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# ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No	BH117
SHEET	_1_ of _4_
REFERENCE No	H10918

PROJECT	<u>Ipswi</u>	<u>ich Moto</u>	r <u>way</u>	/ Upgrade - Rocklea to Darra									
LOCATION	Creighton House Driveway (Bridge BR20)								COORDINATES 497287.8 E; 6950704.4 N				
PROJECT No	_FG5 <u>7</u>	77 <u>9</u>		SURFACE R.L 23.96m PLUNGE90 °			DATE STARTED	29/11	/10 GRID DATUM GDA94				
JOB No	<u>140/l</u>	<u>J16/902</u>		HEIGHT DATUMAHD BEARING			DATE COMPLETED _	30/11	1/10 DRILLER R&D Drilling F	Pty Ltd			
(m)	IG R BORING DRILLING	RQD ( )%		MATERIAL			INTACT DEFECT STRENGTH SPACING (mm)  20000000000000000000000000000000000		ADDITIONAL DATA				
DEPTH (m)	REPORT NO NE		빌	DESCRIPTION		빌		HIC	AND	SAMPLES			
回 0 23.96	CASI OTHE WASI CORI	CORE REC %	SAMPLE		nsc	WEA	200 200 200 200 200 200 200 200 200 200	GRAF	TEST RESULTS	SAMPL			
				CONCRETE up to 0.15mm					Non destructive digging up to 1.5m — depth. (Based on Drillers logs only)	-			
22.46				Silty CLAY (Alluvium)			<del>-</del>			-			
- -2 - - - - 21.46			Α	Mottled grey to red, moist, soft.  High plasticity.	(C	H)			1,1,3 N=4	SPT -			
			В	Silty CLAY (Residual) Mottled yellow-red to grey, moist, mainly very stiff to hard.  Medium to high plasticity.	_				4,9,12 N=21	SPT			
- - - - - - - - - -			С	Iron staining in parts.					5,7,12 N=19	SPT :			
- - - - - - - - - - - - - - - - - - -			D		(C				7,11,18 N=29	SPT -			
- - - - - - - - - - - - - - - - - - -			E	Becoming hard below 5.5m depth.					9,18,27 N=45	SPT -			
16.96			F						N=29	SPT -			
-7 10.90			G	SILTSTONE FINE GRAINED SEDIMENTARY ROCK COMPOSED MAINLY OF SILT SIZED PARTICLES XW: Generally exhibits engineering properties of grey to brown, moist, hard silty clay.					11,16,27 N=43	SPT -			
- - - - - - - - - - - - - - - - - - -				Relict rock fabric structure visible.  Contains thin bands of fine grained sand in parts.	XI	W			18,17,30 N=47	SPT =			
			J	MUDSTONE	χı	N			8,12,18 N=30	SPT -			
10			-	(See over)		. 1			N=30	_			
REMARK	S				_	_ _			LOGGED BY BW/SG				



## ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No \_\_\_BH117\_\_

SHEET \_\_2\_ of \_\_4\_\_

REFERENCE No \_\_\_H10918\_\_

PROJECT	<u>Ipsw</u>	rich Moto	r <u>wa</u> y	/ Upgrade - Rocklea to Darra							
LOCATION	ON <u>Creighton House Driveway (Bridge BR20)</u> COORDINATES 497287.8 E										<u>4 N</u>
PROJECT No	_F <u>G</u> 5	<u>779</u>		SURFACE R.L. <u>23.96m</u> PLUNGE <u>-90°</u>	_	_	DATE STARTED _			I/10 GRID DATUM <u>GDA94</u>	
JOB No	<u>140/</u>	<u>U16/902</u>		HEIGHT DATUM <u>AHD</u> BEARING	_	-	DATE COM	IPLETED .	30/11	1/10 DRILLER R&D Drilling I	Pty Ltd _
R.L. (m) HEAD 10 13.96	SASING OTHER VASH BORING SORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	nsc	VEATHERING	INTACT STRENGTH	DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA  AND  TEST RESULTS	SAMPLES TESTS
-11 -11 -12 -12		NEC 76	K	MUDSTONE (Cont'd) FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF CLAY SIZED PARTICLES XW: Generally exhibits engineering properties of dark grey to black, moist, hard silty clay. High plasticity; organic content in parts.  Contains interbeds of siltstone below 12.5m depth.		W				9,12,18 N=30 22,30/120mm N>50 30/100mm N>50	SPT :
		100		HW: Dark grey, massive, fissile structure in parts, fine grained, mainly very low strength.  Generally defects are rare Drilling induced lamination / bedding partings @ 5° (1/m)  Defects are mainly wide spaced, planar, smooth and slickensided, closed and clean.  SANDSTONE FINE TO MEDIUM GRAINED, MASSIVE POORLY CEMENTED, SEDIMENTARY ROCK HW: Yellow-brown, iron stained, massive, fine grained, very low strength.  Generally defects are rare Drilling induced bedding partings @ 5° (1/m)		w				Gravelly cond (YVM)	x
-16 7.86 -17 -17 -18 -19 -19 -20 3.96		100 (100) (100)		MUDSTONE MW: Dark grey, laminated, fine grained, mainly very low to low strength.  Contains interbeds of sandy siltystone in parts.  Generally defects are rare.  - Drilling induced / lamination partings @ 5° (<1/m)  - Joint @ 15° (1/m)  -Joint @ 45° (1/m)  Defects are close to wide spaced, planar, smooth closed and clean.	М	ıw				Is(50) = 0.09MPa Is(50) = 0.10MPa DD = 1.82t/m³; WD = 2.12t/m³; MC = 15.6%; UCS=765KPa  Fine grained sandstone  Is(50) = 0.02MPa Is(50) = 0.05MPa Is(50) = 0.15MPa Is(50) = 0.15MPa Is(50) = 0.11MPa Is(50) = 0.11MPa Is(50) = 0.11MPa Is(50) = 0.11MPa	x - 0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
REMARKS	S				_	_				BW/SG	



## ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No \_\_\_BH117\_\_

SHEET \_\_3\_ of \_\_4\_\_

REFERENCE No \_\_H10918\_\_

PROJECT	<u>lpsw</u>	ich Moto	r <u>w</u> ay	y Upgrade - Rocklea to Darra									
LOCATION	Creighton House Driveway (Bridge BR20)										CO	ORDINATES <u>497287.8 E; 6950704.</u>	4 <u>N</u>
PROJECT No	FG5	<u>779</u>		SURFACE R.L. <u>23.96m</u> PLUNGE <u>-90°</u>			DATE STARTED 29/			D _	<u> 29/1 1</u>	1/10 GRID DATUM GDA94	
JOB No	<u> 140/</u>	<u>U16/902</u>		HEIGHT DATUM <u>AHD</u> BEARING			DATE C	ОМ	PLETE	D _	<u>30/1 1</u>	/10 DRILLER R&D Drilling F	Pty Ltd _
R.L. (m) HLL 49 20 3.96	CASING OTHER WASH BORING CORE DRILLING	RQD ()%	SAMPLE	MATERIAL DESCRIPTION	USC	WEATHERING	INTAC STRENG	ZH T	DEFECT SPACIFIC (mm)	OOO 0000 1	GRAPHIC LOG	ADDITIONAL DATA  AND  TEST RESULTS	SAMPLES TESTS
-				<b>SW:</b> Dark black, massive with laminations, minor fissiling, fine grained, mainly very low to low strength.								Is(50) = 0.08MPa Is(50) = 0.07MPa	X - 0 -
- - -21		(90)		Contains thin bands of siltstone in parts.  Generally defects are rare.								Is(50) = 0.10MPa Is(50) = 0.08MPa	x - 0 -
- - -		100		- Drilling induced lamination partings @ 5-10° (1/m) - Joint @ 15° and 25° (<1/m) - Joint @ 45° (1/m)								Is(50) = 0.10MPa Is(50) = 0.12MPa	x   0
- - - 22 -		(100)		Defects are medium to wide spaced, planar, smooth, closed and clean.				-				Is(50) = 0.11MPa Is(50) = 0.11MPa	x -
- - - -												Is(50) = 0.07MPa Is(50) = 0.12MPa	x -
- 23		100										Joint @ 45° Is(50) = 0.05MPa Is(50) = 0.10MPa	x -
[		(95)										─ High strength band ─ Joint @ 25°	]
-												Is(50) = 0.08MPa Is(50) = 0.11MPa	x -
												DD = 1.62t/m <sup>3</sup> ; WD = 2.00t/m <sup>3</sup> ; MC = 23.2%; UCS=1416KPa	-
- - - - -		100 (80)			SI	w						Is(50) = 0.06MPa Is(50) = 0.09MPa	x -
- 25 - - - -												Is(50) = 0.12MPa Is(50) = 0.11MPa Is(50) = 0.10MPa Is(50) = 0.11MPa	x - 0 - 1
- - - - 26		100 (100)										Is(50) = 0.07MPa Is(50) = 0.08MPa	x -
- - - - - - - 27								-				Is(50) = 0.09MPa Is(50) = 0.12MPa	x - 0
- - - - -		100 (80)										Is(50) = 0.06MPa Is(50) = 0.19MPa	x -
- - - 28 -												Is(50) = 0.15MPa Is(50) = 0.18MPa	x - 0 -
- - - -		100										Is(50) = 0.09MPa Is(50) = 0.17MPa	x _
- -29 - 5.25		(80)											=
-5.25 - - -				CLAYSTONE	M	w		-				Is(50) = 0.10MPa Is(50) = 0.11MPa	x -
20				(See over)								Is(50) = 0.13MPa	x =
REMARKS	3				_	_						LOGGED BY BW/SG	
					_	_						•	



## ENGINEERING BOREHOLE LOG

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/6-2010

BOREHOLE No \_\_BH117\_\_

SHEET \_\_4\_\_ of \_\_4\_\_

REFERENCE NO \_\_H10918\_\_

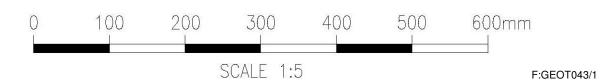
PRO.					y Upgrade - Rocklea to Darra							OORDINATES 497287.8 E; 6950704.4 N	
					Driveway (Bridge BR20) SURFACE R.L23.96m PLUNGE90					— – TARTED			
JOB					HEIGHT DATUM _AHD _ BEARING								— – td
	R.L. (m)	G SORING DRILLING	RQD ()%		MATERIAL		П	INTAC	т	DEFECT SPACING (mm)		ADDITIONAL DATA	
DEPTH (m)		문교꾼씨	CORE	SAMPLE	DESCRIPTION	nsc	EATHE	I I I I I		200 200 2000 2000	GRAPHIC LOG	AND SET RESULTS TEST RESULTS	TESTS
30	-6.05	NAS WAS	REC %	ŝ	CLAYSTONE (Cont'd)	ı	> "			10000	ō	Is(50) = 0.14MPa c	
-			100 (80)		<b>MW:</b> Pale grey, massive, fine grained, mainly very low to low strength.				-			Is(50) = 0.08MPa Is(50) = 0.08MPa	
-					Generally defects are rare.								=
-31 -31					- Drilling induced lamination partings @ 5-10° (1/m) - Joint @ 45° (<1/m)							Is(50) = 0.08MPa Is(50) = 0.12MPa	
- - - -			100		Defects are close to wide spaced, planar, smooth, closed and clean.	М	w					Is(50) = 0.18MPa Is(50) = 0.16MPa	
-32 -			(60)									L.(50) -0.40MD	-
- - - -			100									Is(50) = 0.10MPa Is(50) = 0.05MPa	
- - 33 - - -	-9.05		(80)		SANDSTONE MW: Pale grey, massive, fine to coarse grained, very low to low strength.							DD = 1.74t/m³; WD = 2.06t/m³; MC = 17.8%; UCS=1499KPa Is(50) = 0.08MPa Is(50) = 0.06MPa	
- - - - -34					Contains medium to coarse grained highly erodable sand (XW) layer app. 170mm thick.	М	W					Highly erodable and poorly indurated sand layers.	-
-	-10.47		60	$\backslash$	Generally defects are rare.					•			-
-					Borehole terminated at 34.42m								-
- -35 -													1
_													-
- - -36										- i i i i i - i i i i i i			=
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38										- - - : : : : : : : : : : : : : : : : :			-
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- 39													-
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40										- : : : : :			
R	EMARK	S								. <b></b>	·	LOGGED BY BW/SG	

Project: **Ipswich Motorway Upgrade - Rocklea to Darra** 

Page 1 of 2

Borehole No: BH 117
Start Depth: 13.00m
Finish Depth: 34.42m
Project No: FG5779
H No: H10918





Project: **Ipswich Motorway Upgrade - Rocklea to Darra** 

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Borehole No: BH 117
Start Depth: 13.00m
Finish Depth: 34.42m
Project No: FG5779
H No: H10918



