPE OF BORING: Auger 0.00-4.00m, NMLC Core 4.00-20.00m WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: PVC standpipe installed

SAMPLING & IN SITU TESTING LEGEND

Pocket penetrometer (kPa)
PD Photo ionisation detector
S Standard penetration test
PL Point load strength is(50) MPa
V Shear Vane (kPa)
Water seep
Water level Auger sample
Disturbed sample
Bulk sample
Tube sample (x mm dia.)
Water sample
Core drilling





CLIENT: AECOM Australia Pty Ltd PROJECT: Cross River Rail - Phase 1 LOCATION: Cope Street, Annerley

SURFACE LEVEL: 22.5 m AHD **EASTING:** 502818 NORTHING: 6958055 DIP/AZIMUTH: -90°/--

BORE No: CRR102 PROJECT No: 74321.00 **DATE: 22 April 2010** SHEET 2 OF 4

П	Depth	Description	Degree of Weathering 글	Rock Strength	Fracture Spacing	Discontinuities	Sa	ımplir	1g & l	n Situ Testing
귙	(m)	of Strata	Degree of Weathering State	Strength Cow Cow Low High High Ex High Water Water	(m) (m)	B - Bedding J - Joint S - Shear D - Drill Break	Type	Core	RaD %	Test Results &
	5.0	SANDSTONE (as before)			1 1		С	100	20	Comments
		- 200mm carbonaceous siltstone interbed				5.2m: frg to 5.40m, di	С	100		
121	5.5 5.6	CORE LOSS				5.5m: CORE LOSS: 100mm				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-6	- 300mm extremely low to very low strength, light grey siltstone interbed 30mm clay seam, bedding at 10° bedding subhorizontal				5.9m: B, 20°. pl, sm	С	94	50	PL(D) = 0.05MPa
1						6.25m: J, sv, un, sm, cf \ 3mm	ļ	<u> </u>		
16		- 300mm extremely low strength, light grey siltstone interbed			The second secon	6.35m: J, 20°, un, ro, lim 6.49m: J, 60°, un, ti, lim				
		- 100mm medium to high strength band	The second secon		The same water	\ 6.68m: B, 20°, un, sm 6.7m: frg to 6.81m, di				
	-7	- 120mm low to medium strength, highly weathered band	The state of the s		The state was about the state of the state o	7m: B, 10°, pl, sm	С	100	35	
15	•	- 50mm carbonaceous band				7.24m: B, 10°, pl, sm, cf 5mm 7.25m: J, sv, un, sm, lim to 7.46m				PL(A) = 0.03MPa PL(D) = 0MPa
	- 8 -	- 50mm clay band					С	100	0	
14		- 250mm fine to coarse volcaniclastic sandstone interbed				8,4m: J, 45°, pl, sm, cf 10mm	The state of the s			
		- 50mm clay seam								
13	9	- fresh				8.9m: J, sv, un, ro, lim to 9.20m	C	100	20	
ŀ	-									
	-									PL(A) = 0.09MPa PL(D) = 0.02MPa

LOGGED: MAH CASING: HW to 4.0m RIG: MD300 **DRILLER:** Taberner

TYPE OF BORING: Auger 0.00-4.00m, NMLC Core 4.00-20.00m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: PVC standpipe installed

SAMPLING & IN SITU TESTING LEGEND

Auger sample
Disturbed sample
Bulk sample
Tube sample (x mm dia.)
Water sample
Core drilling

pp Pocket penetrometer (kPa)
PlD Photo ionisation detector
S Standard penetration test
PL Point load strength Is(50) MPa
V Shear Vane (kPa)
D Water seep
Water level





CLIENT: AECOM Australia Pty Ltd PROJECT: Cross River Rail - Phase 1 LOCATION: Cope Street, Annerley

SURFACE LEVEL: 22.5 m AHD **EASTING:** 502818 NORTHING: 6958055 DIP/AZIMUTH: -90°/--

BORE No: CRR102 PROJECT No: 74321.00 DATE: 22 April 2010 SHEET 3 OF 4

		Description	Degree of Weathering	.≘ _	Rock Strength	Fracture	Discontinuities				n Situ Testing
킾	Depth (m)	of		irapt Log	Ex Low Very Low Very Low Medium Medium High Very High Ex High Water	Spacing (m)	B - Bedding J - Joint	Туре	ore %	ROD %	Test Results &
			EW HW MW SW FS	U	Ex Low Media High Very Very Very Very Very	0.05 0.10 1.00	S - Shear D - Drill Break	Ļ	ŏĕ	Ĕ.	Comments
-	10.0	SANDSTONE (as before)					40.0 1.050 -1 15				
12		- medium strength, moderately to slightly weathered, fractured, grey and orange-brown sporadic carbonaceous laminae bedding at 10-20°					10.2m: J, 65°, pl, ro, lim 10.4m: J, sv, un, h, lim to 10.65m 10.5m: - drilling induced breaks throughout core	С	100	20	
ŀ		- extremely to very low strength		• • •	5		to 20.00m				
ŀ		- fresh, grey									
-	-11	- bedding at 10°	4								
		- sporadic bands of medium strength sandstone						С	100	19	PL(A) = 0MPa PL(D) = 0MPa
			The time them the time the time that time the time time the time time the time time time time the time time time time time time time tim			Care and come and come	»>		The state of the s		
	-12	- slightly weathered	The state of the s		when the control of t	The state of the s				1	
2	•							С	100	35	
Ì		- bedding at 20°									
Ì	- 13	- bedding subhorizontal		: :::							
		- medium strength									PL(A) = 0.59M PL(D) = 0.99M
	- 13.3 - 13.4	CONGLOMERATE - high strength, noderately weathered, fractured,		\$?			13.4m: CORE LOSS:				<u> </u>
6	-	grey and orange brown medium to coarse conglomerate CORE LOSS					500mm	Annual Annua	***************************************		T T T T T T T T T T T T T T T T T T T
	- 13.9 - 14	CONGLOMERATE - high strength, moderately weathered, fractured, grey and orange brown medium to coarse conglomerate		000				C	62	48	PL(D) = 1.05M
8				000			14.35m: J, 35°, un, ro, \lim 14.43m: J, 45°, un, ro, \lim	LAB LAB UCS			PL(D) = 1.85M PL(A) = 1.56M PL(A) = 3.46M Irregular Lur 9.574 MPa
	14.7	SILTSTONE - extremely low strength, fresh, slightly fractured dark grey and grey banded siltstone, bedding subhorizontal to		<u>e</u>			14.52m: J, 80°, un, ro, lim 14.7m: - drilling induced breaks common to 20.00m	С	100	0 0	

LOGGED: MAH CASING: HW to 4.0m RIG: MD300 **DRILLER:** Taberner

TYPE OF BORING: Auger 0.00-4.00m, NMLC Core 4.00-20.00m WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: PVC standpipe installed

Auger sample
Disturbed sample
Bulk sample
Tube sample (x mm dia.)
Water sample
Core drilling

SAMPLING & IN SITU TESTING LEGEND
pp Pocket penetrometer (kPa)
Ploto ionisation detector
S Standard penetration test
PL Point load strength is(50) MPa
V Shear Vane (kPa)
V Water seep Water vel





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BORE No: CRR102 PROJECT No: 74321.00 **DATE: 22 April 2010** SHEET 4 OF 4

	Description	Degree of Weathering	ic	Rock Strength	Fracture	Discontinuities	Sa	mplir	1g & l	n Situ Testing
군 Depth (m)	of Strata	Degree of Weathering	Grapt Log	Ex Low Very Low Low Medium High High Ex High Water	Spacing (m)	B - Bedding J - Joint S - Shear D - Drill Break	Туре	Core Rec. %	RQD %	Test Results & Comments
15.0°	20°, with some carbonaceous material on bedding with very low to low strength bands SILTSTONE - extremely low strength, fresh, slightly fractured dark grey and grey banded siltstone, bedding subhorizontal to 20°, with some carbonaceous material on bedding with very low to low strength bands						C	100		
-17 17.0	CORE LOSS		* SECONDARIO			17m: CORE LOSS: 800mm	The state of the s		The state of the s	
17.8	strength, fresh, slightly fractured dark grey and grey banded siltstone, bedding subhorizontal to 20°, with some carbonaceous material on bedding with very low to low strength bands bedding subhorizontal						C	73	0	

Bore discontinued at 19.98m

LOGGED: MAH RIG: MD300 **DRILLER:** Taberner CASING: HW to 4.0m

TYPE OF BORING: Auger 0.00-4.00m, NMLC Core 4.00-20.00m

WATER OBSERVATIONS: No free groundwater observed whilst augering

REMARKS: PVC standpipe installed

SAMPLING & IN SITU TESTING LEGEND

pp PD Pocket penetrometer (kPa)

pp Pocket penetrometer (kPa)

Photo ionisation detector

Standard penetration test
Water seep

Water seep

Water seep

Water seep Auger sample
Disturbed sample
Bulk sample
Tube sample (x mm dia.)
Water sample
Core drilling









