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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH106
SHEET 1 of 3
REFERENCE No H10906

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Oxley Creek - Right Bank COORDINATES 499009.1 E; 6951139.6 N
PROJECT No FG5779 SURFACE R.L. 2.86m PLUNGE -90° DATE STARTED 08/11/10 GRID DATUM GDA94
JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 08/11/10 DRILLER R&D Drilling Pty Ltd

DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH					DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J				
0	2.86					Gravelly Sandy CLAY (Fill) Rock Fragments up to 50mm.								Non destructive digging up to 1.5m (Based on Drillers logs only)		
1	1.86					Silty CLAY (Estuarine?) Dark grey, moist, mainly soft to firm Medium to high plasticity; organic content.										
2					A		(CI-CH)							inferred GWT su=20kPa p'c=78kPa OCR=2.1	U100	
3					B								Peat layers	su=30kPa p'c=92kPa OCR=2.3	U100	
4	-1.14				C	Sandy CLAY (Alluvium) Greenish grey, moist, soft. High plasticity.	(CH)							HW, 1,3 N=4	SPT	
5	-2.14				D	SAND (Alluvium) Grey, moist, medium dense. Sand fraction fine to medium grained.								7,8,10 N=18	SPT	
6					E		(SP-SM)							7,11,12 N=23	SPT	
7	-4.14				F	SANDSTONE FINE TO COARSE GRAINED, MASSIVE, POORLY CEMENTED SEDIMENTARY ROCK HW: Generally exhibits engineering properties of grey-brown, moist, very dense silty sand.								14,19,30/95mm N>50	SPT	
8					G	Sand fraction medium to coarse grained.								30/110mm N>50	SPT	
9					H		HW							30/85mm N>50	SPT	
10	-7.14															

REMARKS Observation well installed, infiltration zone from 5.0m to 26.0m. Water level readings may be effected by tidal movements in Oxley Ck.

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BOREHOLE No BH106
SHEET 2 of 3
REFERENCE No H10906

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
LOCATION Oxley Creek - Right Bank COORDINATES 499009.1 E; 6951139.6 N
PROJECT No FG5779 SURFACE R.L. 2.86m PLUNGE -90° DATE STARTED 08/11/10 GRID DATUM GDA94
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DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH					DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS
								EH	VH	H	M	J				
10	-7.14					SILTSTONE FINE GRAINED SEDIMENTARY ROCK COMPOSED MAINLY OF SILT SIZED PARTICLES SW: Dark grey to black strip heavily interlaminated, fine grained, mainly low strength.								Iron staining zone Iron staining zone	Is(50) = 0.44MPa Is(50) = 0.82MPa	x o
11				100	(73)	Contains medium to coarse grained highly erodable sandstone app. 300mm thick.										
12				100	(40)	Occasional interbeds of mudstone in parts. Generally defects are rare. - Drilling induced laminations / bedding partings @ 5-10° (3/m) - Irregular fracture joint @ 45° (<1/m)								Highly erodable Sandstone	Is(50) = 0.49MPa Is(50) = 0.50MPa	x o
13				100	(72)	Defects are close to wide spaced, planar to irregular, slightly rough to smooth, open and closed with clay infill or clean.								Joint @ 15° Irregular joint @ 40° clay infill	Is(50) = 0.74MPa Is(50) = 0.90MPa	x o
14				100	(83)										Is(50) = 0.69MPa Is(50) = 0.64MPa	x o
15				100	(95)		SW								Is(50) = 0.40MPa Is(50) = 0.49MPa	x o
16				100	(83)										Is(50) = 0.56MPa Is(50) = 1.03MPa	x o
17				100	(95)										Is(50) = 0.82MPa Is(50) = 0.68MPa	x o
18				100	(100)										Is(50) = 0.86MPa Is(50) = 0.88MPa	x o
19				100	(100)									Irregular joint @ 40°	Is(50) = 0.49MPa Is(50) = 0.49MPa DD = 1.92t/m ³ ; WD = 2.14t/m ³ ; MC = 11.2%; UCS=4601KPa	x o
20	-16.86					MUDSTONE SW:(See over)	SW							High strength siltstone		

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BOREHOLE No BH106
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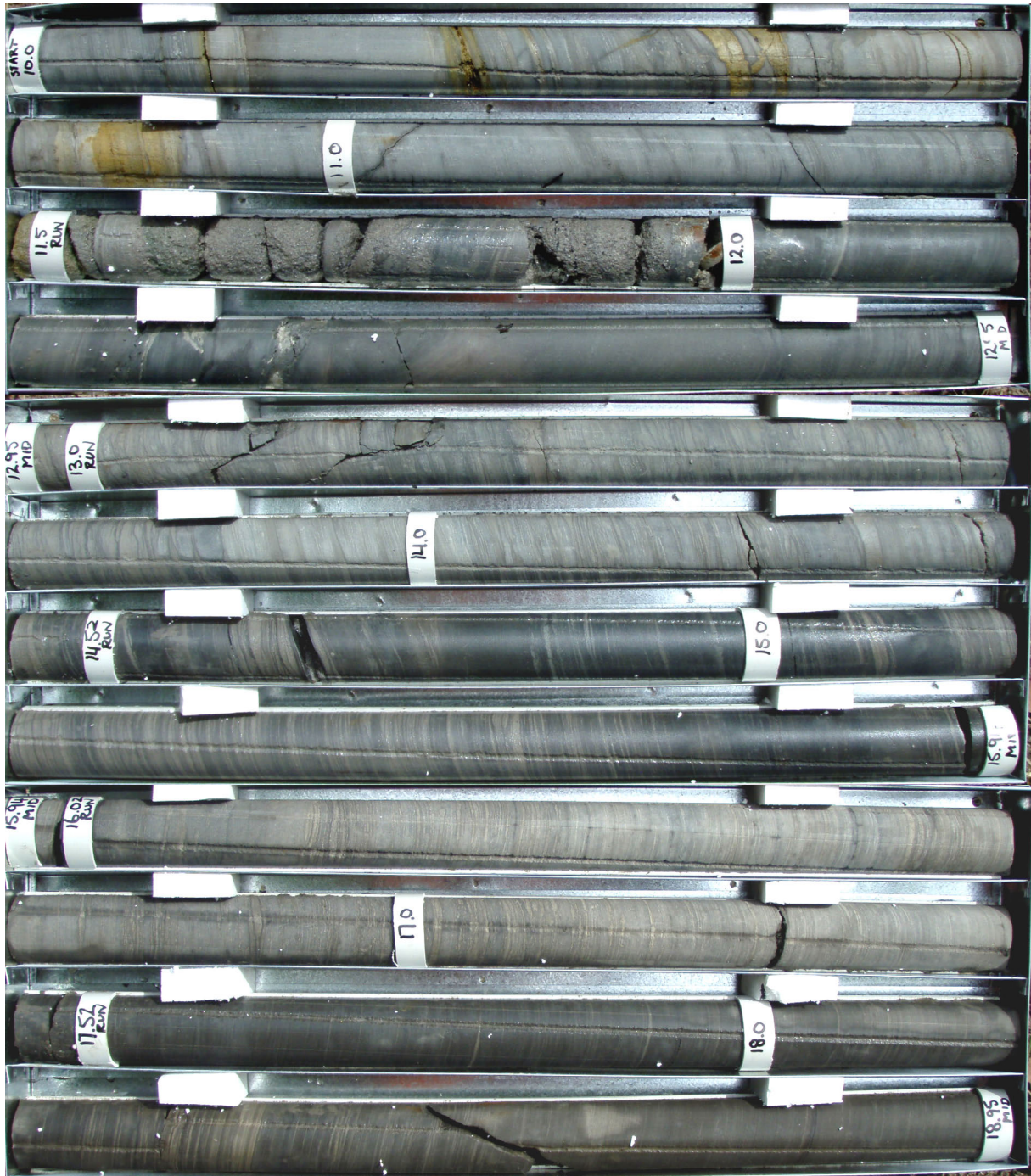
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DEPTH (m)	R.L. (m)	AUGER CASING WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	WEATHERING							GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES TESTS	
							USC	EH	VH	H	M	J	VL				EL
20	-17.14					MUDSTONE (Cont'd) FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF CLAY SIZED PARTICLES SW: Dark black, massive and laminated, mainly low strength. Generally defects are rare. - Drilling induced lamination partings @ 5-10° (<2/m) Defects are medium to wide spaced, planar, smooth, closed and clean.										Is(50) = 0.15MPa Is(50) = 0.20MPa DD = 1.60t/m ³ ; WD = 1.97t/m ³ ; MC = 23.6%; UCS=3972KPa Clay seam (Possible shear zone)	x o
21			100	(87)													
22			100	(83)													
24			100	(60)													
25	-21.64					HW: Dark grey to black, moist, fissile, extremely low strength. Exhibits engineering properties of silty clay. Becoming siltstone below 25.7m depth.										Possible shear zone	
26	-23.14		100	(0)													
26						Borehole terminated at 26m											
27																	
28																	
29																	
30																	

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Project: **Ipswich Motorway Upgrade - Rocklea to Darra**
Borehole No: **BH 106**
Start Depth: 10.00m
Finish Depth: 23.53m
Project No: FG5779
H No: H10906



SCALE 1:5

F:GEO043/1

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SCALE 1:5

F:GEO043/1