
 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL							Site Nottinghamshire/ Derbyshire COA NMCS2 Upgrade		Borehole Number M41	
Machine: Flush : Core Dia: mm Method :			Casing Diameter		Ground Level (mOD) 86.57		Client Highways Agency		Job Number F11451	
			Location 444845.84 E 369803.82 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
0.30-0.60	95	43	12	25	D01 0 blows	86.27	(0.30) 0.30	TOPSOIL.		
0.60-0.80					D02 0 blows	85.97	(0.30) 0.60	MADE GROUND: Light brown slightly sandy slightly clayey medium and coarse angular gravel sized fragments of limestone.		
0.80			0	10				Grey thinly laminated subhorizontal very thinly and thinly bedded subhorizontal moderately weathered MUDSTONE weak to moderately weak locally very weak with extremely closely spaced random fractures open irregular smooth. (Coal Measures)		
1.45	87	56	23	0				---from 1.45m fractures become very closely and closely spaced subhorizontal open smooth planar with clay smearing		
1.80			0	25	Seepage(1) at 1.80m, sealed at 100000.00m.		(3.20)			
2.45			0	9						
2.55			0	99				---from 2.45m to 2.55m highly weathered with extremely closely spaced random fractures open smooth irregular		
3.20										
3.30-3.60	100	59	18	25	10,15/22,28,0,0 SPT 50/145					
3.59			0	3						
3.80			0	25		82.77	3.80	Light grey thinly laminated subhorizontal very thinly and thinly bedded subhorizontal highly weathered MUDSTONE, weak to moderately weak locally very weak with extremely closely spaced random fractures tight smooth irregular clay smeared. (Coal Measures)		
4.00			0	3				---from 3.80m to 4.00m moderately weathered with very closely spaced subhorizontal and inclined fractures open smooth planar clay smeared		
4.50	97	22	0	25			(2.35)	---from 4.50m to 4.80m slightly weathered moderately weak with closely and very closely spaced subhorizontal and subvertical fractures open smooth planar		
4.80			0	25						
5.80			0	6						
6.15	100	11	0	0		80.42	6.15	Dark grey thinly laminated subhorizontal very thinly bedded subhorizontal slightly weathered carbonaceous		
6.40			0	25			(0.42)	MUDSTONE, moderately weak and weak with very closely spaced subhorizontal fractures tight smooth planar. (Coal Measures)		
6.57						80.00	6.57			
			0	25			(0.86)	Light grey thinly laminated subhorizontal thinly bedded subhorizontal highly weathered MUDSTONE, very weak with extremely closely spaced random fractures smooth irregular clay smeared. (Coal Measures)		
7.43			0	98		79.14	7.43	---from 6.80m with closely spaced thick laminae of moderately weathered carbonaceous mudstone, weak		
7.53	100	0	0	0		79.04	7.53			
7.90			0	25			(0.82)	Black moderately weathered COAL, weak with extremely closely spaced subhorizontal and subvertical fractures tight smooth planar. (Coal Measures)		
8.35						78.22	8.35	Stiff grey extremely closely fissured silty CLAY with many fossils. (Completely Weathered Seatearth) (Coal Measures)		
	100	13	0	2			(1.05)	Light grey thinly and medium bedded subhorizontal moderately weathered very silty fossiliferous MUDSTONE, very weak with extremely closely spaced random fractures smooth irregular tight clay smeared. (Seatearth)		
9.40			0	98		77.17	9.40	---from 8.80m brownish grey		
9.60						76.97	(0.20) 9.60	Dark grey indistinctly thinly laminated subhorizontal very thinly bedded subhorizontal highly weathered carbonaceous MUDSTONE, very weak with very closely spaced subhorizontal fractures open smooth irregular.		
Remarks 1. Inspection pit excavated to 0.80m. 2. Borehole complete at 13.00m. 3. Borehole backfilled with grout. 4. Marker Post Ref 231/5 S.								Scale (approx) 1:50	Logged By NBR	Figure No.



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Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
	97	0	0	3				Soft to firm dark grey slightly sandy CLAY with much fine and medium angular and subangular gravel. (Possible Workings?)		
10.80			0	98			(2.44)	---from 10.80m to 11.00m grey slightly weathered mudstone with very closely spaced subhorizontal fractures open smooth planar		
11.00			0	98						
11.60			0	25						
12.04	100	30	21	0	26/08/1999:0.00m	74.53	12.04 (0.44)	Black slightly to moderately weathered COAL weak with extremely closely spaced subhorizontal and subvertical fractures tight smooth planar. (Coal Measures)		
12.30			0	2	01/09/1999:	74.09	12.48 (0.17)	---from 12.30m becomes highly weathered very weak, fractures become open with clay smearing		
12.65			0	99		73.92	12.65 (0.23)	Firm grey indistinctly thinly laminated CLAY. (Completely Weathered Seatearth?) (Coal Measures)		
12.85					01/09/1999:100000.00m	73.57	13.00 (0.35)	Grey thinly bedded subhorizontal highly weathered very silty fossiliferous MUDSTONE, weak with closely spaced subhorizontal fractures open smooth undulose. (Seatearth) (Coal Measures) ---from 12.85m non intact		
					01/09/1999:			Complete at 13.00m		
Remarks								Scale (approx) 1:50	Logged By NBR	
								Figure No.		