


 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL						Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2			Borehole Number RC1235	
Machine: Flush : Core Dia: mm Method :			Casing Diameter 140mm cased to 12.50m		Ground Level (mOD) 86.80		Client Highways Agency		Job Number WAL060099A	
			Location 444677 E 370503 N		Dates 31/01/2007		Engineer Arup		Sheet 1/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00	O/H		0	0	Groundwater was not apparent during boring(1) at 0.00m.			Open Hole. For likely material description, see cable percussion borehole CP1235.		∇1
	97	49	23	0			(11.50)			
Remarks Prior to excavation a Cable Avoidance Tool (CAT) survey was carried out. Services were not encountered.:No visual or olfactory indication of contamination was observed.:								Scale (approx) 1:50	Logged By OP	
								Figure No.		



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11.50			0	0	P1 /30,38,32 SPT 0'/0 100/169	75.30	11.50 (0.37)	Very weak becoming weak black very carbonaceous MUDSTONE, with extremely closely spaced thin laminae of black vitreous coal. Discontinuities: extremely closely spaced, horizontal and vertical, rough, clean.			
11.87			0	0		74.93	11.87 (0.69)	Weak, grey MUDSTONE, with occasional fossil plant remains. Discontinuities: very closely spaced to closely spaced, subhorizontal, rough, occasional clay coating (<1mm thick). Subvertical to 45 degrees, undulating, rough and clean.			
12.56			0	0		74.24	12.56	Moderately weak grey SILTSTONE very thinly to medium interbedded with moderately weak grey MUDSTONE. With occasional fine to medium gravel sized nodules of ironstone. Discontinuities: extremely closely to medium spaced, horizontal and subhorizontal, smooth and rough, with occasional clay infill up to 1mm thick.			
12.60			0	0							
12.90	95	87	61	0	P2 /36,42,22 SPT 0'/0 100/164		(2.04)				
13.00											
13.00-13.17											
	98	98	60	0							
14.20					P3 /31,39,30 SPT 0'/0 100/166						
14.50			0	0		72.20	14.60	Moderately weak, light grey, fine grained SANDSTONE, with extremely closely to very closely spaced thin carbonaceous laminae. Discontinuities: closely to medium spaced, horizontal, rough and smooth with occasional clay infill up to 3mm thick. 70 degrees, rough with some clay infill, generally <1mm thick.			
14.50-14.66			0	0			(0.90)	From 14.95m to 15.05m; moderately weak, grey siltstone.			
14.60											
15.50					P4 /37,46,17 SPT 0'/0 100/165	71.30	15.50	Moderately weak, grey becoming dark grey SILTSTONE, with extremely closely to medium spaced thick laminae of ironstone. Discontinuities: extremely closely to closely spaced, horizontal and subhorizontal, smooth and rough, with occasional clay infill up to 3mm thick. Vertical to 60 degrees, rough, clean.			
15.65	100	92	55	0			(1.80)	From 15.50m to 15.62m; thin laminae of fine grained sandstone.			
16.00			0	0				Between 16.10m and 16.47m; moderately strong, light grey, fine grained SANDSTONE, with occasional thin carbonaceous lenses and laminae.			
16.00-16.17			0	0							
16.10					P5 /32,41,23 SPT 0'/0 96/165						
16.20			0	0		69.50	17.30	Weak locally very stiff clay dark grey MUDSTONE, with closely spaced thick laminae of ironstone. Discontinuities: very closely to closely spaced, horizontal, rough, with occasional clay infill. Vertical, rough, clean.			
16.47						68.97	17.83	Moderately strong light and dark grey thinly and thickly colour laminated SILTSTONE. Discontinuities: very closely to closely spaced, horizontal to subhorizontal, smooth, clean. Subvertical, rough, clean, undulating.			
							(0.67)				
17.30	95	95	47	0	P6 /32,41,23 SPT 0'/0 96/165	68.30	18.50 (0.20)	Weak, black, brittle, COAL.			
17.50						68.10	18.70	Weak and moderately weak locally firm clay, light brown grey MUDSTONE, with some carbonaceous fossilised plant remains. Discontinuities: extremely closely spaced, randomly orientated, rough and smooth, occasionally polished.			
17.50-17.66			0	0							
17.60			0	0							
17.83											
18.50			0	0							
18.70	83	12	0	0							
18.90											
19.00											
19.00-19.17			0	0							
20.00											
Remarks								Scale (approx) 1:50	Logged By OP	Figure No.	



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Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.50 20.50-20.73 20.55 20.70	98	93	75	0	/26,32,38,4 SPT 0'/0 100/226 P7		(2.50)	From 20.00m; fossilised plant remains are rare.		
			0	0						
			0	0						
21.20	Sample / Tests		Casing Depth (m)	Water Depth (m)		65.60	21.20	Moderately strong and strong, light grey, fine grained SANDSTONE. Discontinuities: horizontal, very closely to closely spaced, rough and smooth, clean.		
21.30	P8						(0.80)	From 21.50m; fractures are subhorizontal, medium spaced, rough, planar. Subvertical, rough, planar. From 21.65m; light and dark grey colour laminations.		
					31/01/2007: 31/01/2007:	64.80	22.00	Complete at 22.00m		
Remarks								Scale (approx) 1:50	Logged By OP	Figure No.