

	British Geologic			ı,				Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2	Boreho Numbe RC12	er	
Machine: Flush :				Diamete I0mm ca	er sed to 3.00m		l Level (mOD 107.30	Client Highways Agency	Job Numbe WAL06009		
Core Dia: mm Method :			Location 445158 E 368689 N			Dates 06/09/2006		Engineer Arup		Sheet 1/2	
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.	(Open Hole.		∇1	
1.20							(3.00)				
	96	66	0	0				(BCE)			
3.00			0	0	_	104.30	(0.45)	Very weak black carbonaceous MUDSTONE. Thinly interlaminated with very weak brittle black coal. Apparently extremely closely fractured. Generally recovered non-intact as clayey angular to subangular fine to coarse gravel.			
3.45			0	0		105.60	3.43	Generally weak (variably very weak) grey SILTSTONE with occasional (locally frequent) black carbonised plant remains (up to 8mmx15mm). Weathering: Yellow brown discolouration penetrating up to 2mm. Fractures: Horizontal			
4.05 4.00 4.50-4.67 4.50	96	73	0	0	P1 12/16,35 SPT 12*/75 51/95			discolouration penetrating up to 2mm. Fractures: Horizontal (0 degrees to 15 degrees) closely spaced, smooth, undulating, frequently irregular, others very closely spaced and irregular. Apparently random strike. Between 3.45m and 4.00m; recovered as very stiff very closely fissured silt/clay. Fissures infilled up to 2mm with yellow brown silt.	X X X X X X X X X X X X X X X X X X X		
5.60 6.00-6.11	83	73	26	0	P2 8/35 SPT 8'/75		(4.15)		X X X X X X X X X X X X X X X X X X X		
6.00 6.35 7.50-7.62	98	87	39	0	35/30 // P3 11/35 SPT 11*/75			(BCE)			
7.50 7.60			0	0	35/40	99.70	7.60	Generally moderately weak (variably weak) light grey frequently colour laminated dark grey SILTSTONE. Variably grading in thin and medium beds to moderately weak fine to		ı	
8.45-8.65 8.80-8.84 8.80	97	97	51	0	C4 /35 SPT 0 ³ /0 - 35/40			grained sandstone. Fractures are horizontal (0 to 15 degrees) closely and medium spaced, smooth, planar, undulating and moderately open. Between 7.60m and 9.00m occasional orange brown discolouration on fracture surfaces.	X X X X X X X X X X X X X X X X X X X		
9.00-9.22	97	84	36	0	C5			Between 9.40m and 9.65m; convergence of subvertical fractures at 100 degrees.	X X X X X X X X X X X X X X X X X X X		
Remarks	•							Scale (approx)	Logge	d	
								1:50 Figure	TL No.		



British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL								Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2	Borehole Number RC1230		
Machine: Casing Diameter Flush : 140mm ca										Job Number	
Core Dia: mm								WAL060			
Method :							/09/2006	Engineer		Sheet	
			445158 E 368689 N					Arup		2/2	
Depth (m)	TCR	SCR	RQD	FI	Field Records	(mOD)	Depth (m) (Thickness	Description	Legen	Water	
9)									****** ******	×	
10.30 10.30-10.39					4/35 SPT 4*/75 35/10				* * * * * * * * * * * * * * * * * * *	×	
10.30			0	0	P6		-		× × × × × × × × × × × × × × × × × × ×	×	
11.15 11.30			0	0			(7.20)	Between 11.15m and 11.30m; non-intact.	X X X X X X X X X X X X X X X X X X X	× × × ×	
11.50	98	87	18	0			_		*****	× × × ×	
11.80 11.90-12.18					C7				* * * * * * * * * * * * * * * * * * *		
12.25			0	0				Between 12.25m and 12.50m; non-intact.	××××× ××××× ×××××	×	
12.50			10				<u> </u>		* * * * * * * * * * * * * * * * * * *	× × × ×	
									* * * * * * * * * * * * * * * * * * *	× × ×	
			0	0			<u> </u>		* * * * * * * * * * * * * * * * * * *	× × × ×	
13.45-13.60					C8				* * * * * * * * * * * * * * * * * * *	×	
13.80								Between 13.80m and 14.80m; bedding plane inclined at 40 degrees, fractures are subhorizontal (35 degrees to 40 degrees), closely spaced, smooth, undulating and	××××××	×	
91	100	95	15	0				open.	X X X X X X X X X X X X X X X X X X X	×	
14.80						92.50	14.80		××××× ××××× ××××× ×××××	× × × ×	
15.10					P9	02.00	7.30	veek and moderately weak light and dank gley thinly colour laminated SILTSTONE with rare thin beds (80mm) of moderately strong grey thinly laminated fine grained sandstone with frequent thick laminae and medium to coarse gravel size nodules of ironstone. Bedding plane	* * * * * * * * * * * * * * * * * * *	× × × × × ×	
								varies from 0 degrees to 20 degrees. Fractures: Horizonta (10 to 20 degrees), very closely and closely spaced, smootl undulating, very tight to open, subvertical, smooth, planar and generally very open.		× × ×	
	100	100	0	0			(3.10)	(6)	* * * * * * * * * * * * * * * * * * *	×××××××××××××××××××××××××××××××××××××××	
)				At 16.60m; thick lamination (20m) ironstone.	* * * * * * * * * * * * * * * * * * *	× × × × ×	
									X X X X X X X X X X X X X X X X X X X	× × × ×	
17.35					P10			Between 17.30m and 17.40m; thin bed moderately strong sandstone. Between 17.60m and 17.75m; thin bed moderately	X X X X X X X X X X X X X X X X X X X	× × × ×	
17.80 17.80-18.00 17.90			0	0	C11	89.40	17.90	Weak light and dark grey thinly to thickly colour laminated	××××× ××××× ××××× ×××××	×	
6								SILTSTONE with rare thick laminae and rounded medium gravel size ironstone nodules. Fractures: Horizontal (0 to 10 degrees) extremely closely spaced and very closely	****** ****** ******	××××	
)							(1.20)	spaced, smooth, planar, incipient to open and subvertical (55 degrees).	X X X X X X X X X X X X X X X X X X X	××××	
						88.20	19.10	Weak dark brown grey think laminated MI IDSTONE	× × × × × × × × × × × × × × × × × × ×	××××	
19.45					P12		(0.90)	Weak dark brown grey thinly laminated MUDSTONE. Fractures: horizontal (10-15 degrees) extremely closely to very closely spaced, smooth, planar, often irregular, incipien others subvertical and vertical smooth, planar, open.	,		
					06/09/2006:	-					
Remarks						87.30	20.00	Scale (approx)	Fogg	∃ jed	
								(approx)	TL		
									No.		