

Channel Tunnel Rail Link
Union Railways Ltd

Chapel Mill, Lenham, Kent

ARC CML 97

Environmental Statement Route Window No. 27

Oxford Archaeological Unit

November 1997

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CHAPEL MILL, LENHAM, KENT

ARC CML 97

ARCHAEOLOGICAL EVALUATION

Environmental Statement Route Window No. 27

OS GRID TQ 904 500

Contract No. 194/870

REPORT

Volume 1 of 1

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ARCHAEOLOGICAL EVALUATION

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ARCHAEOLOGICAL EVALUATION

SUMMARY

The Oxford Archaeological Unit was commissioned by Union Railways Ltd to conduct a field evaluation of 4.3 ha of land north of the M20 and south of Lenham Heath Road, Lenham, Kent (TQ 904 500). The evaluation formed part of a wider programme of archaeological investigations along the route of the Channel Tunnel Rail Link (CTRL). The site was c. 60m wide and extended for 700m from Bowley Lane in the west to the field west of Water Street Cottage in the east. The site is presently grassland, grazed by cattle and sheep and the geology is sand and clay of the Folkestone Beds.

Thirteen evaluation trenches were excavated and archaeological features were located in two of these trenches. A single Bronze Age pit contained a substantial amount of pottery from a simple tub-shaped vessel that has affinities with either the Deverel-Rimbury or post-Deverel-Rimbury (Plain Ware) pottery traditions of the late Bronze Age date (1750-900 BC). A ditch produced a small quantity of mid-late Iron Age pottery as well as residual Bronze Age pottery and a second smaller ditch was aligned adjacent to and parallel to the larger ditch. This ditch produced no finds but it is also likely to be mid-late Iron Age in date.

SECTION 1: FACTUAL STATEMENT

1 BACKGROUND

1.1 Introduction

1.1.1 The Oxford Archaeological Unit undertook an archaeological field evaluation (Fig. 1), between 20th and 24th October and between 31st October and 4th of November 1997, on land north of the M20 and south of the Lenham Heath Road, Lenham, Kent (NGR TQ 904 500) on behalf of Union Railways Ltd (URL). The evaluation forms part of a programme of archaeological investigation along the line of the Channel Tunnel Rail Link (CTRL), the aim of which was to assess the effect of the construction of the new railway upon the cultural heritage of the site. An Environmental Assessment has been prepared (URL 1994). The site lies within Environmental Statement Route Window No.27.

1.1.2 The work was carried out according to a Written Scheme of Investigation, prepared by URL and agreed with the County Archaeologist and English Heritage, detailing the scope and methods of the evaluation, including this report. The area of the evaluation is shown in Fig. 2. The evaluation was to act as a control evaluation of a geophysical prospection.

1.2 Geology, landscape and landuse

1.2.1 The site lies on Folkestone Beds along the dip slope of the North Downs. The land gently slopes away to the west. The area around Water Street Cottage (Trench 1956TT), lies at 95 metres above Ordnance datum (OD) and the western end, south of Chapel Mill (Trench 1946TT), at 87 metres above OD.

1.2.2 The evaluation area is presently a series of small grassland fields, grazed by cattle or sheep. A stream flows from Chapel Mill across the western end of the site and continues under the M20. The M20 lies just south of the site and is situated within a cutting.

1.3 Archaeological background

1.3.1 An area of cropmarks is situated at Boughton Malherbe some 600m north-west of the site. Although undated they include ring ditches and linear features which could be Bronze Age in date (OAU No. 1317).

1.3.2 Further late Iron Age activity is indicated by a findspot just 200m east of Chapel Farm Cottages and include; a *La Tene III* (late Iron Age) brooch probably made in the second half 1st century BC, late Iron Age coins and five Roman coins (OAU No. 1246).

- 1.3.3 Iron Age coins were discovered on Lenham Heath in 1781 some 500m east of the site (OAU No. 1126).
- 1.3.4 The site of the medieval and post-medieval Royton Chapel is situated 150m east of Chapel Mill, from which it derives its name.
- 1.3.5 An earlier geophysical survey (URL 1996a) across the site was 700m long and 40m wide (from Trench 1945TT in the west to Trench 1958TT in the east). The results were generally unresponsive, and a strong magnetic response at the west end of the site was likely to be modern made ground/infilling dumping associated with the construction of the M20.

2 AIMS

The Written Scheme of Investigation specified the general aims of the evaluation and also the site specific aims, both of which are reiterated below.

2.1 General aims

- 2.1.1 To determine the presence/absence, extent, condition, character, quality and date of any archaeological remains within the evaluation area.
- 2.1.2 To determine the presence and potential of environmental and economic indicators preserved in any archaeological features or deposits.
- 2.1.3 To determine the local, regional, national and international importance of such remains, and the potential for further archaeological fieldwork to fulfil local, regional and national research objectives.

2.2 Specific aims

- 2.2.1 To act as a control evaluation of the geophysical prospection survey.

3 METHODS

3.1 General

- 3.1.1 A detailed statement on the methods used in the evaluation is contained in the Written Scheme of Investigation prepared by URL, and agreed with the County Archaeologist and English Heritage. The following is intended only to amplify certain aspects of the evaluation methodology.
- 3.1.2 The following trenches were located over or close to areas of magnetic activity (URL 1996a):

1945-1947TT

1950-1951TT
1955-1957TT

3.2 Survey

- 3.2.1 The trench locations were surveyed by P H Matts, Building & Civil Engineering Land Survey (Reading) based on a trench location plan provided by URL. Trenches 1945TT and 1946TT were subsequently repositioned to avoid an overhead power line. Trench 1955TT was repositioned to avoid a bank of modern soil and rubble.
- 3.2.2 The trenches have been digitally plotted using AutoCAD graphics programme (Fig. 2). All survey points are based upon the URL local grid rather than the National Grid.

3.3 Excavation

- 3.3.1 Fourteen trenches were excavated over the 4.3 ha site. Thirteen trenches were 30 m long and 2 m wide. Trench 1946TT was shorter, (24.7m long and 2m wide), to prevent the repositioned trench (see Para. 3.2.1) extending beyond the northern limits of the Rail Link corridor.
- 3.3.2 The topsoil and soil layers were excavated by a 360° mechanical excavator using a toothless ditching bucket under close archaeological supervision.
- 3.3.3 Archaeological finds were hand-retrieved from machine-excavated deposits on an opportunistic basis. Spoil heaps were also inspected for superficial finds but not rigorously searched.
- 3.3.4 Machine-excavation resulted in a generally clean trench base which was not hand cleaned except where archaeological deposits were suspected. Sample sections of all trench sides were cleaned and drawn.
- 3.3.5 Bulk environmental samples were taken from ditches in Trenches 1950TT and 1952TT and a pit in Trench 1949TT (Appendix 3).

3.4 Recording

- 3.4.1 Recording followed the standard OAU single context recording system (Wilkinson ed. 1992). A running sequence of context numbers was adopted for the whole site. Plans were drawn at 1:50 or 1:100. Sections were drawn at 1:20. All evaluation records were prefaced by the site code ARC CML 97.
- 3.4.2 All trenches and archaeological features were photographed using colour slide and black and white print film.

4 RESULTS

4.1 Presentation of results

4.1.1 Descriptions of individual trenches are presented in Section 5. A summary of all contexts and finds is presented in the archaeological context inventory (Section 6), and Fig. 5 summarises the distribution of archaeological features and finds. Detailed reports on the pottery, flint, animal bone and environmental indicators are contained in Appendices 1-4.

4.2 General Stratigraphy

Modern deposits

4.2.1 In all trenches the upper 0.25 m consisted of modern turf and topsoil. The modern topsoil overlaid earlier ploughsoils which occurred throughout the site and were generally 0.30m-0.80m deep.

4.3 Summary of the archaeology

4.3.1 A single late Bronze age pit was located in Trench 1949TT containing a substantial amount of pottery from a simple tub-shaped vessel. This vessel has affinities with either the Deverel-Rimbury or post-Deverel-Rimbury (Plain Ware) pottery traditions of the late Bronze Age date (1750-900 BC).

4.3.2 Two parallel ditches, which probably date to the Iron Age were revealed in Trench 1950TT. There was a 0.50m wide gap between the ditches and it is likely they are of contemporary date. The larger of the two ditches produced residual Bronze Age pottery from the lower fill and mid-late Iron Age pottery from the upper fill.

4.3.3 Four pieces of struck flint were recovered from the site; all were from ploughsoil deposits. This small assemblage included a weathered worn core, which is likely to be Mesolithic in date, and a backed knife which is consistent with an early Bronze Age date.

4.4 Site archive

4.4.1 The site archive has been compiled in accordance with the specification prepared by URL. It includes six electronic datasets for the Fieldwork Event, Contexts, Bulk Finds, Finds, Environmental Samples and Graphical Output.

5 TRENCH DESCRIPTIONS

5.1 Bronze Age pit (1949TT)

Trench 1949TT (Fig. 3)

- 5.1.1 Trench 1949TT contained a circular pit (21), which measured 0.50m across and 0.26m deep. The pit fill (19) which was a dark grey-brown silty sand, and contained 24 sherds of late Bronze Age pottery. The pottery (see Appendix 1) was clustered together in the pit and seems to represent fragments from a single tub-shaped vessel which has affinities with either the Deverel-Rimbury or post-Deverel-Rimbury traditions (1750-900BC). The pit was fully excavated in order to maximise the finds recovery and provide a larger environmental sample. Environmental sampling of the late Bronze Age pit (21) produced only wood charcoal (see Appendix 3-Environmental Indicators).
- 5.1.2 There was no indication of archaeological activity in this area from the geophysical survey (URL 1996a).

5.2 Iron Age ditches (1950TT)

Trench 1950TT (Fig. 3)

- 5.2.1 *Ditch 28.* This ditch was 1.64m in wide and 0.78m deep with a flat based U-shaped profile orientated approximately east - west. Two fills were identified (26 and 27); the lower Fill 27 was a greenish-brown clayey sand which contained a single sherd of late Bronze Age pottery. The upper fill (26), was a mid-reddish-brown silty sand which contained small fragmented sherds of mid to late Iron Age pottery as well as a late Bronze Age sherd. Environmental sampling of the fills produced a low level of charred remains, although hazel nut and emmer wheat were recovered (see Appendix 3-Environmental Indicators).
- 5.2.2 *Ditch 43.* This ditch was aligned east - west, parallel to and 0.50m to the south of Ditch 28. Ditch 43 measured 0.76m in width and 0.35m deep with a rounded U-shaped profile.
- 5.2.3 A sequence of later ploughsoils (24, 23, & 22), up to 0.82m deep, sealed Ditches 28 and 43. Both Ditch 28 and 43 were overlain by a ploughsoil (24) which contained a single sherd of late Bronze Age pottery. This sherd was recovered directly above Ditch 43 and it seems likely it had been displaced from the top of the ditch by the ploughing. A later ploughsoil (23) overlaid Ploughsoil 24 and the sequence was completed by the present topsoil (22).
- 5.2.4 The depth of ploughsoils may account for why neither of the Iron Age ditches were recorded by the magnetometer survey (URL 1996A).

5.3 Post-medieval gully (1952TT)

Trench 1952TT (Fig. 4)

- 5.3.1 *Gully 81.* This gully was 0.92m wide and 0.27m deep with a steep sided U-shaped profile. The ditch was orientated approximately north-west to south-east. The fill (82) was a light brown sandy silt which contained a single sherd

of post-medieval pottery. It was sealed by sequence of later ploughsoils (71, 70, 69, & 68) up to 0.70m deep. Environmental sampling of the fill produced no charred remains (see Appendix 3-Environmental Indicators).

5.4 Stream channel (1946TT & 1947TT)

Trench 1947TT

5.4.1 This trench was orientated perpendicular to the line of the stream and revealed a former channel which had filled with alluvium. The channel (50) had a flat base and was 1.04m deep. The bottom of the channel was filled with water deposited sand and flint gravel (49) which was 0.18m deep. This was overlain by a clay alluvium (47) which was 0.35m deep. The alluvium was overlain by a grey silt layer (46) and the sequence was completed by the topsoil (45).

5.4.2 There were no finds recovered from any of the channel fills and no waterlogged deposits were located within the earlier stream channel.

5.5 Peripheral trenches (1947TT, 1948TT, 1951TT, 1953TT, 1954TT, 1955TT, 1956TT, 1957TT and 1958TT)

5.5.1 This group of trenches contained no identifiable archaeological features. A deeper sequence of ploughsoils were recorded in Trenches 1952TT, 1953TT, 1954TT and 1955TT, which from the present ground surface to the top of the natural was 0.70m deep. The ground slopes up gently to the north and this may well account for the movement of ploughsoils down into the area of the evaluation. The field containing Trenches 1954TT and 1955TT is situated about one metre higher than the field containing Trenches 1952TT and 1953TT, and this probably indicates ploughsoils accumulating against the hedge boundary.

5.5.2 An old field boundary aligned with the boundary of Chapel Farm Cottages was located in Trench 1948TT; this was still visible on the ground as a linear depression.

5.5.3 There was no indication in these trenches of archaeological activity corresponding to areas of magnetic variation recorded by the geophysics (URS 1996a).

5.6 Modern deposits associated with the M20 (1946TT)

5.6.1 At the western end of the site Trench 1945TT identified over 1.2m of dumped sand and concrete rubble, which had been deposited during the construction of the M20 and the bridge embankment which carries Bowley Lane over the M20. Some of this rubble, along with lengths of dewatering hose, was still visible on the field surface on the western side of the stream.

- 5.6.2 The original ground surface was located at the east end of the trench but along the majority of the trench the M20 dumping exceeded 1.2m deep. To provide a sequence down to the natural a machine sondage was excavated near to the east end of the trench. The results from this investigation suggest a truncated topsoil survives below the dumped material and below this the deposits grades from a dark grey marshy soil horizon (3) to an alluvium (56) which overlies the natural. The total depth of the undisturbed deposits (3 and 56) was 0.70m.
- 5.6.3 The modern dumping associated with the M20 was restricted to the west side of the stream and the west bank had been substantially modified and built up.
- 5.6.4 This area of modern dumping appears to confirm the observation of a magnetically disturbed area in the geophysical survey (URL 1996a).

6 ARCHAEOLOGICAL CONTEXT INVENTORY

The following abbreviations and definitions have been used in the Context Inventory

o/l	overlies	IA	Iron Age
c/by	cut by	LBA	Late Bronze Age
f/of	fill off	Medieval	1500 AD to 1800 AD
f/by	filled by	Post-medieval	1800 AD to present

Trench	Context	Type	Associations	Finds	Number	Date
1945	01	topsoil	o/l 2			
1945	02	modern layer	o/l by 1, o/l 3			
1945	03	alluvium	o/l by 2			
1947	04	topsoil	o/l 5			
1947	05	layer	o/ 8, 15, o/l by 4			
1947	06	natural	o/l14, o/l by 5			
1947	07	natural	o/l 14, o/l by 9			
1947	08	layer	o/l 9, o/l by 5			
1947	09	natural	o/l 7, o/l by 8			
1947	10	fill	f/of 11, o/l 4			
1947	11	modern cut	f/by 10, cuts 5			
1947	12	fill	f/of 13, o/l by 4			
1947	13	ditch	f/by 12, cuts 40			
1947	14	natural	o/l by 7			
1947	15	layer	o/l 6, cut by 41			
1949	16	topsoil	o/l 17			
1949	17	earlier ploughsoil	o/l 19, o/l by 16			
1949	18	natural	c/by 21			
1949	19	fill	f/of 21, o/l 20	pot	24	LBA
1949	20	fill	f/of 21, o/l by 19			
1949	21	pit	f/l by 19, 20, cuts 18			
1950	22	topsoil	o/l 23			
1950	23	earlier ploughsoil	o/ 24, o/l by 22			
1950	24	earlier ploughsoil	o/l 26, 44, o/l by 23	pot	1	LBA
1950	25	natural	c/by 28, 43, o/l by 24			
1950	26	fill	f/of 28, o/l 27, o/l by 24	pot	19	MIA-LIA
				pot	1	LBA
				flint	1	
				bone	1	
1950	27	fill	f/of 28, o/l by 26	pot	1	LBA
				bone	3	
1950	28	ditch	f/by 27, 26, cuts 25			
1948	29	topsoil	o/l 30			
1948	30	earlier ploughsoil	o/l 31, o/l by 29			
1948	31	natural	o/l 32, o/l by 30			
1948	32	natural	o/l by 31			
1951	33	topsoil	o/l 34			
1951	34	earlier ploughsoil	o/l 35, o/l by 33			
1951	35	earlier ploughsoil	o/l 39, o/l by 34			
1951	36	natural	o/l 37, o/l by 39			

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Trench	Context	Type	Associations	Finds	Number	Date
1951	37	natural	o/l 38, o/l by 36			
1951	38	natural	o/l by 37			
1951	39	natural	o/l 36, o/l by 35			
1947	40	fill	f/of 41, cut by 13			
1947	41	ditch	f/by 40, cuts 15			
1951	42	unstratified finds		flint	2	1 ?Mesolithic
1950	43	ditch	f/l by 54 53, 44, cuts 25			
1950	44	fill	f/l of 43, o/l 53, o/l by 24			
1946	45	topsoil	o/l 46			
1946	46	layer	o/l 47, o/l by 45			
1946	47	fill	f/of 50, o/l 48, o/l by 46			
1946	48	fill	f/l of 50, o/l 49, o/l by 47			
1946	49	fill	f/of 50, o/l by 48			
1946	50	stream channel	f/by 49, 48, 47, cuts 52			
1946	51	natural	c/by 50			
1946	52	layer	c/by 50 o/l by 46			
1950	53	fill	f/of 54, o/l by 44			
1950	54	fill	f/of 43, o/l by 53			
1958	55	topsoil	o/l 66	flint	1	?BA
1945	56	alluvium	o/l 57, o/l by 3			
1945	57	natural	o/l by 56			
1956	58	topsoil	o/l 59			
1956	59	earlier ploughsoil	o/l 61, o/l by 58			
1956	60	natural	o/l by 62			
1956	61	fill	f/of 62, o/l by 59			
1956	62	treehole	f/by 61, cuts 60			
1957	63	topsoil	o/l 64			
1957	64	earlier ploughsoil	o/l 65, o/l by 63			
1957	65	natural	o/l by 64			
1958	66	topsoil	o/l 66			
1958	67	natural	o/l by 66			
1952	68	topsoil	o/l 69			
1952	69	earlier ploughsoil	o/l 70, o/l by 68			
1952	70	earlier ploughsoil	o/l 71, o/l by 69			
1952	71	ploughsoil/colluvium	o/l 72, o/l by 70			
1952	72	disturbed natural	o/l 73, o/l by 71, c/by 81			
1952	73	natural	o/l 74, o/l by 72			
1952	74	natural	o/l by 73			
1953	75	topsoil	o/l 76			
1953	76	earlier ploughsoil	o/l 77, o/l by 75			
1953	77	earlier ploughsoil	o/l 78, o/l by 76			
1953	78	ploughsoil/colluvium	o/l 79, o/l by 77			
1953	79	disturbed natural	o/l 80, o/l by 78			
1953	80	natural	o/l by 79			

Trench	Context	Type	Associations	Finds	Number	Date
1952	81	gully	f/by 82, cuts 72			
1952	82	fill	f/of 81, o/l by 71	pot	1	Post-medieval
1953	83	ploughsoil/colluvium	o/l 78, o/l by 77			
1954	84	topsoil	o/l 85			
1954	85	earlier ploughsoil	o/l 86, o/l by 84			
1954	86	ploughsoil/colluvium	o/l 87, o/l by 85			
1954	87	fill	f/of 88, o/l by 86			
1954	88	treehole	f/by 87, cuts 89			
1954	89	disturbed natural	o/l 90, c/by 88			
1954	90	natural	o/l by 89			
1955	91	topsoil	o/l 92			
1955	92	earlier ploughsoil	o/l 93, o/l by 91			
1955	93	earlier ploughsoil	o/l 95, o/l by 92			
1955	94	natural	o/l by 95			
1955	95	disturbed natural	o/l 94, 96, o/l by 93			
1955	96	natural	o/l by 95			

SECTION 2: STATEMENT OF IMPORTANCE

7 CONCLUSIONS

7.1 Extent of archaeological deposits (Fig. 5)

7.1.1 Archaeological features were found in Trenches 1949TT and 1950TT. The late Bronze Age pit in 1949TT was the only feature of this date, although residual late Bronze Age pottery also occurred within one of the Iron Age ditches in Trench 1950TT.

7.1.2 Two mid to-late Iron Age ditches were located in Trench 1950TT. They were parallel to one another on the same south-west to north-east alignment. There were no other features of this date on the site.

7.2 Date and character

7.2.1 The pottery from the pit (21) in Trench 1949TT dates it to the later Bronze Age (1750-900BC). This represents the majority of the pottery recovered from the site (27 sherds, 57% of all the pottery). There were 47 sherds in total and the percentage of Bronze Age pottery is considerably higher if the fragmentary nature of Iron Age pottery is taken into account. It is likely that the pottery was a deliberate deposit within the pit, so there is little chance of any residuality or contamination.

7.2.2 The character of the Bronze Age activity is difficult to assess on the basis of this single feature, although considering the residual pottery from the Iron Age ditch in Trench 1950TT, it is likely that there are other discrete features of this date within the vicinity. The lack of any residual Bronze Age finds from elsewhere on the site may also suggest that the features are very localised.

7.2.3 The small amount and size of the pottery recovered from the Iron Age ditch in Trench 1950TT provides less secure dating than the Bronze Age activity. The low level of charred material from the ditch along with the small assemblage of pottery suggests that there was some Iron Age occupation in the vicinity of the ditch, but its character is unclear. The relative dearth of material from these features may indicate that the settlement was small and/or short-lived or that the area is peripheral to a larger settlement.

7.3 Environmental evidence

7.3.1 The environmental potential of the site would appear to be limited as carbonised remains from the Iron Age ditches were low, although small amounts of hazel nut and spelt/emmer wheat were present. The charcoal from the late Bronze Age pit was limited to wood charcoal.

- 7.3.2 Animal bones were found in the environmental samples from the Iron Age ditch in Trench 1950TT. These included sheep/goat and pig, although the number recovered is too small to draw any significant conclusions.
- 7.3.3 Terrestrial snails were not well preserved and were restricted to intrusive modern burrowing species.
- 7.3.4 There were no waterlogged deposits within the earlier stream channel in Trench 1946TT and much of the channel was filled with a clay alluvium.

8 IMPORTANCE OF ARCHAEOLOGICAL DEPOSITS

8.1 Survival/Condition

- 8.1.1 The site has been disturbed by later ploughing and this was demonstrated by the occurrence of Bronze Age pottery in the earliest ploughsoil in Trench 1950TT. There has been a significant build up of colluvial ploughsoils over the Iron Age ditches in Trench 1950TT, which given the low-lying position of the area may indicate that the archaeology has not been severely truncated by modern agriculture. A deep sequence of ploughsoils was also recorded within Trenches 1952TT, 1953TT, 1954TT and 1955TT.
- 8.1.2 The disturbance by the M20 is restricted to the area west of the stream. It appeared from the evidence in Trench 1945TT that there had been some topsoil removal and that material was then infilled to build up the embankment for Bowley lane.

8.2 Period

- 8.2.1 The significant amount of pottery recovered from the pit in Trench 1949TT can provide a secure date in the late Bronze Age.
- 8.2.2 The small quantity of pottery from the ditch in Trench 1950TT, along with the occurrence of a residual Bronze Age sherd in the fill, means the ditches can only be tentatively assigned to the mid to late Iron Age.

8.3 Rarity

- 8.3.1 Material of the later Bronze Age is increasingly being recorded in northern Kent, although the evidence is often fragmentary and the sites themselves difficult to assess. The Bronze Age sites known in advance of the Channel Tunnel as well as the sites located by the Rail Link suggest that Bronze Age settlement sites occupy advantageous positions along the foot of the North Downs. Evaluation work by the OAU in connection with the CTRL has recorded late Bronze Age / early Iron Age boundary? features and a pit at White Horse Stone (URL 1997b), and dispersed Bronze Age activity at

Hollingbourne (URL 1996b). A similar late Bronze Age pit at Singlewell (URL 1997a) has also been recorded in the area to the west of the Medway.

8.3.2 Late Bronze Age pottery of a similar date and type has been recovered from Cobham Park Golf Course (URL 1997d). The middle Bronze Age sherds from Cobham had carbonised residues indicating use as cooking vessels. In the case of Chapel Mill there were no carbonised residues but wood charcoal was present.

8.3.3 The presence of a high concentration of pottery from a limited number of vessels has strong parallels with the pottery from the ditches at Cobham Golf Course and has been noted at other sites in Kent. It suggests that this deposition, which usually seem to be composed of partial vessels, was deliberate, and contrasts with the complete vessels deposited in graves (Macpherson-Grant 1996).

8.3.4 A small quantity of late Bronze Age pottery was also recovered at Boxley (URL 1997c) and in the Tollgate area, Gravesham (URL 1995) probably indicating nearby activity.

8.3.5 Domestic material of the middle to late Bronze Age is undoubtedly more common than was thought a decade ago (cf. Drewett *et al* 1988, Champion and Overy 1989), although the sites yielding this material are not well understood even in terms of their basic dating. Published excavations of sites of this period are rare, particularly east of the Medway gap. Later Bronze Age settlements from Gravesend (Mudd 1994) and Hayes Common (Philp 1973) have been reported. The focus of study until recently has been concentrated on the sites in north Kent in Thanet, where a number of bronze hoards along with pottery have been found in the past (Macpherson-Grant 1992).

8.4 Fragility/vulnerability

8.4.1 The archaeological features were sealed by later ploughsoils and since the present use is pasture there is no immediate threat to them other than the CTRL.

8.5 Diversity

8.5.1 The archaeology present seems limited to the late Bronze Age pit and mid-to-late Iron Age ditches. While the significant amount of pottery from the pit means it can be securely dated to the late Bronze Age the limited quantity of pottery from the ditches means a secure date cannot be assigned.

8.5.2 The Bronze Age pit in Trench 1949TT may be an isolated feature, although the possibility of it being a large posthole within a post built structure or fence line cannot be ruled out (Drewett *et al.* 1988, 103 fig. 4.6).

8.5.3 The struck flint from the site is not associated with any features.

8.6 Documentation

- 8.6.1 An earlier geophysical survey (URL 1996a) across the site was 700m in long and 40m wide (from Trench 1945TT in the west to Trench 1958TT in the east). The results were generally unresponsive, and a strong magnetic response at the west end of the site was likely to be made ground/infilling dumping associated with the construction of the M20.
- 8.6.2 The evaluation has tested the findings of the geophysical survey and confirmed some of the anomalies are due to geological variations as well as modern infill. The Bronze Age and Iron Age features were not located by the geophysical survey (URL 1996a).
- 8.6.3 An aerial photograph (CTRL No. 89-001 068) of the site prior to the construction of the M20 (taken in January 1989) shows a number of undated earthworks consisting of linear and curvilinear features (OAU No. 1166) just beyond the site in Chilston Park. The date of these earthworks is not known, although they appear to predate the 17th/18th century landscaping of Chilston Park. The main area of interest is in the eastern limit of Chilston Park in the vicinity of the stream. An earlier meander of the stream is visible just north of the Rail Link corridor and the line of the stream which crosses the site is more sinuous than the present route, suggesting it was modified as part of the M20 landscaping. Two rectilinear features are visible on the west side of the stream and aligned with the stream. They are situated side by side and probably represent one subdivided square feature which measures approximately 30m x 30m. These were not located in Trench 1945TT because of the depth of modern infill/made ground (in excess of 1.20m) which prevented any further investigation. Therefore the character and nature of these features not known.

8.7 Group value

- 8.7.1 Chapel Mill is one of a number of sites on the line of the Rail Link which have identified later Bronze Age activity.
- 8.7.2 An area of cropmarks is situated at Boughton Malherbe some 600m north-west of the site. Although undated they include ring ditches and linear features which could be Bronze Age in date (OAU No. 1317).
- 8.7.3 An Iron Age coins were discovered on Lenham Heath in 1781 some 500m east of the site (OAU No. 1126).
- 8.7.4 Further late Iron Age activity is indicated by a findspot just 200m east of Chapel Farm Cottages and include; a *La Tene III* (late Iron Age) brooch probably made in the second half 1st century BC, late Iron Age coins and five Roman coins (OAU No. 1246).

8.8 Potential

- 8.8.1 The site shows that late Bronze Age features are present, although in a low density. The recovery of residual late Bronze Age pottery from the ditch in Trench 1950TT may well indicate there are other features exist in the vicinity and therefore the pit in Trench 1949TT is not an isolated feature.
- 8.8.2 This type of late Bronze Age site may reflect the limited type of features which occur on such sites and are limited to ring-post houses, pits and enclosures (Drewett *et al.* 1988, 96-109).
- 8.8.3 The presence of the Iron Age features is of some interest but difficult to interpret. On the one hand they may represent peripheral features of a settlement located off the CTRL route, or alternatively they could be the remains of a very short-lived phase of settlement/activity.
- 8.8.4 The environmental potential of the site would appear to be limited as carbonised remains from the ditches were low, although small amounts of hazel nut and spelt/emmer wheat were present. The occurrence of charred hazel nuts from an Iron Age context is of particular interest. The charcoal from the late Bronze Age pit was limited to wood charcoal, however, other pits if they exist in the vicinity may contain other charred material.

8.9 Overall Conclusions

- 8.9.1 The Bronze Age pit suggests that there is significant potential for such sites which are as yet little known at the foot of the Downs / margin of the Weald.
- 8.9.2 The mid to late Iron Age evidence may be of similar significance. While it may be peripheral to a larger settlement, in which case it would not be very significant, if it proved to be a small short lived unenclosed farmstead it would be unusual and interesting.
- 8.9.3 The geophysical survey did not identify these features, possibly because of a combination of soil depth and relatively low level of archaeological activity. Moreover the areas of general magnetic activity did not prove to be archaeological. Wider conclusions about the reliability of geophysics in the area would need to take account of others results, but these results suggest that some significant archaeology may go undetected.

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APPENDIX 1

BRONZE AGE AND IRON AGE POTTERY

by Alistair Barclay and Paul Booth, Oxford Archaeological Unit

1 Introduction

- 1.1 The evaluation produced a small quantity (47 sherds) of mostly prehistoric pottery. Most of the assemblage comprises pottery of late Bronze Age date, although some Iron Age material is also present (see Table 1 below). The assemblage is mostly characterised by small sherds with the notable exception of a fragmentary late Bronze Age vessel that was recovered from a single pit.

2 Methodology

- 2.1 A rapid assessment and quantification (number of sherds and weight) of the evaluated assemblage was undertaken to provide spot dates. No detailed record was made of fabrics during the assessment, although fabric group (eg. flint-tempered) was used as a broad chronological indicator. The incidence of featured and, or decorated sherds was noted.

3 Character and date of assemblage

Later Bronze Age

- 3.1 Twenty seven flint-tempered sherds from four evaluated contexts (19, 24, 26 and 27) are thought to be of this date. Most of these sherds are from a simple tub-shaped vessel that has affinities with either the Deverel-Rimbury or post-Deverel-Rimbury (Plain Ware) pottery traditions of the mid-late Bronze Age date (1750-900 BC). This vessel is in a fragmentary condition and was recovered from a Pit 21 (fill 19). The remaining flint-tempered sherds are relatively thin-walled and likely to be of late Bronze Age date. This includes part of a base angle from ditch Fill 26.

Mid-late Iron Age

- 3.2 Nineteen sand-tempered sherds all from from Ditch 28 (Fill 26) are thought to be of this date. The sandy fabrics contain a high proportion of glauconite, the sherd walls are relatively thin and some of the surfaces are burnished. The only featured sherd was a fragment of a bead rim.

Post-Medieval

- 3.3 A single sherd from Ditch 81 (Fill 82) is thought to be of this date.

4 Discussion

- 4.1 Analysis of the assemblage indicates both late Bronze Age and probable middle to late Iron Age activity on the site. The only definite late Bronze Age feature is Pit 21, while the single sherd from the primary fill (27) of Ditch 28 indicates that it could at the very earliest be of this date. The remaining sherds of this date are redeposited. The upper fill (26) of Ditch 28 contained both a late Bronze Age sherd and Iron Age sherds. The post-medieval sherd was recovered from a gully and indicates a further phase of activity on the site.

Table 1: Pottery summary by period and context

Context	Trench	Type	Late Bronze Age	Iron Age	Post-medieval	Total
19	1950TT	Pit fill	24, 298g			24, 298g
24	1950TT	Ploughsoil	1, 9g			1, 9g
26	1950TT	Ditch fill	1, 3g	19, 18g		20, 21g
27	1950TT	Ditch fill	1, 9g			1, 9g
82	1952TT	Gully fill			1, 3g	1, 3g
Total			27, 319g	19, 18g	1, 3g	47, 340g

Pottery is recorded in the table by sherd count followed by weight in grams eg. 1, 3g.

APPENDIX 2

WORKED FLINT

by Philippa Bradley, Oxford Archaeological Unit

1. Introduction

- 1.1 Four pieces of worked flint were recovered from the evaluation (two flakes, an opposed platform blade core and a backed knife). The flint is a dark brown to black colour with a worn, buff cortex. A single piece of flint was made on a grey to black mottled flint. Cortication was light except for the opposed platform blade core which was very heavily corticated. Apart from the blade core, which was extremely worn and abraded, the flint was in a fairly fresh condition.

2 Method

- 2.1 The flint was briefly scanned and recorded using standard codes. Technological traits such as butt type, hammer mode and position in reduction sequence were recorded where it was felt that this information would enhance the characterisation of the material. The general condition of the flint and raw material types were also noted.

3 Dating and discussion

- 3.1 The flint consists of two unretouched hard-hammer struck flakes from a ditch fill (26) in Trench 1950TT and the topsoil (55) in Trench 1958TT, an opposed platform blade core from an unstratified context (42) in Trench 1951TT and a backed knife from the topsoil (55) in Trench 1958TT. The blade core has been carefully worked and has abraded platform edges. A Mesolithic date is likely for this type of core. The condition of the core suggests that it has been lying around for some considerable time. The backed knife has been carefully worked with slightly invasive retouch. It is broken at its proximal end. An early Bronze Age date would be consistent with this type of artefact. The two flakes are unfortunately not diagnostic.
- 3.2 Mesolithic flintwork has been recovered from the area, for example, at Sandway (2km north-west of the site). This includes a scatter of Mesolithic worked flint (11,000) collected by Lord Monkton (OAU No. 1372). Flint scatters at Harrietsham have included Mesolithic cores, flakes, blades, microliths, microburins, axes and scrapers (Wymer 1977, 150-1). At Sittingbourne and Milton a similar range of material was recovered (Wymer 1977, 158) and at Smeeth a large Mesolithic assemblage was recovered from Evergate Farm (*ibid.* 158). Scatters of worked flint of probable Neolithic date were identified during test-pit sieving at Harrietsham (URL 1997).

APPENDIX 3

ENVIRONMENTAL INDICATORS

by Dana Challinor, Oxford Archaeological Unit and
Ruth Pelling, Oxford University Museum

1 Introduction

- 1.1 Five samples were submitted for the assessment of their charred plant remains. Two samples were taken from a late Bronze Age Pit 21 (Fills 19 and 20). Samples were 20 and 8 litres in volume. Three samples were taken from probable Iron Age period features, Ditch 28 (Fills 26 and 27) and a Gully 81 (Fill 82). Samples ranged from 20 to 40 litres in volume.
- 1.2 The purpose of the assessment was to evaluate the quality of the preservation of the charred material and the potential for further sampling and analytical work.

2 Methods

- 2.1 Following pre-processing treatment to break down the clay-rich deposits, between 10 and 40 litres of soil were processed to extract the charred plant remains by flotation in a modified Siraf flotation machine, with the sample held on 0.5 mm mesh and the flot collected on 0.5 mm mesh. The mineral residue that remained following the processing was washed through a stack of 10 and 4 mm sieves. The coarse residue fraction (>10 mm) was sorted for bones and artefacts, and the medium residue fraction (10-4 mm) was sorted for bone, artefacts other than fired clay, and wood charcoal (which was added to the flot). The finest fraction (4-0.5 mm) was scanned for small bones and micro debitage. Flotation recovery was good and no sample required further flotation by hand.
- 2.2 Each flot was scanned under a binocular microscope at x10 and x20 magnification. The quantity and quality of any charred plant material was noted. Material was provisionally identified and estimates made of the abundance of grain, chaff, weed seeds, charcoal and other charred items. The results are recorded in Table 2.

3 Results

- 3.1 Three samples contained limited charred remains. The charred remains from the Bronze Age pit samples were limited to cf. Pomoideous (hawthorn/apple/pear etc.). No seeds or chaff were present in either sample. Small amounts of *Corylus avellana* (hazel) nut shell were recovered from the

Iron Age ditch fills and also *Triticum spelta/dicoccum* (spelt/emmer wheat) grain. No charred remains were noted in the third sample of post-medieval date.

4 The Potential for Further Work

- 4.1 The quantity of remains recovered would suggest that the density of charred remains on the site is likely to be very low. Such low densities of remains would be consistent with the interpretation of the ditches as Iron Age field boundaries. On present evidence it would appear that the potential for useful sampling in the event of further excavation is low. If, however, future excavation does reveal further prehistoric features or more intensive Iron Age period archaeology some sampling for botanical remains is recommended.
- 4.2 Bone was poorly preserved. A single unburnt tooth fragment from Ditch 28 (Fill 26) and partially burnt teeth and fragments of large animal bone from Ditch 28 (Fill 27) were recovered. No small animal or fish bones were preserved. Sampling specifically for animal bone during any further work would not appear to be useful.
- 4.3 Snails were not well preserved. Snail fauna was restricted to intrusive modern burrowing species.

Table 2: Summary of Charred Remains

	Trench	1949TT	1950TT	1950TT
	Context	19	26	27
	Volume litres	20	36	40
	Date	MBA-LBA	Iron Age	
SEEDS & CHAFF				
<i>Triticum</i>	Spelt/Emmer wheat	-	1	-
<i>spelta/dicoccum</i>	grain			
<i>Corylus avellana</i>	Hazel nut shell	-	+	+
	fragments			
CHARCOAL				
cf. Pomoideae	Hazel/Apple/Pear etc.	++		

+ = present; ++ = common

APPENDIX 4

ANIMAL BONE

by Kathy Ayres, Centre for Human Ecology, University of Southampton

1 Introduction

- 1.1 The bones from all contexts were examined. The total number of fragments was recorded for each context, with species identified where possible.

2 Condition of the bone

- 2.1 The condition of the bone from each context was graded on a scale of 1-5, where grade 1 bone was in excellent condition with little or no post-depositional damage and that graded as 5 could not be identified further than 'bone'. Table 3 summarises the condition of the bone in each assemblage.

Table 3: Summary of condition of the animal bone

Recovery	1	2	3	4	5
>10mm	0	0	1	0	0
10-4mm	0	1	0	0	0

3 Species representation

- 3.1 All bone from Chapel Mill was recovered through sieving. One bone was recorded from the 10-4mm material and was identified as sheep. Four bones were recorded from the >10mm material, two of which were identified as pig and two of which were unidentified.

Table 4: Summary of species of animal bone

Recovery	Cattle	Sheep	Pig	Horse	Dom. fowl	Fish	Unid.
>10mm	0	0	2	0	0	0	2
10-4mm	0	1	0	0	0	0	0