

1 INTRODUCTION

1.1 Project Background

- 1.1.1 Canterbury Archaeological Trust Ltd (CAT) was commissioned by Union Railways (South) Limited (URS) to undertake detailed archaeological investigations on land situated to the south of the church of St John the Baptist, Mersham, Kent (Figure 1). This work formed part of an extensive programme of archaeological investigation carried out in advance of the construction of the Channel Tunnel Rail Link.
- 1.1.2 The archaeological Written Scheme of Investigation (Channel Tunnel Technical Report no. 440-RUG-RLEVC-00001-AA, 1998) was prepared by Rail Link Engineering (RLE) and agreed in consultation with English Heritage and Kent County Council on behalf of the Local Planning Authorities.
- 1.1.3 The general vicinity having been identified as an area of potential archaeological interest by desk-based assessment (Channel Tunnel Rail Link, Assessment of Historic and Cultural Effects, 1994) followed by geophysical survey (Report on Geophysical Survey for Union Railways Channel Tunnel Rail Link, 1996), the main site (ARC MSH 98) was pin-pointed by trial trenching (Mersham, ARC MSH 97; An Archaeological Evaluation, 1998) and selected for detailed excavation. This excavation was conducted by CAT during December 1998 and January 1999, being followed by further trial trenching (ARC EMM 98) to the east of the site in the latter month.

1.1.4 Table One

Fieldwork Events

<i>Fieldwork Event Name</i>	<i>Fieldwork Event Type</i>	<i>CTRL site code</i>	<i>Contractor</i>	<i>Dates of fieldwork</i>
MERSHAM; AN ARCHAEOLOGICAL EVALUATION	Evaluation	ARC MSH 97	MoLAS	1997
MERSHAM, KENT	Excavation	ARC MSH 98	C.A.T.	December 1998 and January 1999
ARCHAEOLOGICAL EVALUATION, EAST OF MERSHAM	Evaluation	ARC EMM 98	C.A.T.	January 1999

- 1.1.5 The main site (Figure 1), which measured some 80m north-south and 125m east-west, with a total area of about 0.995 hectares, was centred on URS grid point 85184/19289 (NGR TR 60518 13929). It lay to the south of the boundary wall of the church of St John the Baptist and to the north of the cutting of the London to Folkestone railway line. It was bounded to the east by a tree-lined fence and the western boundary lay some 60m east of and parallel to Church Road.

1.2 Geology and Topography

- 1.2.1 The site occupied a slight spur on the edge of the Hythe Beds, a distinct formation of Lower Cretaceous lime and sandstones (British Geological Survey, Sheet 305/6). The land dropped away to the south and west onto low-lying Atherfield and Wealden Clays. A very sandy ragstone outcropped at the site and many of its fragments showed banding due to slight textural changes in the size of their sand grains (predominantly medium to coarse).
- 1.2.2 The solid geology was capped in most places by a distinctive deposit of red/brown, weakly calcareous, sandy clay, up to 0.05m thick, which is thought to be peculiar to the immediate vicinity of Mersham. This in turn was capped by pale orange/brown sandy clay, a loessic drift material that blankets the Hythe Beds throughout the wider district.
- 1.2.3 The central, northern and eastern parts of the site occupied a relatively flat area dipping gently from north to south but the ground dropped away more steeply on the site's southern and western margins. The land had been ploughed to a depth of 0.25m-0.30m, as evidenced by a relatively homogeneous topsoil horizon. The truncated nature of all features located in the relatively flat area suggested that this ploughing had caused relatively deep erosion of the underlying deposits. The level of the truncated natural varied from 63.70m to 61.10m OD in this area and to a low point of 57.85m OD in the site's south-western corner.

1.3 Archaeological and Historical Background

- 1.3.1 The modern village of Mersham contains three separate nuclei of historic interest. The northernmost of these is defined as a Conservation Area and is situated some 500m north of the main site. A second area lies immediately north of the site and consist of a group of listed buildings; the parish church (Grade I), with its surviving medieval west window and graveyard (Grade II) and, to the west of the church, Court Lodge, an important hall house (Grade I) and its associated barn (Grade II*). The earliest known reference to the church dates to 1040 and it was rebuilt in the twelfth century. Court Lodge dates to the early to mid fourteenth century, when it came under the control of Christ Church Priory, Canterbury. The third area is situated to the south of the site, and was separated from it by the cutting of the London to Folkestone railway line. Known locally as The Forstal, it consists of a widely spread group of eleven buildings of historic interest, seven of which are listed (Grade II).
- 1.3.2 Previous discoveries in the area include an important group of at least three early Anglo-Saxon burials found in 1828 during road mending 'on Bower Farm'. The grave goods, which included brooches, a buckle, a sword, a spearhead, and a knife, are now in Canterbury Museum. They probably date to the sixth or seventh centuries. Further evidence of burials of the same period comes from two buckles and an oblong gilt ornament set with garnets discovered in the parish before 1852 and from a globular cinerary urn found before 1853.
- 1.3.3 The quarrying of ragstone along Bower Lane led, in 1967, to the identification of medieval occupation in a field east of the parish church and west of the lane (SMR No. TR 03 NE 22; TR 0548 3928). Hearths, wells, and pits were found, as were 'quantities' of pottery sherds, believed to date to the thirteenth and fourteenth centuries, and of small iron artefacts. To the east of this site stands Bower Farmhouse, a timber-framed hall house dating to c. 1500 (Grade II*).

- 1.3.4 The CTRL Environmental Statement (URL 1994) and subsequent geophysical prospection identified the area to the south of the parish church as being of potential archaeological interest and it was then evaluated by trial trenching, undertaken by the Museum of London Archaeology Service (MoLAS) in 1997 (Mersham, ARC MSH 97; An Archaeological Evaluation, 1998).
- 1.3.5 The 1997 evaluation involved nine trenches, seven of which revealed archaeological features, being cut across the paddock to the south of the church, an area of approximately 2 hectares. Twelve features yielded cultural material, including iron slag and pottery. Most of the pottery was believed to date to the thirteenth century.
- 1.3.6 The most significant finds from the evaluation were retrieved from pits and ditches located in the central southern area of the field. Iron slag (derived chiefly from smelting), ironstone, daub and cinders were found in large quantities, clearly indicative of ironworking. The discovery of postholes and beam slots suggested that timber buildings were associated with this activity. The Wealden iron industry was of considerable regional importance during the Roman, Anglo-Saxon, medieval and post-medieval periods and, for this reason, an area centred on the metalworking features identified during the evaluation, and covering most of the paddock, was selected for detailed archaeological excavation (the subject, along with further evaluation, of this assessment report).

2 ORIGINAL PRIORITIES, AIMS AND METHODOLOGY

2.1 Landscape Zone Priorities

2.1.1 A number of broadly based Landscape Zone Priorities were outlined by RLE in the WSI. Of these general priorities, two are likely to be of relevance in any further study of the results of the excavation at Mersham and are detailed below.

2.1.2 One relevant priority is to reconstruct the changing palaeo-environment for all time periods represented and its interaction with past economies, specifically here through the study of:

- the effects and extent of clearance of the ‘Wealden Wild Wood’;
- changes arising from early industrial economies;
- woodland management for medieval and post-medieval ironworking.

2.1.3 A second relevant priority is to establish the basis of the rural economy for the area for all time periods represented, especially through the recovery of material and environmental remains, specifically here through the study of;

- changes to the organisation of the landscape through time;
- settlement morphology and function;
- reliance on pastoralism versus arable farming;
- early industrialisation, *e.g.* medieval and later ironworking and fulling;
- utilisation of natural resources, *e.g.* woodland management and exploitation of riverine and coastal resources;
- local, regional and international trade.

2.2 Fieldwork Event Aims

2.2.1 The aims of the fieldwork event as stated in the WSI were;

- to establish the full extent, morphology and organisation of the iron working site;
- to recover artefactual assemblages (especially pottery) in order to elucidate the sequence of the site's development;
- to provide information on the site's status and economy and on trade and exchange;
- to recover environmental and other economic indicators present on the site;
- to determine the landscape setting of the site and its interaction with the contemporary local environment.

2.3 Fieldwork Methodology and Summary of Excavation Results

2.3.1 Detailed excavation was undertaken during December 1998 and January 1999. The site was first cleared using a mechanical excavator using a toothless bucket and the resulting surface cleaned with shovels and trowels. As soon as potential features were identified they were marked out using spray paint. Subsequently, a pre-excavation plan was produced by EDM survey. Due to heavy rain during this phase of the works, a number of areas required re-cleaning before they could be planned.

- 2.3.2 Generally, all pits, post holes and stake holes were half sectioned or, in the case of some of the larger features, quadranted, leaving fifty percent of each fill unexcavated. Short stretches of ditches and other linear features had two slots cut across each, usually including at least one terminal. Longer ditches had three or more slots cut across them and all intersections of features were excavated.
- 2.3.3 All bulk finds observed within the excavated portions of almost every context were recovered manually during excavation. The only exceptions made to this rule were for the fills of three large pits (Groups 2 and 13) near the centre of the site, which contained so much iron slag that the collection of only ten percent of the slag was considered a sufficient sample in agreement with RLE and the Statutory Consultees.
- 2.3.4 Samples were taken from the remaining unexcavated portions of features. The principal aims of this work were to identify hammer scale, to identify any evidence relating to settlement activity in the area and to identify evidence for the local environment. Column samples were taken from a number of the larger pits, generally those where there appeared to be good survival of organic material.
- 2.3.5 Following the completion of the excavation, further evaluation work was undertaken in the field immediately to the east. A continuation of a ditch found running along the southern side of the main site was identified but no further evidence of metalworking was found.
- 2.3.6 In total, 561 individual contexts were recorded during the excavation, of these 307 represented deposits and 254 cuts or interfaces. 188 separate archaeological features were recognised, including pits, ditches, postholes and shallow features that were probably horticultural in origin.
- 2.3.7 The following periods were represented:
- Prehistoric and Romano-British;
Late Anglo-Saxon (*c.* 850-1050);
Early medieval (*c.* 1050-1200);
Late medieval (*c.* 1450-1550);
Post-medieval and modern (*c.* 1550-1900);
- 2.3.8 Small quantities of mid Anglo-Saxon and earlier material were found on the site but are thought to be entirely residual.
- 2.3.9 A few features (Groups 2-5), including one containing slag from iron smelting, have been dated to the late Anglo-Saxon period (*c.* 850-1050) and about a dozen later features contained residual material of similar date.
- 2.3.10 The majority of the features on the site were dated broadly to the period *c.* 1050-1200 and, most probably, to the first half of that range. These included pits backfilled with iron slag, the southern boundary ditch and ditches cut to bring water to the site. The western boundary ditch was probably contemporary with these.
- 2.3.11 Following the abandonment of the site, the southern boundary ditch was retained and smaller, parallel ditch was cut to the north. Evidence was found for further activity, albeit at a low level, from *c.* 1475-1500 until some time before *c.* 1775. Apparently horticultural features excavated at the eastern end of the site were probably contemporary with this later activity.

- 2.3.12 Late post-medieval/modern truncation of the site probably had an adverse effect on some earlier deposits, limiting their recovery during the excavation. Shallow features, such as beam slots, and horizontal stratigraphy, such as floors and occupation spreads, were probably removed. The main casualties of this are likely to have been the surface evidence for domestic structures, occupation associated with them, and in-situ remains of furnaces, the bases of which probably sat on the contemporary ground surface.

2.4 General Assessment Methodology

- 2.4.1 This assessment report was commissioned by URS to the specification for assessment reports produced by RLE, as discussed with English Heritage and Kent County Council. This specification follows national guidelines prepared by English Heritage and provides additional information regarding level of detail required and format. The production of the assessment reports was project-managed by Ian Riddler.

3 FACTUAL DATA AND QUANTIFICATION

3.1 The Stratigraphic Record

Truncation

- 3.1.1 Most of the features recovered during the excavation appeared to have been affected to some degree by truncation, the greater part of which was probably due to later cultivation. In the relatively flat area defined above (1.2.3), the forms of features suggested that the modern ground level was 0.10m to 0.30m lower than that in early medieval times. Deeper truncation would have been prevented by the sandstone of the Hythe Beds, which outcropped here. However, the sandstone did not extend away from this area, the effect was therefore much more severe around and off its edges, particularly to the west. Truncation was most noticeable in the boundary ditch of the medieval site, which survived along the southern edge of the area and, still more heavily truncated, in its south-western corner but disappeared just as it turned northwards. Truncation here could have been by as much as 1.00m to 1.50m. Natural erosion probably accounted for most of the effect here as water drained away along this boundary, both from the main area of the site and from the manor house further to the north.

Intrusion

- 3.1.2 Intrusive effects (later material being ascribed to earlier contexts) on the site were negligible. Most features were located in stratigraphically isolated positions and very few finds were recovered from the intersections of features, where the risk of such effects is highest.

Residuality

- 3.1.3 Residual material (earlier material being present in later contexts) was a problem on this site. Prehistoric material was present on site, but considered to be entirely residual (with the exception of the pit in Group 1). Roman material, though residual, is probably the result of manureing and does therefore indicate Roman period activity in the vicinity. Mid Anglo-Saxon material was likewise considered residual, but indicative of activity in this period, although nature of this activity is not understood. Residual later Anglo-Saxon material was present, but features have been securely dated to this period

Contamination

- 3.1.4 For the reasons stated above (see 3.1.2), cross-contamination (material from one context being ascribed to another, irrespective of sequence) on the site was also negligible.

Phase 1, Prehistoric and Romano-British; Group 1

- 3.1.5 One pit contained a single sherd of prehistoric pottery (Group 1), but nothing later, and therefore has been tentatively dated to Phase 1. However, there is no guarantee that the sherd and feature are contemporary. There is little to suggest that any significant activity took place within the area of excavation during this phase.

Phase 2, Late Anglo-Saxon (c. 850-1050); Groups 2 to 5

- 3.1.6 Six features were dated to the late Anglo-Saxon period. It was during this phase that ironworking was first carried out on site, slag from the smelting process being deposited in a large, purpose-cut pit (Group 2). The association of this feature with others yielding domestic material and with contemporary textile-working implements found in later contexts (see 3.1.7) suggests a mixed regime. Spinning and weaving in order to meet the requirements of the household was a ubiquitous domestic occupation at this date but iron smelting, dependant on viable supplies and fuel, was a far less common activity.
- 3.1.7 Four pits also belong to this phase (Groups 3 and 4). Although *in situ* evidence of occupation in the area is relatively sparse, the abundance of late Anglo-Saxon finds suggests a fairly active site.
- 3.1.8 What may have been a ditch, was cut during this period (Group 5). Located near the south-east corner of the excavated area, most of this feature appeared to have been truncated by later boundary ditches.

Phase 3, Early Medieval (c. 1050-1200); Groups 6 to 25

- 3.1.9 The period c. 1050-1125 saw the site at its most active, although occupation may have continued on until c. 1200. The excavated area appears to have been used predominantly for the smelting and smithing of iron, although evidence for domestic activity was also found. This might be construed as indicative either of a simple intensification of the metalworking aspect of the earlier mixed regime or of a switch to a more specialist operation, on a small industrial scale though with the metalworkers still living on the site.
- 3.1.10 The majority of features dating to this phase were concentrated within an area bounded by ditches generally some 1.5m to 2m in width (Group 14). That marking the southern limit of the site followed the edge of the relatively flat area, then turned at its western end and probably continued northwards, though here truncation and a later ditch sequence had removed all but a few, possibly contemporary, ditch segments (Group 24). A north-south ditch was cut towards the end of this phase, about 70m east of and parallel to the presumed western boundary, apparently intended either to partition the enclosure or to reduce its area drastically.
- 3.1.11 Many features associated with ironworking were cut within the area defined by the boundary ditches. Slag derived from smelting, which probably took place within the excavated area, was disposed in eighteen to twenty specifically cut pits in the central and southern parts of the enclosure (Groups 12 and 13) and hammerscale, indicative of smithing, was identified over much of the site. It is likely that ironworking was carried out near the south-western corner, where a large pit, which it is suggested may have been used for storing water (Group 15), and two short ditches (Group 20) were located and where there terminated three successive long ditches (Group 8), interpreted as having been cut to carry water to the site.

- 3.1.12 It is probable that during the medieval period, as now, the site occupied a fairly flat area adjacent to, and just below, the local church (St John the Baptist), with the ground dropping away to the south and west. As noted above, the evidence suggests contemporaneous domestic and ironworking activities and those working at the site probably lived there. About twenty-five pits of this phase, distributed fairly evenly across the enclosure, contained domestic debris (Groups 10 and 11) while seven or eight, in the central and northern parts, contained traces of cess (Group 6). The main domestic area was located in the northern area of the excavation, where two small gullies (Group 7), four postholes (Groups 16 and 17) and two beam slots (Group 9), were found.
- 3.1.13 Twenty-eight other post pits were found spread across the northern (Groups 18 and 22) and southern (Group 19) halves of the area; these may relate to the domestic activity or to the industrial process itself. Thirteen or fourteen other pits (Groups 21, 23 and 25) contained little evidence for either domestic or industrial use and were generally hard to classify.

Phase 4, Late Medieval (c. 1450-1550); Groups 26 and 27

- 3.1.14 There was only limited evidence for use of the site after the early medieval ironworking phase. Although some of the activities ascribed, tentatively to Phase 5 may have dated instead to Phase 4 or perhaps earlier (see 3.1.15 and 3.1.16), no certain indications were identified for any activity at all until the very late medieval period. It was around this time that an east-west ditch (Group 26) was cut across the northern part of the excavated area, leaving a gap just west of the earlier eastern boundary/partition ditch (see 3.1.10). The earlier enclosure's southern boundary ditch was re-cut and, perhaps, continued farther to the west (Group 27). It is therefore likely that, whilst most of the Phase 3 features had been backfilled by this stage, the enclosure ditches were still visible and were in part re-utilised, probably for field boundaries.

Phase 5, Post-Medieval (c. 1550-1900); Groups 28 to 34

- 3.1.15 Other than a re-cutting (Group 34) of the western boundary ditch, no direct evidence indicative of post-medieval activity was recovered in the western part of the site although an isolated pit (Group 28) which yielded no datable material might belong to this or to the preceding phase. The truncation of earlier features (see 3.1.1) suggests that this area was probably under the plough at some time during the same broad period.
- 3.1.16 A series of linear features (Group 30) and associated pits (Group 31), probably horticultural in origin, were found near the eastern edge of the excavated area. Although they yielded very little material, such as was recovered indicated a post-medieval date. Traces of later cart tracks (Group 29) were noted running across them. Seven pits and two linear features (Group 33) of unknown function were also excavated in this area or a little to its west; the absence of datable material from them renders their attribution to this phase highly tentative.

3.2 The Artefactual Record

Prehistoric Ceramics

- 3.2.1 The excavation produced ten sherds of fairly abraded, flint-tempered prehistoric pottery. The sherds are small and entirely residual, being found in early medieval and later contexts. One sherd may be from a later Neolithic Peterborough Ware bowl (a possibility which receives tenuous support from the recovery of a residual Neolithic arrowhead) but it could equally well be later prehistoric. Another is probably of Late Bronze/Early Iron Age date; the remainder lack diagnostic characteristics and can only be placed within the broad time frame *c.* 1500-25 BC.
- 3.2.2 Although one isolated pit contained a sherd of prehistoric pottery and nothing later (Phase 1, Group 1, Fill 438) there is no guarantee that the sherd and feature are contemporary.

Roman Ceramics

- 3.2.3 The site produced eleven sherds of abraded Late Iron Age to Roman pottery, all residual in late Anglo-Saxon and medieval contexts. The pottery has a maximum date range of *c.* 75 BC to *c.* AD 400 or later, although none of it need be earlier than late first century in date. No diagnostic sherds are present.

Post-Roman Ceramics

- 3.2.4 In total, 272 post-Roman sherds were recovered by manual excavation. The bulk of this material belongs to the early medieval period, although there are a few sherds of early Anglo-Saxon date and small quantities of material from the middle and late Anglo-Saxon, the late medieval and the post-medieval periods. Some of this material is likely to be residual, but until further work is carried out on the assemblage, it is not possible to say how much or from which periods.
- 3.2.5 The pottery consists largely of local shelly and shelly-sandy wares, together with some Canterbury sandy wares. Many sherds are small and abraded; there are no intact profiles (though some could be reconstructed), however some diagnostic material was present in the assemblage. No preservation bias was noted. Though fairly small, the assemblage contains a mix of forms and fabrics, which contrasts with contemporary urban groups in East Kent.

Fired Clay

- 3.2.6 Other than largely vitrified material from furnaces or hearths, adhering to ferrous residues and assessed along with them (see 3.2.10-11), only a small assemblage of fired clay, was recovered from the excavations. This material is both small in quantity and poor in quality, the only item of note being a loomweight fragment (see 3.2.7), much if not all of the remainder being burnt daub from wattle and daub structures.

Ceramic Objects

- 3.2.7 The excavation yielded a fragment of a fired clay loomweight of bun-shaped form (from pit [223], Group 23), characteristic of the late Anglo-Saxon period, and an intentionally trimmed Roman potsherd. The loom weight is likely to be residual, as the context it is from has been phased as early medieval (c1050-1200). Sufficient of the loomweight survived to be able to calculate the original dimensions and to categorise its fabric. Its presence reinforced other artefactual evidence from the site for textile manufacture (see 3.2.14, 3.2.16 and 3.2.17). The potsherd had been trimmed to a roughly circular shape, probably to form a counter, perhaps used in the medieval game of *Tabula* (see Appendix 5.6).

Worked Flint

- 3.2.8 A small assemblage of struck was recovered during the excavation. All of the artefacts were recovered from later contexts and were therefore residual.

Burnt Flint

- 3.2.9 A small assemblage of burnt flint was recovered during the excavation. The size of the individual pieces and their distribution suggests that this material was largely residual.

Ferrous Residues

- 3.2.10 A little over 115kg of ferrous metallurgical residues have been examined, about 20% of the overall sample collected, largely from contexts of Phase 3. The diagnostic material mainly consists of tap slag and dense slag from smelting along with smithing hearth bottoms. This material provides good evidence for smelting on or in the immediate vicinity of the site. It has not proved possible to locate the furnaces by excavation or by remote sensing (MoLAS 1998, 16), but they may have been similar to those excavated at Ramsbury, Wiltshire and elsewhere (Haslam 1980). Smithing debris was also recovered and the types of hammerscale present (both spherical and flakes) indicate that both the primary smithing of blooms and the secondary smithing of iron were taking place at or near the site.
- 3.2.11 A preliminary analysis suggests a marked shift in the relative importance of smelting and smithing from Phase 2 to Phase 3 with a striking increase in the proportion of material attributable to smelting as opposed to that for smithing in the later period.

Coinage

- 3.2.12 A single coin was retrieved from the surface of cut 5 (sub-group 56, Group 27, Phase 4), a silver half-penny of Edward I/II, probably lost in the fourteenth century.

Copper Alloy Objects

- 3.2.13 Fragments of two copper alloy objects were retrieved from samples taken for metallurgical residues. Both are probably from dress accessories, in one case a pin and in the other a domed stud that may have come from a buckle. Unfortunately, both pieces are too small to be diagnostic. They may date to the mid Anglo-Saxon period. The pin comes from Group 4, phased as late Anglo-Saxon, the stud from Group 6, phased as early Medieval (c1050-1200) and thus are likely to be residual.

Iron Objects

- 3.2.14 The majority of the iron objects from the site were contemporary with the early medieval ironworking. They included an awl, fibre processing teeth, knives, nails, strips and bindings. A few pieces may perhaps have represented stock iron for smithing and the presence of hammerscale on a few objects reflects their local production.

Lead Object

- 3.2.15 A small strip of lead alloy was retrieved from the fill of a medieval ditch.

Bone and Antler Objects

- 3.2.16 Two antler objects were recovered, one by manual excavation and the other from a sample. One is a fragment of a double-pointed pinbeater, the other a small piece of the connecting plate from a composite comb. Both objects are of Anglo-Saxon date. The pinbeater came from the fill of a ditch that formed a boundary to the area of industrial activity (context 395, sub-group 36, Group 26, Phase 4 – Late Medieval). Associated pottery is noticeably mixed and of late pre-Roman Iron Age, early medieval and late medieval date. The comb fragment came from the fill of a pit that also contained domestic debris as well as the skeleton of a horse (context 403, sub-Group 129, Group 11, Phase 3 - Early Medieval).

Worked Stone Objects

- 3.2.17 A fragment of a quern, a spindle whorl and a small section of rubble were recovered by hand excavation. The quern may be Roman, Anglo-Saxon or early medieval, and is of a rare, oscillatory type. The spindle whorl is early medieval and of a material and type which is now well attested within East Kent, being produced at or near *Sandtun*, West Hythe. The section of stone rubble comes from an early medieval context but its function in relation to activity of that period is unclear.

Glass Objects

- 3.2.18 Five small fragments of post-medieval glass were recovered from the excavation.

3.3 The Environmental Record

Mammalian Bone

- 3.3.1 The bone assemblage was retrieved by both hand-recovery and by sieving. The hand-recovered assemblage of mammalian bone consisted of 422 fragments, weighing 9.046kg, from 25 contexts. Mammal bone weighing 1.110kg was derived from 43 sieved samples.

Bird and Fish Bone

- 3.3.2 The bone assemblage was retrieved by both hand-recovery and by sieving. Ten fragments of bird bone and ten of fish bone were collected manually. A further 49 fragments of bird bone were recovered during sieving as well as, from several samples, pieces of eggshell. Sieving also recovered over 2000 fragments of fish bone (of which about 300 are identifiable), spread between 37 of the 48 samples processed. Three samples also yielded a few fish scales.

Plant Remains

- 3.3.3 Excavation work included the sampling of deposits for charred plant remains. A total of 102 samples were taken. The flots from nine of these samples, all of early medieval date, were assessed for their potential for analysis, as were mineralised or charred seeds extracted from thirteen flotation residues. Charred plant remains were found to be present in seven samples. The concentration of remains was generally low, although two samples produced more substantial remains. Cereal crops included bread type wheat, spelt wheat, oats and barley. Pulses included broad bean and, perhaps, cultivated vetch (*Vicia sativa* subsp. *sativa*). What may have been minor crops, including flax, beet and plum or sloe, were also identified. Occasional mineralised seeds, particularly of brassica, may have derived from sewage.

Marine Mollusca

- 3.3.4 Small quantities of shellfish remains were recovered from several of the samples taken. Cockle, mussel, and oyster shell proved the most common.

Land Snails

- 3.3.5 A sample of flot from washover flotation was presented for assessment. The assemblage contained a number of large and apical fragments of *Helix aspersa*, which is a Roman introduction, and also one *Candidula* sp., which is a medieval introduction. The composition of the assemblage indicates terrestrial habitats.

3.4 Dating

- 3.4.1 All dating has been based upon the pottery and other artefacts recovered during the excavation. No other dating techniques were employed.

3.5 Archive Storage and Curation

3.5.1 Table Two

The archive index has been up-dated and consists of:

ITEM	NUMBER OF ITEMS	NUMBER OF FRAGMENTS	CONDITION (No. of items) (W = washed; UW = unwashed; M = marked; UM = unmarked P = processed; UP = unprocessed; D = digitised; I = indexed)
Contexts sheets	561	/	P, I
A1 plans	119	/	I, D
A3 plans	6	/	I, D
A1 sections	1	/	I
A3 sections	46	/	I
Small finds	72	/	P, I
Films (monochrome) PR=print	8.5	/	I
Films (colour) S=slide;	9	/	I
Flint (boxes)	1 (size 1) box	26	W, UM, P, I
Pottery (boxes)	1 (size 2) box	296	W, M, P, I
Stone (boxes)	1 (size 3) box	3	UW, UM, P, I
Metalwork (boxes)	1 (size 1) box (in total)	/	/
CA		2	UW, UM, P, I
Fe		66	UW, UM, P, I
Pb		1	UW, UM, P, I
Ae		1	UW, UM, P, I
Iron Slag	20 (size 1) boxes	3214	UW, UM, P, I
Animal Bone	1 (size 1) box	1799	W, UM, P, I
Soil Samples	102	1180 litres	640 litres P, I & 540 litres UP.

Key to box sizes:

Size 1: large = 540 x 406 x 260mm

Size 2: museum box = 430 x 300 x 235mm

Size 3: half museum box = 430 x 305 x 100mm

3.5.2 All artefacts have been stabilised for long term storage. No further work is required.

3.5.2 On completion of the post-excavation analysis, it is intended that, the archive will be deposited with Folkestone Museum, which has agreed in principle to receive the material. The specific deposition format and discard policies will be determined in accordance with Museum's policies, in agreement with RLE.

3.6 The Documentary Record

3.6.1 The available primary documentary sources were listed and then rapidly assessed in terms of their potential contribution to the issues set out in the CTRL Archaeological Research Strategy. It was also necessary to undertake a preliminary investigation of the secondary literature to provide a context for this evidence. The principal primary sources consisted of four pre-conquest charters, a few late twelfth-century records, and a much larger quantity of thirteenth-century material.

- 3.6.2 The work entailed a brief examination of the very few late twelfth-century records and the more abundant thirteenth-century sources for the following categories; charters, leases, quitclaims; bedels' rolls; treasurers' accounts; rentals; estate assessments and accounts, including the *Assisa Scaccarii*. Also examined was a seventeenth-century map of Mersham that shows the position of the church, manor house and barns, and some of the local fields and roads.
- 3.6.3 As well as information on industrial activities, the records were scanned for material on the use of the manor of Mersham by Christ Church Priory (Canterbury), including its agricultural policy, evidence of inter-manorial co-operation, markets and other trade activities. Other evidence that might shed light on the settlement at Mersham are field names, occupational surnames, the assize of bread and ale, and the presence of such features as common ways and the king's highway.

4 STATEMENT OF POTENTIAL

4.1 Stratigraphic Potential

Phase 1, Prehistoric and Romano-British; Group 1

- 4.1.1 Only one feature (see 3.1.4) was identified that may date to this period. It has no potential in regard to the research aims of the project.

Phase 2, Late Anglo-Saxon (c. 850-1050); Groups 2 to 5

- 4.1.2 Only six features have been ascribed to this period though some of those, without diagnostic finds, which have been assigned to Phase 3, should perhaps be included here. The importance of these few features lies in the fact that they place the origins of the later domestic and industrial firmly in the pre-conquest era.
- 4.1.3 With the possible exception of a very small remnant to the south-east (see 3.1.8), no boundary ditches could be attributed to this phase. However, the evidence for occupation appeared to be concentrated in the same area as subsequent activity, suggesting that the spatial limits as well as the function of the site may have been set out during this period. The evidence thus indicates that use of the landscape may have been fossilised during this period, and a pattern of industrial exploitation established that continued and, apparently, expanded in the following phase.
- 4.1.4 Although the stratigraphic data is limited it has a reasonable potential, when combined with the artefactual and the documentary evidence and in the light of the later material, to address some of the broad landscape issues raised in the CTRL Archaeological Research Strategy. It is, therefore, recommended that the interim stratigraphic narrative for this period should be reviewed, revised and refined.

Phase 3, Early Medieval (c. 1050-1200); Groups 6 to 25

- 4.1.5 The majority of the stratigraphic evidence has been attributed to this period. It is indicative of an industrial site used predominantly for iron smelting and smithing. The site was probably adjoined to the north by the churchyard and manor. The site utilised a relatively flat area, formed by an outcrop of the Hythe Beds, with wet, low-lying ground, from which it was separated by ditches, to the west and south. The eastern portion of the excavated area showed only minimal evidence for activity in this period and it was partitioned off by a ditch (possibly on the line of a Phase 2 ditch) at a fairly late stage.
- 4.1.6 Although no structural evidence for smelting was found in situ, the distribution of cut features and fill-types suggested that this was undertaken close to the south-western corner of the excavated area (see 3.1.11). It is possible smelting was also undertaken elsewhere though the fieldwork programme, of course, could not demonstrate this. Internal ditches probably fed water to the smelting area from the north-east and may have utilised springs located there, although an examination undertaken during fieldwork found active springs only in slightly lower locations, below the level of the excavated area. Most of the large pits cut to dispose of iron slag and other waste material produced by the smelting were located in the southern half of the area (see 3.1.11).

- 4.1.7 Domestic activity also appeared to have taken place at the site. Pits that may have contained human excreta (which is also to be expected on industrial sites) and domestic waste were identified, as were post pits and possible beam slots (see 3.1.12) although no building plans were distinguishable. The majority of features of the 'domestic' features lay in the northern half of the site. The existence of the church and manor to the north and of low lying, wet ground to the south and west, along with the paucity of features to the east suggested that, as with the ironworking, the settled area did not extend beyond the ditched enclosure.
- 4.1.8 Despite the heavy truncation to which the area has been subjected, a detailed analysis of the distribution and inter-relationship of the differing types of features (*e.g.*, large and small, deep and shallow pits) and inclusions (*e.g.*, smelting and smithing residues, cess and domestic waste) encountered and of surrounding topographical evidence should provide a clearer picture of the spatial organisation of the site and of the activities conducted there. Together with documentary evidence, such an analysis could provide material useful for the study of the exploitation of the local landscape and for that of the Wealden iron industry in a stage of its development that is, as yet, but poorly understood. The interim stratigraphic narrative for this period should, therefore, be reviewed, revised and refined.

Phase 4, Late Medieval (c. 1475-1550); Groups 26 and 27

- 4.1.9 The boundaries defined by the earlier ditches appear to have remained in use following the cessation of ironworking and associated domestic occupation at the site. The virtual absence of structural, stratigraphic and artefactual evidence suggests only a very low level of activity (perhaps grazing or ploughing) in this phase and its study has virtually no potential to further any of the established Landscape Zone Priorities.

Phase 5, Post-medieval (c. 1550-1900); Groups; 28 to 34

- 4.1.10 A similar picture to that in Phase 4 is evident during this phase. Evidence of horticultural exploitation was discovered in the eastern part of the excavated area but proved impossible to date with any certainty. Were documentary research to uncover references to such use within this broad date range, the stratigraphic data might be cited as corroboratory evidence, but it has little potential for further study in its own right. The environmental evidence may prove to have the potential to provide further information on the features in this phase.

4.2 Artefactual Potential

Prehistoric Ceramics

- 4.2.1 The very limited and mainly residual and undiagnostic assemblage (see 3.2.1) is indicative of prehistoric activity somewhere in the vicinity but has no appreciable potential for further study.

Roman Ceramics

- 4.2.2 The state of the sherds (see 3.2.3) suggests that they are derived from field marling and are entirely residual; they contribute little to the aims of the CTRL project and require no further study.

Anglo-Saxon and Early Medieval Ceramics

- 4.2.3 Between them, the Anglo-Saxon and Early Medieval ceramics account for the vast majority of the pottery from the site (see 3.2.4) and their study would complement the study of the stratigraphic and other data for these periods in addition to refining and, perhaps, expanding the chronologies of the sandy and shelly wares for this part of rural Kent. It should be noted, however, that the Early and Middle Anglo-Saxon material is residual. The quality of the pottery may be taken to reflect not only the status and economy of the site but may show variation across it and/or over time (synchronic and diachronic analysis). The types of vessel form present, as well as the fabrics in which they occur, can be quantified to some extent in terms of 'tablewares' or 'finewares' versus 'kitchenwares' or 'coarsewares' for the different periods they represent. The ratios of different vessel forms present can often shed light on the economy of a site; a high incidence of bowls, for example, can indicate dairying practices. For the Mersham site, these ratios would be estimated by the use of Estimated Vessel Equivalents (EVEs), arrived at by totalling the surviving percentage of rims for each vessel form group and comparing these figures with a count of diagnostically featured sherds (handles, spouts etc.). The results from such an exercise would then be compared with those from with other rural and urban sites and with lower and higher status sites to enable the assemblage to be seen in its broader socio-economic context.
- 4.2.4 An analysis of the geographic sources of the pottery may provide evidence for trade or exchange. The quantities of pottery from known or inferred sources, including the medieval pottery industry at Canterbury, can be compared by quantitative tabulation of fabrics by source groups. This should enable supply trends and hence the relative importance of different trade links to be established and compared.

Late Medieval and Post-Medieval Ceramics

- 4.2.5 The limited assemblage is indicative of some degree of late medieval and post-medieval activity, probably cultivation, but has no appreciable potential for further study.

Fired Clay

- 4.2.6 Fragments of clay hearth or furnace lining are discussed below, along with the ferrous residues (see 4.2.11-13). As for the remaining fired clay, although the presence of burnt daub (see 3.2.6) suggests that there may have been wattle and daub lined structures on the site, the lack of large quantities of good quality material from secure contexts and features suggests that any further work, other than on the loomweight (see 4.2.7), is unlikely to contribute to the Landscape Zone Priorities or Fieldwork Event Aims.

Ceramic Objects

- 4.2.7 The loomweight (see 3.2.7) should be seen in the context of the other objects relating to textile working found on the site. Our understanding of textile production in East Kent in the late Anglo-Saxon period is fairly limited and the Mersham evidence is particularly welcome in this respect. However, the potential for further work on this piece is restricted to a drawing, completion of its cataloguing and providing parallels from Canterbury assemblages.
- 4.2.8 The pottery sherd trimmed to form a counter is a useful addition to a small corpus of similar objects known from East Kent. Its presence widens the range of household activities visible on the site, to include recreational pursuits. However, the potential for further work on this piece is restricted to a drawing and completion of its cataloguing.

Worked Flint

- 4.2.9 The assemblage is poor and of insignificant potential, no further study is recommended.

Burnt Flint

- 4.2.10 The assemblage is poor and of insignificant potential, no further study is recommended.

Ferrous Residues

- 4.2.11 The evidence of intensive ironworking (see 3.2.10) links the site with other 'industrial' complexes of this period, and notably those at Canterbury and at Millbrook in the Ashdown Forest in Sussex. The sample of residues extends across the range of smelting and smithing processes, from the furnace to the finished product. Stock iron is not present, however, but the sample of finished material is relatively small. It may be that the Mersham site came into operation at a time when the smelting and smithing of iron was no longer being carried out in the suburbs of Anglo-Saxon Canterbury. Equally, the material may have been prepared for other markets or, conceivably, for ecclesiastical projects. Pottery and tile kilns in and around Canterbury testify to the power and influence of the church at this time (Sherlock and Woods 1988; Cotter 1997).
- 4.2.12 The site appears to have been located on the fringes of the Weald for the specific purpose of iron production. It has been noted that late medieval sources suggest that iron production was centred in northern and central parts of the Weald (MoLAS 1998, 18) but the eastern Weald and downland is under-researched in this respect, and it too lies close to appropriate sources of iron ore. Moreover, the mechanisms, which facilitated the industry in the late medieval period, are not necessarily pertinent to the late Saxon period.
- 4.2.13 Iron working sites of this date are rarely found. The value of this assemblage is enhanced by the sampling programme, which has produced good quantities of hammerscale. The waste products are distributed around the central and southern parts of the site and an analysis of their spatial distribution, by period, may provide a tentative indication of the original location of the furnaces and of other aspects of the site's internal organisation. Analysis of the remaining samples could also correct or confirm the striking increase in the relative importance of smelting as opposed to smithing in the early medieval period suggested by the assessment, with potentially fundamental implications for the site's economic and commercial basis. A chemical trace analysis of some of the metalworking residues found could prove the link between them and some of the objects found on site, this would also indicate the likely ore used.

Coinage

- 4.2.14 The potential of this assemblage is negligible. The coin has been recorded and no further work is envisaged.

Copper Alloy Objects

- 4.2.15 The presence of both objects recovered tends to support the sparse evidence for mid Anglo-Saxon occupation at the site. It is not possible to assign the pin shaft to type and no further work is recommended on it. The mount should be compared with other jewellery of the period with the aim of establishing the type of object that it once adorned.

Iron Objects

- 4.2.16 The range of iron objects from Mersham is relatively small, as is the overall quantity of material. Nonetheless, it is possible to link the objects with the waste products and thus to explore their relationship. For example, a brief, initial examination demonstrated the presence of hammerscale on some of the iron objects, suggesting that some, at least, were manufactured on or near this site. A metallurgical examination of the strips, bindings and sheet material may also link the processes together.
- 4.2.17 Appendix 7.8 highlights the potential for study of the iron residues from Mersham and the same general points apply to the iron objects. Some, such as knives and fibre processing teeth, may assist in expanding or confirming the site's broad date range.

Lead Object

- 4.2.18 The potential for further study of the single lead object is poor and it is of no particular relevance to the aims of the project.

Bone and Antler Objects

- 4.2.19 The pinbeater should be seen in the context of the other objects from Mersham which relate to textile manufacture (see Appendices 7.5, 7.11 and 7.14). However, the potential for further work on this piece is restricted to a drawing and provision of parallels. The section of comb is too fragmentary to be of value in any further study.

Worked Stone Objects

- 4.2.20 The siltstone spindle whorl is an important addition to the corpus, both confirming and extending the distribution of the Hythe production centre. It is evidence for trade in worked stone artefacts during the early medieval period and forms an element of the evidence for textile manufacture at the site. Its presence is directly relevant to several of the Fieldwork Event Aims, relating both to trade and to industry, but only limited further work (drawing, cataloguing and parallels) on it would be required.
- 4.2.21 The quern fragment is unusual in several respects and is important as a good example of an object type that is seldom recovered from rural sites. Its significance lies also in its recovery from a post-conquest setting, at a point when the use of such objects was subject to revision and change. As with other object types and with the post-Roman ceramics and the ferrous residues, there is an important contrast to be drawn between urban and rural situations but, again, it requires only limited further work, akin to that for the spindle whorl.
- 4.2.22 The rubble fragment may be of Roman or post-Roman date and it cannot be securely related to any structures in the vicinity of the site. It has no potential for further study.

Glass Objects

- 4.2.23 The potential of this assemblage is poor. It is recommended that no further work is carried out on it.

4.3 Environmental and Economic Potential

Mammalian Bone

- 4.3.1 The mammalian bone assemblage has the potential to illustrate aspects of diet and economy from the late Anglo-Saxon and early medieval phases. This material offers a valuable opportunity to examine assemblages from a rural site of these periods and compare them to previously studied urban assemblages. The horse skeleton provides the opportunity to analyse a nearly complete medieval specimen. In contrast, the potential for recovering environmental information, *sensu strictu*, from this assemblage is negligible.

Bird and Fish Bone

- 4.3.2 Like the mammalian material, the bird and fish bone can provide information on the diet and economy of the medieval inhabitants of the site. Little previous work has been done on such assemblages from inland rural sites of this date.
- 4.3.3 The small assemblage of bird bones recovered is typical of food debris found on medieval sites, with domestic fowl and goose predominant. The potential for further work is limited by the small quantity of bone recovered and would consist in the production of a simple list of species.
- 4.3.4 Further analysis of the fish bone would be of value for the overall interpretation of the site economy and trading contacts. The assemblage as a whole contains a higher proportion than is normally encountered of relatively unbroken, identifiable material; sufficient to generate a statistically significant model of the fish component of the diet of the medieval inhabitants. The relative importance of marine and freshwater fish could thus be determined and comparison with other medieval assemblages from sites along the southern North Sea and Channel coasts may shed light on the provenance of the marine fish.

Plant Remains

- 4.3.5 The plant remains recovered have the potential to yield information on both the economy and environment of the site. There is a paucity of comparative material for this period in Kent and the building up of a national data-set for all periods of potential environmental change, be it due to natural or cultural factors, is of strategic importance. Some further work on the material is therefore recommended. The five samples that produced moderately sized deposits should be sorted and analysed in full (samples 1019, 1022, 1023, 1028 and 1029). In addition, the loose grain and brassica seeds extracted from sample 1027 should be identified and discussed with the other results.

Marine Mollusca

- 4.3.6 There is a general lack of analysis of marine molluscan remains from East Kent sites; even the abundant shells from early medieval contexts on a site on Townwall Street, Dover has not been studied in detail. This enhances the potential value of the Mersham sample which, although small, merits publication in summary form as representing a reasonably significant part of the dietary evidence for the site, particularly (25 of the 34 samples being from Phase 3) in the early medieval period.

Land Snails

- 4.3.7 Although sufficiently numerous to permit statistically significant analysis, further study of the terrestrial mollusca would probably be of little value in pursuing the research objectives of the site as the assemblage is largely composed of synanthropic species.

4.4 Dating Potential

The Anglo-Saxon and Medieval Ceramics

- 4.4.1 The Anglo-Saxon and early medieval ceramics have the potential to elucidate the sequence of site development by providing a detailed chronological basis. Evidence provided by cross-joining sherds from different contexts can shed additional light on this matter and can also be used to establish the nature of the redistribution of discarded material across the site. With the benefit of a revised stratigraphic narrative, a more considered dating can then be offered for site features and for the groups and sub-groups. Although the ceramics are not in excellent condition, there is a high potential for establishing cross-joins. Similar work on an early medieval site at Monkton was very useful in linking structural evidence to the site sequence (Cotter, forthcoming A).

Other Artefactual Evidence

- 4.4.2 The coin has been identified and it is not relevant to the main phases of activity. Although unlikely to provide close dating, the study of the remaining artefacts may either extend the range of mid Anglo-Saxon and/or late medieval activity at the site or else confirm the broad chronology suggested by the ceramics.

4.5 Archive Storage and Curation

- 4.5.1 All conservation work relating to the site has now been completed. Arrangements for long-term curation have been agreed in principle with Folkestone. The Museum's curation/discard policy will be applied to the material as appropriate, bearing in mind the recommendations of the individual specialists given in the various appendices.

4.6 Documentary Record Potential

- 4.6.1 The major problem with the documentary records lies in the lack, apart from a few early charters, of evidence for the Anglo-Saxon and early medieval periods. There is, therefore, a heavy reliance on the post-1200 records, which fall outside of the date range of the excavated site's most active phases. However, the great strength of the documents relating to Mersham is that the ville had become one of the holdings of Christ Church Priory (Canterbury) by the time of the conquest. The early manorial and estate records produced by Christ Church include numerous references to Mersham and such records survive, intermittently, for the whole of the medieval period. The quality and quantity of the post-1200 documents, in combination with the earlier material, means much can be deduced about Mersham during the period when ironworking was undertaken in the area of the excavation.

- 4.6.2 The early charters, taken in consideration with the Domesday survey, provide useful evidence on the topography of the Anglo-Saxon settlement at Mersham, its lordship, and the modes of production undertaken there. Unfortunately, none of the charters mention ironworking and the land boundaries recorded do not appear to relate to the area covered by the excavation. In general, the data relating to this period could be employed to help build up a picture of complex and ever expanding landholding. Available evidence should relate to agricultural practice (plough-lands, meadows), the utilisation of natural resources (woodland management in particular) and local and regional trade.
- 4.6.3 Iron was one of the customary dues known to have been collected, from at least the mid thirteenth century, by the Priory from its peasants at Mersham. Provision of these payments had probably been established from the late Anglo-Saxon period. Although the ceramic evidence suggests that production in the area of the excavation stopped around 1200, the payments are likely to relate directly to ironworking undertaken in or near the village, so a change in the location or extent of the industry is indicated. The documentary evidence relates to both smithing and smelting. Further study of the thirteenth-century and later documents is likely to produce some information relating to the early industry, but much more on its later development and final demise.
- 4.6.4 Further study is also likely to help place the industry within the Priory's manorial policy. The available documents are of such quality that a detailed picture of the developing economy and settlement at Mersham could be produced. Although this would relate mainly to the thirteenth century and later development much, by implication, would be relevant to forming an understanding of the settlement during the earlier period.

4.7 Overall Potential

Phase 1, Prehistoric and Romano-British; Group 1

- 4.7.1 Only one feature (see 3.1.4) is likely to date to this period, and this is open to some doubt. The artefactual evidence (see 3.2.1 and 3.2.8) was also minimal and, as a result, the extent of occupation pre-dating the mid Anglo-Saxon period difficult to establish. The earliest datable material consisted of small quantities of struck flints dating to the Mesolithic and Neolithic periods (see Appendix 7.6). These were recovered from later features spread right across the site. Iron Age and Roman ceramics (see Appendix 7.1) were also retrieved from several features, and are also generally thought to be residual.
- 4.7.2 The quantities of material present are no more than one would expect as 'background noise', and indicate only that occupation may have taken place in the general area of the site at specific periods during the prehistoric and Roman periods. There is little that has the potential to enhance either the broad landscape issues or the research aims of the project.

Phase 2, Late Anglo-Saxon (c. 850-1050); Groups 2 to 5

- 4.7.3 Although only a small number of features appear to date from the late Saxon period, taken in consideration with the finds assemblages they do suggest substantial activity. The origins of both ironworking and domestic occupation within the excavated area can be traced to this period.
- 4.7.4 The documentary records suggest that a complex land holding was developing at Mersham, and further research may evidence the origins of land management patterns associated with the ville. Although explicit references to ironworking may not be found, indirect evidence, for example mention of woodland management relating to the industry, may be uncovered.

- 4.7.5 The ferrous residues recovered from this phase should be studied for evidence of continuity with Phase 3. All information relating to the nature and extent of the industry in the pre-conquest period is of potential relevance when considering questions relating to that of the post-conquest era.
- 4.7.6 The origin of the domestic settlement is evidenced by the pottery and by artefacts relating to textile manufacture (a loomweight and a pinbeater). Domestic activity is also indicated by the presence of a bone comb. Further study of some of these artefacts should be undertaken with a view to examining questions of continuity or change in the status of the settlement. At present the indications are suggestive of continuity. A study of the spatial distribution of contemporary features in comparison with those of the subsequent phase should help identify any changes that may have occurred in the morphology of the settlement.
- 4.7.7 Evidence of the nature and origin of the diet of those living at the site is slight. It is, however, deserving of further study as very little work has been undertaken on rural Kentish settlements of this period. In particular, further examination of the mammalian bones, fish bones and plant remains is recommended, together with less intensive work on bird bones and marine mollusca.
- 4.7.8 Evidence for the contemporary environment is poor and does not merit further examination.

Phase 3, Early Medieval (c. 1050-1200); Groups 6 to 25

- 4.7.9 As with the late Anglo-Saxon period (Phase 2) study of material from the early medieval deposits is likely to address a number of the Landscape Zone Priorities outlined by RLE.
- 4.7.10 A combined study of the ferrous residues, iron objects and documentary records has the potential to address questions relating to the nature of the industry at the site. The presence of hammerscale on the iron objects, for example, noted as a result of only a brief examination, suggests that at least some were manufactured locally. A closer examination, with specialist collaboration, of the strips, bindings and sheet material may also link the processes together. Any documentary records relating to the types of object produced (*e.g.*, cartwheels) will also be useful.
- 4.7.11 The history of iron production in this area of Kent, at the eastern end of the Weald, is little known. The more westerly sites and the Roman and later medieval stages of the Wealden iron industry have been most studied to date. A study of the Mersham site is therefore likely to be important in addressing broader questions concerning the origins, topographical spread and development of the industry, including its exploitation of mineral and timber resources.
- 4.7.12 As with the late Anglo-Saxon phase, a study of the pottery and artefacts, such as the gaming piece and stone spindle whorl, should help in forming a picture of the nature of the domestic settlement. Evidence for domestic industry should be sought.
- 4.7.13 The chief contribution of a study of the iron objects would be towards characterising the products of the local industry but together with a study of the pottery, the spindle whorl and other artefacts, it should also assist in elucidating the site's trading pattern. Further study of the documentary evidence is likely to define the role played in the trade in such materials by the monks at Christ Church Canterbury, and perhaps by other local landowners.

- 4.7.14 Although useful dietary information can and should be obtained by a study of the mammalian bones, fish bones and charred plant remains (again, with less intensive work on the bird bones and marine mollusca), evidence for the contemporary environment is poor and does not merit further examination.

Phase 4, Late Medieval (c. 1475-1550); Groups 26 and 27

- 4.7.15 Although only the recutting of the northern and southern boundary ditches can be confidently dated to this period, a few other features may be contemporary. Documentary evidence indicates that the iron industry prevailed in the Mersham area in the medieval period and any relevant artefacts that may have come from this phase should be considered in this light.
- 4.7.16 Generally however, there is little potential in the stratigraphic, artefactual and environmental assemblages of this phase to advance any of the research questions relating to the project.

Phase 5, Post-Medieval (c. 1550-1900); Groups 28 to 34

- 4.7.17 As for the preceding phase, there is little data from this period that can usefully contribute to any of the Landscape Zone Priorities as defined by the RLE in the WSI or elsewhere and no further work is recommended.

4.8 Realisation of Priorities and Aims

- 4.8.1 From the above statements it can be seen that the stratigraphic, artefactual, environmental and documentary evidence has the potential to contribute to a number of the relevant Landscape Zone Priorities (see 2.1.1) and Fieldwork Event Aims (see 2.2.1).
- 4.8.2 In regard to ‘the changing palaeo-environment’, information relating to the clearance of the Wealden Wood may be obtained by a study of the documentary record. It would also be possible to make inferences about such land use once studies of the ferrous residues and iron objects have produced a more accurate picture of the type of industry present. A study of the documentary record may also highlight other changes in land use (*e.g.*, from pasture to plough-land).
- 4.8.3 Information relating to the ‘basis of the rural economy’ may be provided by a variety of sources, including stratigraphy, ferrous residues, ceramics, other artefacts, animal bone, other dietary evidence and documents. Inferences relating to change or continuity in the local economy can be made by examining these data sets for evidence of what happened on site. Furthermore, information relating to changes in the morphology, organisation and function of the site may be sought by undertaking a more detailed examination of the stratigraphic and finds data.
- 4.8.4 Trade in iron products, ceramics, and other items such as the spindle whorl are evident, and in combination with evidence from the documentary record should help to define some of the local trade networks. The role of Christ Church, Canterbury, should be examined in this regard.
- 4.8.5 Unlike economic and dietary indicators, the recovery of environmental indicators was poor, and consequently there is little value in their further study.

4.9 Additional Research Potential

- 4.9.1 In addition to studies, outlined above, addressing objectives laid down in the WSI, some others should be considered for the contributions they could make to related subjects.

Late Anglo-Saxon and medieval ceramics

- 4.9.2 The Mersham group is one of only a few groups of late Anglo-Saxon/early medieval date from the county and the first of its kind from this area. The importance of the late Anglo-Saxon and early medieval pottery assemblage from Mersham is thus that it provides a window into the ceramics of an area of rural Kent where virtually no ceramics research has been conducted previously. In terms of local and regional research priorities, as regards the Ashford/east Wealden area, the assemblage is undoubtedly significant in demonstrating that the local ceramic tradition of shelly and shelly-sandy wares, previously dated no earlier than the thirteenth century, is in fact a tradition with Anglo-Saxon roots.
- 4.9.3 Late Anglo-Saxon and early medieval ceramics research in East Kent has, to date, been centred on urban sites, and particularly at Canterbury and Dover (Blackmore 1988; McCarthy and Brooks 1988, 183-4; Macpherson-Grant 1990; idem 1992; Cotter 1997; idem, forthcoming B). One of the few comparable rural sites of early medieval date lies some distance away at Monkton in Thanet (Cotter, forthcoming A).
- 4.9.4 The occurrence of local, hand-made, basically Anglo-Saxon vessel forms sometimes side-by-side with technically more advanced early medieval Canterbury ceramics provides an interesting illustration of the late Anglo-Saxon/early medieval interface in ceramic technology with more advanced urban products perhaps providing the catalyst for change in a more conservative rural tradition. In this respect the Mersham assemblage provides a useful contrast and corrective to the urban-biased picture of ceramic development seen at both Canterbury and Dover.
- 4.9.5 Shelly or shelly-sandy wares, mostly early medieval, account for about 40% of the assemblage. The Mersham site therefore has the potential to contribute to an existing long-term programme that is scientifically characterising the shelly ware industries of Kent. One aspect of this is the identification of the shell species used as tempering material in the pottery fabrics and determining whether these are of fossil or contemporary marine origin. Together with petrological information derived from microscopic or thin-section analysis, as well as more traditional ceramic information based on form and decoration, this provides a basis for sub-dividing the county's otherwise uniform mass of shelly wares into distinct localised industries or traditions. Analyses of this kind have recently been undertaken on shelly wares from Dover, Canterbury and *Sandtun* (Cotter, forthcoming B) and it would be useful to expand this programme to other parts of the county.
- 4.9.6 The shelly and shelly-sandy wares are predominantly of types previously established for the Ashford area and dated to the thirteenth century. However, the Mersham material is probably earlier than this and suggests that this tradition may have originated in the Anglo-Saxon period; indeed, some forms in these fabrics exhibit transitional Anglo-Saxon/early medieval characteristics. Thus, although the assemblage is relatively small, it is an important group in regional terms and it has the potential to advance our understanding of Wealden ceramic traditions before and after the Norman conquest.

Environmental Data

- 4.9.7 Although the assemblages of animal bone, plant remains and marine mollusca are small, they can provide useful information on local diet and the rural economy, which is poorly documented for this period in Kent. Given the paucity of comparative material and the importance of building up a national data set for all potential periods of change, further work on these three assemblages is recommended. The potential for recovering direct evidence for the local environment (rather than the indirect implications of diet and economy) is, however, very low.
- 4.9.8 The material is generally unspectacular but will allow useful comparisons to be made between rural and urban East Kent [e.g., with Townwall Street, Dover (Parfitt *et al.*, forthcoming)].

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6 ACKNOWLEDGEMENTS

I would like to thank all those who contributed to the compilation of this report, particularly
Mike Allen, Enid Allison, Ian Anderson, Peter Atkinson, Robin Bendrey, John Cotter, Emily
Dodd, Louise Harrison, Tania Wilson, Lynne Keys, Malcolm Lyne, Nigel MacPherson-Grant,
Ruth Pelling, Simon Pratt, Ian Riddler and Sheila Sweetinburgh.

Mark Houliston, March 2001

Edited by
Mick Diack, October 2001

7 APPENDICIES

7.1 ASSESSMENT OF EARLIER PREHISTORIC CERAMICS

Nigel Macpherson-Grant

Summary

- 7.1.1 The excavation produced ten sherds of fairly abraded, flint-tempered prehistoric pottery. The sherds are small and most are residual in early medieval and later phases. One sherd may be from a later Neolithic Peterborough Ware bowl, a possibility marginally supported by the recovery of a residual Neolithic arrowhead, but it could equally well be later prehistoric. Another is probably of Late Bronze/Early Iron Age date; the remainder lack diagnostic characteristics and can only be placed within the broad time frame c.1500-25 BC.
- 7.1.2 Although one pit contained a sherd of prehistoric pottery (Phase 1, Group 1, Fill 438) there is no guarantee that the sherd and feature are contemporary.

Introduction

- 7.1.3 A small number of prehistoric sherds were recovered during the excavation; none were retrieved from environmental or other samples. The presence of these sherds confirms a degree of later prehistoric activity, with the slight possibility of earlier occupation. The sherds probably arrived on-site either as a by-product of settlement fringe activity or as a component in farmyard manure. Though most of this material should be of later second or first millennium BC date, it is not possible to determine whether they stem from one single or several, chronologically separate, phases of pre-Roman land-use.

Methodology

- 7.1.4 The assemblage has been dated and quantified by context. It has also been reviewed for potentially publishable elements. The CAT fabric reference collection has been used to provide broad fabric identifications.

Quantification

- 7.1.5 A total of 10 sherds, weighing 37g, was recorded. Other than noting that all the sherds are flint-tempered and that there are minor fabric variations, the assemblage has not received detailed fabric analysis and quantification. No biases due to sampling or excavation strategies have been noted.

7.1.6 Table One

Prehistoric Ceramics

All dates are approximate, all are BC

<i>Context</i>	<i>Fabric</i>	<i>Group</i>	<i>Count</i>	<i>Wt (g)</i>	<i>Early Date</i>	<i>Late Date</i>
0	Flint-Tempered	-	1	7	1500	25
306	Flint-Tempered	-	2	3	1500	25
328	Flint-Tempered	-	1	9	1500	25
383	Flint-Tempered	-	1	7	3500	2500
438(Group 1)	Flint-Tempered	-	1	7	900	550
496	Flint-Tempered	-	1	3	1500	25
556	Flint-Tempered	-	1	1	1500	25
569	Flint-Tempered	-	1	7	1500	25
639	Flint-Tempered	-	1	2	1500	25

Provenance

7.1.7 Individual quantities and associated dating are indicated in Table One. There are no publishable elements/groups and their typological value is minimal. They do have a small degree of site- and topographic-based value in that, like the lithics, they probably indicate two or more broad phases of activity not represented in the feature record. There is no guarantee that the single sherd recorded from the only pit assigned to the earliest phase (context 438, sub-group 58, Group 1, Phase 1) is contemporary with that feature.

7.1.8 All the sherds are small and worn. Their condition may be the result of post-loss re-distribution, during later site phases, or during exposure derived from settlement or land-use activities significantly earlier than Phase 1.

Conservation

7.1.9 The degree of further analysis recommended below does not conflict with potential long-term storage since, following fabric analysis and the retention of any sherds for the regional Fabric Reference Collection, the remainder could be discarded.

Comparative material

7.1.10 The sherds lack diagnostic elements and their current type, size and condition are ubiquitous in later second-first millennium BC settlement sites or later prehistoric landscapes that have been agriculturally managed. At present over 500 (mostly minor) locations and assemblages could be quoted as potential parallels to the present group of material, but only because the sherds are lacking in diagnostic features.

Potential for further work

7.1.11 The assemblage is of some, but minor, value to landscape studies in that it suggests that there may have been a phase of prehistoric activity prior to Phase 1.

7.1.12 In order to provide long-term comparative data, a standard context-based fabric identification and quantification catalogue should be prepared for the site archive; no further work is recommended beyond this. Sherds not required for the regional Fabric Reference Collection could then be discarded.

7.2 ASSESSMENT OF LATE IRON AGE AND ROMAN CERAMICS

Malcolm Lyne

Summary

- 7.2.1 The site produced eleven sherds of abraded Late Iron Age to Roman pottery, all residual in late Anglo-Saxon and medieval contexts. The pottery has a maximum date range of c. 75 BC to c. AD 400 or later, although none of it need be earlier than the late first century in date. No diagnostic sherds are present.

Introduction

- 7.2.2 A small collection of abraded late Iron Age to Roman pottery was recovered from nine separate contexts; one sherd was unstratified (context 0). The material suggests that there was occupation of this date in the general area but it does not add materially to the Fieldwork Event Aims for this project.

Methodology

- 7.2.3 The sherds were examined with the aid of a hand lens. They have been assigned to fabric types, using the CAT Fabric Reference Collection.

Quantification

- 7.2.4 Eleven sherds (116g) were examined and are quantified in Table One. They include six sherds in late pre-Roman Iron Age fabrics (B2 and B2.1), three of Roman date and two (LR5 and LR10) which are late Roman.

7.2.5 Table One

Late Iron Age and Roman Ceramics

All dates are approximate, all are AD unless stated otherwise

<i>Context</i>	<i>Fabric</i>	<i>Form</i>	<i>Count</i>	<i>Wt(g)</i>	<i>Edate</i>	<i>Ldate</i>	<i>Comments</i>
0	B2	Closed	1	2	75BC	100+	Oxidised
344	R43	DR.31	1	2	150	200	Burnt
377	R14	Open form	1	6	120	270	Abraded
385	LR.10	Bowl base	1	34	240	400+	Burnt
388	B2	Jar	1	8	75BC	100+	Abraded
395	B2.1	Jar	1	2	75BC	100+	Oxidised
423	LR5	Store-jar	1	12	270	400+	Abraded
485	B2.1	Jar neck sherd	1	8	75BC	100+	Abraded
499	R43	Basal sherd	1	30	50	175	Worn
580	B2	Basal sherd	1	6	75BC	100+	Abraded
657	B2	Closed	1	6	75BC	100+	Abraded

Provenance

- 7.2.6 Each sherd was found in a separate context and all of them are residual (in deposits of Anglo-Saxon and early medieval date). The sherd from context 499 had been trimmed for re-use as a ceramic counter (see Appendix.7.5).

Conservation

- 7.2.7 The sherds are abraded and are relatively featureless, although they can be ascribed to fabric types. They do not have any particular conservation requirements and they can be stored as a bulk commodity. None of the material is suitable for illustration and it could be discarded at the end of the project.

Comparative material

- 7.2.8 Small scraps of pottery of this date are widespread throughout East Kent and it is not worthwhile to establish detailed comparisons with this assemblage.

Potential for further work

- 7.2.9 The state of the sherds suggests that they are derived from field marling; they contribute little to the aims of the CTRL project.
- 7.2.10 The material should be written up briefly in note form as part of the site report and requires no further study.

7.3 ASSESSMENT OF POST-ROMAN CERAMICS

John Cotter

Summary

- 7.3.1 In total, 272 post-Roman sherds (3.101kg) were recovered by hand excavation. The bulk of this material belongs to the early medieval period, although there are a few sherds of early Anglo-Saxon date and small quantities of material from the middle and late Anglo-Saxon, late medieval and post-medieval periods. The ceramics have been identified by fabric and consist largely of local shelly and shelly-sandy wares together with some Canterbury sandy wares.
- 7.3.2 The Mersham group is the first of its kind from this area and one of few groups of late Anglo-Saxon/early medieval date from the county. The shelly and shelly-sandy wares are predominantly of types previously established for the Ashford area and dated to the thirteenth century. However, the Mersham material is probably earlier than this and suggests that this tradition may have originated in the Anglo-Saxon period; indeed, some forms in these fabrics exhibit transitional Anglo-Saxon/early medieval characteristics. Thus, although the assemblage is relatively small, it is an important group in regional terms and it has the potential to advance our understanding of Wealden ceramic traditions before and after the Norman conquest.

Introduction

- 7.3.3 A modest assemblage of post-Roman sherds was recovered by hand excavation from 85 separate contexts. In addition, a small quantity of pottery came from the environmental samples. The latter material was briefly scanned but not recorded in any detail.
- 7.3.4 The study of this material was intended to assist a number of the Fieldwork Event Aims, as follows;
- Recovery of artefact assemblages (especially pottery) to elucidate the sequence of site development; to provide information on the status and economy of the site and data on trade and exchange;
 - Recovery of environmental and other economic indicators if these are found to be present on site;

Methodology

- 7.3.5 All of the material has been catalogued by fabric code, number of sherds and weight per context (Table One). Fabric codes are those of the CAT Fabric Reference Collection. Fabrics were identified by visual inspection and by microscopic examination (x20 magnification). All contexts containing pottery have been spot-dated. Brief notes and/or sketches of diagnostic items were made during the cataloguing process.

7.3.6 Table One*Post-Roman Ceramics, by phase and context*

All dates are approximate, all are AD

<i>Con text</i>	<i>Sub- Grp</i>	<i>Grp</i>	<i>Phase</i>	<i>Fabric</i>	<i>Fabric</i>	<i>Grp</i>	<i>Count</i>	<i>Wgt</i>	<i>Early Date</i>	<i>Late Date</i>
0	0	0	0	EM1	Sandy	-	3	18	1050	1225
0	0	0	0	EM2	Shelly	-	1	22	1050	1225
0	0	0	0	EM3A	Shelly- Sandy	-	6	17	1075	1225
0	0	0	0	LM100	? English	-	1	5	1350	1550
0	0	0	0	LM2	Fine Earthenware	-	1	10	1475	1550
0	0	0	0	LM4	?Wealden Sandy	-	5	98	1450	1550
0	0	0	0	LS1	Sandy	-	1	14	850	1050
0	0	0	0	PM2.5	?Wealden Sandy	-	1	7	1550	1675
0	0	0	0	PM2.6	?Wealden Buff	-	1	32	1550	1675
365	0	0	0	PM25	London Stoneware	-	1	3	1675	1825
575	102	25	0	EM2	Shelly	-	1	2	1050	1225
575	102	25	0	M39	Potter's Corner Sandy	-	3	17	1175	1325
430	147	3	2	LS1	Sandy	-	2	27	850	1050
430	147	3	2	LS3	Shelly- Sandy	-	1	16	850	1050
573	101	4	2	LS3	Shelly- Sandy	-	1	6	850	1050
584	171	4	2	LS2	Shelly	-	1	4	850	1050
618	115	3	2	LS3	Shelly- Sandy	-	1	25	850	1050
626	160	2	2	LS3	Shelly- Sandy	-	2	18	850	1050
640	75	3	2	MLS2	Sandy	-	1	8	775	875
311	37	23	3	EM1	Sandy	-	7	54	1050	1225
311	37	23	3	EM2	Shelly	-	1	4	1050	1225
316	30	17	3	EM2	Shelly	-	3	20	1050	1225
318	23	11	3	EM1	Sandy	-	8	177	1050	1225
318	23	11	3	EM2	Shelly	-	29	262	1050	1225
325	38	11	3	EM2	Shelly	-	1	4	1050	1225
329	34	22	3	EM2	Shelly	-	1	2	1050	1225
331	39	10	3	EM1	Sandy	-	4	56	1050	1225
331	39	10	3	PM1	Red Earthenware	-	1	2	1550	1800
342	24	11	3	EM2	Shelly	-	1	10	1050	1225
347	25	6	3	EM2	Shelly	-	1	3	1050	1225
362	167	22	3	EM1	Sandy	-	4	32	1050	1225
366	27	11	3	EM2	Shelly	-	2	21	1050	1225
382	129	11	3	EM2	Shelly	-	1	2	1050	1225
383	131	6	3	EM1	Sandy	-	1	3	1050	1225

<i>Con text</i>	<i>Sub-Grp</i>	<i>Grp</i>	<i>Phase</i>	<i>Fabric</i>	<i>Fabric</i>	<i>Grp</i>	<i>Count</i>	<i>Wgt</i>	<i>Early Date</i>	<i>Late Date</i>
383	131	6	3	EM2	Shelly	-	1	3	1050	1225
383	131	6	3	LM4	? Wealden Buff Sandy	-	1	8	1450	1550
385	131	6	3	EM2	Shelly	-	1	6	1050	1225
388	29	20	3	EM1	Sandy	-	1	10	1050	1225
388	29	20	3	EM2	Shelly	-	2	10	1050	1225
388	20	20	3	PM1	Red Earthenware	-	2	56	1550	1800
391	129	11	3	EM2	Shelly	-	4	61	1050	1225
403	129	11	3	LS2	Shelly	-	6	175	850	1050
403	129	11	3	LS3	Shelly-Sandy	-	1	18	850	1050
416	130	6	3	EM2	Shelly	-	1	1	1050	1225
421	129	11	3	MLS2	Sandy	-	1	11	775	875
423	22	13	3	EM1	Sandy	-	2	26	1050	1225
424	65	14	3	LM32	Wealden Or.-Buff Sandy1	-	40	1475	1550	
424	65	14	3	LS19	Non-local Chalk-filled	-	1	10	850	1050
424	65	14	3	M10	?Wealden-type Sandy	-	1	5	1350	1550
432	146	12	3	EM1	Sandy	-	11	147	1050	1225
432	146	12	3	EM2	Shelly	-	1	12	1050	1225
440	164	11	3	EM2	Shelly	-	1	2	1050	1225
442	137	23	3	EM1	Sandy	-	1	4	1050	1225
442	137	23	3	EM2	Shelly	-	1	3	1050	1225
442	137	23	3	M40B	?Ashford/Wealden Sandy	-	1	5	1175	1400
471	178	12	3	EM1	Sandy	-	1	2	1050	1225
477	65	14	3	LS1	Sandy	-	1	4	850	1050
478	65	14	3	EM1	Sandy	-	1	10	1050	1225
485	149	6	3	EM4	West Kent Fine Sandy	-	1	17	1125	1250
487	157	6	3	EM1	Sandy	-	1	44	1050	1225
488	157	6	3	EM2	Shelly	-	1	30	1050	1225
492	57	14	3	EM1	Sandy	-	1	4	1050	1225
493	176	18	3	EM2	Shelly	-	1	30	1050	1225
498	151	6	3	EM2	Shelly	-	1	3	1050	1225
509	57	14	3	EM1	Sandy	-	1	4	1050	1225
509	57	14	3	EM3A	Shelly-Sandy	-	1	7	1075	1225
510	120	20	3	EM2	Shelly	-	1	2	1050	1225
510	120	20	3	PM1	Red Earthenware	-	2	4	1550	1800
511	128	11	3	EM1	Sandy	-	1	14	1050	1225
511	128	11	3	EM2	Shelly	-	1	6	1050	1225
514	119	10	3	LS2	Shelly	-	1	9	850	1050
515	180	6	3	EM2	Shelly	-	6	8	1050	1225

<i>Con text</i>	<i>Sub- Grp</i>	<i>Grp</i>	<i>Phase</i>	<i>Fabric</i>	<i>Fabric</i>	<i>Grp</i>	<i>Count</i>	<i>Wgt</i>	<i>Early Date</i>	<i>Late Date</i>
515	180	6	3	EM3A	Shelly- Sandy	-	1	16	1075	1225
519	65	14	3	LS1	Sandy	-	7	62	850	1050
525	152	11	3	EM2	Shelly	-	2	14	1050	1225
548	154	12	3	EM2	Shelly	-	6	13	1050	1225
551	156	19	3	EMS4	Organic Tempered	-	1	6	550	725
562	109	13	3	EM3A	Shelly- Sandy	-	1	44	1075	1225
568	104	13	3	EM1	Sandy	-	1	12	1050	1225
569	112	12	3	EM2	Shelly	-	1	3	1050	1225
572	60	6	3	EM2	Shelly	-	2	10	1050	1225
587	162	13	3	LM2	?C"bury- type earthenware	-	1	11	1475	1550
592	15	9	3	EM1	Sandy	-	4	135	1050	1225
595	68	8	3	LS2	Shelly	-	1	23	850	1050
596	69	8	3	EM1	Sandy	-	1	14	1050	1225
600	161	13	3	EM2	Shelly	-	2	33	1050	1225
601	16	7	3	MLS2	Canterbury- type Sandy	-	1	5	775	875
602	14	16	3	EM1	Sandy	-	2	7	1050	1225
603	15	9	3	LS2	Shelly	-	1	2	850	1050
609	161	12	3	LS2	Shelly	-	1	60	850	1050
619	70	8	3	LS1	Sandy	-	1	11	850	1050
620	68	8	3	EM1	Sandy	-	2	29	1050	1225
621	70	8	3	EM2	Shelly	-	1	1	1050	1225
621	70	8	3	MLS2	Canterbury- type Sandy	-	2	7	775	875
627	70	8	3	EM1	Sandy	-	5	39	1050	1225
628	71	10	3	EM2	Shelly	-	1	2	1050	1225
628	71	10	3	EM28	?Kentish White Sandy	-	1	22	1175	1225
629	73	10	3	EM2	Shelly	-	2	32	1050	1225
630	73	10	3	EM2	Shelly	-	2	11	1050	1225
632	70	8	3	EM1	Sandy	-	6	24	1050	1225
632	70	8	3	LS100	?English Miscellan- eous	-	1	2	850	1050
639	70	8	3	EM1	Sandy	-	4	24	1050	1225
639	70	8	3	M40B	?Ashford/ Wealden Sandy	-	1	6	1175	1400
649	65	14	3	LS1	Sandy	-	11	129	850	1050
659	65	14	3	EM2	Shelly	-	1	8	1050	1225
330	36	26	4	EM1	Sandy	-	1	18	1050	1225
330	36	26	4	EM2	Shelly	-	3	45	1050	1225

<i>Con text</i>	<i>Sub-Grp</i>	<i>Grp</i>	<i>Phase</i>	<i>Fabric</i>	<i>Fabric</i>	<i>Grp</i>	<i>Count</i>	<i>Wgt</i>	<i>Early Date</i>	<i>Late Date</i>
330	36	26	4	LM2	?C'bury-type earthenware	-	1	8	1475	1550
332	36	26	4	PM1	Red Earthenware	-	1	13	1550	1800
370	36	26	4	M40B	?Ashford/Wealden Sandy	-	2	9	1175	1400
395	36	26	4	EM2	Shelly	-	1	4	1050	1225
395	36	26	4	LM2	?C'bury-type earthenware	-	1	36	1475	1550
456	62	26	4	EM100	?English Miscellaneous	-	1	14	1050	1225
497	56	27	4	EM1	Sandy	-	1	3	1050	1225
497	56	27	4	EMS2	Shelly	-	1	2	450	700
497	56	27	4	LM32	Wealden Or.-Buff Sandy	-	1	10	1475	1550
508	56	27	4	EM1	Sandy	-	1	8	1050	1225
508	56	27	4	LM32	Wealden Or.-Buff Sandy	-	4	117	1475	1550
556	56	27	4	EM1	Sandy	-	1	2	1050	1225
556	56	27	4	LM2	?C'bury-type earthenware	-	1	3	1475	1550
556	56	27	4	M40B	?Ashford/Wealden Sandy	-	1	11	1175	1400
556	56	27	4	MLS100	?English Miscellaneous	-	1	2	650	850
392	28	28	5	PM2.5	?Wealden fine earthenware 1	-	2	1550	1675	
397	90	29	5	LM2	?C'bury-type earthenware	-	1	9	1475	1550
398	4	31	5	M40C	?Ashford/Wealden Pasty	-	1	8	1250	1400
302	46	34	5	LPM12C	Pearlware	-	3	7	1780	1825
302	46	34	5	PM1	Red Earthenware	-	1	140	1550	1800

Quantification

7.3.7 The 272 sherds (3.101kg) of post-Roman pottery are presented by phase and context in Table One. 27 fabric codes have been used, indicating the variety of pottery types or wares present, although some of these come from the same general source area. No obvious collection bias was noted.

7.3.8 The quantity of sherds can be summarised by period as follows;

7.3.9 Table Two

Post-Roman Ceramics by Period

<i>Period</i>	<i>Fabrics</i>	<i>Count</i>	<i>Weight (g)</i>	<i>%</i>
Early Anglo-Saxon	EMS2, 4	2	8	0.8
Middle Anglo-Saxon	MLS2, 100	7	34	2.6
Late Anglo-Saxon	LS1, 2, 3, 19, 100	42	615	15.4
Early Medieval	EM1, 2, 3A, 28, 100	178	1762	65.2
High Medieval	M10, 39, 40B, 40C	10	61	3.7
Late Medieval	LM 2, 4, 32, 100	19	355	7.0
Post-Medieval	PM1, 2.5, 2.6, 25, LPM12C	14	266	5.2

Provenance

7.3.10 The majority of individual post-Roman contexts with pottery produced only around one to three sherds each. Most of the pre-1200 pottery comes from pit refuse. The highest number of sherds from a single context or sub-group is 37 (context 318, sub-group 23, Group 11, Phase 3), which contains some useful featured sherds. Other contexts producing modest assemblages of some note include the following;

7.3.11 Table Three

Contexts with Notable Ceramic Assemblages

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Description</i>	<i>Count</i>	<i>Dating</i>
318	23	11	Pit Refuse	37	Early medieval
403	129	11	Animal Burial	7	Late Anglo-Saxon
432	145	12	Pit Refuse	12	Eleventh Century
649	65	14	Ditch fill	11	Late Anglo-Saxon*

*context 649 also includes some later pottery

Conservation

7.3.12 Generally the condition of the pottery is fair to poor. Many sherds are small and worn. There are no complete vessels or whole profiles although a few reasonably complete profiles can probably be reconstructed from the fragments.

7.3.13 The material does not have any special conservation or storage needs and it can all be treated as a bulk finds commodity. It may be necessary to reconstruct a small number of vessel profiles prior to illustration. It is recommended that all of the ceramics be retained. The quantity present is, in any case, not great but the material is of comparative value for future ceramic research in this area of Kent.

Comparative Material

- 7.3.14 Remarkably little post-Roman pottery has been published from the Ashford/Mersham area and, in general, known or published assemblages of late Anglo-Saxon or early medieval pottery from the rural Weald of Kent are scarce. The most relevant published assemblage is merely an interim report, now out of date, which deals with a probable kiln site, probably of the early thirteenth century, at Potter's Corner, Ashford (Grove and Warhurst 1952). It is clear from an examination, by the author, of this pottery in Maidstone Museum that both a sandy ware and a closely related shelly/sandy ware were produced at Potter's Corner, though the latter ware may represent a slightly earlier phase of production. This medieval shelly-sandy ware, probably made with fossil shell derived from the Hythe Beds, appears to be closely related to the late Anglo-Saxon/early medieval shelly wares at Mersham although the latter are clearly more primitive and cruder in manufacture. Nevertheless, some of the Mersham wares appear to represent an earlier stage of the same local tradition of shelly-sandy wares from which the Ashford wares eventually developed.
- 7.3.15 Pottery fabrics similar to both local shelly and sandy fabrics at Mersham are also known from the Anglo-Saxon and early medieval coastal settlement of *Sandtun*, near Hythe (Hodges 1981, 11; Macpherson-Grant and Blackmore, forthcoming). Early medieval flint-and-shell tempered fabrics are present but rare at Mersham. These are characteristic of the coastal areas of Sussex and south Kent. Very similar fabrics occur, for example, at the CTRL site north of Westenhanger Castle (ARC WSG98). Both late Anglo-Saxon and early medieval sandy Canterbury wares are well known from many sites in East Kent, although Mersham more or less marks the south-westerly limits of their distribution.

Potential for further work

- 7.3.16 The late Anglo-Saxon and early medieval pottery assemblage from Mersham provides a window into the ceramics of an area of rural Kent where virtually no ceramics research has been conducted previously. In terms of local and regional research priorities, as regards the Ashford/east Wealden area, the assemblage has the potential for demonstrating that the local ceramic tradition of shelly and shelly-sandy wares, previously dated no earlier than the thirteenth century, is in fact a tradition with Anglo-Saxon roots.
- 7.3.17 Late Anglo-Saxon and early medieval ceramics research in East Kent has, to date, been centred on urban sites, particularly at Canterbury and Dover (Blackmore 1988; McCarthy and Brooks 1988, 183-4; Macpherson-Grant 1990; *idem*, 1992; Cotter 1997; *idem*, forthcoming B;). One of the few comparable rural sites of early medieval date lies some distance away at Monkton in Thanet (Cotter, forthcoming A).
- 7.3.18 The occurrence of local, hand-made, basically Anglo-Saxon vessel forms sometimes side-by-side with technically more advanced early medieval Canterbury ceramics provides an interesting illustration of the late Anglo-Saxon/early medieval interface in ceramic technology. This may reflect more advanced urban products providing the catalyst for change in a more conservative rural tradition. In this respect the Mersham assemblage provides a useful contrast and corrective to the picture of urban ceramic development seen at both Canterbury and Dover.

- 7.3.19 With a significant shelly element (*c.* 40%) in the assemblage, Mersham has the potential to contribute to a long-term research programme, which is scientifically characterising the shelly ware industries of Kent. One aspect of this is the identification of the shell species used as tempering material in the pottery fabrics and determining whether these are of fossil or contemporary marine origin. Together with petrological information derived from microscopic or thin-section analysis, as well as more traditional ceramic information based on form and decoration, this provides a basis for sub-dividing the county's otherwise uniform mass of shelly wares into distinct localised industries or traditions. Analyses of this kind have recently been undertaken on shelly wares from Dover, Canterbury and *Sandtun* (Cotter, forthcoming B) and it would be useful to expand this programme to other parts of the county.
- 7.3.20 The earliest manifestation of the shelly and shelly-sandy wares has been assigned here, on the basis of comparison with urban assemblages, to the middle or late Anglo-Saxon period. As, at Mersham, they occur chiefly within contexts or groups that have also produced early medieval Canterbury wares, these early wares currently appear, therefore, to be largely residual. However, a limited programme of thermoluminescence analysis could provide independent dating and, thus, either confirm their residuality or point towards a later date-range for this tradition than that encountered in (perhaps more progressive) urban environments in East Kent, such as at Canterbury.
- 7.3.21 The post-Roman pottery assemblage also has the potential to address a number of the Fieldwork Event Aims, as detailed in the following paragraphs.
- 7.3.22 The assemblage elucidates the sequence of site development by providing dating information. Evidence provided by cross-joining sherds from different contexts can also shed light on this point, and can be used to establish the nature of the redistribution of discarded material across the site. With the benefit of the revised stratigraphic narrative, a more considered dating can then be offered for site features and for the groups and sub-groups. Although the ceramics are not in excellent condition, there is a high potential for establishing cross-joins. Similar work on the early medieval site at Monkton was very useful in linking structural evidence to the site sequence (Cotter, forthcoming A).
- 7.3.23 The quality of the pottery (*i.e.*, fine or coarse wares, high or low quality production) provides a degree of information on the status and economy of the site. The type of vessel forms present, as well as the fabrics in which they occur, can be quantified to some extent in terms of 'tablewares' or 'finewares' versus 'kitchenwares' or 'coarsewares' for the different chronological periods they represent. The ratio of different vessel forms present can sometimes shed light on site economy; a high number of bowls, for example, can indicate dairying practices. This quantification can be achieved by recording Estimated Vessel Equivalents (EVEs), usually by recording the surviving percentage of rims for each vessel form group and then comparing their totals. A count of diagnostic featured sherds complements this exercise. It would also be necessary to compare these results (either quantitatively or qualitatively) with other rural and urban sites and with lower and higher status sites to enable the Mersham assemblage to be seen in its broader socio-economic context.
- 7.3.24 The geographic sources of the pottery provide evidence for trade or exchange. In particular, there is the relationship with Canterbury, one of the possible destinations for iron products produced on the site. The quantities of pottery from known or inferred sources can be compared by grouping fabrics into source groups. This should enable supply trends and hence the relative importance of different trade links to be established and compared. This can be achieved by tabulating the quantified data in terms of source groups.

7.3.25 Bibliography

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7.4 ASSESSMENT OF FIRED CLAY

Louise Harrison

Summary

- 7.4.1 Excluding material covered elsewhere (see Appendices 5 and 8), only a small assemblage, of poor quality, of fired clay was recovered from the excavation. Most if not all of this material probably represents burnt daub from wattle and daub structures.
- 7.4.2 It is suggested that no further analytical work be carried out on this material although a small note including basic details regarding its quantity, quality and location should be included with the archive.

Introduction

- 7.4.3 Excluding very heavily fired clay, often vitrified, adhering to ferrous residues (see Appendix 7.8) and part of a loomweight (see Appendix 7.5) almost all of the material was retrieved by hand from the excavated features although a small quantity, weighing 363g, was extracted from samples. About 33.6% of this assemblage (38.8% by weight) held wattle impressions and most if not all of the material probably derives from wattle and daub structures, having been preserved by incidental exposure to low to moderate heat in the vicinity of hearths *etc.* or in more destructive fires.
- 7.4.4 Due to its small quantity and poor quality, further analysis of the material is unlikely to address any Fieldwork Event Aims. However, its occurrence does suggest that wattle and daub-lined structures were present on the site, probably in the Anglo-Saxon or early medieval period.

Methodology

- 7.4.5 All of the daub was counted and weighed and scanned for features such as wattle impressions and flat surfaces. The resultant information is presented in Table One.

Quantification

- 7.4.6 The daub retrieved from the excavation consists of 357 fragments, weighing a total of 6.620kg. This includes 122 fragments (2.615kg), which have features such as flat surfaces and wattle impressions. The remaining material (including all the daub retrieved from the samples) amounts to 235 fragments (4.005kg). This was abraded and had no diagnostic features.

7.4.7 Table One*Diagnostic Fired Clay, by Phase*

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>Count</i>	<i>Wt(g)</i>	<i>Phase Period</i>	<i>Comments</i>
622	160	2	2	1	30	Anglo-Saxon	wattle impressions and surfaces
318	23	11	3	2	45	Early medieval	flat surfaces
385	131	6	3	1	5	Early medieval	wattle impressions
386	131	6	3	31	250	Early medieval	wattle impressions
391	129	11	3	4	85	Early medieval	wattle impressions
432	145	12	3	2	40	Early medieval	wattle impressions and surfaces
488	157	6	3	24	1060	Early medieval	wattle impressions
511	128	11	3	1	30	Early medieval	wattle impressions
525	152	11	3	46	645	Early medieval	wattle impressions and surfaces
561	108	12	3	1	15	Early medieval	wattle impressions and surfaces
587	162	13	3	6	95	Early medieval	wattle impressions and surfaces
620	68	8	3	1	15	Early medieval	wattle impressions and surfaces
659	72	10	3	4	295	Early medieval	wattle impressions and surfaces
465	8	32	5	1	5	Post-medieval	wattle impressions

7.4.8 The fired clay tabulated above consists mainly of small, abraded fragments. Although the greater part, by weight, of this material has wattle impressions and/or surfaces, its condition is generally poor and none of it shows signs of exposure to very high temperatures.

7.4.9 A brief scan of the material suggests that it was all of the same clay type, varying in colour from an orange through to a pale brown shade. It has a fine, sandy texture with no other common inclusions present.

Provenance

7.4.10 The fired clay was retrieved from various-sized pits associated with ironworking debris and domestic waste, generally dated (by the pottery) to the early medieval period. Almost all of these contexts have been assigned to Phase 3. Although three (context 386, sub-group 131, Group 6, Phase 3; context 488, sub-group 157, Group 6, Phase 3; context 525, sub-group 152, Group 11, Phase 3) yielded moderate quantities of daub, the majority of contexts contained only small amounts.

Conservation

- 7.4.11 Due to the already poor condition of the fired clay, no conservation work is deemed appropriate. In keeping with the CAT's retention and discard policy for such material, the fragments with features such as wattle impressions and flat surfaces have been placed in plastic bags with waterproof labels and stored in museum boxes for possible future analysis whilst undiagnostic pieces were discarded following quantification and assessment.

Comparative material

- 7.4.12 Due to a general lack of work carried out on burnt daub, it is difficult to find published comparative material. However, the assemblage from another CTRL site, at Saltwood Tunnel, appears to be similar in quality and fabric type as the Mersham material. A non-CTRL excavation carried out at St Augustine's, Chartham (Rady 1996) has been assessed (by the author) and also appears similar to the Mersham group.

Potential For Further Work

- 7.4.13 The fired clay discussed above is small in quantity and poor in both quality and condition. Although the presence of the daub suggests that there were probably wattle and daub lined structures on the site, the lack of large quantities of good quality material from secure contexts suggests that any further work on the material is unlikely to contribute to the Land Zone Priorities and the Fieldwork Event Aims. It is therefore thought that a small note covering the quantity, condition and location of the daub is all that is required for inclusion in the archive.

7.4.14 Bibliography

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7.5 ASSESSMENT OF CERAMIC OBJECTS

Ian Riddler

Summary

- 7.5.1 The two ceramic objects recovered consist of a fragment of a fired clay loomweight of bun-shaped form, characteristic of late Saxon textile working, and a sherd of Roman pottery that had been trimmed, probably in the early medieval period and probably to provide a counter for the game of *Tabula*.

Introduction

- 7.5.2 A fragment of a fired clay loomweight was recovered by manual excavation. It is relevant to the following Fieldwork Event Aims;
- Recovery of artefact assemblages (especially pottery) to elucidate the sequence of site development; to provide information on the status and economy of the site and data on trade and exchange;
 - Recovery of environmental and other economic indicators if these are found to be present on site.
- 7.5.3 In addition, there was found a ceramic counter formed, probably in the early medieval period, from a basal sherd of a Roman fineware vessel. Though not directly relevant to the Fieldwork Event Aims described above, is an interesting social indicator (see below).

Methodology

- 7.5.4 The loom weight has been cleaned and assessed for its conservation needs by a conservation assistant. An examination of the remainder of the Ceramic Building Material and Fired Clay indicates that no other fragments of loomweights were recovered either by hand excavation or from the sampling programme.
- 7.5.5 The reused sherd has been cleaned by a finds assistant, separated from the bulk ceramics and treated as a small find.
- 7.5.6 Both objects have been examined with the aid of a hand lens. The original dimensions and fabric have been noted for the loomweight, as have the diameter and fabric of the potsherd.

Quantification

- 7.5.7 The loom weight fragment comes from an object of bun-shaped form (Dunning et al 1959, 23-5 and fig 6.3; Holden 1976, 310-1) with an original diameter of approximately 100mm. It was made in a clay, probably from a local source, with abundant white quartz (up to 1mm) and occasional red quartz (2mm or more) inclusions, either or both of which may be an added temper.
- 7.5.8 The counter was made from the base of a Roman vessel of central Gaulish Samian ware and had an original diameter of approximately 75mm. The body of the vessel has been pared away with a knife to leave a circular disc, ridged on one face.

Provenance

- 7.5.9 The loom weight was found in one of the larger pits within an area thought to have been used for domestic occupation (context 403, sub-group 129, Group 11, Phase 3). It is likely to have been made locally, at or near the site and would have formed part of a group of around 20 such items suspended from a warp-weighted loom (Walton Rogers 1997, 1753 and fig 812). Alongside several other objects (see Appendices 12 and 14), it provides evidence for textile manufacture at or near the site. The same context yielded seven sherds of late Anglo-Saxon pottery.
- 7.5.10 The counter was recovered from one of the smaller pits within the central area of the site (context 499, sub-group 179, Group 12, Phase 3). The sherd itself came from a vessel of Roman Central Gaulish Samian ware (CAT Fabric R43). Although it is the only datable object to have come from the pit, the feature has been attributed to a scatter of industrial waste pits (Group 12) assigned to Phase 3, dated c. 1050-1200, which would accord well with the likely date of this object in its re-used form.

Conservation

- 7.5.11 The loom weight is fragmentary and only about a quarter of it now survives. The original surface, present on one face, is slightly pitted and abraded, but otherwise survives in a good state. The proposed further analysis would be entirely descriptive and non-destructive, and would not conflict with any issues of long-term storage. It should be retained for future study and not discarded.
- 7.5.12 The same can be said for the counter, which survives in reasonable condition if a little worn. It can be stored for future analysis in the same way as a bulk find. The proposed future study would be non-destructive. The object is incomplete and could, in principle, be discarded after full recording.

Comparative material

- 7.5.13 Bun-shaped loom weights are thought to have come into use during the ninth century (Biddle 1990, 227-8; Walton Rogers 1997, 1753). Good assemblages of this type are known from Canterbury, *Sandtun* and Rochester (Harrison 1972, 155-6 and fig 20.12; Rady 1991, 17; Riddler, forthcoming) but few are well dated, as the following table demonstrates.

7.5.14 Table One

Bun-Shaped Loomweights from East Kent

<i>Location</i>	<i>Site</i>	<i>Quantity</i>	<i>Dating</i>
Canterbury	Church Lane	2	Ninth to Eleventh Century
Canterbury	Longmarket	12	Ninth Century ?
Canterbury	Castle Street	6	Eighth to Eleventh Century
Rochester	East Gate	40	c. 1050 - 1100
West Hythe	<i>Sandtun</i>	7	Ninth to Twelfth Century

- 7.5.15 This table should be used with caution. The dating of the Rochester examples is based on an assessment of ceramic dating undertaken in the early 1970s, and this may now need to be revised. Several loomweights, not included here, from the Marlowe Theatre excavation in Canterbury were described as 'bun-shaped' but are, in fact, of intermediate form. The Mersham example comes from a context with seven sherds of late Anglo-Saxon date, provisionally dated c. 875-1050.

- 7.5.16 The re-used potsherd can be identified as a counter, probably for the medieval game of *Tabula*. Simple discs of this type have been recovered from numerous sites of Roman and medieval date. Generally, they represent simple adaptations of sections of ceramic vessels or tiles and are cut to more or less regular circular or oval shapes. Their function has been discussed on a number of occasions and they have been regarded as pot lids or mats, household weights, reckoning counters and gaming pieces (Addyman and Priestly 1977, 139; MacGregor 1978, 33; Foreman 1991, 108; Nicholson in Hill 1997, 447-9). It is the latter suggestion that has prevailed in more detailed studies of groups of discs of this type (Mann 1982, 14; Crummy 1983, 94-5). It is noticeable, in particular, that these discs occur in Roman and early medieval contexts and that they are rarely seen during the Anglo-Saxon period although a series of ceramic examples came from late ninth century contexts at Lincoln (Mann 1982, 14 and fig 15). This dating scheme corresponds reasonably well with that known for the game of *Tabula* as it was played in England (Riddler 1994). Moreover, the size of these discs is commensurate with that of the contemporary and more ornate examples of bone, antler, whalebone and ivory. Ceramic discs could be stacked easily, which is one of the requirements of *Tabula*. Counters of this size would have enabled the game to have been played both indoors and outdoors, and there is good evidence from the Roman period onwards, to indicate that the game was played in both locations.

Potential for further work

- 7.5.17 The loom weight should be considered alongside the other objects from this site that relate to textile manufacture. As noted above, our understanding of textile production in East Kent in the late Anglo-Saxon and early medieval periods is fairly limited and the Mersham evidence is particularly welcome in this respect.
- 7.5.18 The ceramic disc comes from a context assigned (albeit tentatively) to Phase 3, which would accord with its use at or around the Norman conquest. Similar examples are known from Townwall Street (Dover), but are otherwise little published from East Kent (Walton Rogers and Riddler, forthcoming). This example is a useful addition to this small corpus and it widens the range of household activities attestable on the site, to include recreational pursuits. It cannot be closely dated but it has been placed within the early medieval phase of activity, which accords well with the period of greatest popularity of this object type. No further work is likely to be required for this object.

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7.6 ASSESSMENT OF WORKED FLINT

Tania Wilson

Summary

- 7.6.1 A small assemblage of worked flint was recovered during the excavation. All of the pieces were found in post-Roman contexts and are therefore residual. Due to the size of the group and the provenance, further analysis of this assemblage is not considered worthwhile although a short note highlighting their regional value is suggested.

Introduction

- 7.6.2 A total of 24 worked flints were recovered from the site (excluding the small quantity of material collected by MoLAS during evaluation). The majority of the assemblage was retrieved by hand during excavation but four pieces were recovered during the processing of environmental samples.
- 7.6.3 Analysis of this assemblage is unlikely to address the Fieldwork Event Aims, as these are targeted largely towards the more intensive Anglo-Saxon and medieval phases. However, the assemblage does augment the ceramic evidence for activity in the area prior to the late Iron Age.

Methodology

- 7.6.4 The assemblage has been quantified and scanned, but has not been catalogued. Each individual artefact has been assigned to basic categories, as shown in Table One.

Quantification

- 7.6.5 The assemblage composition is shown in Table One. There appears to be no observable bias in the collection of the material and it is likely that the assemblage is fairly representative for the site.

7.6.6 Table One
Worked Flint

<i>Artefact Type</i>	<i>Number</i>	<i>Group %</i>	<i>Total %</i>	<i>Period</i>
Scrapers	1	50	4	
Piercers				
Burins				
Projectiles	1	50	4	Neolithic
Leaf-shaped arrowhead				
Denticulates				
Fabricators				
Microliths				
Core tools				
Other tools				
Misc. retouch				
Tools - sub total		2	8	
Flake cores & core frags	1	25	4	
Blade(let) cores & core frags	1	25	4	Mesolithic
Rejuvenation tablets				
Crested pieces				
Microburins				
Chips	2	50	8	
Production - sub total	4	17		
Blades & bladelets	1	6	4	
(inc. no. broken)				
Flakes (inc. no. broken)	15	94	63	
Blades & flakes – sub total	16	67		
Debitage	2	100	8	
Fragments – sub total	2	8		
Total	24			

Provenance

7.6.7 The provenance of the individual artefacts is shown in Table Two. As can be seen in the table, the artefacts are fairly evenly distributed and were almost exclusively recovered from contexts of Anglo-Saxon or medieval date.

7.6.8 Table Two*Worked flint by context*

<i>Context</i>	<i>Count</i>	<i>Period</i>	<i>Comments</i>
0	1		
316	1		
330	1		
414	2		
423	1		
478	1		
483	1		
485	1		
506	1	Mesolithic	Blade Core
548	1		
557	1	Scraper	
562	2		
563	1		
565	1		
567	1		
569	1	Neolithic	Arrowhead
608	1		
609	1	Core	
632	2		
639	1		
658	1		

Comparative material

- 7.6.9 Other finds from the vicinity have been recorded previously and are of roughly contemporary date. From Aldington has come a scatter of flint implements, probably Mesolithic in date (Bradshaw 1968, 251), and a fragment of a Neolithic ground and polished flint axe (Alpin 1995, 219). A stone mace-head from Smeeth is likely to be late Neolithic or early Bronze Age in date (Kelly 1988, 302).
- 7.6.10 A substantial struck flint assemblage was recovered near Ashford at Waterbrook Farm. This dates to both the Mesolithic and late Neolithic or Bronze Age periods and represents more intensive activity within the area (Wilson 1998).
- 7.6.11 For other significant evidence of Mesolithic activity one must look further afield, to Park Farm at Ashford (Clark 1996, 37). The only other substantial finds of Neolithic date were made some distance away at Brabourne (Bradshaw 1975, 203; Kelly 1969, 259; 1976, 230).

Potential for further work

- 7.6.12 The potential of this assemblage to address the Fieldwork Event Aims and the Landscape Zone Priorities is fairly minimal, as these are more applicable to the more intensive phases of occupation in the Anglo-Saxon and medieval periods.

- 7.6.13 Given the size of the assemblage, its provenance and the paucity of other contemporary artefacts or features, further analysis is not considered worthwhile. In regional terms, however, it is worthy of note that this assemblage was recovered, and a short note to this end would be desirable, accompanied by illustrations of the diagnostic and formal tools.

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7.7 ASSESSMENT OF BURNT FLINT

Tania Wilson

Summary

- 7.7.1 A small assemblage of burnt flint was recovered during the excavation. The size of the individual pieces and their distribution suggests that this material was largely residual and hence further study would not be worthwhile.

Introduction

- 7.7.2 A total of sixteen fragments of burnt flint, weighing some 1.145kg was recovered during the archaeological excavation at Mersham. The assemblage was retrieved entirely during manual excavation.
- 7.7.3 Given that this material is likely to be residual it is unlikely that any further study could address the Fieldwork Event Aims.

Methodology

- 7.7.4 The assemblage has been quantified and weighed; the results are shown in Table One.

Quantification

- 7.7.5 In total, sixteen pieces of burnt flint were recovered. There is no observable bias in collection, hence it is likely that this assemblage is fairly representative for the site.

Provenance

- 7.7.6 The provenance of the individual fragments is included in Table One. The table shows that there are no apparent concentrations of burnt flint and that the material is sparsely distributed throughout the features of Anglo-Saxon or medieval date although a small scrap (not tabulated) was recovered from the single prehistoric feature identified.

7.7.7 Table One
Burnt Flint

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>Number</i>	<i>Weight (g)</i>
573	101	4	2	1	110
640	75	3	2	1	350
328	33	10	3	1	5
488	157	6	3	1	20
515	180	6	3	1	60
564	109	13	3	1	140
567	107	13	3	1	95
568	104	13	3	1	55
569	112	12	3	1	65
600	161	13	3	1	10
609	161	13	3	2	150
629	73	10	3	2	75
639	70	8	3	1	5
370	36	26	4	1	5

Conservation

- 7.7.8 It is unlikely that any further analysis of this material would be worthwhile. As it has been fully recorded in terms of quantity, weight and provenance, it is recommended that the assemblage is not retained.

Potential for further work

- 7.7.9 It is almost certain, given the size of the assemblage and its distribution, that further study of this assemblage would do little to address the Fieldwork Event Aims or the Landscape Zone Priorities.
- 7.7.10 It is impossible to assign a meaningful date to this assemblage.
- 7.7.11 Given that any further study is unlikely to be worthwhile, no further analysis is recommended.

7.8 ASSESSMENT OF FERROUS RESIDUES

Lynne Keys

Summary

- 7.8.1 Over 590kg of ferrous metallurgical residues, hammerscale, ore and hearth or furnace linings were recovered (largely from contexts of Phase 3), of which about 115kg have been examined and identified. X-rays of iron objects have also been examined. There is evidence for both the smelting and smithing of iron. A preliminary analysis suggests a marked shift in the relative importance of these activities from Phase 2 to Phase 3, with a striking increase in the proportion of material attributable to smelting as opposed to that for smithing. Analysis of the remaining samples is recommended in order both to confirm this phenomenon and to investigate the relative spatial distributions of the various residue types.

Introduction

- 7.8.2 The site sampling strategy resulted in the recovery of over 590kg of ferrous residues and associated waste. A sub-sample of about 115kg (just under 20%) of this material has been examined and catalogued.
- 7.8.3 The residues are relevant to the following Fieldwork Event Aims;
- to establish the full extent and morphology and organisation of the ironworking site;
 - to recovery artefact assemblages (especially pottery) to elucidate the sequence of site development;
 - to provide information on the status and economy of the site and data on trade and exchange;
 - to recover environmental and other economic indicators if these are found to be present on site;
 - to determine the landscape setting of the site and interaction with the contemporary local environment.

Methodology

- 7.8.4 Three pits contained large quantities of residues and 10% samples (by volume) were recovered during the manual excavation of 50% (also by volume) of each of these features; each such sample therefore representing about 5% of the original assemblage (discounting truncation *etc.*). 50% of each remaining pit was also excavated and all of the residues found were kept from these. A total of just over 590kg of ferrous metallurgical residues were recovered by these means during excavation. In addition, further small quantities of hammerscale and slag were identified in 42 floatation samples taken from features seen to contain large quantities of metallurgical residues.
- 7.8.5 A sub-sample of a little over 115kg (just under 20%) of the collected material was examined and catalogued (Table One). This level of sampling is considered to be sufficient for assessment purposes in order to establish the presence (but not the spatial distribution) of the different forms of residue. It is unlikely that the remaining material is markedly different in range to that which has been sampled, although relative proportions may alter, particularly for the Anglo-Saxon period. All sampled material has been appropriately marked and labelled.

- 7.8.6 The sampling was targeted towards secure contexts with good assemblages of material, which were located towards the centre of the area of ironworking activity. The assessment was intended to examine the evidence for both smelting and smithing on site. The residues in the sub-sample were thus examined visually and categorised on the basis of morphology, colour, density and vesicularity.

Quantification

- 7.8.7 The quantity of sampled residues (about 115kg out of the roughly 590kg recovered) is presented by type in Table One. The remainder of the material collected has yet to be identified as to type, although total weights are available per context.

7.8.8 Table One

Sampled Ferrous Metallurgical Residues, sorted by Phase, Group and Sub-Group

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>SF</i>	<i>Residue</i>	<i>Weight (g)</i>
132	0	0	0	609	Tap Slag	20
542	0	0	0	580	Fired Stone	10
542	0	0	0	580	Undiagnostic	112
542	0	0	0	580	Tap Slag	814
622	160	2	2	1089	Hammerscale	28
622	160	2	2	434	Undiagnostic	74
622	160	2	2	434	Tap Slag	114
622	160	2	2	434	Smithing Hearth Bottom	714
622	160	2	2	434	Undiagnostic	776
622	160	2	2	434	Smithing Hearth Bottom	1116
622	160	2	2	434	Vitrified Hearth Lining	1342
347	25	6	3	214	Tap Slag & Undiagnostic	775
531	153	6	3	606	Fired Clay	38
531	153	6	3	606	Undiagnostic	52
531	153	6	3	606	Vitrified Hearth Lining	78
531	153	6	3	606	Tap Slag	350
531	153	6	3	606	Smithing Hearth Bottom	376
535	67	8	3	624	Smithing Hearth Bottom	106
328	33	10	3	51	Undiagnostic	15
331	39	10	3	37	Undiagnostic	10
659	72	10	3	501	Undiagnostic	88
659	72	10	3	501	Smithing Hearth Bottom	376
363	169	10	3	81	Smithing Hearth Bottom	166
545	128	11	3	556	Tap Slag	690
382	129	11	3	98	Smithing Hearth Bottom	118
382	129	11	3	98	Smithing Hearth Bottom	144
382	129	11	3	98	Smithing Hearth Bottom	400
382	129	11	3	98	Vitrified Hearth Lining	1300
383	131	11	3	1019	Hammerscale	0
525	152	11	3	307	Undiagnostic	598
525	152	11	3	307	Vitrified Hearth Lining	756
525	152	11	3	307	Tap Slag	3182
527	152	11	3	571	Stone	20
527	152	11	3	571	Vitrified Hearth Lining	588

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>SF</i>	<i>Residue</i>	<i>Weight (g)</i>
527	152	11	3	571	Undiagnostic	1320
527	152	11	3	571	Tap Slag	3330
440	164	11	3	1028	Hammerscale	12
338	134	12	3	191	Tap Slag & Undiagnostic	400
548	154	12	3	627	Undiagnostic	22
548	154	12	3	627	Vitrified Hearth Lining	104
548	154	12	3	627	Tap Slag	254
471	178	12	3	471	Vitrified Hearth Lining	192
471	178	12	3	471	Undiagnostic	468
471	178	12	3	471	Smithing Hearth Bottom	552
471	178	12	3	471	Tap Slag	1508
588	161	13	3	594	Cinder	36
588	161	13	3	594	Vitrified Hearth Lining	62
588	161	13	3	594	Smithing Hearth Bottom	208
588	161	13	3	594	Dense Slag	370
588	161	13	3	594	Smithing Hearth Bottom	460
588	161	13	3	594	Undiagnostic	990
588	161	13	3	594	Smithing Hearth Bottom	1178
588	161	13	3	594	Tap Slag	6946
599	161	13	3	1080	Hammerscale	20
599	161	13	3	489	Cinder	106
599	161	13	3	489	Smithing Hearth Bottom	214
599	161	13	3	489	Smithing Hearth Bottom	280
599	161	13	3	489	Smithing Hearth Bottom	312
599	161	13	3	489	Smithing Hearth Bottom	450
599	161	13	3	489	Smithing Hearth Bottom	890
599	161	13	3	489	Smithing Hearth Bottom	1088
599	161	13	3	489	Dense Slag	1310
599	161	13	3	489	Smithing Hearth Bottom	1360
599	161	13	3	489	Vitrified Hearth Lining	1816
599	161	13	3	489	Smithing Hearth Bottom	2310
599	161	13	3	489	Undiagnostic	7582
599	161	13	3	489	Tap Slag	15492
600	161	13	3	492	Ore?	82
600	161	13	3	492	Cinder	86
600	161	13	3	492	Fired Clay	96
600	161	13	3	492	Slag Around Tuyere	118
600	161	13	3	492	Smithing Hearth Bottom	180
600	161	13	3	492	Smithing Hearth Bottom	186
600	161	13	3	492	Smithing Hearth Bottom	240
600	161	13	3	492	Smithing Hearth Bottom	340
600	161	13	3	492	Smithing Hearth Bottom	340
600	161	13	3	492	Smithing Hearth Bottom	382
600	161	13	3	492	Smithing Hearth Bottom	464
600	161	13	3	492	Smithing Hearth Bottom	618
600	161	13	3	492	Smithing Hearth Bottom	724
600	161	13	3	492	Dense Slag	866
600	161	13	3	492	Vitrified Hearth Lining	1624
600	161	13	3	492	Smithing Hearth Bottom	1766
600	161	13	3	492	Undiagnostic	6078

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>SF</i>	<i>Residue</i>	<i>Weight (g)</i>
600	161	13	3	492	Tap Slag	10856
609	161	13	3	502	Smithing Hearth Bottom	540
609	161	13	3	502	Smithing Hearth Bottom	764
635	172	13	3	459	Tap Slag	3330
345	136	18	3	200	Tap Slag	65
608	114	19	3	417	Cinder	4
608	114	19	3	417	Fired Ore?	32
608	114	19	3	417	Bloom Frag/Iron?	96
608	114	19	3	417	Tap Slag	140
608	114	19	3	417	Undiagnostic	302
610	114	19	3	1087	Hammerscale	0
549	155	19	3	631	Tap Slag	158
551	156	19	3	616	Dense Slag	30
551	156	19	3	616	Tap Slag	3975
349	165	22	3	106	Tap Slag	1090
362	167	22	3	110	Tap Slag	235
311	37	23	3	74	Smithing Hearth Bottom	74
311	37	23	3	74	Smithing Hearth Bottom	428
311	37	23	3	74	Undiagnostic	914
311	37	23	3	74	Tap Slag	1616
319	36	26	4	142	Tap Slag	515
326	36	26	4	146	Tap Slag & Undiagnostic	1965
330	36	26	4	150	Tap Slag	335
332	36	26	4	43	Tap Slag	1315
343	36	26	4	209	Tap Slag	270
370	36	26	4	115	Undiagnostic	1384
370	36	26	4	115	Tap Slag	1768
497	56	27	4	518	Undiagnostic	114
497	56	27	4	518	Tap Slag	1140
508	56	27	4	579	Undiagnostic	162
508	56	27	4	579	Tap Slag	560

7.8.9 Iron ore is smelted in a furnace and the waste products include tap slag, dense slag and a spongy mass known as an unconsolidated bloom, consisting of iron with a considerable amount of slag still trapped inside it. Smithing of the bloom removes the excess slag and eventually transforms the raw material into objects (McDonnell 1989, 373). The most diagnostic slag from smithing is the smithing hearth bottom, which is formed below the tuyere and is periodically removed in order to allow the furnace to continue to work efficiently. Smithing also produces a vesicular form of slag as a by-product, which can be distinguished from the denser smelting slag. A piece of slag from context 600 had formed around the tuyere of a hearth. The tuyere had been removed but the slag had taken shape around it. Some fragments of heavily fired or vitrified clay hearth (or furnace) lining, representing walls at least 300-400mm thick, were found to be included in the samples, as were some fired ore and other stone.

7.8.10 The material examined can be divided into broad categories, according to whether it is characteristic of smelting or smithing or are ambivalent (Table Two).

7.8.11 Table Two*Sampled ferrous residues by phase and broad category***Largely characteristic of smelting**

	<i>Unstratified</i>		<i>Phase 2</i>		<i>Phase 3</i>		<i>Phase 4</i>	
	<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	<i>Wt(g)</i>	<i>%</i>
Ore?					82	-		
Fired ore?					32	-		
Dense Slag					2576	3		
Tap Slag	834	87	114	3	53217	53	5903	62
Tap Slag & Undiagnostic					1175	1	1965	21
Sub-totals	834	87	114	3	57082	57	7868	83

Largely characteristic of smithing

	<i>Unstratified</i>		<i>Phase 2</i>		<i>Phase 3</i>		<i>Phase 4</i>	
	<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	<i>Wt (g)</i>	<i>%</i>	<i>Wt(g)</i>	<i>%</i>
Hammerscale			28	1	32	-		
Smithing Hearth Bottom			1830	44	18034	18		
Slag Around Tuyere					118	-		
Sub-totals	0	0	1858	45	18184	18	0	0

Ambivalent

	<i>Unstratified</i>		<i>Phase 2</i>		<i>Phase 3</i>		<i>Phase 4</i>	
	<i>Wt(g)</i>	<i>%</i>	<i>Wt(g)</i>	<i>%</i>	<i>Wt(g)</i>	<i>%</i>	<i>Wt(g)</i>	<i>%</i>
Bloom Frag/Iron?					96	-		
Undiagnostic Slag	112	12	850	20	18471	18	1660	17
Vitrified Hearth Lining			1342	32	6520	6		
Fired Clay					134	-		
Fired Stone	10	1						
Stone					20	-		
Sub-totals	122	13	2192	52	25473	24	1660	17

Totals

	<i>Unstratified</i>		<i>Phase 2</i>		<i>Phase 3</i>		<i>Phase 4</i>	
	<i>Wt(g)</i>		<i>Wt(g)</i>		<i>W (g)</i>		<i>Wt(g)</i>	
	956		4164		100739		9528	

7.8.12 The most significant figures in the foregoing are the sub-totals for smelting and smithing debris for Phases 2 and 3. From these, it appears that, whilst identifiable smithing waste outweighs identifiable smelting material by a factor of fifteen in the earlier period, in the later the smelting waste accounts for more than three times the weight of that from smithing.

Provenance

- 7.8.13 The material examined belongs largely to Phase 3 and is concentrated towards the centre of the site. There were reasonable quantities of residues also further to the south. It has been recovered from some 50 contexts and was also found during earlier evaluation work, where 31.6kg came from sixteen contexts (MoLAS 1998, 33-5). As the tables show, smaller quantities were recovered from contexts of Phase 2 and 4. This confirms the impression provided in the interim report, that smelting began at Mersham during the late Anglo-Saxon period and was at its height during the early medieval period. The results shown in Table Two suggest a marked increase in the relative importance of smelting as against smithing in the latter period. The small quantity from Phase 4 deposits may well be residual.

Conservation

- 7.8.14 Ferrous metallurgical residues are inherently robust and stable and, like ceramics, they tend to survive well in a buried environment. The material is stored as a bulk commodity and there are no problems with its storage over time. The residues are currently stored in 20 boxes and do not present any large storage problems. Following analysis, selected elements of the assemblage could be discarded.

Comparative material

- 7.8.15 Evidence for smithing is commonly seen on Anglo-Saxon sites, but traces of smelting are rare. Here, however, we are dealing with a site on the outskirts of the Wealden area, which is well known for the quantity of ironworking which was undertaken in the Roman, Anglo-Saxon, medieval and early post-medieval periods, by virtue of the presence of good ore and copious supplies of wood for furnaces (Drewett *et al.*, 1988, 330). Nonetheless it has been noted that, in the Weald and its immediate surroundings, physical evidence for iron smelting has seldom been encountered. A mid Anglo-Saxon smelting site is known from Millbrook in the Ashdown Forest in Sussex, and sparse traces have been discovered elsewhere (Tebbutt 1981; *ibid* 1982; Cleere and Crossley 1985). Within East Kent, massive quantities of smithing debris (amounting to over 4 tonnes of residues) have been recovered from excavations of a mid Anglo-Saxon site at Christ Church, Canterbury, but there is no unequivocal evidence there, as yet, for the smelting of iron (Bennett 1986; Jarman 1996; Houliston 1997). Charters relate Canterbury to the Weald in the Anglo-Saxon period (Appendix 7.21) and enhance the potential value of this assemblage.

Potential for further work

- 7.8.16 A good quantity of material survives, most of which is tap slag. Alongside the dense slag, this material provides good evidence for smelting in the immediate vicinity of the site. It has not proved possible to locate the furnaces by excavation or by remote sensing (MoLAS 1998, 16), but they may have been similar to those excavated at Ramsbury, Wiltshire and elsewhere (Haslam 1980). Smithing debris was also recovered and the types of hammerscale present (both spherical and flakes) indicate that both the primary smithing of blooms and the secondary smithing of iron were taking place at or near the site. Some of the end products could also be identified (see Appendix 7.11).

- 7.8.17 This intensive activity links the site with other 'industrial' complexes of this period, and notably those at Canterbury, Millbrook and Ramsbury, noted above. The sample of residues extends across the range of smelting and smithing processes, from the furnace to the finished product. Stock iron is not present, however, but the sample of finished material is relatively small. Mersham can, perhaps, be regarded as a site that came into operation at a time when the smelting and smithing of iron was no longer being carried out in the suburbs of Anglo-Saxon Canterbury. Equally, the material may have been prepared for other markets or, conceivably, for ecclesiastical projects. Pottery and tile kilns in and around Canterbury testify to the power and influence of the church at this time (Sherlock and Woods 1988; Cotter 1997).
- 7.8.18 The site appears to have been located on the fringes of the Weald for the specific purpose of iron production. It has been noted that late medieval sources suggest that iron production was centred in northern and central parts of the Weald (MoLAS 1998, 18), whilst known Roman iron working sites tend to concentrate in the southern Weald. The eastern Weald and downland is under-researched in this respect; it too lies close to appropriate sources of iron ore and the mechanisms that facilitated the industry in the Roman and late medieval period are not necessarily pertinent to the late Anglo-Saxon and early medieval period.
- 7.8.19 Ironworking sites of this date are scarce, as noted above. The value of this assemblage is enhanced by the systematic sampling programme, which has produced good quantities of hammerscale. The waste products are distributed around the central and southern parts of the site and spatial distributions by period may provide a tentative indication of the original location of the furnaces, which clearly lay close to or within the area of excavation.
- 7.8.20 In addition to contributing to the site's spatial analysis, examination of the remaining 80% of the residues may serve to confirm or correct, in the light of revised stratigraphic analysis and phasing, the impression provided by this assessment of a striking shift in the relative importance of smelting and smithing from the Anglo-Saxon to the early medieval period. If confirmed, this must reflect on the trading patterns and organisation of the site; it would seem to suggest either that the smiths operating here in the Anglo-Saxon period were importing most of their raw iron but smelting some and that local raw iron production met local demand in the early medieval period or, more probably, that local production met local demand in the Anglo-Saxon period and that the iron smelters working here in the early medieval period were exporting most of their raw iron but smithing some.

7.8.21 Bibliography

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7.9 ASSESSMENT OF COINAGE

Ian Anderson

Summary

- 7.9.1 A single coin was retrieved from the excavation; a silver half-penny of Edward I/II, which was probably lost in the fourteenth century though, it may have survived in circulation into the following century. It has been recorded and no further work is envisaged.

Introduction

- 7.9.2 The only coin to be recovered from the site is a silver halfpenny, which was retrieved by hand excavation from 'the surface of cut 5' (sub-group 56, Group 27, Phase 4). No other coins came from any of the sampled deposits.

Methodology

- 7.9.3 The coin has been examined under magnification and has been identified by the author, following cleaning.

Quantification

- 7.9.4 The coin is a silver Class 10 halfpenny of Edward I/II (c. AD 1302-1310). It is heavily worn on the obverse and less worn on the reverse. It could have remained in circulation throughout the fourteenth century and up until the weight reductions of 1412 and 1464, which took many earlier coins out of circulation.

Provenance

- 7.9.5 The coin came from the London mint, the major mint of that period. Its discovery on the surface of cut 5 means that it is not securely stratified, unfortunately and the dating of the coin is a little earlier than that provided by the ceramics for this phase of activity on the site. However, coins of this type were in circulation for a long period of time.

Conservation

- 7.9.6 The coin has been cleaned by a conservation assistant. No further work on the coin is necessary, given that it has been identified and recorded. It should certainly be retained although it is heavily worn and is not of a standard for museum display. As a silver coin, it also falls under the regulations of the Treasure Act (1996).

Comparative material

- 7.9.7 Medieval coins are generally scarce on excavations within East Kent, and particularly those in rural locations. They are not common even in urban contexts of this date. However, some comparable coinage is known from East Kent as, for example, at Ospringe (Smith 1979, 127).

Potential for further work

- 7.9.8 The coin has been identified and it is not relevant to the main phases of activity on the site. No further work is envisaged, although a summary note of its type and date should be included in the archive.

7.9.9 Bibliography

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7.10 ASSESSMENT OF COPPER ALLOY OBJECTS

Ian Riddler

Summary

- 7.10.1 Fragments of two copper alloy objects were retrieved from samples taken for metallurgical residues. Both are probably from dress accessories, in one case a pin and in the other a domed stud that may have come from a buckle. Unfortunately, both pieces are too small to be diagnostic.

Introduction

- 7.10.2 There are just two copper alloy objects from the site. Both are small and fragmentary; each came from a sieved sample rather than from manual excavation. The first is a small fragment of tapering wire which is probably part of a pin shaft, the second a curved section which stems from the base of a domed stud. Details of each object are provided in Table One.

Methodology

- 7.10.3 Each object has been examined under a hand lens and identified to type.

Quantification

- 7.10.4 Details of the two objects are summarised in Table One.

7.10.5 Table One

Copper Alloy Objects

Context	Group	Sub-Group	Phase	SF	Sample	Object	Period
573	4	101	2	701	1070	Pin shaft	Late Anglo-Saxon
383	6	131	3	692	1079	Stud	Anglo-Saxon

- 7.10.6 The tapering wire is of circular cross-section with a curve at its terminal, suggesting that it might be part of a small hook, although it is more likely to be part of the shaft of a copper alloy pin. It is not possible to date this object with any precision although it can at least be said that it would not be out of place in the late Anglo-Saxon period.
- 7.10.7 The stud fitting is a little more substantial and closely resembles mounts for jewellery settings. These are familiar from the early and mid Anglo-Saxon periods (note Wamers 1985, tafn 1, 3, 7 and 16, for example), although it could possibly be of late Anglo-Saxon date.

Provenance

- 7.10.8 The pin shaft comes from a late Anglo-Saxon context and may be of a similar date. The stud is from a piece of jewellery, probably of early or middle Anglo-Saxon date, and is residual within its context, which also yielded prehistoric and early and late medieval ceramics.

Conservation

- 7.10.9 Both objects have been stabilised and placed in appropriate packaging. They are in good condition, if fragmentary. Further study or long-term storage would not conflict with any conservation requirements, which are largely a question of monitoring their condition. Both objects should be retained for future study although the pin shaft cannot be assigned to type and it could perhaps be discarded, once recorded. Both objects are small and would not be onerous to store.

Comparative Material

- 7.10.10 The pin shaft cannot be identified as to type but it can be compared in general terms with those known from middle and late Anglo-Saxon contexts (Hinton 1996, 14-37). Copper alloy dress pins of such date are familiar from East Kent sites at Canterbury and *Sandtun* (Blockley *et al.* 1995, 1042-6; Riddler, forthcoming).
- 7.10.11 The setting comes from a piece of jewellery that, at this period, could be of Insular character and ecclesiastical origin (Wamers 1985). Equally, however, such mounts occur with early Anglo-Saxon jewellery, but usually in silver or gold, other than with buckles, which are mostly copper alloy (MacGregor and Bolick 1993, 70-81 and 193-7). Too little survives of the object to be more certain of its identification.

Potential for further work

- 7.10.12 Both objects, although small and fragmentary, provide a further tentative hint of mid Anglo-Saxon occupation at the site. It is not possible to assign the pin shaft to type and no further work is recommended on it. The mount should be viewed alongside jewellery of the period in the hope of deciding on the type of object that it once adorned. Given that it cannot yet be assigned to a specific object type, it is currently not directly relevant to the Fieldwork Event Aims. Both objects do, however, indicate that there was a wider range of Anglo-Saxon activity present on the site than is revealed from hand-collected material alone, given that they are both elements of dress accessories. Group 4, for example, has been regarded as an industrial area of the site, given the proximity of ironworking debris, but (like Group 6) domestic material is clearly also present. Both objects therefore strengthen the evidence for domestic occupation in these areas.

7.10.13 Bibliography

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7.11 ASSESSMENT OF IRON OBJECTS

Ian Riddler

Summary

- 7.11.1 The majority of the iron objects from the site are contemporary with the early medieval ironworking. They include an awl, fibre processing teeth, knives, nails, strips and bindings. A few pieces may perhaps represent stock iron from smithing, and the presence of hammerscale on a few objects reflects their local production.

Introduction

- 7.11.2 A total of 47 iron objects were recovered by hand excavation and a further twelve came from sieved samples. The objects include fibre-processing teeth, a buckle frame, a horseshoe, knives, nails and strips of iron (Table One).

Methodology

- 7.11.3 All of the objects have been examined visually and most have been x-rayed (with the exception of obvious nails, of which 24 were recovered from the site). The objects have been examined alongside the x-rays and have been identified as to type where possible.

Quantification

- 7.11.4 The objects (excluding the nails) are summarised by type in Table One and broken up into functional groups in Table Two.

7.11.5 Table One
Iron Objects

<i>Context</i>	<i>Group</i>	<i>Sub-Group</i>	<i>Phase</i>	<i>SF</i>	<i>Object</i>	<i>Period</i>
0	0	0	0	511	Horseshoe	Post-Medieval ?
0	0	0	0	1	Knife	Post-Medieval
328	10	33	3	67	Awl	Early Medieval
383	6	131	3	690	Binding	Early Medieval
600	13	161	3	644	Binding	Early Medieval
432	12	145	3	559	Binding	Early Medieval
527	11	152	3	584	Binding	Early Medieval
613	8	70	3	475	Chisel ?	Early Medieval
562	13	109	3	473	Fibre Processing Tooth	Early Medieval
568	13	104	3	389	Fibre Processing Tooth	Early Medieval
431	12	146	3	297	Fibre Processing Teeth	?Early Medieval
318	11	23	3	66	Knife	Early Medieval
347	6	25	3	220	Knife	Early Medieval
385	6	131	3	224	Knife	Early Medieval
338	12	134	3	218	Metallurgical Waste ?	Early Medieval
575	25	102	3	702	Metallurgical Waste ?	Early Medieval
382	11	129	3	69	Object	Post-Medieval ?
367	10	73	3	514	Ring Collar	Early Medieval
350	10	166	3	687	Sheet	Early Medieval
580	12	117	3	474	Sheet (4 fragments)	Early Medieval
629	10	73	3	476	Sheet	Early Medieval
421	11	129	3	513	Staple	Early Medieval
451	18	175	3	388	Staple	Early Medieval
362	22	167	3	689	Undiagnostic Strip	Early Medieval
603	15	9	3	693	Strip	Early Medieval
370	36	26	4	179	Knife	Post-Medieval ?
422	22	63	4?	223	Sheet	Post-Medieval ?
496	34	46	5	639	Undiagnostic Strip	Post-Medieval
390	30	86	5	70	Buckle Frame	Post-Medieval
353	33	99	5	2	Object	Post-Medieval
397	29	90	5	181	Pin ?	Post-Medieval

7.11.6 Table Two*Objects by Functional Category, within Period Bands*

Object	Early Medieval	Late Medieval	Post-Medieval	Undated
Awl	1			
Binding	4			
Buckle			1	
Fibre Processing Tooth	3			
Horseshoe			1	
Knife	3	1	1	
Pin				1
Ring	1			
Ring Collar	1			
Sheet	6	1	1	
Staple	2			
Strip	1			2
Object			2	
Total	22	2	6	3

7.11.7 Most of the 32 identifiable objects belong to the early medieval period and come from contexts of Phase 3. They include an awl and two fibre-processing teeth, to which can be added a second group of iron rods (297) that are now accreted together and resemble wool comb teeth in section. The two knives which can be identified as to type are both angled-backed, the most common form in East Kent between the seventh and eleventh centuries (Riddler forthcoming). The function of the ring is unclear, although it is much too big to be a finger ring. It can be compared with examples from Shakenoak and York (Brodribb *et al.* 1972, fig 41.190; Ottaway 1992, 648-9). The ring collar (514) is an unusual item to find in an Anglo-Saxon context and it may possibly be of Roman date. The quantities of thin iron sheet are similar to those seen at Shakenoak and some, at least, may be related to the bindings which have also been identified (Brodribb *et al.* 1972, figs 45-6). The bindings include wider pieces, which resemble those seen on chests and doors at this time, and one example (584) of a smaller, more decorative mount with closely spaced rivets.

Provenance

7.11.8 The objects are widely dispersed within contexts of Phase 3 and later, as seen in Table One. The majority belong to that phase and, typologically, they can be provided with a late Anglo-Saxon or early medieval date. None of the items can be closely dated and, therefore, no items can be identified as being residual elements of the Anglo-Saxon assemblage.

Conservation

7.11.9 All of the iron objects have been packaged with silica gel and are kept in a controlled environment. All the items, save those that were obviously nails or of late post-medieval date, have been x-rayed.

7.11.10 The iron objects are currently stable and they will remain in reasonable condition in the short term, allowing selected items to be catalogued and recorded in more detail. In the longer term their condition can be monitored but they will gradually and inexorably decay.

Comparative Material

- 7.11.11 There are few published items of late Anglo-Saxon or early medieval ironwork from East Kent, outside of Canterbury, where a number of comparable items have been found, particularly in respect of the knives (Driver *et al.* 1990, 193-206). Fibre-processing teeth, knives and other items are known also from Dover and *Sandtun*, allowing the Mersham finds to be placed within a broader context. There are also a few iron finds from the early medieval site at Monkton (Parfitt *et al.*, forthcoming; Gardiner forthcoming; Pratt *et al.*, forthcoming).
- 7.11.12 Angled-back knives are the most common form of knife to be seen in East Kent from the seventh to the twelfth century, and they are known from Dover Buckland, Saltwood, Canterbury and *Sandtun*, amongst other sites. There are few indications of any change in their form over time, although it has been noted elsewhere that a transition can be seen during this period from the use of horn handles to those of wood, which are more popular in early medieval deposits. The knives from Mersham can be contrasted with those from contemporary or slightly later deposits at Monkton and Dover, where the angled-back form is not as common, and it is possible that the Mersham examples are of eleventh century date.

Potential for further work

- 7.11.13 The range of iron objects from Mersham is relatively small, as is the overall quantity of material. Nonetheless, it is possible to link the objects with the waste products and to explore their relationship. A brief view of the presence of hammerscale on the iron objects, for example, does suggest that some, at least, were manufactured locally. A closer, specialist examination of the strips, bindings and sheet material may also link the processes together. Little attention has been paid to the later material, but the documentary evidence does indicate that the iron industry prevailed here in the later medieval period. More attention should be paid, therefore, to its nature at that time, and material that has been considered residual could, in fact, be of later date.
- 7.11.14 Appendix 7.8 has highlighted the potential of the iron residues from Mersham and the same general points apply also to the sample of iron objects. Some, like the knives and fibre processing teeth, will assist in dating the assemblage, or at least in confirming its broad date range. The remainder provide some indication of the types of product under manufacture in the late Anglo-Saxon and early medieval periods.

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7.12 ASSESSMENT OF LEAD OBJECT

Ian Riddler

Summary

- 7.12.1 A small strip of lead alloy was retrieved from the fill of a medieval ditch. It is of no particular relevance to the aims of the project.

Introduction

- 7.12.2 A small strip of lead alloy was recovered by hand excavation. Its original function is unclear although it may be no more than a small offcut. It is not directly relevant to the Fieldwork Event Aims.

Methodology

- 7.12.3 The object has been examined with the aid of a hand lens.

Quantification

- 7.12.4 This small strip represents the only item of lead alloy to have come from the excavations. It consists of a length of undecorated, tapering flat strip that is curved upwards towards one end.

Provenance

- 7.12.5 The object was retrieved from the fill of a ditch in the northern part of the site (context 457, sub-group 62, Group 26, Phase 4).

Conservation

- 7.12.6 The object has been cleaned and is stored within a stable environment. It has little intrinsic value and it could be discarded, once it has been fully recorded.

Comparative Material

- 7.12.7 Objects and waste of lead alloy occur in copious quantities in East Kent from the Roman period onwards. This particular example came from a medieval context. It has few distinguishing features and it is not possible to tell whether it is residual in that context.

Potential for further work

- 7.12.8 The object is too small and indistinct to be of any real value for the project. It does suggest (very tentatively) that lead alloy was trimmed for use in the vicinity of the site, probably during the medieval period. Beyond this, it has little potential for further analysis, particularly as it is not associated with the principal period of site activity.

7.13 ASSESSMENT OF BONE AND ANTLER OBJECTS

Ian Riddler

Summary

- 7.13.1 Two antler objects were recovered, one by hand excavation and the other from a sample. One is a fragment of a double-pointed pinbeater and the other is a small piece of the connecting plate from a composite comb. Both objects are of Anglo-Saxon date.

Introduction

- 7.13.2 A single, fragmentary example of an antler pinbeater was recovered by hand excavation. The object has been examined by a conservation assistant. In addition, a small section of the antler connecting plate from a composite comb was found

- 7.13.3 The objects are relevant to the following Fieldwork Event Aims;

- To recover artefact assemblages (especially pottery) to elucidate the sequence of site development; to provide information on the status and economy of the site and data on trade and exchange
- To recover environmental and other economic indicators if these are found to be present on site

Methodology

- 7.13.4 The objects have been examined with the aid of a hand lens and their original dimensions have been noted. Both have been identified to material by visual examination alone.

Quantification

- 7.13.5 A fragment from the central section of a double-ended pinbeater has an oval section at one end and a slightly broader, flattened oval section at the other. It stems from the central section of the object, most of whose original dimensions cannot now be reconstructed.

- 7.13.6 The section of connecting plate comes from a composite comb with five teeth per centimetre on one side. Unfortunately, only one part of the connecting plate survives, so that it is not clear whether it comes from a single-sided or double-sided comb. The connecting plate is noticeably shallow in section and is decorated by bands of vertical incised lines. There are no other diagnostic features, and the comb can only be said to be of Anglo-Saxon date.

Provenance

- 7.13.7 Both objects were probably made locally, at or near the site, using antler that may have been supplied by market, or gathered locally from the forest. The pinbeater came from the fill of a ditch that formed a boundary to the area of industrial activity (context 395, sub-group 36, Group 26, Phase 4). Associated pottery is noticeably mixed and of late pre-Roman Iron Age, early medieval and late medieval date. The comb fragment came from the fill of a pit, which also contained domestic debris, as well as the skeleton of a horse (context 403, sub-Group 129, Group 11, Phase 3).

Conservation

- 7.13.8 Both objects are fragmentary, with fractures that appear to have occurred in antiquity. The surface of the pinbeater retains traces of polish but is pitted and abraded as a consequence of its burial environment.
- 7.13.9 Further analysis would be entirely descriptive and non-destructive, and would not conflict with any issues of long-term storage. The objects should be retained for future study, and should not be discarded. They should be kept in a controlled environment, in accordance with the conservation requirements for organic materials.

Comparative Material

- 7.13.10 The cross-section of the pinbeater indicates that it is of double-ended form. Double-ended pinbeaters occur in late Iron Age and Roman contexts, but the majority come from Anglo-Saxon deposits. They are associated with the warp-weighted loom (Walton Rogers 1997, 1755; Riddler forthcoming). The single-ended pinbeater occurs in contexts from the ninth century onwards and at some sites, including London, Winchester and York, the double-ended variant is not seen beyond the tenth century. At Canterbury, however, it appears that this trend is not maintained, although the small quantity of double-ended pinbeaters from eleventh century contexts may well be residual (Elder and Riddler 1988, 135-8 and figs 26.94 and 27.95; Blockley *et al.* 1995, 1173-4). At the present time, there are few examples of mid Anglo-Saxon or later double-ended pinbeaters from East Kent outside of Canterbury itself. Current evidence suggests that they were used during the fifth to tenth centuries, with some slight changes in formal design over that period (Riddler forthcoming).
- 7.13.11 The comb fragment comes from a composite comb whose type cannot be identified with any certainty. The connecting plate has a shallow cross-section, which may be indicative of a double-sided composite. The decoration would also fit that comb type, which is largely of early and mid Anglo-Saxon date, rather than later. However, too little of the comb survives to be absolutely sure about this identification.

Potential for further work

- 7.13.12 It should be noted that both these objects were residual and found in later contexts.
- 7.13.13 The pinbeater should be seen in the context of the other objects from Mersham that relate to textile manufacture (see Appendices 5, 11 and 14). As noted above, our understanding of textile production in East Kent in the late Anglo-Saxon and early medieval periods is fairly limited and the Mersham evidence is particularly welcome in this respect. However, the potential for further work on this piece is also limited; it is recommended that it be drawn and fully catalogued, with reference made to parallels from other assemblages.
- 7.13.14 The section of the comb is too fragmentary, unfortunately, to be able to place it within an appropriate context. Although there is a good Anglo-Saxon comb sequence for Canterbury, too little survives of this object to be able to relate it to other examples, and its presence should merely be noted, as another piece of evidence for domestic activity of Anglo-Saxon date.

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7.14 ASSESSMENT OF WORKED STONE OBJECTS

Ian Riddler

Summary

- 7.14.1 A fragment of a quern, a spindle whorl and a small section of rubble were recovered by hand excavation. The quern may be Roman, Anglo-Saxon or early medieval, and is of a rare, oscillatory type. The spindle whorl is of a material and type that is now well attested within East Kent, being produced at or near *Sandtun*, West Hythe. The section of stone rubble comes from an early medieval context but its function in relation to activity of that period is unclear.

Introduction

- 7.14.2 The three stone objects retrieved by hand excavation consist of a fragment of a quern, a spindle whorl and a small section of rubble. No further fragments of stone implements were recovered from the sampling programme. The two objects and the fragment of rubble are relevant to the following fieldwork event aims;

- to recover artefact assemblages (especially pottery) to elucidate the sequence of site development; to provide information on the status and economy of the site and data on trade and exchange;
- to recover environmental and other economic indicators if these are found to be present on site.

Methodology

- 7.14.3 Each object has been examined visually, with the aid of a hand lens in some cases. They have all been identified as to stone type, as noted in Table One. The spindle whorl has been weighed and its dimensions have been recorded.

Quantification

- 7.14.4 Details of each stone object are presented in Table One. This includes an estimate of their likely dating, on typological grounds alone. The objects consist of a spindle whorl, a fragment of a quern and a piece of stone rubble.

7.14.5 Table One

Worked Stone Objects

<i>Context</i>	<i>SF</i>	<i>Group</i>	<i>Stone Type</i>	<i>Object Type</i>	<i>Period</i>
568	390	13	Hythe Beds Siltstone	Spindle Whorl	Anglo-Saxon or Early Medieval
342	219	11	Basalt Lava	Quern	Anglo-Saxon or Early Medieval
569	298	12	Composite	Rubble	Medieval ?

- 7.14.6 The spindle whorl is complete and is made from a Hythe Beds siltstone, in common with a number of spindle whorls of late Anglo-Saxon and early medieval date. It is a good example and belongs to Walton Rogers type A2, one of the most common forms for spindle whorls of this East Kent provenance (Walton Rogers 1997, 1736-41).

- 7.14.7 The fragment from a basalt lava quern stems in all probability from an upper stone and it includes a good section of the outer circumference. Along the edge are two notches designed for cordage, with marks of wear. It is possible that these relate to the use of the object as a *pendelmühl* (oscillating quern), which is pulled alternately in two directions (*cf* Frere and Stow 1983, 183 and fig 72.5).
- 7.14.8 Little needs to be said of the fragment of rubble, which has no diagnostic features other than its stone type.

Provenance

- 7.14.9 Spindle whorls of this type are believed to have been manufactured at *Sandtun*, West Hythe, (see App. 14.6) although this need not have been the only centre of production. Detailed analysis has shown other such 'siltstone' pieces to have been made from a clay ironstone outcropping near Hythe and, perhaps, in the iron-producing areas of the Weald. It represents an object type that was widely traded during the early medieval period. It came from a context that produced a single sherd of an early medieval sandy ware and this group as a whole has been placed in the early medieval period (context 568, sub-group 104, Group 13, Phase 3). The particular pit in which this spindle whorl was found also contained an iron fibre-processing tooth (see Appendix 7.13) and both objects are firmly associated with textile manufacture, rather than ironworking.
- 7.14.10 The quern fragment came from one of the pits dispersed away from the centre of the enclosure, and thought to have been used for domestic waste (context 342, sub-group 24, Group 11, Phase 3). Ceramics suggest that its context belongs to the early medieval period, a fascinating period of transition for this particular object type.
- 7.14.11 The fragment of stone rubble came from one of the smaller pits of Group 12, which are thought to have been full largely of residues from ironworking (context 569, sub-group 112, Group 12, Phase 3).

Conservation

- 7.14.12 All of the objects survive in a stable condition. The siltstone spindle whorl needs to be monitored for its humidity, given that objects of this type can fracture easily in adverse conditions. Similar conditions should prevail also for the quern fragment, basalt lava having a tendency to fragment over time. Both objects should be recorded in detail during the analytical phase.

Comparative Material

- 7.14.13 The spindle whorl is complete and represents a good example of a type that is current in East Kent from the ninth century onwards to the thirteenth century. Evidence for the manufacture of spindle whorls of this type has come from *Sandtun* (West Hythe) and it is likely that they were produced there during the Anglo-Saxon period, and possibly during two phases of occupation of mid Anglo-Saxon and early medieval date (Riddler forthcoming). Analysis of whorls of this stone type from St Gregory's Priory (Canterbury) and Townwall Street (Dover) by electron microscopy and x-ray diffraction, has shown that they are in fact clay ironstone (M. A. Eden and W. J. French, cited in Hicks and Hicks, forthcoming). The most likely source of clay ironstone is in the Lower Greensand hills, in that part of the Weald mined for iron ore in the medieval period, or in outcrops of the same strata in the Hythe-Sandsend area. They appear to have been widely traded in East Kent and they are known from Canterbury and Dover as well as *Sandtun*. The full extent of their distribution within and beyond East Kent has yet to be determined (Walton Rogers and Riddler, forthcoming).
- 7.14.14 The estimated diameter of the quern (c. 420mm) is commensurate with a pre-conquest dating, at which time such objects were more common. Equally, however, basalt lava querns are known from early medieval contexts and that appears to be the situation here (Walton Rogers and Riddler, forthcoming). At both Canterbury and Dover, querns of this material occur in late Anglo-Saxon and early medieval contexts almost to the exclusion of any other stone types. Whilst Anglo-Saxon querns were probably used as hand-mills for the grinding of grain, the widespread adoption of water-powered mills during the medieval period lead to a rapid decline in hand-milling, which may be attributed to the period around the twelfth or thirteenth century (Biddle 1990, 882-3; Margeson 1993, 202). Basalt lava querns of this date are therefore considered to have been redeployed for the grinding of hops for beer (Walton Rogers and Riddler forthcoming). However, this assumption is based entirely on the situation in urban environments, at Canterbury, Dover, London, Norwich and Winchester. The situation in rural England has as yet been little studied, which heightens the significance of the Mersham example. In addition, it should be noted that it survives in good condition, with a number of distinctive and unusual attributes.
- 7.14.15 The fragment of stone rubble has no diagnostic features other than its stone type. It presumably stems from a stone building of early medieval date, although it could be a residual Roman find.

Potential for further work

- 7.14.16 The siltstone spindle whorl is an important addition to the type, which both confirms and extends the distribution of the Hythe production centre. It is evidence for trade in worked stone artefacts during the early medieval period and it forms one element of the evidence for textile manufacture at the site. It is directly relevant to several of the Fieldwork Event Aims, relating both to trade and to industry. It is recommended that it be drawn and fully catalogued and that the distribution of similar items from other assemblages be examined.
- 7.14.17 The quern fragment is unusual in several respects; *pendelmühl* are very rare in themselves and querns are in any case seldom found in rural surroundings. Its significance lies also in its recovery from a post-conquest setting, at a point when the use of such objects was subject to revision and change. As with other object types, like the post-Roman ceramics and the ferrous residues, there is an important contrast to be drawn between urban and rural situations.

- 7.14.18 The rubble fragment may be of Roman or post-Roman date and it cannot be securely related to any structures in the vicinity of the site. It has little potential for further study.

7.14.19 Bibliography

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7.15 ASSESSMENT OF GLASS OBJECTS

Ian Riddler

Summary

- 7.15.1 Five small fragments of post-medieval glass were recovered from the excavations. They are not relevant to the Fieldwork Event Aims and it is recommended that no further work is carried out on them.

Introduction

- 7.15.2 Two fragments each of clear window and green bottle glass came from separate contexts. One of the former (SF 688) was recovered from a sample, the remainder were collected during manual excavation. All of this material is of post-medieval date and it is not directly relevant to the Fieldwork Event Aims for the project.

Methodology

- 7.15.3 The glass has been examined by eye, under low magnification, and identified as to type.

Quantification

- 7.15.4 The quantity of glass from the site is provided in Table One.

7.15.5 Table One

Glass

<i>Context</i>	<i>Sub-Group</i>	<i>Group</i>	<i>Phase</i>	<i>SF</i>	<i>Description</i>
302	46	34	5	18	green bottle glass fragment
313	98	31	5	25	clear window glass fragment
353	99	33	5	688	clear window glass fragment
492	57	14	3	567	green bottle glass body fragment

- 7.15.6 Three of the fragments came from post-medieval deposits, and consist of small pieces of modern window glass or late post-medieval bottle glass. The remaining fragment (SF567) came from a ditch fill assigned to Phase 3, but it is substantially similar in form to the remainder and is clearly also post-medieval and, presumably, intrusive.

Provenance

- 7.15.7 All of the material is of post-medieval date and, with the one intrusive exception outlined above, they all come from contexts placed within the post-medieval phase of the site. They are mostly of late post-medieval (*i.e.* Victorian) date.

Conservation

- 7.15.8 All of the fragments have been cleaned and are packaged in a stable environment. They are not germane to the principal objectives of the project and they could be discarded.

Comparative Material

- 7.15.9 Small fragments of window and bottle glass of this type are widespread in post-medieval contexts.

Potential for further work

- 7.15.10 All of the fragments are of post-medieval date and they are not relevant to the aims of this project. Accordingly, no further work on them is envisaged.

7.16 ASSESSMENT OF MAMMAL BONE

Robin Bendrey

Summary

- 7.16.1 422 fragments (9046g) of mammalian bone were recovered by manual excavation and additional material (1110g) by sieving. Around half (by number) of the hand-recovered assemblage is accounted for by a nearly complete horse skeleton from an early medieval context. The remaining material is dominated by cattle, sheep and pig and there is evidence suggestive of horn working.
- 7.16.2 The mammalian bone from early medieval deposits (Phase 3) offers the greatest potential for analysis as it is the largest group from a single phase. The potential for gaining environmental information from the material is very limited and any further work should instead concentrate on a detailed study of the horse skeleton and a dietary and economic analysis of the remaining material. This rural assemblage may then usefully be compared with early medieval urban groups, particularly from Canterbury and Dover.

Introduction

- 7.16.3 A total of little over 10kg of mammalian bone was recovered by manual excavation and by sieving

Methodology

- 7.16.4 The small size of the mammal bone assemblage negated the need to sub-sample and all the bone has, therefore, been catalogued. Sieved bone was recovered as part of the process outlined below (Appendix 17.2).
- 7.16.5 The hand-recovered bone was identified with the aid of a comparative osteological reference collection. Bone identified to species was recorded using the diagnostic zones of Dobney and Reilly (1988). Bone not identified to species was awarded an animal-size category (e.g. sheep-sized) or listed as being indeterminate. The criteria of Boessneck (1969) were used to differentiate between sheep and goat remains. If this was not possible the fragments were labelled sheep/goat. All bone fragments have also been weighed (Table One).
- 7.16.6 The mammalian bone from the samples was recorded in the same way as the hand-recovered material, except that the total bone material derived from each sieved sample was weighed instead of the individual fragments.
- 7.16.7 Basic fragment counts and bone weight have been used to quantify the material (Table One). Context frequency (for the hand-recovered bone) and sample frequency (for the bulk samples) have been used to compare the material from the two recovery methods. This allows comparison of the frequency of occurrence of the different taxa independently of differing fragmentation, bone weights and context/sample size.

Quantification

- 7.16.8 The hand-recovered assemblage consists of 422 fragments, weighing 9046g, from 25 contexts, a further 1110g was derived from 43 sieved samples. The total quantity (number of fragments and weight) of hand-recovered mammalian bone is presented in Table One. The distribution of this bone between the phases, groups and sub-groups is shown in Table Two.

7.16.9 Tables One and Two show the majority of the material to have derived from the early medieval period (Phase 3). A large part of this comprises a single horse skeleton. This skeleton contributes all the horse bones and all the cattle-sized material from sub-group 129, a total of 238 fragments (Table Two). Analysis of the number of contexts within which particular taxa occur goes some way towards cancelling out the bias caused by the articulating skeleton. Excluding the skeleton from the data leaves an assemblage typical of early medieval mammalian assemblages – one dominated by cattle, sheep and pig.

7.16.10 Comparison of the context/sample frequencies shows cattle to be better represented in the hand-recovered material, and sheep and pig to be better represented in the sieved material. This is a known product of recovery bias (Payne, 1975).

7.16.11 Table One

Summary of hand recovered mammalian bone

	Late Anglo-Saxon [Phase 2]	Early Medieval [Phase 3]	Late Medieval [Phase 4]	Post-Medieval [Phase 5]	Total number of frags.	Total weight (g)	Mean fragment weight (g)
Cattle	2	33	2	-	37	1665	45.0
Sheep/goat	-	22	3	1	26	207	8.0
Sheep ovis sp. domestic	1	5	-	-	6	80	13.3
Pig, sus Sp. domestic	-	13	-	-	13	164	12.6
Horse, Equus caballus sp. domestic	2	115	-	-	117	5803	49.6
Goat Capra sp. domestic	-	5	-	-	5	80	16.0
Sheep/Goat/Roe deer	-	1	-	-	1	14	14.0
Dog Canis sp. domestic	-	3	-	-	3	20	6.7
Cat Felis sp. domestic	-	1	-	-	1	4	4.0
Mustelid	-	1	-	-	1	1	1.0
Cattle-sized	-	159	1	-	160	895	5.6
Sheep-sized	1	38	-	-	39	103	2.6
Indeterminate	-	38	-	-	39	103	2.6
Total	6	408	7	1	422	9046	21.4

7.16.12 Table Two*Distribution of hand-recovered mammalian bone, by number of fragments*

Phase	2	3						
Group	3	6	8	10		11		
Sub-Group	147	153	67	119	73	128	129	152
Cattle	2	2	-	3	-	4	1	3
Sheep/goat	-	1	-	2	-	9	2	-
Sheep	1	-	-	1	-	1	-	-
Pig	-	1	-	-	-	3	-	-
Horse	2	-	-	-	-	-	115	-
Goat	-	1	-	-	-	1	-	-
Sheep/Goat/Roe deer	-	-	-	-	-	-	-	-
Dog	-	-	-	-	-	-	-	-
Cat	-	-	-	-	-	-	-	-
Mustelid	-	-	-	-	-	-	-	-
Cattle-sized	-	-	1	2	2	12	123	-
Sheep-sized	1	-	-	1	2	23	-	-
Indeterminate	-	-	-	-	-	1	-	-
Total NISP	6	5	1	9	4	54	241	3

Phase	3									
Group	12				13	14	19	20	27	34
Sub-Group	105	146	154	161	107	65	156	120	56	46
Cattle	1	-	2	-	9	6	2	-	2	-
Sheep/goat	3	3	-	-	1	-	-	1	3	1
Sheep	1	-	-	-	1	1	-	-	-	-
Pig	1	2	-	-	4	1	-	1	-	-
Horse	-	-	-	-	-	-	-	-	-	-
Goat	-	-	-	3	-	-	-	-	-	-
Sheep/Goat/Roe deer	-	-	-	-	-	1	-	-	-	-
Dog	-	-	-	-	-	3	-	-	-	-
Cat	-	-	-	-	-	1	-	-	-	-
Mustelid	-	-	-	-	-	1	-	-	-	-
Cattle-sized	4	4	-	-	5	5	-	1	1	-
Sheep-sized	5	1	-	-	5	1	-	-	-	-
Indeterminate	7	-	-	-	3	1	-	-	1	-
Total NISP	22	10	2	3	28	21	2	3	7	1

Provenance

7.16.13 Around half (by number) of the hand-recovered assemblage is accounted for by the skeleton of a horse, which is excellently preserved (context 421, sub-group 129, Group 11, Phase 3). The rest of the material varies between some well-preserved contexts and some poor, though it is generally fair.

7.16.14 The mammalian bone from early medieval deposits, Phase 3, offers the greatest potential for analysis, as it is the largest group from a single phase.

Conservation

- 7.16.15 Further analysis would not conflict with long-term storage. The material is already suitably packaged for long-term storage.

Comparative material

- 7.16.16 The bone from Mersham is contemporary with larger assemblages from Canterbury (Driver, 1990) and Dover (Bendrey, forthcoming). Comparison of the Mersham assemblage with these other sites may reveal interesting differences and/or similarities between the diet and economy of early medieval urban and rural.

Potential for further work

- 7.16.17 The mammal bone assemblage has the potential to illustrate aspects of diet and economy from the late Anglo-Saxon and early medieval site. The bone material offers a valuable opportunity to examine an assemblage from a rural site of this date, and compare it to previously studied urban assemblages. The horse skeleton provides an unusual opportunity to analyse a nearly complete medieval specimen.
- 7.16.18 The potential for gaining environmental information from the bone assemblage is very limited. Wild mammal bones are few and do not necessarily pertain to the immediate site environment, and there are only a few small mammal bones from the sieved samples.
- 7.16.19 Further work should focus on two areas. The first of these would comprise an analysis of the fragmentary assemblage for information on diet and economy (*e.g.*, the presence of goat horn cores in Phase 3 with the absence of post-cranial goat bones could suggest horn working). The second would involve a detailed study of the horse skeleton. This would encompass a metrical and morphological analysis and comparison with the measurements of disarticulated bones found from other sites. Attempts should also be made to identify the mustelid bone as to species, by comparison with reference material at the London Natural History Museum.
- 7.16.20 Analysis of the bulk samples will add a small amount of information to that provided by the hand-recovered material. They broaden the species range, with the identification of roe deer. Environmental information is limited; only three mammal bones were recorded, none of which have been identified to species. As has been stated above, the bulk samples reveal a recovery bias in the hand-recovered bone in favour of the larger species.
- 7.16.21 Although the assemblage is small, it is of importance for providing information on the rural economy, which is lacking for this period in Kent, and for allowing a comparison to be made between town and country in East Kent.

7.16.22 Bibliography

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7.17 ASSESSMENT OF BIRD AND FISH BONE

Enid Allison

Summary

- 7.17.1 Over 2,000 pieces of bird and fish bone were recovered, largely through sieving although some, generally larger, material was collected by hand. The material has the potential to provide information on the diet and economy of the medieval inhabitants of the Mersham site. Little previous work has been carried out on an inland rural site of this date. Further analysis would concentrate on fish bone obtained from sieved samples.

Introduction

- 7.17.2 Bird and fish bones were recovered, both by manual excavation and by sieving of 48 bulk samples from selected features.

Methodology

- 7.17.3 Sieving of bulk samples was carried out onto nested 1mm and 2mm meshes after carrying out bucket flotation, to 0.5mm, for recovery of charcoal and seeds. All residues have been sorted and all bones present retrieved.

Quantification

- 7.17.4 Very few bird and fish bones (10 fragments of each) were recovered by hand collection. A total of 49 fragments of bird bone were recovered from the samples, representing a wider range of species than the hand-collected material. Eggshell was present in several samples.
- 7.17.5 Recovery of fish bone was greatly enhanced by sieving, with an estimated total of over 2,000 fragments recovered from 37 samples. Seven of these produced assemblages with over 100 fish fragments. The numbers of identifiable fragments make up a relatively low proportion of the total (this is usually the case with sieved material, as many small, undiagnostic fragments of fin rays are recovered). A relatively high proportion (c. 40%) of identifiable bone was recovered from just two Phase 3 samples (context 419, sub-group 130, Group 6; context 432, sub-group 146, Group 12); these consisted chiefly of eel vertebrae. The total of identifiable fish bones is estimated at c. 300. A few fish scales were recovered from three samples.

Provenance

- 7.17.6 The bird and fish remains were recovered from ditch and pit fills excavated closer to the supposed areas of industrial rather than domestic activity. The bones appear to be predominantly food debris although possible exceptions to this are provided by bones of small passerines.

Conservation

- 7.17.7 None of the bones will require conservation.

Comparative Material

- 7.17.8 There are relatively few published accounts of medieval bird and fish assemblages from this general area. Those that have been published are from semi-urban/ecclesiastical or urban sites, such as Maison Dieu (Ospringe; Wall, 1980), St Gregory's Priory (Canterbury; Powell *et al.*, forthcoming), and Townwall Street (Dover; Nicholson, forthcoming; Allison, forthcoming)).

Potential for further work

- 7.17.9 The material from Mersham provides an opportunity to examine material from an inland rural site. Although the bird bone should be noted, future work should concentrate upon the much larger assemblage of fish bone which has the potential to address the CTRL research aim to examine the:
- Utilisation of natural resources, e.g. woodland management and exploitation of riverine and coastal resources.
- 7.17.10 The small, bird bone assemblage recovered is typical of food debris found on medieval sites, with domestic fowl and goose predominant. Bones of mallard (?) duck and pigeon (?) were present and several bones of small passerines were recovered by sieving. The potential for further work is limited by the small quantity of bone recovered and should consist of the production of a simple species list.
- 7.17.11 Further analysis of the fish bone would be more valuable in interpretation of the site economy. Work would necessarily be concentrated on the material recovered by sieving. The assemblage as a whole contains sufficient identifiable material to generate statistically significant information on the fish component of the diet of the medieval inhabitants of the site. The relative importance of freshwater and marine fish should be determined; comparison made with other medieval assemblages from sites along the southern North Sea and Channel coasts may shed light on the provenance of the latter and, therefore, on the trading/exchange patterns of the settlement.

7.18.12 Bibliography

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7.18 ASSESSMENT OF THE PLANT REMAINS

Ruth Pelling

Summary

- 7.18.1 Excavation work included the sampling of deposits for charred plant remains. Nine standard samples of early medieval date were assessed for their potential for analysis and seven yielded such remains. 13 samples also provided loose seeds that were included in the assessment, some of these had been mineralised and were extracted from flotation residues, others were carbonised and collected from the flots of small samples. Generally, the concentration of remains was low although two samples produced more substantial remains. Cereal crops included bread-type wheat, spelt wheat, oats and barley. Pulses included broad bean and possible cultivated vetch (*Vicia sativa* subsp. *sativa*). What may have been subsidiary crops, including flax, beet and plum or sloe, were also identified. Occasional mineralised seeds, particularly of brassica may be derived from sewage. Some further detailed analysis is recommended.

Introduction

- 7.18.2 Samples were collected from ditches, pits (including cess-pits) and post-holes during excavation and wet-sieved for the recovery of carbonised and mineralised material. The deposits examined were generally of early medieval date (Phase 3, c. 1050-1200). The samples were taken in order to address questions concerning the diet, cereal economy and environment of the site.

Methodology

- 7.18.3 Samples of 10 to 40 litres were processed by bucket flotation and the flots collected onto 0.5mm mesh sieves. Flots were air dried slowly prior to a rapid visual assessment of nine of them. Occasional seeds were picked out of residues or small flots from an additional 13 samples and were also submitted.
- 7.18.4 Each flot was assessed by scanning under a binocular microscope at x10 magnification. Any seeds or chaff noted were provisionally identified and an estimate of abundance made. Random fragments of charcoal were fractured and examined in transverse section at x10 and x20 magnification.

Quantification

- 7.18.5 Nine flots were assessed and the seeds extracted from a further 13 samples were provisionally identified. Flots were small to moderately sized (10 to 300 ml). Several samples contained frequent roots and two (samples 1009 and 1048) were rich in molluscan remains. The results of the examination are detailed below (Table One).

- 7.18.6 Seven of the nine flots produced charred cereal remains, generally in low numbers (up to 50 grains), although two samples (samples 1022 and 1029) were slightly richer, with 51 to 100 grains. Species noted included *Hordeum vulgare* (barley), free-threshing *Triticum* sp. (bread or rivet wheat), possible *Triticum spelta* (spelt wheat) and *Avena* sp. (oats). Cereal chaff was very rare, being recorded in one sample only (1022). The chaff noted consisted of a single *Hordeum vulgare* rachis. Weeds were quite common in sample 1022, but were rare or absent from the remaining flots. Non-cereal items were found in six flots and included seeds of possible *Brassica* sp. (cabbage, mustard *etc.*; mostly preserved by calcium phosphate mineralisation), *Vicia faba* (broad bean), *Vicia* cf. *sativa* (fodder vetch), *Linum usitatissimum* (flax), *Corylus avellana* (hazel-nut), *Beta vulgaris* (beet) and *Prunus* sp. (sloe, plum *etc.*). Wood charcoal was present in eight samples and was common in sample 1064. The taxa was generally provisionally assigned as *Quercus* sp. (oak) or Pomoideae (hawthorn, apple *etc.*), with occasional *Corylus/Alnus* sp. (hazel/alder).
- 7.18.7 The loose material included occasional charred cereal grain and *Vicia/Pisum* sp. (pulses), mineralised seeds of *Brassica* sp. (cabbage, mustard *etc.*) and a *Prunus* sp. (plum, sloe *etc.*) stone. Seeds of *Sambucus nigra* (elderberry) were recovered in quite large quantities from two samples (1067 and 1072). The *Sambucus* material was not charred; the seeds of this species tend to be particularly robust and resistant to decay, tending to survive where other remains do not (*e.g.*, in waterlogged deposits which have subsequently dried out).

7.18.8 Table One
Plant Remains

<i>Sam- ple</i>	<i>Con- text</i>	<i>Feature</i>	<i>Phase</i>	<i>Type</i>	<i>Flot size (ml)</i>	<i>Grain</i>	<i>Chaff</i>	<i>Weed seeds</i>	<i>Other</i>	<i>Id-Other</i>	<i>Char- coal</i>	<i>Comm- ents</i>
1007	347	Cess pit	3	Seeds	0							Modern rubus
1009	353	Ditch	5	Flot	100						+	Mollusc rich
1016	374	Ditch	3	Seeds	0				+	Brassica		Mineral -ised
1017	366	Pit	3	Seeds	0	++			++	Brassica		Mineral ised
1019	383	Cess pit	3	Flot	100	++			+	Beta vulgaris, Corylus	++	Rooty
1022	403	Pit	3	Flot	200	+++	+	+++	++	Vic.faba Vic.sat Corylus Linum	++	2xflots
1023	414	Cess pit	3	Flor	200	++		++			++	Rooty, 2xflots
1024	419	Cess pit	3	Seeds					+	cf Prunus,		Mineral -ised
1028	440	Pit	3	Flot	300	++		+	+	Corylus Prunus Vic/lath Crataegus	++	Very rooty
1029	432	Pit - iron working?	3	Flot	200	+++		+	+	Corylus Vic/Pis	++	2xflots
1038	498	Cess pit	3	Seeds	0	+		+				
1048	519	Ditch	3	Flots	10	+						Moll- uscs
1064	567	Pits	3	Flots	50						+++	
1067	570	Pits	3	Flots	50	+		+	+	Corylus	++	Elder
1070	573	Pits	2	Seeds	0	+			+	Vic/Pis		
1072	575	Pits	3	Seeds	0			++				Elder
1075	584	Pit	3	Seeds	0	+						
1076	587	Pits	3	Seeds	0							Modern seeds
1078	595	Ditches	3	Seeds	0							Modern seeds
1082	605	Post- holes	3	Seeds	0							Modern seeds
1087	610	Pots- holes	3	Seeds	0	+						
1090	618	Pits	2	Seeds	0				+	Vic/Pis		

Provenance

- 7.18.9 Those samples that contained moderate to good quantities of grain were all taken from pit fills (contexts 383, 403, 414, 440, 432). The mineralised brassica seeds recovered from pit fill 366 would suggest that this pit contained sewage material and therefore may have been be a cess-pit. Other than the brassica seeds, mineralised remains were not common although occasional items, including the *Prunus* stone in context 419, do confirm the interpretation of some features as cess-pits. The charred remains recovered from both cess-pits and other features are likely to represent small-scale cereal processing and food-preparation waste as well, perhaps, as waste from hearth or furnace fires.

Conservation

- 7.18.10 The flots are in a stable condition and can be archived for long-term storage.

Comparative material

- 7.18.11 Comparable sites of this period are infrequent in Kent. A tenth-century assemblage was recovered from the Graveney Boat (Wilson, 1978), which produced a range of estuarine and salt marsh species, terrestrial trees and shrubs and herbaceous plants as well as the actual cargo of the boat which included, most notably, a large deposit of *Humulus lupulus* (hops). The Graveney deposits are, however, rather unusual. Slightly later (twelfth-/thirteenth-century) deposits from Ebbsfleet, and a possible Saxon grave at Chalk Hill, were examined as part of the Sandwich Bay archaeological project (Scaife 1995). The assemblages were limited, but the Ebbsfleet samples produced a comparable species list with free-threshing wheat, possible spelt wheat, *Hordeum vulgare*, oats, and rye rachis, broad bean and pea. Material from Northfleet (Pelling, unpubl.), dated to the eleventh/ twelfth century, again suggests a mixed cereal economy, producing free-threshing wheat, barley, oats and rye. The pulses at this site included cultivated vetch as well as beans and peas. The sites all suggest that *Triticum turgidum* (rivet wheat) was not cultivated in Kent at this time, although it is known from eleventh and twelfth century records elsewhere in the country (Moffett, 1991). They do suggest that cultivated vetch is present from at least the eleventh century, as the Mersham sample seems to support.
- 7.18.12 Outside of Kent, there is a growing body of archaeobotanical assemblages from this period, for example the large scale assemblages examined from West Cotton (Campbell 1994) which cover the late Anglo-Saxon and early medieval periods, although with many gaps in the record. While there are many references to medieval urban deposits (see Robinson and Wilson 1987), many are slightly later (thirteenth century onwards) and small-scale rural assemblages have been less frequently examined. This is a period of potential economic and agricultural change, with new introductions from Scandinavia and Norman France. It is, therefore, important to continue to develop the data-set for areas, like Kent, for which the data is still limited in order to trace the introduction of new species and to analyse developing agricultural and, perhaps, climatological trends throughout the country.

Potential for further work

7.18.13 Given the paucity of comparative material for this period in Kent and the importance of building up a national data-set for all potential periods of change, some further work on the material is recommended. To this end, it is suggested that the five samples that produced moderately sized deposits should be sorted and analysed in full (samples 1019, 1022, 1023, 1028 and 1029). In addition the loose grain and brassica seeds extracted from sample 1027 should be identified and discussed. Further work on this assemblage has the potential to address the following Landscape Zone priorities:

- changes to the organisation of the landscape through time;
- reliance on pastoralism versus arable farming;

And the following Fieldwork Event Aims:

- to recover environmental and other economic indicators present on the site;
- to determine the landscape setting of the site and its interaction with the contemporary local environment.

7.18.14 Bibliography

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7.19 ASSESSMENT OF THE MARINE MOLLUSCA

Enid Allison

Summary

- 7.19.1 The small assemblage of marine molluscan remains recovered from the site has been identified and weighed. Oyster, cockle and mussel were represented in several samples, winkle and tellin were represented in single samples; see table One for details.

Introduction

- 7.19.2 Marine molluscan shells were recovered by hand during excavation and from the bulk sample residues taken from pit and ditch fills.

Methodology

- 7.19.3 The samples were sieved onto nested 2mm and 1mm meshes after carrying out bucket flotation onto 0.5mm. mesh. The 2mm fractions from each sample were sorted in their entirety and searched for molluscan remains.

Quantification

- 7.19.4 The marine shells recovered by hand consisted of 54 partial or complete oyster shells with a total weight of 732g. The sieved samples produced a wider range of species. Cockle and mussel shell was common in a few samples, but generally the remains consisted of small quantities of fragmentary oyster, mussel and cockle shell (Table One). Winkle and tellin were recorded in single samples, as were the calcareous tubes of marine annelid worms (commonly found adhering to shells) and a crustacean claw.

7.19.5 Table One
Marine Molluscs

Context	Sample	Group	Sub-Gp	Phase	10-50%	1-10%	<1%	Trace
309	1000	22	139	3			Oyster	
309							Mussel	
309							Cockle	
314	1001	17	32	3				Shellfish
314								Crustacean Claw
330	1003	26	36	4			Oyster	
330							Mussel	
328	1004	10	33	3				Oyster
328								Mussel
324	1005	10	141	3				Oyster
324								Mussel
341	1006	0	0	0			Mussel	
347	1007	6	25	3			Mussel	
353	1009	33	99	5				Mussel
350	1011	10	166	3				Shellfish
362	1012	22	167	3				Shellfish
374	1016	7	26	3			Cockle	
366	1017	11	27	3				Mussel
383	1019	6	131	3	Mussel			
403	1022	11	129	3	Mussel			
403					Cockle			
414	1023	6	130	3				Mussel
419	1024	6	130	3				Mussel
440	1028	11	164	3		Cockle		Mussel
432	1029	12	146	3				Oyster
432								Mussel
499	1039	12	179	3			Oyster	
499							Mussel	
510	1042	20	120	3				Mussel
515	1044	6	180	3			Mussel	
516	1045	6	180	3			Shellfish	
518	1047	6	180	3				Mussel
518								Cockle
519	1048	14	65	3			Mussel	
567	1064	13	107	3			Shellfish	
570	1067	23	111	3		Mussel		
573	1070	4	101	2				Mussel
574	1071	4	101	2		Oyster	Cockle	
584	1075	4	171	2			Mussel	
584							Cockle	
587	1076	13	162	3				Mussel
589	1077	9	13	3				Mussel
599	1080	13	161	3			Mussel	
622	1089	2	160	2			Cockle	
618	1090	3	115	2			Mussel	

Provenance

- 7.19.6 All of the material described above is of marine origin, and it suggests that East Kent fishermen were either providing these resources at Mersham markets, or that, in the light of the documentary evidence (see Appendix 7.21), some of the Mersham fishermen had access to marine resources.

Conservation

- 7.19.7 All of the material is inherently stable and has been packaged for long-term storage.

Comparative material

- 7.19.8 Marine molluscs were found in abundance at Townwall Street (Dover) in early medieval contexts. Most of that material has not been studied in any detail, however, and there is a general lack of analysis of marine remains from East Kent sites. This enhances the value of the Mersham assemblage, which, although small, is worthy of publication in a summary form at least, as a significant part of the dietary evidence for the site, particularly in the early medieval period, in particular (25 of the 34 samples are from Phase 3).

Potential for further work

- 7.19.9 The lack of comparative studies from elsewhere in East Kent is to be regretted, but that does not diminish from the value of this assemblage which appears to represent not inconsiderable component of the dietary regime (and thus the trading connections) of Mersham in the early medieval period. The material is generally unspectacular and there is too little for any detailed quantification to be carried out. No further work is required on the specimens. Nonetheless, the material does warrant summary publication, as valuable evidence for the presence of marine molluscs prepared for consumption at an inland site.

7.20 ASSESSMENT OF THE LAND SNAILS

Mike Allen
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Summary

- 7.20.1 A sample of flot from washover floatation was presented for assessment. The assemblage contained a number of large and apical fragments of *Helix aspersa*, which is a Roman introduction, and also one *Candidula* sp., which is a medieval one. The assemblage is post-Roman and probably medieval or later. The composition of the assemblage indicates terrestrial, synanthropic habitats. No further work is recommended.

Introduction

- 7.20.2 One sample was received from CAT for assessment of the land snails. The sample (number 1025) was from a flot from washover floatation. It was from one of the fills of an early medieval pit (context 422, sub-group 63, Group13, Phase 3) that appears to have been cut specifically to dispose of metal-working debris.

- 7.20.3 The assessment aims were to;

- quantify shells to indicate if statistically viable analysis was possible;
- characterise the assemblage;
- indicate if there was change in the local environment over time;
- examine if the assemblage will determine whether ditches or other features contained water;
- indicate the potential resolution of interpretation.

Methodology

- 7.20.4 The available material was scanned under a x10 to x30 stereo-binocular microscope to identify the basic mollusc taxa/species present and, crudely, quantify the total numbers in the fractions received, from which it can be determined whether the total assemblages are likely to be statistically viable for analysis.
- 7.20.5 For assessment of the snails it is normal to assess the flots that contain the majority of the floating shells. There is some minor inherent bias in the flots as some species and shell fragments will not have floated and may only be present in the unextracted residues. The flot is likely to contain shells that are less likely to break (*i.e.*, larger robust species and very small species). Nevertheless the flots normally contain the majority of the shells in any sample and are more representative of the total assemblage. By contrast the residues usually contain shell fragments, the majority of which are non-apical and undiagnostic.

Quantification

- 7.20.6 The residue was very 'dirty' and contained a large quantity of fine sand. Although shells were very abundant, the taxonomic range was very limited and thus, with high numbers of shells, simple quantification was of little significance.
- 7.20.7 The results are given in Table 1 and are presented in habitat preferences rather than taxonomic order for ease of reference.

7.20.8 Table One
Land Snails

<i>Context</i>	422
<i>Sample</i>	1025
OPEN COUNTRY	
<i>Candidula</i> sp	A
CATHOLIC SP	
<i>Trichia hispida</i>	A
<i>Monachia cf cantiana</i>	A
<i>Helix aspersa</i>	C
SHADE LOVING	
<i>Discus rotundatus</i>	C
<i>Aegopinella nitidula</i>	B
<i>Oxychilus</i> sp.	B
BURROWING SPECIES	
<i>Ceclioides acicula</i>	B
	100+

KEY: A 10 items or more
 B 5 to 9 items
 C 4 items or fewer

Provenance

- 7.20.9 The assemblage contained a number of large and apical fragments of *Helix aspersa*, which is a Roman introduction, and also one *Candidula* sp., which is a medieval introduction. The assemblage is post-Roman and probably medieval or later. The composition of the scanned assemblage seems to indicate strongly terrestrial habitats; many of the species present although classed shade-loving (according to Evans 1972), are synanthropic and may be found in garden habitats, debris and rock rubble.

Conservation

- 7.20.10 All of the material is inherently stable and has been packaged for long-term storage.

Comparative material

- 7.20.11 Comparable material is ubiquitous but of little value in terms of addressing the Fieldwork Event Aims or Landscape Zone Priorities.

Potential for further work

- 7.20.12 Very high shell numbers were present and statistically viable analysis is possible. To provide a total assemblage would require sorting the residue, ideally to 0.5mm, in order to recover other species. However, the assessed assemblage indicates a regime favouring synanthropic species and further analysis would probably not be of great environmental value for this site.

7.20.13 Bibliography

Evans, J.G. 1972; *Land Snails in Archaeology*, London Seminar Press.

7.21 ASSESSMENT OF DOCUMENTARY SOURCES

Sheila Sweetinburgh

Summary

- 7.21.1 The available documentary sources were listed and then rapidly assessed in terms of their potential contribution to the issues set out in the CTRL Archaeological Research Strategy. It was also necessary to undertake a preliminary investigation of the secondary literature to provide a context for this evidence. The principal sources consisted of four pre-conquest charters, a few late twelfth-century records and a much larger quantity of thirteenth-century material.

Introduction

- 7.21.2 The brief with regard to the documentary evidence was to establish a list of the available sources and to assess rapidly which were likely to be the most useful. At the same time it was necessary to undertake a preliminary investigation of the secondary literature to provide a context for the archaeological and documentary evidence.
- 7.21.3 From the historical standpoint, an investigation of Mersham for the late Anglo-Saxon and medieval periods has certain advantages compared to some other vills in East Kent as the land there was the subject of at least a few pre-conquest charters. In addition, the ville had become part of Christ Church Priory's holdings by the time of the conquest and, even though it is listed as a manor belonging to the Archbishop of Canterbury in the Winchester Domesday, the Priory appears to have regained its authority over Mersham and its Wealden dens shortly afterwards. In consequence, the early manorial and estate records produced by Christ Church include references to Mersham and such records survive intermittently for the whole of the medieval period. Other types of evidence are available, especially charters, which provide information about local landholders, patterns of land holding and features such as mills. Together, such sources may be used to build up a picture of Mersham for the period corresponding to the main archaeological finds and for the later medieval period.

Methodology

- 7.21.4 Having listed the potential sources available using the catalogues for Canterbury Cathedral Archives and Library (CCAL), the British Library (BL), the Lambeth Palace Library (LPL), and the Bodleian library (Table One), it was decided to confine the initial survey of primary sources to the pre-conquest charters and to a sample of the early manorial, estate and charter records held at the Canterbury Cathedral Archive. Of the four Anglo-Saxon charters concerning land in Mersham, copies of three are extant with the Christ Church Priory records at Canterbury, while a copy of the earliest charter, Sawyer 328, has been printed and translated in secondary literature (Birch 1887, 100-1; Whitelock 1968, 488-90). Other secondary sources provided extracts and analyses of place names found in charters Sawyer 328 and 332 (Furley 1871; Wallenberg 1931; Witney 1976; Kelly 1995).

- 7.21.5 As well as information on industrial activities, the records were scanned for material on the Priory's use of the manor of Mersham, for example its agricultural policy, evidence of inter-manorial co-operation, markets and other trade activities. Other evidence that might shed light on the settlement at Mersham are field names, occupational surnames, the assize of bread and ale, and the presence of such features as common ways and the king's highway. This entailed a brief examination of the very few late twelfth-century records and the more abundant thirteenth-century sources for the following categories; charters, leases, quitclaims; bedels' rolls; treasurers' accounts; rentals; estate assessments and accounts, including the *Assisa Scaccarii*. Also examined was a seventeenth-century map of Mersham, which shows the position of the church, manor house and barns and some of the local fields and roads.
- 7.21.6 The major research problem concerning Mersham is the lack of documentary evidence for the Anglo-Saxon and early medieval period, apart from a few early charters. This means there is a heavy reliance on the post-1200 records and, though they are relatively abundant for the rest of the medieval era, this means our knowledge of the earlier period remains sketchy, a problem highlighted in the seminal assessment of the medieval Wealden iron industry (Cleere and Crossley 1985, 88-96). However, the quality and quantity of the post-1200 materials probably means more can be said about Mersham than many other settlements in the region.

Quantification

- 7.21.7 The principal sources for Mersham are listed in Table One.

7.21.8 Table One*Documentary Sources for Mersham*

<i>Pre-conquest Charters;</i>	
1	Sawyer 328 Charter dated 858 (BL Cotton Aug, ii. 66)
2	Sawyer 332 Charter dated 863 (CCAL Chart. Ant. M14)
3	Sawyer 1047 Charter dated 1042x1066 (BL Cotton Claud. Aiii, fol 6v; LPL Ms 1212, 331; Bodleian Tanner 223, fol. 20v; CCAL DCc/ Register I, fol 58v-59; Register P, fol 26)
4	Sawyer 1090 Charter dated 1053x1061 (BL Cotton Claud Aiii, fol 5v; LPL Ms 1212, 332; Bodleian Gough Berks 20, fol 12v; Tanner 223, fol 21; CCAL DCc/Register C, fol 237; Register P, fol26v)
<i>Canterbury Cathedral Archives and Library</i> See above, plus	
5	Chart. Ant. M1-13, 15-29, charters, leases, quitclaims for the period 1042x1066, c. 1250-1349; M38a, b, c, leases, rentals 15th and 16th centuries
6	Lit. MS B14, 15, 16, rents to Christchurch Priory, possibly including Mersham, late12th and early 13th century
7	Lit. MS D4, treasurers' accounts, rents to Christchurch Priory, c.1200 and early 13th century
8	DCc/Register C., fol 237-242v, copies of Mersham charters, Domesday copy, rents of assize, c. 1050-1350; Register E, fol 279-281, copies of Mersham charters; Register O, fol 226, 253v, rental and custumal; Registers Q, T, U contain 15th and early 16th century records for Mersham
9	DCc/Bedels Rolls 1-22, for some years between 1265-6 and 1349-50
10	DCc/Assisa Scaccarii 1-5, 7, 8, accounts of Priory estates, including Mersham, for some years between 1224-5 and 1258-9
11	DCc/Rentals 35, 36, 38, dated c. 1275-1335, c. 1250-1300, c. 1213
12	DCc/Rural Economy 133, 1260x1270, 1292136, 296, accounts and assessment, dated 1278,
13	U15/21/10 Mersham estreat roll 1300-1; 11-16 Mersham court rolls 15th century
14	Map 23, dated 1659
<i>British Library</i> See above, plus	
15	Add. MS 6159, fol 35, 170; Add MS 6160, fol 52v, rents of assize, customary dues etc.
16	Add. Ch 56953, 59421, 59425, 59455, 59456, 59460, 59583, 59584, deeds dated between 1336 and 1550
<i>Lambeth Palace Library</i> See above, plus	
17	MS 750, rental and custumal, 14th century
18	MS 951/1 [33], courts and views including Mersham, 1536-9

7.21.9 It is possible that there are materials at the Public Record Office, especially the taxation records, which might be useful. However, it would probably be more sensible to confine the search to the Calendars of Patent, Close, Charter, Liberate Rolls *etc.* Accordingly to Dr N. Cullen, an expert on place-names in Kent, there is an excellent perambulation of the parish, but it may be too late (c. 1761) for the purposes of this project.

Comparative Material

- 7.21.10 At present very little is known about ironworking in the Weald for the Anglo-Saxon period or for the early medieval period and, as Cleere and Crossley (1985) have indicated, the documentary references do not occur in any number until the thirteenth and fourteenth centuries. For the period covered by the main excavations at Mersham there are three references to iron working; a possible iron mine at Lyminge in a charter dated 689, a *ferraria* near East Grinstead, listed in the Domesday Survey, and a ninth century bloomery at Millbrook in Ashdown Forest (Cleere and Crossley 1985, 87-8; see also Appendix 7.8 above). It is possible that members of the Wealden Iron Research Group have uncovered other evidence concerning medieval iron works in the Weald during the last few years (note the *Wealden Iron Bulletin*, field notes for 1990, 1991, 1995, 1996, 1997, 1998, 1999) although only the field notes for 1997 include evidence of Anglo-Saxon ironworking.
- 7.21.11 Even for the later medieval the references to ironworking in Cleere and Crossley are drawn mainly from the royal records and so do not provide an analysis of the place of the industry within the local economy, an analysis which may well be possible for Mersham. Such an apparently mixed manorial economy, with both agriculture and ironworking, seems to be relatively under-researched elsewhere in England and even though there are a considerable number of studies of the economies of the large ecclesiastical houses, as yet little has been found which is comparable with the situation here. One exception may be the manor of Wakefield in Yorkshire, for which the fourteenth-century court rolls appear to provide an excellent picture of the iron industry (Cleere and Crossley 1985, 93).

Potential for further work

- 7.21.12 The documentary evidence suggests there are four topics that may be useful with respect to the archaeological finds from Mersham;
- the importance of the late Anglo-Saxon settlement;
 - history of iron working at Mersham;
 - the place of this industry within the Priory's manorial policy;
 - peasant activities at Mersham
- 7.21.13 Each topic is briefly considered below.

The importance of the late Anglo-Saxon settlement

- 7.21.14 The ninth- and eleventh-century charters, alongside the Domesday survey, provide useful evidence concerning topography, lordship, and the modes of production at and associated with Mersham. According to the charters, the land at Mersham comprised fields, presumably arable land, pasture and meadow, with some marshland, possibly by the river Stour, and woodland. Some idea of the holding may be gleaned from the charters as the two earliest grants were for 5 and 8 sulungs respectively, while Domesday indicates Mersham was assessed for tax purposes at 6 sulungs (Sawyer 328; 332; Morgan 1983, 2, 22). Other features of the settlement at Mersham in 1086 were the church and two mills; it is possible that one of the mills was *Cleyportes melle*, which was the subject of several fourteenth century charters. However, none of the few pre-conquest charters mention ironworks and the land boundaries recorded do not appear to suggest that they encompass the area covered by the excavation. This is unfortunate but hardly unexpected in the light of other contemporary documentary records.

- 7.21.15 Assuming these charters cover a majority of the land which would form the parish of Mersham, it appears that for most of the Anglo-Saxon period Mersham was under the control of members of the aristocracy, being classed as bookland, that is held by title-deed. Though, for a brief period at least (858-863), a significant area there was in royal hands, king Ethelbert reconverted it to folkland, and such changes had significant implications in terms of the rights and obligations attached to it. Another important feature of lordship during this period was the addition of certain dens or woodland swine pastures to holdings like that at Mersham, thereby providing valuable appurtenances to the original property (Witney 1976, 78-103). In this case, six dens were recorded as belonging to the Mersham landholding in the charter of 863, which provided the holder with the forest rights of pannage and the taking of timber in an area covering parts of Headcorn, Smarden, Shadoxhurst, and particularly Bethersden (Sawyer 332; Wallenberg 1931, 216-20; Witney 1976, 260-1). Furthermore, these early charters provided the holder of Mersham with certain other rights and property in East Kent, which meant that Christ Church Priory received a valuable, parcellated manor from its lay donors in the eleventh century (Sawyer 1090).
- 7.21.16 Christ Church Priory, like many other ancient Benedictine houses, received a large proportion of its land holdings before the conquest and, with respect to its Kentish manors; a significant number of these had dens attached. Consequently, the Priory's holdings were to be found across a wide range of rural landscapes, which provided it with the opportunity to exploit its considerable assets for the maintenance of the house at Canterbury. From the charter and Domesday records concerning Mersham, this meant a mixed farming system based on the ploughlands, meadows, and woodland dens (including pannage for 30 pigs), timber production (also from the dens), salt production or rents from its two salt houses (probably sited in the Faversham/Whitstable area), the use of its two mills (both for flour production for the Priory and for milling the local peasantry's grain) and the collection of customary dues from these same peasants as food rents, boon works and other works. Though the Priory appears to have initially held the advowson of the parish church, it seems to have passed to the Archbishop at some stage in the eleventh century and have remained a possession of the see throughout the medieval period (Hasted 1972 [1797-1801], 600).

History of iron working at Mersham

- 7.21.17 One of the customary dues collected from the Priory's peasants was iron, and the earliest extant Bedels' Rolls for Mersham dating from the mid thirteenth century record the paying of 12 pieces of iron valued at 3s under the heading 'Dues' within the receipts section of the annual accounts. These entries suggest that such dues were still being paid in kind, especially as the stock figures for the iron on the back of the roll list; received 12, used 7, sold 2, remaining 3 (CCAL; DCc/Bedels' Rolls Mersham 1). In addition, it is possible that the pair of cartwheels, which the Priory also expected to receive under the customary dues, were iron shod and if so these presumably would have been made using the local iron. As suggested above, the provision of customary payments had probably been established on these manors from the late Anglo-Saxon period and it seems likely that those relating to the iron industry date from the same time.
- 7.21.18 As well as iron production, the documentary evidence indicates that smithing also took place at Mersham. The Priory employed a smith there, paying him 37d in 1265-6 and in that year his main work was shoeing the horses and making cartwheels. It is not clear whether he used the seven pieces of iron belonging to the Priory but it seems likely, though whether the remaining three were sent to Canterbury or stored at Mersham is unknown.

- 7.21.19 In terms of the iron industry, further research should provide ideas about when iron smelting ceased at Mersham (*i.e.*, when the customary dues became money payments rather than payments in kind). The manorial documents should also indicate whether smithing continued there, the type of work undertaken and, possibly, where the iron came from. Moreover, the central Priory records should provide information regarding its annual iron consumption, what it was used for and possibly where it was obtained. A brief look at the *Assisa scaccarii* and associated records has not yet revealed any large-scale purchases of iron but, like the manorial materials, a study of the whole series of these records for the thirteenth and fourteenth centuries would be the best approach. This might reveal answers to a number of questions such as; why iron production stopped at Mersham, was it replaced by any other ironworking centres belonging to the Priory, did smithing continue at Mersham, how much was spent on iron there, and by the Priory, and how did the place of the iron industry change over time within the local manorial economy?

The place of the industry within the Priory's manorial policy

- 7.21.20 An analysis of the manor of Mersham is central to any assessment of the village there; even though other manors held land in the parish, the Priory's manor held the greatest part and its manor house was sited close to the parish church. From a rapid scan of the manorial records it appears that, in the thirteenth century, the Priory had adopted a mixed farming policy on the demesne lands. Although wheat, barley, winter oats, spring oats, peas and vetch were grown, the acreage involved does not seem to have been very large, and similarly the livestock enterprises were relatively small at this time. Cheese and butter were produced on the home farm, all of which seems to have been sold rather than being sent to Canterbury. Other products sold included timber, hemp (evidence of a local textile industry?) and hides. Thus, at this time, the Priory appears to have seen Mersham as a revenue production unit rather than as a producer of goods for the house at Canterbury. It seems likely that a large proportion of these goods were sold locally; the Priory had shops and stalls at Mersham, which suggests there was a small commercial centre close to the manor house and church (for example, these assets provided 5s6d in rent for the year 1268-9; CCAL; DCc/Bedels' Rolls Mersham 2), but other markets may have been used from time to time depending on the local prices. The records also indicate that there was a high degree of inter-manorial trading between the Priory's manors in the region around Ashford and the Romney Marsh, and the beadle at Mersham seems to have been particularly active in this area. The only evidence for transactions located to date concern livestock, sheep pelts, corn and peas. Further research might reveal other commodities which may imply an even greater inter-dependency between the various manors, and that the Priory officials were thus operating a very complex management scheme with respect to the East Kent manors.

7.21.21 It would, therefore, be advantageous to examine these sets of manorial documents further to see how the economy at Mersham developed and what the implications were for the settlement there. So far it appears that the Priory's management policy in the thirteenth century required the beadle to hire several agricultural workers (two ploughmen, a harrower, a carter, a shepherd, a cowman, a pigman, a custodian of the lambs, and a custodian of the geese), as well as a carpenter, a smith, and a maid servant for the manor house, and it would be interesting to know whether this policy was maintained over the next century. Similarly, with respect to the farm buildings, it would be interesting to know if the hall, barns, cowshed and henhouse continued to be used (repair costs are a good indicator), and so whether the Priory was continuing its policy of farming some of its land directly and renting the rest to its sizeable body of peasant farmers. Such an understanding of the manorial economy over time would also aid our knowledge of the local peasant society.

Peasant Activities at Mersham

7.21.22 Unfortunately, although the fifteenth-century court rolls for Mersham survive, those for the fourteenth century do not. It is, therefore, difficult to build up a picture of the peasant economy for the earlier period. Consequently, any assessment is reliant on such matter as the customary dues, occupational surnames, charters, and documents such as the Mersham estreat roll of 1300-1. The customary dues recorded for Mersham in the mid thirteenth-century documents were the wood and hay carrying services, and certain other works, including thatching, ploughing, mowing and haymaking, plus a few others yet to be identified. Presumably, some of these were associated with the dens, including the levy of 'danger', which seems to have been linked to both pannage and wood cutting (Neilson 1928, 16-7). As might be expected, the ploughing service seems to have been the heaviest burden on the local peasantry, which may reflect the significance of arable farming on the desmesne, and it is possible this mirrors the situation for the local peasant farmers.

7.21.23 Even though a large proportion of the local population were probably primarily working on the land, either on their own holdings or as landless labourers, the occupational surnames suggest the presence of bakers, brewers, fishermen and millers within the community, while the names Walter mercator and John mercator imply that some were engaged in trading, possibly on a relatively large scale (CCAL; U15/21/10; DCc/ *Chart. Ant.* M1-6, M9). Interestingly, apart from the names constable, beadle, and sacrist, the only other occupation mentioned in this way was smithing (Walter fadery and Thomas smith) which may indicate the status of these men within the village (CCAL; U15/21/10; DCc/*Chart. Ant.* M3). As might be expected, those fined for breaking the assize of ale in 1300-1 were all women, and though it is difficult to find comparable records for the same date, the figures of 15 and 24 women fined (presumably for different dates in that year) may suggest that a considerable proportion of the Mersham households were involved in brewing and that some of their production was linked to the village's role as a local trading centre.

7.21.24 This very brief sketch of the Mersham peasantry would probably be enhanced by an examination of the court rolls. Even though dating only from the fifteenth century, they may provide a number of indicators about conditions during the earlier period. Furthermore, by looking at them in conjunction with the other documentation generated by the Priory officials, it should be possible to gain a more comprehensive picture of the community at Mersham that may, in turn, shed light on the disappearance of the iron industry there in the thirteenth century.

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