







 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL						<b>Site</b> M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI-CONTRACT 2		<b>Borehole Number</b> RC1233		
<b>Machine:</b> <b>Flush :</b> <b>Core Dia: mm</b> <b>Method :</b>		<b>Casing Diameter</b> 140mm cased to 3.00m		<b>Ground Level (mOD)</b> 92.20		<b>Client</b> Highways Agency		<b>Job Number</b> WAL060099		
		<b>Location</b> 444878 E 369785 N		<b>Dates</b> 02/02/2007-05/02/2007		<b>Engineer</b> Arup		<b>Sheet</b> 1/3		
<b>Depth (m)</b>	<b>TCR</b>	<b>SCR</b>	<b>RQD</b>	<b>FI</b>	<b>Field Records</b>	<b>Level (mOD)</b>	<b>Depth (m) (Thickness)</b>	<b>Description</b>	<b>Legend</b>	<b>Water</b>
0.00	PIT		0	0				Inspection Pit.		
	OH		0	0			(1.20)			
1.20						91.00	1.20	Open Hole.		
	58	0	0	0			(1.80)			
3.00						89.20	3.00	Assumed zone of core loss.		
	100	3	0	0			(0.63)			
4.50-4.82					25/19,27,33,50 SPT 25'/75 129/243	88.57	3.63	Stiff to hard, light grey extremely closely fissured CLAY.		
4.50			0	0			(1.43)			
4.94			0	0		87.14	5.06	Below 4.94m: stiff clay to very weak dark grey and black carbonaceous mudstone.		
5.06			0	0			(0.79)			
6.15					P1			Weak and very weak grey SILTSTONE (locally stiff clay), with occasional to some fossilised plant remains. Discontinuities: randomly orientated, extremely closely spaced, rough, some slightly polished microfractures.		
5.50			0	0		86.35	5.85	Moderately strong, light grey fine grained SANDSTONE thinly interlaminated to very thinly interbedded with grey siltstone. With occasional fine to medium gravel sized ironstone nodules. Discontinuities: closely spaced, At 6.45m: thick lamination of ironstone, horizontal and subhorizontal, rough, with clay coating up to 2mm thick. Vertical, rough, clean.		
6.00-6.16	100	33	14	0	25/39,50 SPT 25'/75 89/85		(0.75)			
5.85			0	0		85.60	6.60	Very weak and weak, grey thickly and thinly interbedded MUDSTONE and SILTSTONE, with very closely to medium spaced thin laminae and very thin beds of ironstone. Some orange brown discolouration. Occasionally weathered to firm clay. Discontinuities: randomly orientated most commonly vertical and horizontal, extremely closely spaced, smooth and rough, some orange staining. Extremely closely to closely spaced, horizontal and subhorizontal, smooth, clean. Closely to medium spaced, 45 degrees, rough, clean.		
6.00			0	0			(3.60)			
6.05										
6.60	93	18	0	0	P2					
7.40										
7.50	100	20	0	0						
8.80					P3					
9.00			0	0						
<b>Remarks</b>							<b>Scale (approx)</b> 1:50		<b>Logged By</b> OP	
							<b>Figure No.</b>			



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<b>Machine:</b> <b>Flush :</b> <b>Core Dia: mm</b> <b>Method :</b>		<b>Casing Diameter</b> 140mm cased to 3.00m		<b>Ground Level (mOD)</b> 92.20		<b>Client</b> Highways Agency		<b>Job Number</b> WAL060099		
		<b>Location</b> 444878 E 369785 N		<b>Dates</b> 02/02/2007- 05/02/2007		<b>Engineer</b> Arup		<b>Sheet</b> 2/3		
<b>Depth (m)</b>	<b>TCR</b>	<b>SCR</b>	<b>RQD</b>	<b>FI</b>	<b>Field Records</b>	<b>Level (mOD)</b>	<b>Depth (m) (Thickness)</b>	<b>Description</b>	<b>Legend</b>	<b>Water</b>
10.20	100	30	18	0	02/02/2007:DRY 02/02/2007: 02/02/2007: 05/02/2007: P4	82.00	(3.60) 10.20	Weak, variably stiff clay, grey MUDSTONE. Discontinuities: locally randomly orientated, generally vertical and horizontal, extremely closely spaced, rough and smooth, clean. From 10.65m to 11.00m; discontinuities are horizontal and subhorizontal, very closely to closely spaced, rough and smooth with occasional clay infill up to 2mm thick.		
10.50							(1.30)			
10.65			0	0						
11.50	100	57	17	0	P5	80.70	11.50	Weak and moderately weak locally clay, dark grey, slightly carbonaceous, MUDSTONE. Discontinuities: extremely closely to closely spaced, horizontal and subhorizontal, smooth, generally clean. Vertical, undulating smooth, clean.		
12.00										
12.10	33	31	7	0						
13.50					25/31.50 SPT 25'/75 81/102 P6		(3.50)	From 13.53m to 13.59m; ironstone. From 13.59m to 13.70m; black and very carbonaceous. From 13.70m to 14.15m; grey non carbonaceous.  From 14.35m to 14.80m; black and very carbonaceous.		
13.50-13.68										
14.00	93	35	15	0						
15.00					P7	77.20	15.00	Moderately weak, variably stiff clay to very weak, grey, MUDSTONE, with occasional fossilised plant remains. Discontinuities: where weathered, randomly orientated, extremely closely to very closely spaced, smooth and rough, clean. Vertical, rough, undulating. Where fresh, horizontal and subhorizontal, rough and smooth, occasional clay infill up to 20mm thick. Widely spaced, subvertical, smooth persistence within the core 50mm to 100mm. At 15.26m; very thin bed of ironstone.		
15.70	100	60	43	0						
16.50										
16.55	93	23	17	0	Water strike(1) at 16.50m, no rise after 20 mins. P8  P9 25/36.44,50 SPT 25'/75 130/160			From 17.15m to 17.55m; dark grey and slightly carbonaceous.		▼1
17.80										
18.00										
18.00-18.24	100	48	27	0			(6.00)			
19.50										
<b>Remarks</b>								<b>Scale (approx)</b> 1:50	<b>Logged By</b> OP	
								<b>Figure No.</b>		



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Boring Method Cable Percussion		Casing Diameter 140mm cased to 3.00m		Ground Level (mOD) 92.20		Client Highways Agency			Job Number WAL060099	
		Location 444878 E 369785 N		Dates 02/02/2007- 05/02/2007		Engineer Arup			Sheet 3/3	
Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
19.70	P10			05/02/2007: DRY		(6.00)	MUDSTONE (as previous sheet)			
20.90	P11			05/02/2007: 05/02/2007:	71.20	21.00	Complete at 21.00m Complete at 21.00m			
Remarks										
								Scale (approx) 1:50	Logged By OP	
								Figure No.		