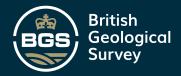
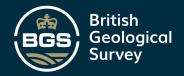


	British Geologica ATURAL ENVIRO		•	501				Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2	Boreh Numb RC12	er
Machine:				Diamete	er sed to 18.50m		Level (mOD)	Client Highways Agency	Job Numb	
Core Dia: m	ım		Locatio			Dates		Engineer	WAL0600	
Method :					363802 N	14	/11/2006- 5/11/2006	Arup	1/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00	PIT O/H		0	0	Groundwater was not apparent during boring(1) at 0.00m.		(1.20)	Inspection Pit.		∇1
1.20	O/IT					117.90		Open Hole.		
1.20			(0)	55)						
	42	15	0	0			(3.60)			
1.80					-	114.30	4.80	Poor recovery. Possible MADE GROUND. Recovered as		
	20	0	0	o			(1.55)	moderately weak to moderately strong subangular cobbles of grey mudstone.	"	
3.35-6.73 3.35					4/4,2,3,3 SPT(C) 4*/75 N=12	112.75	6.35	Very poor recovery. Possible MADE GROUND. Recovere as moderately strong to strong coarse gravel and subangula cobbles of light grey brown fine grained sandstone.	d r	
	20	0	0	0			(1.50)	copples or light grey brown line grained sandstone.		
7.85-8.23 7.85					2/2,3,3,4 SPT(C) 2*/75 N=12	111.25	7.85	Very poor recovery. Possible MADE GROUND. Recovered as strong subangular gravel of light grey fine grained sandstone.	l l	
	43	17	17	0			(1.50)			
9.35-9.73 9.35					1/2,3,6,10 SPT(C) 1*/75 N=21	109.75	9.35	Poor recovery. Possible MADE GROUND. Recovered as strong subangular cobbles (up to 180mm) of light grey fine grained sandstone (locally with very narrow wispy black laminae orientated subvertically).		
Remarks					I		<u> </u>	Scale (approx	Logge	ed
								1:50 Figure	TL	



	iritish Geologic ATURAL ENVIR		•	501				Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2	Boreh Numb RC12	er
Machine: Flush :				Diamete	er sed to 18.50m		Level (mOD) 119.10	Client Highways Agency	Job Numb	
Core Dia: m	m		Locatio			Dates		Engineer	Sheet	
Method :					14/11/2006- 15/11/2006		//11/2006- 5/11/2006	Arup	2/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legeno	Water
5)	33	13	7	0		(
10.85 10.85-11.23	67	21	9	0	1/2,4,4,4 SPT(C) 1*/75 N=14					
12.35 12.35-12.73	37	20	13	0	4/3,4,4,9 SPT(C) 4*/75 N=20		(6.00)	(BGB)		***************************************
13.85 13.85-14.23	81	65	58	0	3/3,4,4,6 14/11/2006: 14/11/2006: SPT(C) 3'/75 N=17 14/11/2006: 15/11/2006:					
5.35 5.35-15.73	69	47	0	0	4/4,4,6,6 SPT(C) 4*/75 N=20	103.75	15.35	Possible MADE GROUND. Strong boulders (up to 660mm of strong light grey fine grained sandstone.)	
6.85 6.85-17.23			0	0	6/6,7,6,7 SPT(C) 6*/75 N=26	102.60	16.50	Possible MADE GROUND. Moderately strong subangular cobble of black carbonaceous mudstone, rarely of fine grained sandstone. From 16.85m to 17.32m; assumed zone of core loss.		
17.47 17.60	94	47	0	0	P1	101.63	17.47	Generally weak (variably very weak to moderately weak) gre SILTSTONE with rare black carbonised fossil plant remains Fractures: horizontal, very closely to closely spaced, smoot planar. Occasionally weathered to stiff clay.	th,	:
18.35 18.35-18.73 19.20	0	0	0	0	6/7,7,8,12 SPT(C) 6'/75 N=34	(<	(3.53)	From 19.38m to 19.41m; ironstone.		
19.85					_			From 19.85m and 20.15m; no recovery.	X X X X X X X X X X X X X X X X X X X	:I I
Remarks					I			Scale (approx		_
								1:50 Figure	TL	



99 2) (British Geologica ATURAL ENVIRO		•	IL.				Site M1 WIDENING JUNCTION 21 TO 30 PRELIMINARY GI- CONTRACT 2	Boreh Numb RC12
lachine: lush :				Diamete I0mm cas	er sed to 18.50m		Level (mOD) 119.10	Client Highways Agency	Job Numb WAL0600
ore Dia: m	ım		Locatio		363802 N		1/11/2006- 5/11/2006	Engineer Arup	Sheet
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend
9.85-20.23 0.15	67	22	8	0	SPT(C) 23*/75 N=102	(¿		From 20.15m to 20.64m; assumed zone of core loss.	X X X X X X X X X X X X X X X X X X X
1.65 1.93	85 98	52 83	9	0	24/2,50 SPT(C) 24 ⁴ /75 52/150 P4	98.10	21.00	From 20.94m to 20.97m; ironstone. Moderately weak, grey MUDSTONE, with occasional gravel sized nodules of ironstone. Locally firm clay. Discontinuities: very closely to closely spaced, horizontal and subhorizontal, rough and smooth, clean. Vertical and subvertical, smooth and clean, persistence within core up to 120mm. From 21.65m to 21.83m; assumed zone of core loss.	******
.85 .85-23.00 .57	100	51	17	0	25/50 SPT(C) 25*/75 50/75 P5		(5.01)	ironstone. From 22.85m to 22.89m; siltstone. From 23.82m to 23.92m; siltstone. From 23.92m to 23.97m; ironstone.	
35 35-24.50 48	67	49	32	0	25/50 SPT(C) 25'/75 50/75 P7			At 24.28m; thick lamination of coal.	
85 85-26.00 00-26.28 55 65 78			0 0	0 0	25/50 SPT(C) 25'/75 50/75 U8 P9	93.09 92.45 91.75	(0.64)	Moderately strong light grey SILTSTONE, with extremely closely to closely spaced thin and thick laminae of grey mudstone. Discontinuities: horizontal and subhorizontal, very closely to medium spaced, rough, clean. From 26.35m to 26.65m; thinly and thickly interlaminated mudstone and siltstone. Moderately strong grey MUDSTONE locally weakened with extremely closely spaced fractures. Vertical, planar, rough, clean, persistence within the core 60mm. From 26.65m to 26.78m; Discontinuities: very closely to closely spaced, horizontal and subhorizontal, rough, clean.	**************************************
					15/11/2006:	(e		From 26.78m to 26.85m; recovered largely non-intact due to extremely closely spaced, randomly orientated microfractures. Complete at 27.35m	
emarks				61			- - - - - - -	Scale (approx	
								1:50 Figure	No.