British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Site	Borehole Number
M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI - CONTRACT 2	RC1208

Machine:	Casing Diameter	Ground Level (mOD)	Client	Job Number
Flush :	140mm cased to 3.00m	168.50	Highways Agency	WAL060099A
Core Dia: mm				
Method :	**Location**	**Dates**	**Engineer**	**Sheet**
	444908 E 361567 N	13/09/2006	Arup	1/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					Groundwater was not apparent during boring(1) at 0.00m.					
0.00			0	0				Inspection Pit.		▽1
	100	93	4	0			(0.75)			
0.75						167.75	0.75	Completely weathered siltstone. Recovered as stiff to very stiff friable light grey mottled brown and orange brown very closely fissured SILT/CLAY.		
			0	0			(0.80)			
1.55						166.95	1.55	Very weak light grey mottled brown, orange brown and black thinly to thickly laminated weathered SILTSTONE.		
			0	0			(0.60)			
2.15						166.35	2.15	Very weak to moderately weak, grey brown and dark grey thinly colour laminated weathered SILTSTONE. Black speckling on fracture surfaces. Fractures are subhorizontal to subvertical (30 to 70 degrees), very closely spaced and irregular. Between 2.45m and 2.75m; recovered as completely weathered compact brown mottled black silt with subangular fine to coarse gravel sized fragments of very weak siltstone. Between 2.75m and 3.00m; fractures are horizontal (0 to 20 degrees), very closely to closely spaced, smooth, planar, open, frequent black discolouration on fracture surfaces.		
2.35			0	0	P1					
2.45			0	0			(0.85)			
2.75	100	90	15	0						
2.95					P2	165.50	3.00			
3.00			0	0						
3.40										
			0	0			(1.35)			
3.85					P3					
4.00			0	0				Generally moderately weak (variably very weak to moderately strong) grey fine grained SANDSTONE with very frequent thin black wispy non-persistent interlaminae. Frequent orange brown discolouration penetrating 2mm throughout. Between 3.00m and 3.40m; horizontal fractures (0 to 10 degrees), closely spaced, smooth, planar; subvertical, rough, planar and very open. Between 3.40m and 4.00m; very weak and weak with frequent very closely spaced silt/clay filled fissures up to 45mm. Fractures are generally subvertical, very closely spaced and irregular. Between 4.00m and 4.35m; very weak to weak; generally non-intact due to convergence of very closely spaced vertical irregular fractures.		
						164.15	4.35			
4.35										
4.70					P4					
	96	95	75	0			(1.65)			
5.55					P5					
6.00						162.50	6.00	Generally weak (variably moderately weak) light and dark grey thinly colour to laminated SILTSTONE. Rarely grading in thin beds (130mm) to moderately weak light and dark grey cross colour laminated fine grained sandstone. Occasional orange brown discolouration on fracture surfaces penetrating up to 1mm. Horizontal fractures (0 to 10 degrees), very closely and closely spaced, smooth, planar, occasionally with very soft grey gravelly silt/clay infill up to 8mm.		
6.20-6.55					C6					
								Generally moderately weak (variably weak and moderately strong) grey fine grained SANDSTONE variably with very frequent dark grey and brown thin wispy non-persistent interlaminae and dark grey thin colour laminations. Horizontal fractures (0 to 10 degrees), closely to widely spaced, smooth, planar undulating, open; subvertical 2 no. sets intersecting at 100 to 120 degrees, smooth and rough, planar and undulating and open.		
	100	100	63	0						
8.33-8.78					C7					
9.00										

Remarks

Scale (approx)	Logged By
1:50	TL

Figure No.

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Core Dia: mm				
Method :	**Location**	**Dates**	**Engineer**	**Sheet**
	444908 E 361567 N	13/09/2006	Arup	2/2

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.40-10.67	100	56	63	0	C8		(9.00)	Between 10.70m and 10.85m; black and brown cross colour laminated. Between 11.10m and 11.35m; irregular lenses of weak grey siltstone (up to 5mm x 70mm). At 11.25m; 2 no. subrounded strong brown ironstone nodules (50mm and 70mm).		
12.00 12.15			0	0	P9					
12.30	82	21	0	0				Between 12.30m and 14.83; weak and moderately weak; with very frequent very closely spaced vertical irregular fractures; frequently recovered non-intact due to fracture convergence. At 12.70m; very thin bed of moderately strong brown ironstone (25mm).		
13.70					P10			Between 13.70m and 13.85m; frequent flecks of calcite mineralisation on vertical fracture surface. At 13.75m; subrounded strong brown ironstone nodule (65mm).		
14.00	**Sample / Tests**		**Casing Depth (m)**	**Water Depth (m)**						
14.35	P11									
					13/09/2006:	153.50	15.00	Between 14.83m and 15.00m; no recovery. Core possibly lost due to multiple irregular vertical fractures.		
					13/09/2006:			Complete at 15.00m		

Remarks	Scale (approx)	Logged By
	1:50	TL
	Figure No.	