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ENGINEERING BOREHOLE LOG

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

BOREHOLE No BH116
 SHEET 1 of 3
 REFERENCE No H10888

PROJECT Ipswich Motorway Upgrade - Rocklea to Darra
 LOCATION Blunder Road near Mobil Service Station COORDINATES 497990.1 E; 6950784.8 N
 PROJECT No FG5779 SURFACE R.L. 12.35m PLUNGE -90° DATE STARTED 27/10/10 GRID DATUM GDA94
 JOB No 140/U16/902 HEIGHT DATUM AHD BEARING DATE COMPLETED 28/10/10 DRILLER Foundrill Pty Ltd

DEPTH (m)	R.L. (m)	CASING OTHER 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	L	VL					EL	20
0	12.35					Engineered FILL									Non destructive digging up to 1.5m depth Based on Drillers logs only				
1	10.85				A	Silty CLAY (Residual) Mottled grey-brown, moist, stiff to very stiff. High plasticity. Ferruginous iron concretions nodules in parts.									Red iron staining	3,4,4 N=8	SPT		
2					B												6,8,9 N=17	SPT	
3					C													4,3,4 N=7	SPT
4					D													4,4,5 N=9	SPT
5					E		(CH)											4,4,8 N=12	SPT
6					F													4,7,8 N=15	SPT
7					G													4,6,7 N=13	SPT
8	3.85				H	CLAYSTONE FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF CLAY SIZED PARTICLES XW: Generally exhibits engineering properties of mottled grey, moist, very stiff silty clay. High plasticity.	XW								Relict rock fabric and structure visible, brown iron staining throughout.			4,7,9 N=16	SPT
9	2.85				I	MUDSTONE (See over)	XW								2/2/2011			8,9,13 N=22	SPT
10																			

REMARKS Observation well installed, infiltration zone from 5.0m to 27.0m.

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BOREHOLE No	<u> BH116 </u>
SHEET	<u> 2 </u> of <u> 3 </u>
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								EH	VH	H	M	L	VL					EL	20
10	2.35					MUDSTONE (Cont'd) FINE GRAINED SEDIMENTARY ROCK MAINLY COMPOSED OF CLAY SIZED PARTICLES. XW: Generally exhibits engineering properties of dark grey to black, moist, mainly very stiff silty clay. Rock structure visible throughout. Brown iron staining along joint surface; displays cracking on drying.	XW										Very friable and fissile	6,9,10 N=19	SPT
11				J													Mainly slickensided and polished surfaces.	6,7,10 N=17	SPT
12				K													∇ 22/12/2010	5,11,18 N=29	SPT
13				L				Contains siltstone interbeds below 13m depth app. 450mm thick.											
14	-1.25				M	SANDSTONE FINE TO MEDIUM GRAINED, MASSIVE, POORLY CEMENTED SEDIMENTARY ROCK HW: Pale grey to yellowish brown, moist, fine to medium grained, very dense sand.	HW											30/70mm N>50	SPT
15				N	Sand fraction fine to medium grained.													30/120mm N>50	SPT
16				O	Becoming grey-brown below @ 16.6m depth. Exhibits engineering properties of very dense erodable sand.													30/140mm N>50	SPT
17				(0)													Black carbonaceous material (coal seam) 5mm thick		
18				67	(0)										Possible XW sandstone.				
19				6											Coal seams				
20	-7.25					MUDSTONE (See over)	HW									Is(50) = 0.06MPa	x		

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BOREHOLE No BH116
SHEET 3 of 3
REFERENCE No H10888

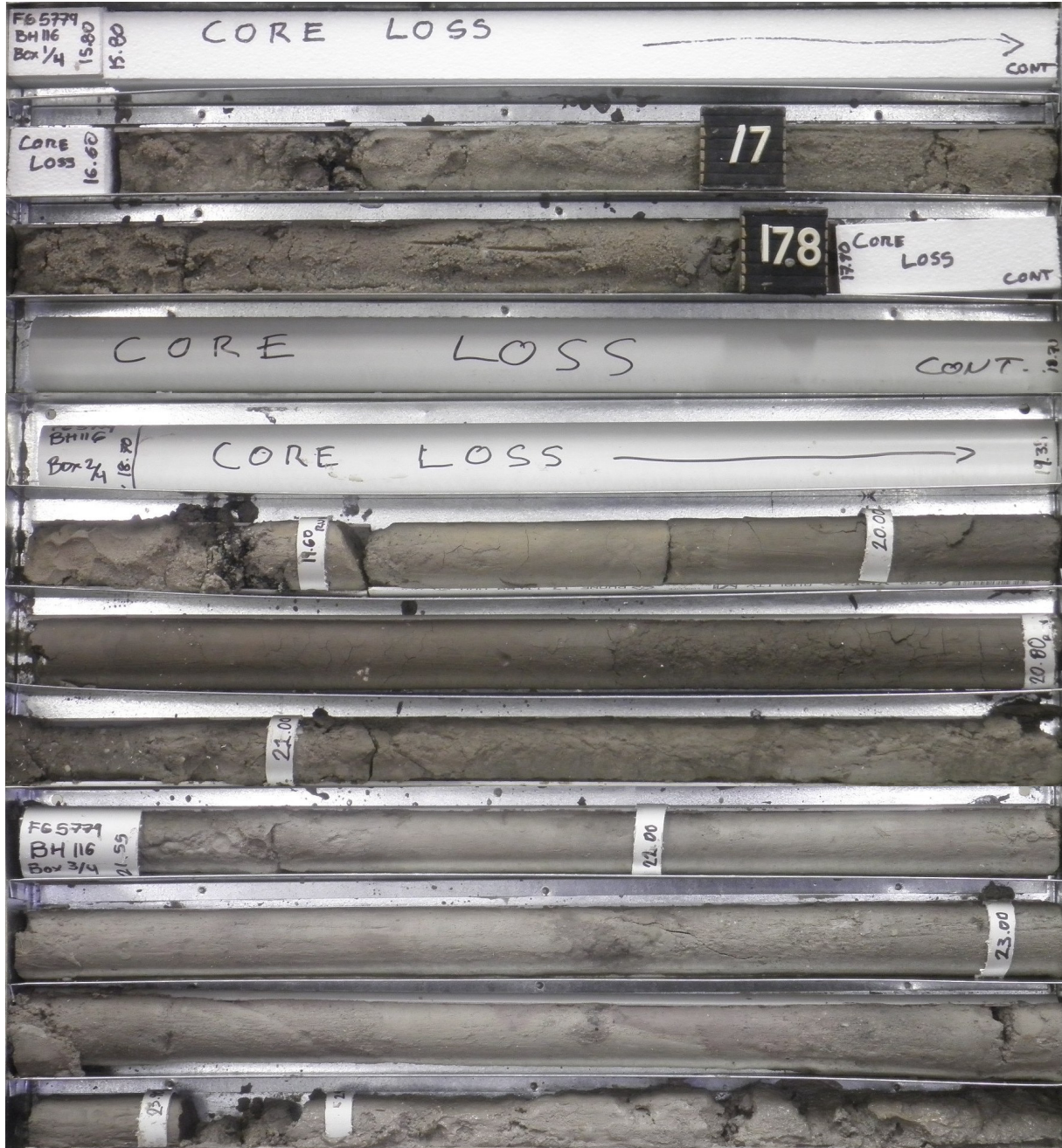
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DEPTH (m)	R.L. (m)	CASING OTHER WASH BORING CORE DRILLING	RQD (%)	CORE REC %	SAMPLE	MATERIAL DESCRIPTION	USC WEATHERING	INTACT STRENGTH					DEFECT SPACING (mm)	GRAPHIC LOG	ADDITIONAL DATA AND TEST RESULTS	SAMPLES	TESTS
								EH	VH	H	M	J					
20	-7.65																
20 - 21			100			MUDSTONE (Cont'd) HW: Dark grey to black, massive, mainly very low strength. Generally defects are rare. - Drilling induced lamination partings @ 5 - 10° (2/m). Defects are medium to wide spaced, planar, smooth, closed with clay infill or clean.	HW							Gravelly clay (XW)	Is(50) = 0.07MPa		o
21 - 22															Is(50) = 0.07MPa Is(50) = 0.03MPa		x o
22 - 23	-9.45					CLAYSTONE HW: Pale grey, massive, extremely low strength. Exhibits engineering properties of silty clay, displays cracking on drying. Generally defects are rare. - Drilling induced lamination partings @ 5 - 10° (2/m). Defects are medium to wide spaced, planar, smooth, closed with clay infill or clean.									Is(50) = 0.10MPa Is(50) = 0.06MPa		x o
23 - 24			100												Is(50) = 0.06MPa Is(50) = 0.06MPa		x o
24 - 25															Is(50) = 0.03MPa Is(50) = 0.06MPa		o o
25 - 26							HW							XW silty clay (possible shear zone)			
26 - 27	-14.65		100												Is(50) = 0.10MPa Is(50) = 0.04MPa DD = 1.92t/m ³ ; WD = 2.18t/m ³ ; MC = 13.6%; UCS=1998KPa		x o
27						Borehole terminated at 27m									Is(50) = 0.08MPa Is(50) = 0.11MPa		x o
28																	
29																	
30																	

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Project: **Ipswich Motorway Upgrade - Rocklea to Darra**
Borehole No: **BH 116**
Start Depth: 15.80m
Finish Depth: 27.0m
Project No: FG5779
H No: H10888



SCALE 1:5

F:GEO43/1

Project: **Ipswich Motorway Upgrade - Rocklea to Darra**
Borehole No: **BH 116**
Start Depth: 15.80m
Finish Depth: 27.0m
Project No: FG5779
H No: H10888



SCALE 1:5

F:GEOT043/1