









<div><div>British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL</div></div>						Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI - CONTRACT 2		Borehole Number RC1241			
Machine: Flush : Core Dia: mm Method :			Casing Diameter 140mm cased to 15.00m Location 445054 E 372985 N			Ground Level (mOD) 63.85 Dates 29/01/2007-30/01/2007		Client Highways Agency Engineer Arup		Job Number WAL060099A Sheet 1/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.00	PIT		0	0	Groundwater was not apparent during boring(1) at 0.00m.			Inspection Pit.		V1	
	O/H		0	0			(1.20)				
1.20						62.65	1.20	Open Hole. See cable percussion hole CP1241 for likely material description.			
	97	31	0	0			(13.80)				
Remarks									Scale (approx) 1:50 Logged By OP/TL Figure No.		



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Machine: Flush : Core Dia: mm Method :			Casing Diameter 140mm cased to 15.00m		Ground Level (mOD) 63.85		Client Highways Agency		Job Number WAL060099A		
			Location 445054 E 372985 N		Dates 29/01/2007- 30/01/2007		Engineer Arup		Sheet 2/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
15.00						48.85	15.00 (0.25)	Very weak, black, thinly laminated very carbonaceous MUDSTONE. Discontinuities: extremely closely spaced, rough, clean. Generally recovered as 4mm to 8mm thick discs.			
15.25			0	0		48.60	15.25				
	88	23	8	0			(1.55)	Moderately weak, black, vitreous COAL. Discontinuities: extremely closely and very closely spaced, horizontal and vertical, rough and smooth. From 15.25m to 15.65m; generally recovered non-intact.			
16.50					/18,24,30,29			From 16.50m to 16.68m; assumed zone of core loss.			
16.50-16.74			0	0	SPT 0*/0	47.05	16.80	From 16.68m to 16.80m; non-intact.			
16.80					101/240		(0.85)	Stiff variably very weak light grey MUDSTONE, with occasional fossilised plant remains. Discontinuities: extremely closely spaced, randomly orientated, smooth and rough fissures.			
17.65						46.20	17.65	Moderately weak to moderately strong grey (locally dark grey thinly colour laminated) SILTSTONE thinly interbedded with very weak grey mudstone with occasional rounded coarse gravel size ironstone nodules. Fractures: (where evident) horizontal, extremely closely to very closely spaced, smooth, planar. Frequent irregular discontinuities in mudstone, apparently random strike.			
17.75	83	33	7	0	P1		(1.30)				
18.00					/30,38,32			Generally weak (variably very weak to moderately weak) grey MUDSTONE with rare very thin beds of strong brown ironstone. Discontinuities: horizontal, very closely to closely spaced, smooth planar and undulating; vertical and subvertical, smooth, planar.			
18.00-18.18			0	0	SPT 0*/0	44.90	18.95				
18.85					P2						
18.95	100	51	9	0							
19.50					/28,32,39,1						
19.50-19.73					SPT 0*/0						
					100/225						
Remarks								Scale (approx) 1:50	Logged By OP/TL		
								Figure No.			



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		Location 445054 E 372985 N		Dates 29/01/2007-30/01/2007		Engineer Arup		Sheet 3/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.40	63	23	0	0	P3			MUDSTONE (as previous sheet)		
21.00 21.00-21.18			0	0	/31,36,33 SPT 0°/0 100/180		(4.25)	At 21.40m; very thin bed of strong brown ironstone.		
21.95	72	7	0	0				From 21.95m to 22.50m; assumed zone of core loss.		
22.50			0	0	/33,38,29 29/01/2007:					
22.80 22.50-22.68			0	0	29/01/2007: SPT 0°/0 100/175 29/01/2007:	40.65	23.20	From 22.80m and 23.20m; recovered as firm to stiff thinly laminated grey clay very thinly interbedded with very weak grey mudstone.		
23.20 23.35	98	57	21	0	30/01/2007: P4			Generally moderately weak (variably weak to moderately strong) black carbonaceous MUDSTONE. Fractures: horizontal, very closely to closely spaced, smooth planar; subvertical and vertical, smooth planar.		
24.00 24.00-24.16	100	32	0	0	/29,39,32 SPT 0°/0 100/162			From 24.30m to 24.50m; thin bed of strong dark grey black siltstone.		
25.30 25.50-25.66			0	0	/31,42,27 SPT 0°/0 100/159		(3.40)			
26.60 26.70	100	0	0	0	P6	37.25	26.60	Between 25.50m to 25.60m; thin bed of soft light grey slightly gravelly clay. Gravel is subangular fine to coarse of mudstone (probably fallen from above). Between 25.60m to 26.00m; thickly colour laminated black and light brown. Between 26.00m and 26.25m; thin bed of weak light grey mudstone with occasional carbonised plant remains. At 26.50m; rare thin laminations of weak brittle black coal.		
27.00 27.00-27.23			0	0	/21,29,37,13 SPT 0°/0 100/229		(1.60)	Generally moderately strong (variably weak to strong) light grey locally medium and coarse sandy MUDSTONE. Fractures: subhorizontal and subvertical, closely and medium spaced, rough to irregular.		
27.70-27.97					U7					
28.20 28.45					P8 30/01/2007: 30/01/2007:	35.65 35.35	28.20 (0.30) 28.50	Weak grey MUDSTONE. Fractures: subhorizontal (30 degrees to 40 degrees), smooth, planar; subvertical, smooth, planar to irregular.		
								Complete at 28.50m		
Remarks								Scale (approx) 1:50	Logged By OP/TL	
								Figure No.		