








<div>British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL</div>							Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI - CONTRACT 2			Borehole Number RC1232		
Machine: Flush : Core Dia: mm Method :			Casing Diameter 140mm cased to 18.00m			Ground Level (mOD) 84.80		Client Highways Agency			Job Number WAL060099	
			Location 444988 E 369464 N			Dates 02/02/2007-05/02/2007		Engineer Arup			Sheet 1/3	
Depth (m)		TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description		Legend	Water
0.00 0.20		PIT		0	0	B1			MADE GROUND. Firm dark brown and black sandy slightly clay. Gravel is subangular fine and medium of brick, slate, coal, slag and limestone, intermixed with subangular to subrounded coarse gravel of limestone.			
		O/H		0	0			(1.20)				
1.20							83.60	1.20	Open Hole.			
		100	0	0	0			(7.30)				
8.50							76.30	8.50	Firm to stiff grey extremely closely fissured CLAY with occasional cobbles of weak mudstone.			
		46	0	0	0		75.60	9.20	Strong grey SILTSTONE with orange iron staining on fracture surfaces.			
9.50-9.73 9.50						/21,27,30,22 SPT 0'/0 100/232	75.30	9.50	Assumed zone of core loss.			
								(0.70)				
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 18.00m		Ground Level (mOD) 84.80		Client Highways Agency		Job Number WAL060099		
		Location 444988 E 369464 N		Dates 02/02/2007-05/02/2007		Engineer Arup		Sheet 2/3		
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
11.00 11.00-11.16	97	0	0	0	/27,36,27 SPT 0'/0 90/162	74.60 73.80	(0.70) 10.20 (0.80) 11.00	Poor recovery. Recovered as very stiff friable light grey At top; fragments of weak mudstone and coal. CLAY with occasional carbonised plant remains. Very weak to moderately weak light grey MUDSTONE (variably siltstone) with occasional carbonised plant remains. Occasionally weathered in thin beds to stiff friable clay. Fractures: subvertical and subhorizontal, extremely closely to closely spaced, planar and irregular, frequently incipient.		
12.50 12.50-12.67 12.55 12.80 13.10	39	0	0	0	/31,39,30 SPT 0'/0 100/167 P1	72.25 71.70	12.55 (0.55) 13.10	Very weak to weak dark grey MUDSTONE with occasional subrounded coarse gravel size ironstone nodules. Fractures: where evident: subvertical, closely spaced, planar; frequent others irregular, apparently random strike. Assumed zone of core loss.		
14.00 14.00-14.24	39	0	0	0	/19,23,29,31 SPT 0'/0 102/244		(3.20)			
15.50			0	0	02/02/2007: 02/02/2007: 02/02/2007:					
16.30	67	19	0	0	05/02/2007: P2 /15,21,26,30 SPT 0'/0 N=92	68.50 67.80 67.40 66.80	16.30 (0.70) 17.00 (0.40) 17.40 (0.60) 18.00	Very weak to weak dark grey MUDSTONE. Weak brittle black COAL, locally with speckles of pyrite. Fractures: horizontal, very closely spaced, smooth, planar; subvertical and vertical, smooth, planar. Generally very weak (variably stiff clay to weak) grey MUDSTONE, locally with occasional carbonised plant remains. Fractures: subvertical, closely spaced, planar and irregular; others irregular, apparently random strike.		
16.85 17.00 17.00-17.30 17.40			0	0	P3 /20,31,39,10 SPT 0'/0 100/227		(1.10)	Assumed zone of core loss.		
18.00 18.30 18.50 18.50-18.73 19.10	61	43	0	0		65.70	19.10	Generally weak (variably very weak) grey MUDSTONE with rare subrounded coarse gravel size ironstone nodules. Fractures: horizontal (0 degrees to 15 degrees), very closely to medium spaced, smooth, planar, frequent with soft clay infill up to 5mm; subvertical, smooth, planar; others generally vertical, apparently random strike.		
20.00	83	63	22	0						
Remarks							Scale (approx) 1:50		Logged By TL	
							Figure No.			



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		Location 444988 E 369464 N		Dates 02/02/2007- 05/02/2007		Engineer Arup		Sheet 3/3			
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
20.00-20.23					SPT 0'/0 100/228			MUDSTONE (as previous sheet)			
20.80	100	77	47	0	P4		(3.55)				
21.50 21.50-21.73					/27.33.36.4 SPT 0'/0 100/226						
22.05	100	100	85	0	P5						
23.00	Sample / Tests		Casing Depth (m)	Water Depth (m)	- driller noted as artesian water to 24.50m(1) at 23.00m. /36.42.22		62.15 22.65	Moderately strong to strong light grey fine grained SANDSTONE with very frequent thin black wispy laminae. Fractures: horizontal, closely to medium spaced, smooth, planar; subvertical (75 degrees to 85 degrees), rough, planar to undulating.		▽1	
23.00-23.16	SPT 0'/0 100/156		18.00				(1.85)				
23.70-24.05	U6										
24.00 24.00	W201 W7										
24.50-24.51	SPT 0'/0 50/11		18.00		05/02/2007: 05/02/2007: /50 05/02/2007:	60.30 24.50		Complete at 24.51m			
Remarks								Scale (approx) 1:50	Logged By TL		
								Figure No.			