

 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL							Site Nottinghamshire/ Derbyshire COA NMCS2 Upgrade			Borehole Number <b>M34</b>	
Machine: Flush : Core Dia: mm Method :			Casing Diameter			Ground Level (mOD) 63.54		Client Highways Agency		Job Number F11451	
			Location 445172.8 E 373231.68 N			Dates 07/09/1999- 08/09/1999		Engineer WSP Environmental Ltd		Sheet 1/3	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
0.00-0.40					D01 0 blows	63.44	0.10	TOPSOIL.			
0.40-0.80	29	0	0	98	D02 0 blows		(0.70)	MADE GROUND: Light brownish grey slightly sandy medium and coarse angular gravel sized fragments of limestone.			
0.80-1.25					1, 1/1, 1, 1, 1 SPT N=4	62.74	0.80	MADE GROUND: Brown very sandy clay with some fine and medium angular and subangular gravel sized fragments of sandstone, mudstone and quartz.			
1.25											
2.00-2.45	100	0	0	98	1, 1/2, 3, 3, 4 SPT N=12			---from 1.85m to 2.00m mudstone boulder ---from 2.00m becomes orangish brown mottled grey with much fine to coarse angular to rounded gravel sized fragments of mudstone sandstone, quartz, siltstone and coal			
2.45											
3.00-3.45	54	0	0	98	2, 3/3, 4, 4, 4 SPT N=15						
3.45											
4.00-4.45	22	0	0	98	2, 2/4, 5, 6, 5 SPT N=20		(7.20)				
4.45											
5.00-5.45	54	0	0	98	2, 3/4, 4, 7, 6 SPT N=21						
5.45											
6.00-6.42	45	0	0	98	2, 11/33, 11, 3, 3 SPT 50/265			---at 6.00m sandstone cobble			
6.41											
7.00-7.45	100	0	0	98	1, 3/5, 2, 2, 2 SPT N=11						
7.45											
	38	0	0	98	1, 2/4, 4, 4, 5 07/09/1999: 0.00m 08/09/1999: SPT N=17	55.54	8.00	MADE GROUND: Dark grey sandy clay with much fine to coarse angular to rounded gravel sized fragments of sandstone, quartz, mudstone and siltstone.			
8.00-8.45											
8.45											
	50	0	0	98							
9.50-9.95					3, 3/4, 6, 7, 7 SPT N=24		(3.00)	---from 9.50m becomes brown with occasional sandstone cobbles			
9.95											
<b>Remarks</b> 1. Inspection pit excavated to 0.80m. 2. Borehole complete at 23.00m. 3. Borehole backfilled with grout. 4. Marker Post Ref 235/0 +50N.								Scale (approx) 1:50	Logged By NBR		
								Figure No.			



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		<b>Location</b> 445172.8 E 373231.68 N		<b>Dates</b> 07/09/1999- 08/09/1999		<b>Engineer</b> WSP Environmental Ltd		<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>
11.00-11.45	97	0	0	98	1,2/3,4,4,6 SPT N=17	52.54	11.00	MADE GROUND: Orangish brown and grey mottled slightly sandy clay with occasional to some fine and medium subangular to rounded gravel sized fragments of mudstone and quartz.		
11.45										
12.50-12.95	79	0	0	98	2,2/3,3,4,4 SPT N=14		(3.13)			
12.95										
14.00-14.38	45	21	0	99	7,11/11,16,23,0 SPT 50/225	49.41	14.13	Grey thinly laminated subhorizontal very thinly and thinly bedded subhorizontal moderately weathered MUDSTONE, weak and very weak with very closely and closely spaced subhorizontal fractures open smooth planar and irregular. (Coal Measures) ---from 14.30m to 14.40m non intact		
14.37 14.40			0	1						
15.50-15.87	69	0	0	25	6,8/14,19,17,0 SPT 50/220		(2.87)	---from 15.50m to 15.85m non intact		
15.87								---from 15.85m with extremely closely spaced random fractures tight smooth irregular		
17.00-17.16 17.15	87	67	38	11	3,23/50,0,0,0 SPT 26*/115 50/40	46.54	17.00	Light grey thinly laminated subhorizontal thinly bedded and medium bedded subhorizontal slightly weathered fine grained SANDSTONE, moderately strong and strong with very closely and closely spaced subhorizontal fractures open rough irregular and planar and medium spaced inclined fractures open rough irregular. (Coal Measures)		
			0	3			(1.45)			
18.10	72	36	6	99						
18.50			0	19		45.09	18.45	Grey thinly laminated subhorizontal very thinly and thinly bedded subhorizontal moderately to slightly weathered fossiliferous MUDSTONE, very weak and weak with very closely and closely spaced subhorizontal fractures open smooth planar. (Coal Measures) ---from 18.50m to 19.32m moderately weathered non intact		
19.32										
20.00	96	31	15	0			(2.10)			
<b>Remarks</b>								<b>Scale (approx)</b> 1:50	<b>Logged By</b> NBR	
								<b>Figure No.</b>		



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Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
20.35 20.50			0 0	99 25		42.99	20.55 (0.65)	---from 20.23m to 20.50m moderately weathered non intact Dark grey thinly laminated subhorizontal very thinly bedded subhorizontal moderately weathered carbonaceous MUDSTONE, very weak with extremely closely spaced subhorizontal and random fractures tight smooth planar and irregular. (Coal Measures)		
21.50	42	21	0	10		42.34	21.20 (0.55)	Black moderately to highly weathered COAL, very weak with extremely closely spaced subhorizontal and subvertical fractures tight and open smooth planar. (Coal Measures)		
21.75			0	97		41.79	21.75	Soft to firm dark grey CLAY with much fine to coarse subangular and subrounded gravel of mudstone and coal. (Workings?) (Coal Measures)		
22.00			0	99			(1.00)			
22.75 22.80			0	4	08/09/1999:12.70m 08/09/1999:	40.79 40.54	22.75 (0.25) 23.00	Light grey very thinly bedded subhorizontal moderately weathered very silty MUDSTONE, very weak and weak with very closely spaced subhorizontal fractures open smooth planar and curvilinear. (Seatearth?) (Coal Measures) Complete at 23.00m		
Remarks								Scale (approx) 1:50	Logged By NBR	
								Figure No.		