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SOIL SURVEYS

Easting: 503210

Northing: 6960934 RL: -5.76 m

BOREHOLE RECORD SHEET Location Number: BH 313

Project Number: 110-12936 Project Name: Cross River Rail

Location: Brisbane Client: AECOM

Logger: DA/DT Operator:	DA Machine: Scout 2 Date: 04/		Page: 1 OF 6
Drilling Method Depth Depth	Description	Weathering Strength Estimated Spacial	ng 👸 🛱 Samples and Remarks
<u>- 1.0</u> - 1.0 - 2.0 - 2.0	Silty CLAY (CH) Very soft, high plasticity, dark grey, with some organics.		
3.00 3.00 1.00	Clayey SAND (SC) Very loose, fine to medium grained, dark grey, high plasticity fines.		
TOO	SAND (SP) Medium dense, fine to medium grained, grey and brown.		!
Comments:	Defects - 1.54m : F,60° P,RO,C	Wathering Grades RS-Residual Soil XW - Extremely weathered DW - Distinctly weathered	Samples
1) Drilled from floating barge - all driver bed level. 2) Note: the coring not NMLC. 3) Borehole grouted or Water First Noted Water Steam	peritor inced was NQ3 completion. B' Bedding Weg C - Circulturer C - System - C - Constituer - C - Silverandes C - Coase C - C C - C C - C - C C -	on Oxide on Oxide on Oxide on Oxide SW - Slightly weathered FR - Fresh Rock Strength wustz WW - Very weak W - Weak wusted withdertified mineral on Oxide W - Weak W - Weak W - Weak	SPT Approved: Disturbed Sample Date:

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Date: 04/01/2012

Page: 2 OF 6

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					0000		S/V/			-		
	5			F 20.0								=
	Coi					Defects - 1.54m : F,60°,P,R,O,C		RS - Residual So XW - Extremely weat	hered	ample	es	
	1) C rive	rille r be	ed fro	m floating barge - (el. 2) Note: the co	all depth ring meth	s measured from 100 used was NQ3 Depth (m) Type Dip (deg) Planarity Roughness Aperature Infill Planarity C-Curtilinear L-Slickensides C-Closed C-Clay seam D-Discontinuous P-Polished F-Filled F-Front	Dvide			US	0	
	not	NM	ILC. 3	3) Borehole groute	d on con	PIETION. P. Palmar R R. Rough N Cleam K Calm J Joint J Joint T Stepped L Cleavage L Cle	nte nite tz ndary mineral	Rock Streng	th	SF	τĪ	
Water First Noted — Water Steady Level 2- Decomposed Zone 2- Clean VS - Very strong ES _ Entremely strong						R. Fracture U - undulating S. Seco S. Shear zone U - Unid T. Conflact V - We V - Vain X - Carh	entified mineral athered rock onaceous	S - Strong	^{ng} D		_	
	ğ <u>-</u> Σ-\	Wate	er Firs	st Noted Water	Steady Le	Vel Z - Decomposed Zone Z - Clear D1 - Drilling Induced break	n	VS - Very strong				Date:

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SOIL SURVEYS

Logger: DA/DT

Easting: 503210

Northing: 6960934

Operator: DA

Machine: Scout 2

RL: -5.76 m

BOREHOLE RECORD SHEET

Location Number: BH 313

Project Number: 110-12936 Project Name: Cross River Rail

Location: Brisbane Client: AECOM

Page: 3 OF 6 Date: 04/01/2012

Logger		VD1 Operato		Machine. Scout 2 Date. 04/0						rage. 3 Of 0
Drilling Met		Depth	Graphic	Description	Weatherir	Strength g Estimated RS W W MS S VS ES	Defect Spacing	Rec (%)	RQD	Samples and Remarks
				fractures. Clasts are fine gravel sized.	FR					19.75-20.09 m; DI, 2°, S, R, O, Z 20.4m, Is50 = 0.26 MPa
			0000	CONGLOMERATE, coarse grained, pale light grey, speckled blue grey, granular, medium bedded, moderately widely spaced fractures. Clasts are medium gravel sized, sub-rounded, of siltstone, sandstone and quartz. Clast supported. MUDSTONE, fine grained, dark grey, banded				100	73	21.03-21.30 m; B, 6°, P, S, O, Z
			000000000000000000000000000000000000000	granular, thinly bedded, very closely to moderately widely spaced fractures. CONGLOMERATE, coarse grained, pale light grey, speckled blue grey, granular, medium						23.4m, Is50 = 0.9 MPa
oped by Datgel		23.72 - 24.0 - 24.46		Clasts are medium gravel sized, sub-rounded, of siltstone, sandstone and quartz. Clast supported. CONGLOMERATE, coarse grained, pale light grey, speckled blue grey, granular, thinly bedded, moderately widely spaced fractures, thinly bedded, medium grained sandstone from 24.21m to 24.31m. Clasts are medium gravel sized,				99	92	
6 NEW.GPJ <-DrawingFile>> 21/05/2012 14:32 8.30.002 Developed by Datget			000000000000000000000000000000000000000	Clast supported. CONGLOMERATE, coarse grained, pale light grey, speckled blue grey, granular, medium bedded, closely spaced to moderately widely						22.59-27.84 m; DI, 5° , S, R, O, Z
			000000000000000000000000000000000000000	CONGLOMERATE, coarse grained, pale light grey, speckled blue grey, granular, medium bedded, closely spaced to widely spaced fractures. Clasts are fine to coarse gravel sized, sub-rounded, of siltstone, sandstone, phyllite and quartz. Clast supported. Thin beds of siltstone				100	78	26.64m, Is50 = 0.24 MPa
SOIL SURVEY BOREHOLE LOG 111-1283)	CONGLOMERATE, coarse grained, light brown						27.89 m; B, 7° , P, S, O, Z 28.21 m; DI, 6° , S, R, O, Z 28.30 m; DI, 6° , S, R, O, Z 28.56 m; DI, 66° , S, R, O, Z
2012-05.GLB Log SOIL SUI		<u>2</u> 9.0	000000000000000000000000000000000000000	matrix with grey clasts, granular, medium bedded, closely to moderately widely spaced fractures. Clasts are coarse gravel sized, sub-rounded, of siltstone, sandstone and quartz, with some medium gravel clasts. Clast supported.				100	90	28.89 m; J, 89°, S, R, O, Z 28.89 m; D, 10°, S, R, O, Z 29.7m, is50 = 0.43 MPa
SURVEYS 00 LIBRARY 2012-05 GIB 109 1) Drilled river been not NML		_ _ 30.0	0000	S measured from od used was NQ3 pletion. Defects - 1.54m : F,60°,P,R,O,C conduction of used was NQ3 pletion. Definition Type Type	te dary mineral htified mineral hered rock	Weathering Grr RS - Residual So XW - Extremely weat DW - Distinctly weath FR - Fresh Rock Streng W - Very weak W - Weak MS - Medium stro	ades Sa	U5 SP	0 	
তুঁ _ ⊈_Wate	er First	Noted Water S	teady Le	V-Ven X-Carbon 2 - Decomposed Zone Z-Cean D1-Diffing Induced break	no.Cous	S - Strong VS - Very strong ES - Extremely stro		Sampl		Date:

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SOIL SURVEYS

Logger: DA/DT

Easting: 503210 Northing: 6960934

RL: -5.76 m Machine: Scout 2 Operator: DA

BOREHOLE RECORD SHEET

Location Number: BH 313

Project Number: 110-12936 Project Name: Cross River Rail

Location: Brisbane Client: AECOM

Da

ate: 04/0	1/2012				Page:	4 OF	6
		o	Defect	()			

		Metho			į			Strength	Defect	(%)	D	Samples and
10	WB	NMLC	Casing De	epth	Graphic	Description	Weatheri	ng Estimated RS vw w ws s vs es	Spacing 20 60 200 600	Rec (%)	RQD	Remarks
				31.02		matrix with grey clasts, granular, medium bedded closely to moderately widely spaced fractures. Clasts are coarse gravel sized, sub-rounded, of siltstone, sandstone and quartz, with some medium gravel clasts. Clast supported. (continued)	FR			100	90	29.08-30.95 m; DI, 7°, S, R, O, Z
			32.0			SANDSTONE, fine grained, pale grey, granular, thinly bedded, closely spaced to moderately widely spaced fractures, with some siltstone and coal laminae.						31.21 m; BDI, 3°, P, S, O, Z 31.30 m; BDI, 3°, P, S, O, Z 31.35 m; J, 50°, P, S, O, Z 31.8m, Is50 = 1.89 MPa
				32.61		Interlaminated MUDSTONE and SILTSTONE,	-					31.46-32.62 m; DI, 3*, P, S, O, Z
			33.0 - - - - - - - - - - - - - - - - - - -			fine grained, alternating dark grey and pale grey/white grey, cryptocrystalline, thinly laminated fragmented to widely spaced fractures, with some fine grained sandstone laminae and quartz veins. Fine gravel conglomerate band from 37.97m to 38.0m, and medium to coarse gravel conglomerate band from 39.2m to 39.4m.				100	76	32.86 m; B, 3°, P, S, O, Z 32.95 m; J, 36°, P, S, O, Z 33.03-33.24 m; B, 2°, P, S, O, Z 33.31 m; J, 60°, P, S, O, Z 33.38 m; J, 80°, P, S, O, Z
002 Developed by Datgel												34.55m, Is50 = 0.84 MPa
936 NEW.GPJ < <drawingfile>> 21/05/2012 14:32 8:30.002 Developed by Datgel</drawingfile>										400	8	36.08 m; J, 38°, P, S, O, Z
s NEW.GPJ < <drawingfil< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>100</td><td>82</td><td>36.17 m; J, 19°, P, R, O, Z 33.34-39.17 m; B, 2°, P, S, O, Z 36.27 m; J, 46°, P, R, O, Z 36.40 m; J, 45°, P, S, O, Z 36.76m, Is50 = 1.34 MPa</td></drawingfil<>										100	82	36.17 m; J, 19°, P, R, O, Z 33.34-39.17 m; B, 2°, P, S, O, Z 36.27 m; J, 46°, P, R, O, Z 36.40 m; J, 45°, P, S, O, Z 36.76m, Is50 = 1.34 MPa
			- - - - - 38.0									37.3m, Is50 = 0.95 MPa
00 LIBRARY 2012-05.GLB Log SOIL_SURVEY_BOREHOLE_LOG 111-12			- - - - 39.0							100	57	
IBRARY 2012-05.GLB	;or	mmer	- 40.0	39.75	0000		1	Weathering Gra	ades Sa	ample	s	39.25 m; Dl, 4°, S, R, O, Z 39.41 m; J, 17°, P, S, O, Z 39.45 m; B, 8°, P, S, O, Z 39.58 m; B, 6°, P, S, O, Z 39.78 m; J, 50°, P, R, O, Z
ହ ା n) D	rilled f	rom floating	e: the cori	ng meth	s measured from nod used was NQ3 Dejth (m) Type Do (deg) Planarity Roughness Aperature hill Bedding C - Orbilliner L - Slickensides C - Closed C - Ch pletton. Dejth (m) Type Do (deg) Planarity Roughness Aperature hill Section C - Closed C - Ch Conditions P - Polished F - Find Pletton. Dejth (m) Type Do (deg) Planarity Roughness Aperature hill Section C - Children	Oxide cite	RS - Residual So XW - Extremely weath DW - Distinctly weath SW - Slightly weathe FR - Fresh Rock Strengt	ill hered hered ered	U5	0	
_1	<u>7</u> V	Vater F	irst Noted	⊈ _ Water S	steady Le	L - Cleavage U - Undulating U - Undu	artz ondary mineral dentified mineral sathered rock bonaceous an	VW - Very weak W - Weak MS - Medium stron S - Strong VS - Very strong ES - Extremely stro	DIS	sturbe Sample	d 📕	Approved: Date:

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SOIL SURVEYS

Easting: 503210

Northing: 6960934 RL: -5.76 m

BOREHOLE RECORD SHEET

Location Number: BH 313

Project Number: 110-12936 Project Name: Cross River Rail

Location: Brisbane Client: AECOM

Logger: DA/DT Operate	or: DA	Machine: Scout 2 Da	te: 04/01/2012	2				Page: 5 OF 6
Drilling Method R M M M M M M M M M M M M M M M M M M	Graphic	Description	Weatheri	ng Estimated Sp	efect pacing	Rec (%)	RQD	Samples and Remarks
	000000000000000000000000000000000000000	CONGLOMERATE, coarse grained, pale grey, speckled blue grey, granular, thinly closely to moderately widely spaced fract Clasts are fine gravel sized, sub-rounded siltstone, sandstone and quartz, with som medium gravel clasts. Clast supported. F with quartz laminations from 40.53m to 4 (continued)	bedded, rures. I, of ne Phyllite			100	57	40.07 m; DI, 8°, P, R, O, Z 40.29 m; DI, 2°, S, R, O, Z 40.4m, Is50 = 0.75 MPa 40.35 m; DI, 11°, S, R, O, Z 40.55 m; F, 23°, P, S, O, Z 40.71 m; J, 35°, P, R, O, Z
	0000	Interlaminated MUDSTONE and SILTST fine grained, alternating dark grey and pa grey/white grey, cryptocrystalline, thinly la closely to moderately widely spaced fract with some fine grained sandstone lamina mudstone band from 41.65m to 41.85m. CONGLOMERATE, coarse grained, pale	ale aminated, ures, ie, with a			100	51	41.18 m; DI, 8°, S, R, O, Z 41.23 m; DI, 5°, S, V, O, Z 41.42 m; J, 34°, P, R, O, Z 41.25-42.09 m; B, 7°, P, S, O, Z 41.90 m; J, 73°, S, R, O, Z 42.25 m; J, 56°, P, R, O, Z
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	grey, speckled blue grey, granular, closel fractures, thinly bedded. Clasts are coars sized, sub-rounded, of siltstone, sandstor quartz, some medium gravel clasts, clast supported. CONGLOMERATE, coarse grained, pale grey, speckled blue grey, granular, mediu	y spaced se gravel ne and light					42.4m, is50 = 0.5 MPa =
	000000000000000000000000000000000000000	thickly bedded, closely to widely spaced it Clasts are fine gravel sized, sub-rounded siltstone, sandstone and quartz, some migravel clasts, clast supported, with some sandstone and siltstone beds.	fractures. I, of edium			100	83	43.60 m; J, 50° , S, R, O, Z
	00000000000000000000000000000000000000							Z 44.45m, ls50 = 0.45 MPa
<u>46.0</u>								45.93 m; J, 15° , P, S, O, Z —————————————————————————————————
<u>-47.0</u> - 47.27		Interlaminated MUDSTONE and SILTST fine grained, alternating dark grey and pacryptocrystalline, thinly laminated, closely fractures. CONGLOMERATE, coarse grained, pale grey, speckled blue grey, granular. Clasts gravel sized, of siltstone, sandstone and	le grey, y spaced light s are fine		\otimes	100	95	46.78 m; B, 4°, P, R, O, Z 46.80 m; J, 26°, P, S, O, Z 47.20 m; B, 4°, P, S, O, Z 47.45 m; J, 50°, C, S, O, Z 47.74 m; DI, 15°, S, R, O, Z
<u>48.0</u>		some medium gravel clasts, clast suppor Interlaminated MUDSTONE and SILTST fine grained, alternating dark grey and pacryptocrystalline, thinly laminated, closely moderately widely spaced fractures, with fine grained sandstone laminae.	ted/ ONE, ale grey, to					48.24 m; J, 14°, P, S, O, Z 48.24 m; J, 21°, P, S, O, Z 48.48m, Is50 = 1.47 MPa 47.9649.47 m; B, 2°, P, S, O, Z
- 49.0 49.49 49.49		9 · · · · · · · · · · · · · · · · · · ·				100	79	49.15m, ls50 = 0.35 MPa 49.6m, ls50 = 1.46 MPa 49.71 m; F, 44°, P, R, O, Z
Comments: 1) Drilled from floating barge - a river bed level. 2) Note: the cornot NMLC. 3) Borehole grouted	:: 00	L - Cleanage T - Stepped V - Very rough R - Fracture U - Undufating S - Shear zone T - Contact	Aperature Infilia es C - Closed C - Clos F - Filled F - Iron Oxide N - Clacin K - Calcint O - Open L - Limonte S - Stain U - Unidentified mineral U - Unidentified mineral W - Weathered rock	Weathering Grades RS - Residual Soil XW - Extremely weathered DW - Distinctly weathered SW - Slightly weathered FR - Fresh Rock Strength VW - Very weak W - Weak MS - Medium strong		U50 SP1	· I	Approved:
—— Water First Noted —— Water S	Steady Lev		X - Carbonaceous Z - Clean	S - Strong VS - Very strong ES - Extremely strong		urbec ample		Date:

SOIL SURVEYS

Soil Surveys Engineering Pty. Limited Specialist in Applied Geotechnics

Location Number: BH 313

BOREHOLE RECORD SHEET

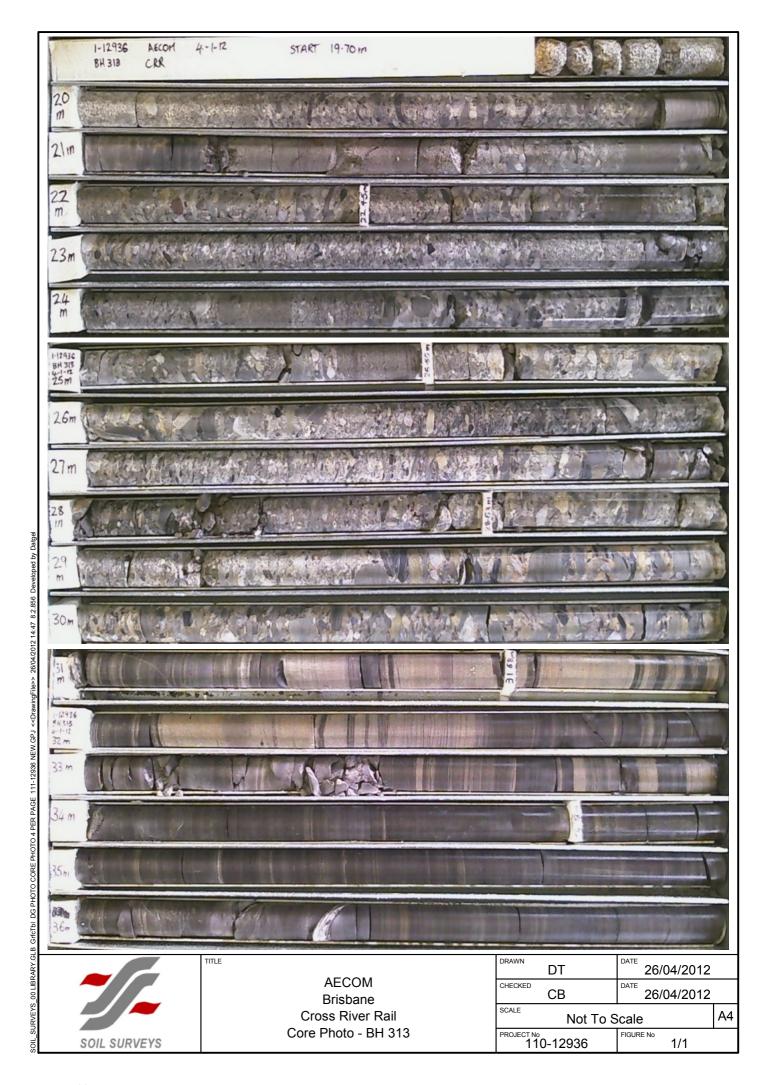
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Mackay: ph +61 7 4942 2907 mackay@soilsurveys.com.au Project Number: 110-12936 Project Name: Cross River Rail

Easting: 503210 Northing: 6960934 RL: -5.76 m

Page: 6 OF 6 Date: 04/01/2012 Logger: DA/DT Machine: Scout 2 Operator: DA

Location: Brisbane Client: AECOM

Interbedded SANDSTONE and CONGLOMERATE, medium to coarse grained, pale grey speckled blue grey and dark grey, granular, medium to thickly interbedded, closely spaced to moderately widely spaced fractures. Conglomerate has metasediments present throughout including quartzite and phyllite. 51.0	Logger. DF	VD1 Operator		Macilile.	Scoul 2	Date: 04/0	.,_5,_					rage. 0 Or 0	
Interbedded SANDSTONE and CONGLOMERATE, medium to coarse grained, pale grey speckled blue grey and dark grey, granular, medium to thickly interbedded, closely spaced to moderately widely spaced fractures. Conglomerate has metasediments present throughout including quartzite and phyllite. 51.0		Depth	Graphic		Description		Weathering	Estimated	Spacing	Rec (%)	RQD		
52.0			000000000000	CONGLOMER pale grey spec granular, medi spaced to mod Conglomerate throughout inc	RATE, medium to coa kled blue grey and d um to thickly interbed derately widely space has metasediments	ark grey, dded, closely d fractures. present	FR			100	79	50.44 m; J. 76° , S, R, O, Z 50.47 m; T, 19° , P, S, O, Z 50.58 m; J. 75° , P, S, O, Z 50.72m, Is50 = 1.05 MPa 50.80 m; T, 40° , C, R, O, Z 50.94 m; D, 80° , S, R, O, Z 51.07 m; J, 31° , P, R, O, Z 51.45m, Is50 = 0.91 MPa	
BOREHOLE BH 313 TERMINATED AT 54.30 m 55.0 56.0 57.0 58.0 59.0 59.0 59.0 59.0 60.0 Comments: Defects -1.54m; F.60*P.R.O.C. Westbering Grades Samples			000000000000000000000000000000000000000								80	52.25m, Is50 = 2.13 MPa 52.65 m; T, 37°, P, S, O, Z 51.30-54.15 m; DI, 4°, S, R, O, Z 52.83 m; F, 30°, P, S, O, Z	
55.0 56.0 57.0 58.0 59.0 60.0 Comments: Defects 1.54m: F.60*P.R.O.C. Weathering Grades Samples Research and Complex Services Research and Complex Samples		_	00000	BOREHOI F F	BH 313 TERMINATF	D AT 54.30 m						53.65m, is50 = 0.62 MPa 53.56 m; J, 46° , P, R, O, Z 54.10 m; J, 87° , U, R, O, Z	1
56.0 57.0 58.0 59.0 60.0 Comments: Defects 1.54m : F.60* P.R.O.C. Weathering Grades Samples Sam				SONERIOLE	3.1010 1.E.W.	2711 01.00 111							
57.0		<u>5</u> 6.0											
58.0 59.0 60.0 Defects - 1.54m : F,60°,P,R,O,C RS - Residual Soil RS - Residual Soil RS - Residual Soil		<u>5</u> 7.0											
59.0													
Comments: Defects - 1.54m : F,60°,P,R,O,C RS - Residual Soil Weathering Grades RS - Residual Soil													
1) Drilled from floating barge - all depths measured from river bed level. 2) Note: the coring method used was NQ3 not NMLC. 3) Borehole grouted on completion. 1) Drilled from floating barge - all depths measured from river bed level. 2) Note: the coring method used was NQ3 not NMLC. 3) Borehole grouted on completion. 2		ri m floating barge - all el. 2) Note: the corin) Borehole grouted (Depth (m) Type Dip (deg) Planarity B - Bedding C - Clary seam F - Folistion H - Schstosity J - Joint L - Cleavage U - Undulating U - Undulating U - Undulating	Roughness Aperature L - Slickensides C - Closed P - Polished F - Filled R - Rough N - Clean V - Very rough S - Stain C - Cay V - Cay V - Very rough S - Stain C - Cay V - Very rough S - Stain C - Cay V - Cay V - Very rough S - Stain C - Cay V - Very rough S - Stain	idde e te te dary mineral tiffied mineral hered nock	RS - Residual Sc (W - Extremely weath DW - Distinctly weath SW - Slightly weath FR - Fresh Rock Streng VW - Very weak W - Weak MS - Medium stro	il hered hered hered hered hered hered hered	U5 SP	0 T d 		



IN-SITU PACKER PERMEABILITY TEST RESULT

PROJECT: CRR BH No.: 313 Packer type:
PROJECT No.: 110-12936 Test No.: 1 Packer pressure:

33.00

Date: 4/01/2012 Gauge pressures measured in: kPa
Tested by: CS

Vertical depth to: Top of test section (m):

(below river bed) Base of test section (m):

 Base of test section (m):
 35.50

 Centre of test section(m):
 34.25

 Base of casing (m):
 32.00

 Ground water (m)
 TIDAL

Depth of centre of test section (m): 34.25
Length of test section (m): 2.50

Double

2000kPa

Gauge Height above ground level (m):
Hole Diameter in test section (mm) 75

1st period	Time (mins)	0	5	10	15	Average
Gauge Pressure	Flow reading	895.0	895.5	896.2	897.5	Flow (I/min)
100	Water Take	0.00	0.50	0.70	1.30	0.167
2nd period	Time (mins)	0	5	10	15	Average
Gauge Pressure	Flow reading	902.0	903.0	903.0	903.0	Flow (I/min)
200	Water Take	0.00	1.00	0.00	0.00	0.067
3rd period	Time (mins)	0	5	10	15	Average
Gauge Pressure	Flow reading	903.2	903.5	903.5	903.5	Flow (I/min)
300	Water Take	0.00	0.30	0.00	0.00	0.020
4th period	Time (mins)	0	5	10	15	Average
Gauge Pressure	Flow reading	903.5	903.5	903.5	903.5	Flow (I/min)
200	Water Take	0.00	0.00	0.00	0.00	0.000
5th period	Time (mins)	0	5	10	15	Average
Gauge Pressure	Flow reading					Flow (I/min)
100	Water Take	0.00	0.00	0.00	0.00	0.000

Period	Flow (q)	Gauge Press	Gauge Press	Friction Loss	Friction Loss (m)*		Lugeon	Perm.
	(l/min)	(kPa)	(m of water)	Basic	In extra rods	(m)	Value	(m/s)
1st	0.167	100.00	10.220	0.000	0.000	44.470	0.153	1.67E-08
2nd	0.067	200.00	20.440	0.000	0.000	54.690	0.050	5.42E-09
3rd	0.020	300.00	30.660	0.000	0.000	64.910	0.013	1.37E-09
4th	0.000	200.00	20.440	0.000	0.000	54.690	0.000	0.00E+00
5th	0.000	100.00	10.220	0.000	0.000	44.470	0.000	0.00E+00

^{*}Where friction loss is assumed to be negligible.

N.B. Pressure Conversion: 1 bar = 100 kPa = 14.503 psi

Note - zero flow in period 4 - test ended

IN-SITU PACKER PERMEABILITY TEST RESULT

PROJECT:CRRBH No.:313Packer type:DoublePROJECT No.:110-12936Test No.:2Packer pressure:2000kPa

Date: 4/01/2012 Gauge pressures measured in: kPa
Tested by: CS

Vertical depth to: Top of test section
(below river bed)

Base of test section

Top of test section (m):	23.50
Base of test section (m):	25.50
Centre of test section(m):	24.50
Base of casing (m):	22.50
Ground water (m)	TIDAL

Depth of centre of test section (m):	24.50
Length of test section (m):	2.00

Gauge Height above ground level (m):		
Hole Diameter in test section (mm)	75	

1st period	Time (mins)	0	5	10	15	Average	
Gauge Pressure	Flow reading	910.0	914.0	919.0	924.0	Flow (I/min)	
100	Water Take	0.00	4.00	5.00	5.00	0.933	
2nd period	Time (mins)	0	5	10	15	Average	
Gauge Pressure	Flow reading	930.5	936.5	939.0	939.9	Flow (I/min)	
200	Water Take	0.00	6.00	2.50	0.90	0.627	
3rd period	Time (mins)	0	5	10	15	Average	
Gauge Pressure	Flow reading	941.0	944.0	949.0	951.0	Flow (I/min)	
300	Water Take	0.00	3.00	5.00	2.00	0.667	
4th period	Time (mins)	0	5	10	15	Average	
Gauge Pressure	Flow reading	951.5	954.0	958.0	958.0	Flow (I/min)	
200	Water Take	0.00	2.50	4.00	0.00	0.433	
5th period	Time (mins)	0	5	10	15	Average	
Gauge Pressure	Flow reading	958.5	961.0	963.0	971.0	Flow (I/min)	
100	Water Take	0.00	0.00	2.00	8.00	0.667	

Period	Flow (q)	Gauge Press	Gauge Press	Friction Loss (m)*		Total Head	Lugeon	Perm.
	(l/min)	(kPa)	(m of water)	Basic	In extra rods	(m)	Value	(m/s)
1st	0.933	100.00	10.220	0.000	0.000	34.720	1.373	1.42E-07
2nd	0.627	200.00	20.440	0.000	0.000	44.940	0.712	7.34E-08
3rd	0.667	300.00	30.660	0.000	0.000	55.160	0.617	6.37E-08
4th	0.433	200.00	20.440	0.000	0.000	44.940	0.493	5.08E-08
5th	0.667	100.00	10.220	0.000	0.000	34.720	0.981	1.01E-07

^{*}Where friction loss is assumed to be negligible.

N.B. Pressure Conversion: 1 bar = 100 kPa = 14.503 psi

Note - zero flow in period 4 - test ended