
 <b>British Geological Survey</b> NATURAL ENVIRONMENT RESEARCH COUNCIL						Site Nottinghamshire/ Derbyshire COA NMCS2 Upgrade		Borehole Number <b>M43</b>				
Machine:		Casing Diameter				Ground Level (mOD) 106.75		Client Highways Agency		Job Number F11451		
Flush :						Dates 25/08/1999		Engineer WSP Environmental Ltd		Sheet 1/2		
Core Dia: mm		Location 445402.53 E 367230.14 N										
Method :												
Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water		
0.20-0.50	100	0	0	98	D01 0 blows	106.55	(0.20) 0.20	TOPSOIL.				
0.50-0.80					D02 0 blows	106.15	(0.40) 0.60	MADE GROUND: Light brown clayey slightly sandy fine to coarse angular gravel sized fragments of limestone.				
0.80-1.25					1,3/2,2,3,3 SPT N=10		(0.65)	MADE GROUND: Brown very sandy clay with some fine to coarse angular to subrounded gravel sized fragments of sandstone, mudstone, quartz and brick.				
1.25	100	0	0	98	1,2/2,3,3,4 SPT N=12	105.50	1.25	MADE GROUND: Light brown mottled grey and orange sandy clay with occasional fine angular gravel sized fragments of mudstone, sandstone and quartz.				
2.00-2.45							(1.75)	---from 1.85m to 1.88m with much coarse gravel ---from 2.15m becomes light grey and light brown				
2.45												
3.00-3.45	100	0	0	98	4,3/4,6,6,7 SPT N=23	103.75	3.00	MADE GROUND: Light grey very clayey fine to coarse subangular to rounded gravel sized fragments of mudstone, sandstone, quartz and coal.				
3.45						(1.00)	---from 3.20m with much mudstone cobbles					
4.00-4.40												
4.39	13	11	0	97	3,6/11,15,13,11 SPT 50/245	102.75	4.00	COAL. (No recovery - Driller's description)				
4.55						(0.55)						
5.00-5.15	85	60	14	10	13,12/50,0,0,0 SPT 25*/95 50/50	102.20	4.55	Grey thinly laminated subhorizontal very thinly bedded moderately weathered MUDSTONE, very weak and weak with very closely spaced subhorizontal fractures open smooth planar clay smeared. (Coal Measures)				
5.14						(0.55)						
6.00-6.09	100	88	10	17	24,0/50,0,0,0 SPT(C) 24*/45 50/40	101.65	5.10	Grey thinly laminated very thinly and thinly bedded subhorizontal slightly and moderately weathered fine grained SANDSTONE, moderately weak with very closely and closely spaced subhorizontal fractures open smooth planar iron stained and medium spaced inclined fractures open rough irregular. (Coal Measures)				
6.08						(1.15)						
6.80	82	49	18	1	25,0/50,0,0,0 SPT(C) 24*/45 50/40	100.50	6.25	Grey thinly laminated subhorizontal very thinly bedded subhorizontal slightly weathered silty MUDSTONE, weak and moderately weak with very closely and closely spaced subhorizontal fractures open smooth planar iron stained. (Coal Measures)				
6.90						(0.55)						
7.06												
7.00-7.06	98	56	9	99	25,0/50,0,0,0 Moderate(1) at 7.00m, sealed at 100000.00m. SPT(C) 25*/30 50/30	99.95	6.80	Dark grey thinly laminated subhorizontal very thinly bedded subhorizontal slightly weathered fossiliferous fine grained SANDSTONE, moderately weak with very closely spaced subhorizontal fractures open rough planar. (Coal Measures)			V	
7.50						(0.27) 7.07						
8.00-8.09	100	88	49	3	25,0/50,0,0,0 SPT(C) 25*/50 50/35	99.68	7.25	Light grey medium bedded subhorizontal fine grained slightly weathered SANDSTONE, strong. (Coal Measures)				
8.08						(1.50)						
8.20												
8.75	100	88	49	3	25,0/50,0,0,0 Heavy(2) at 9.30m, sealed at 100000.00m. SPT(C) 25*/45 50/35	99.50	(0.18) 7.25	Grey thinly laminated subhorizontal very thinly bedded subhorizontal moderately to highly weathered MUDSTONE, very weak with very closely and extremely closely spaced subhorizontal and vertical fractures tight smooth planar and irregular, clay smeared. (Coal Measures)				
9.50-9.58			0	25		98.00	8.75	Grey thinly cross laminated subhorizontal thinly bedded subhorizontal moderately to slightly weathered SILTSTONE, weak, and moderately weak with closely and medium spaced subhorizontal and vertical fractures open smooth and rough planar. (Coal Measures)			V	
9.58						(0.55)						
Remarks 1. Inspection pit excavated to 0.80m. 2. Borehole complete at 12.35m. 3. Borehole backfilled with grout. 4. Marker Post Ref 228/9 -56S.										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
10.20			0	5	25,0/50,0,0,0 SPT 25*/20 50/30	95.50	(1.95)	---from 10.20m to 10.40m fractures become extremely closely spaced subhorizontal and vertical open rough irregular clay smeared ---from 10.40m to 10.50m thinly laminated highly weathered mudstone, very weak with extremely closely spaced random fractures tight irregular clay smeared		
10.50										
	78	70	0	3						
11.05-11.10					25,0/50,0,0,0 25/08/1999:7.50m SPT 25*/25 50/30	94.40	11.25	Grey thinly and very thinly bedded subhorizontal moderately to highly weathered MUDSTONE, very weak with closely and very closely spaced random fractures tight smooth irregular clay smeared. (Coal Measures)		
11.10			0	25						
11.35										
12.35-12.41							12.35	Complete at 12.35m		
Remarks						Scale (approx) 1:50		Logged By NBR		
						Figure No.				