
 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL							Site Nottinghamshire/ Derbyshire COA NMCS2 Upgrade		Borehole Number <b>M45</b>	
Machine: Flush : Core Dia: mm Method :			Casing Diameter		Ground Level (mOD) 109.83		Client Highways Agency		Job Number F11451	
			Location 445268.85 E 364467.93 N		Dates 26/08/1999- 01/09/1999		Engineer WSP Environmental Ltd		Sheet 1/2	
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.70-0.80 0.80-1.25 1.25	70	0	0	98	3,2/2,3,3,4 D01 0 blows SPT N=12	109.63	(0.20) 0.20	TOPSOIL.		
						109.13	(0.50) 0.70	MADE GROUND: Light brown slightly clayey sandy medium and coarse angular gravel sized fragments of limestone.		
			0	98			(1.30)	Firm orangish brown and grey mottled sandy CLAY with many root and rootlet traces with grey gleying. (Glacial Till)		
2.00 2.00-2.22 2.22	51	9	0	0	10,15/27,23,0,0 SPT 25*/115 50/105	107.83	2.00	Grey thinly laminated subhorizontal very thinly bedded subhorizontal moderately weathered SILTSTONE, weak with very closely and extremely closely spaced subhorizontal and subvertical fractures open rough planar with much iron staining. (Coal Measures)		
2.75 3.00-3.45	89	34	0	99	6,11/17,10,9,12 SPT N=48	106.93 106.83	2.90 3.00	Brown very sandy CLAY with much fine to medium angular gravel of siltstone. (Workings?) (Coal Measures)		
3.45 3.80 4.00-4.33			0	25			(1.80)	Grey very clayey sandy fine to coarse angular and subangular GRAVEL of mudstone and ironstone. (Workings?) (Coal Measures)		
4.33	64	6	0	25	10,13/15,24,11,0 SPT 50/180					
5.00-5.28 5.27 5.55			0	11	9,15/27,23,0,0 SPT 50/125	105.03	4.80	Grey thinly and thickly laminated subhorizontal moderately weathered MUDSTONE, weak with very closely and extremely closely spaced subhorizontal fractures open smooth planar clay smeared and closely spaced subvertical and inclined fractures open smooth irregular. (Coal Measures)		
6.00-6.31 6.30	28	28	0	97	9,10/16,28,6,0 SPT 50/155			---from 6.05m to 6.08m brown ironstone band, strong		
6.80 7.00-7.12 7.11	90	64	22	8	25,0/50,0,0,0 SPT 25*/70 50/45		(4.75)	---from 6.35m becomes very thinly and thinly bedded slightly to moderately weathered weak to moderately weak with very closely and closely spaced subhorizontal fractures and medium spaced subvertical and inclined fractures		
7.85 8.08 8.00-8.09	100	77	14	20	25,0/50,0,0,0 26/08/1999:0.00m			---from 7.85m to 8.00m extremely closely and very closely spaced random fractures open smooth clay smeared		
9.00			0	99	01/09/1999: SPT(C) 25*/50 50/35			---from 9.50m to 9.55m non intact		
9.50 9.55 10.00	100	75	0	10		100.28	9.55	Grey thinly cross laminated subhorizontal thinly and very thinly bedded subhorizontal slightly and moderately weathered SILTSTONE, very weak and weak with		
Remarks 1. Inspection pit excavated to 0.80m. 2. Borehole complete at 15.15m. 3. Borehole backfilled with arisings. 4. Marker Post Ref 226/1 - 30S.								Scale (approx) 1:50	Logged By NBR	
								Figure No.		



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<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	25		99.59	10.24	extremely closely and very closely spaced subhorizontal fractures open, smooth planar iron stained and medium spaced subvertical fractures open rough irregular iron stained. (Coal Measures)		
10.68	98	71	17	0				Light greyish brown thinly and medium bedded subhorizontal moderately weathered medium grained SANDSTONE, very weak and weak with closely and medium spaced subhorizontal fractures open rough planar and very closely spaced subvertical and inclined fractures open rough irregular with black and orange iron staining. (Coal Measures)		
10.80			0	5				---from 10.80m to 10.85m grey highly weathered siltstone, very weak		
10.90										
11.80			0	10						
	99	37	0	0						
12.25			0	11						
12.80							(4.91)			
	100	52	9	0						
13.70			0	25						
14.03			0	7						
14.30			0	25				---from 14.03m to 14.09m soft greyish brown very sandy clay ---from 14.30m to 14.80m with much iron staining and occasional coarse gravel sized vugs		
14.70										
					01/09/1999:11.10m 01/09/1999: 01/09/1999:5.30m	94.68	15.15	Complete at 15.15m		
<b>Remarks</b>								<b>Scale (approx)</b> 1:50	<b>Logged By</b> NBR	
								<b>Figure No.</b>		