





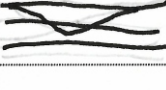




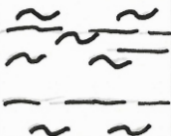


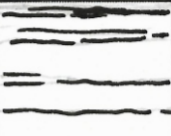



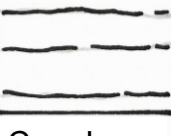




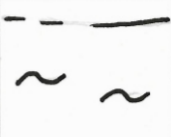



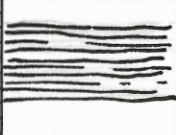
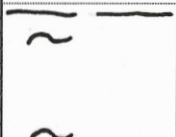

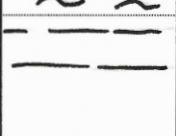
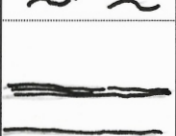

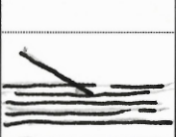


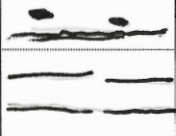
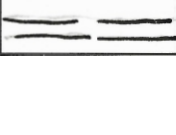
FIGURE 1: Core log of
the River Kennet
Borehole





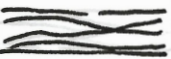
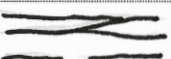



 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 1 of 19			
Start date		Client Thames Water Utilities		Borehole diameter			
End date				NGR/lat & long			
Drilling method				Casing details			
				Logged by M.Woods May 2021			
Scale							
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
5							
6							No Core
7						Rubble & core fragments of extremely hard chalk with some iron-stained chalk	
8						Very hard chalk passing down into softer chalk with good marl seam	
9						Rubble core comprising intensely hard chalk with patchy iron-staining	
10							
Comments							






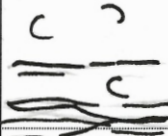
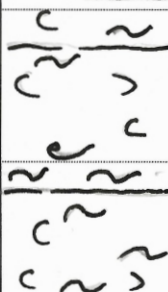
 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.				
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 2 of 19				
Start date		Client Thames Water Utilities		Borehole diameter				
End date				NGR/lat & long				
Drilling method				Casing details				
				Logged by M.Woods May 2021				
				Scale				
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend	
				Grp.	Fmn.			
10				LEWES NODULAR CHALK		Rubble core. Hard chalk but slightly softer than above.		
11								Core Loss
						11.42: base of patchily hard chalk		
12				NEW PIT CHALK FORMATION		Downward change to firm chalk with marl seams. Less dense & less cemented. Plexus marl		
							Thick marl seam. Medium grey marly chalk passing down into soft marl.	
13							Plexus marl	
							Fragments of sheet flint with median chalky seam	
14						Flint rubble - infer core loss	Core Loss	
15								
Comments								


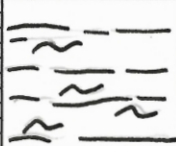

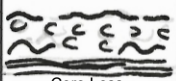





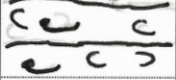
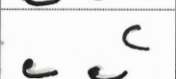

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project				Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)				Sheet 3 of 19	
Start date		Client Thames Water Utilities		Borehole diameter		NGR/lat & long	
End date						Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	Scale
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
15						Firm - soft marly chalk with regular plexus marls & a few flints	Plexus marl
							Marl wisp
							Flint fragments including sheet flint with chalky median seam
16							Plexus marl & marl wisps
17							
							Core Loss
							Plexus marls & shell fragments
18							
							Good marl seam underlain by small nodular flint
19							Thin unit of nodular, sponge-rich chalk
							Good marl seam underlain by chalk with sponge remains
20							
Comments							


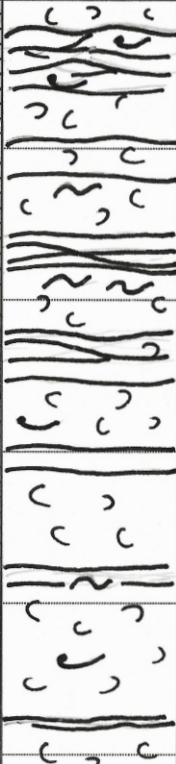
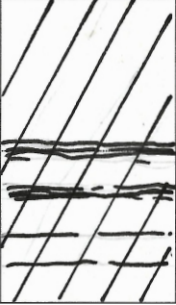
 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project				Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)				Sheet 4 of 19	
Start date		Client Thames Water Utilities		Borehole diameter		NGR/lat & long	
End date						Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	Scale
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
20				NEW PIT CHALK FORMATION		Patchily iron-stained sponge-bearing chalk with thin wispy marls	
						Good oblique fracture	
21						4cm marl underlain by marl wisps	
							
22						Marl with chalk augen (burrow infills)	
						Medium nodular flint	
						Thin wispy marls	
23						Rubbly core. Moderately hard with iron-stained sponge remains	
						Large nodular flint with oblique fracture just below	
24						Plexus marl cut by oblique fracture	
					Patchily iron-stained with sponge remains		
25							
Comments							

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 5 of 19			
Start date		Client		Borehole diameter		NGR/lat & long	
End date		Thames Water Utilities				Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
25						Soft, grey, marly chalk	
						Firm - soft chalk with wispy marls. A few iron-stained sponge remains	
26						Frequent thin wispy marls and occasional iron-stained sponge remains	
							
27						Plexus marl	
							
28						Oblique fracture	
						Marly chalk interval underlain by wispy marls	
						Slightly harder, creamy-coloured & less marly chalk. Some patchy iron-staining	
29						Marl & small nodular flints in broken core interval	
						Thin wispy marls in firm - soft marly chalk	
30							
Comments							


 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 6 of 19			
Start date		Client		Borehole diameter		NGR/lat & long	
End date		Thames Water Utilities				Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known) Grp. Fmn.		Description	Legend
30						Oblique fracture	
						Strong, dark grey plexus marl that strongly contrasts with chalk matrix	
31						Conspicuous iron-stained sponge bed	
						Plexus marl	
32						Marl wisps	
						Conspicuous plexus marl. Individual marl stringers ca. 10 mm thick	
33						Conspicuous plexus marl. Individual marl stringers ca. 10 mm thick	
						Plexus marl	
34							
35							
Comments							


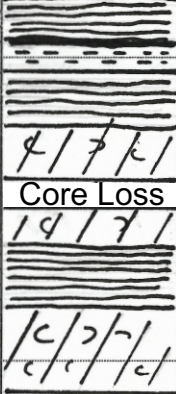
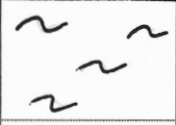
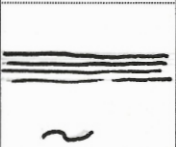
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		Locality Name River Kennet, Marlborough (TB8345)		Sheet 7 of 19			
Start date		Client Thames Water Utilities		Borehole diameter		NGR/lat & long	
End date				Ground level			
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
35						35 - 35.25: band of harder, creamy coloured and patchily iron-stained chalk with sponge remains	
36					NEW PIT CHALK FORMATION	Strong, dark grey plexus marl	
						Fragment of terebratulid brachiopod	
37							
38					HOLYWELL NODULAR CHALK FORMATION	Conspicuous dark grey plexus marl (inferred Gun Gardens Main Marl). Chalk below becomes patchily hard & nodular with pink inoceramid shell fragments. Rougher-textured chalk compared to above.	
							Core Loss
39						?Mytiloides shell fragments	
						Patchily hard, nodular chalk with regular iron-stained sponge remains. ?Mytiloides fragments, ?Orbirhynchia	
40							
Comments							

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 8 of 19			
Start date		Client Thames Water Utilities		Borehole diameter		NGR/lat & long	
End date				Ground level			
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
40						Hard, nodular chalk with regular thin wispy marls and iron-stained sponge remains	
41						Thin, strongly nodular unit with iron-stained sponge remains. Vey hard.	
							Core Loss
42					HOLYWELL NODULAR CHALK FORMATION	Bands of more strongly nodular & more weakly nodular chalk	
						Plexus marls with marl stringers up to 30 mm thick	
43							
							
44						Hard, cream-coloured chalk with common shell fragments & thin wispy marls	
							
45						Very shelly with large shell fragments	
							Core Loss
Comments							


 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 9 of 19			
Start date		Client Thames Water Utilities		Borehole diameter			
End date				NGR/lat & long			
Drilling method				Casing details			
				Logged by M.Woods May 2021			
Scale							
Depth (m) <small>below Ground Level</small>	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
45						Hard, nodular, cream-coloured chalk with thin grey plexus marls & concentrations of shell & iron-stained sponge remains	
46							
47							
48						Chalk as above but shell fragments not very conspicuous	
49						Chalk becoming much harder	
50							<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); border: 1px solid black; padding: 2px;">Melbourn Rock</div>  </div>
Comments							


MM 6
MM 5

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 10 of 19	
Start date		Client Thames Water Utilities		Borehole diameter	
End date				NGR/lat & long	
Drilling method				Casing details	
				Logged by M.Woods May 2021	
				Scale	

Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
50						Very hard creamy nodular chalk. Marls between 50 and 51 m form series of good seams (?Meads Marls)	 MM 4 MM 3 MM 2 MM 1
51						51.3: sharp downward change to greenish-grey marl	
52						Hard, nodular, creamy-grey chalk	
						Greenish grey marl	 J7, J8 J6 J5 J4 J3 Core Loss J1, J2
						Hard, nodular, creamy-grey chalk	
53							
						Firm - hard, smooth-textured, medium grey marly chalk with patchy iron-staining. Darker-grey bands where marl is more concentrated	
54						Band of darker grey marly chalk	
55							


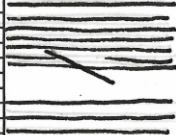

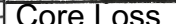





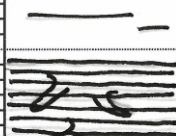

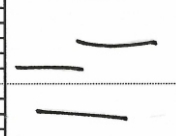
Comments


 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 11 of 19			
Start date		Client		Borehole diameter		NGR/lat & long	
End date		Thames Water Utilities				Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known) Grp. Fmn.		Description	Legend
55						Firm - hard pale grey chalk with bands of darker grey marly chalk	
56						Medium-grey marly chalk	~
						Harder, paler grey chalk	~
57						Softer, dark grey marly chalk band	~
						Band of very dark grey marly chalk with abundant <i>Chondrites</i> bioturbation picked out by paler grey burrow infills.	~
58						Medium-grey, hard marly chalk	~
						Dark grey marly chalk, passing down into buff-grey, soft marly chalk.	~
59						Firm to hard creamy-grey chalk	Core Loss
						Marly chalk band with darker grey, more marl-rich lower and upper intervals with paler grey, less marly interval between	~
60							
Comments							


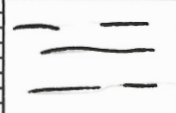


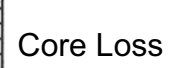

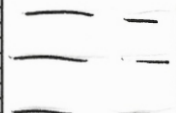
 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 12 of 19	
Start date		Client Thames Water Utilities		Borehole diameter	
End date				NGR/lat & long	
Drilling method				Casing details	
				Logged by M.Woods May 2021	
Scale					


Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
60						Firm - hard pale grey & cream coloured chalk	
						Thin plexus marl	
61						Medium grey, soft marly chalk interval	
62							
						Firm - hard, pale grey chalk. Possible iron-stained sponge remains	
							~ ~
63						Soft. pale brownish grey marly chalk	Core Loss
						Harder, medium grey chalk with less marl than adjacent intervals	
64						Firm - hard, dark grey marly chalk. Very common bioturbation	
65						Brownish-grey marly chalk with no conspicuous bioturbation	

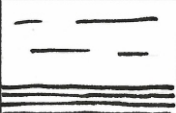

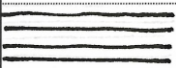
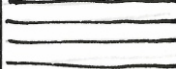
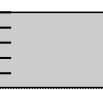

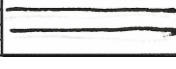
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 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 13 of 19			
Start date		Client Thames Water Utilities		Borehole diameter		NGR/lat & long	
End date				Ground level			
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
65						Firm to soft marly chalk with ; Oblique fracture at 65.2marl concentrated into bands	
66						Soft, medium grey marly chalk	
						Soft, medium grey marly chalk	
67				ZIG ZAG CHALK FORMATION		Soft, medium grey marly chalk	
						Hard marly chalk with iron-stained sponge remains	
68						Band of dark grey marly chalk	
						Firm to soft, brownish grey marly chalk	
69						Band of dark grey marly chalk	
						Firm - soft, brownish-grey marly chalk	
70						Band of dark grey marly chalk	
Comments							


 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 14 of 19			
Start date		Client		Borehole diameter		NGR/lat & long	
End date		Thames Water Utilities				Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level		Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known) Grp. Fmn.		Description
70							Band of dark grey marly chalk
71							Firm - soft, brownish-grey marly chalk
72							Band of dark grey marly chalk
							Core Loss
							Oblique fracture
73							Thin band of dark grey marly chalk
							Marcasite nodule
							Firm-hard brownish-grey marly chalk
							Soft marly chalk horizon at 73.6 - 73.7 m
74							Band of dark grey marly chalk with locally conspicuous burrows
75							Brownish-grey marly chalk
Comments							

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 15 of 19			
Start date		Client Thames Water Utilities		Borehole diameter			
End date				NGR/lat & long			
Drilling method				Casing details			
				Logged by M.Woods May 2021			
Scale							
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
75						Firm, brownish-grey marly chalk	
						Band of dark grey marly chalk	
						Thin band of dark grey marly chalk	
76						Firm brownish-grey marly chalk	
							
77						Broken-up core; chalk as above	
							
78							
						Firm to soft, dark grey marly chalk	
79							
							
80							
Comments							

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 16 of 19	
Start date		Client Thames Water Utilities		Borehole diameter	
End date				NGR/lat & long	
Drilling method				Casing details	
				Logged by M.Woods May 2021	
Scale					


Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
80						Firm - hard, brownish-grey marly chalk Dark grey marly chalk band	
81						Very hard medium grey limestone	
82					ZIG ZAG CHALK FORMATION	Hard, dark grey marly chalk - no obvious soft marly chalk horizons	
83						Firm, dark grey marly chalk. Some units break up more easily when hammered & are presumably more marl rich, but the limits of these units are not obvious in the borehole core	
84						Chalk as above	
85							




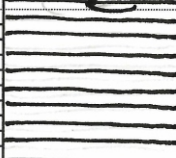



Comments

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.	
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 17 of 19	
Start date		Client Thames Water Utilities		Borehole diameter	
End date				NGR/lat & long	
Drilling method				Casing details	
				Logged by M.Woods May 2021	
Scale					

Depth (m) below Ground	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
85						Firm, dark grey marly chalk. Some units break up more easily when hammered & are presumably more marl rich, but the limits of these units are not obvious in the borehole core	
86					ZIG ZAG CHALK FORMATION		
87							
88							
89					WEST MELBURY MARLY CHALK FORMATION	Fragments of <i>Entolium orbiculare</i> and phosphatic fragments <div>Cast Bed</div>	
90						Hard pyritic limestone with sponge remains <div>Tenuis Limestone</div>	
						Tough, dark grey marly chalk with phosphatic clasts, <i>Oxytoma seminudum</i> , <i>Entolium orbiculare</i> Downward change to softer, darker-grey marly chalk with pyrite nodules	

Comments

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 18 of 19			
Start date		Client		Borehole diameter		NGR/lat & long	
End date		Thames Water Utilities				Ground level	
Drilling method				Casing details		Logged by M.Woods May 2021	
Depth (m) below Ground Level	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
90				WEST MELBURY MARLY CHALK FORMATION		Hard marly chalk with sponge remains	e#e#
						Dark grey marly chalk	
						Hard marly chalk	#e#e
						Firm dark grey marly chalk	
91						Phosphatic nodules	ph ph
						Hard marly chalk	# #
						Firm dark grey marly chalk	
92							# # #
							Core Loss
						Firm dark grey marly chalk	
93					Hard marly chalk	# # #	
					Firm dark grey marly chalk		
					Hard marly chalk	# #	
94							
					Firm dark grey marly chalk		
95							
Comments							

 British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL		Project		Borehole No.			
		Locality Name River Kennet, Marlborough (TB8345)		Sheet 19 of 19			
Start date		Client Thames Water Utilities		Borehole diameter			
End date				NGR/lat & long			
Drilling method				Casing details			
				Logged by M.Woods May 2021			
Scale							
Depth (m) below Ground	Run no. & Driller's depths	Core Loss	Sampled Intervals	Stratigraphy (where known)		Description	Legend
				Grp.	Fmn.		
95						Firm dark grey marly chalk	
						Hard marly chalk with conspicuous burrows	
96						Firm dark grey marly chalk	
97							
98						Firm dark grey marly chalk	
99							
						Series of sharply defined oblique fractures	
100							
Comments							TD = 100 m