





British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL						Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI - CONTRACT 2		Borehole Number RC1191			
Machine:			Casing Diameter			Ground Level (mOD)		Client		Job Number	
Flush :			140mm cased to 1.50m			133.55		Highways Agency		WAL060099	
Core Dia: mm			Location			Dates		Engineer		Sheet	
Method :			445152 E 356837 N			21/09/2006-25/09/2006		Arup		1/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.00			0	0	Groundwater was not apparent during boring(1) at 0.00m.			INSPECTION PIT		V1	
	100	85	0	0			(1.20)				
						132.35	1.20 (0.30)	OPEN HOLE			
						132.05	1.50				
1.50								Generally very weak thinly laminated grey brown weathered SILTSTONE (variably recovered as soft to stiff gravelly silt/clay) with very frequent dark brown discolouration of fracture surface. Fractures, where evident horizontal to subhorizontal (0 to 25 degrees), extremely closely to very closely spaced (5/20/45) smooth, planar tight; vertical, locally very closely spaced, frequently irregular.	XXXXXXXXXXXXXXXXXXXX		
	100	89	0	0			(2.10)		XXXXXXXXXXXXXXXXXXXX		
3.00					D17				XXXXXXXXXXXXXXXXXXXX		
3.00			0	0					XXXXXXXXXXXXXXXXXXXX		
3.75					P1	129.95	3.60	Very weak to weak thinly laminated grey weathered SILTSTONE with occasional orange discolouration on fracture surfaces. Fractures, where evident generally subhorizontal and subvertical, extremely closely to very closely spaced, planar, frequently irregular, apparently random strike.	XXXXXXXXXXXXXXXXXXXX		
3.60	67	19	0	0			(0.90)		XXXXXXXXXXXXXXXXXXXX		
4.50					21/09/2006: DRY	129.05	4.50	NO RECOVERY - assumed zone of core loss	XXXXXXXXXXXXXXXXXXXX		
4.50					21/09/2006: D18		(0.50)		XXXXXXXXXXXXXXXXXXXX		
					21/09/2006:	128.55	5.00	Grey weathered SILTSTONE recovered non intact.	XXXXXXXXXXXXXXXXXXXX		
5.00	56	13	0	0	22/09/2006: P2		(0.45)		XXXXXXXXXXXXXXXXXXXX		
						128.10	5.45	Weak brittle black COAL.	XXXXXXXXXXXXXXXXXXXX		
6.00					D19		(0.70)		XXXXXXXXXXXXXXXXXXXX		
6.00	100	84	46	0		127.40	6.15	Generally recovered as firm to stiff thickly laminated SILT/CLAY. From 6.45 to 6.80m; no recovery	XXXXXX		
6.80			0	0	D20		(1.25)		XXXXXX		
7.50			0	0	C3				XXXXXX		
7.40-7.86			0	0		126.15	7.40	At 7.30m; subrounded coarse gravel size nodule of strong ironstone.	XXXXXX		
7.20			0	0				Generally moderately weak to moderately strong (variably weak) light grey fine grained SANDSTONE with occasional becoming frequent thin brown and black (frequently non Between 8.00m and 8.55m; generally non-intact due to persistent wispy interlaminae. Frequent light orange brown discolouration on fracture surfaces, variably weak. Fractures, subhorizontal (40 to 50 degrees) closely spaced (90/110/130) smooth, planar and undulating, tight to open, subvertical and vertical (70 degrees to 85 degrees) smooth, undulating, very open.	XXXXXX		
7.40			0	0					XXXXXX		
8.00	81	65	25	0	C4		(2.00)		XXXXXX		
8.66-9.00			0	0					XXXXXX		
8.20					D21				XXXXXX		
8.55	80	80	10	0					XXXXXX		
9.00			0	0	D22				XXXXXX		
9.00						124.15	9.40	Generally weak (variably very weak) green grey becoming grey thinly and thickly laminated MUDSTONE (variably grading in very thin beds to siltstone) with occasional very thin beds of strong light brown ironstone (up to 60mm). Between 9.40m and 9.60m; no recovery	XXXXXX		
9.40			0	0					XXXXXX		
Remarks									Scale (approx) 1:50	Logged By TL	
									Figure No.		



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Machine: Flush : Core Dia: mm Method :		Casing Diameter 140mm cased to 1.50m		Ground Level (mOD) 133.55		Client Highways Agency		Job Number WAL060099		
		Location 445152 E 356837 N		Dates 21/09/2006- 25/09/2006		Engineer Arup		Sheet 2/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.20	100	81	15	0	P5			Recovered in very thin to thin beds as very stiff friable extremely closely fissured gravelly clay, structure frequently not apparent. Fractures, where evident horizontal (0 degree to 10 degrees), extremely closely to closely spaced (15/45/110), smooth, planar, occasional stepped. Incipient to open; subvertical and vertical, smooth, planar to irregular. Between 9.60m and 10.20m; very stiff friable extremely closely fractured silt/clay. At 10.30m; very thin bed of strong light brown ironstone (60mm)		
10.50								At 11.45m; very thin bed of strong light brown ironstone (45mm)		
10.55								Between 12.00m and 12.35m; no recovery.		
								Between 12.65m and 12.90m; recovered as soft to stiff friable fractured silt/clay.		
12.00			0	0	P6 D23		(4.75)	At 13.55m; very thin bed of strong light brown ironstone (45mm)		
12.35			0	0						
12.90	100	87	38	0						
13.45			0	0						
13.50					C7			Moderately weak to moderately strong light and dark grey thinly colour laminated fine grained SANDSTONE locally with very thin brown wispy interlaminae. Light orange brown discolouration penetrating occasionally throughout, occasional heavy red brown discolouration on fracture surfaces, locally weak. Fractures, horizontal (0 degree to 15 degrees), closely to medium spaced (90/200/530), smooth, undulating and planar, open, vertical (80 degrees to 90 degrees), rough, undulating and planar, open subvertical (75 degrees) smooth, undulating, open apparently intersecting vertical at 90 degrees. Between 15.60m and 15.90m; frequent vertical irregular fracturing vertical displacement up to 3mm.		
13.50			0	0						
14.15	100	96	52	0						
14.69-14.90										
15.00			0	0	C8		(4.10)	Between 16.70m and 18.10m; vertical fracture, locally non intact.		
15.60			0	0						
15.90										
15.97-16.50	97	75	53	0						
16.50			0	0	C9			Generally moderately weak (variably becoming weak) light and dark grey thinly colour and cross colour laminated SILTSTONE (rarely grading to fine grained sandstone). Fractures, horizontal (0 degree to 10 degrees) closely to medium spaced (80/130/230), smooth, planar, tight open, subvertical, smooth, planar, open. Between 18.60m and 18.70m; grading to fine grained sandstone.		
16.70	95	95	63	0						
18.00			0	0						
18.00-18.23			0	0						
18.10					W24 W25			Between 19.60m and 20.15m; weakened by leaching in closely spaced thin zones (up to 150mm), occasionally recovered non intact, weak, fractures locally very closely		
18.25	97	79	16	0						
19.50			0	0						
19.60			0	0						
19.60										
19.80										
Remarks								Scale (approx) 1:50	Logged By TL	
								Figure No.		

[illegible]