



[illegible]



 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL						Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2			Borehole Number RC1221	
Machine: Flush : Core Dia: mm Method :		Casing Diameter 140mm cased to 6.00m		Ground Level (mOD) 105.25		Client Highways Agency		Job Number WAL060099A		
		Location 445301 E 365694 N		Dates 02/10/2006		Engineer Arup		Sheet 2/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
								OPEN HOLE (as previous sheet)		
13.50 13.50-13.81					25,16/27,36,21 SPT 84/162	91.75	13.50 (1.70)	Recovered as soft to stiff brown with some grey mottling slightly gravelly slightly sandy CLAY. Gravel is subangular to subrounded fine to coarse of mudstone. With cobbles of mudstone. Sand is fine to coarse. Possible At top; possible material fallen from above.		
14.85	94	19	0	0				From 14.85m to 15.20m; possible material fallen from above.		
			0	0		90.05	15.20 (0.55)	Weak locally moderately and very weak grey MUDSTONE. Very closely to medium spaced bands up to 30mm thick recovered as clayey subangular fine and medium gravel sized fragments of mudstone. Discontinuities are extremely closely to medium spaced horizontal, with some grey clay coating <1mm thick. Locally randomly orientated.		
16.13 16.40	95	61	30	0		89.50	15.75	Moderately weak and moderately strong grey and light grey thinly interlaminated to thinly interbedded SILTSTONE and fine grained SANDSTONE. With localised weakened bands up to 150mm thick. From 15.75m to 16.13m; recovered as friable grey clay with subangular fine to coarse gravel sized fragments of mudstone.		
17.40-17.60	95	43	22	0	U1		(2.61)	From 17.00m to 18.36m; discontinuities are extremely closely to medium spaced horizontal and subhorizontal, planar, rough, clean. At 17.30m, 17.67m and 18.25m; ironstone.		
17.80-18.02			0	0	U2					
17.95			0	0						
18.36	90	27	6	0	Water strike(1) at 18.50m, no rise after 20 mins.	86.89	18.36	Moderately strong grey SILTSTONE very closely to medium interbedded with very weak and weak grey MUDSTONE. Mudstone generally has extremely close randomly orientated joints or recovered non-intact. Occasional weathered to grey very gravelly clay. Gravel is subangular, fine to coarse of mudstone. Discontinuities: close to medium spaced horizontal to subhorizontal, planar, smooth and clean only in siltstone. At 18.85m, 19.49, 20.00m, 20.08m and 20.51m; ironstone. From 19.03m to 19.15m; vertical and subvertical, undulating, smooth, clean. From 19.37m to 19.45m; assumed zone of core loss. From 19.50m to 19.83m; subvertical, undulating, rough.		▼1
19.45										
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	
20.45-20.56	89	19	12	0	P3		(4.64)	clean.			
21.00								From 20.85m to 21.17m; assumed zone of core loss.			
22.00-22.08	93	78	10	0	P4			From 21.50m to 22.50m; closely spaced thin beds of ironstone.			
22.50			0	0				From 22.50m to 22.57m; assumed zone of core loss.			
23.00			0	0		82.25	23.00	Weak dark grey and black carbonaceous MUDSTONE. Fractures are very closely spaced, subhorizontal, planar, rough and smooth, clean.			
23.13						82.12	23.13				
23.27-23.33	96	41	17	0	P5			Weak black vitreous COAL. Fractures are locally non-intact extremely closely to closely spaced, subhorizontal, rough. Vertical fractures are planar, rough and smooth frequently with white mineralisation on surface.			
23.50			0	0			(0.97)				
24.10			0	0		81.15	24.10	Very weak grey MUDSTONE with occasional fossilised plant fragments. Very closely spaced fractures generally non-intact. From 24.10m to 24.37m; recovered as clay and subangular fine to coarse gravel sized fragments of mudstone.			
24.70			0	0		80.55	24.70				
24.70-24.75			0	0			(0.30)	Very weak to weak grey SILTSTONE with occasional fossilised plant remains. Fractures are very closely to closely spaced subhorizontal, rough. Some clay infill up to 20mm thick. Locally non-intact. At base; assumed zone of core loss.			
24.94						80.25	25.00				
P6 02/10/2006:18.50m 02/10/2006:						Complete at 25.00m					
Remarks											
									Scale (approx) 1:50	Logged By OP	
									Figure No.		