

**Channel Tunnel Rail Link
London and Continental Railways
Oxford Wessex Archaeology Joint Venture**

**Ceramics from Section 1 of the
Channel Tunnel Rail Link, Kent**

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1 CHAPTER 1: GENERAL INTRODUCTION

1.1 Introduction: quantities and general characteristics of the assemblages

The combined fieldwork interventions (post-dating evaluation) in Section 1 of the Channel Tunnel Rail Link, covering a distance of some 74 km between Folkestone and Springhead in Kent, produced approximately 102,000 sherds (almost exactly 1 tonne) of pottery ranging in date from the earlier Neolithic to the post-medieval/modern periods (Table 1.1, in which the sites are listed in spatial order from north-west to south-east). In addition some 1.146 tonnes of ceramic building material of Roman and later date were recovered from four recorded assemblages (material recorded to assessment level is not noted here). The overall quantities of pottery appear relatively modest when the scale of the fieldwork is taken into consideration, although directly comparable data from Kent are not easily found: it is unfortunate that figures cannot be readily extracted from major reports on work at Canterbury (Blockley *et al.* 1995) or Lullingstone (Pollard 1987, 164), for example, or from Pollard's general work (1988) on the Roman pottery of Kent. A few examples can be quoted, however. The excavation of a 6 ha sample of the roadside settlement at Westhawk Farm, Ashford, produced just over 73,000 sherds (862 kg) of early-middle Roman pottery alone (Lyne forthcoming), while outside the region 1.16 tonnes (an estimated 100,000+ sherds) of Late Iron Age and Roman pottery were recovered from excavation of *c.* 1.3 ha of a rural settlement complex at Claydon Pike, Gloucestershire (Green and Booth forthcoming). The recent excavations at Springhead in the context of CTRL Section 2 works have produced approximately 110,000 sherds, principally of Roman date (Lorraine Mephram pers comm). The quantity of pottery from Alec Detsicas's excavations of the Roman villa at Eccles is not known precisely, but can be estimated as probably in excess of 200,000 sherds (Malcolm Lyne pers. comm.). As an urban comparison, the material used by Davies *et al.* as the basis of their 1994 study of early Roman pottery from London amounted to *c.* 1.25 tonnes (Davies *et al.* 1994, 254), much of it from a single site in Newgate Street (*ibid.*, 1).

These crude comparisons can be used to inform a few simple observations concerning the type and extent of the sites from which the CTRL Section 1 pottery and other ceramic assemblages derive, as well as their degree of preservation and the sampling strategies applied in the course of their examination. First, none of the sites sampled constitutes a really major settlement (or a part thereof). Second, in contrast to this, and in comparison to many other archaeological projects, the scale of exposure of areas of archaeological interest was very considerable, amounting (in an extreme case) to some 37 ha of a single site at Beechbrook Wood, for example. Preservation was variable, however, and at Beechbrook Wood, Thurnham and Pepper Hill, to name sites with some of the largest ceramic assemblages,

ploughing had considerably truncated archaeological deposits in places, resulting in demonstrable attrition of the ceramics contained within them (seen most clearly in the case of the once-complete vessels placed in graves at Pepper Hill). This factor will certainly have reduced the potential assemblage size at these sites (although at Pepper Hill the effect of ploughing and other damage was to boost the sherd count), but similar conditions also applied at the previously quoted sites of Westhawk Farm and Claydon Pike, so these assemblages were not numerous (in terms of sherd count) simply because of superior preservation (nor because of extreme fragmentation).

Assemblage size is also critically affected by the extent of sampling. This was determined by factors including the nature of the fieldwork event: formal excavation, as at Thurnham, involved a variable but generally greater number of interventions into features and deposits (including 100% sampling of layers within some of the structures, for example) than at sites such as Beechbrook Wood which were examined under watching brief conditions. The level of intervention and sampling might also vary depending on site type, with preferential treatment (ie higher sampling levels) applied to sites of earlier prehistoric date (such as White Horse Stone, where almost every posthole of the Neolithic structures was fully excavated) and to cemeteries (including Pepper Hill), for example - part excavation of graves being meaningless. Outside this framework there was no routine and explicit modification of excavation sampling strategies, for example to specifically enhance the size of pottery assemblages from particular contexts, although this was occasionally done on an opportunistic basis. Overall, the site-to-site variations in the factors affecting final assemblage sizes were very considerable and almost entirely driven by non-ceramic concerns and criteria. The great majority of pottery was collected by hand excavation, although some material was recovered from sieving of deposits (usually of samples taken for recovery of ecofactual material). Such pottery, however, often contributed little of value to the understanding of individual site ceramic assemblages, but there were exceptions to this, as for example at White Horse Stone. Here there were almost no hand recovered finds from the Neolithic longhouse, but sieving showed that about three-quarters of the postholes contained small pieces of flint, charcoal, grain and pottery.

1.2 Post-excavation assessment and the background to analysis and reporting

The ceramic assemblages were subject to post-excavation assessments in line with the established overall project programme. These were carried out on a site by site basis by a variety of workers, drawn from the four contracting organisations involved in the fieldwork and from a pool of external specialists regularly employed by these organisations. These factors, and the lack of a detailed methodological framework within the overall project documentation, meant that there was some variation in the format and content of the

assessment reports. This was exacerbated by the widely varying time scale of their production, reflecting the extended time span of the main fieldwork programme (ie excluding evaluation phases), which ran for a period of 4 years (3 years (non-continuous) at Beechbrook Wood alone). Although the potential of assemblages for further analysis and reporting was indicated in many of the individual assessment reports, final decisions on the scale and scope of further work on the ceramics were made once all the assessments had been completed and the overall picture could be seen.

An Updated Project Design for Post Excavation Analysis (UPD) prepared by RLE provided the framework within which further work was carried out (URS 2003a). On the basis of that document detailed method statements (URS 2003b) and task lists were prepared by OWAJV, refining identification of assemblages for analysis indicated in the UPD and defining the standardised recording methodologies to be employed in addressing the broad questions identified in the UPD. For the purposes of the detailed method statements the pottery was divided into four main chronological blocks; early prehistoric (Neolithic to Early Bronze Age), later prehistoric (Middle Bronze Age to Iron Age), Late Iron Age to Roman and post-Roman (for further comment on these divisions see below). This represented a modification of the broad chronological scheme of the UPD to fit the ceramic realities of the region and the assemblages as understood. Detailed recording methods were specific to each of these four main period units, reflecting the general characteristics of the material, the potential to extract data of particular types and also the issues which it was thought possible or appropriate to address with ceramic data. The main focus was on achieving consistency of recording and thus inter-site comparability of results within the broad chronological blocks, but some comparability of results across the broad period boundaries was also achieved (see further below). In order to meet a tight schedule for the completion of reports, period-specific teams of specialists (again including in-house and external staff) were deployed to process and report on the material from individual sites, with work on several assemblages being carried out at the same time (this was particularly an issue for the relatively large later prehistoric and Roman groups).

The present report takes the form of overviews of the pottery from each of these chronological units in sequence, prepared by the leaders of the period-based teams. The overviews draw upon the reports on individual site assemblages (or, in some cases, groups of small, closely adjacent assemblages). Very brief summaries of each period/site assemblage are presented in the overviews (the sequence in which these sites are listed in these summaries and elsewhere is usually geographical, from north-west to south-east) but the nature of this approach means that for detailed information on specific sites it is essential to consult the relevant individual reports. These reports can be found in digital form on the Archaeology Data Service Website, as can the datasets which support the individual reports (ADS 2006,

<http://ads.ahds.ac.uk/catalogue/projArch/ctrl>). The period based overviews are very much centred on the CTRL assemblages themselves - it has not usually been possible to set these assemblages in their wider context to the extent that might have been considered desirable. Although none of the overviews therefore attempts to review the contemporary pottery from the county as a whole, it is hoped that they will make a significant contribution towards such work as and when it might take place.

It should be noted that both early-middle Anglo-Saxon pottery and ceramic building material fall somewhat outside this framework. In both cases the number of assemblages reported upon was very small. In the case of the Anglo-Saxon pottery the total quantity of material was also very small. In the case of the ceramic building material both Roman and post-Roman material was reported upon from a total of four rather disparate sites, with only one Roman and one post-Roman assemblage of any size. The individual assemblage reports have thus largely been left to speak for themselves, although brief references will be found in the Roman and post-Roman overview chapters.

The reported assemblages are identified by major period and size (in terms of sherd count and weight) in Table 1.1. The fully reported assemblages are shown in this table in **bold**. Figures derived from assessment report data which have been checked are given in ***bold italic*** while unchecked assessment data are in *italic*. In summary there are 10 fully reported early prehistoric assemblages totalling 1511 sherds (out of an overall total of pottery of this date of *c* 1533 sherds, 11465 g), 15 fully reported later prehistoric assemblages (counting the White Horse Stone complex, Beechbrook Wood and Saltwood Tunnel as single assemblages), totalling 24,226 sherds (out of a period total of 24,761 sherds, 264,982 g), 15 fully reported Late Iron Age-Roman assemblages totalling 64343 sherds (out of a period total of *c* 66,885 sherds, 60,3542 g) and 12 fully reported post-Roman assemblages, 7878 sherds (out of a period total of 8602 sherds, *c* 1,119,200 g +). In practice all the major assemblages and many of the lesser ones were reported upon, if only (in some cases) for the value of the pottery in providing dating for the site sequences from which it derived. Some small assemblages of pottery were not examined beyond the post-excavation assessment stage (indicated by italics in Table 1.1); summaries of this material can be found in the relevant assessment reports, in digital form (ADS 2006). It should be noted that for the most part the present reports do not take account of material from the field survey and evaluation phases of the project, although it is occasionally referred to (for example in the report on the Roman pottery from Snarkhurst Wood; Lyne 2006c). Information on this material can be found in digital form (ADS 2006). It is also important to note that the quantities of pottery and date ranges quoted in the assessment reports are not always exactly replicated in the more detailed reports. Data presented in the latter should be regarded as authoritative and are given in Table 1.1.

From the table it is clear that some sites, unsurprisingly, produced material from more than one of the major period groupings. However, there was rarely significant overlap between the ‘ends’ of these chronological ranges. Where such overlap did occur it was generally dealt with on the basis of practicality. Occasional sherds of Middle Bronze Age or later date might be reported in conjunction with larger early prehistoric assemblages, for example, but there were usually closer links between Middle and Late Bronze Age material (and more likelihood that they would occur on the same site) than between Early and Middle Bronze Age, providing the justification for placing the division between early and later prehistoric groups at the end of the early Bronze Age.

The most common instance of overlap can be seen with regard to the Late Iron Age. Even here, however, there were very few assemblages with a continuum of material through the Middle Iron Age into the Romano-British period (Beechbrook Wood was one such). In a few cases reports on later prehistoric assemblages have included Late Iron Age material when there was a ‘tail’ of activity of that date at the sites in question (for example, at Little Stock Farm). Much more common were assemblages with Late Iron Age pottery as their earliest significant component, almost always associated with Roman material. In these cases the two were recorded together. This approach preserves as far as possible the integrity of individual site assemblages and facilitates understanding of their sequences. For a comprehensive view of the later Iron Age ceramics of the project, however, it will be necessary to refer to the later prehistoric pottery reports as well as those concentrating specifically on the Late Iron Age and Roman periods, and some issues of absolute chronology remain unresolved.

The overlap between Roman and post-Roman assemblages was minimal. Saltwood Tunnel is one of the very few sites where Roman and Anglo-Saxon material occurred together (and even here there was a degree of spatial separation between features of the two periods). Here the material of the different periods is reported separately. Only at Thurnham was a single possible early Anglo-Saxon sherd recorded alongside the late Roman material to which it was chronologically most closely related. The total number of early and early-middle Anglo-Saxon assemblages was small. They have been reported separately from late Saxon material, which invariably occurs as an early component of medieval assemblages and is grouped with them. The general dearth of large assemblages of medieval date clearly reflects the avoidance by the CTRL route of modern nucleated settlements which subsume medieval predecessors. The complete absence of significant post-medieval pottery assemblages is presumably explained in the same way. None of the small post-medieval groups that was recovered merited detailed reporting subsequent to assessment.

The detailed recording methodologies were tailored to suit the particular characteristics of the ceramics of each of the main chronological units (but were standardised within these units), and were in part determined by the period-specific team leaders. These

methodologies are discussed further in the separate period-based sections of this report. Despite variation, however, all were based on accepted national standards (the recommendations of a variety of period-specific special-interest study groups) and consistently employed sherd count and weight as standard measures, allowing cross-period comparison of pottery quantities. Approaches to quantification of vessel types reflected period- and ceramic technology-based variation more closely, however. Approaches to chronology were also variable. Earlier prehistoric material was assigned to ceramic style phases with broad chronological significance. Radiocarbon dating was used as far as possible to provide regionally-specific definition of these various styles. A broadly similar approach was applied to the later prehistoric ceramics. For most site assemblages, however, the later prehistoric material was placed in a sequence of ceramic phases. This was partly because of the lack of a well-understood framework for later prehistoric ceramics in this part of Kent at the onset of the project, but also because much of the work of recording and reporting had to be carried out before the relevant site sequences were finalised. Radiocarbon dating has again been applied where possible to provide definition for schemes of ceramic phases. Despite significant progress here the detailed chronology of Iron Age ceramics in west Kent (including that of the 'Late' Iron Age) remains problematic in places.

Dating of Roman and post-Roman assemblages has generally been based on traditionally-used associations (eg with an emphasis on continental and extra-regional imports to provide definition) and established regional frameworks. For these periods it has been easier to apply date ranges expressed in calendar years (the RCHME convention adopted for this project), both to individual records and to context assemblages. Even so, many of the ranges thus defined are broad. For the prehistoric material this is clearly a much greater problem and for many records the date ranges can be of little more than notional value.

1.3 Ceramic building material

As mentioned above, only four ceramic building material assemblages were fully reported. These were from Northumberland Bottom (15 kg; Smith 2006a), Thurnham (884 kg; Betts 2006), Parsonage Farm (240 kg; Betts and Smith 2006) and Bower Road (7 kg; Smith 2006b). The Thurnham assemblage was almost entirely of Roman date while that from Parsonage Farm was all medieval. The smaller assemblages from Northumberland Bottom and Bower Road contained a majority of Roman material, but in the former case there was evidence for a post-medieval brick clamp and at Bower Road it is likely that the Roman brick and tile was entirely reused material that had not originated on the site. These individual site assemblage reports can be found alongside the other site/period based ceramic reports.

Table 1.1: Approximate overall quantities of pottery from CTRL Section 1 excavations and watching briefs by major period

SITE NAME	EVENT CODE	Total early prehistoric		Total late prehistoric		Total Late Iron Age-Roman		Total early and mid Anglo-Saxon		Total late Saxon and medieval		Total post-medieval		APPROX TOTAL ALL PERIODS	
		Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	COUNT	WEIGHT (g)
Pepper Hill, Southfleet	ARC PHL97			80	273	(26760)	(192325)							(26841)	(192613)
	ARC NBR98									1	15				
Whitehill Road Barrow (Area 330 Zone 1)	ARC 330 98	4	50	25	173	1441	15972					2	29	1472	16224
Area 330 Zone 2	ARC 330 98			58	415	(491)	(4033)							(576)	(4707)
	ARC SSR 99			27	259										
W of Northumberland Bottom (Area 330 Zone 3)	ARC WNB 98	212	2425	712	6019	3412	44553	1	10	(509)	(5957)	1	36	4847	59000
	ARC 330 98			1237	13906	503	6497							1740	20403
	ARC HRD 99			6	22	432	4434							438	4456
Area 330 Zone 4	ARC 330 98			1706	25554	453	7325			107	749	6	22	2272	33650
Cobham Golf Course (Area 330 Zone 5)	ARC CGC 98	48	156	943	8742									991	8898
Cuxton (Area 330 Zone 6)	ARC CXT 98			237	6929	8	25	3 vessels ?		1	2	5	2305	254	9261+
Nashenden Valley	ARC NSH 98					55	1331			5	29	4	35	64	1395
White Horse Stone	ARC WHS98	(671)	(2698)	6920	98094	(193)	(1122)			(1469)	(16629)	(4)	(12)	(9431)	(119267)
	ARC PIL98			154	577										
	ARC BFE99			9	58										
	ARC BFW98			2	19										
	ARC420 58+200 - 59+500			9	58										
West of Sittingbourne Road	ARC 420/61+900 - 62+000									301	3037			301	3037
Thurnham Roman Villa	ARC 420/99 62+200 - 63+000					724	4915							724	4915
	ARC HHW 98			1	13	1	1							2	14

SITE NAME	EVENT CODE	Total early prehistoric		Total late prehistoric		Total Late Iron Age-Roman		Total early and mid Anglo-Saxon		Total late Saxon and medieval		Total post-medieval		APPROX TOTAL ALL PERIODS	
		Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	COUNT	WEIGHT (g)
	ARC 420/99 63+400 - 63+900													6	78
	ARC THM 98			28	43	13911	127673			384	2824	9	37	14332	130577
	ARC 420/99 63+900 - 66+350													7	60
Snarkhurst Wood	ARC SNK99			15	155	1426	14095			14	90	1	14	1456	14354
	ARC 420 99/66+300					415	3991			3	48	5	35	423	4074
	ARC 420 99/67+100													12	71
South-east of Eyhorne Street	ARC 420 68+100 - 68+500 99	86	566	591	5006	225	1252					23	74	925	6898
+Holm Hill	ARC HOL99	18	73	25	109	19	256			24	143	14	267	100	848
Sandway Road	ARC SWR99	139	505	80	535					7	?	17	?	243	1040+
Chapel Mill	ARC CML 99			12	37	34	274					17	112	63	423
	ARC 420/73+700-78+150													46	683
Hurst Wood & E. of Newlands	ARC HWD98			8	16	10	27							18	43
	ARC NEW98			(76)	(444)	(22)	(97)							(99)	(543)
	ARC 430 79+950-80+150 99											1	2		
	ARC 430 80+150-81+800 99													9	13
	ARC 430 81+800-82+000 99					48	132							48	132
	ARC 430 82+000-83+800 99					61	953							61	953
Land West of Leda Cottages	ARC 430/83+200/01					1882	21026							1882	21026
Tutt Hill, Westwell	ARC 430/99 83+800 - 84+900	27	99	2235	10965	62	568	18	28	106	720	9	145	2457	12525
Parsonage Farm	ARC PFM 98			2	3	29	227			3499	59378	2	20	3532	59628
Beechbrook Wood	ARC BWD98	(171)	(2343)	25	417	(3775)	(53116)							(7448)	(101680)
	ARC BBW00			3341	42144					136	3660				
Lodge Wood	ARC 430/99 87+300-87+800					378	12999							378	12999
Boys Hall Balancing	ARC BHB 99			1	7	517	3439							518	3446

SITE NAME	EVENT CODE	Total early prehistoric		Total late prehistoric		Total Late Iron Age-Roman		Total early and mid Anglo-Saxon		Total late Saxon and medieval		Total post-medieval		APPROX TOTAL ALL PERIODS	
		Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	Count	Weight (g)	COUNT	WEIGHT (g)
Pond															
Blind Lane, Sevington	ARC BLN 98			<i>34</i>	<i>245</i>	<i>343</i>	<i>2724</i>			<i>44</i>	<i>399</i>			<i>421</i>	<i>3368</i>
Mersham	ARC MSH 98			<i>10</i>	<i>41</i>	<i>11</i>	<i>116</i>			<i>253</i>	<i>2738</i>	<i>14</i>	<i>178</i>	<i>288</i>	<i>3073</i>
Bower Road, Smeeth	ARC 440 99/95+900-97+100					<i>4175</i>	<i>39578</i>			<i>135</i>	<i>1225</i>	<i>3</i>	<i>65</i>	<i>4313</i>	<i>40868</i>
Little Stock Farm	ARC LSF99	18	49	2456	17376	9	47	1	50	110	959	<i>34</i>	<i>175</i>	<i>2628</i>	<i>18656</i>
Church Lane & E. of Station Rd	ARC CHL98			<i>50</i>	<i>369</i>	<i>23</i>	<i>129</i>			<i>51</i>	<i>285</i>	<i>7</i>	<i>98</i>	<i>131</i>	<i>881</i>
	ARC STR99					<i>272</i>	<i>1720</i>					<i>10</i>	<i>226</i>	<i>282</i>	<i>1946</i>
Westenhanger Castle	ARC WGC98	2	14							<i>(656)</i>	<i>(5791)</i>			<i>(867)</i>	<i>(7561)</i>
	ARC WSG99			<i>209</i>	<i>1756</i>										
Saltwood Tunnel (all events counted together)	ARC SLT98	(137)	(2487)	(3437)	(24203)	(4765)	(36570)	(143)	(6029)	(359)	(3805)	(74)	(709)	(8915)	(73803)
	TOTALS	<i>1533</i>	<i>11465</i>	<i>24761</i>	<i>264982</i>	<i>66885</i>	<i>603542</i>	<i>166</i>	<i>6117+</i>	<i>8174</i>	<i>108483+</i>	<i>262</i>	<i>4596+</i>	<i>101861</i>	<i>1000090+</i>

Figures in brackets are combined for several or all elements of a site name (eg Pepper Hill Roman data)

Figures in bold are derived from detailed site/period specialist reports

Figures in bold italic are derived from checked assessment data

Figures in italic are derived from unchecked assessment data

Totals in bold italic include checked or unchecked assessment data

Totals in italic are derived solely from unchecked assessment data

2 CHAPTER 2. EARLIER PREHISTORIC POTTERY

with a note on some unusual Late Neolithic fired clay objects

by Alistair Barclay and Emily Edwards

2.1 Introduction

Earlier prehistoric pottery (1515 sherds, *c* 11.4 kg), dating from the Earliest Neolithic to the end of the Early Bronze Age (4000-1600 cal BC), was recovered from a total of 11 principal sites along the route of the Channel Tunnel Rail link (Fig. 2.1). These figures include four sherds (50 g) of pottery from Whitehill Road discussed here on the basis of the post-excavation assessment record alone. With the notable exception of the assemblages from White Horse Stone and Pilgrim's Way (a total of 669 sherds weighing *c* 2.7 kg), the assemblages were all relatively small (171 sherds or less) containing relatively few vessels (see Appendix Table 2.4). Pottery was recovered from a wide range of contexts that include tree-throw holes, pits, burials, post-built structures, ditches and layers, and as redeposited material. To some extent condition and the brokenness of pottery groups was directly influenced by depositional practice (eg deliberate burial in pits and graves). Six complete (reconstructed) or semi-complete vessels were recovered from Beaker/Early Bronze Age funerary deposits and other semi-complete vessels were recovered from Middle-Late Neolithic and Early Bronze Age pit deposits.

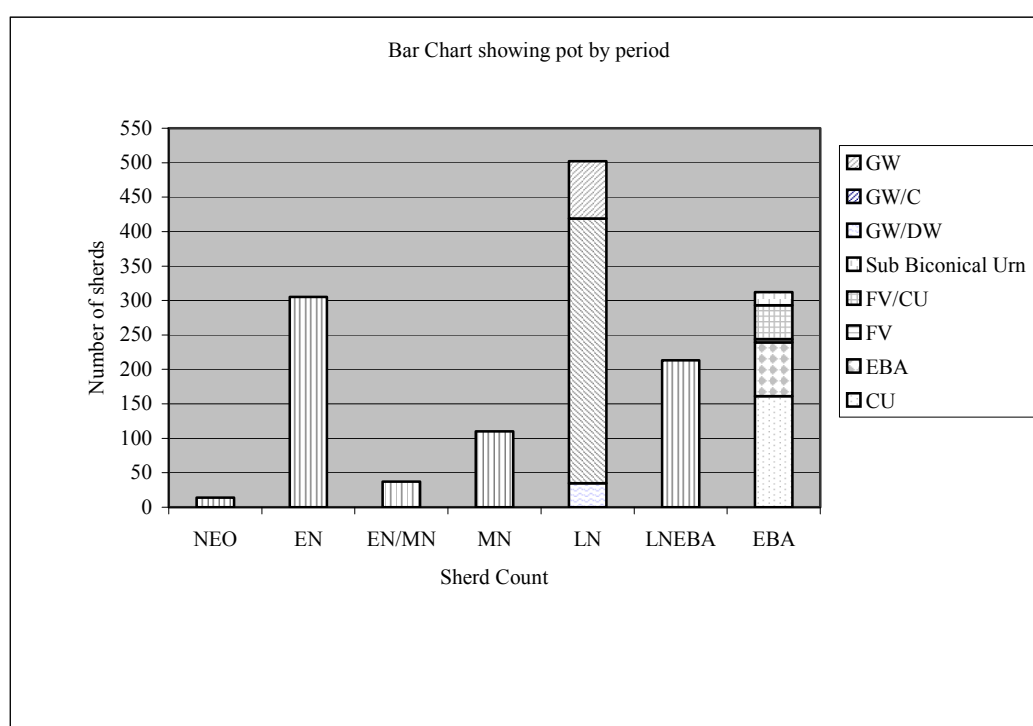
This report also considers the wider significance of a decorated fired clay ball/spindlewhorl recovered from a Grooved Ware pit at Eyhorne Street and a shaped clay object from a Beaker pit at Beechbrook Wood.

2.2 Aims of the ceramic overview

The CTRL project has presented the opportunity to analyse a relatively large sample of pottery from a range of contexts from the county of Kent. Section 1 of CTRL crosses the chalk to the north, with associated deposits of clay with flints, and then follows the scarp slope of the North Downs to the coast (Figs 2.1-2.3). Of some 30 sites excavated 11 principal ones produced assemblages of earlier prehistoric pottery (Table 2.4 and breakdown of the assemblage given in Fig. 2.4). In the case of most of these sites the focus of excavation was the recording of archaeological remains of later prehistoric, Roman and post-Roman date. However, notable exceptions include the Mesolithic site at Sandway Road (Trevvarthen 2006), five sites with barrows (Cobham, Tutt Hill, Whitehill Road, Beechbrook Wood and Saltwood Tunnel: Davis 2006; Brady 2006a-b; Bull 2006; Riddler and Trevvarthen 2006) and the dry valley at White Horse Stone/Pilgrim's Way (Hayden 2006a). With the exception of the sites with barrows, no other sites with recognisable prehistoric monuments were excavated.

Monuments of Neolithic date are rare in Kent and are distributed along a few river valleys and along stretches of the present day coast. In terms of monument numbers and density the spatial distribution is somewhat similar to that found in the adjacent counties of South-East England and very different from the concentrations of monuments found in Wessex and parts of the Upper Thames valley. The northern route of CTRL Section 1 passes through the Medway Valley, one of the area's major groups of monuments. South-east of here, however, it crosses an area, which on current evidence, is devoid of Neolithic monuments (see Ashbee 2004, 11).

Figure 2.4: A breakdown of the entire assemblage by period and ceramic style



2.3 Use of nomenclature

This report follows standard terminology when referring to the various styles of earlier prehistoric pottery (see Gibson 2002). It is accepted that many of the current descriptive labels (eg Ebbsfleet Ware) are unsatisfactory, but they provide a familiar and useful shorthand for discussion and reference. Herne's use of the term Carinated Bowl is adopted to describe the earliest type of bowl pottery (1988) and preference is given to the use of Decorated Bowl over the various regional styles (ie Mildenhall and Whitehawk) (see Smith 1974). The traditional Peterborough Ware terminology (Ebbsfleet, Mortlake and Fengate) is retained over the more modern use of Impressed Ware on the basis that the former still carries more meaning. It is acknowledged that Neolithic pottery assemblages of 4th and early 3rd

millennium date would be better described following an approach based on periodisation and assemblage variation (range of vessels) as suggested by Cleal and others (see Cleal 1992), similar to the accepted current practice of describing later prehistoric ceramics (see Morris this volume). However, given the size of the various site assemblages under discussion here such a novel approach would be inappropriate.

The pottery of the 4th to early 2nd millennium cal BC can be viewed as a series of overlapping traditions of differing duration, reflecting both continuity and discontinuities such as the introduction of novel forms and changes in style and materials. To help understand this sequence a model of periodisation is adopted based on a series of stages (see Table 2.1). The bowl tradition can be seen as a continuous and possible gradual development from the first use of pottery (Carinated Bowl) through to the full development of the Peterborough Ware styles (Impressed Wares: Ebbsfleet, Mortlake and Fengate). It is argued elsewhere (Barclay 2006; Barclay forthcoming) that within the carinated bowl phase it is possible to differentiate between early and late assemblages and the same may be true of the so-called plain and decorated bowl phase. The position of Ebbsfleet ware within this sequence remains uncertain for the simple reason that there are still relatively few radiocarbon dates associated with these vessels. However, it has been suggested that this style developed around the 36th century cal BC and that Mortlake/Fengate ware substyles developed out of it in the period 3350-2800 cal BC (Barclay 2006; Gibson and Kinnes 1997).

The Grooved Ware tradition of the 3rd millennium cal BC has its beginnings in the 29th century cal BC (Garwood 1999) and appears to have been introduced from northern Britain. Overlap between the southern substyles has been recognised for some time and it is probable that the Woodlands substyle developed out of an earlier Clacton substyle (see various papers in Cleal and MacSween 1999). The Durrington Walls substyle appears on current evidence to have developed in parallel with the other two (see Garwood 1999). Use is made here of the classifications devised by Longworth and others to describe the various Grooved Ware substyles (Wainwright and Longworth 1971).

For Grooved Ware, Beaker and Early Bronze Age pottery the standard descriptive terminology is adhered to (Longworth 1984; Clarke 1970), along with the more recent work of Needham (1996; 2005) when discussing typo-chronology and sequence.

2.4 Chronology

The CTRL project provided a good opportunity to obtain high quality radiocarbon dates for a range of pottery associated contexts (Allen 2006). In total some 33 radiocarbon dates were obtained for such contexts, which has significantly increased the number of published dates available for Kent. These dates are summarised in Table 2.1 (see Fig. 2.5) and further details

can be found in the individual site reports, their corresponding radiocarbon reports, and the scheme wide radiocarbon report (Allen 2006). This section will summarise these results.

The earliest pottery assemblage is that associated with the construction and use of the building at White Horse Stone, which has been dated to the period 3900-3750 cal BC (Allen *et al.* 2006). This assemblage includes relatively few featured sherds, although what is present would not be out of place in a Carinated Bowl assemblage. The radiocarbon dates for the house are entirely consistent with other Carinated Bowl assemblages from southern Britain (Barclay 2006; forthcoming). It is generally accepted that decorated and plain bowl developed out of these earlier carinated assemblages during the 37th century cal BC and at a time when causewayed enclosures were being constructed (Barclay 2006). Plain Bowl occurred on six sites, mostly in small quantities, but there were no suitable opportunities to obtain radiocarbon dates. Small assemblages of Decorated Bowl occurred at White Horse Stone, Saltwood Tunnel and Sandway Road (Table 2.4). At White Horse Stone the pottery has affinities with the Mildenhall style, while the group of pottery from Saltwood has closer affinities with the Whitehawk style. Radiocarbon dates were obtained for both feature groups, the date from Saltwood fell within the period 3650-3350 cal BC, while those from White Horse Stone turned out to be later Bronze Age indicating that the pottery was almost certainly redeposited.

Despite the recovery of Peterborough Ware from seven sites there was little opportunity to obtain radiocarbon dates for these occurrences. It has been suggested that Ebbsfleet Ware could have developed during the 36th century cal BC, at a time when new monuments (cursuses) were appearing and old monuments (causewayed enclosures and long barrows) were going out of use (Barclay and Bayliss 1999; Barclay 2006). Developed forms of this style (generally more profusely decorated) and other styles of vessel (Mortlake and Fengate) appear after 3350 cal BC and appear on present evidence to have continued in use until sometime in the 28th century cal BC. The single date (NZA-19918 3350-3030 cal BC) from a pit (2507) containing Fengate Ware at Little Stock Farm falls well within this range.

The chronological development of Grooved Ware, Beaker and Early Bronze Age pottery in southern England has been critically reviewed by Paul Garwood (1999) and Stuart Needham (1996; 2005). Their schemata are adopted here. On present evidence Grooved Ware appears around 2900/2800 cal BC and continues in use until about 2200 cal BC. There may be some overlap (50-100 years) with the final use of the Mortlake/Fengate styles of Peterborough Ware and possibly considerable overlap (50-250 years) with the earliest use of Beakers. The series of early dates obtained for groups of Clacton style Grooved Ware from a total of 26 pit deposits at White Horse Stone/Pilgrim's Way that fall within the period 2900-2500 cal BC is as expected (see Garwood 1999). The Grooved Ware with Durrington Walls affinities from a pit at Eythorne Street has a similar date range. Taken together the two sets of dates indicate little overlap with the emergence of Beaker pottery.

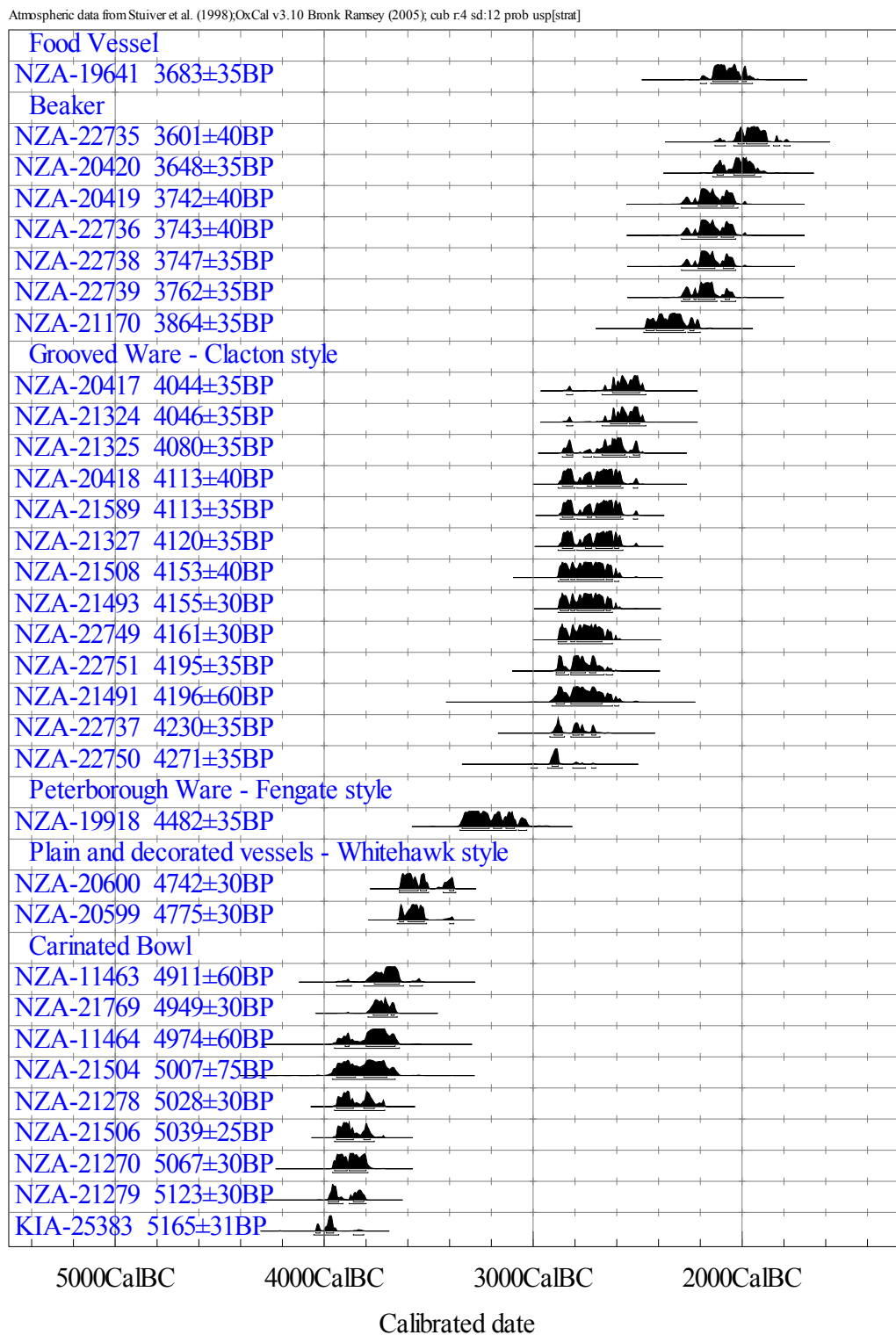
The development of Beaker pottery has been recently reconsidered by Needham (2005). He suggests that Beakers are generally rare before 2200 cal BC, and this may well be the case in Kent, with an explosion of vessel types after this date (*ibid*). Only one date (NZA-21170 2470-2200 cal BC) from CTRL Section 1 falls before 2200 BC, with the rest (NZA-22735-6, NZA-22738-9) falling within the range 2290-1780 BC. The early date is likely to be anomalous as two later dates from the same pit (NZA-22738-9) are almost identical. The pottery from this pit can be placed in Clarke's (1970) East Anglian and Barbed Wire styles, and represents an important group (see below). The dates (NZA-22735-6) obtained for the multiple Beaker burial at Northumberland Bottom are broadly consistent with those from Beechbrook Wood (Table 2.1 and Fig. 2.5).

A single date (NZA-19641 2200-1940 cal BC) for a Food Vessel associated with a barrow inhumation from Saltwood Tunnel is consistent with the suggested currency of this ceramic style (Needham 2005, 206). The widely accepted view that Food Vessels occurred alongside the main floruit of Beaker pottery is once again confirmed by this result. Significant here is the fact that the decorative motif of incised diamonds is also common to Beaker pottery (see below).

Table 2.1: Selected radiocarbon dates associated with pottery deposits (see Fig. 2.10)

Phase	Ceramic style	Site	Context	Lab no	Date	Range
Earliest Neolithic 4000-3650 BC	Carinated Bowl	White Horse Stone	Postholes and hearth associated with a longhouse	See Allen <i>et al.</i> 2006	Ditto	Estimated to fall between 3900-3750 cal BC
Early Neolithic 3650-3350 BC	Plain and decorated vessels- Whitehawk style	Saltwood	Pit deposits SG136 fill 3371 SG175 fill 3280	NZA-20599 NZA-20600	4775±30 BP 4742±30 BP	3650-3380 cal BC 3640-3370 cal BC
Middle Neolithic 3350-2800 BC	Fengate style Peterborough Ware	Little Stock Farm	Pit 2507	NZA-19918	4482±35 BP	3350-3030 cal BC
Late Neolithic 2800-2300 BC	Clacton style Grooved Ware	White Horse Stone and Pilgrim's Way Eyhorne Street	Multiple pit deposits Pit deposit	See Allen <i>et al.</i> 2006 NZA-20417 NZA-20418	Ditto 4044±35 BP 4113±40 BP	Fall within the range 2900-2500 cal BC 2840-2460 cal BC 2880-2506 cal BC
Early Bronze Age 2300-1600 BC	Beaker	Beechbrook Wood	Pit 1374	NZA-21170 NZA-22739 NZA-22738 NZA-22735 NZA-22736 NZA-20419 NZA-20420 NZA-19641	3864±35 BP 3762±35 BP 3747±35 BP 3601±40 BP 3743±40 BP 3742±40 BP 3648±35 BP 3683±35 BP	2470-2200 cal BC 2290-2030 cal BC 2280-2030 cal BC 2120-1780 cal BC 2280-1980 cal BC 2280-1970 cal BC 2140-1910 cal BC 2200-1940 cal BC
	Food Vessel	Saltwood	Barrow grave			

Figure 2.5: Radiocarbon results from contexts associated with early prehistoric pottery.



2.5 Methodology

Recording of this material followed the nationally-accepted standards set out by the Prehistoric Ceramics Research Group (hereafter PCRG; PCRG 1995; 1997). These cover approaches to recording the basic ceramic attributes defined in the post-excavation specification. In addition, any evidence for characteristics (such as soot, lime-scale or abrasion) which shed light on vessel use was noted and sherd thickness was recorded. This last aspect has been shown to be of considerable value in characterising prehistoric assemblages, to the extent that in combination with other attributes it can assist in assessment of the date of groups which may contain few other diagnostic characteristics.

Sherds were assigned to fabric either on macroscopically observed criteria or using a binocular microscope at up to x20 magnification. Site or site-group specific fabric series were established. These reflect the almost universally local nature of early prehistoric pottery production. The pottery was characterised by fabric, form, surface treatment, decoration and colour. The sherds were divided into fabric types and groups by principal inclusion type. Density of inclusions was measured using standard charts (Fitzpatrick 1984; cf Matthew *et al.* 1991).

The assemblages were quantified using sherd count and weight by fabric/record per context. Rim diameter and percentage of rim present (to the nearest whole percentage) were recorded, where rim sherds were sufficiently large enough.

Table 2.1 delineates the radiocarbon date ranges currently associated with Neolithic and Early Bronze Age wares. Where it was not possible to provide a ware code, due to lack of diagnostic criteria, a date range has instead been provided. Figures 2.6-2.9 show a selection of illustrated vessels recovered from sites along the route; these are representative of the range of wares identified.

Only the more diagnostic featured sherds are listed in the catalogues. The results were entered into an Excel table which forms part of the site archive.

2.6 Site assemblage summaries

2.6.1 Introduction

A summary breakdown of all 11 site assemblages (Whitehill Road, Northumberland Bottom, Cobham, White Horse Stone/Pilgrim's Way, Eythorne Street, Sandway Road, Tutt Hill, Beechbrook Wood, Little Stock Farm, Westenhanger Castle and Saltwood Tunnel) is given in Table 2.4. A more detailed report exists for all of these sites except White Hill Road, the information for which is based upon assessment date (Rayner 2001). Summaries of the larger and/or important assemblages (Northumberland Bottom, White Horse Stone and Pilgrim's Way, Eythorne Street, Sandway Road, Tutt Hill, Beechbrook Wood and Saltwood Tunnel) are given below and a range of vessels is illustrated in Figures 2.6-2.9.

2.6.2 Northumberland Bottom (Edwards 2006a)

This assemblage contained two significant finds. Two Beakers (Fig. 2.8, Nos 10-11) were recovered from a multiple flat grave at Wrotham Dry Valley and a Collared Urn was recovered from a pit at Hazells Farm (Fig. 2.9, No. 2) (Askew 2006).

The two Beakers have been compared to other vessels classified as belonging to Clarke's East Anglian style (1970). The more complete vessel (Fig. 2.8, No. 10) having a slightly more sinuous W/MR/East Anglian profile than appears to be usual for Kent. The vessel from the higher contexts associated with a male skeleton was fragmented and only 30% complete; this vessel has a more typical globular profile (Fig. 2.8, No. 11) for an East Anglian style vessel from Kent.

The Collared Urn (Fig. 2.9, No. 2) was only 30-40% complete, and was found in an inverted position within a pit. It is a late style vessel (Second Series South Eastern) typical of published examples from Kent, on which 'tongue and groove' coil joins are clearly visible. A total of 11 Collared Urns were mentioned by Longworth (1984, 216-217), mostly from the north-east Kent and the Isle of Thanet; no new vessels have been published since. The unusual feature of this Collared Urn appears to be the decoration; twisted cord filled triangles have not been noted in Kent before, although Longworth states that they are a tradition not restricted to any particular part of Britain they do appear more frequently on vessels in the north and north east of Britain.

2.6.3 White Horse Stone and Pilgrim's Way (Edwards 2006c)

The persistent use of place at this site, and the later Neolithic reuse of earlier areas of activity, is reflected by the ceramic record and is generally unusual for Kent. There are few other published examples of assemblages spanning such a breadth of time from the county of Kent. Pottery recovered from the Ebbsfleet valley includes Peterborough Ware and Beaker but this is not all from one site. The only suitable comparison may be the assemblage from Eythorne Street. The White Horse Stone/Pilgrim's Way assemblage is particularly notable for its Carinated Bowl, Decorated Bowl, Mortlake Ware and Clacton style Grooved Ware (see Figs 2.6-2.7). A total of 666 sherds (2681 g) of early prehistoric pottery were recovered and a total of 22 vessels were identified (19 illustrated- see Edwards 2006c). The most important groups were the material associated with the houses (contexts 4899, 4919, 5283, 4866, 4861, 4824), the Grooved Ware features (contexts 898, 904, 913, 958, 964, 966, 7024, 5256, 4965, 4943, 4874, 4830) and the Peterborough Ware pits (features 714 and 711 near the Pilgrim's Way house) (Hayden 2006a).

The Early Neolithic sherds from both houses were small, worn and abraded but included a tiny fragment of rolled rim from a Plain Bowl (Fig. 2.6, No. 3), and a rim and a shoulder sherd from Carinated Bowls (Fig. 2.6, Nos 1-2).

The most significant element of the Peterborough Ware group is an almost complete profile of a Mortlake Ware bowl, which has a base decorated with concentric circles (Fig. 2.6, No. 13).

The total assemblage from White Horse Stone and Pilgrim's Way is dominated by shell-tempered Grooved Ware (71%), of which all the identifiable forms belong to the Clacton substyle, and include straight sided tub forms with horizontal bands and wavy applied cordons (Fig. 2.7, Nos 1-5). Collared Urn sherds (Fig. 2.9, No. 3) were recovered from a tree throw hole (5128); its presence on such a site is of significance as such pottery is only rarely associated with domestic contexts (Longworth 1984). A miniature vessel (Fig. 2.9, No. 4) is most likely to be of Early Bronze Age date, although a few miniature vessels are known from Grooved Ware associated sites (eg Barrow Hills, Radley (Cleal 1999, fig 4.32, P34 and P36)) and, given that it was not recovered from a secure context, its precise date remains uncertain.

2.6.4 Eyhorne Street (Edwards 2006d)

This assemblage, like the much larger assemblage from White Horse Stone, is significant for its representation of persistent use of place. However, the assemblage is relatively small, consisting of just 86 sherds recovered from only six features: four pits, a posthole and a tree throw hole (Hayden 2006b). A minimum of 11 vessels were identified. Key elements of the assemblage include Early Neolithic Bowl, Durrington Walls style Grooved Ware (represented by relatively large fragments) and Beaker (Edwards 2006d).

The presence of possible Carinated Bowl and Ebbsfleet Ware, although in very small quantities, is a significant indication of continual use of the site. The range of forms and fabrics, especially notable within the Grooved Ware and Beaker associated features, suggests domestic activity, supported by the charred residue on the Grooved Ware (Fig. 2.7, No. 10). The raw materials for potting appear to have been procured locally; although some of the inclusions noted in the fabrics are likely to be naturally occurring.

The Grooved Ware is stylistically peculiar, and is influenced by both the Durrington Walls and Clacton substyles, perhaps a reflection of its early date within the currency of Grooved Ware (see section on Chronology: Table 2.1 and Fig. 2.7). The 'Greek Key' decoration on (Fig. 2.7, No. 7) is unusual and has close affinities with certain prestigious objects (eg one of the chalk plaques from Amesbury (Clarke *et al.* 1985, pl 3.48). This has no precise parallels within published Grooved Ware assemblages, although a few sherds with more simple key motifs are known, for example from the Marden Henge, Wilts (Wainwright 1971, 211, fig. 15:P39) and from the West Kennet Enclosure (Hamilton 1997, fig. 61:18). This may suggest contacts outside the immediate locality on the part of the potters. Other sherds have decoration more typical of the Durrington Walls substyle (Fig. 2.7, Nos 6, 8-10). The Grooved Ware was recovered from pit deposits, which also included a fragment of a

small decorated clay ball (Fig. 2.7, No. 11) with a possible perforation, the significance of which is further discussed below (Hayden 2006b).

The assemblage also includes two significant Beaker vessels. One vessel (Fig. 2.8, No. 12), belonging to Clarke's Southern group, has parallels with other funerary Beakers from Kent (see Clarke 1970). The other Beaker is of rusticated style and has the unusual addition of a prefiring drilled hole (Fig. 2.8, No. 13). This type of vessel is rare in Kent, although a number are known from East Anglian (Bamford 1982).

2.6.5 Sandway Road (Edwards 2006e)

Although the ceramic assemblage is small (139 sherds, 505 g), it includes material of Early-Late Neolithic date (Table A1). The assemblage appears to be predominantly earlier Neolithic (Early Neolithic and possibly Ebbsfleet, Mortlake and Fengate style Peterborough Ware- see Fig. 2.6, Nos 14-16), and largely redeposited. A total of nine vessels was identified and ten sherds illustrated (see Edwards 2006g). The sherds were generally in a worn condition; the mean sherd weight per context ranged from 1 to 34 g, of which the majority was under 7 g. The pottery is likely to represent small-scale habitation of the site over a period of time that covered most of the Neolithic period. Unlike other CTRL sites nearly all the pottery was probably discarded on to the ground surface rather than placed in pits (eg Saltwood Tunnel and Beechbrook Wood: Riddler and Trevarthen 2006; Brady 2006b).

2.6.6 Tutt Hill (Edwards 2006f)

Although a small ceramic assemblage, almost the entire Neolithic was represented at Tutt Hill, with the exception of the Late Neolithic. This assemblage was recovered from pits, ring ditches and from colluvium (Brady 2006a) and largely comprised Plain Bowl and Peterborough Ware, although a small amount of Beaker pottery was also identified.

2.6.7 Beechbrook Wood (Edwards 2006g)

This site produced a regionally important assemblage of Beaker vessels (173 sherds 2343 g) from which a minimum of 15 vessels were identified. Most of this pottery was recovered as a single pit group and is dominated by vessels of Clarke's East Anglian, Barbed Wire and Southern styles (1970). The most important groups of pottery were recovered from pits 1374 (14 Beaker vessels), 1716 (one complete Beaker vessel) and 1910 (two Early Neolithic Plain Bowls). The pottery from pit 1374 was particularly remarkable for its good condition and freshly broken appearance.

Some 29% of sherds were identified as earlier Neolithic, of which eight were refitted to form part of a large baggy or carinated bowl (Fig. 2.6, No. 4) and other sherds were recovered from a smaller second vessel (Fig. 2.6, No. 5). The remainder of the assemblage comprised sherds of indeterminate date and 26 sherds from the assemblage were residual.

2.6.8 *Saltwood Tunnel (Edwards 2006j)*

A total of 137 sherds (2486 g) of early prehistoric pottery was recovered, including Early Neolithic Plain and Decorated Bowl and Early Bronze Age vessels. The key elements were Early Neolithic vessels from three pits (Group 46021) and Early Bronze Age pottery from barrows 10055 and 10082. The most important of this latter group was the complete (reconstructed) Food Vessel (Fig. 2.9, No. 1) from the central burial of Barrow 10082 (grave 4619, context 4618). Much of the overall assemblage appears to have been residual. Exceptions were the Early Neolithic pit group (pits 136, 175 and 317), the Food Vessel (see above), sherds from 3894 (pit 3896) overlying the ditch of this barrow, the Sub-Biconical Urn from barrow (10055) and Beaker from pit 4586 (Fig. 2.8, No. 14) (see Riddler and Trevarthen 2006).

The Early Neolithic forms include a small, neutral bowl or cup with applied cordon (Fig. 2.6, No. 8), the shoulder from a plain carinated bowl (Fig. 2.6, No. 7), a decorated 'Whitehawk style' shouldered bowl (Fig. 2.6, No. 10), and an open, hemispherical bowl (Fig. 2.6, No. 9).

The Beaker (Fig. 2.8, No. 14) from pit 4586 has a narrow closed neck with cordon, everted rim and impressed aplastic finger-nail decoration. The possible globular shape is typical of the East Anglian (eg Tovil, Great Mongeham and Erith) and Finger Nail (Barham) decorated styles from Kent (see Clarke 1970). It is unusual because of the fingernail decoration, which appears again (with the exception of Barham) only within CTRL assemblages, and for the cordon below the rim. Typologically this vessel could be earlier than the rusticated vessel (Fig. 2.8, No. 13) recovered from Eythorne Street and could be of a similar date to the pottery recovered from Beechbrook Wood (see section on Chronology above and compare with Fig. 2.8, Nos 8-9).

The sub-Biconical Urn (contexts 1037 and 1103 from barrow 10055) consisted of large, thick and straight-walled sherds with a simple, upright and rounded rim. These vessels characteristically have slack profiles (Calkin 1964, 40, figure 13) and occur either with primary or secondary burials in barrows.

2.7 Technology and use

2.7.1 *Manufacture*

It was not possible in most cases to ascertain information about manufacture beyond the evidence of fabric type. It was noted that the Fengate Ware rim (Fig. 2.6, No. 17) from Little Stock Farm (Edwards 2006h), the Mortlake Ware bowl with decorated base (Pilgrim's Way: Fig. 2.6, No. 13) and the Collared Urn from Northumberland Bottom (Fig. 2.9, No. 2) were clearly coil built.

The Beakers from the Northumberland Bottom burial and some of the vessels from pit 1374 at Beechbrook Wood were possibly over-fired. The Beaker associated with the female skeleton at Northumberland Bottom (Fig. 2.8, No. 6) is not symmetrical, having been fired whilst too wet, and has an oval rim diameter and bulging belly. There are indications that it originally had a red-brown burnished exterior and it also has three ‘fire clouds’ around the circumference of the vessel. The most likely suggestion is that these are the result of other vessels having been placed both around and against the Beaker during firing, thus cutting off the air supply. The Beaker (Fig. 2.8, No. 2) recovered from a pit within a ring-ditch at Beechbrook Wood has a spalled surface. Lastly, as has been mentioned elsewhere, there is a Beaker from Eyhorne Street (Fig. 2.8, No. 13) which shows a pre-firing piercing. The Food Vessel from Saltwood Tunnel (Fig. 2.9, No. 1) was also warped with large firing cracks. Most of these misfired vessels were recovered from sepulchral contexts.

2.7.2 *Fabrics*

The fabrics defined within each site assemblage were site specific, as early prehistoric fabrics were not standardised by any means. These definitions are given in each site report and are too numerous to repeat in detail here (see Edwards 2006a-j). They have, however, been amalgamated into broad fabric groups by principal inclusion type. The tables below give breakdowns of this by site (Table 2.2) and by period (Table 2.3), thus showing the distribution of broad fabric types along the route.

Only two temper types were used during the Early and Middle Neolithic. It can be seen that flint was the preferred fabric. The results hide the fact that rare to medium flint was present in some of the grog tempered Beakers and Early Bronze Age vessels. This is typical of early pottery in southern England and, given the proximity of the South Downs to sites along the route, is not surprising. Sand, too, also only appears during this period and was present (Table 2.2) within the same assemblages as the flint fabrics.

The Durrington Walls and Clacton Grooved Ware were manufactured using different fabrics (Table 2.3). This may have been entirely culturally determined. The same Gault clays were available at both sites. There are both shelly and clean beds within the Gault but it is also possible that the shell was added to the Clacton vessels. This possibility may be supported by the fact that none of the Beaker or Early Bronze Age pottery from this site was shell tempered. Generally, during these latter periods, potters in Kent utilised clay temper with grog with rare to medium additional material. Generally, the fabrics used to manufacture pottery appeared to be locally acquired and, to a certain extent, culturally and geologically determined rather than being conditioned by technological factors. One exception to the first of these generalisations was noted at Northumberland Bottom, however. Here it appears likely that short distances had to be travelled in order to procure the potting clay.

Table 2.2: Percentage of sherd count of fabric groups per site

	Fabric Group								
Site	1 (Sand)	2 (Sand and Flint)	3 (Grog)	4 (Chalk)	5 (Flint)	6 (Temper free)	7 (Shell)	Indeterminate	Sherd count
Whitehill Road Barrow								100	4
Northumberland Bottom	0.5		75.9				23.6		212
Cobham	2.1	2.1	85.4		4.2	6.3			48
White Horse Stone/Pilgrims Way	0.1	1.3	5.1	0.7	19.2	0.4	67.7	5.4	671
Eythorne Street	1.2	1.2	54.7	1.2	33.7			8.1	86
Sandway Road	1.5	50.3			43.8	0.7		3.7	139
Tutt Hill	14.8		3.7		74.1	7.4			27
Beechbrook Wood	1.2	1.8	62		28.1	0.6	1.8	4.7	171
Little Stock Farm	11.1				61.1			27.8	18
Westenhanger Castle					50	50			2
Saltwood		2.2	43.1		40.1	9.5	5.1		137
Sherd Count	14	87	449	6	356	24	514	65	1515
Total Weight (g)	926	386	5586	15	1776	105	2390	159	11343

Table 2.3: Quantification of fabric groups(herd count) by period

	Fabric Group								
Period/ware group	1 (Sand)	2 (Sand and Flint)	3 (Grog)	4 (Chalk)	5 (Flint)	6 (Temper free)	7 (Shell)	Indeterminate	Totals
Early Neolithic	1	53	2		205	2	6	1	270
Early or Middle Neolithic					24				24
Middle Neolithic	3	24			76	1		6	110
Late Neolithic (DW or CW)			28 (DW 27)			3 (DW 1)	435 (CW 366)	37	503
Late Neolithic /Early Bronze Age	8	5	138	1	2	2	55	4	215
Early Bronze Age	1		281		1	3		1	287
Other (including all approximately dated sherds)	1	4			43	11	15	2	76
Indeterminate		1		5	5	2	3	14	30
Totals	14	87	449	6	356	24	514	65	1515

CW = Clacton Ware; DW = Durrington Walls style

Figure 2.10: Fabric group proportions. Illustrating the change over time.



The change in the choice of temper over time is illustrated for the CTRL assemblages in Figure 2.10. This shows the preferred use of flint, flint and sand-tempered fabrics in the Early-Middle Neolithic, with a switch to shell-tempered fabrics by the Late Neolithic and then the increased use of grog from the Late Neolithic until the end of the Early Bronze Age.

2.7.3 Function

Evidence for cooking, in the form of charred residue, was noted on a few sherds, for example on a flint-tempered Early Neolithic sherd from White Horse Stone, on Peterborough Ware from Sandway Road, on Grooved Ware from Eythorne Street and on an indeterminate grog-tempered sherd from Pilgrim's Way. In most cases, with the exception of the Grooved Ware from Eythorne Street, this residue was noted on the internal surfaces of sherds.

The range of vessels for any one period is likely to reflect specific practices such as cooking, serving and storage of food. From the Early Neolithic onwards ceramic assemblages have been found to include a range of vessels from small individual cups/bowls to larger vessels used for communal activities such as the cooking and serving of food and storage. The CTRL Section 1 assemblages were generally too small for analysis in these terms, although the following comments can be made about the total assemblage and particular contexts. The group of Grooved Ware from Eythorne Street included a range of jars from smaller thin-

walled examples with complex decoration to larger vessels with relatively thick walls (Fig. 2.7, Nos 6-10). The same is true of the assemblages from White Horse Stone, which also included a possible Grooved Ware bowl (Fig. 2.7, No. 5). Variety of size and form can be seen with the Early Neolithic bowl (see Fig. 2.6, Nos 4, 8-9) and the Beaker vessels from Beechbrook Wood, and in particular the pottery recovered from pit 1374 (Fig. 2.8, Nos 3-9) which included a small cup (No. 3), taller jars (eg No. 4) and more substantial 'storage' vessels (Nos 7-9). It can also be noted that these vessels occur in a range of fabrics, styles and decoration (see Edwards 2006i).

2.8 The wider context

2.8.1 Early Neolithic (4000-3350 cal BC)

A total of 305 Early Neolithic sherds was recovered from six sites, namely White Horse Stone/Pilgrim's Way, Eyhorne Street, Sandway Road, Tutt Hill, Beechbrook Wood and Saltwood (Appendix Table A1). These include 25 rim sherds and five shoulders from 18 vessels, 12 of which are illustrated in Figure 2.6 (Nos 1-12).

The earliest pottery recovered from CTRL section 1 belongs to the Carinated Bowl tradition (see Herne 1988; Barclay 2006). These assemblages are characterised by a high proportion of carinated vessels, although non-carinated vessels also occur. Decoration is absent, as are lugs and bosses. Surface treatment, in particular burnishing, occurs. Vessels can range from thin-walled fine wares to coarser thick-walled vessels and in size from small cups or bowls up to quite large bowls. Early assemblages tend to have quite simple rims with squared, everted or rounded profiles, while later assemblages can contain rolled rims and other heavy types. Carinations tend to be set relatively low down the profile and necks are comparatively tall and concave in profile.

The scraps of pottery recovered from the long house at White Horse Stone are almost certainly of this type (eg the simple squared rim and the angular shoulder). There are now a number of well dated Carinated Bowl assemblages from southern England, all of which support the suggestion of an early date (4000-3700 cal BC). Carinated Bowl has been noted at a few other sites in Kent (Herne 1988). These include pottery from the Chestnuts long barrow and possibly a rim sherd from the Coldrum chamber (Alexander 1961; Ashbee 1998, 22; also see Piggott 1931, 138). Less certain are the vessels from Mill Road, Upper Deal and Minnis Bay (Dunning 1966; Macpherson-Grant 1969), as neither is of 'classic' Carinated Bowl style.

In the later centuries of the Early Neolithic period (after 3700 cal BC) a number of developments occur. Vessel forms become less angular, shoulders tend to be set higher or are absent altogether. The variety of rim forms increases as does the manufacture of heavier rim types (rolled, thickened or expanded). Another development is the use of decoration on a proportion of vessels. This is often limited to just the rim and/or shoulder zones, but more

rarely covers the upper zone of the vessel. Within central and south-east Britain a number of styles of decorated bowl appear. Kent sits between two of these recognised style zones-centred on East Anglia is the Mildenhall style and along the south coast is found the Whitehawk style. The decorated pottery from White Horse Stone and Sandway Road has affinities with the Mildenhall style (Fig. 2.6, Nos 6, 11-12), while that from Saltwood Tunnel (Fig. 2.6, No. 10) is closer in appearance to the pottery from Whitehawk and other sites in Sussex. The shoulder of a decorated bowl (Fig. 2.6, No. 11) from White Horse Stone is decorated with three or four rows of impressed dots, having the appearance of a square-toothed comb. This was associated with the fingernail decorated rim (Fig. 2.6, No. 12). Stylistic parallels for these sherds can more easily be made with material outside Kent, such as at Etton (Kinnes 1998, 183, fig. 191, M205), Cambridgeshire, Whitehawk Camp (Piggott 1936, fig 7-9 and 12, 77) and the Trundle (Curwen 1929, plate IX, fig 15, 52), Sussex, Hurst Fen, Cambridgeshire and Abingdon, Oxfordshire (Avery 1982).

Decorated Bowl assemblages appeared at the same time as causewayed enclosures and there is a strong association between highly decorated pottery assemblages and monument use. Until relatively recently no causewayed enclosures had been excavated in Kent. However, since the late 1990s no less than three enclosures have been excavated, two on the Isle of Sheppey and another on the Isle of Thanet. Examination of two of these assemblages by Alex Gibson (pers comm) indicates affinities with the Mildenhall style. A further three causewayed enclosures are known from cropmarks, one of which is located at Barham, just 5 km north of White Horse Stone.

The Early Neolithic pottery distribution for Kent (Fig. 2.3) consists of up to 17 assemblages or find spots (Ashbee 2004, 11-12), which cluster mostly around the coast of eastern Kent near Folkestone, Deal and Thanet (one site was also situated on the Downs). Causewayed enclosures have been noted at six locations (ibid, 11) and long barrows at ten. The assemblages from the causewayed enclosures at Folkestone and Sheppey are (although not yet published) particularly important (ibid).

The pottery from pit 1910 at Beechbrook Wood was associated with a quernstone and has an interesting parallel with a pit group from Wingham, in East Kent (Greenfield 1960), which contained both a baggy profiled Plain Bowl, a saddle quern and a rubber.

Overlapping with these developments is the appearance of the Ebbsfleet style of Peterborough ware. This pottery is found at some causewayed enclosures, usually in later contexts such as secondary ditch fills, as at Staines causewayed enclosure (Robertson-Mackay 1987). As discussed above this pottery probably first appeared around 3500 cal BC and would have been contemporaneous with some assemblages of plain and decorated bowl. The eponymous type site for Ebbsfleet ware occurs just north of the north-west end of CTRL Section 1 (Burchell and Piggott 1939) and is directly adjacent to the line of CTRL Section 2.

Some of the pottery recovered from Sandway Road and Eythorne Street could be accommodated within the Ebbsfleet substyle (see Fig. 2.6, No. 12).

2.8.2 Middle Neolithic (3350-2800 cal BC)

Figure 2.6 (Nos 13-17) shows a selection of Peterborough Ware vessels from the Channel Tunnel route (see Table A1). Most of these rim forms and decoration types can be paralleled within the assemblage from Baston Manor, Hayes (Smith 1973, fig. 6). The vessel with the decorated base is, however, unusual and discussed further below. A small collection of Peterborough Ware was discovered at Chalk Farm, Ramsgate (Cleal 1995a).

The Middle Neolithic pottery distribution for Kent (17 sites) is more evenly spread across the county (Fig. 2.3), with clusters of sites in north-east Kent, Thanet, the North Downs and Folkestone (Ashbee 2004, 11-12; Burchell and Piggott 1939, 405; Cleal 1995a; Sieveking 1960, 192; Philp 1973, 5). The best known of these is the Ebbsfleet assemblage (Burchell and Piggott 1939). It is still true, however, that there are few notable collections from Kent. A small assemblage of 40 sherds was recovered from the causewayed enclosure at Castle Hill in Folkestone (Ashbee 2005, 115), three vessels were recovered from the causewayed enclosure at Ramsgate, and other sites have included incidental discoveries, field-walking and excavations of small pit deposits.

The Channel Tunnel Section 1 assemblages are of regional significance because of their association with pit deposits, food related debris and sites with long histories of occasional occupation. These sites include White Horse Stone/Pilgrims Way, Sandway Road, Tutt Hill, Little Stock Farm, and Saltwood Tunnel (Table A1). Each assemblage yielded only a few identifiable vessels, including one unusual example with a decorated base (Fig. 2.6, No. 13). This vessel was recovered from a pair of pits at one end of a probable Neolithic longhouse at White Horse Stone (Hayden 2006a). The freshly broken nature of the vessel and the recovery of refitting elements of the same vessel from separate pits strongly hints at formal deposition. The placing of these pits near one end of the longhouse could just be coincidental and a consequence of the persistent use of place. However, the placing of Grooved Ware pits within longhouses at White Horse Stone, Yarnton and Littleour (Gill Hey pers comm; Barclay and Maxwell 1998, 58) could alternatively suggest that the pits were deliberately placed so as to reference an earlier site and an ancestral past, especially as this type of pottery is frequently deposited in and around much earlier monuments.

The decorative motif (concentric circles) on the base of vessel No. 13 (Fig. 2.6) is rare, although similar semicircular motifs occur on other vessels, often on the rim. The nested concentric circle motif is also a rare Grooved Ware motif (Wainwright and Longworth 1971, figs 29 and 91). It is found in megalithic art and also on a number of unusual objects such as

the Folkton chalk drums (Kinnes and Longworth 1985, 115-6) and a carved stone ball from Towie, Aberdeenshire (Clarke *et al.* 1985, pl 3.16).

2.8.3 Late Neolithic (2900-2200 cal BC)

Grooved Ware finds in Kent have been largely restricted to sites (occupation horizons and pits) located near to the coast (Fig. 2.3) (Longworth 1971, 278-9; Longworth and Cleal 1999, 189-90) and on the whole tend to be recovered as relatively small assemblages (up to 22 sherds). Where diagnostic material occurs affinities can be suggested with the Durrington Walls and Clacton sub-styles and it appears to be the case that assemblages sometimes contain characteristics of both styles. In comparison the assemblages from Eythorne Street and White Horse Stone/Pilgrim's Way are more substantial. In particular the latter, which comprised some 475 sherds recovered from a series of 24 pits, associated structures and other miscellaneous features, represents an important group within south-east England. In Kent it is probably the second largest assemblage after the one recovered from a large single entrance henge at Ringlemere (Parfitt and Needham 2005, 7; Stuart Needham pers comm).

Two of the CTRL Section 1 sites (White Horse Stone/Pilgrims Way, Eythorne Street) produced Grooved Ware assemblages and a further three sites (Sandway Road, Mersham and Saltwood) produced odd sherds. Durrington Walls style Grooved Ware was identified at three of these (Eythorne Street, Sandway Road and Saltwood Tunnel) whilst White Horse Stone/Pilgrims Way was associated with Clacton style vessels.

Excavations at Ringlemere have revealed a very large and important assemblage of Grooved Ware (over 4000 sherds) which is currently being analysed at the British Museum (Parfitt and Needham 2005). No large published collections exist from Kent. Longworth and Cleal (1999) reported only 12 very small assemblages, not all of which could be attributed to particular Grooved Ware substyles; two were associated with Durrington Walls vessels, four with Clacton and two with either Durrington or Clacton (or both). They also noted very little Grooved Ware from Surrey (two small assemblages) or Sussex (two assemblages of small size). There is very little notable material, consequentially, which can be compared with the Channel Tunnel assemblages, although larger assemblages are known from East Anglia (Longworth and Cleal 1999).

The Grooved Ware from White Horse Stone is typologically Clacton style Grooved Ware (Garwood 1999, 158, fig. 15.6) with straight sided tub forms, horizontal bands and curvilinear decoration, while the material from features 19 and 20 at Eythorne Street appears to display a mixture of both Clacton type decoration and Durrington Wall form. The Grooved Ware vessel No 6 (Fig. 2.7) is a tall straight-sided or splayed jar with a closed top, a typical late style Durrington Walls form (*ibid.*, 157-9, fig. 15.6). The horizontally arranged grooved bands are, however, more usual for Clacton style vessels (*ibid.*). This vessel is associated with

an upright, bevelled, horizontally decorated rim (Fig. 2.7, No. 9) and an unusual sherd showing a possible 'Greek key' motif (Fig. 2.7, No. 7). The use of both herringbone and grooves arranged into right angled shapes is very unusual and the only parallels can be found on the chalk plaques from Amesbury, near Stonehenge (Harding 1988, 323 and plate 20). Whilst rims closely paralleling P9 can be found amongst the Durrington Walls assemblage (Longworth 1971, 114, fig. 50, P258), the combination of an upright, bevelled form with internal and external horizontal grooves and a diagonally decorated top appears to be rare. It is possible that this rim is also influenced by Clacton styles, if not part of a Clacton ware vessel.

In addition to the Grooved Ware there is a small fired clay object (Fig. 2.7, No. 11) from pit 19 at Eythorne Street (Edwards 2006d; Hayden 2006b). It is slightly spherical (but not perfectly rounded); decorated, untempered, well fired though not oxidised and shows signs of having been burnt. It also appears to have spalled. It weighs 9 g and is approximately one third complete, if it is presumed to have been spherical. The estimated weight of the complete object may, therefore, have been *c* 27 g. The diameter is 28 mm. There are possible traces of the lip of a piercing, almost central and observable in section (although the edges are rough). This 'perforation' is estimated to measure 5 mm in diameter. The decoration includes a filled lozenge and a diagonal row of small incisions leading to the 'lip'.

Suggested interpretations of this object include; a spindlewhorl; a bead; a model of a crab apple (a fragment of crab apple was found in Pit 19) or alternatively a decorated ball. Whichever of these is most appropriate, it appears to be unparalleled. Fired clay objects of such dimensions and form have never before been identified in a Neolithic context, although a biconical ceramic object, identified as a spindlewhorl, was recovered from Durrington Walls (Wainwright and Longworth 1971). Similar Iron Age objects have been identified as beads or spindle whorls (Poole 1984, 401-402). The decoration on the top of this object is similar to the geometric design of Grooved Ware sherds from the pottery assemblage at Eythorne Street and is, again, reminiscent of the patterns on the chalk plaques from Amesbury, near Stonehenge (Harding 1988, 323, fig. 2, pl 20) as well as the 'floating' lozenge pattern found on some Southern style Beakers (see Clarke 1970).

If the interpretation of the object as a spindlewhorl is accepted, then the size would not be problematic. The 'perforation diameter' is estimated to be a maximum of 10 mm and may possibly be as small as 5 mm. It has been suggested that this is far too small, but perforations on large, Early Iron Age triangular loomweights can be as narrow as 7 mm. Published perforation diameters for spindlewhorls range, however, from 6 mm to 14 mm (Hamerow, 1993; Canham 1978, 38, fig 25.10; Barber 1991, 99). The object is not necessarily too light for this function. The average weight range of spindlewhorls according to Wild is 20-30 g (2003, 25), while they can be as light as 15 g (Barber 1991, 99). The estimated weight of the

complete spindlewhorl, some 27 g, would fall within this range. The Eyhorne object, if a spindlewhorl, would have produced a light weight, fine thread (Barber 1991, 99; Anderson 1996). Examples from Early Iron Age contexts at Heathrow (Canham 1978, 38-9) and Horcott Pit in Gloucestershire (Edwards forthcoming) are 28 mm in diameter, which is approximately the same size, if not a little smaller, than this example. Other examples of small whorls come from Weston Wood in Albury (Russell 1989, 44) and Mucking North Ring in Essex (Bond 1988, 38).

Alternatively the object could be a large bead or ball of unknown function. There are published examples of unusual, decorated Neolithic objects, such as the later Neolithic Folkton chalk drums from Yorkshire, which appear to be ‘pieces of art’ rather than functional objects. These are large tub shaped objects with intricate carved patterns including filled lozenges which, although quite different in many respects, are reminiscent of the lozenge on the Eyhorne object. Other object types include representations of humans and ‘fertility’ objects (often of chalk or wood), chalk objects such as the chalk cups from the Trundle (Curwen 1931, 17), which are more often Early Neolithic, and chalk balls from Grimes Graves (Varndell 1991). Large stone balls, sometimes decorated, are found in Scotland and Ireland. It is possible that the Eyhorne Street object is such an artefact, although the parallels are generally larger and not ceramic. The object remains unparalleled, even given such an interpretation, in terms of fabric, form and decoration. Representations of objects from the natural world are not found in early prehistoric Britain and the idea that the object may be a representation of the crab apple from pit 19 is interesting but probably unlikely.

2.8.4 Late Neolithic - Early Bronze Age

Beaker pottery was recovered from six CTRL sites (Table A1). Of these, the Beechbrook Wood assemblage is regionally and nationally significant in respect of domestic context and Beaker chronology (Edwards 2006i).

In 1982 Champion noted that at least 36 substantial or near complete Beakers had been found in Kent (Champion 1982, 32) (see Fig. 2.3), mostly from funerary contexts. Further funerary sites and a number of occupation sites of this date have since come to light (Gibson 1990, 16; 1992a, 283; 1992b, 399-400; Macpherson-Grant 1994, 262-3; Smith 1984). An important occupation site has been recovered under colluvium at Holywell Coombe, near Folkestone (Gibson 1998).

At Beechbrook Wood pit 1716, cut into the fill of ring-ditch 3012, contained examples of Clarke’s (1970) East Anglian, Barbed Wire and Southern style Beakers in direct association (see Fig. 2.8 and Edwards 2006i). Comparable horizontal band motifs occur at Cottington Hill, Tovil, Great Mongeham, Folkestone and Igtham (Gibson 1992a, 283; Clarke 1970, nos 350, 423, 336 and 38). Beakers from The Tovil, Folkestone, Wye, Sturry and

Canterbury (Gibson 1992b, 399-400; Clarke 1970, numbers 382 and 338) are decorated with barbed wire impressions. Finger-nail decoration appears on the Barham vessel and 'crows feet' impressions on the Dover vessel (Clarke 1970, nos 380 and 435).

With regard to Beakers, it was still true that all the Early Bronze Age material from Kent comes from burials or stray finds (Champion 1982, 32) prior to the CTRL work. It is highly significant, then, that the largest Beaker deposit from any site along the CTRL route should be from a pit. Following Case's (1993, 263-4) discussion of Beakers from East Anglia and the south-east of England, all the motifs and decorative styles from Beechbrook Wood, Eythorne Street, Northumberland Bottom and Saltwood (see Fig. 2.8) are common and can be paralleled elsewhere in Kent.

The vessels from Eythorne Street (Fig. 2.8, Nos 12-13) are typical of Clarke's S1 style. Examples have been found at Manston (Gibson 1990), Brendly (Clarke 1970, 774) and Capel-le-Ferne (ibid., 741). Similar forms are found within the Northern styles, examples of which have been found at Folkestone (ibid., 633), Dover (ibid, 397) and Capel-le-Ferne (ibid., 629). The four Beakers found with inhumations at Monkton in east Kent (Macpherson-Grant 1994, 262-3), are also very similar in form and in decoration to material from CTRL.

The sherds illustrated as Fig. 2.8, No. 13 possibly represent as little as 5% of the original vessel, but this is clearly a large pot-sized, late Southern Style or FP style Beaker, of which there are no published examples from Kent (Clarke 1970; Lanting and van der Waals 1972; Case 1993). The decoration on this vessel is as unusual in Kent as is the form. The piercing appears to be a pre-firing drilled hole, rather than a post-firing mend (Cleal 1988). A close parallel can be found in the late style Southern Beaker from Hockwold-cum-Wilton, Norfolk (Case 1993, 258 fig. 13.5), which is decorated with paired finger-nail impressions and also has a drilled hole at the shoulder. A fingernail-rusticated Beaker from the Hamel, Oxford (Case 1981, 132, fig. 3.7) is also drilled, although it is not stated whether or not this hole was made before firing.

The two Beakers (Fig. 2.8, Nos 12-13) recovered from a multiple inhumation at Northumberland Bottom can be accommodated within Clarke's East Anglian group (Edwards 2006b).

Fired clay was also recovered from Beaker pit 1374 at Beechbrook Wood. One piece (Fig. 2.8) had clearly been moulded and would fit comfortably into the palm of an adult's hand. The piece appears to have been crudely shaped and has two thumb prints that could resemble eyes. It is possible that the crudely fashioned object represents a face or a small animal. Any modern interpretation is subjective, but the piece does appear to resemble a hedgehog(!).

The excavations have contributed significantly to the relatively small corpus of other Early Bronze Age pottery from Kent. Eleven Collared Urns are mentioned by Longworth

(1984, 216-217) (see Fig. 2.3), mostly from the barrows or flat graves within the sites of barrows (Grinsell 1992, 357, table 1) situated in the north-east of Kent. No vessels of this type have been published since. There are three published Biconical Urn assemblages and one enlarged Food Vessel (Champion 1982, 34), and five schematically drawn urns from Iffins Wood (*ibid*, 32) are probably also Biconical. There are only two published examples of Food Vessels in Kent, from Deal and Ashford (Champion 1982), and vessels of this type are rare in the south of England. Modern, reliable radiocarbon dates place Food Vessels in the period between 2220-1500 cal BC, which fits with the radiocarbon date obtained for a vessel in a burial at Saltwood (2200-1940 cal BC, NZA-19641- see Chronology section above).

Collared Urn was recovered from Northumberland Bottom, Sub Biconical Urn from Saltwood Tunnel, Food Vessel from Saltwood and Food Vessel/Collared Urn from Cobham and Eythorne Street. Early Bronze Age sherds were recovered from Mersham, Holm Hill (Mephram 2001) and Sandway Road (see Fig. 2.1 and compare with Fig. 2.3).

The Collared Urn from Northumberland Bottom is a late style vessel (Second Series South Eastern) typical of published examples from Kent, on which 'tongue and groove' coil joins are clearly visible (Longworth 1984). The unusual feature of this vessel appears to be the decoration; twisted cord filled triangles have not been noted in Kent before. The closest parallel is the triangles on the Biconical Urn from Ringwould (Champion 1982, fig. 11, 33). Longworth (1984) notes that parallels appear more frequently on vessels from the north and north-east of Britain. A small collar from White Horse Stone is also decorated with short lines of possible impressed cord.

The Food Vessel from Saltwood (Fig. 2.9, No. 1) is a southern bipartite vase. This has very minimal decoration emphasising the upper part of the vessel, which is quite typical of vessels from southern and eastern England (see examples in Clarke 1970). The decoration consists of two rows of horizontal zig-zag, formed of triple incised lines, that overlap to make a diamond pattern. Similar motifs are not only found on Food Vessels but also on Beakers of Clarke's S4 group (eg 1970, nos 1018, 1034 and 1036).

Most of the pottery was recovered from burials or secondary deposits within burial monuments. Significantly, the pottery from White Horse Stone/Pilgrims Way and from Eythorne Street came from a tree throw hole and a pit respectively (Hayden 2006a; 2006b). The former was associated with burned flint, fruit (apple and pear) and hazelnut shell, a stone pestle, bone, a small amount of cremated bone and a fired clay object. None of the Beaker sherds are covered with residue but they are clearly associated with food and the preparation of food in this particular context. Other Beaker contexts along the CTRL route are associated with cremation deposits and burials.

'Domestic' deposits of Early Bronze Age pottery thus remain very rare in Kent. While the CTRL finds generally substantiate the pattern of the occurrence of this material in

funerary contexts, occasional groups of pottery such as the Beaker assemblage from White Horse Stone demonstrate the potential for the location of significant ‘domestic’ material, and perhaps suggest the extent to which such material is still under-represented in this region.

2.9 Quantification of period/ware groups by site

Table 2.4: Quantification of period/ware groups by site

Site code	Ceramic style	Count	Weight (g)	Minimum number of diagnostic vessels	Average sherd weight (g)
Whitehill Road ARC WHR 98 (Rayner 2001)					
	Beaker	4	50		12.5
<i>Total</i>		4	50		12.5
Northumberland Bottom ARC WNB 98 (Edwards 2006a)					
	Beaker	51	956	2	18.7
	Collared Urn	161	1469	1	9.1
<i>Total</i>		212	2425		11.4
Cobham ARC CGC 98 (Edwards 2006b)					
	Bowl/Peterborough Ware?	3	18		6.0
	Collared Urn/Food Vessel?	15	50	3	3.3
	Indeterminate Early Bronze Age	28	80		2.9
	Indeterminate prehistoric	2	8		4.0
<i>Total</i>		48	156		3.3
White Horse Stone and Pilgrims Way ARC PIL98 (Edwards 2006c)					
	Bowl	106	280	23	2.6
	Bowl/Peterborough Ware?	13	27		2.1
	Peterborough Ware	19	268	2	14.1
	Grooved Ware	475	2033	16	4.3
	Beaker	4	10		2.5
	EBA	34	58	2	1.7
	Indeterminate	20	22		1.1
<i>Total</i>		671	2698		4.0
Eythorne Street ARC 420 68+100 - 68+500 99 (Edwards 2006d)					
	Bowl	6	34	1	5.7
	Bowl/Peterborough Ware?	23	74	1	3.2
	Grooved Ware Durrington Walls	33	210	5	6.4
	Beaker	23	194	3	8.4
	Early Bronze Age	1	54	1	54.0
<i>Total</i>		86	566		6.6
Sandway Road (Edwards 2006e)					
	Bowl	76	251	3	3.4
	Bowl/Peterborough Ware	1	4		4
	Peterborough Ware	53	218	3	4.1
	Grooved Ware	1	17	1	17.0
	?Beaker	2	8		4
	Indeterminate	6	7		1.2
<i>Total</i>		139	505		3.6
Tutt Hill ARC 430/99 83+800 - 84+900					

Site code	Ceramic style	Count	Weight (g)	Minimum number of diagnostic vessels	Average sherd weight (g)
(Edwards 2006f)					
	Bowl	4	7		1.8
	Bowl/Peterborough Ware	1	1		1.0
	Peterborough Ware	15	50	2	3.3
	Beaker	7	41	2	5.9
<i>Total</i>		27	99		3.7
Beechbrook Wood ARC BBW (Edwards 2006g)					
	Bowl	43	370	3	9.0
	Bowl/Peterborough Ware?	7	21		3.0
	Beaker	111	1897	14	17.1
	Indeterminate	10	55		5.5
<i>Total</i>		171	2343		13.7
Little Stock Farm ARC LSF99 (Edwards 2006h)					
	Peterborough Ware	18	49	4	2.7
<i>Total</i>		18	49		2.7
Westenhanger Castle ARC WGR (Edwards 2006i)					
	Indeterminate prehistoric	2	14		7
<i>Total</i>		2	14		7
Saltwood ARC SLT98, ARC SLT98, ARC SLT99, ARC SFB99, ARC SFB01 (Edwards 2006j)					
	Bowl	49	322	4	6.6
	?Bowl	1	3		3.0
	Bowl/Peterborough Ware?	18	26		1.4
	Peterborough Ware	3	23		7.7
	Grooved Ware	2	12		6.0
	Grooved Ware or Beaker?	2	4		2.0
	Beaker	13	169	1	13.0
	Beaker or Food Vessel?	1	3		3.0
	Food Vessel	5	1318	1	263.6
	Early Bronze Age	24	167		7.0
	Sub-biconical Urn	19	440	1	23.2
<i>Total</i>		137	2487		18.2
Overall Total		1515	11392		7.5

3 CHAPTER 3. LATER PREHISTORIC POTTERY

By Elaine L Morris

3.1 Introduction

A total of 21 locations along the route of the Channel Tunnel Rail Link were the scenes of later prehistoric activity between the Middle Bronze Age and the Middle Iron Age – based on the presence of pottery from this broad phase. This activity may have been represented by the recovery of fragments from single vessels or major assemblages. This synthesis will present the methods of analysis utilised, a summary of the results and reported interpretation of the pottery from each location, and an explanation of sub-regional zones utilised in this contribution which explores six themes that have emerged from these reports; themes which have been chosen as repeated patterns about the nature of the later prehistoric pottery or as new reflections on general trends about the entire collection of pottery which could not have been appreciated during the original programme of analysis.

3.2 Methodology

Six different analysts were employed, four of whom prepared specialist reports. Therefore, it was vital that a methodology was established which could provide a structure for linking the analysts and their assemblages from along the route and providing some form of consistency in the analysis and computerised data input. No such methodology had yet been developed for use on later prehistoric pottery assemblages from Kent but one does exist in the form of guidance from the Prehistoric Ceramics Research Group (PCRG 1995; 1997). This formed the basis for the present work.

Each assemblage was divided into different fabric groups on the basis of the dominant inclusion types (alpha code), and to a fabric type based on the variation within the group (numeric code). A fabric type is the definition of identifiable inclusion combinations of material type, size, density and sorting and any visible components naturally occurring in clay matrices which together can be described as different from another set of inclusion and matrix combination. Density charts (PCRG 1997, appendix 3) were used to standardise assessment of the quantity of inclusions present within the pottery fabric. All sherds were assigned to a fabric type after macroscopic examination and by using a binocular microscope (x10 power) where necessary.

All sherds were counted and weighed to the nearest whole gramme, and given a unique pottery record number for ease of reference. Diagnostic sherds were additionally assigned to a form and decorative scheme, and other characteristics noted include sherd or sherd group thickness based on codes established for ease of comparison, surface treatment and evidence

of use. Table 3.1 provides a list of the various symbolic codes used within certain fields now present on the various databases for each assemblage which form the electronic archive. A field for free-text comments was also provided; however, this field was under-used by most analysts.

Table 3.1: Database codes utilised during analysis of later prehistoric pottery

Wall Thickness

- 1 – <5 mm
- 2 – 5 - <7 mm
- 3 – 7 - <9 mm
- 4 – 9 - <11 mm
- 5 – 11 - <13 mm
- 6 – 13 - <15 mm
- 7 – 14 - <17 mm
- 8 – 17 - <19 mm
- 9 – 19 mm +

Surface Treatment

- AC – applied clay globules
- AF – added flint grits (not part of fabric)
- BU – burnished
- CB – combed (see also as decoration)
- EF – extra flint grits (not part of fabric)
- FWP – finger wiped
- RG – deliberate roughening
- RT – rusticated (used prior to realisation that rustication is very varied)
- SM – smoothed
- SL – red-slipped
- WP – wiped; with cloth or hand

Decoration

- CB – combed (see also as surface treatment)
- CD – cordon (usually applied cordon)
- FN – finger-nail impression(s)
- FPC – finger-pressed, finger-pinched cabling
- FT – finger-tipped impression(s)
- IC – incised (breaks the skin of the vessel)
- IM – impressed, excluding finger-tipped, finger-nail and twisted cord variants
- SL – diagonal slash(es) made by a tool rather than finger-nail
- TO – tooled (pushes the surface of the vessel inwards but does not break the skin)
- TW – twisted cord impression(s)

Evidence of Use

- AB – abraded on interior surface or on base (not general abrasion of whole sherd)
- LM – limescale
- PT – pitting on the interior only, rather than throughout the fabric of the sherd(s)
- RS – burnt residue
- SO – soot

Position on Vessel

- 1 – all over; throughout
- 2 – exterior (general)
- 3 – interior (general)
- 4 – core of sherd(s) only, or one surface of a sherd flake
- 5 – rim interior

- 6 – upper vessel interior
- 7 – upper vessel exterior
- 8 – lower vessel interior
- 9 – lower vessel exterior
- 10 – top of rim
- 11 – neck to body joining zone
- 12 – through the base or on the underside of the base
- 13 – shoulder

Featured sherds were recorded on and sketched at 1:1 on individual featured sherd record sheets which form part of the paper archive. Parallel form types have been sought from within and outside the Kent area, using published and unpublished material. The computer programmes Microsoft Excel and Access have been used to store analyse and summarise the data.

Deviation from the standard single alpha coding of principal inclusion within fabric types developed after two assemblages (Little Stock Farm and Cobham Golf Course) had been analysed. It was determined that considerable variation occurred amongst the clay matrices utilised in this region and that it was likely to be extremely significant to record this where possible. In addition, often more than one type of temper or naturally-occurring inclusion could be identified which contributed significantly to the nature of the fabric. A two-alpha system was introduced whereby the first alpha was meant to be the most common inclusion observed and the second alpha the next most common. However, this was not always adhered to by all analysts and unfortunately inconsistency in the application of this methodological procedure entered the classification of fabrics. When using the detailed information about an assemblage and associated database, it may be necessary to check the actual description to determine if the method was applied strictly in correct order of inclusion density or whether it was followed only generally with both inclusion types representing significant frequency.

It was possible to identify more than one ceramic phase within certain site assemblages. A ceramic phase is defined on the basis of the presence of material comprising a chronologically coherent group of fabrics and forms, and occasionally decoration, which are different from another set of these characteristics from the same site. Not all assemblages displayed this variation and therefore were single ceramic phase assemblages, while others contained many phases. These phases are solely an internal site assemblage phenomena and do not have wider scheme-wide relevance. The correlation of different ceramic phases across the scheme is defined by the common period names such as Late Bronze Age or Middle Iron Age.

3.3 Sub-regional zones (Figure 3.1)

For convenience of discussion and for useful comparison, the length of the route across the landscape of Kent from north-west to south-east has been divided into three sub-regional zones which can be used to explore aspects based on geology, density of chronological periods of activity, and ceramic variability: SRZ1 for Sub-regional zone 1 (North Downs and Thames Estuary), SRZ2 for Sub-regional zone 2 (Maidstone to Ashford) and SRZ3 for Sub-regional zone 3 (Ashford to Folkestone). Each of these zones contains a length of the route varying from 20-26 km and therefore the zones are nearly equivalent in extent for the purposes of comparison.

3.4 Site assemblage summaries

Excavations and watching briefs at 21 locations along the route of the Channel Tunnel Rail Link Section 1 revealed assemblages of later prehistoric pottery defined as belonging to the period from the Middle Bronze Age to the Middle/Late Iron Age. Each of these is summarised briefly below and reference to the full report, available electronically, is provided. Information not available in the full reports but presented either here below or elsewhere in this synthesis derives from continuing analysis, editing, research and understanding of the assemblages and their significance after the reports were completed in 2004. The quantification of the pottery by period from each location is presented in Table 3.2. All flint is crushed, calcined flint unless otherwise described.

Table 3.2: Summary quantification of later prehistoric pottery assemblages

CTRL Site Number	Site Code (Database)	Site Name	Sherd count	Weight (g)	Mean sherd weight
SUB-REGIONAL ZONE 1 – NORTH DOWNS					
2	ARC NBR 98	Pepper Hill	80	273	3.4
3	ARC 330 98;	Whitehill Road Barrow (Area 330 Zones 1 & 2)	25	173	6.9
	ARC SSR 98		27	259	9.6
4	ARC 330 98;	West of Northumberland Bottom (Zone 3)	1237	13906	11.2
	ARC WNB 98;		712	6019	8.4
	ARC HRD 98		6	22	3.7
5	ARC 330 98	Tollgate (Zone 4)	1706	25554	15.0
6	ARC 330 98	Cobham Golf Course (Zone 5)	943	8742	9.3
7	ARC 330 98	Cuxton (Zone 6)	237	6929	29.2
9	ARC WHS 98	White Horse Stone, <i>with</i>	6920	98094	14.2
	ARC PIL 98	Pilgrim's Way	154	577	3.7
	ARC BFE 99	East of Boarley Farm	9	58	6.4
	ARC BFW 98	West of Boarley Farm	2	19	9.5

CTRL Site Number	Site Code (Database)	Site Name	Sherd count	Weight (g)	Mean sherd weight
	ARC 420 58+200, 59+000, 59+300 98/99	Boarley Farm	9	58	6.4
SUB-REGIONAL ZONE 2 – MAIDSTONE TO ASHFORD					
13	ARC SNK 99	South of Snarkhurst Wood	15	155	10.3
14	ARC 420/68+200	South-East of Eyhorne Street	591	5006	8.5
15	ARC HOL 98 / 99	A20 Diversion Holm Hill	25	109	4.4
16	ARC SWR 98	Sandway Road	80	535	6.7
17	ARC HWD 98	Hurst Wood	8	16	2.0
	ARC CML 99	Chapel Mill	12	37	3.1
	ARC 430/80+000/99	East of Newlands	76	444	5.8
19	ARC 430 83+800-84+900 98-9	Tutt Hill	2235	10965	4.9
21	ARC BBW 00; ARC BWD 98	Beechbrook Wood	3341 25	42144 417	12.6 16.7
SUB-REGIONAL ZONE 3 – ASHFORD TO FOLKESTONE					
24	ARC BLN 98	West of Blind Lane	37	257	6.9
25	ARC MSH 98	Mersham	10	41	4.1
27	ARC LSF 99	Little Stock Farm	2456	17376	7.1
28	ARC CHL 98	Church Lane	50	369	7.3
30	ARC SFB 99;	Saltwood Tunnel	980	6281	6.4
	ARC SFB 01;		129	897	7.0
	ARC SLT 98;		257	2971	11.6
	ARC SLT 98C;		1294	6786	5.2
	ARC SLT 99		777	7268	9.4
TOTAL			24465	262757	

3.4.1 *Pepper Hill*

Six contexts contained sherds of later prehistoric type which derive from approximately 11 different vessels. The fabrics all contain at least some flint as temper and the clay matrices vary from silty to sandy in texture. In addition, one fabric displays irregularly-shaped vesicles suggestive of previously holding shell fragments, while two other fabrics contain varying quantities of linear vesicles indicative of organic matter and are not dissimilar to salt container, or briquetage, fabrics from West of Northumberland Bottom and Tollgate, 2-5 km to the east. There are only two recognisable vessel forms amongst this modest assemblage; one is a shouldered jar with a flat-topped rim on an upright, short neck and the other is a swan-necked rim jar. Several of the undiagnostic sherds were thin-walled. Both of these forms (neither is illustrated) and the fabrics could be accommodated easily within the Earliest Iron Age period, and the shouldered jar with upright rim may have continued in use into the

Early/Middle Iron Age. This assemblage will not be illustrated in figures or detailed in tables further within this synthesis owing to the small assemblage size; however the date of the pottery and location of this site within the landscape are significant and the use of specific fabric types amongst the vessels will be included. (Jones and Morris 2006)

Date: c Earliest Iron Age; c Early/Middle Iron Age

3.4.2 White Hill Road Barrow

This small assemblage, derived from two pit and four ditch contexts, is Late Bronze Age in date. Approximately eight or nine vessels were identified, none of which is decorated. Therefore, it is most likely that this assemblage can be dated to the plainware assemblage phase of the Late Bronze Age. The six fabrics are all flint-tempered and very similar in nature to the Late Bronze Age pottery found at Cobham Golf Course 5 km to the east where a radiocarbon date centred entirely within the 9th century cal BC was obtained; three have silty or very fine sandy clay matrices, one is significantly sandy (20% concentration) although the grains are still fine in size, and one has rare, rounded iron oxides in the matrix. All classes of Late Bronze Age pottery, as defined both by Barrett (1980) and using fabric texture, surface treatment locations and vessel wall thicknesses, were recovered; two Class I jars, one Class II jar, two Class IV bowls, and one or possibly two Class V cups amongst eight or nine vessels. The fabrics of sherds recovered from the pit contexts are different from those recovered from the ditch contexts which suggests that there could be spatial variation across this site, if further investigations take place in the future. Because of its small size this assemblage is not treated in detail here, but the date of the pottery and location of this site within the landscape are significant and the use of specific fabric types amongst the vessels is discussed below. (McNee and Morris 2006a)

Date: Late Bronze Age or Earliest Iron Age (Late Bronze Age/Early Iron Age)

3.4.3 West of Northumberland Bottom

Two separated phases of activity were identified in this moderately large assemblage of nearly 2000 sherds: Middle/Late Bronze Age and Early/Middle Iron Age. The first is represented by the lower part of a single, flint-tempered cremation urn. The main phase consists of sherds from over 125 vessels, 48 of which are illustrated. The significance of the Iron Age assemblage lies in the presence of both settlement type pottery, including decorated jars, undecorated bowls and a single saucepan pot, and distinctive industrial vessels identified as briquetage containers used to evaporate water from brine to produce salt crystals. The dating of the pottery is strongly suggested by the presence of round-shouldered jars bearing finger-tip impressions on the shoulder and finger-pinched cabling on the top of the rim in association with softly rounded-profile, burnished bowls with everted to upright rims. These vessels are also distinctive due to their fabric types; 75% of the assemblage was made from

shell-bearing fabrics but less than 10% from flint-tempered fabrics. Many of the bowls were made from a distinctive sandy fabric rich with glauconite pellets but actual vessels (as represented by rim sherds) are rare in the assemblage (2-3%). Various organic-tempered fabrics are present as well as several other sandy fabrics. Sources for the dominant shell fabric types cannot be found in the area immediately around the site up to 1 km distance, the preferred zone of resource exploitation in handmade pottery production systems. Instead the closest possible sources for these types of clays and inclusions lie within 5 km of the site. However, the closest possible source for the glauconite-rich sandy bowls is over 10 km to the south-east; therefore these shiny vessels were brought to the site, not made there. Because some of the pottery jars had been used in association with the salt-drying process, they bear 'salt colours' similar to those of the briquetage containers. There is a strong possibility that the slightly larger size of many of these jars, compared to assemblages from elsewhere in England, may be a result of either special selection from the normal range of pots in the community for use in the salt production activities or simply a regional characteristic. None of the bowls, however, bears these 'salt colours' and their size ranges are not in any way out of the ordinary. Less than 5% of the pottery assemblage consists of briquetage fabric sherds; it is uncertain, therefore, whether the full salt production process actually took place on the site or whether salt was transported to it for use from a production site nearer the Thames. However, the condition and size range of the round-shouldered and conical jars in shell fabrics associated with a salt-related activity requires explanation. (Bryan and Morris 2006)

Date: Middle/Late Bronze Age; Early/Middle Iron Age

3.4.4 Tollgate (Zone 4)

A trace of Middle Bronze Age activity remained at this location in the form of two coarse, flint-tempered sherds, redeposited in a later context. This limited evidence was followed by the deposition of a small quantity of flint-tempered body sherds from approximately 15 different Late Bronze Age vessels in a pit with no later pottery in association. However, the vast majority of pottery belonged to the Early/Middle Iron Age period and was dominated by salt-affected jars, made from shell-tempered, flint-tempered or combined flint-and-shell-tempered fabrics, and a range of organic-tempered briquetage containers associated with salt production. All of the fabrics could have been made using resources found within the wider local area up to 7 km. With over a quarter of the pottery assemblage consisting of actual briquetage containers, it is highly likely that this is a salt production site located at the foot of the North Downs. In the absence of other briquetage industrial debris such as pedestals, however, Tollgate could have been simply the location for a major salt-related activity utilising this important mineral in association with numerous large pottery jars. The majority of all measurable vessel rim diameters lie within the medium to very large range, 20-40 cm.

The identification of five different fabrics in the briquetage collection is unusual for a salt production site in eastern England, and is likely to indicate experimentation of manufacturing techniques and the cognitive changes required to accept these experiments and discoveries. More than 90% of the Tollgate pottery was recovered from three groups of pits; an unusual phenomenon in its own right. Significant variability in briquetage fabric types was identified amongst the material within these groups. There are only five bowls (less than 10% of the assemblage vessels identifiable to form) in this moderately large Early/Middle Iron Age assemblage of just under 1700 sherds. In contrast to Zone 3 (West of Northumberland Bottom) to the west, there are no examples of glauconitic sandy fabric sherds amongst these bowls. This may be due to a slightly earlier date for the Tollgate assemblage, which is supported by the absence of any examples of saucepan pots in the assemblage, or due to the emphasis of salt-related activities at this location along the base of the North Downs. The absence of identifiable saucepan pots is emphasised by the presence of several neutral-profile vessels which could be precursor proto-saucepan pots. (Jones 2006a).

Date: Middle Bronze Age; Late Bronze Age; Early/Middle Iron Age

3.4.5 Cobham Golf Course (Zone 5)

Radiocarbon dating of this modest assemblage of just under 1000 sherds demonstrated that there were two separated phases of activity represented in the excavated area of this site. There is a small but distinctive group of between five and ten Middle Bronze Age Deverel-Rimbury bucket-shaped jars from settlement activity and a larger collection of at least 58 vessels of plain assemblage Late Bronze Age type, including both jars and bowls, dated to the 9th century cal BC. Nearly all of the pottery is flint-tempered but there are what appear to be single vessels made from a grog-and-flint-tempered fabric, a flint-tempered and iron oxide-bearing fabric, a flint-tempered and quartz sand fabric, and an un-tempered quartz sand fabric. All of the fabrics could have been made from local resources. There are both rounded and carinated types of shouldered jars and bowls amongst the Late Bronze Age material. A small but significant collection of fragments from briquetage containers, ceramic rods and a spacer-clip for supporting the containers over hearths or ovens, and hearth-lining or oven-wall fragments were found in association with the Late Bronze Age pottery from three pits. The presence of containers, supports and heating unit indicates that salt production took place at the Cobham Golf Course site. Salt production is likely to have been a specialised activity at the settlement during this period but the proportion of container sherds within the pottery assemblage (0.4%) suggests that it was a minor or household activity, at least on this part of the site. (McNee and Morris 2006b; Morris 2006a)

Date: Middle Bronze Age; Late Bronze Age

3.4.6 Cuxton (Zone 6)

The later prehistoric pottery was recovered from only 10 truncated features: three pits, six postholes and two treethrows. This is a moderately small assemblage of Early/Middle Iron Age pottery and the majority (78.5 % of the assemblage by number of sherds) derives from only one pit which contained sherds from approximately 54 vessels including 33 jars, 20 bowls and a saucepan pot. The range of types comprises several shouldered jars including three with finger-tip impressions on the shoulder, a slack-profile jar, a nearly biconical ovoid jar, four highly burnished bowls (two round-bodied, one with decorated footring base, one shouldered and with red-slipped exterior surface), a small and un-burnished bowl, a highly burnished, black saucepan pot, and a spouted ovoid jar. The most common fabric type is flint- and organic-tempered (56% of the entire assemblage), but there is actually a considerable array of different fabrics, all of which represent less than 10% of the entire assemblage, including flint-tempered, flint-tempered with quartz sand, iron oxide-rich, glauconite and quartz sand, quartz sand and flint-tempered, shell-rich, and shell-rich with flint temper, all of which could have been made from resources within the wider local area. In addition, there are two sherds from a briquetage container used to evaporate salt from brine and transport the mineral inland from the coast. Some of the pottery sherds had been altered to varying degrees by heat, interpreted as a post-manufacturing condition because of the presence of many different fabric types amongst the vessels affected. The sizes of the vessels within the full collection are not unusual with small, medium and large examples present; but the proportional frequency of vessels in the medium and larger ranges is not similar to other Early/Middle Iron Age assemblages although it does appear to be typical of Kent. However, this is not a large assemblage and therefore may be unrepresentative of the settlement/site activity as a whole. Nevertheless, the contents of this feature are anomalous compared to assemblages from elsewhere outside Kent and could represent a special event, a suggestion supported by the condition of the pottery which probably derives from a special event of closure or celebration. The pottery fabrics and forms from at least one other feature, a posthole, may be slightly earlier than this pit group due to the presence of sherds from a carinated bowl made in a grog-tempered fabric. The remaining pottery fabrics from these features, however, are similar to those of the pit, and include three more sherds of briquetage. None of the pottery from these other features is unusually heat-affected. (Morris 2006b)

Date: Early/Middle Iron Age (Middle Iron Age by radiocarbon date)

3.4.7 White Horse Stone, with Pilgrims Way, Boarley Farm East, Boarley Farm West and Boarley Farm

This is the largest later prehistoric pottery assemblage from along the route of the Channel Tunnel Rail Link Section 1. Three periods of later prehistoric activity associated with pottery

took place: Middle Bronze Age; Late Bronze Age (plain assemblage); and Early/Middle Iron Age. The small quantity of Middle Bronze Age pottery from various pits and ditches associated with settlement activity was flint-tempered with silty clay matrices; the small quantity of the Late Bronze Age pottery from a single pit was also flint-tempered with silty clay matrices. The majority of Early/Middle Iron Age pottery from hundreds of different pits, postholes and other features was also flint-tempered, but the clay matrices are much more varied than in previous periods, with relatively similar amounts of flint-temper into silty clay matrices or sandy clay matrices, and sandy clays with some flint temper or simply sandy clay matrices without flint temper. Amongst the sandy matrices there are those with significant quantities of naturally-occurring glauconite pellets and those without pellets. In addition, there are smaller but significant amounts of shell-bearing fabrics, iron oxide-bearing fabrics, organic-tempered fabrics including a small quantity of sherds from briquetage containers used to dry and transport salt from the Thames estuaries, grog-tempered fabrics and other calcareous fabrics. Only the shell-bearing fabrics could not have been made from local resources found within 7-10 km of the site. The variety of clays used to make pottery has been interpreted as representing different potters/family groups with access to resources across the local area or in the case of the shell fabrics as visiting families with their own pots. Alternatively these vessels might have been acquired through exchange.

All of the Middle Bronze Age vessels recovered from contemporary features were bucket jar/urns; however, a single lug from a globular jar/urn was found redeposited in a later feature. At least 15 vessels were recovered from the Late Bronze Age pit including a round-shouldered jar, a carinated jar, an ovoid-profile jar, a round-bodied, necked bowl with incised decoration and a shouldered bowl, as well as a small sherd bearing a finger-tip impression which indicates that this deposit is likely to have belonged to the plainware phase of the Later Bronze Age. There is a great variety but equal numbers of closed form/jars and open form/bowls and neutral profile types in the Early/Middle Iron Age range. The limited amount of decoration on these forms is strongly offset by the immense amount of surface treatment observed including smoothing, wiping, burnishing, red-slip application and rustication in a variety of forms such as application of clay globules in relief, random and deep finger-tip impressions, roughening and deep finger-grooving (finger furrows) on the exterior surfaces of both jars and bowls. The intensity and frequency of these applications has been interpreted as representing a distinctive south-east Essex-Kentish Iron Age style group which spanned both sides of the Thames Corridor and was extremely common in northern France. One vessel form, a horned bowl, is presently unique to White Horse Stone in Britain but has also been found on sites in northern France. In addition to these visual effects which make the assemblage very striking, is the unusual size range of both the jars and bowls/neutral forms. A considerable proportion of the assemblage has medium-sized rim diameters, from 20-28 cm,

rather than the norm amongst Early/Middle Iron Age assemblages, which lies in the small-sized range from 10-18 cm. In addition, there are a number of very large vessels with 40 cm diameter rims. In contrast there is little evidence of use-wear.

The majority of the pottery was recovered from a few of the great number of excavated pits, which produced impressive assemblages. All of this evidence strongly suggests that the contents of these particular features may have been the result of the deposition of material culture as part of feasting activity associated with significant community events which took place at White Horse Stone during the Early/Middle Iron Age. Different family groups (and potters) may have come, stayed and left over the two or three centuries represented by this ceramic period but occasionally the wider community may have gathered for particularly important reasons, and these events were marked by ceremony and consumption of foods possibly already prepared elsewhere or in cleaned vessels or vessels newly-made for the event. And finally, the range of vessels associated with a cremation deposit, a range which is relatively rare in the Early/Middle Iron Age assemblage but common in northern France, was radiocarbon dated to a period stretching from the end of the Early/Middle Iron Age through the Middle Iron Age, 460-160 cal BC (cremation pit 6132; GU-9088, 2270 \pm 60). This may prove to be statistically later than the radiocarbon dates for the pits rich with pottery (and also the pits containing metalworking debris). If so, this cremation deposit with its associated pottery vessels, metal objects and impressive quantity of charred grain may have been the last or one of the last events at the site. (Morris 2006c).

Date: Middle Bronze Age; Late Bronze Age; Early/Middle Iron Age; Middle Iron Age

3.4.8 South of Snarkhurst Wood

Later prehistoric pottery derived from one pit at this site. All were body sherds made from one of two flint-tempered fabrics representative of the Middle to Late Bronze Age transition. The fabrics could have been made from local resources. At least two vessels were represented in this feature. (Jones 2006b)

Date: Middle/Late Bronze Age

3.4.9 South-East of Eyhorne Street

There are three very significant aspects about this modest-sized, Iron Age assemblage. First, some 90% of the pottery was made from richly glauconitic, sandy clay matrices, whether simply sandy or with sparse amounts of finer or coarser flint present. Second, a small, conical cup with solid, pedestal base, typical of French design and not made from glauconitic sandy clay but rather a grog-tempered fabric, was recovered from a pit in association with a deliberately sliced or cut, S-shaped footring bowl made from a sandy fabric unique in the assemblage and a jar with rusticated surface treatment. Thirdly, four proto-saucepan pots and one saucepan pot were also recovered from different features. Equally significant is the

absence of any fingertip impressed upright rim, round-shouldered jars or round-bodied bowls with medium-long rims typical of the Early/Middle Iron Age period. Therefore, it is most likely that this assemblage belongs to the beginning of the Middle Iron Age period with elements of the Early/Middle Iron Age transition clearly ending. The frequency of proto-saucepan pots and a saucepan in the assemblage has a chronological resonance with Beechbrook Wood. The glauconitic sandy fabrics could have been made from local resources; the unique grog-tempered, sandy fabric of the conical cup would not be out of place in an assemblage from northern France and its associated S-profile footring bowl was made from a non-glauconitic but otherwise undiagnostic sandy fabric, unique to the site. Two sherds in the assemblage were red-finished, with 26 vessels out of approximately 173 in the assemblage displaying forms of applied layers of clay rustication or deliberate roughening of the exterior surface. The association of the conical cup and the footring bowl, which had been deliberately sliced rather than simply broken, with sherds from several other vessels creating a possible set of expected vessels including one large jar, a proto-saucepan pot, the bowl, the cup and an ovoid jar, together in a pit may have been the result of deliberate selection as a group or set for deposition after or as part of a special event – the purpose of which is presently unknown. The upper fill of this feature, a context that sealed these vessels, was dated to 400-260 cal BC (context 223; NZA-22594, 2295±30). Therefore, these distinctive vessels including not only the cup but also the footring bowl and large jar with rusticated roughening, two forms found elsewhere along the route, can be dated to the Middle Iron Age or earlier. It is also important to note that this assemblage contains the only other example of a carinated, Middle Iron Age bowl identical in form and fabric (but finer in wall thickness) to the four examples recovered from the impressive cremation pit deposit of ironwork, charred grain and seven associated pottery vessels at White Horse Stone. (Jones 2006c)

Date: Middle Iron Age

3.4.10 A20 Diversion Holm Hill

A small assemblage of later prehistoric pottery was recovered in generally abraded and poor condition from topsoil, subsoil and layers of colluvium as well as seven ditches and one tree-throw. A total of eight fabrics made from resources available locally was defined and may date from the Middle Bronze Age to the Late Iron Age. These contained flint, grog, iron oxides and grog, quartz or quartz with some flint. One angled sherd, burnished on both surfaces, derived from a shouldered bowl and is likely to be Late Bronze Age to Early Iron Age in date. Otherwise, the remaining sherds are undiagnostic. (Jones 2006d)

Date: c Late Bronze Age to Earliest Iron Age or later prehistoric

3.4.11 Sandway Road

Two features at Sandway Road, a ditch and a pit, contained later prehistoric pottery. The identifiable pottery is Middle Bronze Age in date but several sherds cannot be dated more closely than later prehistoric. There are at least two Deverel-Rimbury globular jar/urns in the Middle Bronze Age collection, one of which is highly decorated and the other represented by a single perforated lug. The decorated vessel was made from a flint-tempered fabric while the lug was in a quartzite-tempered fabric. The character of the latter is not dissimilar in appearance to flint-tempered fabrics due to the angular shape, quality of sorting and density of the inclusions. This is one of two quartzite-tempered fabrics in the assemblage. It is most likely that these quartzite recipes are a local substitute for flint-tempered ones. There were approximately ten vessels in the assemblage, all of them distinctively finer in fabric texture compared to other Middle Bronze Age assemblages along the route of Channel Tunnel Rail Link Section 1. None of the sherds is likely to have derived from bucket or barrel urn/jars which may be significant in view of the infrequency of globular urns within Middle Bronze Age assemblages. (Jones 2006e).

Date: Middle Bronze Age

3.4.12 Hurst Wood

This very small collection was in poor condition at the time of recovery from three features. One of the fabrics was a combination of flint and quartzite temper, one was iron oxide-rich, one contains coarse quartz sand, and three were tempered with increasing densities of crushed quartzite. All of these fabrics could have been produced from resources available in the local area. The significance of the assemblage lies in the consistent use of quartzite as a tempering agent, a characteristic of this area of Kent. All of the pottery consisted of undiagnostic body sherds of later prehistoric date (Jones 2006f).

Date: later prehistoric

3.4.13 Chapel Mill

This small collection was in poor condition at the time of recovery from four contexts, three of which were either ploughsoil or subsoil layers. Three of the defined fabrics were flint-tempered; two representing the more intermediate and coarser ranges of Middle and Late Bronze Age pottery and one, flint-tempered with a sandy clay matrix, more typical of Late Bronze Age and Early Iron Age pottery. The fourth fabric type is quartzite-gritted. (Jones 2006g)

Date: ?Middle Bronze Age; ?Late Bronze Age; ?later prehistoric

3.4.14 East of Newlands

Sherds from a single, large burial-type urn/jar, made from a quartzite-bearing fabric, which may have been deliberately tempered, were recovered from a disturbed pit containing a small amount of human adult cremated remains. The vessel is similar in form to Middle Bronze Age bucket urns, but the walls are thinner than normal for Deverel-Rimbury pottery. Therefore, this vessel may represent the transition from the Middle to Late Bronze Age periods. It is uncertain whether it once held the remains or simply accompanied them. The fabric could have been made from local resources. (Jones 2006h)

Date: Middle/Late Bronze Age

3.4.15 Tutt Hill

Later prehistoric pottery was recovered from 13 features, including both funerary and settlement contexts. Much of the assemblage is fragmented and many sherds were in poor condition upon recovery. There are distinct chronological variations in the use of different clays and tempers within the later prehistoric assemblage. Middle Bronze Age pottery was made from flint-tempered or grog- and flint-tempered fabrics with silty clay matrices only. These fabrics continued to be used during the transition from the Middle to Late Bronze Age when one new flint-tempered fabric and one new grog-and-flint-tempered fabric were also utilised, in addition to two grog-tempered fabrics. During this transition silty clay matrices were still being used; this was therefore a phase of both continuity and of change. Subsequently there was a distinct gap in activity at the site until the Early Iron Age or Early/Middle Iron Age when the clays used to make pots were sandy in texture containing both quartz sand, which could be finer or coarser in size, and glauconite pellets, as well as various amounts and sizes of flint temper. A single pit contained pottery of Middle/Late Iron Age date and this very fragmented bowl was in a fabric rich with only medium-grained glauconite and quartz sand. All of these fabrics could have been made from locally available resources. The Middle Bronze Age vessels include classic examples of bucket urns from cremation pits and bucket urn/jars from settlement features, while the transition phase vessels range from variations of bucket urn/jars to ovoid jars, a hooked rim jar and several open forms including a necked bowl and a small bowl or cup with long neck and shouldered profile. There are, however, virtually no typical examples of Late Bronze Age shouldered jars at this site which strongly suggests that this transition phase is pre-10th century cal BC in date. A significant gap in occupation activity occurred before the Early Iron Age or Early/Middle Iron Age period which is represented by two tripartite, carinated bowls decorated with linear incising and various slack profile jars and one or two examples of necked jars probably with rounded shoulders. One example had finger-tip impressed cabling on the top of the rim, commonly found elsewhere in assemblages along the route. The final

phase which is not likely to have taken place immediately after this period is represented by a single, fragmented bowl with curvilinear tooled decoration and a possible dimple. (Morris 2006d)

Date: Middle Bronze Age; Middle/Late Bronze Age; Early/Middle Iron Age; Middle/Late Iron Age

3.4.16 Beechbrook Wood

Re-examination of the ceramic phasing of Beechbrook Wood has shown that there are only four phases represented; Middle Bronze Age; Middle/Late Bronze Age transition, Early/Middle Iron Age and Middle Iron Age, rather than the five phases originally proposed. Typical examples of Late Bronze Age plain assemblage shouldered jars and bowls are not present. A large assemblage of pottery was recovered from 72 features. While the Bronze Age and Early/Middle Iron Age assemblages are in moderate and poor condition respectively, the Middle Iron Age collection is in very good condition. The Bronze Age pottery was recovered mainly from pits while the Iron Age material derived mainly from ditches. The Middle and Middle/Late Bronze Age fabrics consist of a wide range replete with flint temper in silty clay matrices, while grog-and-flint-tempered fabrics and grog-tempered fabrics were used only in the production of Middle/Late Bronze Age vessels. In addition to these main trends, single Middle Bronze Age vessels, represented solely by body sherds, had been made from a poorly-sorted quartzite-tempered fabric and a very fine-grained sandy fabric. The Iron Age pottery was primarily made from sandy fabrics, including types with and without glauconite pellets, with significant amounts of iron-gritted and grog-tempered fabrics as well as some flint-tempered ones. All of the pottery recovered from Beechbrook Wood could have been made from resources found in the local area up to 10 km around the site. Only one type of Middle Bronze Age vessel, the bucket urn/jar, could be positively identified amongst the material, mainly body sherds, of this date; the presence of finger-tip decoration around the straight-sided wall sherds supports the identification of this vessel form type. Significantly there are several vessels displaying characteristics which can be seen as half-way between bucket forms and ovoid jars and which are often in either Middle Bronze Age flint-tempered fabrics or new types of grog-and-flint-tempered fabrics. As a result, these vessels have been interpreted as transitional groups of pottery of Middle/Late Bronze Age date.

What were originally thought to be Late Bronze Age vessels are in fact a peculiar selection, not far removed in character from the transitional types in many cases and definitely not the most common types of plain assemblage post-Deverel-Rimbury shouldered jars and bowls. Therefore, there is a long gap in occupation before any Early/Middle Iron Age activity took place at this location. What was thought to have been Early Iron Age pottery is now understood to represent the Early/Middle Iron Age period in the absence of shouldered

jars and carinated or tripartite bowls. Vessels, from only a single feature, consist of four types - a rustic proto-saucepan pot, a round-shouldered jar with upright rim and finger-impressed decoration on the top, a possible hemispherical bowl and a necked bowl probably from a round-bodied type which is burnished on the interior; single examples of each were recovered. There is a rich assemblage of Middle Iron Age vessels, mainly from a single deposit dumped into enclosure ditch 2150. These include various saucepan pots and bucket-shaped neutral profile forms which should be recognised as saucepan pots, reverse S-profile jars and bowls, and barrel-shaped jars. Footring and pedestal bases are present. This range is a significant summary of all the form types commonly found across central-southern and south-eastern England during the Middle Iron Age. Several aspects about the pottery from the main deposit of this phase are striking: first, all of the vessels are small to medium in size – none has a rim diameter greater than 28 cm and most measure less than 20 cm; second, there is a wide range of fabric types represented amongst the individual vessels with 17 different fabrics identified amongst the 33 vessels; third, the vessels usually display surface treatments in the form of smoothing, burnishing and more rarely rustication roughening including various combinations of these applications but are virtually without decoration – only one vessel is decorated, a bowl bearing curvilinear tooling similar to the Mucking-Oldbury style. The latter is more commonly assumed to be of later Iron Age date. This ceramic phase therefore probably represents activity on site from sometime in the 4th to 2nd centuries BC. Several of the Middle Iron Age vessels were used as cookpots prior to being dumped into the enclosure ditch, an activity interpreted as representing the end of a feasting event related to the renewal of the ditch entrance. Evidence of use for cooking was observed on 11% of the pottery from the site, and from all periods represented. No briquetage was identified in this large assemblage. (Jones 2006)

Date: Middle Bronze Age; Middle/Late Bronze Age; Early/Middle Iron Age; Middle Iron Age

3.4.17 West of Blind Lane

A small collection of pottery, including four earlier prehistoric, Beaker-like sherds and one Romano-British sherd, was recovered. This revealed a wide range of fabrics, all of which could have been made from local resources. None of the sherds displays diagnostic features with the exception of thick-walled (8-14 mm) body sherds, made from a very coarsely flint-tempered fabric, that have been assigned to the Middle Bronze Age and a body sherd from a possible necked globular bowl of Middle to Late Iron Age date made from a grog-tempered fabric. (Jones 2006i)

Date: ?Late Neolithic-Early Bronze Age; ?Middle Bronze Age; ?Middle/Late Bronze Age; ?Late Bronze Age; ?Late Bronze Age/Early Iron Age; ?Late Iron Age; Roman

3.4.18 Mersham

Ten small body sherds, all but one derived from medieval and post-medieval features, were recovered. Three fabrics were defined and these contain flint, grog and flint with quartz; the grog-tempered fabric is probably Late Iron Age in date. All could have been made from local resources. (Jones 2006j)

Date: undiagnostic first millennium BC; possibly Late Iron Age

3.4.19 Little Stock Farm

There are most likely to have been at least three ceramic phases represented in the Little Stock Farm assemblage: ceramic phase (cp) 1, Late Bronze Age/Early Iron Age (otherwise known as Earliest or Early Iron Age); cp2, sometime during the Middle Iron Age; and cp3, later Iron Age. This was the first later prehistoric pottery assemblage to have been analysed in the project and, therefore, a full understanding of the pottery was not revealed during the initial examination for the report. Ten fabrics were assigned to the pottery from cp1, and these are flint-tempered, flint-tempered with iron oxides, quartz-gritted (including one very rich with glauconite), and quartz-gritted with iron oxides. These same local fabrics were also used to make pottery recovered from cp2 features, and in many cases it may be that these sherds are actually redeposited rather than contemporary in manufacture. Only a calcareous fabric is new amongst the fabric groups for cp2. What distinguish cp3 features from those of previous phases are the presence of grog-tempered fabric vessels and a new version of glauconitic sandy fabric. However, it is now apparent with the result from radiocarbon dating of the left radius of a female skeleton from a grave pit that the introduction of grog-tempering occurred during the Middle Iron Age at this site and became more common in use during the later Iron Age.

The Late Bronze Age/Early Iron Age range of forms are typical of this phase anywhere in central-southern or south-eastern England and include shouldered jars, carinated bowls with long necks and a tripartite bowl. Four vessels from this phase are decorated, one jar with finger-tip impressions and one with incised geometric motifs and impressed dots, a carinated bowl with slashed neck cordon and paired finger-tip impressions below it and the tripartite bowl with a 'raised' cordon. The cp1 pottery was recovered from only two pits which contain large parts (c 25-40%) of seven vessels with a few other sherds accompanying them. The only sherds of briquetage in the assemblage were also recovered from one of these pits. There is likely to have been a significant gap in time between cp1 and cp2. Ceramic phase 2 is less well-defined but examples of vessel types include a shouldered jar with rustication, simple barrel-shaped jars, hemispherical bowls, globular bowls and saucepan pots. None of these

were made from grog-tempered fabrics, while applied clay and roughened surface rustication were distinctive surface treatments at this time. Ceramic phase 3 is defined by the addition of cordoned jar/bowls and a rolled rim jar, grog-tempered examples of barrel-shaped jars and saucepan pots, as well as scratched exterior surface treatment, to the cp2 repertoire. One grave was excavated which contained amongst several sherds two distinctive vessels, a large grog-tempered bowl with a capacity of about 9 litres and a Continental-style beaker-like jar decorated with combed line panels and red-painted slip infilling which emphasises the panels, made from a sandy fabric, with a capacity of approximately 1.3 litres. It is suggested that the bowl may have provided drink for the deceased or those at the wake with the beaker/jar being the drinking vessel. For the most part, the size range of this assemblage conforms to the rest of southern England – however, it is significant to note that the three largest vessels all derived from apparently special deposits rather than ‘rubbish’. (Bryan 2006)

Date: Earliest Iron Age; Middle Iron Age; Late Iron Age

3.4.20 Church Lane

A small assemblage of later prehistoric pottery was recovered in average to poor condition, many sherds having derived from ploughsoil and subsoil contexts. The majority of the assemblage may be dated to the Middle Bronze Age based on fabric, but many sherds are basically undiagnostic and simply prehistoric in date. The fabrics contained flint, grog, quartz and iron, with one which contained possible sandstone. All could have been made from local resources. One rim sherd and a cordoned body sherd made from the same coarsely flint-tempered fabric suggest the presence of at least a single Deverel-Rimbury bucket urn in the assemblage. (Jones 2006k)

Date: Middle Bronze Age; later prehistoric

3.4.21 Saltwood Tunnel

Analysis and interpretation of this large assemblage was hampered as a result of its overall condition and context of recovery. The mean sherd weight is 7.1g, 25% of the later prehistoric pottery was redeposited in medieval and later features, and only 20 features contained sufficient quantity of material for confident assignment to chronological period. Nevertheless, five ceramic phases can now be confirmed out of an original seven suggested phases. Diagnostic Middle Bronze Age vessels, tempered with flint in silty clay matrices with two exceptions, consist mainly of globular urn/jars, which were usually redeposited in later features. Two neutral profile, bucket vessels, one made from a flint-tempered fabric and one from a grog-and-flint-tempered fabric, were recovered from pits associated with other Middle Bronze Age material. The grog in the grog temper derived from a flint-tempered vessel. The Middle to Late Bronze Age transition phase is composed of small number of vessels which, although in a fragmented state, were interpreted as bucket urn/jars. However, characteristics

such as the consistent presence of both finger-tip decoration only on the top edge of the rim, grog-tempered fabrics with various amounts of flint also present (both in the fabric as separate components and as the original vessels from which the grog was made), and one nearly complete profile which indicates a slightly convex shape to the form, provide a new opportunity to explore this transition. One feature summed up this transition, containing one of these jars and also a Late Bronze Age shouldered jar – both made from the grog-tempered fabrics. The Late Bronze Age phase, on the other hand, is much more easily distinguished with the presence of shouldered jars and bowls. Four associated pits were grouped together and dated to this period on the basis of their thin-walled shouldered jars, necked bowls (one with a shoulder) and fragments of other vessels including a redeposited globular urn/jar sherd; only the last was decorated. A radiocarbon date of 12th to 10th century cal BC date was obtained for the use of a cooking pot from this group.

The contents of a single ditch fill may belong to this ceramic phase, or the following phase, the Late Bronze Age decorated phase which is often referred to as the Late Bronze Age/Early Iron Age. This phase is characterised by the continued use of grog-and-flint-tempered fabrics but many more of these were manufactured with the use of sandy, rather than silty, clay matrices and, as expected, the proportion of decorated vessels is significant. One pit group included four decorated vessels out of six selected for illustration; and in another two pits two out of three vessels were decorated. The recognition of this ceramic period, Earliest Iron Age (Late Bronze Age/Early Iron Age decorated phase) along the route of the Channel Tunnel Rail Link Section 1 is relatively rare, so these three examples are quite important groups. Following this decorated phase of shouldered jars and bowls, it is possible to define an Early/Middle Iron Age at Saltwood consisting of round-shouldered jars with finger-pressed or smeared cable decoration on the rim associated with a saucepan pot (or at least proto-saucepan pot), an ovoid jar and a round-bodied jar with what appear to be slashes on the girth (but are described as a finger-pinched effect), barrel-shaped and biconical jars and pedestal-based vessels and shouldered bowls recovered from graves. The fabrics in this ceramic phase continue to be the grog-and-flint tempered variations with sandy clay matrices but also include flint-tempered, flint-and-organic-tempered, sandy with iron oxides and sandy wares. One of the sandy fabrics is abundantly gritted with rounded glauconite pellets. All of the fabrics could have been made from locally available raw materials, but this does not exclude the possibility that some vessels may also have been acquired through trade or exchange with producers from outside the local area. Curiously, no fragments of briquetage were identified amongst the later prehistoric pottery assemblage. (Jones 2006l)

Date: Middle Bronze Age; Middle/Late Bronze Age; Late Bronze Age; Earliest Iron Age; Early/Middle Iron Age

3.5 Ceramic chronology and presence of activity at locations

Figure 3.2 presents a time-line of all the later prehistoric pottery assemblages within the sub-regional system of landscape zones from north-west to south-east. The named chronological periods (Middle Bronze Age; Middle/Late Bronze Age; etc) were chosen as a combination of traditional concepts and also an attempt to challenge our understanding and acceptance of chronological terminology as it is commonly used. In particular the term ‘Middle/Late Bronze Age’ is used to provide a focus for future discussion about how we might recognise the processes of change during the later Bronze Age. How did potters, and the settlements and society they serviced with vessels, respond to the time during which cremation burials and cremation cemeteries so typical of the Middle Bronze Age became less frequent, new vessels in the form of shouldered jars and bowls became common, unenclosed settlement middens were first established in some areas of southern England (Lawson 2000) with the continuation of circular or oval ditched enclosures elsewhere in Essex, Surrey, Kent and Sussex (Russell 2002, 21-2), and the bronze metalwork tradition changed from Taunton to Penard style (Needham 1996, fig. 1)? How was pottery used during this transitional period and how did it contribute to that change; what role(s) did it play? The term ‘Late Bronze Age’, when on its own, is used solely to describe the post-Deverel-Rimbury (PDR) plainware phase of pottery manufacture and use, while the term ‘Earliest Iron Age’ is adopted through its accepted definition and use in central southern England, as at Old Down Farm (Davies 1981) and within the Danebury Environs Programme (Brown 2000). The rather long-winded phrase ‘decorated phase of the later Bronze Age’ has been dropped, as has the catchall term ‘Late Bronze Age/Early Iron Age’, to describe this ceramic period of more frequently decorated strongly shouldered jars and bowls of Late Bronze Age form (it is suspected that many specialists will object to such a decision). However, because the manufacture and use of iron metalwork are part of the changes which took place at that time, the term ‘Earliest Iron Age’ recognises this development.

Traditionally, it would have been expected that the next period should be named ‘Early Iron Age’. However, many pits containing pottery that could have been assigned to this period also contained single examples of saucepan pots; this occurred on several sites. The appearance of saucepan pots in many pits at White Horse Stone and the series of radiocarbon dates for some of these suggested that the association of Early Iron Age jars and bowls (round-shouldered jars with upright, decorated rims; large bowl-like vessels with short upper zones and distinctive shoulders; long-necked bowls with tightly rounded profiles; medium-length necked bowls with rounded profiles and low pedestal bases; hemispherical bowls) with the first appearances of saucepan pots was taking place at the ‘end of the Early Iron Age and beginning of the Middle Iron Age’; hence, the term ‘Early/Middle Iron Age’. There is

unlikely to be a resolution of this nomenclature at the present time due to the wide standard deviation associated with the radiocarbon ages from these deposits which are plateau-affected (Table 3.3). In an ideal world ‘Earliest Iron Age’ would be 800-650 cal BC, ‘Early Iron Age’ would be 700-450 cal BC, and ‘Early/Middle Iron Age’ would be 500-350 cal BC but it is necessary to accept that this cannot be established in absolute terms at the present time.

Table 3.3: Radiocarbon dating results from Early/Middle Iron Age ceramic phase pits containing pottery and briquetage container sherds at West of Northumberland Bottom, Tollgate and White Horse Stone

Site	Feature	Context	Lab No.	Date	Range
West of Northumberland Bottom					
	Pit 156	149	NZA-22728	2509 \pm 35BP	800-420 cal BC
Tollgate					
	Pit 387	389	NZA-22886	2384 \pm 35BP	760-380 cal BC
White Horse Stone					
	Pit 7090	7080	NZA-21958	2438 \pm 30BP	760-390 cal BC
	Pit 2155	2103	NZA-22038	2377 \pm 45BP	760-370 cal BC
	Pit 2155	2103	NZA-22039	2337 \pm 40BP	800-200 cal BC
	Pit 2130	2130	NZA-22040	2507 \pm 50BP	800-410 cal BC
	Pit 2130	2125	NZA-22041	2367 \pm 40BP	760-370 cal BC
	Pit 2119	2114	NZA-22042	2397 \pm 50BP	770-380 cal BC
	Pit 8037	8026	NZA-22043	2527 \pm 40BP	800-510 cal BC
	Pit 4561	4562	NZA-22044	2469 \pm 40BP	770-400 cal BC
	Pit 4067	4050	NZA-22045	2429 \pm 55BP	770-390 cal BC

Fortunately, the ‘Middle Iron Age’ was represented by a major deposition event at Beechbrook Wood and a radiocarbon date contemporary with or post-dating this deposit established at 390-170 cal BC (context 2346-384; NZA-20052, 2207 \pm 40). The deposit was rich with saucepan pots, S-profile jars, round-bodied bowls and ovoid bowls. This, therefore, is the accepted date for the common use of saucepan pots – the Middle Iron Age in Kent. In addition, a pit excavated at Cuxton containing many sherds from a variety of vessel types, including one highly burnished saucepan pot, was provided with a similar Middle Iron Age radiocarbon determination, 400-200 cal BC (context 342; NZA-22593, 2267 \pm 30). From a statistical perspective, these two dates are virtually contemporary and may represent a slight time lag between Beechbrook Wood and Cuxton. The expectation was that the Cuxton pit would have been directly contemporary with the many Early/Middle Iron Age pits with pottery from White Horse Stone. As these two ceramic phases, Early/Middle Iron Age and Middle Iron Age, have vessels in common during their transition phase, it may well be that the Cuxton pit represents this change.

The ‘Middle/Late Iron Age’ was recognised by the common use of grog as tempering in fabrics created to make saucepan pots and also by the introduction of new forms of slack-profile jars, cordoned jar/bowls and round-shouldered jars with beaded rims. Grog-tempered fabrics were used to make saucepan pots during the ‘Middle Iron Age’ phase at Beechbrook Wood; therefore, the common use of this tempering agent as well as the introduction of new vessel forms and decorative styles herald another transitional phase, the ‘Middle/Late Iron Age’, in Kent. Unfortunately, no samples were selected for radiocarbon dating from deposits with this range of pottery.

Figures 3.3-3.9 present a display of selected key groups of pottery and other diagnostic vessels from different sites laid out in chronological order according to the zone scheme beginning with West of Northumberland Bottom (SRZ1) and ending with Saltwood Tunnel (SRZ3) where the appropriate period is represented on each site. The individual illustrations are provided with a site assemblage code (Table 3.4) followed by a forward stroke and a number which corresponds to the Catalogue of Illustrated Sherds number for that site assemblage which is presented in its electronic report; for example, LSF/5 is Little Stock Farm catalogue entry 5.

Table 3.4: Site assemblage abbreviations used in Figures 3.3-3.9

Abbreviation	Site name
BBW	Beechbrook Wood
CGC	Cobham Golf Course
CUX	Cuxton
EYH	South-East of Eyhorne Street
LSF	Little Stock Farm
NEW	East of Newlands
SLT	Saltwood Tunnel
SWR	Sandway Road
TOL	Tollgate
TUT	Tutt Hill
WHS	White Horse Stone (includes Pilgrims Way, East of Boarley Farm, West of Boarley Farm and Boarley Farm)
WNB	West of Northumberland Bottom

3.5.1 Middle Bronze Age (Figure 3.3)

This period is represented by small quantities of pottery and limited numbers of vessels at nine definite and three other probable locations, three to four in SRZ1, three to five in SRZ2 and three in SRZ3. It appears, therefore, that Middle Bronze Age activity utilising pottery vessels took place thinly but uniformly along the entire route. The vessel forms conform to the traditional descriptions of two principal Deverel-Rimbury style pots only, bucket and globular shapes. These are known as urns if recovered from human burial contexts and as urn/jars if retrieved from settlement contexts (cf. Gibson 2002). No examples of barrel

urn/jars were identified. All of the vessels identified as Middle Bronze Age were abundantly to moderately tempered with flint and the clay matrices were always silty in texture with quartz grains only visible at x20 power microscopy. An exception to this pattern was a single vessel from Saltwood Tunnel which is not flint-tempered and has a fine sandy matrix. Globular vessels were uniformly made from well-sorted, finer flint temper and bucket vessels from moderately to poorly sorted, coarser flint temper. Many of the vessels, both globular and bucket examples, are decorated; the former with linear and curvilinear incised designs and the latter with applied cordons on the girth area which bear personalised finger-tip impressions, horseshoe-shaped appliqué with finger-tip impressions or simply finger-tip impressions around the top of the rim. None of these vessels is large, primarily because they derive in nearly all cases from settlement rather than from burial activity and do not appear to represent storage containers; the frequency of bucket urn/jars used as cooking pots is significant.

Most of the cremation burials of Middle Bronze Age date along the route are un-urned, and the vessels from urned cremation burials were too fragmented to reconstruct their original diameters. There may be a correlation between the absence of barrel urn/jars and the absence of large vessels amongst the funerary assemblages, but this could be challenged due to the small sizes of these collections; often only single vessels are representative of this period at an excavated site location. One radiocarbon determination was obtained from the primary fill of ditch cut 197 at Cobham Golf Course, 1530-1390 cal BC (context 196; NZA-23006, 3190±40 BP), in association with sherds from a Middle Bronze Age urn/jar decorated with a finger-tip impressed, horseshoe-shaped cordon and repair perforation which may also have served as a decorative eyelet (Fig. 3.3, CGC/1). Two Middle Bronze Age urn/jars from a ditch at White Horse Stone (Fig. 3.3, WHS/1-2), one of which had been used as a cooking pot and both made from the same flint-tempered fabric, were dated by association to 1520-1310 cal BC (context 4016; NZA-21326, 3151±35). A sample from a posthole at Pilgrims Way, which contained a base sherd from a flint-tempered globular urn (not illustrated; context 573), produced a radiocarbon date of 1430-1260 cal BC (context 572; NZA-21840; 3079±30), a date which is identical to one for a cooking jar/urn from Beechbrook Wood also made from a flint-tempered fabric (NZA-22878, 3112±30; Fig. 3.3, BBW/10).

Eighteen sherds from four Middle Bronze Age vessels were recovered from a pit at Saltwood Tunnel; two vessels were illustrated (Fig. 3.3b, SLT/68 and 82) and one directly dated to 1520-1310 cal BC (context 5368; NZA-22879, 3146±35). The urn/jar in this group is extremely interesting; it is the earliest radiocarbon dated example of a grog-and flint-tempered fabric vessel with fingertip decoration on the rim top edge. The grog temper itself provides a developmental clue to the next section in this contribution; the grog is itself flint-tempered. This means that a flint-tempered, presumably Middle Bronze Age, vessel was crushed and an abundant amount of it was added to the clay matrix of the new fabric along with a moderate

amount of flint temper. Together these two types of inclusions made the new fabric (GF8) for this vessel. The history of this potting sequence indicates that rare occurrences of grog-tempering undoubtedly post-dated flint-tempering during the Middle Bronze Age and that the recipe for this fabric links both to past and present pot-making, both of which have important implications for the following section.

Other small groups of flint-tempered Middle Bronze Age pottery were recovered from both Cobham Golf Course, White Horse Stone and Beechbrook Wood (Fig. 3.3, CGC/2-4, WHS/3-4 and 5-7, and BBW/2 and 8), while single vessels were also identified at several locations (Fig. 3.3, WHS/127, SWR/1, TUT/4, BBW/1, 3, 7 and 12) and in particular at Saltwood Tunnel (Fig. 3.3b, SLT/72, 77-78, 80-81). Each of the sub-regional zones has at least one location of Middle Bronze Age activity.

The Middle Bronze Age pottery from sites along the route can be compared to many examples found along the route of the Brighton Bypass, E. Sussex (Rudling 2002a). The flint-tempered, decorated urn/jars from Mile Oak settlement are not dissimilar to those from Cobham Golf Course (Russell 2002, figs 2.31-2.32; Bayliss, *et al.* 2002, table 9.1; Hamilton 2002a, fig. 7.30) and dates ranging between 1400 and 1030 cal BC (OXA-5108 & 5109, 2975 \pm 50) were recovered. At Downsview, a date of 1410-1100 cal BC (GU-5432 & 5433, 3003 \pm 46) was produced from charcoal from a posthole found on the settlement associated with similar flint-tempered, decorated Middle Bronze Age pottery (Rudling 2002b, figs 7.27-7.28; Bayliss, *et al.* 2002, table 9.1; Hamilton 2002a, fig. 7.30).

On examination of Ellison's study of regional variation amongst Middle Bronze Age pottery and metalwork types (1980, fig. 2) it is noticeable that the Lower Thames A:12 style of everyday wares (bucket urn/jars) was present in Kent, and that this style was different from B:3 and C:2 styles located in the area west of London. Equally significant was the absence, at that time, of any globular urn/jars or other fine ware types in Kent. Based on this study there is every reason to suspect that a defended enclosure site is waiting to be discovered somewhere in the county.

A review of the Middle Bronze Age pottery specifically, and later Bronze Age pottery in general, from Kent is now required. A great deal of pottery has been recovered from the tremendous amount of fieldwork which has taken place over the past 30 years and this material needs careful examination in order to fully characterise the phase of pottery production and to confirm that there are no examples of salt production briquetage found on any sites in the area.

3.5.2 Middle to Late Bronze Age Transition (Figure 3.4)

One of the most striking aspects about the later Bronze Age pottery assemblages recovered from along the route was the appearance of a number of fabrics and variations of forms which

visually indicate a change away from classic examples of Middle Bronze Age urn/jars but which are not yet classifiable as Late Bronze Age jars and bowls of the plainware tradition (Barrett 1980). This transition has been widely recognised in southern Britain, and we now know that Kent has a significant contribution to make to this research. The transition appears to have started first of all at Saltwood Tunnel during the Middle Bronze Age, as is detailed above. Generally, this transition can be defined by the contextual associations of typical Middle Bronze Age vessels, or ones which belong to the concept of bucket urn/jars but are not actually identical to them, and diagnostic ovoid jars. At Coldharbour Road, Gravesend, radiocarbon determinations of 1140-900 cal BC and 1230-890 cal BC were obtained from the deposit (in a ditch fill) of a cordoned bucket urn/jar and hooked rim ovoid jar interpreted as likely to have been deposited prior to 1000 cal BC (Mudd 1994, 400-1, figs 9, 7 & 10, 8). Barclay (1994, 389-90) indicated that this pairing was likely to emphasise a transitional phase of pottery production because of the different type of fabric used to make both vessels; this was an unusual combination of flint and grog temper with vesicles probably derived from the loss of shell fragments, whereas previously only fabrics with flint temper, with or without shell vesicles, had been utilised (*ibid*, table 4). The addition of grog temper at this time, a time of transition, may have been significant (see further below). It would be useful as a line of future research to investigate the character of the grog itself to characterise the vessel that had been crushed to make the grog. Along the CTRL route, at least three and possibly eight locations revealed examples of this association or unusual associations of vessels which signalled the commencement of this change.

A Middle Bronze Age urn made from a typical Middle Bronze Age flint-tempered fabric and a hooked rim, ovoid jar made from a grog-tempered fabric were found in the same feature at Tutt Hill (ditch 176; Fig. 3.4, TUT/14-15). The recognition of decorated Middle Bronze Age pottery in pit 142, made from the same flint-tempered fabric, confirms the presence of this fabric tradition at the site. In addition, at Tutt Hill and elsewhere along the route, there are deposits of neutral profile vessels, similar in many respects to bucket urns but usually with finger-tip impressions around the top of the rim, that are always made from a distinctive grog-dominated and flint-recessive fabric combination and which occasionally have pre-firing perforations (Fig. 3.4, TUT/1-2, 5, 7-9, BBW/4 & 9, SLT/21). The most complete vessel had been used as a cremation container (Fig. 3.4, TUT/1) and in all respects but fabric it is a Middle Bronze Age urn. The confidence to explore this topic of transition came with the analysis of pit 14 at Tutt Hill. Sherds from six vessels were identified (Fig. 3.4, TUT/8-13) and while two could have been described as Middle Bronze Age types, their grog- and flint-tempered fabrics and their association with three other vessel forms which are Late Bronze Age plainware types (two bowls and a miniature jar), all consistently made from either grog-tempered or grog- and flint-tempered fabrics, allows the Middle Bronze Age ones

to be considered as transitional vessels. The presence of Late Bronze Age vessels is particularly significant since two of these are bowls and one a small capacity vessel; completely new shape concepts which heralded a major ceramic change at the end of the 2nd millennium BC (Barrett 1980). This was not an isolated occurrence, however. A small, necked bowl with lightly burnished surfaces, made from a grog-tempered fabric, was found in another cremation pit with sherds from a similar grog-and flint-tempered, bucket-shaped vessel decorated with finger-tipped rim and slashed, applied girth cordon (Fig. 3.4, TUT/5-7). Unfortunately, no samples suitable for radiocarbon dating were recovered from any of the features at Tutt Hill.

Beechbrook Wood provides not only several transitional associations but also radiocarbon dates for one of these. A key group recovered from waterhole/pit 245 consists of two ovoid profile vessels made from different flint-tempered fabrics and a bucket-profile vessel made from grog-and flint-tempered fabric in a collection of 63 sherds weighing 1.5 kg (Fig. 3.4, BBW/4-6). Radiocarbon determination of soot found on a sherd in this feature provided an associated date of 1410-1260 cal BC (context 244/PRN1017; NZA-22877, 3081±30). In addition, there is one bucket-shaped vessel, made from a flint-tempered fabric which should be Middle Bronze Age in date but which has an unusual, recursive base profile suggesting that it might actually belong to this transition period on form rather than fabric grounds (Fig. 3.4, BBW/10). It had been used as a cooking pot and another sherd in the same context produced a radiocarbon date of 1430-1260 cal BC (context 1201/PRN1053; NZA-22878, 3112±30), a date which is nearly identical to that from waterhole/pit 245 and may be considered to represent the start of the changes at this location. In addition, the upper half of an unusual vessel from this site is a bucket-shaped form with finger-tip decoration on the rim but the lower half has a typical shouldered jar profile of Late Bronze Age tradition (Fig. 3.4, BBW/9); the two stylistic halves are united by grog-and flint-tempered fabric and make this vessel a worthy candidate for consideration as a transitional pot. A similarly-shaped pot but without the finger-tip decoration was found at Hoo St Werburgh in the lower Medway valley in association with flint-tempered Late Bronze Age plain assemblage pottery including a hooked rim jar (Moore 2002, fig. 3, 1, 3 and 5).

At Saltwood Tunnel, the combination of grog-dominant and flint-recessive fabric for a finger-tip decorated urn/jar and a Late Bronze Age shouldered jar made from a different grog-and flint-tempered sandy clay matrix fabric was found in at least one feature (F. 4757; Fig. 3.4, SLT/58-59). However no radiocarbon dates from this site span the absolute years of this proposed transition period.

Elsewhere in Kent, there is another radiocarbon date for a probable funeral pyre deposit at Shrubsoles Hill, Sheppey, which consisted of fragments from at least seven vessels amongst 168 sherds recovered. Most of the sherds were from a miniature vessel (not

illustrated in the publication), and two other thick-walled vessels (8-12 mm) made from different fabrics both tempered with flint and grog (Raymond 2003, 30). The associated date determined from charcoal residues taken from the interior of one of the larger vessels falls between 1420-1130 cal BC (pit 908; KIA11045, 3052±39) (Coles, Pine and Preston 2003, table 1.12) and demonstrates that the use of grog and flint together as tempering agents is not confined solely to Channel Tunnel Rail Link vessels of Middle/Late Bronze Age date.

3.5.3 Late Bronze Age (post-Deverel-Rimbury; plain ware assemblages) (Figure 3.5)

Post-Deverel-Rimbury later Bronze Age pottery was defined by Barrett (1980, 302) as consisting of jars, bowls and more rarely cups and dishes or lids, rather than urns of the previous period. These new jar and bowl forms could be divided into two sub-groups based on their general fabric textures, coarser or finer in nature, and the refined surface treatment often found on the latter. Barrett did not describe the actual shapes of any of these later Bronze Age vessels but relied on his readers to study his rather limited illustration selections instead (*ibid*, figs 5-6), no examples of which were presented as key contextual groups. This classification scheme and the general chronological sequence have never been disputed, even after several decades of fieldwork, and numerous excellent examples of his earlier ‘plain ware assemblages’ and later ‘decorated assemblages’ have been recovered from all over southern England (cf. Needham 1991; Gingell 1992; Hearne and Heaton 1994; Moore and Jennings 1995; Lawson 2000; Brossler, *et al.* 2004). For this synthesis, Barrett’s earlier plain phase is known as the ‘Late Bronze Age’, while his decorated phase is known as the ‘Earliest Iron Age’ in respect of the occasional recovery of iron metalwork in the region. The Late Bronze Age ceramic period spans the Wilburton to Ewart Park metalwork phases (Needham 1996) and is characterised by a low frequency of decoration on the pottery, if any is present at all. Just how much pottery can be decorated before assignment of an assemblage to the ‘decorated’ phase has never been established.

The range of jars identified within the Late Bronze Age phase along the route includes simple ovoid or convex-sided jars with rounded rims (Fig. 3.5, CGC/17; SLT/56) (but no examples of hooked rim jars, but see below), strongly shouldered, obtuse-angled or carinated jars (Fig. 3.5, CGC/16; WHS/9, 10 & 12; SLT/10, 32 & 34) and round-shouldered jars with upright rims (Fig. 3.5, CGC/9 & 11; SLT/12). The range of bowls is equally varied and includes round-bodied bowls, with either graceful profile (Fig. 3.5, CGC/6), short upright rim (Fig. 3.5, SLT/35) or sharply everted rims (Fig. 3.5, WHS/8), a low-slung or long-necked shouldered bowl (Fig. 3.5, CGC/12) not dissimilar to a large S-shaped profile bowl (Fig. 3.5, SLT/29) and simple shouldered bowls (Fig. 3.5, WHS/11; SLT/13). It may be significant that there are three broad types of jar shapes and three of bowl shapes, a mirroring of forms which emphasizes the original major change which Barrett (1980) declared as the hallmark of the

truly Late Bronze Age, the creation and use of both jars and bowls, which have been discussed by Woodward as possibly representing drinking sets (1998, fig. 3).

Only three locations along the route saw activity of this date in the form of pottery deposition; all of it relatively low density in nature and often represented by single, isolated events. Late Bronze Age pottery is best reflected in key groups from White Horse Stone and Saltwood Tunnel (Fig. 3.5, WHS/8-13 & SLT/1-8 & 10-15) with early dates of 1130-890 cal BC (pit 5421, context 5449; NZA-22006, 2804 \pm 40) and 1130-900 cal BC (pit 5235, context 5250; NZA-19637, 2847 \pm 35) respectively, and with later dates of 980-820 cal BC (pit 137, context 136, PRN 1022; NZA-21143, 2741 \pm 30) and 990-820 cal BC (pit 6658, context 6662; NZA-22727, 2769 \pm 30) from Cobham Golf Course and Saltwood Tunnel respectively (Fig. 3.5, CGC/9-12 & SLT/29-34). The earlier dates are broadly contemporary with plain assemblage pottery from Downsview, outside Brighton at 1050-800 cal BC (OxA-4810, 2755 \pm 60; Hamilton 2002a, fig. 7.31) and Rams Hill at 930-810 cal BC (HAR-230, 2690 \pm 70; Hamilton 2002a, fig. 7.31) and Green Park, Reading at 1220-890 cal BC (Brossler, *et al.* 2004, 125, figs 4.8-4.17, App. 1.1; pit 1518, context 1695; NZA-9412, 2859 \pm 58), both in Berkshire, while the later dates are broadly contemporary with the complex of activity and great number of dates at Runnymede Bridge in Surrey (Needham 1991, 345-53) and the 9th to 7th century cal BC settlement at Yapton in West Sussex (Rudling 1987; Hamilton 2002a, fig. 7.31), for example. There is some concern, however, that amongst the pottery from pit 6658 at Saltwood, four of the six illustrated vessels are decorated, which suggests that this radiocarbon date in SRZ3 may actually signal the beginning of 'the decorated phase of the Later Bronze Age' earlier than previously expected. If the concept of increased decoration on jars and bowls derives from contact with France, then Saltwood Tunnel would be an appropriate place to see this change first.

It is during the Late Bronze Age that the first evidence of salt production appears within the route of the Channel Tunnel Rail Link, at Cobham Golf Course. Here a small quantity of organic-tempered and un-tempered briquetage debris was recovered from features containing pottery with the same fabrics as those recovered from pit 137 mentioned above. However, no examples of briquetage container sherds were recovered from other Late Bronze Age contexts at White Horse Stone or Saltwood Tunnel.

The reduction in the level of Late Bronze Age pottery-associated activity along the CTRL route is an interesting development; there are simply far fewer features containing this material, with the exception of Saltwood Tunnel. However, the actual locations of activity are the same as those for the Middle Bronze Age. At Tutt Hill, if the Middle/Late Bronze Age contexts are included to represent Late Bronze Age activity as well (in particular the contents of pit 14, which has two excellent examples of open form bowls and a very small, carinated bowl or cup (Fig. 3.4, TUT/10-12) and an ovoid jar and hooked rim ovoid jar (Fig. 3.4,

TUT/14-15) which would not be out of place in the earliest phases of the Late Bronze Age), then there is a complete correlation for continuity of occupation from Middle Bronze Age to the Late Bronze Age at Cobham Golf Course, White Horse Stone, Tutt Hill and Saltwood Tunnel. At both Cobham and White Horse Stone there is an absence of dated material spanning the transition period from the 14th to 12th centuries cal BC, but this may well be the effect of the narrow tranche through the landscape provided by this restricted route. Each of the sub-regional zones has at least one location of Late Bronze Age activity.

3.5.4 Earliest Iron Age (Figure 3.6)

This period, also known as the decorated assemblage phase of the later Bronze Age, is characterised in assemblages from along the route by the presence not only of shouldered jars but also of tripartite bowls. These occur in only two pits at one location, possibly in another pit and as a scattering of other vessels elsewhere. No radiocarbon dates were submitted from the deposits described below due to the absence of samples suitable for dating, but the generally accepted date for this range of pottery lies in the 8th to 7th/6th centuries BC (Cunliffe 1991, A:2-A:5). As Needham has stated,

“The eighth century is thus as good a place as any to draw to a veil on the ‘Bronze Age’. There was a fundamental transformation in the use of metals to both social and technological ends; the ceramic assemblage was by now modified into a more highly decorated repertoire, at least in Lowland Britain; and hillforts and hill-top enclosures, previously thinly scattered, began to proliferate.” (1996, 137)

The presence of a plateau within this radiocarbon age period means that samples are rarely selected from deposits with this type of assemblage. The main example of an assemblage in Kent which appears to span this period is the very large collection from Monkton Court Farm, Isle of Thanet (Perkins *et al.* 1994, figs 5-20). Macpherson Grant has provided an extensive discussion of this pottery recovered under difficult circumstances and has declared it to belong to a period from c 850/800-550 BC, rather than the post-Deverel-Rimbury Late Bronze Age (1994, 253), from his own knowledge of the Highstead assemblage which is chronologically extensive and stratigraphically reliable (*ibid.*, 249). He equates Monkton Court Farm to Highstead Period 2 and emphasizes the significance of Monkton as an essentially single-period, ‘decorated’-type assemblage with no examples of rusticated surface treatment (*ibid.*, 280). Other examples of Earliest Iron Age assemblages from Kent (described or illustrated as decorated collections of Late Bronze Age date) are Minnis Bay, Birchington (Worsfold 1943, figs 6-8; Cunliffe 1991, A:4, 16-18) and Mill Hill, Deal (Champion 1980, fig. 6). There are no sizeable assemblages of similar significance of this

date along the route of the Channel Tunnel Rail Link, other than the pair of pits at Little Stock Farm.

At Little Stock Farm, a pair of vessel holes or small pits filled mainly with large parts of one or more vessels contained a finger-tip impressed, shouldered jar from one (Fig. 3.6, LSF/23), and two shouldered jars, one shouldered bowl, two sharply carinated bowls, one tripartite bowl, and fragments of two undiagnostic jars from the other pit (Fig. 3.6, LSF/7-13). Together this set of unusually deposited vessels can be classified as fine and coarse ware jars and bowls with four Class I, one Class II, one Class III and two Class IV vessels, with no examples of Class V cups (cf. Barrett 1980). Four of the nine illustrated vessels are decorated. While the majority of vessels were made from fabrics rich with rounded iron oxides, two were made from sandy clay matrices with some flint temper and one was rich with glauconite and quartz sand. The latter is likely to be the earliest example of a flint-free, sandy fabric vessel rich with glauconite pellets. The use of rustication as a surface treatment or decorative technique does not occur during this ceramic phase.

It is possible that the pottery from feature 6345 at Saltwood Tunnel (Fig. 3.6, SLT/51-53) represents deposition activity of this ceramic phase. The round-bodied bowl with upright rim and incised decoration above the girth is similar to the Late Bronze Age round-bodied bowls from White Horse Stone and here at Saltwood as well, but the decoration and association with a finger-tip impressed, shouldered jar suggests that a later, decorated phase date for this deposit might not be out of place.

One of the pits at Tutt Hill contained hundreds of very small sherds from two extremely fragmented, tripartite bowls made from a fabric with sandy clay matrix and some flint temper (Fig. 3.7, TUT/21-22). These bowls are likely to represent the end of the Earliest Iron Age ceramic tradition and, therefore, have been illustrated in the next section. One is virtually identical in form and decoration, but not fabric, to the tripartite bowl from Little Stock Farm (Fig. 3.6, LSF/13).

Several sherds of briquetage were recovered from the richer vessel hole at Little Stock Farm which demonstrates that the trade of salt took place during this period.

3.5.5 Early/Middle Iron Age (Figure 3.7)

Macpherson Grant (1991, 41-2) provided the first full assessment of this ceramic phase in Kent, and his observations still hold today; readers are advised to refer to this publication directly rather than paraphrasing this excellent work here. Assemblages which belong to this phase are defined by the final use of finger-tip decoration on the rim and shoulder of jars, the emergence of softly rounded shoulders and profiles for both jars and bowls, the adoption of low pedestal bases and other base variations, and the first appearance of saucepan pots which may actually be slack or convex-profile, proto-saucepan pots rather than fully developed

saucepan shapes in some cases. Macpherson Grant found no examples of saucepan pots amongst the assemblages available from east Kent during his assessment, but these are regularly identified amongst the Channel Tunnel Rail Link collections, albeit infrequently. Most significantly, the use of *rustication* as a surface treatment or decoration appears for the first time during this period, and the rare application of *red-finish* effects continue. Traditionally, this period is assigned to the 5th to 3rd centuries BC with the pottery from southern England displaying similar styles (Cunliffe 1991, A:6, A:8, A:11-12) or c 550/500-400 BC in Kent ('Early Iron Age'; Macpherson Grant 1991, 41). Radiocarbon dates from eleven pits at three Channel Tunnel sites suggest that this may be slightly conservative dating for this ceramic phase in Kent.

In SRZ1, it is obvious that this phase evolves from the pottery styles/ceramic traditions of the Earliest Iron Age well-established further up the Thames in Surrey, as demonstrated at Petters Sports Field (O'Connell 1986, figs 43, 18 & 22, 44, 27-28 & 30) and Queen Mary's Hospital at Carshalton (Adkins and Needham 1985, figs 3, 1-5 & 4, 4) where many of the jars in these assemblages appear to be the precursors to the rounded shoulder jars bearing upright rims often with finger-tip impressions or finger-pinched cabling effect found at West of Northumberland Bottom (Fig. 3.7, WNB/1-6 & 16-21), Tollgate (Fig. 3.7, TOL/1-3, 7, 23-24) and White Horse Stone (Fig. 3.7, WHS/15, 23-24, 47-48, 90-94). Amongst the associated bowl forms and new base shapes, the commonest types are round-shouldered bowls, S-shaped bowls, round-bodied bowls with short, upright rims or extremely long flared rims on either tightly rounded or carinated profiles, and possible cups or small bowls (Fig. 3.7, WNB/28, 33, 39, 44, 46; TOL/9-10, 26, 34, 43; WHS/17, 20, 27, 31, 47-48, 68, 83, 123, 140-142). Footring or recessed bases, small flared bases, and low pedestal bases also occur (Fig. 3.7, WNB/15, 34; TOL/43, & WHS/43, 96, 150-151, & 156). In addition, there are a number of bowls with slightly restricted openings but basically convex or hemispherical profiles (Fig. 3.7, WHS/25-26, 30, 35, 39, 44 & 152). Very rare examples of saucepan pots occurred in the same pits as these jars and bowls at West of Northumberland Bottom and White Horse Stone (Fig. 3.7, WNB/42 & WHS/37, 88, 99, 135-136) and may actually be simply Middle Iron Age in date. Neutral profile pots recovered from Tollgate may well be proto-saucepan pots and are remarkably similar to slightly ovoid jars from White Horse Stone (Fig. 3.7, TOL/29-31, 33 & 41; WHS/38, 129).

Eleven of the twelve radiocarbon dates for the pottery from these three sites are presented in Table 3.3 (the one not presented, NZA-22880, cannot be contemporary with the pottery and La Tène I brooch recovered from the same pit and therefore is not discussed here). The broad results cover the period of 6th to 4th century cal BC in most cases; seven dates cover 6th-4th, three cover 6th to 5th, and one covers only the 6th century cal BC. If the Earliest Iron Age pottery described above can be accommodated within the 8th-7th/6th

centuries BC, the Early/Middle Iron Age could be assigned to the 6th-4th centuries BC. Feature F.278 at Rectory Road along the route of the Grays By-pass in Essex produced a key group of pottery including a shouldered, biconical jar with finger-tip impressions and angled bowls with long flared necks identical to Early/Middle Iron Age types from White Horse Stone pits in association with two radiocarbon dates of 380 cal BC-60 cal AD (HAR-4527; original published date 160 ± 80 bc) and 800-200 cal BC (HAR-4635; original published date 400 ± 70 bc) (Hamilton 1988, 78).

It is possible that the pottery deposits from the pits at Tollgate are actually just slightly earlier (even as little as a decade or two) than those from Northumberland Bottom and White Horse Stone, based on the absence of any saucepan pots at Tollgate and the presence of one or two possibly 'earlier' types (Fig. 3.7, TOL/5 & 22). Tollgate and Northumberland Bottom may represent foci of the same 'site', a shifting settlement along the Thames Estuary side of the base of the North Downs. Initial interpretation of the Cuxton later prehistoric pottery assemblage put that material into this ceramic phase, but a single radiocarbon date suggests otherwise and is discussed in the next section. The best example of a similar assemblage in south-east England is the earlier phase of Iron Age pottery from Brooklands, Weybridge, a site which is also located on the North Downs but in Surrey (Hanworth and Tomalin 1977). Many of the same vessel forms are present in this collection including occasional saucepan pots with simple tooled decoration which link this site to those in Wessex. A significant, diagnostic trait which characterises this ceramic period is the application of surface rustication to many vessels, both jars and bowls. Rustication is surface treatment (or decoration) which may consist of simply deliberate roughening of the surface of a vessel, patterned roughening creating finger-furrows, the application of clay globules creating a three-dimensional effect (encrustation), application of a thick clay slurry, combing of marks into the leather-hard surface as another type of roughening, or randomly but densely applied deep finger-tip impressions all over the body of the vessel (Fig. 3.7, WHS/26, 38-39, 57, 60, 70, 84, 91, 126, 152 & 157). Often rustication occurs within a general zone around a vessel; however this is never defined by an incised or tooled panel but can be offset by a zone of burnishing around the pot. Rustication is common at White Horse Stone, but non-existent at West of Northumberland Bottom, while at Tollgate there are only three sherds which possibly display this technique. There is every reason to suspect that west of the Medway valley, rustication was not viewed as an acceptable surface treatment during this period. Macpherson Grant noted, more than a decade ago, that this phenomenon seemed to be exclusive to east Kent and the continent (1991, 41-8); the evidence from assemblages recovered along the route of the Channel Tunnel Rail Link supports this observation.

One other distinctive surface treatment applied during this ceramic phase, and later, is a glossy red-finish, formerly referred to as 'haematite-coating' (Middleton 1995). There are a

few examples from Early/Middle Iron Age pits at White Horse Stone. Middleton has indicated that this technique begins during the 'Late Bronze Age/Early Iron Age' as at Minnis Bay and continues into the 'Early Iron Age-Middle Iron Age' as at Highstead (*ibid*, table 18.1A-B). All examples are well-burnished. The variety of fabrics associated with the examples investigated indicates that there is no single source of production of red-finished vessels.

In SRZ2, there are only two likely locations for occupation of this period. At Tutt Hill, one pit contained several slack-profile vessels in association with two tripartite bowls (Fig. 3.7, TUT/16-26). While the tripartite bowls are best accommodated within the Earliest Iron Age, there is a clear possibility that they could belong to this phase as well, straddling the 6th century BC if not later, as one of the other bowls is round-bodied. One of the ditches at Beechbrook Wood contained a small assemblage of vessels which would be perfectly acceptable within the Early/Middle Iron Age ceramic phase based on the presence of a round-shouldered jar with upright rim bearing finger-tip impressions, a saucepan/proto-saucepan pot, and a fine, round-bodied bowl which was burnished on both surfaces (Fig. 3.7, BBW/13-16). Three of the four illustrated vessels are made from the same, distinctive fabric containing quartz sand, organic temper and detritus flint.

Unusual use-wear treatment of single, low pedestal bases was noted both at White Horse Stone (Fig. 3.7, WHS/151) and in the Middle Iron Age pit at Cuxton (Fig. 3.8, CUX/18). Each of these bases had been deliberately snipped or clipped around the entire vessel wall just above the base zone, which makes them appear to be lids. The actual vessels of both bases are black and burnished on all original surfaces, and the Cuxton vessel had been 'signed' with a burnished 'X' underneath. It may be worth investigating these further to determine what instruments were used to perform the clipping procedures.

All of the Early/Middle Iron Age vessels and rustication surface treatment find parallel with forms and styles in northern France (Hurtrelle *et al.* 1990; Blancquaert and Bostyn 1998; Stead and Rigby 1999) and one vessel in particular demonstrates this. The unique example of a 'horned', 'crenellated' or 'festooned' bowl (Fig. 3.7f, WHS/147), which was made from a flint-tempered, shelly fabric and burnished on the interior, emphasizes this connection. Horned bowls are not uncommon in settlement assemblages on the French side of the Channel. Although the *fabric type* may be found in Iron Age assemblages in Kent, it is interesting that this particular one is actually extremely rare in the White Horse Stone assemblage (0.4% by count; 0.1% by weight) and the presence of shell suggests that it could have been made on the south side of the Greater Thames Estuary and transported to the site. The Continental examples of horned bowls are made from flint-tempered (silex) or grog-tempered (chamotte) fabrics; no examples of horned bowls made from flint and shell fabrics

have been noted in these publications. Therefore, it is unlikely that this vessel was imported but the possibility should not be excluded from future research.

Evidence for the trade of salt continued during this period; fragments from several different briquetage containers were recovered from pits at West of Northumberland Bottom, Tollgate and White Horse Stone. At this last site, the fragments undoubtedly indicate that salt was traded or transported inland from the production source areas, but the considerable quantities of briquetage from the other two sites suggest that either these were locations of salt production or that quantities of salt were required for specific purposes there. This is explored further below.

3.5.6 Middle Iron Age (LPREpot Figure 3.8)

As discussed in the Early/Middle Iron Age section above, both roughly finished and highly burnished saucepan pots had already been introduced; during the Middle Iron Age period they simply become more common (Fig. 3.8, CUX/22; EYH/13; BBW/25, 28, 29, 30, 32, 38, 48, 54-55). In addition, a range of new forms such as S-profile jars and proto-bead rim, convex-profile jars appeared (Fig. 3.8, BBW/21-24, 26 & 31; LSF/49), as well as unique forms (Fig. 3.8, EYH/2; LSF/1). Previous types, such as round-bodied bowls with pedestal bases and bipartite jars or bowls, continued to be used and some types are better understood (Fig. 3.8, EYH/1, 3-5, 7-8, 9-12; BBW/18-20, 34, 37 & 56-57; LSF/5, 30) or seem to develop into variants of previous forms (Fig. 3.8, SLT/60-61).

Examples of round-bodied bowls with curvilinear decoration and protruding bases also date to this period (Fig. 3.8, TUT/27a & b, BBW/53), and probably continued in use into the Middle/Late Iron Age ceramic phase. Other possible examples include a body sherd from West of Northumberland Bottom (not illustrated, WNB/48), but this is not burnished on the interior and therefore could be from a jar, and a neck zone sherd of a globular bowl from West of Blind Lane (not illustrated). All four of these examples were made from glauconite-rich sandy fabrics but the variations amongst the minor inclusions in these fabrics suggest that they are not from a single source; this needs further investigation. Similarly decorated bowls have been found at Oldbury in Kent (Thompson 1986), as well as at Ardale School (Hamilton 1988, fig. 72, 22; Sealey 1996, fig. 3), Shoeburyness (Stamataki 2000), Mucking (M U Jones, pers. comm.) and Southend-on-Sea, Prittlewell (Brown 1983) and Asheldham Camp (Brown 1991) in Essex. These vessels have been labelled the Mucking-Oldbury style (Brown 1991) and are different from the Mucking-Crayford style (Cunliffe 1991, fig. A:26), which is a more elaborate variation of decoration with rigid motifs rather than free-flowing curvilinear tooling that has been found on burnished pots in Essex (see also North Shoebury (Brown 1995a, fig. 68, 133 & 141) and at Birchington and Margate in Kent (Macpherson Grant 1991, 44). There

are, therefore, two decorative styles applied to finer vessels during the Middle Iron Age, a distinctive south Essex-north Kent style zone which straddles the lower Thames corridor.

Starting with Cuxton, it is possible to see quite readily the dating links between the Early/Middle Iron Age and the Middle Iron Age. The main pit at this site was rich with many fragments from over 25 vessels, some with diagnostic forms similar to ones common during the Early/Middle Iron Age. These included round-bodied bowls with simple flared or everted rims, a round-shouldered jar with upright rim, a convex-profile jar, shouldered jars with finger-tip impressions, a hemispherical bowl, a rusticated and burnished combination jar, a footring base (with tooled design beneath) and one red-finished and polished bowl (Fig. 3.8, CUX/3-22). A sample from this pit was radiocarbon dated to 400-200 cal BC (context 342; NZA-22593, 2267 \pm 30) but the similarities between these vessels and those of the previous period are so remarkable that it is highly likely that the earlier distribution in the bimodal radiocarbon curve for this result is the most appropriate at 400-350 cal BC (cf. Allen and Mackinder 2005, fig.1), rather than later. This would make Cuxton fit within the wider remit of the Early/Middle Iron Age described above.

Better examples of Middle Iron Age key groups can be found at South-East of Eyhorne Street where four pits containing pottery of this date were recovered (Fig. 3.8, EYH/1-13). One pit, which may be a special deposit, contained five diagnostic vessels: an S-shaped bowl cut in half from rim to base, a unique conical cup, two proto-saucepans and a large (30 cm diameter) ovoid jar displaying rustication on the lower half and smoothing on the upper half. Three of these vessels were made from local glauconitic sandy fabrics with minor quantities of flint temper and the bowl was made from a quartz sand fabric, but the cup may be the earliest occurrence in the Middle Iron Age of a grog-tempered sandy clay fabric. There are no other examples of Iron Age conical cups in south-east England, and it is tempting to suggest that this vessel was imported, possibly from the Champagne region where it finds parallels amongst the grave goods from La Tène I cemeteries (Rozoy 1987, 109). Similar but not identical small or miniature vessels have been recovered from graves dating from Hallstatt C to the Gallo-Roman period and at least some of these are grog-tempered (Stead and Rigby 1999, 42, fig. 22, 2836). A radiocarbon date of 400-260 cal BC (context 223; NZA-22594, 2295 \pm 30) for charred grain dumped into the upper fill of the conical cup pit indicates a date early in the Middle Iron Age. Another pit at Eyhorne contained a sizeable ovoid or possibly shouldered jar, a simple ovoid jar and a shouldered bowl nearly identical to four bowls found in a cremation grave at White Horse Stone with a broad date of 460-160 cal BC (context 6130; GU-9088, 2270 \pm 60) (Fig. 3.8, WHS/61-67); the Eyhorne bowl, however, is made from a local sandy and glauconitic fabric with a sprinkling of flint temper. These bipartite, shouldered or carinated bowls with short rims are commonly found in northern France and date to 'La Tène ancienne' or the La Tène I period, c 400-200 BC (Hurtrelle *et al*

1990; Blancquaert and Bostyn 1998, 132, fig. 22). Another pit contained similar material (Fig. 3.8, EYH/9-12) and the vessels were all made from the same fabrics described above. One other Middle Iron Age pit contained a single saucepan pot made from a quartz sand matrix rich with glauconite but no added flint temper (Fig. 3.8, EYH/13). There is every reason to believe that these four pit groups are contemporary in date or may actually represent the full Middle Iron Age period. The use of fabrics rich with glauconite grains as a sandy fabric concept first appeared during the Early/Middle Iron Age as at West of Northumberland Bottom and White Horse Stone, and continued at Cuxton in the Middle Iron Age. This choice of fabric continues through the Late Iron Age, for some parts of the route (P. Booth, pers comm.), which follows on from the Eyhorne evidence presented here.

At Beechbrook Wood, there is a huge dump of parts of at least 49 vessels, mainly S-shaped jars, saucepan pots and barrel-shaped jars of various kinds which could symbolise the Middle Iron Age for the SRZ2 area; many of them are illustrated in Fig. 3.8 (BBW/18-40). One radiocarbon date determined from charcoal within the deposit revealed that these vessels, a few of which were made with grog-tempered fabrics, are likely to have been used and deposited at some time between 390-170 cal BC (context 2346-384; NZA-20052, 2207 \pm 40). This date is remarkably similar to that of 380-170 cal BC for the skeleton of the woman in grave 2037 at Little Stock Farm (NZA-19987; 2203 \pm 35) with its two grave good vessels (Fig. 3.8, LSF/1 & 5). These two dates and that associated with the conical cup at Eyhorne Street provide an absolute chronology for the Middle Iron Age ceramic phase of this project (Fig. 3.2) and for the introduction of grog-tempering technology during the Iron Age in Kent.

A small but rather useful key group of pottery, conservatively assigned on style to 150-50 BC, was recovered from a gully and soil overlying a hearth in trench 3 at Oldbury, Kent (Thompson 1986, 283, fig. 7, 16-24). Unfortunately none of the fabrics is described for this group of vessels, but one is a type vessel of the Mucking-Oldbury style curvilinear decorated bowl as mentioned above, one is a 6 cm diameter cup, one is an S-shaped jar with a perforation and strong vertical, burnish lines, four rims are from what may be slack-profile or ovoid jars, one is a footring base only and the ninth is undoubtedly a saucepan pot rim displaying tooled parallel lines at the rim. Here again is a combination of the Mucking-Oldbury decorated bowl with an S-shaped jar and saucepan pot, as in the enclosure ditch dump and recut at Beechbrook Wood, which now can be re-assigned to the Middle Iron Age period.

A much larger assemblage from several features can be selected from the many pit groups and ditch phases at Farningham Hill, overlooking the west bank of the Darent valley south of Dartford. At least nine pits and phases from within three ditch cuts can be assigned to the Middle Iron Age upon careful examination of both the vessel forms and range of fabrics present (Couldrey 1984, figs 15-21, table H). These pits contained fine, burnished S-shaped

jars made from glauconitic sandy fabrics and coarse, ovoid jars, jars with everted rims and hemispherical and other simple bowls made from shell fabrics (*ibid*, fig. 15, 14-20 & 32-3; fig 16, 41-3; fig. 18, 89-101; fig. 20, 137-8 & 140-1; fig. 21, 150-161). Grog-tempered pottery is present during this ceramic phase at Farningham Hill but never represents more than 5% of any pit or phase of ditch cut.

To summarise, there are three radiocarbon dates for saucepan pots from along the route; a flint-tempered and burnished saucepan with a date of 400-200 cal BC from Cuxton, a roughly finished, flint-tempered with sandy clay matrix example from the White Horse Stone cremation grave dated 460-160 cal BC and numerous saucepan pots made from either glauconitic sandy, flint-tempered with sandy clay matrices or grog-tempered fabrics found in an enclosure ditch dump at Beechbrook Wood with a date of 390-170 cal BC. Earlier dates are also known for pits containing quantities of Early/Middle Iron Age pottery including rare examples of saucepan pots (Table 3.3), and these are discussed in the previous section.

The surprise, however, amongst some of the key groups assigned to the Middle Iron Age is that this is the period when grog-tempering returns to the range of fabric recipes amongst collections. As mentioned above, the conical cup from Eyhorne Street is grog-tempered, but so too is the highly burnished globular bowl found in a posthole at Little Stock Farm (Fig. 3.8, LSF/15). Many of the jars and saucepan pots from the enclosure ditch dump at Beechbrook Wood are grog-tempered and one slightly shouldered cooking pot from a ditch at Saltwood Tunnel, found in association with a barrel-shaped jar in a sandy and iron oxides fabric and the pedestal base from a glauconite-rich bowl, was grog-tempered (Fig. 3.8, SLT/26-28). Therefore, while once it was possible to assume that grog-tempering of fabrics was a defining characteristic of the Late Iron Age in southern England, this is not the case in Kent. However, it is possible to identify this Middle Iron Age phase at Little Stock Farm from at least one ditch which contained no examples of grog-tempered pottery (Fig. 3.8, LSF/30 & 49) and, therefore, variation amongst fabrics present is to be expected during this ceramic phase. One of the vessels bears lower body rustication and this effect was also found on a Middle Iron Age vessel, this time made from a grog-tempered fabric, from Saltwood (Fig. 3.8, SLT/76). If this bowl had been made from any other type of fabric, it would undoubtedly have been assigned to the Early/Middle Iron Age phase due to its similarity in form to examples from White Horse Stone (Fig. 3.7, WHS/26 & 152). Therefore, in the SRZ2 and SRZ3 areas, the use of grog-tempered fabrics is accepted as part of the Middle Iron Age ceramic repertoire. Without the radiocarbon dating of the conical cup pit from Eyhorne Street, the female grave at Little Stock Farm with the painted beaker and large grog-tempered bowl, and the enclosure ditch dump at Beechbrook Wood, the appearance of this characteristic so early in the ceramic sequence would have caused much consternation. It is noteworthy that there are no examples of Middle Iron Age assemblages from any of the sites within SRZ1, if

the cremation pit from White Horse Stone is excluded; all the examples discussed in this section derive from sites south of Maidstone.

Figure 3.2: Later prehistoric phases represented at each site based on ceramic evidence (dark infill, positive presence; pale infill, suggested presence)

MBA: Middle Bronze Age; M-LBA: Middle/Late Bronze Age; LBA: Late Bronze Age; EIA: Earliest Iron Age; E-MIA: Early/Middle Iron Age; M-LIA: Middle/Late Iron Age

CTRL Site Number	Site Assemblage	MBA	M-LBA	LBA (plainware)	EIA (decorated)	E-MIA	MIA	M-LIA
	(CTRL radiocarbon calibrated date for period)	(1550-1350 BC)	(1350-1150 BC)	(1150-800 BC)	(800-550 BC)	(600-350 BC)	(400-200 BC)	(200-50 BC)
	Needham (1996) - periodisation	5	5	6 & 7	8	-	-	-
	and bronze metalwork traditions	Acton 2 &	Penard	Wilburton to	Llyn Fawr	-	-	-
		Taunton		Ewart Park				
Sub-Regional Zone 1								
2	Pepper Hill							
3	Whitehill Road Barrow							
4	West of Northumberland Bottom							
5	Tollgate							
6	Cobham Golf Course							
7	Cuxton							
9	White Horse Stone							
	Pilgrim's Way							
	East of Boarley Farm							
	West of Boarley Farm							
	Boarley Farm							
Sub-Regional Zone 2								
13	South of Snarkhurst Wood							
14	South-East of Eyhorne Street							
15	A20 Diversion Holm Hill							
16	Sandway Road							
17	Hurst Wood							
	Chapel Mill							
	East of Newlands							
19	Tutt Hill							
21	Beechbrook Wood							
Sub-Regional Zone 3								
24	West of Blind Lane							
25	Mersham							
27	Little Stock Farm							
28	Church Lane							
30	Saltwood Tunnel							

Only two sites along the route appear to have direct evidence for receiving salt in briquetage containers – Cuxton (SRZ1) and Beechbrook Wood (SRZ2). No sherds from briquetage containers were recovered from Middle Iron Age deposits at Eyhorne Street, Little Stock Farm (also in SRZ2) or Saltwood Tunnel (SRZ3). This is not to say that salt was not used at these sites, only that it may no longer have been transported to these areas during the Middle Iron Age in ceramic containers, possibly having been redistributed from Beechbrook Wood for example.

3.5.7 Middle/Late Iron Age (LPREpot Figure 3.9)

The final period discussed in this section is the transition from the Middle to Late Iron Age. It is characterised by new forms such as well-sprung barrel-shaped jars with beaded rims made from grog-tempered fabrics and cordoned jar or bowls, as well as by new types of decoration and surface treatment such as scratching, deep wiping on barrels occasionally with finger-tip impressed applied strips, and combing (Fig. 3.9, LSF/19-22, 40, 46). The well-sprung barrel jars appear to have derived from the more conservative relaxed convex/barrel profile vessels of the Middle Iron Age which were not made from grog-tempered fabrics but local flint and iron oxide types (Fig. 3.8, LSF/49).

A large assemblage of pottery which is likely to date from this ceramic phase and derives from several pits and ditch cuts was recovered at the Farningham Hill farmstead (Philip 1984, 7-71). In addition to earlier vessel types discussed just above in the Middle Iron Age section, other forms such as cordoned jar/bowls and large necked jars made from grog-tempered fabrics, globular or barrel-shaped jars made from flint-tempered fabrics were recovered and the only decorated saucepan pot found in Kent which was made from a shell-rich fabric (Couldrey 1984, fig. 15, 21-31; fig. 16, 47-51; fig. 19, 105-130; fig. 20, 131-4 & 144; fig. 21, 146). Not only the new vessel forms but also the presence of a significant quantity of grog-tempered fabrics (22-45% of the sherds within a pit or phase of ditch cut) entering the archaeological record suggest that there is a Middle/Late Iron Age phase at this site comparable to the postulated ceramic phase 3 at Little Stock Farm.

Comparative Assemblages

As mentioned above, some of the best parallels to the Iron Age assemblages along the route, rather than being in south-east England, are found on sites in northern France, such as Coquelles and Fréthun (Pas-de-Calais) discovered during the construction of the railway connecting the ‘Tunnel sous la Manche’ excavated a decade prior to this project (Blancquaert and Bostyn 1998) and other fieldwork conducted in the départements of Nord and Pas-de-Calais as part of earthwork investigations and landscape management since 1969 (Hurtrelle *et al* 1990). Further examples can be found amongst the 241 pots from the Morel Collection of

funerary objects from Champagne in the British Museum (Stead and Rigby 1999), some of which have been investigated using petrological analysis, and the publication of cemeteries in the Champagne area (Rozoy 1987). In addition, the Early/Middle Iron Age assemblages west of the Medway valley are most similar to the Brooklands, Surrey assemblage (Hanworth and Tomalin 1977) while White Horse Stone is a good example of an assemblage which has forms and fabrics which are similar to both the north-west and the south-east of Kent.

A useful Middle/Late Iron Age assemblage for comparison is Farningham Hill, just west of the SRZ1 area in the Darent valley (Philip 1984). Here, there were pits with only shell-gritted pottery, only grog-tempered pottery, one pit with only sandy fabric pottery rich with glauconite, and pits with various amounts of some or all of these fabric groups. This assemblage has been interpreted as providing a chronological sequence representing approximately a century of activity at the site from 50 BC to AD 50 (Couldrey 1984). Once again, this can now be seen as a conservative estimate of date. It is most likely that the shell-dominated pits (pits 15 and 24) belong to the Early/Middle Iron Age period if compared to the fabrics and forms from West of Northumberland Bottom and Tollgate, with the glauconitic sandy-dominated pits (pits 5, 12 and 22) belonging to the Middle Iron Age and the grog-temper dominated pits belonging to the Late Iron Age (pits 16, 17 and 19) (*ibid.*, table H). Other features were dominated by pottery in shell-tempered fabrics but also contained small to significant amounts of either just glauconitic sandy wares (pits 9, 10, 11, 20, 21 and 23; ditches south lower, south-east lower and north-west lower) or both grog-tempered and glauconitic sandy wares (pits 13, 14 and 6; ditches south upper, north-west upper and south-east upper) which are likely to represent the Middle/Late Iron Age at least. A useful continuation of this research would be to examine this assemblage again to determine if there are any vessels with suitable burnt food or soot residues from key groups and submit them for radiocarbon dating in order to test the results of dating deposits containing grog-tempered wares in the SRZ2 zone with samples from west of SRZ1 to determine if the adoption of grog-tempering in these areas was a contemporary technological and social 'event' or not. The key group from north-west ditch upper (*ibid.* fig. 21, 153-159), for example, would be appropriate for it has a barrel-shaped jar with corrugated or grooved decoration made from a mixed fabric of quartz, grog and shell, in association with a glauconitic sandy fabric bowl and a variety of different handmade and wheelthrown jars in different fabrics, including a bipartite jar with combed effect made from burnishing below the shoulder, which may be a variation of rustication.

3.6 Fabrics, resources, potters and exchange

The manufacture of a pottery vessel requires clay, temper if necessary, water, fuel, suitable weather and the skills of a potter, while the history of a pot requires all this and the presence

of one or more users of the vessel. This section explores the geology which could have provided the clays and tempers which have been identified in the later prehistoric pottery assemblages from along the route. It uses this geology within the framework of a pottery resource procurement model proposed by Dean Arnold (1981; 1985) which has been applied to studies of later prehistoric pottery production and distribution in Britain (Knight 1992; Morris 1991; 1994a; 1994c; 1995; 1996; 2000; Morris and Woodward 2003). Arnold's model states that 84% of potters, whose activities are described within the ethnographic literature and through his own observations of community potters in Mexico, obtained their potting clays from within 7 km of their villages, and 97% were willing to travel up to 10 km to acquire special tempers if necessary. However, the majority of potters actually dug their clays and obtained temper from sources within 1 km of their communities, the preferred territory of exploitation (Arnold 1985, 50-4). Therefore, a resource procurement zone of up to 7 km radius for clay and 10 km for added temper can be constructed around an archaeological site. Within this area the concept of 'local' resources can be applied, while it is very much less likely that a potter will travel outside this 'local' area to procure resources. Therefore, pots made from clays or tempers not found in the 'local' zone are most likely to have been brought to the settlement by trade or exchange; this includes the movement of pottery with marriage partners as bridewealth or as personal objects. Arnold actually recommended that archaeologists use his discoveries to understand the nature of their own pottery distributions (1985, 59). Discussions of the model amongst British pottery specialists and students have shown that while it may be suitable for the study of later prehistoric pottery, it is not necessarily suitable for earlier prehistoric periods, in particular those for which transhumance, pastoralism or a semi-sedentary annual cycle could affect accessibility to resources on a significant scale, nor for a true market economy where the attraction of a market can re-set the landscape defined as 'local'. The model undoubtedly needs modification with regard to topographical variability which can both positively and negatively affect the movement of potters to and from their resources; rivers and seas can be positive aspects, and mountains negative ones. The model is pre-industrial, or rural agricultural, in its setting. Arnold's model, therefore, is used here as a starting-point for establishing whether the pottery found on a CTRL settlement was made locally or acquired through some form of trade for it provides a general method for defining the terms 'local' and 'non-local' for each assemblage, and also an understanding of the practical reasons why these definitions may have had meaning in the past.

Unfortunately, however, the geology along the route of the Channel Tunnel Rail Link does not alter significantly enough amongst the three sub-regional zones for there to be clear differences between 'local' for one site and 'local' for another site in every case (Fig. 3.1). For most of the sites, all of the components identified in each fabric type could have been

obtained locally to that site because the same range of geology is repeated at each location. If a special kind of pottery was made with clay A and temper B at site 41 in SRZ2 and traded to site 53 in SRZ3, we would not be able to recognise this pottery at site 53 being traded pottery if clay A and temper B were also available in the local area of site 53. Only sites on the north dip-slope of the North Downs in SRZ1 have significantly different geology from sites elsewhere in SRZ1 and in SRZ2 and SRZ3 for this possibility to be identified. None of the later prehistoric pottery fabric types defined in the CTRL assemblages was made from identifiably exotic components originating from outside the south-east of England (cf. Gibson *et al.* 1997). To compound matters, the geology of northern France (Stead and Rigby 1999, 29-31) is very similar to that of Kent and the use of grog as a temper is also common there in the second half of the 1st millennium BC (cf. Hurtrelle *et al.* 1990). Therefore, it would also be extremely difficult to identify any vessels which had been transported from northern France to Kent, based solely on fabric type, without resorting to considerably detailed scientific analysis. A total of 101 thin-sectioned samples from 11 site assemblages (Table 3.5) provided a great deal of important assistance with the identification of inclusions in the fabrics whenever this was required, but this method does not reveal variations amongst clay matrices at the clay-sized grade itself. This can only be achieved through the use of atomic absorption spectrometry, inductively-coupled plasma mass spectrometry or neutron activation analysis, for example (Barclay 2001).

Table 3.5: Samples selected for thin-sectioning and petrological analysis

Site	Pottery Record Number	Fabric code
West of Northumberland Bottom	1001	S3
	1030	S3
	1046	F4
	1150	Q1
	1240	C1
	1241	G1
	1259	GI1
	1311	F8
	1316	Q5
	1395	S2
Tollgate	1001	F1
	1002	VQ1
	1013	S1
	1026	S3
	1043	V1
	1078	Q1
	1082	Q2
	1122	F4
	1217	F2

Site	Pottery Record Number	Fabric code
	1296	VF1
	1323	G1
	1350	VG1
	1432	FS1
	1985	VS2?
Cobham Golf Course	1063	F1
Cuxton	1002	SF1
	1006	QF3
	1007	FV1
	1008	FV1
	1016	FV1
	1017	FQ3
	1022	F1
	1036	QF1
	1045	FV1
	1051	FQ2
	1071	VFS1
	1079	S1
White Horse Stone	1019	FI1
	1349	QF1
	1647	QF3
	1684	QF2
	1767	QC1
	2017	FQ1
	2089	QZ1
	2219	S1
	2261	FQ3
	2329	FV1
	3281	C1
	3304	QC1
	3336	FI1
	3490	F1
	3949	FG1
	4009-10	FI1
	4453	Q3
	4457	FI1
Sandway Road	1008	
South-east of Eyhorne Street	1002	Q3
	1007	GQ1
	1023	QF1
Tutt Hill	1003	GF1
	1007	Q1
	1014	QF1
	1019	FQ1
	1026	FQ1
	1090	F1
	1112	F3
	1128	GF1

Site	Pottery Record Number	Fabric code
	1144	GF2
	1147	G2
Beechbrook Wood	1000	Z1
	1097	G3
	1100	I1
	1109	I2
	1117	Q6
	1123	I5
	1125	Q8
	1130	QI3
	1135	G2
	1138	Q5
	1224	G1
	1366	G4
Little Stock Farm	1009	G1
	1011	FI1
	1020	FI1
	1027	Q1
	1028	Q2
	1035	FG2
	1079	QI3
	1142	G9
	1189	G2
	1201-4	Q4
	1744	Q6
Saltwood Tunnel	1001	G2
	1022	G5
	2000	GI3
	2376	FG5
	3025	I1
	3064	GQ4
	4088	GQ99
	4120	GF99
	5291	D2

3.6.1 Geology of the sub-regions (LPREpot Figure 3.1)

Sub-regional zone 1 (North Downs and Thames Estuary) is dominated by the higher ground of Upper Chalk, the major resource of quality flint, and is split by the River Medway. North of the North Downs the wider Thames Estuary deposits of Woolwich Beds and Reading Beds which are sands and clays (some with naturally-occurring fossil shell), and Thanet Sands which can be fine-grained or silty, are accessible from the heart of this sub-region of varied topography and resources (British Geological Survey Sheets 271 and 272; Dewey, *et al* 1924; Dines and Robbie 1954). Easily-accessible and unlimited deposits of flint from the Upper Chalk dominated the fabric tempers for over 1000 years in this area from the Middle Bronze Age to the Middle Iron Age, despite the well-known difficulty of crushing flint to make

temper (Cleal 1995b, 191). The view southwards from the North Downs brings into focus one additional potential clay resource at the very edge of this zone, one commonly found further south, Gault clay. This stratum is likely to be the primary source for the glauconitic sandy clays and the iron oxide-rich clays found in so many of the assemblages south of the North Downs. Sub-regional zone 2 (Maidstone to Ashford) is dominated by the parallel deposits of Gault and Lower Greensand which run through the area considered to be local to the CTRL sites (British Regional Geology Sheet 288; Worssam 1963). To the south-west and the north-east, the Weald Clay and the Upper Chalk lie in similar parallel positions respectively. Sub-regional zone 3 (Ashford to Folkestone) is identical to the deposits of SRZ2 with the exception of the Weald Clay which is no longer locally convenient as a resource between Hythe and Folkestone (British Geological Survey Sheets 289 and 305-306; Smart, *et al* 1966). The presence of iron oxides or ironstones interleaved amongst the sands of the Weald Clay could prove to be the source of much of this inclusion found in so many of the fabric types in the SRZ2 and SRZ3 assemblages.

3.6.2 Middle Bronze Age and Middle/Late Bronze Age

Pottery found in SRZ1 is always flint-tempered during the Middle Bronze Age and there are no obvious examples of vessels from the transitional period with which to compare fabric recipes. A surprise appeared amongst the Middle Bronze Age fabrics in SRZ2 and SRZ3; while the majority of vessels had been made from flint-tempered fabrics, a few examples (Fig. 3.3, SWR/1-2 and NEW/1; BBW/not illustrated) were made from fabrics well-gritted, probably tempered, with angular fragments of quartzite. As flint and quartzite are both silica-based formations and as the shapes of the inclusions in both cases are angular, the engineering properties of these two rock types are very likely to be similar with respect to thermal expansion properties and to improving clay porosity (Rye 1976; 1981; Braun 1983) and may be interchangeable as tempering agents. In addition, they are quite similar in visual appearance, a factor which may have had a significant bearing on their selection in the first place (cf. Cleal 1995b; Gibson 1995). The majority of clay matrices used to make Middle Bronze Age pottery are silty in nature, rather than sandy.

During the second half of the Middle Bronze Age period, from the 14th-12th century cal BC, changes in the technology of pottery production began to take place, and there is every reason to believe that these changes were a reflection of social transformations culminating in the end of cremation cemeteries and the deposition of cremations into urns, the adoption or emergence of excarnation as a significant method of disposal of the dead (Brück 1995) and the appearance of new types of settlements such as ring 'forts' (Bond 1988) and massive middens (McOmish 1996; Lawson 2000) in parts of southern Britain. This ceramic transformation was a slow process over several centuries. In Kent, it seems that the changes

were marked by the use of grog temper as a significant additive or sole additive to fabrics creating grog- and flint-tempered or simply grog-tempered fabrics to make vessel forms which may have been extremely similar if not identical to Middle Bronze Age urn/jars or new forms heralding the Late Bronze Age. There is a possibility that this is an expression of ‘the past in the present’, deliberately adding crushed old pots with well-known histories of their own into the new constructions. This may have been a method for physically working through social changes by embodying the past directly into daily life; it could be done with flint-tempering or without. The best examples amongst the CTRL sites occurred in the Tutt Hill and Beechbrook Wood assemblages, but other examples were identified amongst the Saltwood Tunnel collection. At Shrubsoles Hill on the Isle of Sheppey, Raymond identified both flint-tempered fabrics and those with varying combinations of flint and grog amongst the pottery believed to be Middle Bronze Age (2003, 26 & 32-3). It is very likely that the latter belong to the transition phase as well but in the absence of a correlation of fabrics to forms or a catalogue of details for the small selection of illustrated vessels this cannot be confirmed. The use of flint- and grog-tempered fabrics is not limited to Kent. Brown has prepared a gazetteer of Deverel-Rimbury Middle Bronze Age vessels found in Essex which has revealed that 32 out of 450 vessels (7%) available for study ten years ago had this temper combination and 82 (18%) had been made with grog-tempered fabrics only (Brown 1995a). He suggested that this is likely to have social relevance beyond being simply a matter of technology or potting tradition as had been observed ethnographically with the discovery of ancestral ‘soul pots’ (Sterner 1989, 458). This topic has been explored further more recently (Morris 1994d; Gamble 2001, 115-120), in particular with regard to material culture fragmentation (Woodward 2002, 109-10) which may be an archaeologically detectable demonstration of the reinforcement of social cohesion. More petrological research is required to identify the variations amongst the many types of grog to determine the full histories of the sequences of pots present; grog-within-grog (Bewley, *et al.* 1992) is just one of the obvious examples to investigate.

3.6.3 Late Bronze Age and Earliest Iron Age

The small collections of Late Bronze Age and Earliest Iron Age pottery are microcosms of events unfolding elsewhere in southern Britain. In SRZ1, the pottery is nearly always flint-tempered. We have no idea at this stage whether concerns about social changes were reflected in pottery technology during the Middle/Late Bronze Age transition in this area, but at least by the end of the 12th century cal BC flint-tempering was once again the norm in this zone of Upper Chalk. Towards the end of the Late Bronze Age, the clay matrices selected for pottery production became distinctively sandy in texture, a development taking place all over southern Britain. By the 9th century cal BC if not before, at least one flint-tempered fabric

had a sandy clay matrix containing a moderate amount of rounded, glauconite pellets undoubtedly from a local source. One unique, decorated round-bodied bowl was made from an iron oxide-rich fabric; it stands out from the rest of the associated assemblage of flint-tempered fabrics in its feature (Fig. 3.5, WHS/8) and amongst Late Bronze Age vessels along the route. It is very tempting to suggest that it may be an imported vessel, or at the least not made locally; one of the flint-tempered fabrics had iron oxides in its matrix but only in moderate quantity.

It appears that no examples of Late Bronze Age pottery were found in SRZ2 (Fig. 3.2). However, in SRZ3 pottery manufacture during this ceramic phase seems to have had a technological style all of its own. Late Bronze Age vessels found at Saltwood Tunnel had been made from flint-tempered, grog- and flint-tempered or grog-tempered fabrics (Fig. 3.5, SLT/10, 29-32, 35-37, 51-53) in contrast to the uniformity of flint-tempering elsewhere. Fortunately, at least one of these grog-tempered vessels was radiocarbon dated by association to 10th-9th century cal BC, otherwise the ceramic phasing of grog-tempered pottery would be open to discussion. What is interesting is that this particular vessel is actually grog-tempered with a sandy clay matrix containing a moderate to common amount of glauconite. Why was there so much grog-tempered Late Bronze Age pottery at Saltwood Tunnel? Were the occupants at Saltwood actually a continuous flow of immigrants into the area and, if so, is it suitable to apply the 'transitional' interpretation to this continued use of grog as temper at this temporary homebase?

Little Stock Farm in SRZ3 was the scene of the only sizeable deposits of Earliest Iron Age pottery. Pots from the two vessel holes had been made from an iron oxide fabric (three pots), a glauconitic sandy fabric with moderate flint-temper (two), two flint-tempered fabrics (two), a flint-tempered fabric with iron oxides (one), and a glauconitic sandy fabric (one). The range of fabrics demonstrates the typical trend towards sandier fabrics and iron oxide fabrics during this ceramic phase.

3.6.4 Early/Middle Iron Age

Something significant takes place between the Late Bronze Age and Early Iron Age on the Thames side of the SRZ1 area. By the Early/Middle Iron Age period, between 15-28% of assemblages is flint-tempered having been replaced by large quantities of shell-gritted fabrics derived from the Woolwich Beds. At present it is difficult to determine if any of the vessels in question were actually traded to rather than made at the sites, not only because of the frequency of sources across the area and but also because of the possibility of chronological variation being represented amongst the two CTRL site assemblages in this phase, West of Northumberland Bottom and Tollgate (Table 3.6). The proximity of the two sites strongly suggests that there is a chronological difference between them with regard to the 13%

difference in their use of flint-tempered fabrics, the absence of glauconitic sandy fabric pots at one and the presence of mixed flint and shell fabric at the other, and the variation amongst their briquetage fabrics (see below). If this is a correct interpretation, then it is likely that there was a gradual change from the Late Bronze Age to Early Iron Age with a steadily increasing use of shell-gritted fabrics. The presence of glauconitic sandy, undecorated, burnished bowls at West of Northumberland Bottom but not at Tollgate cannot be explained by distance from source; Gault clays deposits are closer to Tollgate and the distance to Northumberland Bottom indicates that these vessels were traded or transported to that site, not made there. On the south side of the North Downs, however, flint-tempered fabrics still dominate in the Early/Middle Iron Age period (57% of the assemblage). Significant quantities of glauconitic sandy vessels could have been made from local resources within 7 km but just under 3% were shell-gritted vessels and these cannot have been made locally but must have been traded or transported to this area. Therefore, we have clear evidence for at least a small amount of ceramic exchange at this time in SRZ1.

Table 3.6: Summary quantification by percentage of Early/Middle and Middle Iron Age pottery fabric groups (percentage of number of sherds)

FABRIC GROUP	SITE ASSEMBLAGE					
	Northumberland Bottom	Tollgate	Cuxton	White Horse Stone	South-east of Eyhorne Street	Beechbrook Wood
Calcareous	0.1%	-	-	0.2%	-	-
Flint-tempered	9.6%	19.4%	4.6%	28.8%	3.2%	4.4%
Flint-tempered and Calcareous	-	-	-	0.2%	-	-
Flint- and Grog-tempered	-	-	-	0.1%	-	-
Flint-tempered and Iron oxides	-	6.5%	-	4.6%	-	-
Flint- and Organic-tempered	5.6%	1.7%	56.1%	2.5%	-	0.1%
Flint-tempered and Quartz sand	-	-	13.0%	20.0%	-	-
Flint-tempered and Shell-gritted	-	11.7%	9.7%	0.4%	-	-
Grog-tempered	0.2%	5.4%	1.3%	0.8%	0.5%	14.5%
Iron oxide-bearing	-	-	-	0.9%	-	14.6%
Quartzite-gritted	-	-	-	0.2%	-	-
Quartz sand	9.2%	4.9%	-	5.2%	1.0%	26.9%

FABRIC GROUP	SITE ASSEMBLAGE					
	Northumberland Bottom	Tollgate	Cuxton	White Horse Stone	South-east of Eyhorne Street	Beechbrook Wood
Quartz sand and calcareous	-	-	-	1.1%	-	-
Quartz sand and Flint-tempered	-	2.2%	8.9%	8.4%	-	-
Quartz sand, Flint and Shell	-	-	-	1.5%	-	-
Quartz sand and glauconite	2.1%	-	0.4%	10.8%	6.1%	39.3%
Quartz sand, glauconite & Flint	-	-	-	6.0%	83.7%	-
Quartz sand and Iron oxides	0.4%	-	-	0.8%	5.1%	0.1%
Quartz sand and Shell-gritted	-	-	-	2.2%	-	-
Shell-gritted	69.9%	21.9%	2.5%	3.7%	-	-
Briquetage	3.3% (minimum)	26.3%	2.1%	1.1%	-	-
<i>Number of sherds in phase</i>	<i>1929</i>	<i>1704</i>	<i>237</i>	<i>6655</i>	<i>591</i>	<i>2845</i>

In SRZ2, assemblages are entirely flint-tempered with quartz sand matrices or quartz sand fabrics with sparse flint temper. Most of the sandy clay matrices have sparse to abundant amounts of glauconite pellets (including a round-shouldered, burnished bowl (Fig. 3.8, TUT/26), which indicates that the glauconitic sandy fabric vessels found in the southern part of SRZ1 could have originated from SRZ2 because they are significantly more frequent in this area. There are only small quantities of pottery from this ceramic phase in SRZ2 but none of the pots was made from a glauconitic sandy clay fabric alone, in contrast to SRZ1 where between 1-10% of an assemblage could be made from these distinctive wares. The identifiably few vessels of this date from SRZ3 are invariably made from iron-rich sandy fabrics or iron-rich flint-tempered fabrics except, once again, at Saltwood Tunnel where four diagnostic Early/Middle Iron Age vessels from one pit and a classic example of a bowl with lower vessel rustication were found to be grog-tempered, grog-and-flint-tempered, flint-tempered, flint-and-organic-tempered and grog-tempered respectively. It seems, therefore, that glauconitic sandy fabric vessels were used more in the north of Kent than the south at this time and that the distribution of burnished bowls, in particular, represents positive evidence of a trading network in fine but undecorated pots, presumably from a single source although this cannot be demonstrated within the remit of this project.

Most importantly, it is during this phase that we can detect the presence of a variety of different types of clay matrices being exploited. A great deal has been written about this phenomenon in the White Horse Stone specialist report (Morris 2006c). To summarise, the

detailed recognition of significant clay matrix variations within fabric type groups, particularly those where deliberate tempering occurred, such as amongst the very common flint-tempered wares, can provide the basis for an investigation into the range of clay resource exploitation taking place around a site and suggest that these represent the sources used by different potters making vessels for specific family or kin groups. This is currently a theoretical proposal which needs research, testing and much discussion.

3.6.5 Middle Iron Age and Middle/Late Iron Age

It is difficult to fully characterise the nature of Middle Iron Age fabrics and resource selections in area SRZ1 because there is only one pit at one site dated to this period. More than 80% of the fabrics were flint-tempered and therefore more similar to the Early/Middle Iron Age tradition on the south side of the North Downs, but curiously the most common fabric is actually flint-and-organic-tempered, a type present on other sites in SRZ1 but never more than 6% in an assemblage. It may well be that this was actually a traded fabric, originating at this one location on the west bank of the Medway river at Cuxton; only detailed scientific analysis of the clay matrix components can resolve this issue. Nearly 10% are flint-tempered with shell fragments in the clay matrix, signalling proximity to the shell-bearing Woolwich Beds.

During the Middle Iron Age in SRZ2 there is a considerable increase in the use of glauconitic sandy fabric vessels (Table 3.6) in a variety of forms, including S-shaped jars, cooking pots, round-bodied bowls, ‘goldfish’ bowls and saucepan pots (Fig. 3.8, BBW/22, 33-36, 40 and EYH/13). Glauconitic sand with flint fabrics were used for vessels including proto-saucepan pots, medium to large, rusticated storage jars and carinated bowls (Fig. 3.8, EYH/3-12). The round-bodied bowls can be of two types, with undecorated and decorated examples (for the latter, see Fig. 3.8, BBW/53 & TUT/27a, b).

The emerging dominance of glauconitic sandy clay fabrics, at least in the sub-regional zones to the south of the North Downs, is evident in the Middle Iron Age, as at Beechbrook Wood (Table 3.6). The popularity of this fabric type, if it is from a single source, or fabric concept if from several sources, is shown at Farningham Hill from deposits in several pits and a ditch (Couldrey 1984, table H, pits 5, 12, 14, 22-23, ditch S-E lower), interpreted here as belonging to a Middle Iron Age phase of occupation. Associated with these visually distinctive wares are iron-rich fabrics, flint-tempered fabrics and grog-tempered fabrics. Only a few of the grog-tempered examples, however, have any glauconite pellets and these are in rare to sparse quantity which strongly suggests that many different clay resources were being exploited. Eventually grog-tempered fabrics became one of the commonest groups used to make pots in the latest pre-Roman Iron Age period. This is usually interpreted as a practical, technological change but it is now very apparent that the tremendous social upheavals taking

place in south-east England at this time could have been accompanied by a grog-tempering tradition.

3.7 Iron Age saucepan pots in Kent

Amongst the vessel forms, one in particular requires special mention – saucepan pots. As mentioned previously in the chronology discussion above, two saucepans had been identified in Kent prior to the excavations along the route of the Channel Tunnel Rail Link; one from Farningham Hill made from a shell-gritted fabric (Couldrey 1984, fig. 15, 28; pit 6) and the other from Bigberry made from a flint-gritted fabric (Thompson 1983, 261, fig. 10, 37). A third example may have been found at Oldbury; the catalogue description states ‘Slightly corrugated rim in brown flint-gritted ware and black outer surface’ and the illustration presents a straight-sided saucepan pot with horizontal, parallel lines of tooled decoration below the simple, rounded rim (Thompson 1986, 283, fig. 7, 20). The rustic appearance of the Farningham pot with the use of a coarse, shell fabric and its association with wheelthrown, cordoned jars and wheelthrown, grog-tempered barrel-shaped jars suggest that that vessel may have been a local product imitating saucepan pots from west of the Darent valley in Surrey, Hampshire or Sussex during the later pre-Roman Iron Age. This conclusion is based on the contrasting appearance of fine, well-finished saucepan pots in the earlier, well-dated contexts from White Horse Stone, Cuxton, and Beechbrook Wood, none of which is made from a shell fabric and only one of which is decorated (a single example in flint-and-organic-tempered fabric from West of Northumberland Bottom), and the occurrence of several saucepan pots at Little Stock Farm in association with wheelthrown vessels.

At White Horse Stone, nine saucepan pots were identified, including both coarsely and finely finished examples (Fig. 3.7, WHS/62, 99, 135 & 136). The range of fabrics includes flint-tempered, quartz sand, quartz sand and flint-tempered and glauconite-rich and quartz sand, which suggests that this type of pot was not made exclusively by any one potter/kin group or used by any single family/kin group. Unfortunately, only one of the features which produced saucepan pots was radiocarbon dated; cremation pit 6132, dated 5th-2nd century cal BC (Table 3.3). The vessels range between 14 and 34 cm in diameter. At Cuxton, one saucepan pot made from a flint-tempered, quartz sand matrix fabric was recovered in the pottery-rich pit 343, dated 4th-3rd century cal BC (Fig. 3.7, CUX/22). This vessel is black, beautifully burnished on both surfaces, and small in size measuring only 13 cm in diameter. At Beechbrook Wood, the enclosure ditch dump and re-cut, dated to 4th-3rd century cal BC, contained 14 examples of saucepan pots (Fig. 3.8, BBW/25, 26, 28, 30, 32, 38, 40, 54 & 55), including one decorated with horizontal tooled lines at the rim. These vessels were made from quartz sand, glauconite-rich and quartz sand, iron oxide-rich, and grog-tempered fabrics, and measure 12-24 cm in diameter. Several are well-burnished on one or both surfaces; others had

been used as cooking pots. The single example from West of Northumberland Bottom is 16 cm in diameter (Bryan and Morris 2005, catalogue no. 42). At Little Stock Farm 11 saucepan pots were identified (Bryan 2006), but none of these contexts were radiocarbon dated. Amongst the pots there are four fabric types from three different fabric groups: grog-tempered, quartz sand with iron oxides and flint-tempered. It is possibly quite important to point out that there is only one saucepan pot in each of the 11 features rather than several of these vessels in a single feature. Seven of the features have grog-tempered pottery associated and four do not have any grog-tempered pottery. This information suggested that there are likely to be two Middle Iron Age phases represented in the Little Stock Farm assemblage, a Middle Iron Age and a Middle/Late Iron Age, with saucepan pots found in both phases. The vessels range between 14-20 cm in diameter, and the majority are burnished on both surfaces.

Therefore, radiocarbon dating of saucepan pots indicates that they were first made during the Early/Middle Iron Age period (5th–2nd century cal BC) based on evidence from White Horse Stone where the vessels were produced in flint-tempered and sand-gritted fabrics, during the Middle Iron Age (4th–3rd century cal BC) at Cuxton where the vessel was also made from a flint-and-quartz sand fabric, and subsequently during the Middle Iron Age at Beechbrook Wood and Middle/Late Iron Age at Little Stock Farm where they were made from grog-tempered fabrics as well. This indicates that saucepan pots were manufactured earlier in Kent than elsewhere in southern England, by at least 100 years, and continued to be made until the later Iron Age in a great variety of fabric types. Saucepan pots in Hampshire date specifically from the 3rd century BC onwards (Brown 2000, 122-124). Undoubtedly saucepan pots continued to be used into the Late Iron Age period in Kent, as at Farningham Hill and Little Stock Farm, in association with wheelthrown vessels.

3.8 Vessel sizes and evidence of use

Research into vessel size ranges within later prehistoric pottery assemblages and the comparison of both the ranges and the frequencies of sizes amongst assemblages within regions have demonstrated that not only is there significant chronological variation during the millennium from the Middle Bronze Age to the Middle/Late Iron Age but also that this is likely to reflect different forms of social behaviour during this period (Barrett 1980; Howard 1981; Brown 1991; Woodward 1995; 1997; Woodward and Blinkhorn 1997). Much of this work has been based on an understanding that specific activities such as the storage, preparation and consumption of food should be reflected not only in the shapes of the pots but also their sizes (Howard 1981; Henrickson and McDonald 1983; Hill 2002). Archaeological examples have revealed the strength and suitability of this theoretical approach which had originally been based on ethnographic research into pottery manufacture and use (Blitz 1993; Thomas 1991, 91-102, fig. 5.8; CAAA 2001). A widened range of vessel forms and sizes has

been used to indicate that there appears to have been a significant increase in the role of food preparation and consumption and in the division of household tasks first during the Middle Bronze Age (Woodward 1995) and subsequently in the Late Bronze Age indicated by the appearance of cups and bowls (Barrett 1980). During this millennium, pottery became an ‘enabler of social discourse’ through eating and drinking at special events such as feasts (Hamilton 2002b, 46).

Vessel shape and size indicate the potter’s intended function for a pot and this can be linked to actual evidence of use to determine if pots contain a history of use on and within their walls (Skibo 1992; Morris 2002). Some evidence is visible with the naked eye such as soot on the exterior, burnt residues on the interior, limescale, interior pitting from the holding of acidic foodstuffs and abrasion from use. Other evidence can be revealed through chemical analysis of residues preserved within the walls of the pots (Charters *et al* 1997; Dudd and Evershed 1998; *et al.* 1999; Craig *et al* 2000; Maniatis and Tsirtsoni 2002; Copley *et al* 2004). The presence and absence of evidence of use, combined with the forms and sizes of vessels, should provide us with information about activities at sites and the nature of the social groups who used these pots and reveal how people used material culture to conduct and change their lives.

For the purposes of this discussion, vessel sizes have been divided into five classes or functional groups based on the ability to lift a pot easily, or not, and the likely use of a vessel by one individual only, compared to its likely use to service more than a single person or several persons at any single moment, rather than individuals consecutively – the story is never simple. What the latter means is that we need to remember that a pot can be small for individual use but not belong to them personally. A classic example of this is the Anglo-Saxon glass ‘claw beaker’ for drinking found in high status mature women’s graves. This was carried by the senior female in a kin group to her individual, adult male relations at a meal – the beaker was symbolically her vessel but serviced many – one at a time – and represented a kin group. Woodward conducted a very useful exercise about the nature of vessel capacities compared to the rim diameters and determined that for the later prehistoric period, prior to the introduction of Romanised vessel shapes, there is a correlation between rim diameters and capacities (1997). Therefore, it is not inappropriate to use rim diameters measurements available within a fragmented assemblage as a reflection of the capacities of vessels. The classes established for this synthesis based on rim diameter are: *very small*, less than 10 cm in diameter; *small*, 10-18 cm; *medium*, 20-28 cm; *large*, 30-38 cm; *very large*, 40 cm or more. These size classes closely follow those presented by Macpherson Grant (1994) with some variation. The very small sizes equate to Barrett’s cup class, Class V (1980), and are often not just cups or very small bowls but may also be miniature vessels such as jars (Fig. 3.3, TUT/12; Lawson 2000, fig. 60). Interpretation of the likely functions of these classes is

dependent upon the general shape of the vessel as well as its size, with open forms, cups and bowls, performing different functions depending upon size and closed forms, or jars, likewise. Neutral forms such as straight-sided bucket urn/jars or saucepan pots may have had many functions.

3.8.1 Middle Bronze Age and Middle/Late Bronze Age

Woodward (1980; 1995) has demonstrated that during the first half of the 2nd millennium BC Bronze Age pottery in southern England displayed a complex pattern of multiple sizes and functional groupings not evident in the previous millennia. By using all the measurable data available from a great number of cemetery and settlement sites, she deduced that functional classes of vessels were employed in local household tasks while decorated fine wares were used to signify the existence of social groups with distinct agricultural territories – using pots to both reproduce society and maintain identity. This two-tier pattern of domestic pottery and regional pottery continued until the Roman period.

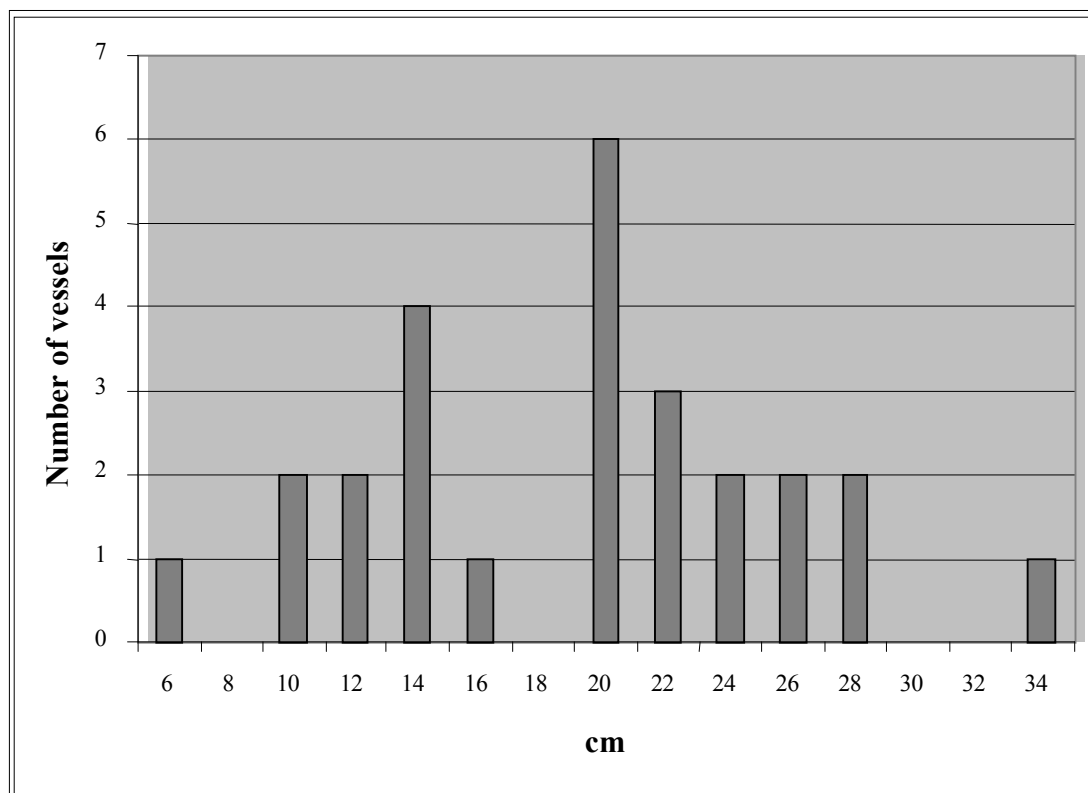
The Middle Bronze Age pottery from Channel Tunnel Rail Link sites is not abundant; there are no large cremation cemeteries with numerous urns to study. Instead, there are a few locations along the route which were sites of Middle Bronze Age activity of a domestic or household nature with pottery recovered from pits and ditches. Four assemblages produced fragments from urn/jars with measurable rim diameters from vessels with fabrics which are Middle Bronze Age in type and three of these also contained sherds from vessels with fabrics that represent the ceramic transition from the Middle to Late Bronze Age (Table 3.7; Fig. 3.10). The data from these vessels do not contradict Woodward's observations but the paucity of actual vessels limits what can be discussed other than to point out that there appear to be four separated size groupings of vessels amongst them: less than 10 cm; 10-18 cm; 20-28 cm; and 30 cm or more; four of the five groupings presented above. The most frequent group is the medium-sized class, followed by the small class. Single examples of very small and large vessels provide extensions to this variation.

Table 3.7: Middle Bronze Age and Middle/Late Bronze Age rim diameters from five sites

Site	Illustration No.	Rim Diameter (cm)
Cobham Golf Course	CGC/1	22
White Horse Stone	WHS/1	20
	WHS/3	24
	WHS/4	20
	WHS/5	16
Beechnrook Wood	BBW/1	26
	BBW/3	22
	BBW/4	24
	BBW/5	14
	BBW/6	10

Site	Illustration No.	Rim Diameter (cm)
	BBW/7	28
	BBW/8	12
	BBW/9	22
	BBW/10	20
	BBW/11	14
Tutt Hill	TUT/1	34
	TUT/6	20
	TUT/8	20
	TUT/9	20
	TUT/10	14
	TUT/11	12
	TUT/12	6
Saltwood Tunnel	SLT/58	26
	SLT/59	28
	SLT/68	14
	SLT/69	10

Figure 3.10: Frequency of Middle Bronze Age and Middle/Late Bronze Age vessels with measurable rim diameters in 2 cm intervals



Curiously, although evidence of soot and burnt residues is present on Middle Bronze Age pottery in the assemblages, this is actually surprisingly infrequent; 16% of the Cobham Golf Course records indicate cooking evidence, 12% at White Horse Stone, only 2% at Tutt Hill (but this is not surprising as many of the Middle Bronze Age vessels were used as cremation urns), and only 1% at Saltwood Tunnel. Why there is so little evidence is difficult

to explain without the application of chemical analysis of the vessels themselves – it may be that the evidence is simply not preserved visually.

Vessel function during this ceramic phase must also consider the largest pots and whether these were storage jars reused as cremation urns or made solely for the latter purpose. One example from Tutt Hill stands out (Fig. 3.4, TUT/1) due to the survival of significant pieces from this pot, but fragments of other vessels were found in apparent burial contexts from this site. However, many more un-urned cremation burials occur during this phase and the Late Bronze Age along the route. The Tutt Hill vessel is the largest measurable vessel for this Middle Bronze Age phase. It is not possible to determine if it had been made for use as a settlement storage jar prior to selection for storage and burial of a body. Nevertheless many of the extremely fragmented Middle/Late Bronze Age transition pots used as urns in association with cremation burials had pre-firing perforations around the rim zone which may have been inserted in order to secure a cloth or leather lid to the vessel when used as a food storage container. The insertion of these perforations, made during vessel manufacture, may have caused or inspired the additional appearance or application of the finger-tip impressed ‘decoration’ around the top of the rims of these vessels, a characteristic of other large, decorated and perforated, Middle Bronze Age, flint-tempered bucket urns used to contain cremated remains in Kent as at Barrow 2 of site 9 along the route of the A2 (Macpherson-Grant 1980c, 170-3, fig. 25, 146 & 26, 147).

3.8.2 Late Bronze Age and Earliest Iron Age

By the Late Bronze Age, a wider range of vessel forms had become common as a result of the creation and use of ovoid jars, shouldered or carinated jars, hemispherical bowls, biconical or bipartite bowls, rounded-bodied bowls with short rims, shouldered or carinated bowls and cups or miniature vessels (cf. Barrett 1980). These forms became more decorated in the Earliest Iron Age ceramic phase. Barrett has demonstrated that the size ranges of Late Bronze Age vessels include the full range of sizes as found amongst Middle Bronze Age urns but that the emphasis or frequency of sizes was different due to the introduction of bowls and cups into the repertoire of shapes. Smaller bowls, and in particular cups, are indications of individuals at drinking, and probably also eating, episodes or events. These vessel types have been linked with large jars into sets of drink-associated vessels (Woodward 1998).

There are very few Late Bronze Age and Earliest Iron Age groups recovered along the route; three have the range of vessel shapes and sizes expected but one does not. At Cobham Golf Course, the rim diameters of nine vessels could be measured and amongst these there are four small, four medium and one large vessel; two bowls are small and the remaining vessels are jars. At White Horse Stone, a single pit contained at least five vessels, two are small, one is medium-sized and one is large. At Little Stock Farm, the Earliest Iron

Age vessel holes contained three small, four medium and one large pot including four bowls and four jars. However, the data from Saltwood Tunnel derives from two sub-groups and amongst the 15 measurable vessels, eight are small and seven are medium-sized; none is large. The infrequency of Late Bronze Age and Earliest Iron Age vessels from individual sites along the route means that little can be made of these data on their own, but they have been combined to represent the Late Bronze Age-Earliest Iron Age ceramic phase (Table 3.8) and presented by cumulative percentage frequency of rim diameters for comparison with general trends during this and subsequent ceramic phases (Fig. 3.11). The only published site in Kent with which this ceramic phase can be compared is Monkton Court Farm in the Isle of Thanet (Perkins *et al* 1994). The pottery has been interpreted as a ‘decorated’-type assemblage of the Late Bronze Age, *c* 850/800-550 BC (Macpherson Grant 1994, 230), and 48 of the rims from this single ceramic phase assemblage could be reconstructed. In particular it is significant to note that there are two very large jars and one very large bowl in this assemblage measuring between 40-44 cm diameter and also three jars which are between 36-38 cm. Compared to the sizes and frequencies from the combined Channel Tunnel Rail Link sites which include only one assemblage which may be directly contemporary with Monkton Court Farm (Table 3.8), it is possible to see that there is a trend towards a significant increase in vessel sizes, for both jars and bowls, from the Late Bronze Age to the Earliest Iron Age (‘decorated’-type assemblage of the Late Bronze Age). Inclusion of the data for 45 unpublished pots from the contemporary phase at Highstead, Isle of Thanet (Period 2) (P. Couldrey, pers. comm.) emphasises the graphic profile of rim diameters, and therefore vessel sizes, for this period. What is also interesting is that there may have been an increase in the scale both of manufacture and of deposition of pots during the Earliest Iron Age phase and later compared to the Late Bronze Age in particular. This is difficult to prove conclusively with assemblages gathered from along a linear route-line compared to area excavations, but it is worth considering for future research.

Table 3.8: Range of vessel sizes for selected Iron Age assemblages in Kent

Rim diameter range (cm)	Vessel count	Cumulative count	Cumulative %	<i>Vessel Size sub-total %</i>
<i>Late Bronze Age/Earliest Iron Age</i>				
Highstead - Period 2				
8	3	3	6.7	<i>v. small - 6.7%</i>
10	1	4	8.9	
12	2	6	13.3	
14	4	10	22.2	
16	6	16	35.6	<i>small - 40.0%</i>
18	5	21	46.7	
20	5	26	57.8	
22	6	32	71.1	
24	1	33	73.3	

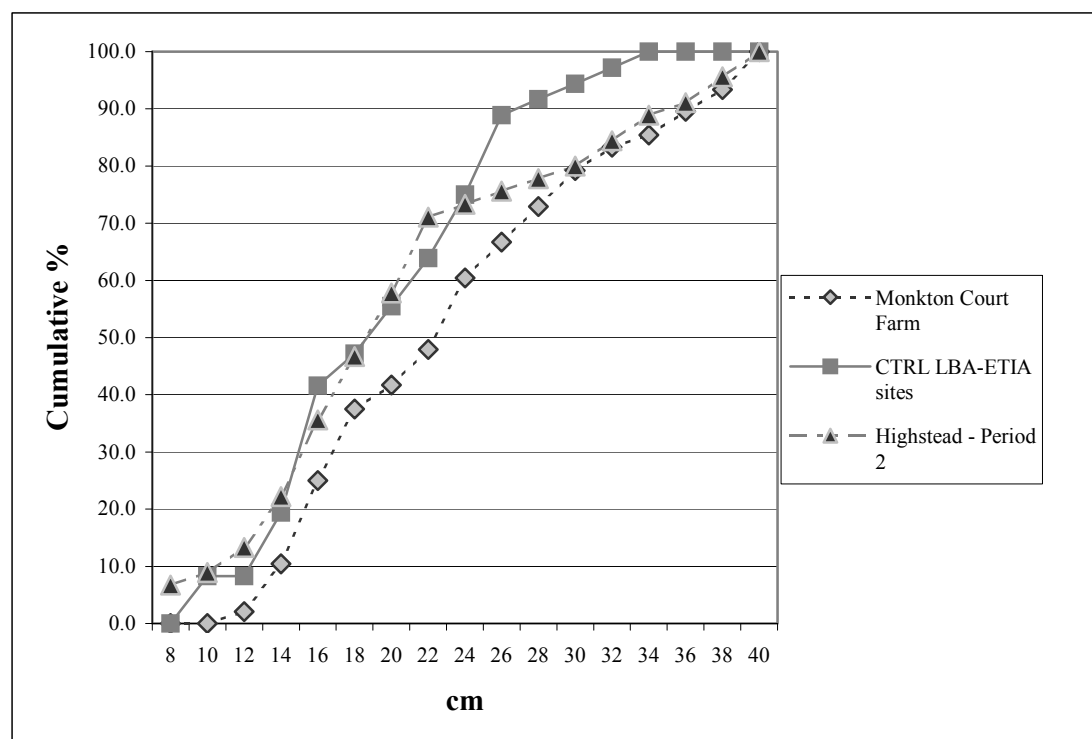
Rim diameter range (cm)	Vessel count	Cumulative count	Cumulative %	<i>Vessel Size sub-total %</i>
26	1	34	75.6	
28	1	35	77.8	<i>medium - 31.1%</i>
30	1	36	80.0	
32	2	38	84.4	
34	2	40	88.9	
36	1	41	91.1	
38	2	43	95.6	<i>large - 17.8%</i>
40+	2	45	100.0	<i>v. large - 4.4%</i>
Monkton Court Farm				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	0	0	0.0	
12	1	1	2.1	
14	4	5	10.4	
16	7	12	25.0	
18	6	18	37.5	<i>small - 37.5%</i>
20	2	20	41.7	
22	3	23	47.9	
24	6	29	60.4	
26	3	32	66.7	
28	3	35	72.9	<i>medium - 35.4%</i>
30	3	38	79.2	
32	2	40	83.3	
34	1	41	85.4	
36	2	43	89.6	
38	2	45	93.4	<i>large - 20.5%</i>
40+	3	48	100.0	<i>v. large - 6.6%</i>
Combined CTRL Assemblages				
(Cobham Golf Course, White Horse Stone, Little Stock Farm, and Saltwood Tunnel)				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	3	3	8.3	
12	0	3	8.3	
14	4	7	19.4	
16	8	15	41.6	
18	2	17	47.2	<i>small - 47.2%</i>
20	3	20	55.5	
22	3	23	63.9	
24	4	27	75.0	
26	5	32	88.9	
28	1	33	91.7	<i>medium - 44.5%</i>
30	1	34	94.4	
32	1	35	97.2	
34	1	36	100.0	
36	-	-	-	
38	-	-	-	<i>large - 8.3%</i>
40+	-	-	-	<i>v. large - 0.0%</i>
<i>Early/Middle Iron Age</i>				
West of Northumberland Bottom				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	0	0	0.0	
12	1	1	2.7	
14	2	3	8.1	
16	6	9	24.3	
18	5	14	37.8	<i>small - 37.8%</i>

Rim diameter range (cm)	Vessel count	Cumulative count	Cumulative %	<i>Vessel Size sub-total %</i>
20	6	20	54.1	
22	5	25	67.6	
24	3	28	75.7	
26	1	29	78.4	
28	2	31	83.8	<i>medium - 46.0%</i>
30	1	32	86.5	
32	2	34	91.9	
34	1	35	94.6	
36	0	35	94.6	
38	1	36	97.3	<i>large - 13.5%</i>
40+	1	37	100.0	<i>v. large - 2.7%</i>
Tollgate				
8	1	1	2.9	<i>v. small - 2.9%</i>
10	0	1	2.9	
12	1	2	5.7	
14	2	4	11.4	
16	3	7	20.0	
18	3	10	28.6	<i>small - 25.7%</i>
20	6	16	45.7	
22	2	18	51.4	
24	4	22	62.9	
26	3	25	71.4	
28	0	25	71.4	<i>medium - 42.8%</i>
30	5	30	85.7	
32	2	32	91.4	
34	0	32	91.4	
36	1	33	94.3	
38	0	33	94.3	<i>large - 22.9%</i>
40+	2	35	100.0	<i>v. large - 5.7%</i>
White Horse Stone				
8	1	1	0.5	<i>v. small - 0.5%</i>
10	2	3	1.6	
12	7	10	5.5	
14	16	26	14.3	
16	17	43	23.6	
18	15	58	31.9	<i>small - 31.4%</i>
20	27	85	46.7	
22	24	109	59.9	
24	29	138	75.8	
26	10	148	81.3	
28	4	152	83.5	<i>medium - 51.6%</i>
30	7	159	87.4	
32	6	165	90.7	
34	5	170	93.4	
36	6	176	96.7	
38	0	176	96.7	<i>large - 13.2%</i>
40+	6	182	100.0	<i>v. large - 3.3%</i>
Highstead (Periods 3A & 3B)				
8	1	1	1.4	<i>v. small - 1.4%</i>
10	0	1	1.4	
12	0	1	1.4	
14	2	3	4.2	
16	5	8	11.3	
18	7	15	21.1	<i>small - 21.0%</i>

Rim diameter range (cm)	Vessel count	Cumulative count	Cumulative %	<i>Vessel Size sub-total %</i>
20	4	19	26.8	
22	3	22	31.0	
24	18	40	56.3	
26	10	50	70.4	
28	3	53	74.6	<i>medium - 53.5%</i>
30	3	56	78.9	
32	4	60	84.5	
34	1	61	85.9	
36	4	65	91.5	
38	1	66	93.0	<i>large - 18.4%</i>
40+	5	71	100.0	<i>v. large - 7.0%</i>
<i>Middle Iron Age</i>				
Beechbrook Wood				
8	1	1	1.2	<i>v. small - 1.2%</i>
10	6	7	8.4	
12	12	19	22.9	
14	10	29	34.9	
16	15	44	53.0	
18	7	51	61.4	<i>small - 60.2%</i>
20	10	61	73.4	
22	7	68	81.9	
24	7	75	90.4	
26	3	78	94.0	
28	2	80	96.4	<i>medium - 35.0%</i>
30	0	80	96.4	
32	1	81	97.6	
34	1	82	98.8	
36	1	83	100.0	
38	-	-	-	<i>large - 3.6%</i>
40+	-	-	-	-
Farningham Hill (Middle Iron Age)				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	0	0	0.0	
12	2	2	6.7	
14	1	3	10.0	
16	5	8	26.7	
18	5	13	43.3	<i>small - 43.3%</i>
20	5	18	60.0	
22	3	21	70.0	
24	1	22	73.3	
26	2	24	80.0	
28	1	25	83.3	<i>medium - 40.0%</i>
30	3	28	93.3	
32	0	28	93.3	
34	1	29	96.7	
36	0	29	96.7	
38	1	30	100.0	<i>large - 16.7%</i>
40+	-	-	-	-
<i>Middle/Late Iron Age</i>				
Farningham Hill (Middle/Late Iron Age)				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	0	0	0.0	
12	3	3	9.7	
14	4	7	22.6	

Rim diameter range (cm)	Vessel count	Cumulative count	Cumulative %	<i>Vessel Size sub-total %</i>
16	1	8	25.8	
18	8	16	51.6	<i>small - 51.6%</i>
20	4	20	64.5	
22	2	22	71.0	
24	3	25	80.6	
26	1	26	83.9	
28	0	26	83.9	<i>medium - 32.3%</i>
30	3	29	93.5	
32	0	29	93.5	
34	0	29	93.5	
36	1	30	96.8	
38	0	30	96.8	<i>large - 12.9%</i>
40+	1	31	100.0	<i>v. large - 3.2%</i>
Bigberry				
8	0	0	0.0	<i>v. small - 0.0%</i>
10	2	2	4.8	
12	1	3	7.1	
14	10	13	31.0	
16	8	21	50.0	
18	7	28	66.7	<i>small - 66.7%</i>
20	4	32	76.2	
22	0	32	76.2	
24	2	34	81.0	
26	2	36	85.7	
28	0	36	85.7	<i>medium - 19.0%</i>
30	2	38	90.5	
32	0	38	90.5	
34	0	38	90.5	
36	1	39	92.9	
38	0	39	92.9	<i>large - 7.2%</i>
40+	3	42	100.0	<i>v. large - 7.1%</i>
<i>Late Iron Age</i>				
Thong Lane, Gravesend				
<8	1	1	2.4	<i>v. small - 2.4%</i>
10	2	3	7.1	
12	3	6	14.3	
14	6	12	28.6	
16	10	22	52.4	
18	3	25	59.5	<i>small - 57.1%</i>
20	7	32	76.2	
22	2	34	80.9	
24	1	35	83.3	
26	2	37	88.1	
28	1	38	90.5	<i>medium - 31.1%</i>
30	0	38	90.5	
32	0	38	90.5	
34	0	38	90.5	
36	2	40	95.2	
38	1	41	97.6	<i>large - 7.1%</i>
40+	1	42	100.0	<i>v. large - 2.4%</i>

Figure 3.11: Cumulative percentage frequencies of rim diameter sizes in centimetres for Late Bronze Age and Earliest Iron Age assemblages from Monkton Court Farm (Macpherson Grant 1994), Highstead – Period 2 (P. Couldrey, pers. comm.) and four assemblages along the Channel Tunnel Rail Link Section 1 route combined (Cobham Golf Course, White Horse Stone, Little Stock Farm, Saltwood Tunnel)



These ceramic phases show evidence of use as cooking pots; some vessels display soot or burnt residues, but other forms of evidence are not at all common. Late Bronze Age pottery from Cobham Golf Course was distinctively domestic in evidence of use; 16% of the assemblage records indicate evidence of use, primarily cooking. One pot was literally dripping with burnt residue and soot on the exterior; so much so, that it was chosen to provide a sample for radiocarbon dating (Fig. 3.5, CGC/11; NZA-21143). Two other illustrated jars, one medium-sized shouldered and one ovoid, had also been used as cooking pots (Fig. 3.5, CGC/16 & 17). The single pit deposit at White Horse Stone included one medium-sized, carinated jar with interior abrasion from stirring or scraping and a small jar of only 10 cm diameter which had soot on the lower exterior surface. However, the pots selected for deposition into the vessel holes (features 2104 and 2304, described as postholes) at Little Stock Farm did not display any evidence of use, which may not be surprising if these were special deposits (discussed below). A maximum of 5% of the records for the Saltwood Tunnel Late Bronze Age-Earliest Iron Age pottery indicate evidence of use, and this is often presented with some doubt in the confidence of identification. Once again the infrequency of vessels dating to these phases limits the significance of this information. Evidence of use was not presented or discussed for the Monkton Court Farm assemblage.

3.8.3 Early/Middle Iron Age

In contrast to the infrequency of vessels representing Middle Bronze Age to Earliest Iron Age pottery, there is a tremendous amount of pottery of Early/Middle Iron Age date. The measurements of vessel rim diameters which could be reconstructed are presented and summarised (Table 3.8), and represented visually as cumulative percentage frequencies for comparative purposes (Fig. 3.12). It is very apparent that the overall sizes of the Early/Middle Iron Age vessels are considerably larger than those of the previous 500 years of pottery; this was first recognised as significant during analysis of the White Horse Stone assemblage and it is very useful to see that this large assemblage is very similar in respect of vessel sizes to the contemporary sites at West of Northumberland Bottom and Tollgate, despite the emphasis on salt production or salt utilisation at these two sites (see below). This largeness of vessels amongst Early/Middle Iron Age pottery in Kent is reinforced by comparison to the sizeable assemblage from Highstead in the Isle of Thanet (data provided by P. Couldrey via T. Champion). For all of these sites, 50% of their pottery is 20-24 cm or less in diameter, with 75% at 24-28 cm or less. These four Early/Middle Iron Age sites have between 22-38% of vessels within the small or very small size class, 43-54% medium size and 16-29% large or larger. This indicates that the majority of Early/Middle Iron Age vessels in Kent are medium-sized and a significant number of vessels are large, with every assemblage of *c* 2000 sherds or more having at least one very large vessel. This trend had already been indicated at Monkton Court Farm (Table 3.8; Fig. 3.11).

However, equally important is the contrast between Early/Middle Iron Age assemblages from Kent and those from Wessex and the south-west. Over the past ten years, several authors have focused on presenting vessel size variability for large assemblages (Brown 1991, fig. 151; Woodward 2000, fig. 107) and using re-assessed data from other sites to explore regional variations and similarities during the Iron Age (Woodward 1997, fig. 4.1; Woodward and Blinkhorn 1997). If vessel types of appropriate date are selected from these presentations, it is easy to see that the majority of jars and bowls are much smaller than those from Kent (significantly smaller by up to eight centimetres in diameter) and that the frequency of vessels larger than 30 cm is low. The only site assemblage which approaches the vessel sizes and frequencies of Early/Middle Iron Age Kent is that from Little Waltham in Essex (Drury 1978). Re-assessment of vessel diameters for Phase 1 pottery shows that this assemblage lies between central-southern assemblages and Kent assemblages (Fig. 3.13), with 64% of the vessels small or very small in size, 32% medium in size and only 3.7% large or very large. The frequency of both medium and large vessels is still significantly lower than in the assemblages from Kent.

Why might this be the case; why is there such a difference between the Early/Middle Iron Age pottery from Kent and that from elsewhere in southern England? The obvious response is that people in France during the Early/Middle Iron Age were making and using larger vessels and that either people in Kent were imitating their contacts from across the Channel or that actual immigrants from France had settled in Kent at this time. Confirmation of the suggestion that larger vessels were common fare in France during this ceramic phase requires collection of data that lies outside the scope of this project. As mentioned previously, the density of settlements and people in Kent during the Late Bronze Age and Earliest Iron Age may have been low and therefore areas could have been colonised through negotiation between immigrant and local communities, using pottery vessels as a medium for enabling social discourse through consumption of food and drink. The continuation of such discourse, and with it the presence of larger vessels, may have been required for at least two to three centuries in the absence of other archaeologically detectable means of everyday life negotiations, force or defence such as hillforts. Hillforts do not appear in Kent until the Middle Iron Age, and it will be shown below that vessel sizes change once more at this time. A similar story of material culture debris, in this case feasting events and accumulation of major midden deposits at sites in Wiltshire during the Late Bronze Age/Early Iron Age, has been invoked in the absence of other detectable means of coercion or negotiation as an explanation of social process (McOmish 1996; Lawson *et al.* 2000, 266-9).

In contrast, it is possible that family sizes were simply larger in Kent than elsewhere in southern England. Again, this could have been due to direct influence of cross-Channel relationships. If so, this may be an indication of increased population size for south-east England, and requires investigation and supportive evidence.

Figure 3.12: Cumulative percentage frequencies of rim diameter sizes in centimetres for Early/Middle Iron Age assemblages from Channel Tunnel Rail Link Section 1 sites (West of Northumberland Bottom, Tollgate and White Horse Stone) and Highstead, East Kent (data provided by P. Couldrey)

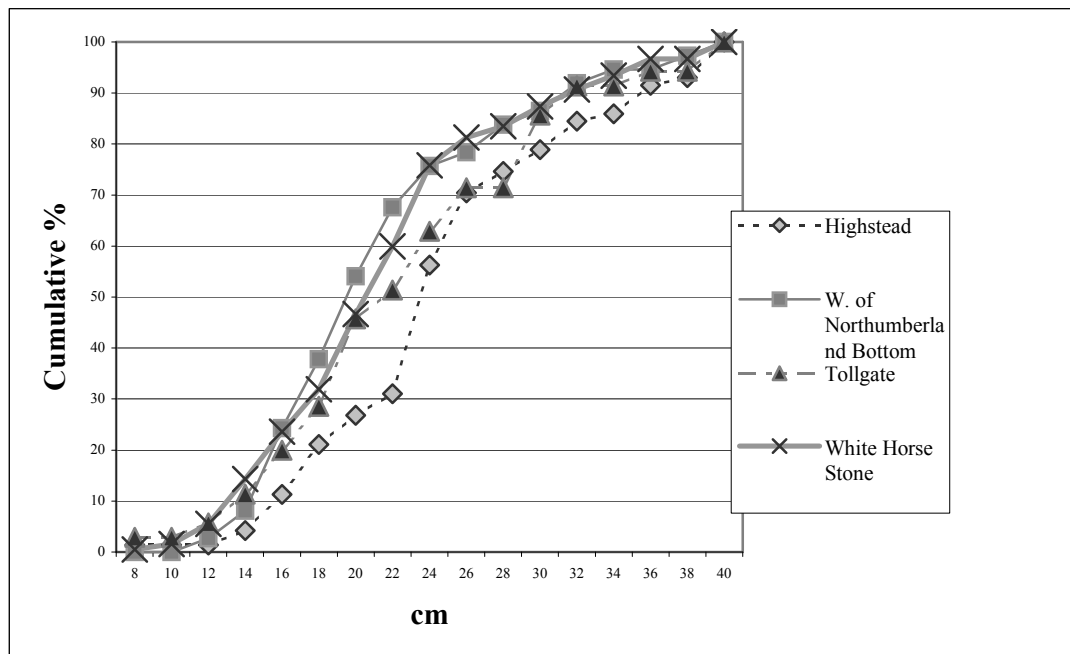
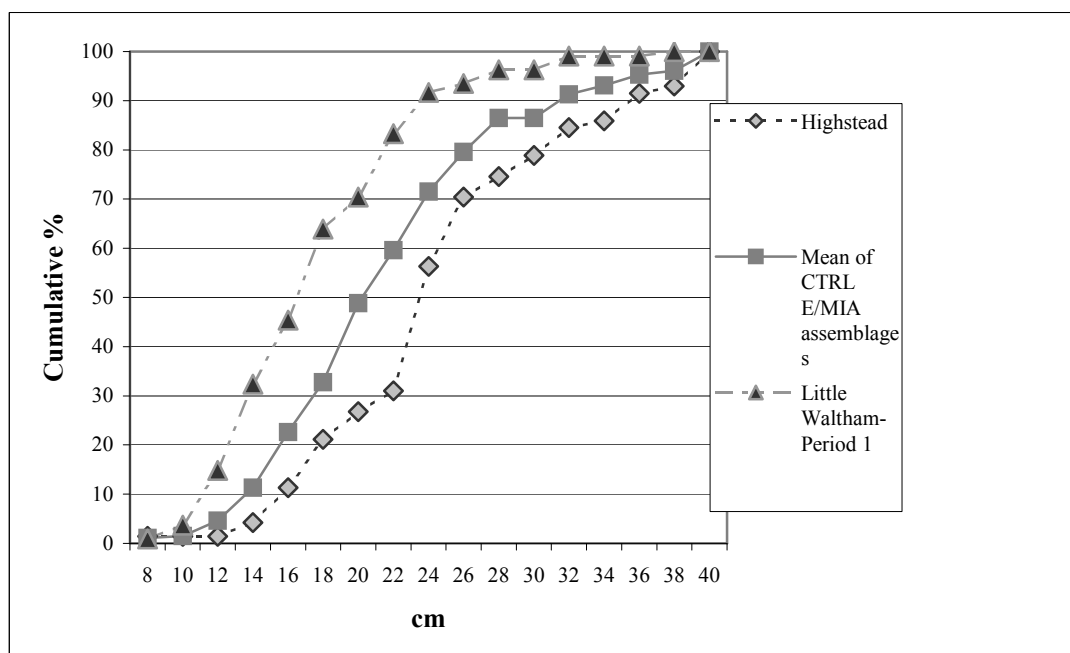


Figure 3.13: Cumulative percentage frequencies of rim diameter sizes in centimetres for Early/Middle Iron Age assemblages from Kent and Essex



3.8.4 *Middle Iron Age*

During the Middle Iron Age period, something distinctive happens – vessels reduce in size. This is amply demonstrated by examining the percentage of small-sized vessels compared to medium and large vessels in sizeable assemblages. Beechbrook Wood provides ample evidence of this change. Here a significant deposit of Middle Iron Age pottery was placed in the re-furbished entrance of a ditched enclosure, and this was sealed by a re-cut deposit dated to the 4th to 2nd century cal BC. The assemblage has been described in detail above, some illustrated here (Fig. 3.8, BBW/18-40 & 53-59) and the rim diameter data quantified (Table 3.8). At first it was assumed that this assemblage might not actually represent a normal array of Middle Iron Age pottery from a settlement site because of the special circumstances of the deposit, interpreted as the result of a feasting event associated with the renewal of the enclosure entrance, rather than everyday rubbish discard. The possibility that the vessels selected for this event would belong to the larger range of sizes because of the larger number of persons participating in the special event was very real. However, analysis revealed that the pots were smaller overall than those of the Early/Middle Iron Age (Fig. 3.14). It was clear that larger pots had *not* been chosen for this event; instead smaller sizes were found in plenty. Examination of the clay matrices of the fabrics, discussed above, revealed that the pottery had been made from at least four different sources, all of which could have been local to the Beechbrook Wood area (within 7 km). It appears as though families may have been coming to this event bringing with them their own, regular array of vessels containing food and drink to consume during the re-digging of the ditch and subsequent feasting. A suitable scenario is the barn-raising event in the Peter Weir film, *Witness*, where local Amish farmers and their families gather to help a newly-wed couple build their first barn; the consumption of food and drink is very much in evidence but none of it is grand or presented in anything but family-sized (medium) and individual-sized (small) containers. The Beechbrook Wood dump, however, may not include a representative number of larger or very large storage jars; there are no vessels larger than 36 cm.

While there are other Middle Iron Age assemblages from along the route, such as at South of Eythorne Street and Little Stock Farm, there are not enough measurable rim diameters in these collections for suitable comparison. In order to provide quality comparative data, a minimum standard of 30 measurable rims per assemblage was required. It is extremely unlikely that any collection with fewer than 30 rims would in any way reflect the nature of a site assemblage. However, the general trends of these two assemblages are markedly different. Eythorne Street has eight measurable vessels; those from the pit containing the conical cup were dated by association to the 4th to 3rd century cal BC. There is one very small vessel (conical cup), one small vessel (the S-profile bowl in the dated pit), three

medium vessels (including a proto-saucepan pot found with the cup and bowl and a saucepan pot from another pit), and two large jars both of which display rusticated exterior surfaces (one associated with the cup, bowl and proto-saucepan pot; one from a second pit). The overall image of these vessels is not dissimilar to that seen in the Early/Middle Iron Age of Kent, rather than the Middle Iron Age. In contrast, the rim diameters of Middle Iron Age pottery from Little Stock Farm are more like those from Beechbrook Wood. There are 13 measurable rims, 11 from small vessels, two from medium vessels and no examples of large vessels.

The best assemblage in Kent which is comparable in date to Middle Iron Age pottery from Beechbrook Wood is that from 13 features or phases of features at Farningham Hill in the Darent valley described above as representing the first ceramic phase at this site. Calculation of rim diameters shows that the vessel sizes are decidedly small in array and more similar to those from Beechbrook Wood than to those from Early/Middle Iron Age sites (Fig. 3.15). At Beechbrook Wood, 61% of the Middle Iron Age vessels are small or very small; at Farningham, this is 43%, whilst in the Early/Middle Iron Age assemblages, never more than 38% of vessels were small to very small (Table 3.8). Between 4-17% of Middle Iron Age vessels are large or very large during this phase compared to 16-28% of Early/Middle Iron Age vessels. This distinctive Middle Iron Age pattern continues into the later Iron Age period discussed below.

Once again, there is little evidence of use present on the pottery of Middle Iron Age date due to the infrequency of pottery of this date from the project as a whole; the information is available on the various databases for future reference. Several vessels from the Beechbrook Wood dump did display evidence for their use as cooking pots; amongst the 76 illustrated vessels from this and other Middle Iron Age features, for example, 16 had soot on the exterior or burnt residues on the interior surfaces. Altogether, there are 59 recorded occurrences with evidence of use in the Middle Iron Age assemblage but none is of limescale and only four are internal pitting.

Figure 3.14: Cumulative percentage frequencies of rim diameter sizes in centimetres for Early/Middle Iron Age assemblages (West of Northumberland Bottom, Tollgate and White Horse Stone) and one Middle Iron Age assemblage (Beechbrook Wood)

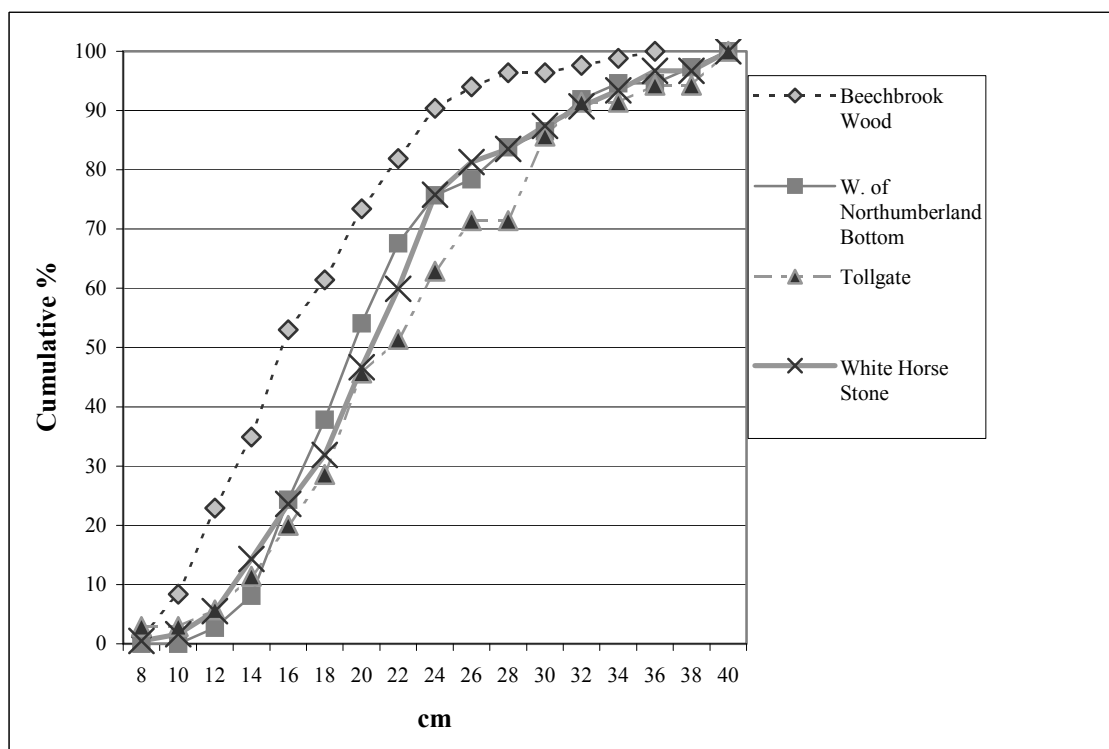
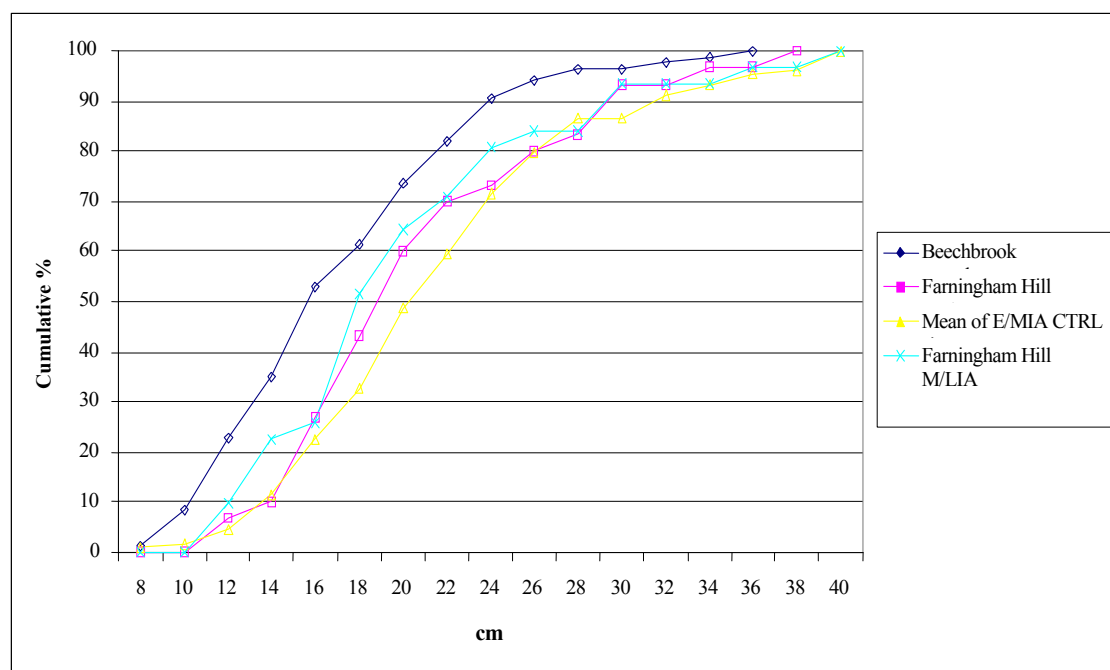


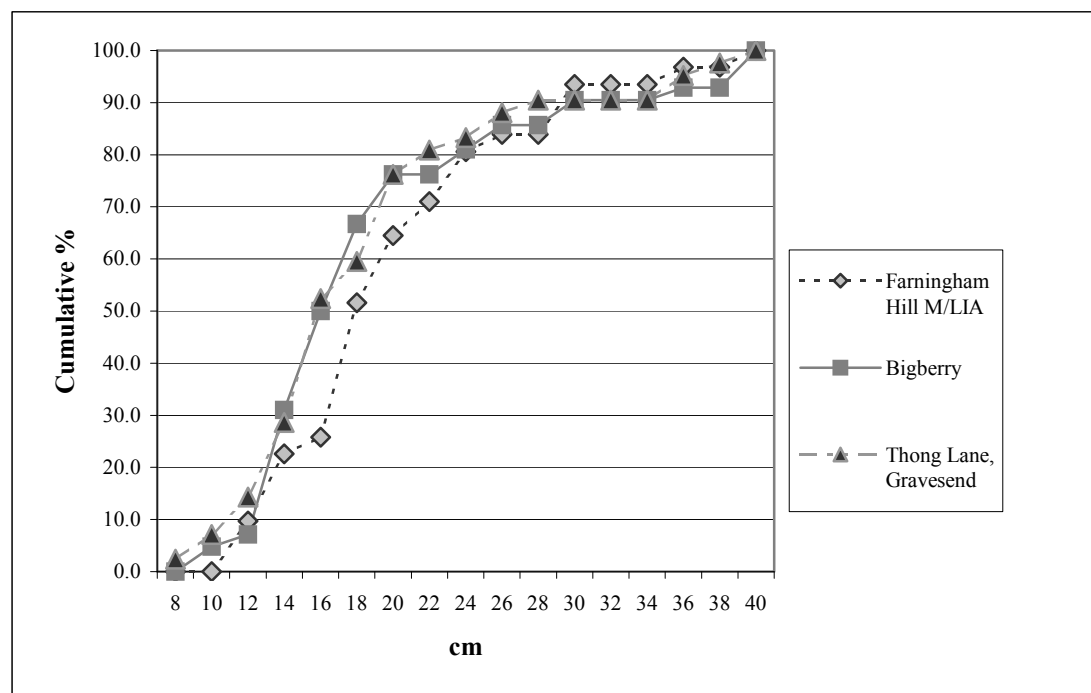
Figure 3.15: Cumulative percentage frequencies of rim diameter sizes in centimetres for the mean of Early/Middle Iron Age assemblages from three Channel Tunnel Rail Link sites, Middle Iron Age Beechbrook Wood, Middle Iron Age Farningham Hill and Middle/Late Iron Age Farningham Hill



3.8.5 Middle/Late Iron Age

No Middle/Late Iron Age assemblages along the route produced data suitable for discussion of vessel sizes. However, two sites in Kent provide an indication of the nature of ceramic vessel capacities during this period. Data from Farningham Hill Middle/late Iron Age phase and nearly all of the vessels from Bigberry hillfort were used (Table 3.8; Fig. 3.16). It appears that during the later Iron Age the frequency of small vessels increases to 52-67% of an assemblage, a rise of 5-9% from the Middle Iron Age phase. In addition, it is interesting to note that there is a tighter band of large to very large vessels at 14-16%. If the details of these larger vessels are examined more closely, it appears that 1-3 of the vessels are actually in the very large category. At both of these sites, these vessels are extremely large closed form jars and are interpreted as storage jars with substantially thick walls. This is a significant, new trend for this ceramic phase – no such vessels were found amongst the Middle Iron Age collections studied here. One Late Iron Age assemblage, Thong Lane at Gravesend (French and Green 1983), was also considered (Table 3.8; Fig. 3.16, Bigberry); here the trend appears to continue with four storage jars with diameters from 36-40 cm. Future excavations may confirm if this is a robust trend during the later Iron Age of Kent. The appearance of very large ceramic storage jars during the later Iron Age is a significant characteristic of sites in the east Midlands and may be interpreted as evidence for agricultural intensification at that time (Morris, forthcoming a).

Figure 3.16: Cumulative percentage frequencies of rim diameter sizes in centimetres for Middle/Late Iron Age assemblages from Farningham Hill farmstead (Couldrey 1984) and Bigberry hillfort (Thompson 1983)



Vessel Shape and Surface Treatment – more than simply style

The presence of rustication primarily on jars but also occasionally on bowls of Early/Middle Iron Age date provides an opportunity to explore and define a regional style in Kent from the Medway eastwards and in south-east Essex for this period. Once again, rustication is a broad church of surface application including deliberate roughening of the surface, applied clay slurry with sharp peaks, smears and occasional fingerprints, additional clay globules creating a three-dimensional effect, finger furrows vertically down the walls of the vessel below the shoulder area, deep and random coverage with finger-tip impressions or rows of deep finger-tipping, and combing. Where sizeable sherds displaying rustication are present, the lower half of the vessel displays one of these rustication variants and the upper half of the vessel is burnished creating a strong bipartite effect to the vessel, whether a jar or a bowl (Fig. 3.7, WHS/26, 35, 38, 39, 57, 60, 70, 84, 91, 126, 152, 157; Fig. 3.8, CUX/16; EYH/4 & 7; BBW/35-36, 58; LSF/30; **Plate 1**. Macpherson Grant declared that rustication does not occur at Monkton Court Farm (Highstead Period 2; Late Bronze Age/Early Iron Age) but is a chronological marker for the Early Iron Age period (Highstead Period 3) (1991, 41-4; 1994, 290) and that rustication had been identified at 40 sites in Kent (1992, fig. 7). This relative date has been confirmed by several radiocarbon dates for the large assemblage of Early/Middle Iron Age pottery including examples of rusticated vessels at White Horse Stone; six dates were obtained from pits for the period 8th–4th century cal BC (Table 3.3). There are three radiocarbon dates from deposits at other sites which appear to be the last examples of the use of rustication as a method of surface treatment as they all have dates of 4th–3rd century cal BC. At South-east of Eythorne Street, a large ovoid jar with rustication applied to a symbolic lower half of this shoulderless vessel was recovered with the conical cup in pit 226 with this date (Fig. 3.8, EYH/4). Three sherds with combed rustication and two identical bowls with burnish on the upper half and roughening on the lower half were found in the large enclosure ditch dump and its re-cut deposit at Beechbrook Wood (Fig. 3.8, BBW/35, 36, 58, 65 & 79), and one shouldered vessel displaying rustication came from the pottery-rich pit at Cuxton (Fig. 3.8, CUX/16). Rustication does not seem to occur on pots in association with grog-tempered barrel jars with scratched surfaces and cordoned jar/bowls at Little Stock Farm, despite at least one example of a biconical-profile rusticated vessel being found there in association with a saucepan pot-like vessel (Fig. 3.8, LSF/30 & 49). Rusticated vessels are found in association with saucepan pots at all of these sites, but rustication does not appear to occur on grog-tempered vessels. Therefore, the end of the use of rustication appears to be placed at some time during the latter part of the Middle Iron Age. As described above, potters were also using this array of rustications during the Early/Middle Iron Age in south-east Essex, as at North Shoebury (Wymer and Brown 1995, fig. 66, 114, 116, 118, 120, fig. 67, 129 & fig. 68, 138) and in northern France (Hurtrelle *et al* 1990; Blancquaert and Bostyn

1998; Stead and Rigby 1999). It is a very strong, visually distinctive style and did not occur in Wessex or Surrey at this time.

But what was it all about? Why all the extra effort of adding this labour-intensive surface treatment to vessels? The argument has already been presented above that it was not for a practical purpose. If the upper parts of these vessels are consistently smoothed or burnished and the lower parts are roughened in some manner, what is important to notice is that there is a distinct line or boundary between these two zones. It may be that the vessels, used in the production, storage and processing of food, symbolise the world of these particular Iron Age people who live in Kent, south-east Essex and north France. The roughened area on a vessel is the earth or landscape with the rustication being evidence for ploughing (finger furrows, combing) or soil with the slurry being wet land after rain, the clay globules being stones in the fields; the upper part of the vessels are the smooth, glistening sky. The importance of the land is being represented on the pots which are themselves symbols; the containers of the world or universe as their makers saw it. The pot is a container of the produce grown from both the earth (soil, land, territory) and the sky (rain, sun). People, and their pots, are the medium through which all this happened – people produce food through farming the land and people produce the pot to contain the produce; the pot is created or born from the land using clay, temper, water and wood, just like food. Therefore, these pots symbolise this world; they are a continuum, metaphors for the cycle of regeneration.

However, if this is a plausible argument, what was the significance of the rare but distinctive red-finished effect? There are very few examples from Channel Tunnel Rail Link sites; at Cuxton, one highly burnished, large bowl represented by its round-shoulder zone only, approximately 2% of the assemblage; at White Horse Stone, 125 sherds from 20 vessels, less than 2% of the assemblage; South-east of Eythorne Street, two body sherds; and at Saltwood Tunnel, one body sherd. Again it appears that this special surface treatment was only found on sites east of the Medway. In contrast to rustication, however, there are sherds at Monkton Court Farm (Macpherson Grant 1994, 257) and at Highstead in Period 2. It would be useful to know which sites in east Kent have red-finished vessels and what shapes these vessels are. Macpherson-Grant describes rustication and red-and/or polychrome-finished vessels as ‘a distinctive cultural package’ (1992, 291), but gives no hint as to the popularity of these techniques in the Kent assemblages beyond the observation, noted above, that at least 40 sites have rusticated pottery.

3.9 Salt production and distribution

A notable feature of several of the Channel Tunnel Rail Link Section 1 later prehistoric ceramic assemblages was the considerable amount of evidence of ceramic containers associated with the production or distribution of salt. Evidence of production was definitely

revealed at one site and salt had been transported to four other sites in specialised ceramic vessels. In addition, two assemblages are argued here to represent evidence of production rather than simply locations where considerable quantities of salt had been used.

Identification of salt production sites is usually based on the presence of quantities of fragments from salt-drying ceramic containers such as vases, semi-cylindrical troughs or shallow pans, often but not always in association with hearth or oven-related ceramic supports of various kinds used to position the containers over the direct (hearth) or within the indirect (oven) heating facility made of fired clay. All of this ceramic material is known as briquetage and traditionally recognised as being organic-tempered where required for porosity. The amount of container material in a ceramic assemblage can be small but the presence of supports provides the confirmation of a salt production site. At some coastal locations, only fragments of containers are present (Bradley 1992). This is also the case at the inland brine spring production location at Droitwich, Worcestershire (Woodiwiss 1992). Therefore, a variety of ceramic material can provide the evidence necessary to indicate a production site, or saltern. The best scenarios are those where special features, such as wood or clay-lined brine pits or settling tanks, feeder channels, hearths or ovens, can be identified as well, and mounds of both container sherds and supports are recovered (De Brisay and Evans 1975; Fawn *et al* 1990; Woodiwiss 1992; Lane and Morris 2001). Often, but not always, reports mention the very distinctive colouration of briquetage which is dominated by full oxidisation (orange-red variations compared to the contemporary unoxidised or irregularly fired domestic pottery), which can be accompanied by patches of discolouration consisting of pink, lavender and white shades. This discolouration is caused by the bleaching of iron-rich clays by the chlorine in saltwater which creates iron depletion in the clay matrix through the volatile loss of ferric chloride when heated to about 800° C or more (Matson 1971, 66).

The majority of evidence for salt production and distribution in Kent is later Iron Age and Romano-British in date. Several locations near the Thames have been identified as possible salt production sites because of their positions near the sea and the 'clear evidence of salt-working' (Philp 2002; 139; Miles 1975; Barford 1982). In addition, at Swalecliffe, north-east Kent between Whitstable and Herne Bay, a single organic-tempered pedestal, typical of the furniture associated with salt production, was recovered from a later Bronze Age well dated to the 9th to 8th century cal BC (Masefield, *et al* 2003, fig. 28; 2004) and at Hoo St Werburgh on the north side of the mouth of the River Medway two fragments from a small, flint-tempered briquetage vase were recovered from a linear feature, in association with Late Bronze Age pottery (Moore 2002, fig. 3, 1-2). The Swalecliffe pedestal has been examined by this author; it has a small patch of the classic salt-affected colouring of pink-lavender. Four kilograms of organic-tempered container fragments were identified from a single, Early/Middle Iron Age pit at Highstead, Isle of Thanet (Macpherson Grant forthcoming; pit

B215, Period 3), and a fragment from a support was found at Cliffe, north-east of Gravesend but the context is not firmly dated other than probably Iron Age or Romano-British (Cameron and Barford 1998, fig. 32, FC19). Inquiry through the Kent Sites and Monuments Record revealed very little additional information as of 2004 (S. Cakebread, pers comm.). Therefore, evidence of salt production and distribution in Kent has increased significantly with the identification and publication of briquetage found at seven sites along the route.

3.9.1 Late Bronze Age

The earliest production evidence consists of 52 pieces of briquetage found at Cobham Golf Course (Morris 2006a), including four container sherds (two of which are rims), 17 rod-like fragments which are most likely to have been the shafts from pedestal supports, 7 hearth fragments and various undiagnostic pieces. Half of the fragments are organic-tempered and the others were made from a silty fabric. Although two different organic-tempered fabrics were identified, the container sherds were all made from the same type and the two rim sherds, while classified differently, could have come from the same sub-rectangular, shallow pan, in view of the variation consequent on the handmade construction of these vessels. Sherds of Late Bronze Age pottery were found in the same features as the briquetage; therefore, the briquetage and production evidence can be dated by association to 10th-9th century cal BC, as detailed above. Several of the fragments display evidence for direct association with brine due to the presence of white 'salt skin' or bleached areas on their exterior surfaces.

The earliest distribution evidence consists of 118 container sherds (438 g) found at Beechbrook Wood in later Bronze Age and Late Bronze Age contexts, or unphased contexts. Scraps of fine clay, pale orange to cream in colour, with fine organic inclusions, were noted in several contexts in Area C at the site. The best examples come from context 1441 in ditch sub-group 1020 (enclosure group 3006), where two fragments similar in form to material from North Ring, Mucking (Bond 1988, 40, 50) were identified. This feature also contained a single Middle-Late Bronze Age flint-tempered pot sherd. Context 277 from ditch sub-group 1022 (enclosure group 1972) also contained briquetage container sherds and a single sherd of Late Bronze Age pottery (Pringle 2003, 72; Jones 2006, table 1). Therefore, there is evidence for both the production and distribution of salt in ceramic containers at this time in Kent, and that the distribution can be at least as far as 40 km from the coast.

It seemed, at first, quite surprising that there was evidence of salt production at Cobham which is approximately 4 km inland from the present coastline. The site was on the dip-slope of the North Downs at 45-86 m OD. It is possible that this position was not so far inland during the 1st millennium BC because of the effects of the Dunkirk I transgression (Evans 1953; Devoy 1979), an environmental condition which has been used to explain the location

of Iron Age salt production some 12 km inland from the modern coastline of Belgium (Thoen 1975).

Cobham lies almost due south of Mucking North Ring, a site located on a terrace above the Thames on the Essex side. Salt production was identified there during both excavation and salvage work (Bond 1988). The material includes pedestal stems and footplates as well as container sherds totalling more than 120 fragments (Barford 1988a, fig. 27; 1988b, fig. 36-38), and the Late Bronze Age pottery would be consistent with Earliest Iron Age date amongst the CTRL assemblages. The site is at 30 m OD and more than 1 km inland from the present course of Mucking Creek which leads into the Thames (Bond 1988, fig. 1). In northern France, a Hallstatt D/La Tène I salt production site was excavated on a river terrace at Vignacourt, 7-8 km north of the River Somme (Prilaux 2000). Therefore, it may not be unusual for later prehistoric salt production to have taken place at some distance and altitude removed from expected locations for this activity. Considerable research is required to improve understanding of the differences between the topographical and geographical locations of prehistoric and Roman salt production in Kent.

Although organic-tempering is not a traditional pottery-making fabric technology during the Late Bronze Age of south-east England, the availability of chaff from grain production would have made this an easy manufacturing method to adopt. The use of organic-temper in making briquetage is known from Late Bronze Age sites on both sides of the Thames during this period. Similar salt working debris has been found at Corringham (Barford 1984-5) where there are pedestals identical to the Swalecliffe example, while at Crouch site 2 (Fenn Creek) a salt evaporating hearth was discovered (Wilkinson and Murphy 1986; 1995, 157-9, fig. 101, plates 20-21) in association with sherds from thin-walled, flared base organic-tempered evaporating vessels, fragments from a horned, pyramidal pedestal and a flint-tempered pottery jar (Barford 1995, fig. 102-103; Brown 1995b, fig. 104), one which would fit comfortably into the Middle/Late Bronze Age transition phase. At Hoo St Werbergh (Moore 2002, fig. 3, 1-2) and Swalecliffe (Masfield *et al.* 2003, fig. 28) only briquetage debris was recovered, not structures representing saltern activity. The Hoo briquetage was flint-tempered and the Swalecliffe pedestal was made from a fabric containing sand, flint and a moderate amount of organic matter. While there is clear evidence for the making of salt during the Late Bronze Age, we have no evidence for the actual transportation of the salt inland to settlement consumers at this time. The small amount of salt production debris relative to the amount of domestic pottery at Cobham Golf Course strongly suggests that the level of production is likely to have been similar to household production for household use and localised trade. This level has been inferred for Middle and Late Bronze Age salt production evidence from elsewhere in England (Morris 2001a, 396, table 98).

There is a strong possibility that the fragments of perforated clay slabs found at Cobham Golf Course (Keily 2006a) (and also at Tollgate; Keily 2006b) were part of the briquetage repertoire during the Late Bronze Age. The Cobham slab fabrics were identical to flint-tempered pottery fabrics from the site rather than briquetage fabrics, but the firing colours included examples which could be called 'pink' in tone, although this was not reported. The shapes of more complete perforated slabs such as those recovered from Mucking (Barford 1988a, fig 27, 1-11; 1988b, fig. 35), Yiewsley in Kent (Champion 1980, fig. 8) and Queen Mary's Hospital at Carshalton in Surrey (Adkins and Needham 1985, figs 12-13) in Surrey, are remarkably similar to unperforated slabs recovered from excavations at the Late Iron Age and Roman Red Hills of Essex (Fawn et al 1990, Plate 13) and north-west France (Daire 1994, fig. 40). Further research is required to collate all the information available about perforated slabs and chemical testing of samples to determine if there is an association between slabs and salt production.

3.9.2 Earliest Iron Age

The vessel hole at Little Stock Farm which contained parts of several pots dated on style to the Earliest Iron Age also contained six pieces of briquetage container fragments, probably from the same vessel (Bryan 2006). The presence of salt container fragments in association with this special deposit of pottery reinforces the unusual nature of the deposit; a similar deposit of just Early Iron Age pottery and salt container fragments was found in a pit at White Horse Stone and is discussed below. There is only one salt production site in Kent which can be dated to this period, at Minnis Bay, Isle of Thanet (Worsfold 1943). Many sherds from shallow half-cylinder containers with curved sides made from organic-tempered fabrics were identified and 12 rims illustrated (Champion 1976, fig. 15). This small amount of evidence demonstrates continuity in salt production and distribution between the previous Late Bronze Age and the subsequent Early/Middle Iron Age in Kent.

3.9.3 Early/Middle Iron Age

Two sites just west of Cobham Golf Course, in the same dip-slope position on the north side of the North Downs, were found to have evidence for salt production. This consisted solely of briquetage containers. The quantity of material recovered at Tollgate presents a substantial case for consideration as a production site rather than one of consumption; production with a difference because it is most likely that these containers represent the final crystallisation stage in the salt-making process. West of Northumberland Bottom has fewer identified fragments of briquetage containers but the quantity alone qualifies as evidence of production. This site is likely to be part of a long string of settlement and production activity sites stretching from Tollgate westward. Briquetage was recognised if it displayed at least two out of four criteria based on previous briquetage research (Morris 1985; 1994a; 1994b; 1996;

1998; 2001a-e): organic-tempered fabric; 'salt colours' such as pink, lavender and purple; 'white skin' patches; and unusually flat body form in plan rather than a circular pot vessel form. In addition, the analysis of the pottery from both Tollgate and West of Northumberland Bottom revealed that, on more than one occasion, pottery vessels were being used in the salt production process on the basis of the presence of 'salt colours' and 'white skin' patches on sherds from shell-tempered pottery vessels. Therefore, it is important to indicate that not all of the 'briquetage' associated with the evaporation of brine in Kent will necessarily be organic-tempered.

The evidence at Tollgate consists mainly of three isolated groups of pits containing 537 sherds (24,917 g) from briquetage containers (Jones 2006a, table 11); these pits together represent 94% of the entire ceramic assemblage including the pottery and briquetage by number of sherds. Five briquetage fabrics were defined: organic-tempered, fine sand to silty clay matrix; organic-and-flint-tempered, very silty matrix; flint-and-organic-tempered fabric; organic-and-grog-tempered with occasional flint temper fabric; and organic-and-*isotropic* grog-tempered with flint and shell, silty clay matrix. It is extremely unusual to identify grog temper in a briquetage fabric and the presence of two different grog-tempered fabrics at one site is cause for comment. Organic temper added to fine clays and silty clays provides considerable porosity to the fabric and also strength to the vessel during manufacture. The porosity works two ways in salt production; firstly during the firing of briquetage containers and supports and secondly during the evaporation process itself. Grog can provide similar properties to organic matter because it is pre-fired ceramic matter which can create porosity and strength, although not as well as organic matter can do, and as crushed pottery it is often readily available. Grog, however, as discussed above, has other 'powers'. It can be a symbol of the past, past stability and knowledge, particularly during a time of change and insecurity. Therefore, it may be that the presence of this grog with organic matter in two of the fabrics is making a comment about the past in the present. In particular, it is very unusual for an extremely high-fired pottery, recognised petrologically as isotropic under crossed nicols using polarizing microscopy, to be used as grog. If the isotropic-fired pot/vessel belonged to metal-working activities for example, then this occurrence is even more important. Further scientific research into the nature of the grog types found in these briquetage fabrics is required.

The briquetage vessel form in the Tollgate assemblage is uncertain in plan; all but one of the vessels strongly suggest a straight, flat view which may be pan-like but one has been reconstructed into a circular shape (Fig. 3.17, TOL/47-51 & 54). The containers are all from open forms with conical profile and a flattened top to the rim with finger-impressed cabling which may be a consequence of manufacturing rather than decoration. Finger furrows are often seen on the exterior surfaces as a result of smoothing over the coil joins during construction of these 'industrial' vessels. The cabling effect is similar to that of contemporary

pottery vessels and the finger furrows on the exterior and the presence of several other characteristics of potting noticed on both pottery and briquetage vessels suggest that the Tollgate potters were likely to have been the Tollgate saltmakers. Three of the pottery vessel rims (Fig. 3.6, TOL/12, 24 & 36) and some of the briquetage rims (Fig. 3.17, TOL, 47, 48 & 51) were finished by folding the clay from the back of the rim over the top which created an irregular lip on the exterior edge of the rims. This created a weakness in the extra lip of clay which was poorly bonded to the vessel, often flaking off. The interiors of the containers were often well-smoothed, creating a 'non-stick' effect, presumably for ease of removal of the salt crystals, and this was clearly an important aspect of the containers because several had been re-surfaced with an extra layer of clay.

The presence of five different fabrics in one briquetage assemblage and the variability of those fabrics amongst the three pit groups (*ibid.*) may indicate that different saltmakers or groups of saltmakers were visiting the location or that salt production was taking place at different times during this Early/Middle Iron Age period. The quantity of briquetage compared to the quantity of pottery strongly indicates that this is a production site. The pits also contained many fragments of charcoal, fired clay and daub, which may have been the remnants of clay and wattle-lining for pits used for storage and settling of brine, as found in Britain and France (cf. Fawn *et al* 1990, Plates 1 & 4; Woodiwiss 1992, 10-3, fig. 6; Trimble 2001, figs 28, 30-31; Crowson 2001, figs 47 & 54; Weller and Desfosses 2002, fig. 6) or of demolished saltern hearths. To the south of one pit group, contemporary open hearths or firepits were found in association with two post and stake built structures of uncertain function which were interpreted as windbreaks (Bull 2006). The positions of these three pit clusters and the presence of the possible windbreaks and minor features are not typical of Early/Middle Iron Age settlement patterns. Usually there is evidence for roundhouses, rather than windbreaks, for example. Pit group 1 was 200 m west of pit group 2 and pit group 2 was 100 m north of pit group 3. The windbreak complex lay between pit groups 2 and 3. This combination of clusters and gaps is intriguing, and there is every reason to suspect that there is no typical settlement immediately nearby, outside the easement of the route. The food waste debris deposited in the features upon abandonment could have been carried to these locations, either as food for saltmakers or as food and materials for hide processing workers. However, in the absence of other saltern features such as channels for directing the flow of brine, it is possible that Tollgate was the scene of a final stage in the salt production process, the crystallisation of salt rather than the evaporation of brine. It may be that these pits were simply receptacles of domestic waste associated with an activity such as the crystallisation of salt. The many large jars found in the pits could have been used to transport concentrated brine to Tollgate from a location closer to the saltwater source itself. The few bowls found in the pit group deposits could have been used as scoops to add more 'heavy' brine to the

briquetage containers over the hearths during the evaporation process. As mentioned above, earths/firepits were identified during the excavations (Bull 2006). Bell (1977, 118-24) and Bradley (1992) have both hypothesised that salt production is likely to have taken place in separate stages during the prehistoric and early Romano-British periods, based on their observations of briquetage container variability at production sites in Sussex where saltern furniture such as pedestals are not part of the archaeological record.

While the evidence presented has shown that Tollgate is most likely to have been a production site, even if it represents only part of the production process, it is also possible that it could have been the location of an unknown activity which used quantities of salt. The pit groups may represent an activity such as curing of hides, and many bones did display evidence of butchery for de-fleshing (Faunal remains in Animal bones in Giorgi and Stafford 2006). A third possibility is that this is a place from which salt was redistributed, resulting in the quantities of broken briquetage containers. All of these interpretations – as a final stage of production, as a process using quantities of salt and as a focus for salt redistribution - are possible and a better understanding of what did take place will benefit from a more detailed assessment of all the briquetage evidence available in Britain and in particular in Kent, a future research programme.

The evidence at West of Northumberland Bottom consists of 63 sherds (431 g) from organic-tempered briquetage containers, which represent a minimum of 3.2% of the ceramic assemblage, and also one diagnostic briquetage rim made from a shell-bearing fabric (Fig. 3.7, WNB/32 Bryan and Morris 2005). Ditch 500 produced the largest group, with 28 sherds. There are five different fabric types: two organic-and-flint-tempered, sandy matrix; organic-tempered, iron oxide matrix; and two shell-gritted and organic-tempered. The definitions of these are all different from the Tollgate briquetage fabrics. Many of the sherds have a brittle feel to the touch and often have the white ‘salt skin’ appearance or a pink-lavender colour tinge. All are body sherds from containers of indeterminate type. In addition, however, at least five pottery vessels made with shell-gritted fabrics were clearly ‘salt-affected’ (eg Fig. 3.7, WNB/24), and one of these (Fig. 3.7, WNB/3) is very similar to a salt vessel with finger-tip impressions on the rim from the Early-Middle Iron Age phase at Ardale along the route of the Grays Bypass in Essex (Barford 1988c, fig. 83, 3). One of the salt-affected, shell-gritted vessels is very similar in concept of open, conical form to the majority of briquetage vessels at Tollgate.

The significantly smaller quantity of briquetage compared to pottery in the Northumberland Bottom assemblage suggests that the site occupants were probably consumers rather than producers of salt, and that this commodity was traded or at least transported to this site from the coast, which today can be reached at Northfleet within 5 km of the site. However, if Northumberland Bottom represents part of a ribbon-like activity zone

along the dip-slope of the North Downs in this area, then it might be the actual settlement associated with the salt production evidence at Tollgate, where pit groups also showed considerable variability amongst the fabric types present. If this is a reasonable scenario for the past, the briquetage at Northumberland Bottom could represent either production *or* consumption of salt at that location. The presence of a group of stakeholes at the base of pit 156 strongly suggests that the pit may have had a wattle-and-daub lining (Askew 2006). Pit 156 contained an impressive collection (at least 20 vessels) of large, round-shouldered storage jars similar to those at Tollgate, medium-sized shell-gritted jars, two sandy fabric bowls, a large neutral profile jar which looks like a bucket (38 cm diameter), and the flared or conical-profile shell-gritted vase which had been salt-affected described above (Fig. 3.7, TOL/16, 18, 23-29). This feature should be considered as a possible brine storage tank. Therefore, as with Tollgate, West of Northumberland Bottom could have been the location of some salt production activity and that this may have consisted of a primary stage in the process. If not, then the amount of briquetage present in the assemblage would indicate that this is likely to have been a consumer site. The evidence is equivocal at present, but leaning towards this being a salt production site.

Less difficult to interpret at this level are the small quantities of briquetage container sherds found at White Horse Stone in association with Early/Middle Iron Age pottery from ten pits and one posthole. A total of 76 sherds (236 g) was identified. Amongst these there are two organic-tempered fabric types and two small fragments of rim sherds from apparently conical profile vessels with straight walls (Fig. 3.17, WHS/122 & 134). One of the fabrics has a very silty clay matrix (WHS/V2) and appears to be extremely similar to a briquetage fabric from Tollgate (TOL/V1), which may prove to have been the source of at least some of the White Horse Stone salt. However, it is not possible to reconstruct the actual shape of the vessels used to transport the salt.

At White Horse Stone, one context in particular may be special not only because of the briquetage present in it but also because of the condition of the pottery and briquetage recovered. Pit 4303 contained one of the briquetage rim sherds and 35 other sherds making this the largest deposit on the site. It was associated with a long-necked, red-slipped and burnished (on *both* surfaces), carinated bowl decorated with a pair of horizontal, incised, parallel lines at the lower neck to body zone which looks almost like a necklace, a second bowl with red-slip on the exterior and burnishing on both interior and exterior, an obtuse-angled (rather than round) shouldered jar with finger-tip impressions on the shoulder and a single sherd with finger-tip impressed random rustication surface treatment (Fig. 3.7, WHS/122-126). Altogether, there is every reason to date this deposit to the Early Iron Age ceramic phase, rather than the Early/Middle Iron Age to which the majority of the pottery assemblage is assigned. The carinated bowl with red-slip and burnish on both surfaces is

unique to the White Horse Stone assemblage. It is in extremely poor condition. The sherds appear as oddly-coloured flakes of pottery as a result of having been deposited in the pit, probably with a significant quantity of salt. Not only the surfaces are affected, as with briquetage vessels; this effect occurred on and throughout the broken edges of the sherds. No other pottery in the entire assemblage has been affected in this way – it can only have been from salt, although this requires scientific confirmation. There is a strong possibility that this group could represent a foundation deposit for the Early/Middle Iron Age activities at White Horse Stone, and this interpretation is developed further below in the next section.

Elsewhere in Kent, 4 kg of briquetage mainly from a single, sub-rectangular vessel were found in a Period 3 pit at Highstead (P. Couldrey, pers comm.) and container sherds have also been identified in the Dumpton Gap assemblage (Champion 1976). Their locations on the Isle of Thanet suggest that these are likely to have been production sites but this, as for Northumberland Bottom and Tollgate, is far from certain.

3.9.4 Middle and later Iron Age

One Middle Iron Age site along the route, Cuxton, produced five briquetage container sherds (69 g) from two pits; two sherds in association with 184 sherds of pottery representing at least 28 different vessels from one pit (Fig. 3.8, CUX/3-21) and three container sherds with four pot sherds from another. All the briquetage is made from a single organic-tempered fabric type with minor fragments of flint and shell in a fine sand clay matrix, but the five sherds appear to be from two different containers. The occurrence of the briquetage, in association with significant parts of several pottery vessels, is reminiscent of the vessel hole deposit at Little Stock Farm with its small quantity of briquetage. It is possibly important to note that none of the briquetage recovered from Beechbrook Wood was found in deposits of this date; all came from Middle to Late Bronze Age or undated features.

The production and distribution of salt in briquetage containers therefore continued during the Middle Iron Age period. The types of fabrics present, however, are not diagnostic to any specific coastal source at the present time. Detailed research into the clay matrices of briquetage fabrics from coastal salterns is required in order to make this possible.

3.9.5 Future Research

This synthesis of the evidence for salt production and distribution from the CTRL sites in relation to information already available from Kent has revealed five important points for future research: (1) all later prehistoric briquetage from Kent needs to be analysed systematically for fabric identification, details about vessel form, surface effects, wall thickness and manufacturing techniques; (2) the pottery from coastal or near coastal sites associated with briquetage needs to be scanned to determine if any had been used in association with brine; (3) excavated features from coastal and near coastal sites associated

with briquetage require a review to identify any which may have relevance to salt production methods; (4) briquetage samples from each saltern site require scientific analysis to characterise in particular the variations of clay matrices amongst the salt production sources in order for briquetage from inland consumer sites to be assigned to a particular source; and (5) a salt index ratio of briquetage by weight to pottery by weight for coast-based and inland site assemblages should be established to begin an investigation of the nature of production and distribution of salt during the 1st millennium BC in Kent as has been conducted elsewhere in Britain (Morris 1994a). This research will assist in determining which sites near the coast were sites of production and which may have been major consumption locations, including those which may have focused as re-distribution points. The presence of a variety of fabric types at sites nearer the coast may indicate their roles as producers, while the limited number of fabric types on inland sites must indicate that the number of sources for the salt consumed was restricted to one or two during the Early/Middle Iron Age at least. It is also important to identify special locations of consumption inland, sites with unusually large quantities or unusually rich deposits of briquetage. If, in future, some Early/Middle Iron Age sites with sizeable assemblages (>2000 sherds) do not have any briquetage container sherds in their ceramic assemblage or if all new sites reveal that briquetage container sherds were always present but in low frequency, then it will be possible to explore variation of access to salt and the cultural value of salt, its social meaning.

3.10 Vessel selection and deposition: Special events and everyday life

Now that Middle Bronze Age to Middle/Late Iron Age pottery and salt production and distribution from along the route have been defined and described, the nature of vessel selection for deposition will be explored to determine if it is possible to see different events taking place at different times and whether these may indicate changing social practices and activities during this later prehistoric period.

Material culture is involved in the procurement, preparation, storage and consumption of food and drink, amongst other functions. During the later prehistoric period, pottery is at the heart of this activity after procurement. It is through these tasks that a variety of social distinctions, identities and values are worked out, negotiations are conducted and society reproduces. Examination of the various depositions amongst the larger excavated sites has not immediately provided evidence of social distinctions, identities or values. Instead, what has been revealed is evidence for eating and drinking by large groups – basically feasting events where groups have gathered for a special purpose. The majority of these events, insofar as they are identifiable from deposits of ceramic material, took place during the Early/Middle and Middle Iron Age phases of the later prehistoric period.

3.10.1 Middle and Middle/Late Bronze Age

The appearance of unusual deposits of Middle Bronze Age pottery in Britain is normally confined to burial events during this period, with the exception of the extraordinary closing deposits that marked the abandonment of structures at Bestwall in Dorset (Ladle and Woodward 2003). Along the route of the Channel Tunnel Rail Link, however, there are only remnants of such deposits, as at West of Northumberland Bottom where one flint-tempered cremation urn is represented by base and body sherds only and at Tutt Hill, where fragments of flint-tempered vessels were associated with cremated bone. The best example of a special cremation urn deposit was the Middle/Late Bronze Age urn from Tutt Hill made from a grog-and-flint-tempered fabric. Un-urned cremation burials are more common than urned examples along the route, and the dates for some of these indicate that there may have been a transition ending the practice of burying cremated bodies in urns during the Middle/Late Bronze Age and Late Bronze Age phases. One un-urned cremation burial at Saltwood Tunnel was dated to 1410-1210 cal BC (NZA-20655, 3063 \pm 30) and the pyre debris from one at Tutt Hill was dated to 1440-1210 cal BC (NZA-20102, 3094 \pm 40). At Pilgrims Way, two un-urned cremation burials were radiocarbon dated to the Late Bronze Age (1010-830 cal BC, NZA-21492, 2719 \pm 35; 1190-920 cal BC, NZA-21505, 2868 \pm 35) and at Beechbrook Wood another two were likely to be contemporary Late Bronze Age events (1270-990 cal BC, NZA-20050, 2921 \pm 40; 1190-920 cal BC, NZA-21507, 2870 \pm 30). Although the practice of cremation had continued into the Late Bronze Age, the interment of the remains with pottery had not. This may have been a symbolic break in a cyclical tradition of earth, food, pots, people - cremation, pot, burial, earth. More dates for urned and un-urned cremation burials in Kent need to be obtained before a pattern relating to chronology or to social organisation can be confidently inferred; in the region of 30-35 examples altogether might be suitable. Other significant deposits of Middle Bronze Age pottery occurred at Beechbrook Wood where the bases of two pots were found in separate pits, unaccompanied by cremated bone. It could be argued that these singular vessels, taking up much of the apparent space within their pit cuts, could have been special deposits containing perishable materials but an equivalent, more practical argument would see this simply as below-ground storage facilities for day-to-day consumption of food.

What is most important, however, is to re-emphasise the small amount of Middle and Middle/Late Bronze Age pottery and infrequency of sites from along the route of the Channel Tunnel Rail Link. This is exemplified by the 12,000 sherds recovered from one site alone amongst several along the Brighton Bypass where Bronze Age pottery was recovered, at Mile Oak (Russell 2002). The Brighton Bypass for the most part was located on chalk and approximately 25% of the CTRL route is also on chalk. If chalk was a favoured locale for

settlement and other activity we might have expected more pottery of this period to be recovered, although issues of preservation reflecting factors such as later agricultural history could have had a significant impact on the survival of such assemblages.

3.10.2 Late Bronze Age and Earliest Iron Age

During the Late Bronze Age, there is good evidence that pottery was being perceived differently, first with the making of bowls and cups and secondly with the deposition of larger quantities in below ground features. The classic example of this is the single Late Bronze Age pit excavated at White Horse Stone – not only is it an isolated feature on the site, it is the only feature of this date (1130-890 cal BC; NZA-22006, 2804±40). At least six pots including both bowls and jars were represented in its fill, and there are 99 sherds (1309 g) of pottery in total. At Cobham Golf Course, a much richer deposit of both bowls and jars from more than five pots (391 sherds, 3243 g) was recovered from a pit with a 10th-9th century cal BC date (NZA-21143). This pattern of deposition continued into the Earliest Iron Age at Little Stock Farm with the pair of vessel holes together containing nine pots, eight in one pit, one in the other (617 sherds; 6096 g) including both bowls and jars. The richer of the two pits contained sherds of briquetage. These few examples show how different the patterns of deposition of pottery are between the Middle Bronze Age and the Late Bronze Age to Earliest Iron Age. It would be useful to quantify the variation amongst all of the pits by period across the sites and compare this evidence with that from other parts of southern Britain and France.

3.10.3 Early/Middle Iron Age and Middle Iron Age

The deposition of pottery vessels in graves is undoubtedly a special and deliberate act. There are several occurrences of these which can be highlighted, such as the rich cremation grave at White Horse Stone with its seven pots (Fig. 3.8, WHS/61-67), five of which are nearly complete, that had been placed in the feature along with several metal objects and a large deposit of charred plant remains; the rarity of metal on this site emphasises the significance of this deposit. This grave deposit appears to symbolise the cycle of life and death, creating a harvest and consuming the food which unites the dead below ground and the living above it. The capacity of the storage jar is huge at 35 litres, while the bowls alone could have provided about 20 litres of drink in this set of pots. Other examples of graves with pots include a later Iron Age example from Little Stock Farm (grave 2037) which contained the second largest vessel in that entire assemblage (30 cm) along with the smallest vessel, a unique, combed and red-painted beaker (Fig. 3.9, LSF/1 & 5). Two examples of single, complete or now nearly complete vessels deposited in graves occurred during the Middle Iron Age at Saltwood Tunnel (Fig. 3.8, SLT/60 & 61).

The salty pit at White Horse Stone is a suitable place to begin the discussion of other forms of special deposition in these ceramic phases because it is rather different from the

majority of pits on the site. The pottery vessels present include one unique and highly decorated bowl and sherds from others which are more likely to be Early Iron Age in date, in addition to one highly rusticated vessel which is slightly later in date. This could be the earliest pit deposit of the Early/Middle Iron Age phase of activity at the site. The decorated bowl had been deposited with or buried in salt, which created a destructive rather than preservative condition for that vessel alone. The bowl may have been wrapped with the salt separating it from the other sherds, or the association with the salt may have taken place prior to deposition. Half a dozen other pits received unusual deposits at this site.

If the vessel sizes discussion above is a suitable interpretation of the data, it implies that the larger quantities of Early/Middle Iron Age pottery deposited in seven or nine pits at White Horse Stone (Morris 2006b, table 21; figs 5a & b) actually include the normal array of pottery from the settlement assemblage. It had, however, been used in a significantly different way, large quantities of regular household vessels being deposited together at a 'focus event'. Therefore, it appears that ceramic material culture was being used in a very distinctive way during the Iron Age in Kent, as elsewhere (Cunliffe 1992; 1995, 72-88; Hill 1995). Common artefacts, used in daily life, became transformed when people gathered for special events. It is not the objects themselves alone which make them special, necessarily, but their associations and their contexts of association which provide their meaning – what had been done with them prior to deposition is that which is represented by the deposit. We can see this archaeologically in the nature of deposition rather than in the manufacturing of special sized vessels for particular events or the exclusive access to particular vessels by a limited group of people within the community. There is no clear evidence of a stratified or hierarchical system of access to material culture in the Early to Middle Iron Age of Kent. All of the CTRL sites had evidence for access to salt, for example.

This same phenomenon appears to have continued into the 4th-2nd century cal BC at Cuxton and Beechbrook Wood. The larger, richer pit at Cuxton, in particular, has elements which make it very similar to the richer pits at White Horse Stone, and one factor which makes it very different. This large group of Iron Age pottery (186 sherds; 6425 g) representing up to 50 vessels was found in a truncated pit. The vessel forms and surface treatments indicated an Early/Middle Iron Age date but a single radiocarbon determination put the contents within the Middle Iron Age period, 4th-3rd century cal BC (NZA-22593, 2267±30). This number and weight of sherds would qualify the deposit for special status at White Horse Stone. Add to this the fact that the majority of vessels had been affected by post-manufacture extreme heating, which caused them to become very hard fired, cracked and occasionally even bloated and twisted, and the contents may take on the status of symbolising a fire-associated event. None of the vessels has a total profile but this may have been a result of the truncation of the pit. However, it is possible that the fragmentation of the vessels was

part of the event and sherds representing mementoes or souvenirs of the day were distributed to the attendants. This event may have been the accidental burning of a structure, for example, or the deliberate burning of a house as part of a cycle of building renewal, similar to the re-cutting of ditches. Were the pots deliberately left in the building when it was set alight? Sherds of briquetage were also found in the truncated pit; was salt thrown on the fire as part of the process to deny preservation by burning? Would ashes from the fire have been whitewashed onto the daubed walls of the new house? Or was salt simply used as part of the eating and drinking which took place at the renewal stage of building work?

The two massive dumps of parts of more than 70 small and medium-sized Middle Iron Age vessels into the entrance end of an enclosure ditch at Beechbrook Wood (ditch 2150 and its recut 7001) are fine examples of a repeated special event deposit; in this case, the renewal of a ditched enclosure. Curiously, there are no fragments of briquetage containers from these contexts rich with ceramics. The range of vessel sizes for Middle Iron Age assemblages in Kent has now been established (see above) and this collection from Beechbrook Wood fits within the normal array for the period. However, the four Iron Age fabric groups identified in this collection (Jones 2006) are represented by approximately 20 fabric types and up to ten different clay matrices which may indicate that there were several household families or kin-groups, represented by these different wares, participating in the renewal event; each clay matrix from a different landscapes around Beechbrook Wood, near and far. This scenario would make the social relationships of gathering and helping in construction projects by dispersed groups at a local scale very similar to those of the Early/Middle Iron Age period at White Horse Stone (Morris 2006c), and comparable to a recognised characteristic of everyday life in Iron Age Wessex (Fitzpatrick 1997).

The rich pits at White Horse Stone and Cuxton in SRZ1 contrast with the rich deposits in ditches during the full Middle Iron Age period at Beechbrook Wood in SRZ2. At Beechbrook Wood, the three deposits with the greatest number of potsherds are ditch 2150 and its recut ditch 7001 (1439 and 565 sherds respectively) and ditch 2019 (243 sherds, Early/Middle Iron Age), which are actually only sections across ditches and not their entireties or half sections as with pit fills. The greatest number of sherds in a pit at Beechbrook Wood is from pit 204 with 83 sherds, but it is Middle Bronze Age in date. It will be interesting to see in future with further excavations if this pattern is one based on a chronological change in deposition behaviour during the Iron Age or if it is a location phenomenon for this part of Kent.

The presence of unique vessels may also be indicative of special deposition events, in particular if other aspects of the deposit are unusual. For example at South-east of Eythorne Street, Middle Iron Age pit 225 contained the only conical cup known in Britain in association with a common, round-profile bowl with everted rim, a large ovoid jar with

rustication treatment on its lower half and two proto-saucepan pots amongst other fragments (Fig. 3.8, EYH/1-5). The significant factor is that the bowl was sliced in half – another apparently unique aspect of this feature. Where is the other half of this vessel? Was it given in exchange to the person who gave the Eyhorne hosts the conical cup? The deposit contained a collection of pottery which could easily be interpreted as a drinking set with a large jar for holding the brew (30 cm in diameter), one or more medium-sized pots which could have held food (20 cm), half of a small bowl which was burnished on both surfaces in order to be used as a liquid container for individual drinking (12 cm), and a very small and special cup (6 cm) which may have been a gift for the gods in a chthonic nature (Cunliffe 1992, 77-9; 1995, 72-88; 2000, 130-2; Fitzpatrick 1997, 80).

Finally, even if the contents of the Early/Middle Iron Age pit groups containing quantities of briquetage at Tollgate and the smaller quantity of briquetage from West of Northumberland Bottom do not represent salt production, then the Tollgate pit contents need to be interpreted as special activity deposits of some kind, such as for processing animal hides. Whatever the case, it is clear that salt played a significant role in later prehistoric life in Kent. Its presence contributes to making deposits, and the behaviour they represent, special at least during the first half of the millennium. These are not likely to have been deposits representing feasting events on account of the limited number of fabric types within each pit (primarily shell at Northumberland Bottom and shell or flint at Tollgate), compared to pit deposits at White Horse Stone with their variety of clay matrix sources, or to Beechbrook Wood where such large fragments of vessels, also from a variety of clay sources, were deposited.

3.11 Concluding note

Pots are functioning objects bound up in social practices involved in the production, storage and consumption of food in a spiralling cycle of social reproduction where change is always taking place; sometimes slowly, sometimes quickly. We try to discover how ceramic assemblages are categorised and how certain aspects of categories such as vessel volume, surface treatment or associations in deposits were used to articulate social identities and behaviour within these practices. The later prehistoric sites along the route of the Channel Tunnel Rail Link were not scenes of monumental architecture such as tombs or locations of extraordinary preservation in and under roundhouses within which to contextualise food remains and ceramics, bone tools and quernstones – but what they do have are a range of deposits and associations selected by people from their cultural world, transformed by use and fragmentation, and removed from that world through deposition for us to examine. The pots have many stories to tell.

4 CHAPTER 4. LATE IRON AGE AND ROMAN POTTERY

by Paul Booth

4.1 Introduction

Approximately 66,885 sherds (*c* 603.5 kg) of Late Iron Age and Roman pottery were recovered during the main fieldwork phase of CTRL Section 1 works. This material comprised much the largest single period group amongst the total pottery from the project, amounting to *c* 66% of all the material recovered (by sherd count, *c* 60% by weight). Separate reports have been prepared for 15 main assemblages (Fig. 4.1) or groups of spatially-related assemblages, (totalling 64,343 sherds, 573.223 kg, comprising *c* 96.2% of the Roman pottery by sherd count and 95% by weight) and data for a number of minor ones exist in archive (See Table 4.1 for a summary of the main assemblages and Table 4.2 for a list of the minor ones, the locations of the latter are shown as small dots on Fig. 4.1). Definition of ‘main’ assemblages was often on site-based rather than ceramic criteria, so that a few of the main assemblages are smaller than some of those considered as ‘minor’. The general character of these assemblages is variable. The assemblage from the major cemetery at Pepper Hill is exceptional both in size and nature, and for the latter reason, in particular, is not readily comparable with material from the other main sites. These are all from rural settlements or settlement-related features (such as trackways and field systems) of various kinds. The majority appear to be low-status settlements, the only obvious exception to this (in structural terms) being the villa site at Thurnham. The latter is also one of the most complete excavations, encompassing a large proportion (though certainly not all) of the settlement area. Many of the other assemblages derive from partial excavation of sites whose original extent is usually unknown. This factor may have affected the composition of assemblages in ways that cannot be known or quantified - one of the results of this is to suggest caution in discussion of site status, particularly on the basis of the smaller assemblages. Assessment of the chronological range of sites (Fig. 4.2) should also be treated with caution for the same reasons, but overall there is a very strong preponderance of assemblages of Late Iron Age and early Roman date, to the extent that there can be no doubt that this represents a genuine pattern. A number of sites contain a late Roman component within their pottery assemblages, but this is rarely significant, and in only one case (the small group from the Hazells Road Diversion, near Northumberland Bottom) is the assemblage predominantly of late Roman date.

Roman ceramic building material is discussed briefly below.

The present report sets out the total quantities of Roman pottery from the main assemblages in the project area, the methodology used by all workers in detailed recording of

the material, and presents a survey of the results of that work. This is very much a summary account, and for more detailed discussion of and information on each site assemblage reference should be made to the individual assemblage reports and, if necessary, the primary datasets, as outlined in the general introduction (above). A sequence of figures (Figs 4.3-4.10) gives a summary of the chronological development of the main ceramic traditions represented, while Figures 4.13-4.19 provide a selection of grave group assemblages from Pepper Hill, Bower Road and Saltwood. It should be noted that the numbering of vessels in these figures is that of the individual site assemblage reports from which they are drawn.

Table 4.1: Quantities of pottery from the main Late Iron Age and Roman assemblages

Site	Codes	Total sherds	Total weight (g)	MV (rims)	EVEs	Date range
Pepper Hill	PHL97, NBR98	26760	192325	626	241.82	Mid 1C-?early 4C, mostly 1-2C
Zone 1 Whitehill Road	ARC WHR 99	1441	15972	76	9.49	LIA-2C
Zone 2 South of Station Road	SSR 99, ARC 330 98A	491	4033	21	1.41	LIA-2C
Hazells Road Diversion	ARC HRD 99	432	4434	38	1.99	3-4C
West of Northumberland Bottom	WNB 98	3412	44553	226	25.88	LIA-mid 2C
WNB 98B	ARC 330 98B	503	6497	26	3.34	LIA-4C, mostly 1-2C
Tollgate	ARC 330 98C	453	7325	25	2.10	?LIA-mid 2C
White Horse Stone	WHS 98, PIL 98, BFW 98, BFE 98	193	1122	10	0.80	LIA-2C, a few later pieces?
Hockers Lane	ARC 420 62+200 - 63+000 99	724	4915	44	3.82	M/LIA-1C
Thurnham	ARC THM 98	13911	127673	1186	120.56	LIA-4C, mostly 1-2C
Snarkhurst Wood	ARC SNK 99	1426	14095	65	9.53	LIA-mid 3C, mostly 1C
Leda Cottages	ARC 430/83+200 *	1882	21026	142	22.39	LIA-mid/late 3C
Beechbrook Wood	BBW00	3775	53116	197	33.30	LIA-2C
Bower Road	ARC 440/99	4175	39578	271	25.77	LIA-4C, mostly 1-2C
Saltwood Tunnel	ARC SLT 98, SLT 98C, SLT 99, SFB 99, SFB 01	4765	36570	171	13.55	LIA-4C, mostly 1-2C
TOTAL		64343	573223	3124	515.75	

Table 4.2: CTRL minor Late Iron Age and Roman pottery assemblages, summaries from assessment reports

Site Name	Codes	Total sherds	Total weight (g)	Approx date range	Comments
Nashenden Valley	NSH 98	55	1331	?late 3C	Mostly R wares
Chapel Mill	CML 99	34	274	LIA-3C	
Hurst Wood	HWD 98	10	27	LIA-1C	
Newlands	WBSDS 430/99 79+950-80+180	22	97	1-2C	Mostly E wares
Eyhorne Street	420/99	225	1252	late 2C-1C BC	?All E wares
Leacon Lane, Charing	WBSDI ARC 430/99 81+800- 82+000	48	132	LIA-2C?	Mostly E wares
Westwell Leacon & Leda Cottages	ARC 430/82+000 to 83+800	61	953	LIA-1C	
Tutt Hill	ARC 430/83+800- 84+900	62	568	late 2C-1C BC	P and E wares
Lodge Wood	WBSDI ARC 430/99 87+300- 87+800 and WBG ARC 430/99 86+500- 87+300	378	12999	LIA-1C	Mostly E wares
Boys Hall	BHB 99	517	3439	1C	
Blind Lane	BLN 98	343	2724	LIA-2C	
Little Stock Farm		9	47	LIA-?2C	Most LIA material is dealt with in the later prehistoric pottery report
Church Lane	CHL 98	23	129	LIA-1C	All E wares
East of Station Road	STR 99	272	1720	LIA-2C	
TOTAL		2059	25692		

Fig 4.2: CTRL Late Iron Age-Roman sites: approximate date ranges based on ceramic evidence

SITE	SHERDS	PERIOD										
		100-50	50-1	1-50	50-100	100-150	150-200	200-250	250-300	300-350	350-400	400-450
Zone 1: Whitehill Road	1441		-----	-----	-----	-----	-----					
Zone 2: South of Station Road	491		-----	-----	-----	-----	-----					
Pepper Hill	26760				-----	-----	-----	-----	-----	-----		
Hazells Road	432						--	-----	-----	-----	-----	
Northumberland Bottom WNB98	3412		-----	-----	-----	-----	-----					
Northumberland Bottom WNB98B	503		---	-----	-----	-----	-----	-----	-----	-----	-----	
Tollgate	453		---	-----	-----	-----						
White Horse Stone	193		---	-----	-----	-----	-----	-----				
Hockers Lane	724	-----	-----	-----	-----							
Thurnham	13911		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Snarkhurst Wood	1426		---	-----	-----	-----	-----	-----				
Eyhorne Street	225	-----	-----	---								
Leda Cottages	1882		---	-----	-----	-----	-----	-----	---			
Beechbrook Wood	3774		-----	-----	-----	-----	-----	-----				
Lodge Wood	378		-----	-----	-----							
Boys Hall	517			-----	-----							
Blind Lane	343		-----	-----	-----	-----	-----					
Bower Road	4175		---	-----	-----	-----	-----	-----	-----	-----	-----	-----
East of Station Road	269		-----	-----	-----	-----	-----					
Saltwood Tunnel	4765		---	-----	-----	-----	-----	-----	-----	-----	-----	-----

Site names in **bold** are main reported assemblages; non-bold are minor sites with assemblages of more than 200 sherds, date ranges derived from assessment data

4.2 Methodology

In the absence of a well-established unified recording system for Roman pottery assemblages in Kent (notwithstanding the excellent synthesis of Pollard 1988) the recording methodology was based on the standard Oxford Archaeology system (Booth 1992-2005) with modifications to reflect the regional character of the project and ensure, as far as possible, compatibility with the analyses of other pottery assemblages of the period from Kent. In particular these modifications involved the use of fabric codes from the Canterbury Archaeological Trust (CAT) series (Macpherson-Grant *et al.* 1995) and 'Southwark' codes (Marsh and Tyers 1978; Davies *et al.* 1994, 6-8) to provide a consistent approach to classification of vessel types. A drawback of the CAT fabric codes is that they have no clear hierarchical structure and no framework for linking fabrics into larger groups for broad analytical purposes. To achieve this the individual CAT fabrics were also assigned a major ware group code from the OA system (see further below).

The principal ceramic attributes recorded included fabric (CAT code), ware group (OA code), vessel type (based on the Southwark system) and detailed vessel type (using eg the north Kent industries' type series of Monaghan (1987) and other well-known typologies, such as those for samian ware and amphorae, where appropriate). Codes for details of rim, base, handle, spout and decoration types were also provided, as well as fields for recording aspects of vessel use, reuse and sherd condition. The means of quantification were sherd count and weight, with rim count and EVEs (strictly REs - rim equivalents) used for quantification of vessel types. Chronology, both at individual record and context group level, was recorded using absolute dates as discussed above (see general introduction). Two additional fields, recording 'interpretative type' and vessel completeness, were applied uniquely at the Pepper Hill cemetery in order to aid analysis of this complex assemblage.

Despite the application of a single recording system it is not claimed that the results achieved by a number of different workers with different assemblages will be completely uniform, for example in consistent attribution of sherds to the same fabrics or even to vessel types. This principally reflects the fact that pottery recording is not an exact science, but the difficulties of achieving precise consistency of recording are thought to be more than outweighed by the use of the same basic framework for sites along the entire CTRL Section 1 route. No concerted effort has been made to impose retrospective consistency of the use of fabric (and other codes) subsequent to initial recording, though a few adjustments have been made to datasets in the light of the overview of all the assemblages together.

While chronology was usually established on the basis of a combination of ceramic and site sequence criteria, occasionally aided by the evidence of small finds, radiocarbon dating was also employed, particularly at Pepper Hill. Here, however, a number of the results were

problematic and the radiocarbon dates, intended to assist in clarification of burial sequences, made no specific contribution to ceramic chronologies (Allen 2006).

4.2.1 *Fabrics*

Sherds were assigned to fabric either on macroscopically observed criteria or using a hand lens or binocular microscope at up to x20 or x30 magnification (where necessary) in conjunction with duplicated selections of sherds from the CAT fabric series. Not all the sherds could be assigned to fabrics in the CAT series and a small number of new fabrics was identified. These have now been added to the CAT series (new codes are indicated by an asterisk in Table 4.3 below). The fabric codes employed are tabulated below with short summary descriptions (derived from the Canterbury documentation) or name labels in the case of well-known wares. More comprehensive descriptions, mostly based (except for the new fabrics) on information from the Canterbury Archaeological Trust, can be found in the project archive. The general ware group codes are also given, together with reference to the national Roman fabric reference collection (Tomber and Dore 1998) where appropriate. Approximate date ranges are also given where possible. It should be noted that these refer to the likely currency of particular fabrics in Kent or (in some cases) in the CTRL area in particular, and may not correspond exactly with their incidence in other parts of Britain. Dates are AD unless indicated otherwise.

As is common in Roman fabric series, each code does not necessarily represent a single fabric in the sense of comprising a unique combination of clay matrix and inclusion types that can be assigned to a single production site. Many of the codes identify ‘wares’ - distinctive products often attributed to particular industries but encompassing a number of variations (usually relatively minor) in fabric. In some cases the codes identify traditions that could have been common to a number of production centres within a region at any given time (B1 and R1 and related fabrics are examples of this). A few codes (eg R109) are general groupings for miscellaneous fabrics that are not easily accommodated within the main framework.

Table 4.3: Canterbury Archaeological Trust / Iron Age and Roman pottery fabrics (as used for CTRL) with additions and correlations

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
MLIA2.1	Very-fine sand and calcined-flint	P		LIA-AD 50
MLIA2.2	As MLIA2.1 with ferrous inclusions, high fired	P		?30/43-70
LIAB1	Profuse silt-sized quartz, sparse ferrous inclusions and occasional flint	P		?30/43-70
LIAB4	Coarse calcined flint tempered	E		LIA-AD 50
LIAB5	Fine calcined flint-tempered	P		MIA-?AD 50
LIAB6	Burnished black with mixed grog, shell and quartz	E		?30-70

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
LIAB7	Ironstone and ?chalk inclusions (leached)	P*		LIA
LIAB8	Black, profuse silt-sized quartz, occasional flint and organic inclusions	E		LIA-AD 50
LIAB9	Fine quartz sand and red ferrous inclusions	P*		LIA
LIAB10	Occasional shell and very coarse calcined flint	P*		LIA
LIAB11	Grog, silt-sized quartz, occasional flint and chalk	E		50 BC-AD 50
B1	'Belgic' fine grog-tempered	E		50 BC-AD 70
B1.1	'Belgic' fine/coarse grog-tempered	E		50 BC-AD 70
B2	'Belgic' coarse grog-tempered	E	cf SOB GT	50 BC-AD 70
B2.1	'Belgic' coarse grog-tempered (pale grog)	E		50 BC-AD 70
B2.2	'Belgic' coarse/probably local coarse grog-tempered	E		50 BC-AD 70
B2.3	'Belgic' very fine grog-tempered, usually highly burnished	R/O		70-170
B3	'Belgic' grog-tempered with sparse flint	E		50 BC-AD 70
B4	'Belgic' grog-tempered with chalk grits	E		50 BC-AD 70
B5	'Belgic' grog-tempered with sand	E		50 BC-AD 70
B5.1	'Belgic' grog and shell-tempered	E		c 30-70
B5.2	'Belgic' sand and shell-tempered	E		c 30-70
B6	'Belgic' shell-tempered (?N Kent)	E		50 BC-AD 70
B8	'Belgic' fine sandy	E		50 BC-AD 70
B9	'Belgic' coarse sandy	E		50 BC-AD 70
B9.1	'Belgic' coarse sandy (glauconite)	E		50 BC-AD 70
B9.2	'Belgic' coarse sandy (glauconite and flint)	E		10-45
B9.3	'Belgic' sandy (glauconite and 'white' grog)	E		LIA-AD 50
B12	Early Gaulish TR Fabric 1(A)	F	GAB TR 1A	20 BC-AD 40
B14	Early Gaulish TR Fabric 1(C)	F	GAB TR 1C	20 BC-AD 40
B16	Early Gaulish TR Fabric 3	F	GAB TR 3	20 BC-AD 40
B17	White ware: Rigby & Freestone fabric 1A	W		
B19.1	Italian Dressel 1B/2-4 amphora	A		
B21	Other coarse ware (unassigned)	E		-
BER1	Stuppington Lane-type (Macpherson-Grant 1980a, 281, 285) coarse sandy	R/O		50-70
BER3	?Local/N Kent Romanising fine grogged	E		
BER5	Early Gaulish white ware: Rigby fabric A (CAM. 114)	W		10-40
BER6	Early Gaulish white ware: Rigby fabric B (CAM. 114)	W		10-40
BER7	Early Gaulish white ware: Rigby & Freestone	W		10-60

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
	(1995, 648) fabric IB			
BER8	Early Gaulish white ware: Rigby fabric 1C	W		1C
BER9	Early Gaulish white ware: Rigby & Freestone (1995, 648) fabric IIA	W		1C
BER10	Early Gaulish white ware: Rigby fabric IIB	W		1C
BER11	Flagon white ware: Rigby & Freestone (1995, 651) WW1	W		1C
BER12	Early Gaulish TN and variants	F		
BER14	Buff ware	O		? 1-70
BER15	Chaff-tempered ware (Macpherson-Grant 1980b)	-		1C
R1	Romanised grog-tempered native coarse ware (NCW) (Pollard 1988, 98)	R		late 2C-mid 4C
R1.2	'Belgic' coarse/Romanised grog-tempered NCW	R		
R2	Romanised grog and flint-tempered NCW	R		late 2C-mid 4C
R3	Romanised grit/sand-tempered NCW	R?		
R4	Canterbury coarse grey sandy (N. Gaulish style)	R		
R5	Canterbury coarse grey sandy (Flavian/Antonine)	R		70-200
R6.1	?Canterbury coarse orange sandy (Flavian/Antonine)	O		70-200
R6.3	?Canterbury coarse buff sandy (Flavian/Antonine)	O		70-200
R7	Fine grey sandy (some CC)	R		
R8.1	Fine orange sandy (some CC)	O		43-100
R8.2	Fine red sandy (some CC)	O		43-100
R8.3	Fine buff sandy (some CC)	O		43-100
R9.1	Canterbury coarse pink buff sandy	O		70-200
R9.2	Canterbury fine pink buff sandy	O		70-200
R10	?Canterbury coarse/fine white cream sandy	W		70-200
R13	Black burnished 1 (Dorset and others)	B	incl DOR BB1	120-370
R14	Black burnished 2	B	incl CLI BB2 & COO BB2	120-350
R14.1	Black burnished 2 (local)	B		?120-300
R15	Verulamium ware: 'Brockley Hill'	W	VER WH	70-160
R16	Fine grey 'Upchurch' fabrics I and II	R	UPC FR	43-300
R16.1	Fine grey 'Upchurch' fabrics I and II white slipped	Q		70-200
R17.1	Fine orange 'Upchurch'-type (some CC)	O		70-270
R17.2	Fine red 'Upchurch'-type (some CC)	O		70-270
R17.3	Fine buff 'Upchurch'-type (some CC)	O		70-270
R18.1	Fine purple/grey* 'Upchurch'-type CC flagon (slipped)	?Q		43-150/200
R18.2	Fine purple/grey 'Upchurch'-type CC flagon	R		

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
	(unslipped))			
R19	? 'London ware' fine with dark grey/black surfaces	R	?LON FR	?60-150
R20	Lyons colour-coated	F	LYO CC	40-70
R22	Central Gaulish colour-coated (pre-Flavian)	F	CNG CC 2	40-70
R23	Pompeian red wares (undifferentiated)	F	incl CAM PR 1, CNG PR 3 & IMP PR 6	1C
R25	Lower Rhineland Fabric 1	F	KOL CC	mainly 2C
R26	Alice Holt-type	R	?ALH RE	late 1C-late 3C
R27	Mica dusted wares	F		mid 1C-2C
R29	Highly micaceous wares	R		50-80
R31	South-east England lead glazed	F		100-150
R33	Colchester colour-coated (not early variants R33.1 & R33.2)	F	COL CC 2	70-200
R35	Central Gaulish 'Rhenish'	F	CNG BS	130-200
R36	Moselkeramik	F	MOS BA	150-250
R37	Central Gaulish colour coated (white cream fabric)	F	CNG CC 1	50-100
R40	White slipped ware (Rigby WS1)	Q		
R41	Arretine (samian)	S		1C BC- AD 40
R42	Southern Gaulish samian	S	incl LGF SA	40-100
R43	Central Gaulish samian	S	incl LEZ SA 2	100-200
R43.1	Les Martres de Veyre samian	S	LMV SA	100-125
R45	Central/Eastern Gaulish samian	S		100-240
R46	Eastern Gaulish samian	S	various	130-240
R46.1	Miscellaneous samian	S		1C-mid 3C
R47	Italian Dressel 2-4 amphorae	A		1C
R49	South Spanish Dressel 7-11 amphorae	A	incl P&W AM 16	?mid-late 1C
R50	South Spanish Dressel 20 amphorae	A	BAT AM 1 & BAT AM 2	1C-3C
R56	South Gaulish Pelichet 47 amphorae	A	GAL AM 1	mid 1C-3C
R61	?Gaul/SE England fabric 1 mortaria	M	some NOG WH 4	mid-late 1C
R62	?Kent fabric 2 mortaria	M	NOG WH 4	
R63	?Colchester/Kent mortaria	M	incl COL WH	mid 1C-2C
R64	?Rhenish fabric 6/7 mortaria	M	incl RHL WH & SOL WH	?2C-mid 3C
R65	?Verulamium fabric 8 mortaria	M	VER WH	70-200
R67	Highgate Wood-type [fabric C]	R	HGW REC	70-160
R68	Patch Grove grog-tempered ware	O	PAT GT	mid 1C-early 3C

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
R68.1	Patch Grove grog-tempered ware variant	O		30-150
R69	South Essex/north-west Kent shelly	C		1-160
R70	Pink buff fine/coarse sandy (some CC)	O		
R71	Other pink buff wares (some CC)	O		1C-4C
R73	Coarse grey sandy ?Thameside	R		1C-4C
R73.1	Black burnished-type	B		120-350
R73.2	Early Thameside fine sandy grey ware	R		43-200
R73.3	Early Thameside medium sandy grey ware	R		43-180
R73.4	Early Thameside fine very sandy black to grey ware	R		43-130
R74	Coarse oxidised (some colour-coated) ?source	O		
R74.1	?Coarse orange (some CC) ?source	O		1C-4C
R74.2	?Coarse red (some CC) ?source	O		1C-4C
R74.3	?Coarse buff (some CC) ?source	O		43-200
R75	Other white cream wares ?source	W		43-300
R81	Early Gaulish 'eggshell' Terra Nigra	F		1C
R83	White ware: Rigby & Freestone (1995, 648) fabric IIC	W		?60-100
R88.93	Flagon white ware: Rigby & Freestone (1995, 651-2) fabrics WW2-8 undifferentiated	W		mid 1C-2C
R89	Flagon white ware: Rigby & Freestone (1995, 651) fabric WW4	W		mid 1C-2C
R92	Flagon white ware: Rigby & Freestone (1995, 652) fabric WW7	W		mid 1C-2C
R95	Picardy/south-east England traded wares	R		1C-4C
R96	Canterbury pink buff sandy with flint	O		
R98	Unidentified amphorae	A		1C-3C
R99	Unidentified mortaria	M		1C-4C
R100	Hard fired grey/black sandy ware (coarse)	R		mid 2C-?4C
R101	Hard fired grey/black sandy ware (fine)	R		mid 2C-?4C
R102	?Local flint and sand-tempered	R		mid-late 1C-2C
R104	Fine grey 'silty' with quartz	R		
R105	Coarse oxidised sandy ware with cream slip	Q		mid-late 1C
R106	Oxidised coarse ware colour-coated	F		
R109	Other coarse ware	-		1C-4C
R110	Other fine ware	-		1C-4C
R113	Gauloise 12 amphora	A		mid 2C-3C
R150*	Fine sandy colour-coated ware, ?source	F		1C-4C
R151*	Fine sandy colour-coated ware, ?source	F		280-360
R152*	Moderately sandy white or buff ware with occasional grog and limestone pellets	W		43-100

CAT code	Summary description	Ware group	National fabric ref coll. code	Approximate date range
R153*	Severn Valley ware	O		mid 1C-2C
R154*	Fine red-surfaced grog-tempered wares	O		50 BC-AD 70
R155*	Brittle gritty grey with profuse ferrous inclusions	R		
R156*	Sandy buff to grey fabric with black surfaces	R		
LR1	Probably local coarse grog-tempered	R		late 3C-5C
LR1.1	Probably local coarse (pale) grog-tempered	R		
LR1.2	Probably local/'Belgic' coarse grog-tempered	R		
LR1.3	Handmade soft grey/black (pale) grog-tempered	R		late 4C-5C
LR1.4	Handmade high-fired grey, grog-tempered	R		late 4C-5C
LR1.5	Fine sand tempered red/black with some grog	R		late 4C-5C
LR1.6	LR1.1 variant with pale grog and fine quartz	R		c 360-400
LR2.1	?Local fine grey sandy	R		180-400
LR2.2	?Local fine grey sandy overfired	R		
LR2.3	?Local coarse grey sandy	R		
LR2.4	?Local coarse grey sandy overfired	R		
LR3	?N. Kent coarse/fine shell-tempered	C		4C
LR4	?Local flint/flint and sand-tempered	R		3C-4C
LR5	Alice Holt	R	ALH RE	late 3C-4C
LR5.1	Alice Holt-type (?local/E. Kent)	R		late 3C-4C
LR6	Portchester 'D'/Tilford/Alice Holt III	O	OVW WH	?mid-late 4C
LR7	Oxford 'parchment' ware	W	OXF PA	250-400
LR10	Oxfordshire red/brown colour coated	F	OXF RS	250-400
LR11	Nene Valley colour coated	F	LVN CC	late 2C-4C
LR12	New Forest colour coated (Fulford Fabric 1a)	F	NFO CC	270-400
LR13	Much Hadham oxidised	O / F	HAD OX	3C-4C
LR13.1	Much Hadham black slipped grey ware	R		c 260-400
LR17	Argonne	S	ARG SA	late 3C-4C
LR19	Mayen ware (Eifelkeramik)	W	MAY CO	4C
LR22	Oxfordshire fabric 3 (white) mortaria	M	OXF WH	250-400
LR23	Oxfordshire fabric 4A (oxidised, white slipped) mortaria	M	OXF WS	250-400
LR26	Coarse grog-tempered with flint	R		
LR27	Oxfordshire white colour-coated	Q	OXF WS	250-400

The fabrics are grouped in five blocks (MLIA/LIAB - Mid/Late Iron Age/Belgic, B - Belgic; BER - Belgic/early Roman; R - Roman; LR - late Roman), broadly successive in chronological terms but in reality with considerable overlap between them. Note that .ELG suffixes to some of the 'B' codes have been omitted.

4.2.2 Vessel types

As indicated above the typology of vessel forms was based on the Southwark scheme as expanded by Davies *et al.* (1994, 6-8), with the addition of a further vessel class (X) for amphorae. The major vessel classes are thus as follows:

- I Flagons/jugs
- II Jars
- III Beakers
- IV Bowls and dishes
- V Plates
- VI Cups
- VII Mortaria
- VIII Lamps and lamp holders (not used here)
- IX Other/miscellaneous vessel forms (principally lids)
- X Amphorae

The principal subdivisions of these classes are as follows:

IA Collared or Hofheim flagon.

IB Ring-neck flagons. Subdivided on the basis of ring typology.

IC Pinched-mouth flagon The distinguishing characteristic of this class is that the rim is pinched together, so that the two sides meet to form either a distinct spout or a minor constriction for ease of pouring.

ID Disc-mouth flagon. One-handled flagon with a distinctive rim which is triangular in section.

IE Two-handled flagon with a squat, bulbous body, cylindrical neck and a small moulding on the rim.

IF A series of flagons characterised by two concentric mouldings (or lid seating) on the inner lip. The external profile shows a flaring rim, a slightly tapering neck and a distinct division between neck and body. The body is ovoid or globular in shape. The vessels vary considerably in minor detail and may have a spout, knob on the rim, or other detail.

IG Flagon similar to class IF, but the rim lacks the strong moulding and instead has a slight groove on the inner lip. The external profile also lacks any distinct division between body, neck and rim, and forms a continuous curve. There is a slight groove or cordon where the handle joins the body.

IH Wide-mouth flagon or jug characterised by the body, neck and rim forming a continuous curve. The rim lacks the moulding or lid seat seen on the IF and IG classes.

IJ Large, two-handled vessels, some of which are referred to as amphora-types. There is a great variety of rim form, although all are thick and heavy. Most have some internal seating on the rim.

IIA Bead-rim jars. Neckless bead-rim jars; the rim is usually a simple rounded swelling.

IIIB Necked jar with rounded body and a thickened or out-turned rim. There is no groove or cordon to mark any neck/shoulder junction.

IIIC Necked jar with a sharply carinated shoulder and a cordon or groove defining the base of the neck. The rim is either sharply turned out in a 'figure-7' or simply beaded and thickened.

IID Necked, round-shouldered jar distinguished by a 'figure-7' rim, with burnished decoration on a shoulder zone delineated by cordons and grooves.

IIE Round-bodied jar with a zone of burnished line decoration on the shoulder. The rim varies considerably in form, but is usually thickened or beaded. None of the examples exhibit the 'figure-7' rim of form IIC and IID.

IIF Jars with everted rims, sometimes with a beading on the lip. The body is decorated, usually with a burnished lattice.

IIH Large neckless jar; the rim is either horizontal or pointing slightly upward, and there is usually some moulding on its upper surface.

IIJ Simple neckless jar (sometimes called unguent or incense pots - UJ) in which the rim springs directly from the body. The rim is usually an upright, slightly elongated bead. Such jars occur in a wide range of sizes.

IIK Two-handled vessel generally referred to as a honey pot. Vessels of this class sometimes have applied or barbotine decoration.

IIIL Large storage jar with long out-turned rim.

IIM Storage jar with squat, sharply out-turned rim and stabbed or incised decoration on the shoulder.

IIN Necked jar with high rounded shoulder.

IIQ Necked, round-bodied jar with groove or cordon on the shoulder.

IIR Narrow-necked jar or flask.

NJ Necked jars. Used for all necked jars which do not conform to the very specific parameters of IIB-IIE.

SJ Storage jars. Used for all storage jars which do not conform to IIM.

IIIA Butt beaker. Relatively tall, narrow vessel with a rounded decorated body and short everted rim.

IIIB Ovoid beaker with high rounded shoulders and a short, sharply everted rim.

IIIC Beaker with a short, frequently sharply everted rim; lacks the high shoulder of IIIB

IIIE Beaker with a short, everted rim and no neck or shoulder. There is always a groove below the rim, defining a zone of decoration.

IIIF Beaker with a taller rim than the previous classes: the rim is not sharply everted but is usually slightly curved, and delineated by a groove or a slight cordon. The class consists mainly of poppy beakers, decorated with rows of barbotine dots.

IIIG Carinated beaker with tall, slightly tapering rim.

IIIH Bulbous beaker with a tall, slightly tapering rim and a high rounded shoulder.

IVA Bowl with a distinctive moulded flange on the rim and usually with a carinated body, although some round-bodied examples do occur. This class includes reeded-rim bowls.

IVB Bowl with a deep, hooked flange.

IVC Deep cylindrical bowl imitating samian form Drag 30.

IVD Wide bowl with a sharp carination and a series of moulding on the rim and body, including imitations of samian form Drag 29.

IVE Hemispherical bowl with a bead rim, imitating samian form Drag 37.

IVF Bowls with slightly curved upper walls and rounded bottoms, or simple rounded bodies, having flat, hooked or folded-over rims. They can be difficult to distinguish from IVA if part of the profile is absent.

IVG Bowls/dishes with straight, usually vertical, upper wall and a flat base; the rim is usually flat or slightly hooked.

IVH Bowls/dishes with a straight or slightly curving wall and a triangular or rounded rim.

IVJ Dish with plain rim, frequently in-turned.

IVK Dish with a groove on the rim and distinctive moulding midway down the wall. The exact shape varies and, while the wall is usually upright, flaring examples are known.

VA Plate with a smooth external profile; the interior is moulded.

VB Plate with a moulding on the exterior.

VC Plate with a wide, flat rim.

VIA Campanulate cup imitating samian form Drag 27.

VIB Conical cup with a short vertical upper wall, similar to CAM 56.

VIC Wide-mouth cup with a narrow foot, sharply carinated body and slightly concave upper wall.

VII WAL Wall-sided mortarium.

VII HOF Hooked flange mortarium.

VII BEF Bead-and-flange mortarium.

VII HAM Hammerhead mortarium.

IXA Lid

IXG Castor box

IX also includes tazze, tettina, triple vases etc

X Amphorae

As indicated above, more detailed definition of vessel type using appropriate widely-recognised typological schemes was carried out where possible. These included standard typologies (Dragendorff etc) for samian ware (summarised in Webster 1996) and for amphorae (Dressel types; Peacock and Williams 1986 etc) and Camulodunum (CAM) forms (Hawkes and Hull 1947) for Gallo-Belgic and related wares. The most widely used schemes for the detailed typology of coarse wares were those of Monaghan (1987) and Thompson (1982) and, to a lesser extent, Pollard (1988). Young (1977) types are used for Oxfordshire wares and Lyne and Jefferies (1979) for Alice Holt. Where identification of specific types was not possible the use of the broad type labels allowed characterisation of assemblages in general terms. Even the expanded Southwark scheme does not cover all possibilities, however. For example it does not allow indication of vessels that could, on the basis of rim form alone, have been either jars or bowls. The ‘default option’ here is that these uncertain rims have usually been recorded as coming from jars (class II). Equally, bowls and dishes were grouped together as class IV, while there was potential overlap between some dish forms assigned to this class and ‘platters’ defined as class V. In some of the larger CTRL assemblages (eg Thurnham) a distinction has been made between bowls and dishes in class IV.

It should be noted that the system of vessel type codes used by MoLSS has been recently revised. Class V (now 5) has been redefined as ‘dishes’ (including platters), a development partly anticipated in the present report (see above), and amphorae are now defined as class 8. Beyond this, however, the broad type codes remain compatible.

4.3 Site assemblage summaries

4.3.1 *Pepper Hill*

The excavation of the Pepper Hill cemetery (Biddulph 2006) produced some 26,760 sherds (192,325 g) of Roman pottery. This represented a minimum of 626 vessels (for a selection, see Figs 4.13-4.18), the majority of which were from burials (and many of the remainder had probably originally formed part of burial groups), but the fragmented condition of many vessels is indicated by the high sherd count. This funerary assemblage is set apart from those in most cemeteries within the region in terms of its size and the settlement to which it is attached. It has permitted answers to be sought for a range of questions, which may more usually have been conjectured from uncertain evidence. Analysis has suggested a number of key points. It is likely that most of the pottery not securely assigned to graves once belonged to burials, but became dislocated through intercutting and later disturbance. Of the more definite funerary assemblage, cinerary vessels were largely confined to jars. Ancillary pottery was biased towards drinking-related forms, followed in preference by eating, then cooking or storage types. There was no set combination of vessels represented within individual graves although the selection of vessels for cemetery use conformed to standard, funerary-related, norms. Pottery was mainly of local origin, dominated by Upchurch and Thameside products and drawn from the ceramic supply otherwise intended for domestic use. Indeed, the presence of worn or burnt vessels suggests that some pottery had first seen household use. Some 'antique' grave-goods may have remained in the household for generations before burial, though others had already been buried, only to be re-interred accidentally after later grave-digging and backfilling. There was no significant difference between inhumation- and cremation-derived assemblages, and no firm conclusion could be drawn about selection of pottery based on the sex of the individual. Evidence for a range of treatments was found. Some vessels had been deliberately mutilated, inverted or laid on their sides. Pottery placed inside cinerary vessels may first have been placed on the pyre. Pottery recovered from inhumation graves tended to be placed outside the coffin during the 1st and early 2nd centuries, but inside the coffin from the mid 2nd century onwards.

The Pepper Hill assemblage is reasonably similar to other cemetery collections in Kent and beyond. All are dominated to lesser or greater extents by drinking-related forms, followed by eating, then cooking or storage types. However, correspondence analysis revealed more subtle differences between them. Pepper Hill is closer to sites that appear to conform to Continental patterns of assemblage composition, in contrast to those that retain elements of regional Late Iron Age practices. However, the economic or social status of the cemetery's inhabitants was relatively poor. High-status indicators, such as lamps and cups, are lacking or are poorly represented.

This study in no way represents an exhaustive treatment of the assemblage. Much more work is necessary before a comprehensive understanding of funerary pottery can be achieved. Chief among the aspects which demand attention is a comparison between the funerary pottery and the domestic assemblages from Springhead. This is likely to reveal significant differences, but may also confirm the means by which pottery was supplied to the cemetery. Secondly, residue analysis must be undertaken. General understanding of what, if anything, ancillary vessels contained has not progressed beyond a most basic level. Residue analysis should help to identify contents, and clarify the function of pottery within graves. The Pepper Hill assemblage retains a store of suitable vessels for analysis, which must be regarded as a future research priority.

4.3.2 Zone 1 Whitehill Road

The assemblage of 1441 sherds (15972 g) was dominated by locally made grog and shell-tempered fabrics of Late Iron Age to early Roman date (Every 2006a). Together these ‘Belgic’ fabrics comprised 93% of the assemblage by sherd count (96.5% by weight). Even allowing for some post-Conquest production, and the fact that some of the associated vessel forms may have been of Flavian date rather than earlier, these figures suggest a significant Late Iron Age aspect to activity on the site, although the evidence of the vessel forms tends to suggest that this did not predate the 1st century AD. These early fabrics were principally used for bead rim jars and storage jars, with a single flagon and small amounts of carinated and butt beakers, dishes and platters. The latter were augmented by single vessels in South Gaulish samian ware and Terra Rubra. The presence of the latter is noteworthy given the general character of the assemblage, which appears to be of low status.

Three Ceramic Phases were defined, respectively Late Iron Age/pre-Flavian, Flavian, and 2nd century. A number of the context groups were quite mixed, particularly those assigned to the 2nd century Phase 3. Given the dominance of the earlier material in the assemblage as a whole, however, it is not particularly surprising that it would occur residually in later features. Overall, the range of forms and fabrics suggests occupation through the 1st century AD and possibly as late as the later 2nd century (the overall date ranges of some fabrics, such as R73, extend later than this) although the earlier pottery dominates. Few fabrics can be assigned with certainty solely to Ceramic Phase 3 and there is nothing that can be specifically dated to the later 2nd century. The presence of early 2nd century pottery in the hill wash overlying one of the ditch fills, suggests that the ditches had gone out of use by this period or shortly thereafter.

4.3.3 Zone 2 South of Station Road

The assemblages from Zones 1 and 2 were broadly similar, they both comprise predominantly coarse locally made wares and pottery from known sources like Patch Grove (west Kent) and

south Essex/north-west Kent shelly ware, with small amounts of samian ware, Terra Rubra and other fine wares. The assemblage from Zone 2 (491 sherds, 4033 g) was, however, smaller than that from Zone 1, and less diverse in both fabrics and forms (Every 2006b).

The local grog and shell tempered fabrics were used for bead rim and storage jars. Platters/dishes occurred in Terra Rubra and South Gaulish samian ware, but overall the assemblage was dominated by jars. The limited range of forms and fabrics is consistent with occupation during the Late Iron Age-early Roman period, commencing in the early 1st century AD and perhaps continuing until some time in the later 2nd century AD. While a later date is not impossible, no component of the assemblage need have post-dated the 2nd century. This assemblage points to a low status settlement site using the locally produced wares for domestic purposes such as cooking and storing food. The Terra Rubra fragment is the only surprise in this context.

4.3.4 Hazells Road Diversion

The assemblage from Hazells Road Diversion (Every 2006c) consisted of 432 sherds (4434 g) recovered from 58 contexts. Most of the pottery came from rubbish deposits and demolition layers associated with kilns/ovens. In contrast to the Roman pottery from adjacent sites, this assemblage included a significant late Roman component, representing activity that probably continued into the 5th century and possibly later. Small quantities of 2nd century pottery, probably mostly residual, were also identified.

The major phases of activity dated to the 3rd century AD and later. Groups of this date were recovered from layers overlying the road, from the backfill of the stoking pit of corndrier 229, from demolition layers and ashy spreads associated with this structure and from kiln/oven 4, which cut the metalled road. These groups, and others from deposits described as rubbish dumps, contained late Alice Holt wares and Oxfordshire colour-coated ware and mortarium fragments, along with residual earlier material.

An interesting small assemblage from a demolition deposit included a carefully trimmed jar base in lustrous black-firing ware R100, a Nene Valley colour-coated beaker base and a rosette stamped Oxfordshire colour-coated sherd from a type C78 bowl dated to AD 340-400+ (Fig. 4.10). This group appeared to have been specifically selected and the Oxfordshire sherd, in particular, is highly abraded, suggesting that the sherds were collected some time after their initial discard, perhaps during the 5th century or later. This group does not appear to be the result of normal Roman settlement activity and is consistent with patterns of collection and reuse sometimes seen on early Anglo-Saxon sites.

4.3.5 West of Northumberland Bottom

This site produced a relatively substantial assemblage (3412 sherds, 44,553 g; Every 2006c) but this only included a few significant groups (eg Figs 4.5 and 4.6). The pottery indicates

that the enclosed occupation site was established during the Late Iron Age, probably in the late 1st century BC. Occupation continued into the Roman period and probably reached its height in the late 1st century AD, but there is sufficient evidence to support continued occupation of some sort into the 2nd century. This is chiefly based on the presence of several black-burnished ware 2 vessels recovered from a number of pit fills and from soil accumulations over a holloway and a track. Although most of these 2nd-century sherds appear to have come from upper fills of features or superficial levels, they were present in significant numbers.

The bulk of the assemblage, however, clearly dated to the 1st century, possibly continuing into the Trajanic-Hadrianic period. Because the majority of vessels are native-derived forms in local or near local coarse wares, including Thameside shelly wares, most elements of the assemblage are difficult to date to within 50-80 years or so. Certain elements of the settlement did appear to have been abandoned by the end of the 1st century AD. The destruction layers associated with oven/hearth features 370/375, 311, 389 and 1202 and foundation trenches 1012 and 1016 all produced material dating to AD 43-80 or 100 and almost all of the ditches and pits had been backfilled by AD 100.

The paucity of imported fine wares is not unusual for Kent but the proximity of this site to Springhead and the main London to Dover Roman road particularly highlights the lack of traded wares here. In this context the presence of early Alice Holt (R26) material from west of London is notable. Fine grey wares from the Upchurch potteries dominated the table ware assemblage of flagons and beakers but these were accompanied by small quantities of samian ware. The total absence of mortaria is also notable. The recovery of a few amphora sherds indicates that olive oil and fish sauce was reaching the site in small quantities during the 1st century.

4.3.6 WNB 98B

The watching brief produced 503 sherds (6497 g), most of which were recovered from the fills of 13 ditches and three pits (Every 2006c). Most of the pottery was of 1st-early 2nd century date but ditches 35 and 556 contained Antonine period sherds and ditches 558 and 597 produced small quantities of 3rd-4th century pottery.

The principal component of the assemblage was Late Iron Age/early Roman wares, dominated by local shell-tempered fabric B6 which formed just over 30%. Shell-tempered wares were produced at sites on the marshes along the Thames estuary (Pollard 1988, 39-42) and the tradition continued well into the Roman period, represented by fabrics such as R69 and LR3. Grog-tempered wares (fabrics B1, B2, B2.1 and B3) together contributed 17.3% of the assemblage. These wares were supplemented, certainly from the Flavian period and perhaps earlier, by a range of fabrics derived from the Upchurch production sites. These

fabrics (R16, R17.1, R17.2, R17.3 and R18.1) constituted nearly 25% of the total sherds from the site. Other Thameside products such as fabric R73 were also present, but in modest quantities, and Thameside black-burnished ware and analogous types (fabric R14 and R73.1) were very scarce. This was in large part a reflection of the overall date range of the assemblage. Occasional late Roman sherds, including Oxfordshire and Alice Holt type products, formed about 2% of the total. The variety of regional or extra-regional imports in the early Roman period was barely wider, but included material from the Verulamium region, Highgate Wood, London and Alice Holt, as well as occasional sherds of South Gaulish samian ware and Spanish amphorae.

4.3.7 Tollgate

The bulk of this small assemblage (453 sherds, 7325 g) dates from the period between the Roman Conquest, or possibly slightly earlier, and the mid 2nd century AD (Brown 2006a). Residual later prehistoric flint-tempered or coarse sand-tempered sherds (fabrics LIAB1 and B21) were recovered in small quantities. The bulk of the assemblage was of 1st century AD date and was dominated by (mostly grog-tempered) 'Belgic' fabrics and shell-tempered fabric R69 which was particularly well-represented (over 21% of sherds) at this site (eg Fig 4.5, Nos 2-4 and 6) although many of the sherds came from a single context and possibly from one vessel. Amongst the latest material recovered were several sherds of black-burnished type 2 ware (BB2) or related reduced wares (fabric R73.1) indicating an early-mid 2nd century *terminus post quem* for the fills of several features

The bulk of the assemblage came from three pits (161, 673 and 861) and a ditch (829), which together produced 78% of the total by count and 93% by weight. Pit 161 contained 54 sherds (632 g), including body sherds in early Roman shell-tempered ware (B6) and unsourced (Thameside?) grey ware (R73) and a coarse orange ware undecorated straight-sided IVJ type bowl, possibly a Canterbury product (fabric R6.1). Two shell-tempered storage jars (Monaghan type 3D1) were also present. The group overall dates to AD 100-150.

Pit 673 produced 73 sherds (2929 g). Grog-tempered vessels include a pre- or early Flavian form IIN necked jar and a small cordoned jar (Monaghan 1987, 4J), dated by Thompson (1982, D2-4) to AD 40-120 (Thompson. A form IIL storage jar (Fig. * No. 7) was also recovered. Shell-tempered (B6, R69) wares (including two form IIA 16 lid-seated bead-rim jars), Patch Grove ware and local flint and sand-tempered ware (R102) jars were also present. A date in the second half of the 1st century seems likely for this group.

Pit 861 contained 124 sherds (1607 g). Shell-tempered wares predominated, the forms including a bell-shaped lid as well as bead rim jars. Grog-tempered and coarse sand and flint-tempered wares were also present, while Patch Grove ware suggests a date of c AD 50 or later for this pit.

Ditch 829 produced 102 body sherds (1635 g) of fabric B5 (20 sherds probably from a single vessel) and north-west Kent shell-tempered ware.

4.3.8 *White Horse Stone*

The assemblage was very small (193 sherds, 1122 g). With the exception of some chronologically early jars and a later Roman flanged dish vessel forms were undiagnostic and dating was therefore based on the representation of fabric types (Stansbie 2006). The presence of grog-tempered ware and other 'Belgic' type fabrics, indicates significant activity during the Late Iron Age. However, the main period of occupation (in ceramic terms) appears to have been the early Roman period, when quantities of sandy grey ware and oxidised Upchurch ware were present. Curiously there is an absence of reduced Upchurch wares from this period, but this may be accounted for by the small size of the assemblage. The 'late' Roman flanged dish could be as early as the earlier 3rd century rather than indicating genuine late Roman activity.

Regional and continental imports are scarce for all periods, being represented only by single sherds of Verulamium white ware and South Gaulish samian ware. This and the narrow range of vessel forms suggest that the assemblage represents low status rural settlement.

4.3.9 *Hockers Lane*

This site produced 724 sherds (4915 g), almost entirely of Late Iron Age date (Lyne 2006a; Fig. 4.3). The earliest material, which may date to the 2nd rather than the 1st century BC, consisted of calcined-flint and sand-tempered fabrics MLIA2.1 and 2.2, which comprised 6% of the pottery. A further 10% of the assemblage was made up of a variety of fabrics (LIAB1 and LIAB4-10), some of which may have been of broadly similar date. Sherds in many of these fabrics concentrated in the Phase 1 palisade trench (255), but others such as LIAB1, not present in the palisade trench and represented in part by the basal footring of a Gallo-Belgic platter copy, belong to the 'Belgic' Late Iron Age.

The most important component of the assemblage was formed by glauconitic fabrics B9.1 and B9.2, which together make up 44% of the pottery by sherd count and slightly less by weight. Sandy black fabric B8 comprised a further 15% by sherd count: the similarity of the bead-rim jars in this fabric to those in glauconitic fabric B9.1 suggests that the wares in fabric B8 come from the same pottery production centre and are the result of the potters having access to more than one sand source for clay filler.

'Belgic' grog-tempered ware fabrics B1, B2, B2.1 and B3 make up a further 22% of the overall assemblage by sherd count and 33% by weight, with the discrepancy between the two methods of quantification being due largely to the tendency for the grog-tempered ware vessels to be larger than those in glauconitic fabric. These fabrics may nevertheless have

included some of the latest material to be used on the site, which perhaps fell out of use around the Conquest period.

Nominal amounts of other wares include chalk tempered B4, shell-tempered B6 from North Kent and Terra Rubra fabrics TR2 (B14) and TR3 (B16). The few sherds in Roman fabrics (R14, R16, R18.1, R43 and R73.3, totalling 1.4%) are largely unstratified and may simply be from field marling or some sporadic ephemeral activity on the site

4.3.10 Thurnham

This site produced the second largest Roman assemblage (13,911 sherds, 127,673 g) from CTRL Section 1 (Lyne 2006b). In Phase 2 (*c* AD 1-60/70) the site, like its neighbours at Hockers Lane and Snarkhurst Wood, relied on the producers of local glauconitic-sand tempered wares for most of its pottery (Fig. 4.3). The main production centre for such wares is likely to have been somewhere in the Maidstone area, and they account for a little over half of all of the Late Iron Age pottery from these three Channel Tunnel Rail Link sites. They were supplemented by grog-tempered wares in fabrics B1, B2, B2.1 and B3, some of which might perhaps also have been locally produced and make up more than a quarter of all of the pottery from Late Iron Age features. A low incidence of combing and furrowing in these fabrics indicates that very little, if any, of this pottery comes from east Kent, where these techniques are prevalent on all but the finest grog-tempered wares during the Late Iron Age. Supply of salt from the Folkestone area is indicated by the presence of nine salt container fragments in chaff-tempered fabric BER15 and there were limited contacts with the north coast of Kent as well. None of the very few Gallo-Belgic imports needs be earlier than the Roman Conquest and, together with the presence of a few wheel-turned Romanised sherds in fabrics R16, R17.1, R73, R73.3 and R73.4 in the Late Iron Age assemblages, suggest that the Phase 2 occupation continued for at least ten years after AD 43. A fragment from a Dressel 1B or 2.4 amphora in Campanian fabric B19.1 from a cleaning layer located within the Iron Age enclosure was brought on to the site during this phase.

The early Roman phase (*c* AD 60/70-120) saw a series of changes in pottery supply (Fig. 4.7). Ditch 10770 at the beginning of the phase still contained appreciable quantities of glauconitic wares, but these were much less significant than previously. Bead-rim jars in calcined-flint and sand tempered fabric MLIA2.2 from the Medway estuary made up more than a third of the pre-Flavian pottery and were accompanied by small numbers of sherds from beakers and flagons in fabrics R16, R17.1 and R18.1 from the same source. Grog-tempered ware cooking pots and lids of uncertain but possibly Wealden origin also continued to be significant and Patch Grove ware was also present, but Canterbury products were insignificant. Six sherds from a Gallo-Belgic Terra Nigra CAM 14 platter and white ware butt-beaker represent small-scale importation of fine wares from north-eastern Gaul. Other

rare pre-Flavian imports from elsewhere on the site include a Lyon ware cup, black eggshell ware beaker body sherds, a CAM 56C cup in Terra Nigra), girth-beaker sherds in TR3 and white ware flagon and butt-beaker sherds in Rigby's Gallo-Belgic fabrics IB, IC, IIA, IIB and Rhenish WW1 (Rigby and Freestone 1995). The South Gaulish samian ware assemblage is notable for the absence of most pre-Flavian forms.

After the initial stages of this phase sand-tempered Thameside cooking-pots in fabrics R73.2 and R73.3 and a variety of grey and oxidised Upchurch/Hoo fine ware forms in fabrics R16 and 17.1, including jars, bowls, dishes, beakers and flagons, appear in some quantity. Products from around the Medway estuary make up 44% of the pottery from ditch 10660 and 53% of that from ditch 20400 and form a sharp contrast with the 2% and 14% of Canterbury products in fabrics R5, R6.1, R6.3 and R8.1 from the same ditches. Grog-tempered wares from largely unknown sources continue to be a significant component of assemblages. Most of the South Gaulish samian ware was imported to the site during this period, constituting 7% of the assemblage from ditch 10660 and 9% of that from ditch 20400. Rare imports include a honey jar from the Otford Progress kiln 28 km to the west of Thurnham, at least two Central Gaulish white ware roughcast beakers with black colour-coat and a single mica-dusted sherd of uncertain origin. Some features - particularly contemporary ditches 10660 and 20400 - showed assemblage differences which may have resulted from functional variation across the site, the former having a predominance of coarse cooking-pots, a variety of mortaria and relatively few open forms, while the latter had twice as many open forms and a much higher percentage of fine wares.

At the beginning of Phase 4 (*c* AD 120-250) Thameside production expanded to include BB2 black-burnished ware fabric R14 (Fig. 4.9, Assemblage 8). The almost immediate impact of this was highlighted by the pottery assemblage from ditch 10610 behind the new stone villa, in which Thameside products made up just over half of all of the pottery with BB2 cooking-pots, bead-rim bowls, straight-sided dishes and beakers alone accounting for 36%. Grog-tempered fabrics B2 and B2.1, including east Sussex ware vessels, and cooking-pots and storage vessels in Patch Grove ware were also present. The majority of the samian vessels from the ditch were still South Gaulish, although some Central Gaulish samian was also present.

Minority fabrics from the site in this phase include one or two sandy grey ware Canterbury products in fabric R5, probably only in use up until the last quarter of the 2nd century. The late 2nd century did, however, see a continuation in supply of a few fine oxidised Canterbury flagons and other forms in fabrics R8.1, R8.2 and R8.3 and the appearance of a few jars in high-fired, handmade Native Coarse Ware from north-east Kent after AD 170. Sherds from one or more poppyhead beakers in Highgate Wood C fabric add to the sparse record for this fabric in Kent. Other rare fine wares include white Cologne fabric

with black colour-coat, a Colchester roughcast indented beaker and a Central Gaulish black colour-coat beaker. There was only a single sherd from a Moselkeramik beaker.

There was only one late 3rd to early 4th century assemblage of any note from the site, from the metalworking deposits within the villa (Fig. 4.9 Assemblage 16). It shows the Thameside kilns continuing to be the main source of coarse pottery for Thurnham and now accounting for roughly three quarters of all of the wares in use. A new Thameside coarse ware fabric LR2.2 fired grey with superficial surface reddening made its appearance after AD 180 and is characteristic of 3rd and early 4th century assemblages in Kent: over a quarter of all of the sherds from the iron-working room are in this fabric. Small quantities of south-east Dorset black-burnished BB1 cooking pots, bowls and dishes appeared in the late 3rd century, and a few sherds from jars and dishes in late Roman grog-tempered fabrics LR1 and LR1.1 were also present.

A few sherds in late Alice Holt/Farnham grey ware, Oxfordshire red colour-coated ware, New Forest purple colour-coated ware and Much Hadham grey ware mark the beginning of a major change in pottery supply to Thurnham during the late 3rd century, with pottery coming from further and further afield. The post-AD 370 assemblage from oven 20036 dates to after the collapse of the Thameside industry: it includes a mere six sherds from that source, all of which could be residual. The most significant suppliers of coarse pottery are now the Alice Holt/Farnham grey ware industry and the handmade grog-tempered ware producing industries of east Kent (Lyne 1994, Industries 7A and 7B), although other broadly similar industries were also represented in other late context groups. Further distinctive late 4th pottery included horizontally-rilled jars and convex-sided dishes in buff, sandy Overwey/Portchester D fabric, Oxfordshire red colour-coated bowls and mortaria in white and white-slipped wares, Much Hadham oxidised beakers and Lower Nene Valley colour-coated beakers and other forms. There are no late imported fine wares from the Continent.

Assemblages from the corn-drier and associated surface to its north (eg Fig. 4.10) may well be early 5th century in date and include the latest wares in use on the site. Approximately half of all the pottery and three-quarters of the post-AD 370 element is now in a variety of handmade grog-tempered fabrics and includes fresh fragments from jars, bowls and dishes in fabric LR1 from the Canterbury area, fabric LR1.1 from an unknown source near Lympne, fabric LR1.4 from somewhere in the Weald of east Sussex and fabrics LR1.3 and LR1.5 of more local origin. Alice Holt/Farnham grey ware sherds are present in such small quantities as to suggest that pottery from this source had ceased being supplied to Thurnham; fresh sherds may have come from old vessels still in use. Similarly small numbers of sherds come from a convex-sided dish and two horizontally-rilled jars in Overwey/Portchester D fabric. Some much older vessels may have been recovered and pressed into use again at a time when it was becoming increasingly difficult to obtain new

vessels of any quality. Fine and specialised wares come from much the same sources as in the late 4th century but are for the most part represented by just one or two residual sherds, including the only two fragments of late Argonne samian from the site. Two of the Oxfordshire red colour-coated vessels, a C51 bowl and a C100 mortarium, are, however, represented by 25 sherds each and may be vessels which were in contemporary use; they are both heavily burnt.

4.3.11 Snarkhurst Wood

The assemblage from Snarkhurst Wood (1426 sherds, 14,095 g) ranges from the Late Iron Age to the mid 3rd century AD in date, although the great majority of the material is of the 1st century AD (Lyne 2006c). The Phase 1 (*c* AD 1-30) assemblage was dominated by glauconitic wares (more than 90% in some groups), indicative of the close proximity of at least one production site situated on or very near the Upper Greensand outcrop (Fig. 4.3). The bulk of the sherds in glauconitic fabric B9.1 come from bead-rim jars with corrugated shoulders but other closed forms, such as butt-beakers, neck-cordoned jars, and storage vessels were also in use. Wares from further afield are represented by a few jar body sherds in calcined-flint tempered fabrics LIAB4 and MLIA2.1 and 'Belgic' grog-tempered fabrics B2, B2.1 and B3. A large sherd from a crude bead-rim jar in calcined-flint tempered fabric LIAB1 may be from one of the last products of an earlier ceramic tradition. The vessel represented by the sherds in fabric MLIA2.1 may come from the lower Medway valley, while those sherds in 'Belgic' grog-tempered fabrics lack diagnostic pieces but probably indicate tenuous trading links with the Canterbury area.

There was little change in the pattern of pottery supply to the site during most of Phase 2 (*c* AD 30-50), but the sherds from 'kiln' 319 suggest radical changes towards the end of the phase; bead-rimmed jars in sand and calcined-flint tempered fabrics from the Medway estuary supplanted the glauconite tempered forms. 'Belgic' grog-tempered wares were the other principal component of the assemblage at this time, and a few sherds of the Patch Grove ware variant R68.1 were also present. The Phase 3 (*c* AD 50-70) pattern of supply was again similar, but Continental imports in the form of a Rhenish white ware lagena and a Gallo-Belgic white ware butt-beaker were present, the latter in a fabric variant which should not be earlier than *c* AD 60. The absence of sherds in Romanised wheel-turned fabrics such as Upchurch ware, and the continued presence of glauconitic wares, are notable features.

Very small amounts of pottery dated to the period *c* AD 70-250. Nearly all was of late 2nd to early 3rd-century date and came from limited activity peripheral to occupation nearby. Fine and coarse grey ware fabrics R14, R16 and LR2.2, a mortarium in cream ware either from Colchester or the Rochester area and limited amounts of plain Central Gaulish samian

were all present. There is no ceramic evidence for any sort of activity on the site after the middle of the 3rd century.

4.3.12 Leda Cottages

This site produced 1882 sherds (21026 g) of Late Iron Age and Roman pottery, the best represented phase, unusually, being dated from the mid 2nd to mid 3rd centuries (Lyne 2006d). The 123 sherds from Phase 1 (*c* 50 BC-AD 70) contexts were dominated by handmade grog-tempered wares, perhaps of fairly local origin, which made up nearly three quarters of this small group. Sherds in sandy black Folkestone fabric B8 and fragments from chaff-tempered salt-containers (fabric BER15) indicate other trading links with the Channel coast connected with salt supply to the site. Black glauconitic wares from the Maidstone area are indicative of a further trade route along the edge of the Weald from the west, Leda Cottages site lying near the eastern edge of the distribution zone for such wares.

Some 293 sherds were attributed to Phase 2 (*c* AD 70-150). These included grog-tempered fabric B2.3 from the Ashford area, Thameside products (after AD 120) including cooking-pots in BB2 and poppyhead beakers in fine Upchurch grey ware fabric R16 and Canterbury sandy reduced and oxidised fabrics R5 and R6.3. A part complete necked jar in fabric B2.1 from the construction cut for structure 8142 may represent some kind of ritual deposit but is not closely datable within the period AD 50-175.

The majority of the pottery (1404 sherds) came from contexts of Phase 3 (*c* AD 150-270), mostly associated with a group of possible iron-working features. The assemblage from these features is noteworthy for the overwhelming predominance of cooking-pots and other jars over bowls and dishes. Flagons were also significant but their importance may be exaggerated by the presence of two complete tops. Another characteristic of the assemblage is the near absence of imported fine wares. This, coupled with the deficiency in open forms, is strongly suggestive of a very low status community. Most of the cooking-pots and other jars were handmade, grog-tempered east Sussex ware vessels from the Weald. The second most significant supplier of cooking pots was, however, a very local producer making sub-standard vessels in very sandy, brittle black fabric R155 with forms based on Thameside industry prototypes. Sand and grog tempered native coarse ware fabric R1 from east Kent and Thameside fabrics R73, LR2.1 and LR2.2 were also present.

The few bowls and dishes are east Sussex ware, BB2 and Thameside grey ware products; one or two Central Gaulish samian open forms were in use elsewhere on the site during this period. The few beakers from the site are all in fine Upchurch grey ware. Flagons and flasks came from both the Thameside and Canterbury industries.

A ritually deposited group of pots in the fill of pit 8037 (Fig. 4.9) included a truncated bag-shaped flagon in Hoo fabric R18.1 and another in late Canterbury fabric R8.3. This pit also contained the upper part of an amphora-sized vessel in Canterbury fabric R8.1.

The ceramic evidence suggests abandonment of the site probably about the middle of the 3rd century or shortly thereafter.

4.3.13 Beechbrook Wood

Beechbrook Wood produced some 3775 sherds (53,116 g) of Late Iron Age and early Roman pottery from settlement and activity areas for the most part spatially distinct from those of later prehistoric date (Lyne 2006e). The pottery is characterised by an overwhelming predominance of 'Belgic' grog-tempered wares (Fig. 4.4); most of which, and in particular the distinctive B5-5 bead-rim jar type, were manufactured locally in the Ashford area. A few of the simpler forms appear to have been made at the site itself and there are just one or two grog-tempered vessels probably from the Canterbury area.

Phase 2 saw the importation of tiny numbers of glauconitic sand tempered pots in fabrics B9.1 and B9.3 from a source or sources in the upper Medway valley but this trade seems to have ceased by Phase 3A. Similarly small numbers of vessels in sandy black fabric B9 were imported from the Folkestone area during the Late Iron Age.

Very few vessels in Romanised wheel-turned fabrics arrived on site during the 30 years or so after the Roman Conquest. This may reflect the low social status of the inhabitants of the site. The few such vessels which did circulate before AD 70 included South Gaulish samian open forms, fine grey Upchurch ware beakers and at least one Gallo-Belgic white ware flagon. Otherwise, local grog-tempered wares continued to make up the bulk of the vessels in use; with fine pots in the distinctive polished B2.3 fabric beginning to replace those in fabrics B1, B2 and B2.1.

Amounts of pottery reaching Beechbrook Wood during the period AD 70-250 were very small, but the pattern of supply seems to have been similar to that on other rural sites in East Kent at this time.

4.3.14 Bower Road

This site produced 4175 sherds (39,578 g) of pottery, spanning the whole of the Late Iron Age and Roman periods, but with the majority of 1st-2nd century date (Brown 2006b). The Roman assemblage encompasses a wide range of forms and fabrics, including a small number of Continental imports.

The Late Iron Age collection suggests nearby settlement activity, probably on a limited scale, and in keeping with a low status, domestic site utilising pottery that was probably locally produced. Two basic fabric groups, flint-tempered wares and grog-tempered wares, were in use during this period.

The pre-Flavian assemblage appears to largely reflect the Late Iron Age pattern of pottery production and distribution for the region. The assemblage is dominated by native-derived grog-tempered wares of unidentified but presumably largely local or near-local origin. The predominant vessel forms, developed from pre-Conquest types, consisted mainly bead-rim and necked jars. Several Gallo-Belgic copies, including butt-beakers and platters, were also recovered. Gallo-Belgic imports, samian wares and other exotic types are rare, and even Canterbury sand-tempered wheel-thrown wares are relatively uncommon. Patch Grove grog-tempered ware and shelly wares from west Kent are represented by fewer than half a dozen sherds each.

The largest group of datable pottery from the site dates to the Flavian to Antonine period (broadly, the later 1st to 2nd century) and the bulk of sherds of this phase were recovered from east-west ditches 169 and 180 (Fig. 4.8). Although grog-tempered wares in the native tradition continued to dominate the assemblage, a number of imports were introduced during this period. The incidence of Kentish sandy wares increased, the range of forms including reeded and flanged-rim bowls (IVA/IVF). Flagons, which were uncommon in the earliest Roman contexts, appear during this phase, mostly in sandy oxidised fabrics (R6), some white-slipped, from the Canterbury area. Fine grey and oxidised wares from the Upchurch marshes (R16/R17) probably began to reach the site from about AD 80. They represent the most common fine ware group overall at over 7% of the total site assemblage. Most of the Upchurch wares recovered were undiagnostic body sherds but the range includes a variety of beakers (mostly in grey ware) and orange ware jars, flagons and bowls. The Thameside production centres, on the other hand, appear to have had only a moderate impact on the Bower Road settlement. Only 59 sherds of Thameside grey ware fabric R73 were present and black-burnished ware 2 (BB2) fabric R14 amounted to fewer than 100 sherds altogether. The majority of these were recovered from middle Roman enclosure ditches 169, 178 and 180, but several came from features dating to the modification of structure 550. The site appears to have continued to rely largely on the Canterbury production centres for sand-tempered utilitarian wares, probably until the decline of the industry during the last quarter of the 2nd century (Pollard 1988, 97).

Imports from north of the London area include a small group of Verulamium wares, including a stamped mortarium from ditch 169. A butt-beaker, flanged bowl and flagon in Brockley Hill white ware were recovered from the same feature. Colchester supplied colour-coated roughcast beakers to the site in small numbers during the 2nd and possibly into the early 3rd century.

A handful of Continental imports included small quantities of samian wares, mostly from the East and Central Gaulish centres, and beaker forms; one sherd of Central Gaulish colour-coated ware (R22) and two each of Lower Rhineland colour-coat (R25) and Trier

black-slipped ware (Moselkeramik, fabric R36). A few southern Gaulish and Spanish amphorae sherds were also recovered from ditch 169. Most of the Continental imports appear to have reached the site during the 2nd century.

Although black-burnished 1 wares (R13) from Dorset circulated in Kent from the early 2nd century, their distribution was largely confined to the London region and high-status sites until the late 2nd century and later (Pollard 1988, 211). The small BB1 assemblage from Bower Road was recovered from the top fills of water hole 372, ditches 169 and 180 and from pit 123. The only classifiable vessels, three straight-sided dishes and a cavetto-rim cooking pot, are late 3rd century types. Coarse grey wares from the Alice Holt industry may have arrived at about the same period. Small quantities of Oxfordshire colour-coated ware were also present, but ceramic evidence for late 3rd and 4th century occupation of the site in general is slight (see Fig. 4.10), suggesting that the focus of the late Roman settlement lay beyond the excavation area.

4.3.15 Saltwood Tunnel

A relatively large assemblage of 4765 sherds, weighing 36,570 g, was recovered from excavations at Saltwood Tunnel (Every 2006d). The majority of the sherds are Late Iron Age to early Roman in date, with a small amount of late Roman material. The condition of the material was variable, but generally average to very worn with a mean sherd weight of only 7.7 g. Much of it was not particularly well-stratified.

The principal component of the assemblage was local early coarse wares, with fabrics B2 (grog-tempered) and B8 (sand-tempered) equally important and together comprising 39% of the total sherds. Their use will have spanned the Conquest period. Reduced coarse wares were mostly from the Upchurch and Thameside industries, R16 probably reaching the site in the pre-Flavian period and R73 perhaps a little later, supplemented by middle and late Roman grog-tempered fabrics R1 and LR1 from East Kent and perhaps quite local sources. Reduced Canterbury products were remarkably poorly represented, but oxidised Canterbury fabric R9.1 was slightly more common, though still outnumbered by the finer Upchurch fabric R17.1. Occasional Patch Grove sherds were also present.

Continental wares included Gaulish white ware (BER7), samian ware, principally from Central Gaul, and rarer fabrics such as Pompeian red ware (R23) and Lower Rhineland colour coated ware (R25). Amphorae were mostly Baetican (probably Dressel 20 types). Extra-regional imported wares were scarce, but the sources represented included the Verulamium region (R15), Highgate Wood (R67) and perhaps Alice Holt (R26).

A range of characteristic late Roman wares was present, although none of these was particularly numerous. Local coarse wares such as LR1 were supplemented by Alice Holt (LR5) sherds, but only a single sherd of BB1 was identified. Oxfordshire, Nene Valley and

Hadham fine wares were all present, the Oxford industry being the primary contributor. Rare late Roman imports consisted of one of only two Mayen ware sherds from all the CTRL sites (a characteristic lid seated jar) and a larger part of an Argonne ware bowl. Overall this material suggests that activity on the site continued well into the 4th century.

Twenty three pottery vessels were recovered from ten cremation burials (Graves 6, 12, 14, 15, 16, 19, 20, 21, 22 (Fig. 4.19) and 337). Generally the cremations burials were in poor condition and only the base and lower body sherds of most vessels were present as a consequence of truncation. Two complete dishes were recovered, but on the whole the vessels were poorly preserved and reconstruction of profiles was difficult. In some cases, attribution of base fragments to vessel type is not absolutely certain. The numbers of vessels per grave ranged from one to four or five. Four graves (16, 19, 21 and 337) contained a single vessel, the urn, one grave (20) contained two vessels, three graves (6, 12 and 15) contained three vessels and two (14 and 22) contained four vessels. It is possible that a fifth vessel was originally present in grave 14, but this is not clear. On the basis of the pottery the burials ranged in date from the Late Iron Age to the mid-late 2nd century, but most were of 1st century date.

The overall distribution of Roman pottery is relatively sparse across the site. Of the 506 contexts producing pottery, only 58 yielded more than 20 sherds. The majority of individual context groups could not therefore be assigned to a ceramic period with confidence.

4.4 The fabrics

Some 171 'fabrics' were identified. These will be discussed briefly in relation to the major ware groupings to which they are assigned. These ware groups, defined on the basis of significant common characteristics, have been adopted here as an analytical tool in preference to groupings based on location of production since the latter is unknown for many of the fabrics present, even though it may be presumed that a good proportion of these were relatively local to the sites on which they were found. The ware groups are presented in the sequence in which they can be combined to constitute two main classes of material, fine and specialist wares on the one hand, and on the other the rest of the coarse wares (cf Booth 1991; 2004). The fine and specialist ware groups are: samian ware (S); fine wares - colour-coated, lead glazed, mica coated etc - (F); amphorae (A); mortaria (M); white wares - other than mortaria - (W); and white-slipped wares (Q). The remaining ware groups are fabrics broadly of Middle Iron Age character (P); Late Iron Age/early Roman fabrics generally of 'Belgic' character (E); oxidised (coarse) wares (O); reduced (coarse) wares (R); black-burnished wares (B); and calcareous (particularly shell) tempered wares (C). It is accepted that these categories do not fit the pottery of Kent quite as neatly as they do material in the regions where they were initially implemented (for example it is arguable that fine 'Upchurch' fabrics such as R16 could be regarded as fine wares (as eg Pollard

1988, 21)) but they still provide a pragmatic basis for comparison of site assemblages in general terms. Quantification of fabrics (by sherd count for all the main assemblages is presented in Table 4.4. Discussion of fabrics and ware groups generally uses quantification based on sherd count, but reference is made to other measures where relevant, and overall data by weight are given for comparative purposes in Table 4.5. The content of Table 4.4 is reworked in subsequent sections dealing with each major ware group in turn, in the sequence given above.

Table 4.4: Quantification of fabrics from all main assemblage groups by sherd count

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
MLIA2.1	P									30	140	116					286
MLIA2.2	P									17	651	299	2	1			970
LIAB1	E	171				24		5	17	10	12	1		2			242
LIAB4	P									7	258	38	2	1			306
LIAB5	P									5	17	9	1				32
LIAB6	E									3	15						18
LIAB7	P									2							2
LIAB8	E									36	11						47
LIAB9	P									1							1
LIAB10	P									4							4
LIAB11	E										1						1
B1	E	183	52	1		164	28	30	23	26	328	56	50	191	314	30	1476
B1.1	E	1	3														4
B2	E	64	493	98		550	13	45		52	1967	102	437	1753	32	982	6588
B2.1	E					10	18			74	522	47	303	902	7		1883
B2.2	E															96	96
B2.3	R/O										4		102	8			114
B3	E	43	7			91	28	3	13	4	66	3	9	27	19	23	336
B4	E	1				22				1	4				2	16	46
B5	E	110	296	2		112		20	3		106	1	1	1	1	38	691
B5.1	E	155							9		52						216
B5.2	E										1						1
B6	E	73	450	184		941	153	127	9	2	662	3	2		3	15	2624
B8	E	225	1	1		38			1	108	116	1	24			878	1393
B9	E	30	24	44	1	130	14	19	11		32	1		56	34	89	485
B9.1	E	5								313	1475	625	12	26			2456
B9.2	E	11								7	207	7	2	23			257
B9.3	E									8	1	1	1	415			425
B12	F		2	1													3
B14	F									11							11
B16	F									1	17						18
B17	W										1						1

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
B19.1	A										3						3
B21	E		12	3				1			25	9		1		22	73
BER1	R/O					6											6
BER3	E					3											3
BER5	W										3						3
BER6	W										2						2
BER7	W										1					59	60
BER8	W										5						5
BER9	W										1				2		3
BER10	W					5					11			3			19
BER11	W										12	19			1		32
BER12	F										12						12
BER14	O														1		1
BER15	-					1					24	2	11	74	4	87	203
R1	R				70	46	2	1			65		82		2480	297	3043
R1.2	R						2									34	36
R2	R					1											1
R3	R														4	3	7
R4	R										14						14
R5	R					1	1				163		11	15	111	3	305
R6.1	O					18		16			84	3	5		97		223
R6.3	O										125		9		29		163
R7	R		1		2	20	4				6				123	23	179
R8.1	O	2	9	4	3	21	12	1			37		39		75	1	204
R8.2	O	54		1	1	4					15				2		77
R8.3	O	60	2			5	8				134		42		23		274
R9.1	O														1	98	99
R9.2	O	4													1	9	14
R10	W					1					5				6		12
R13	B	18			3						6				15	1	43
R14	B	196			5	83		3		4	814	26	57	20	98	43	1349
R14.1	B										4						4
R15	W	422	1			55	6		1		34				12	2	533

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R16	R	3812		13		136	25	1		2	1334	19	230	188	261	306	6327
R16.1	Q	2															2
R17.1	O	708	32	23		103	11	13	19		289	1	5		35	361	1600
R17.2	O	820				5	60								4	2	891
R17.3	O	60				9	5				5				15		94
R18.1	Q	2571				13	22		39	2	81	1	10			5	2744
R18.2	R															9	9
R19	R				1		19				1				11		32
R20	F										1						1
R22	F														1		1
R23	F										1					2	3
R25	F	56				1					21			29	2	8	117
R26	R				6	46	1				19				23	1	96
R27	F										1						1
R29	R	1									2					1	4
R31	F										1						1
R33	F	1									7				22		30
R35	F										3						3
R36	F	1									1				2		4
R37	F										6						6
R40	Q										1						1
R41	S										2						2
R42	S	195	1	5		34	3	1	1		113			6	11	10	380
R43	S	185			2	4		1		1	86	9	49	3	45	62	447
R43.1	S										3						3
R45	S														2		2
R46	S	60				3							2		14	3	82
R46.1	S	4													7	1	12
R47	A										3						3
R49	A					6											6
R50	A					36	2				98		7	9	7	39	198
R56	A					1					7				4		12
R61	M	2									8		3		4	2	19
R62	M										1						1
R63	M										2		16		1		19

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R64	M										1	7					8
R65	M	2									3				2		7
R67	R	58				3	1				5					2	69
R68	O	1364	2	3	6	131	3	7			505	2			2	14	2039
R68.1	O										75	8	5				88
R69	C	1630		59	12	332	18	96							5		2152
R70	O										4				1	2	7
R71	O	261				1					3		1			48	314
R73	R	723	44	45	19	118	22	44			851		139	10		203	2218
R73.1	B			2	17	7	7	6			5		6		1	58	109
R73.2	R	63									289	2					354
R73.3	R	9238							25	1	148				59		9471
R73.4	R	236									78	1					315
R74	O			1											12		13
R74.1	O	242	2		4	18		1	8		4					89	368
R74.2	O	32				1											33
R74.3	O	141			1												142
R75	W	14	2		2	28					58		6		16		126
R81	F										6						6
R83	W										3	1					4
R88.93	W										6		1			10	17
R89	W	343									6						349
R92	W															1	1
R95	R															2	2
R96	O					1	4				1				4		10
R98	A										17		1		1	4	23
R99	M	1									13	1			1	6	22
R100	R	1193	5		63	1			6		2						1270
R101	R				5												5
R102	R	2						12									14
R104	R										10						10
R105	Q	266				4					7						277
R106	F			1													1
R109	-					5					257	2	14	6		144	428
R110	-										5					11	16

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R113	A															1	1
R150	F	2							8		6				4		20
R151	F	116															116
R152	W	106				12											118
R153	O	30															30
R154	O	13															13
R155	R												153				153
R156	R												18				18
LR1	R				32		2				54				35	341	464
LR1.1	R										102						102
LR1.3	R										84						84
LR1.4	R										23						23
LR1.5	R										93						93
LR1.6	R										39						39
LR2.1	R	375									60		1		2	6	444
LR2.2	R										353	3	11	5		28	400
LR2.3	R						1				42				5	3	51
LR2.4	R										11						11
LR3	C				19		3				10						32
LR4	R										1				1		2
LR5	R				99						113				41	7	260
LR5.1	R				3		1				4					15	23
LR6	O				11		1				44						56
LR7	W						1?									1	2
LR10	F				33						113				13	62	221
LR11	F	3			4	1					5					12	25
LR12	F										2						2
LR13	O / F				3						3					1	7
LR13.1	R										1						1
LR17	S										2					9	11
LR19	W				1											1	2
LR22	M				4										2	5	11
LR23	M						2				9					3	14
LR26	R															15	15

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
TOTAL		26760	1441	491	432	3412	503	453	193	724	13911	1426	1882	3775	4175	4765	64343

Table 4.5: Quantification of fabrics from all main assemblage groups by weight (g)

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 S Station Road	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
MLIA2.1	P									292	1026	921		24			2263
MLIA2.2	P									237	6606	1881	6				8730
LIAB1	E	503				246		13	60	76	168	34		16			1116
LIAB4	P									94	785	301	4	2			1186
LIAB5	P									10	166	129	6				311
LIAB6	E									15	136						151
LIAB7	P									31							31
LIAB8	E									176	142						318
LIAB9	P									15							15
LIAB10	P									29							29
LIAB11	E										40						40
B1	E	855	522	4		1784	85	199	55	157	2175	440	250	2110	2502	131	11269
B1.1	E	6	33														39
B2	E	634	6133	989		7853	152	1247		696	19513	1254	5411	28930	631	7278	80721
B2.1	E					68	678			732	5812	780	4089	16179	64		28402
B2.2	E															595	595
B2.3	R/O										46		1083	268			1397
B3	E	169	401			1108	80	8	48	21	833	36	249	369	131	86	3539
B4	E	6				491				6	62				21	49	635
B5	E	735	3072	9		1746		83	12		1222	10	12	5	5	301	7212
B5.1	E	625							191		1056						1872
B5.2	E										24						24
B6	E	427	4891	1569		12315	2006	1648	52	86	9131	32	4		30	62	32253
B8	E	1243	6	14		410			7	222	869	6	313			8562	11652
B9	E	280	360	162	5	1348	110	209	34		149	29		406	183	916	4191
B9.1	E	32								1836	12340	7424	121	180			21933

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WN B 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
B9.2	E	27								81	1633	34	16	225			2016
B9.3	E										126	11	16	3115			3268
B12	F		7	8													15
B14	F									51							51
B16	F									3	31						34
B17	W										6						6
B19.1	A										24						24
B21	E		170	49				20			272	60		8		77	656
BER1	R/O					25											25
BER3	E					44											44
BER5	W										4						4
BER6	W										13						13
BER7	W										2					68	70
BER8	W										42						42
BER9	W										2				4		6
BER10	W					23					65			9			97
BER11	W										120	36			11		167
BER12	F										68						68
BER14	O														3		3
BER15	-					2					52	2	15	119	8	215	413
R1	R				655	412	32	20			823		527		25435	3474	31378
R1.2	R						57									413	470
R2	R					50											50
R3	R														25	21	46
R4	R										92						92
R5	R					19	3				1950		148	144	835	34	3133
R6.1	O					130		180			557	24	212		693		1796
R6.3	O										728		97		165		990
R7	R		11		9	89	11				27				355	112	614
R8.1	O	8	125	22	8	139	88	3			218		534		217	1	1363
R8.2	O	154		7	8	11					58				15		253
R8.3	O	177	22			16	45				797		400		59		1516
R9.1	O														2	221	223

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WN B 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R9.2	O	10													1	157	168
R10	W					5					25				24		54
R13	B	485			16						154				258	8	921
R14	B	3769			73	622		25		19	6102	176	689	154	1014	336	12979
R14.1	B										52						52
R15	W	6950	8			556	187		3		452				66	15	8237
R16	R	16071		29		1153	199	2		6	5795	63	1431	421	768	1596	27534
R16.1	Q	4															4
R17.1	O	1591	32	47		1200	33	56	102		1609	1	19		110	787	5587
R17.2	O	2055				40	816								22	20	2953
R17.3	O	101				216	19				4				56		396
R18.1	Q	14417				116	432		258	6	538	8	368			15	16158
R18.2	R															44	44
R19	R				78		99				2				207		386
R20	F										2						2
R22	F														2		2
R23	F										10					14	24
R25	F	177				6					44			18	4	18	267
R26	R				45	359	1				104				187	3	699
R27	F										4						4
R29	R	128									40					11	179
R31	F										2						2
R33	F	61									13				81		155
R35	F										5						5
R36	F	1									2				3		6
R37	F										18						18
R40	Q										10						10
R41	S										18						18
R42	S	3428	7	77		472	55	3	1		906			67	21	27	5064
R43	S	6137			6	48		13		9	714	154	1451	19	558	459	9568
R43.1	S										8						8
R45	S														4		4
R46	S	3112				25							12		178	26	3353
R46.1	S	21													19	3	43
R47	A										292						292

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WN B 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R49	A					208											208
R50	A					301	98				4757		704	154	778	1325	8117
R56	A					20					248				278		546
R61	M	63									526		2		1091	103	1785
R62	M										252						252
R63	M										96		120		13		229
R64	M										226	90					316
R65	M	50									98				443		591
R67	R	258				26	6				32					7	329
R68	O	19481	6	42	32	1854	29	293			9415	18			91	97	31358
R68.1	O										1770	66	26				1862
R69	C	8523		738	41	7393	409	2473							37		19614
R70	O										32				2	2	36
R71	O	1585				22					8		66			190	1871
R73	R	7146	125	223	85	966	510	174			4743		836	114		843	15765
R73.1	B			16	116	108	79	17			52		176		28	1112	1704
R73.2	R	184									2270	6					2460
R73.3	R	69071							168	9	1082				526		70856
R73.4	R	1800									429	1					2230
R74	O														97		97
R74.1	O	1394	11	26	34	111		6	36		32					401	2051
R74.2	O	165				3											168
R74.3	O	2680			10												2690
R75	W	133	29		10	176					629		20		46		1043
R81	F										7						7
R83	W										14	8					22
R88.93	W										20		6			31	57
R89	W	1425									30						1455
R92	W															20	20
R95	R															21	21
R96	O					21	40				8				17		86
R98	A										343		10		5	141	499
R99	M	130									615	28			15	63	851
R100	R	7650	1		623	17			11		28						8330
R101	R				26												26

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehi ll Road	Zone 2 S Station Road	HRD 99	WNB 98	WN B 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
R102	R	3						633									636
R104	R										38						38
R105	Q	645				42					34						721
R106	F			2													2
R109	-					115					1548	14	50	49		1274	3050
R110	-										23					32	55
R113	A															7	7
R150	F	41							84		154				18		297
R151	F	341															341
R152	W	721				20											741
R153	O	362															362
R154	O	295															295
R155	R												1323				1323
R156	R												134				134
LR1	R				238		17				634				607	3201	4697
LR1.1	R										1196						1196
LR1.3	R										596						596
LR1.4	R										426						426
LR1.5	R										540						540
LR1.6	R										688						688
LR2.1	R	3762									801		12		15	17	4607
LR2.2	R										2554	18	48	11		167	2798
LR2.3	R						6				432				60	27	525
LR2.4	R										160						160
LR3	C				126		11				56						193
LR4	R										4				5		9
LR5	R				1364						1192				277	111	2944
LR5.1	R				262		25				58					58	403
LR6	O				63		23				449						535
LR7	W						12									11	23
LR10	F				178						1092				108	313	1691
LR11	F	18			84	3					20					118	243
LR12	F										13						13
LR13	O / F				35						12					11	58

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 Station Road	HRD 99	WNB 98	WN B 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
LR13.1	R										20						20
LR17	S										2					299	301
LR19	W				30											43	73
LR22	M				174										44	130	348
LR23	M						44				232					40	316
LR26	R															200	200
TOTAL		192325	15972	4033	4434	44553	6497	7325	1122	4915	127672	14095	21016	53116	39578	36570	573223

Table 4.6: Quantification (sherd count) of samian ware fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WN B 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst	Leda Cottag	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
R41	S										2						2
R42	S	195	1	5		34	3	1	1		113			6	11	10	380
R43	S	185			2	4		1		1	86	9	49	3	45	62	447
R43.1	S										3						3
R45	S														2		2
R46	S	60				3							2		14	3	82
R46.1	S	4													7	1	12
LR17	S										2					9	11
subtotal	S	444	1	5	2	41	3	2	1	1	206	9	51	9	79	85	939
% of site total		1.7	0.1	1.0	0.5	1.2	0.6	0.4	0.5	0.1	1.5	0.6	2.7	0.2	1.9	1.8	

4.4.1 *S Samian wares (Table 4.6)*

Samian ware was generally poorly represented on CTRL sites. Only at Leda Cottages did it amount to more than 2% of the sherd total in any assemblage. At Thurnham it comprised 1.5% of sherds and even at Pepper Hill it only totalled 1.6%. Here, however, the figure is misleading because samian vessels were considerably less fragmented than many of those in coarse wares and figures for vessel count (perhaps the most precise indicator of quantities in this particular assemblage) indicate that samian comprised 11.9% of the total assemblage (supported by a figure of 14.7% based on EVEs).

Systematic specialist reporting of samian ware was carried out only on the important assemblage from Pepper Hill. This was examined by Joanna Bird, who also commented on a few pieces from Thurnham. Samian stamps from Pepper Hill and Thurnham were reported on by Brenda Dickinson. All the usual fabrics were present, but these were only analysed in detail at Pepper Hill. Here the varying representation of South and Central Gaulish samian wares (R42 and R43 respectively) is of interest. South Gaulish material was slightly more common in terms of sherd count, whereas Central Gaulish material was much better represented by weight - it was almost twice as common as South Gaulish samian by this measure. The difference is presumably accounted for by the more substantial nature of the Central Gaulish forms - 33 rather than 27, 31 rather than 18. There was no significant difference in the proportion of cups amongst material from both sources - in both cases these amounted to about one fifth of all vessels (by EVEs), so the difference between the occurrence of South and Central Gaulish samian is not accounted for by significant variation in their broad typological breakdown.

South Gaulish samian reached the site from the mid 1st century AD onwards. Almost all of it was produced at La Graufesenque but a platter in a mid 1st century burial (sub-group 891) was probably from Le Rozier. Central Gaulish products from Les Martres-de-Veyre reached the site during the first quarter of the 2nd century, but the majority of Central Gaulish material was from Lezoux. East Gaulish samian (R46) was less well represented (but again was more important in terms of weight than sherds count) and the favoured sources were the earlier established factories at La Madeleine and Heiligenberg, which were exporting during the 2nd century. Products from Rheinzabern were relatively few, as the factory's main period of exportation coincided with the decline and eventual abandonment of the cemetery. As a cemetery group the Pepper Hill assemblage was dominated by plain open forms - even cups were relatively poorly represented - and decorated vessels were represented only by occasional body sherds of Drag 29, 30 and 37, none of which needs to have derived from graves.

Elsewhere there was chronologically based variation in samian ware supply. South Gaulish material was dominant at WNB 98 and, to a lesser extent, at Thurnham, while at Leda Cottages, Bower Road and Saltwood Tunnel Central Gaulish material was much more common. These last three sites also produced small amounts of East Gaulish samian, which was otherwise quite scarce across the route. It was notably absent, for example, at Thurnham, although there is no obvious reason why this should have been the case. The early emphasis of this site is indicated by the presence of two sherds of Arretine ware (R41), the only examples from the project, but there was some late Roman activity as well, reflected (*inter alia*) in the occurrence of two sherds of Argonne ware (LR17). Apart from Thurnham this fabric occurred only at Saltwood Tunnel, where nine sherds were identified, all from a single vessel.

Two vessels from Pepper Hill (both Drag 18/31) and a single sherd of Drag 27 in fabric R46.1 from context 488 at Bower Road were identified as Pulborough samian ware. Other sherds assigned to this code (a further six from Bower Road and one from Saltwood) might perhaps have been from this source but are more likely to have derived from an Eastern Gaulish source.

4.4.2 F Fine wares (Table 4.7)

Fine wares were typically less common than samian ware, and completely absent from several of the smaller early Roman assemblages. This ware group comprised several distinct components, broadly of early, middle and late Roman date. Early fine wares are represented by two sherds of Gaulish Terra Rubra 1A (fabric B12) from Whitehill Road, while 17 sherds of TR3 (fabric B16), 12 sherds of Terra Nigra (BER12) and 6 of eggshell Terra Nigra (fabric R81) were found at Thurnham. Overall, Thurnham produced both the greatest quantity and variety of fine ware fabrics: in addition to the Gallo-Belgic fabrics mentioned above fabrics R20, R27, R31, R35, R37, LR12 and LR13.1 occurred solely at Thurnham, albeit only in very small quantities; even here fine wares only totalled 1.5% of all sherds. The wares unique to this site included single fragments of Lyon colour-coated ware (R20), an unsourced mica-coated ware (R27) and south-east lead-glazed ware (R31). Second century Central Gaulish colour-coated wares (R35 and R37) were also present, though still in minimal quantities, along with a single sherd of Moselkeramik (R36), a fabric also found at Pepper Hill and Bower Road. These 2nd and 3rd century imports were thus as scarce as the early Roman ones.

Only in the later Romano-British period were quantities of individual fabrics occasionally significant. The most important individual fabric was Oxfordshire colour-coated ware (LR10) which, with 221 sherds, accounted for 40% of all the fine ware sherds from the project (although it should be noted that LR10 here includes a few Oxfordshire red colour-coated mortarium sherds, which are strictly LR24 in the CAT fabric series). This fabric was

present only at four sites, however: Thurnham, Hazell's Road, Bower Road and Saltwood. At all of these except Bower Road it was accompanied by small quantities of Nene Valley and Hadham colour-coated wares (fabrics LR11 and LR13 respectively). The occurrence of Hadham ware at Saltwood is perhaps noteworthy, since its distribution is more generally confined to North Kent (cf Pollard 1988, 157, fig 51). Nene Valley colour-coated ware was also present in tiny quantities at Northumberland Bottom (WNB98) and Pepper Hill. The other major southern late-Roman fine ware producer, the New Forest industry, was represented only by two sherds from Thurnham (fabric LR12).

The minimal level of fine wares at Pepper Hill is striking. The Nene Valley sherds, for example, and a tiny fragment of Moselkeramik (R36) were not obviously from auxiliary vessels in graves (although it is just possible that they represent the comminuted remnants of such vessels), and only six fine ware vessels clearly fell into this category. Three of these were in Lower Rhineland colour-coated fabric R25 (eg Fig. 4.15, Grave 1434 ON 4635), one in Colchester colour-coated ware (R33) and two in an unsourced fine oxidised colour-coated ware (R151). These last, deriving from well-fragmented vessels, comprised 20% of all fine ware sherds from the project. At Pepper Hill the majority of the 'fine ware' drinking vessels were provided in fine reduced wares such as the Upchurch fabric R16 (eg Fig. 4.13, Grave 327 ON 4308, Grave 1167 ON 4096; Fig. 4.14, Grave 1109 ON 4523; Fig. 4.15, Grave 560 ON 4345; Fig. 4.16, Grave 10744 ON 4029, Grave 11961 ON 4231, Grave 796 ON 4267; Fig. 4.17, Grave 451 ON 4641) and a ?Canterbury highly micaceous ware (R29), both of which are categorised as R rather than F wares here. The Lower Rhineland fabric R25 was apparently well-represented at Beechbrook Wood, where it was the only fine ware fabric. However the sherds there represented tiny fragments of a single vessel from one context.

Generally, therefore, while most of the expected sources of fine wares were represented on component sites of the project, their overall quantities do not suggest more than sporadic access to supplies of these wares.

Table 4. 7: Quantification (sherd count) of fine ware fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst	Leda Cottag	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
B12	F		2	1													3
B14	F									11							11
B16	F									1	17						18
BER12	F										12						12
R20	F										1						1
R22	F														1		1
R23	F										1					2	3
R25	F	56				1					21			29	2	8	117
R27	F										1						1
R31	F										1						1
R33	F	1									7				22		30
R35	F										3						3
R36	F	1									1				2		4
R37	F										6						6
R81	F										6						6
R106	F			1													1
R150	F	2							8		6				4		20
R151	F	116															116
LR10	F				33						113				13	62	221
LR11	F	3			4	1					5					12	25
LR12	F										2						2
LR13	O / F				3						3					1	7
subtotal	F	179	2	2	40	2			8	12	206			29	44	85	609
% of site total		<i>0.7</i>	<i>0.1</i>	<i>0.4</i>	<i>9.3</i>	<i>0.1</i>			<i>4.1</i>	<i>1.7</i>	<i>1.5</i>			<i>0.8</i>	<i>1.1</i>	<i>1.8</i>	

4.4.3 A Amphorae (Table 4.8)

Amphorae occurred at seven CTRL sites; two in the Northumberland Bottom area, Thurnham, Leda Cottages, Beechbrook Wood, Bower Road and Saltwood. At WNB98 amphorae comprised 1.3% of the total sherds from the site, at Thurnham and Saltwood they amounted to 0.9% and elsewhere they were less than 0.5%. Only at Thurnham and Leda Cottages, however, were amphorae represented by rim sherds - comprising 0.3% and 2.1% of EVEs respectively. In the latter case the 'amphora' was a single rim in an oxidised Canterbury fabric (R8.1) from context 8045, here categorised with other oxidised (O) wares, as it was not normally used for amphora-like forms (Fig. 4.9, No. 22). The only other amphora type represented by rims was Dressel 20, two examples of which occurred at Thurnham. Fabric R50, characteristic of Dressel 20 (and related forms), typically much the most common amphora found in Roman Britain, was the only fabric to occur in all seven assemblages producing amphora sherds, and accounted for just over 80% of all such sherds.

The presence of a wider range of types can be inferred from the variety of fabrics, with the greatest number again seen at Thurnham. Occurring uniquely here were the similar fabrics B19.1 and R47, both of Italian origin and associated respectively with wine amphorae of forms Dressel 1B and 2-4 and Dressel 2-4 alone. Each fabric was represented by three sherds. Another unique occurrence, this time at WNB98, was fabric R49, typical of south Spanish fish sauce amphorae of the Dressel 7-11 range.

A single sherd of a probable south Gaulish wine amphora (fabric R56) also occurred at WNB98, and this fabric was also present in small quantities at Thurnham and Bower Road. A further fabric (R113) associated with amphorae of the Gauloise series, here specifically Gauloise 12 (as opposed to the Gauloise 4 typical of fabric R56) occurred as a single sherd at Saltwood Tunnel. A rim fabric in the analogous form 55 in Peacock and Williams' (1986) typology, was recorded at Thurnham in fabric R98 - unidentified amphora fabrics. Some 10% of all amphora sherds were not assigned to source and were grouped as fabric R98, with examples at Thurnham, Leda Cottages, Bower Road and Saltwood Tunnel.

4.4.4 M Mortaria (Table 4.9)

In terms of representation by sherd count mortaria were the smallest of all the major ware groups - with only 102 sherds from the whole project and a maximum occurrence at Leda Cottages, where they comprised 1% of the total sherds. Their incidence at Thurnham, (0.3% of sherds), was more characteristic. Recorded at eight sites, mortarium fabrics were absent from Whitehill Road, WNB98, Beechbrook Wood and the small groups from Tollgate and White Horse Stone. These figures are slightly misleading, however, because the ware group consists only of those fabrics that were principally or solely used for mortaria - whereas mortaria occurred in a variety of other fabrics (mostly Canterbury products) in which they

were only incidentally present (fabrics R5, R6.1, R6.3, R10 and R17.1 plus a 'catch-all' unassigned fabric R75) as well as in the late Roman Oxford fabrics LR10 and LR27 and (very occasionally) in samian ware fabrics. Even allowing for all these, however, the representation of mortaria by EVEs does not indicate that these were common vessels. At Thurnham mortaria (in all fabrics) comprised 2.5% of EVEs, but at no other site did they exceed 1.5% and at the cemetery of Pepper Hill they only comprised 0.2% of EVEs, most of which is accounted for by a single (incomplete) Central Gaulish Drag 45 (Fig. 4.17, Grave 787 ON 4352) which may have been used as a cover in one of the graves.

Seven specific mortarium fabrics, plus the unidentified mortarium catch-all group R99, were identified. All are characteristic components of assemblages in Kent, although the 'early' fabrics cannot be assigned to specific production centres with complete confidence. These are R61 (?Gaul/SE England fabric 1), R62 (?Kent fabric 2) and R63 (?Colchester/Kent). Fabric R64 can be assigned to the Rhineland with more confidence, while products of the major British producers of the late 1st and early 2nd centuries, the Verulamium region potteries (fabric R65) were present, but scarce, with occasional incidences at Thurnham, Pepper Hill and Bower Road. Fabric R61 was the most widely distributed mortarium fabric, occurring at five sites, but was again only ever present in small quantities, as at Thurnham.

Only two of the mortaria were stamped. These were a Verulamium vessel with a stamp of LALLANS (or LALLAIUS) dated *c* AD 90-105 (Hartley 1976, 218) from Bower Road (Fig. 4.8, No. 13), and a ?Colchester CAM 497 hooked flange mortarium with a wheat-ear stamp, in buff-brown fabric R63, dated *c* AD 140-180, from Thurnham.

Late Roman mortaria consisted entirely of Oxfordshire products - white ware (fabric LR22) and white-slipped ware (fabric LR23) as well as some red colour-coated examples subsumed under fabric LR10. The occurrence of these fabrics was restricted - together LR22 and LR23 were found at WNB98B, Hazells Road, Thurnham, Bower Road and Saltwood, the same sites (except WNB98B) that produced fabric LR10, and quantities were modest. At the first two of these, Oxfordshire products were the only mortarium fabrics present.

Table 4.8: Quantification (sherd count) of amphora fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst	Leda Cottag	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
B19.1	A										3						3
R47	A										3						3
R49	A					6											6
R50	A					36	2				98		7	9	7	39	198
R56	A					1					7				4		12
R98	A										17		1		1	4	23
R113	A															1	1
subtotal	A					43	2				128		8	9	12	44	246
% of site total						<i>1.3</i>	<i>0.4</i>				<i>0.9</i>		<i>0.4</i>	<i>0.2</i>	<i>0.3</i>	<i>0.9</i>	

Table 4.9: Quantification (sherd count) of mortarium fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst	Leda Cottag	Beechbrook Wood	Bower Road	Salt-wood	TOTAL
R61	M	2									8		3		4	2	19
R62	M										1						1
R63	M										2		16		1		19
R64	M										1	7					8
R65	M	2									3				2		7
R99	M	1									13	1			1	6	22
LR22	M				4										2	5	11
LR23	M						2				9					3	14
subtotal	M	5			4		2				37	8	19		10	16	101
% of site total		+			<i>0.9</i>		<i>0.4</i>				<i>0.3</i>	<i>0.6</i>	<i>1.0</i>		<i>0.2</i>	<i>0.3</i>	

4.4.5 *W White wares (Table 4.10)*

White wares were another minor component of most assemblages. In terms of sherds count they were most common at Pepper Hill (3.3% - some 69% of all white ware sherds from the project) reflecting the occurrence there of significant quantities of flagons in grave groups. As with fine wares, the white wares belong to several distinct traditions and chronological periods, and the greatest range of fabrics occurs, as usual, at Thurnham. Here was found a variety of imported Gallic fabrics (B17 and BER5-BER11 inclusive), always in small amounts, most of the sherds probably from beakers dating to either side of the Conquest period (for this and their possible sources see Rigby and Freestone 1995). These fabrics were occasionally found elsewhere; with the exception of 5 sherds of BER10 at WNB98 these occurrences were all at sites south-east of Thurnham. Fifty-nine sherds of fabric BER7 occurred at Saltwood for example, but these, almost entirely from a single context, only weighed 68 g in total and represent a small part of a single butt beaker. Nineteen sherds of a jug/flagon in fabric BER11 came from a single context in ditch 360 at Snarkhurst Wood - the only other white ware sherd at that site, from a butt beaker in fabric R83 (see below), came from the same feature.

The tradition of imported white wares continued into the 1st and 2nd centuries with a group of related fabrics (R83, R88.93, R89 and R92). All except this last - of which only a single sherd was recorded, at Saltwood - were present at Thurnham. Fabric R89 was found at Pepper Hill, where the 343 sherds represent large parts of two flagons. Other white flagons at Pepper Hill were single examples in an unsourced fabric (R152) and an unspecified 'miscellaneous white wares' fabric (R75), plus eleven vessels in the Verulamium region fabric R15, the equivalent of mortarium fabric R65 (eg Fig. 4.13, Grave 12011 ONs 4246 and 4247; Fig. 4.14, Grave 12005 ON 4223; Fig. 4.15, Grave 560 ON 4594; ?Fig. 4.17, Grave 864 ON 4600). Fabric R152 was also found at Northumberland Bottom (WNB98), not far from Pepper Hill, which may suggest that it had a specifically north Kent distribution.

The Verulamium fabric R15 was the most widely occurring white ware, forming a significant part of white ware assemblages at WNB98, Thurnham and Bower Road as well as Pepper Hill, and present in small quantities at Whitehill Road, WNB98B, White Horse Stone and Saltwood. Overall this source accounted for *c* 41.5% of all white ware sherds from CTRL, and approximately 28% of all such wares from the sites excluding Pepper Hill. It is unfortunate that another 28% of white sherds from the sites excluding Pepper Hill were in the unassigned category R75.

Most of the identified white wares can be assigned to the 1st and 2nd centuries. The supply of Verulamium wares, for example, is not likely to have continued much after the middle of the 2nd century AD, in line with the pattern observed at London (Davies *et al.*

1994, 41). Two exclusively late Roman white wares were identified, Oxford parchment ware (fabric LR7) and Mayen ware (fabric LR19), but there were only respectively one and two certainly identified sherd of each, one of each from Saltwood and a Mayen sherd from Hazells Road (Fig. 4.10, No. 1). The forms represented were the most common in the repertoire of each fabric, a carinated bowl (Young 1997 type P24) and two lid-seated jars. A sherd recorded as fabric LR7 at WNB98B was thought perhaps to be Oxford burnt white ware. This is unlikely (the distribution of this fabric is generally quite limited), but not impossible, as examples have been noted at Shadwell (east London) and Ickham (Kent) by Young (1977, 281), although the fabric is not mentioned by Pollard (1988).

4.4.6 *Q White-slipped wares (Table 4.11)*

Only four fabrics were specifically assigned to this ware group, although sherds of some other oxidised fabrics occasionally had a white or cream slip. These fabrics were characteristically used for flagons, which explains their preponderance (94% of all sherds in these wares) at Pepper Hill, where white slipped fabrics amounted to 10.6% of the total sherds. The great majority of these were in fabric R18.1, a fine oxidised 'Upchurch' fabric, in which 37 vessels were represented by rims (19.64 EVEs, 6.5% of the site total, eg Fig.4.13, Grave 12063 ON 4243; Fig. 4.16, Grave 10744 ON 4037; Fig. 4.17, Grave 787 ON 4586; Fig. 4.18, Grave 886 ON 4323, this last vessels clearly of some antiquity when it was buried in the early-mid 3rd century) and there was a single example of a white-slipped reduced fabric (R16.1) from the same source. Some 266 sherds at Pepper Hill were in fabric R105, a coarse oxidised sandy ware with cream slip probably of mid to late 1st century date. There were no rims amongst this material, but the sherds were again most probably from flagons. This fabric also occurred at WNB98 and at Thurnham in small quantities. The only widely distributed white-slipped fabric, however, was R18.1, found at eight sites in addition to Pepper Hill. At White Horse Stone 39 sherds of R18.1 comprised 20.2% of the sherd total (and 23% by weight), but the assemblage is too small for this high value to be significant. In the larger assemblage at Thurnham R18.1 was the dominant white-slipped fabric, comprising 91% of these sherds, while at WNB98B, White Horse Stone, Snarkhurst Wood, Leda Cottages and Saltwood R18.1 was the only white-slipped fabric present. The great majority of identifiable vessel types were flagons, but at Thurnham a jar and a bowl of Monaghan class 4H1.3 were also present and a beaker was probably represented by a small body sherd.

Table 4.10: Quantification (sherd count) of white ware fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst	Leda Cottag	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
B17	W										1						1
BER5	W										3						3
BER6	W										2						2
BER7	W										1					59	60
BER8	W										5						5
BER9	W										1				2		3
BER10	W					5					11			3			19
BER11	W										12	19			1		32
R10	W					1					5				6		12
R15	W	422	1			55	6		1		34				12	2	533
R75	W	14	2		2	28					58		6		16		126
R83	W										3	1					4
R88.93	W										6		1			10	17
R89	W	343									6						349
R92	W															1	1
R152	W	106				12											118
LR7	W						1									1	2
LR19	W				1											1	2
Subtotal	W	885	3		3	101	7		1		148	20	7	3	37	74	1289
% of site total		3.3	0.2		0.4	3.0	1.4		0.5		1.1	1.4	0.4	0.1	0.9	1.6	

Table 4.11: Quantification (sherd count) of white-slipped fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst	Leda Cottag	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
R16.1	Q	2															2
R18.1	Q	2571				13	22		39	2	81	1	10			5	2744
R40	Q										1						1
R105	Q	266				4					7						277
subtotal	Q	2839				17	22		39	2	89	1	10			5	3024
% of site total		10.6				0.5	4.4		20.2	0.3	0.7	0.1	0.5			0.1	

4.4.7 *P 'Prehistoric' fabrics (Table 4.12)*

This group associates hand made fabrics of Middle Iron Age character but considered to be 'Late Iron Age' in date - indeed the period of use, and even of manufacture, of some of these fabrics may have extended after AD 43. The fabrics appear under two main 'period' code headings in the CAT system, MLIA (Mid-Late Iron Age) and LIAB (Late Iron Age-'Belgic') but there is no meaningful chronological difference between these headings in terms of the fabrics discussed here, so they are grouped together. There are inevitably questions relating to the definition of these fabrics vis-a-vis those assigned to the 'Belgic' E ware tradition (see below). The principal characteristics of this group are that they are consistently hand-made (whereas most if not all of the E fabrics include at least some wheel-thrown vessels) and all contain flint and in most this is the principal inclusion type, thus linking them to Middle Iron Age traditions in the region. Grog is completely absent in these fabrics. The evidence of their ceramic associations, and other dating evidence where available, suggests, however, that these fabrics are not chronologically earlier than the grog- and sand-tempered 'Belgic' traditions.

The MLIA fabrics present are MLIA2.1, handmade with very fine sand and sparse-to-moderate crushed calcined-flint inclusions and MLIA2.2, similar but high-fired grey with additional soft brown ferrous inclusions. This fabric shows frequent use of knife trimming on what tend to be very wobbly small bead-rim jars, while MLIA2.1 is used mainly for bead-rim storage jars. The firing of MLIA2.2 suggests that it is an early product of the Thameside industry and its date range may thus span the conquest period. Fabric LIAB1, with profuse silt-sized quartz, sparse brown ferrous inclusions and occasional angular flint may have been related to the MLIA2 fabrics and a similar date-range to that of MLIA2.2 is suggested. In contrast fabrics LIAB4 and LIAB5 are solely tempered with flint and are perhaps more directly linked to regional prehistoric potting traditions. Indeed it is possible that occasional sherds of Bronze Age or early Iron Age date may have been recorded as the more coarsely-tempered LIAB4.

The occurrence of these fabrics was quite restricted - they were confined to a group of sites in the middle part of the Section 1 route, from Thurnham to Beechbrook Wood, though were scarce at the latter site and at nearby Leda Cottages. P fabrics were quite common at Thurnham where they comprised 7.7% of the total sherds. Here the extension of their chronological range into the early Roman period seems to be supported by the fact that these fabrics only amounted to 7.3% of sherds from Late Iron Age features. P fabric sherds formed a considerably larger proportion of the smaller and exclusively Late Iron Age-early Roman assemblage at Snarkhurst Wood, where they totalled 32.4% (but only 23.2% of weight). As at Thurnham, the majority of the sherds were in fabric MLIA2.2. At Thurnham vessel forms were exclusively jars, mostly in MLIA2.2, except for single examples of a dish and a lid, also

in MLIA2.2. The pattern at Snarkhurst was the same: a single bowl in fabric MLIA2.2 comprising 3.5% of an EVEs assemblage otherwise consisting entirely of jars. The jars were mostly faceted bead rim types of Monaghan (1987) class 3G1 (for an example in variant fabric MLIA2.1 see Fig. 4.7, No. 46).

There is potentially a relationship between these fabrics and the reduced flint and sand fabric R102 - noted only in small quantities at Tollgate and with two sherds at Pepper Hill. Vessels in fabric R102 included bead rim jars. The dating of this fabric is, however, ostensibly a little later than that of the P fabrics, so the significance of any possible connection between them is unclear.

It is notable, and unlikely to be coincidental, that the sites with the most marked concentration of P fabrics are also those with the highest representation of sand-tempered E wares, particularly the glauconitic fabrics B9.1-B9.3. There is, however, a clear distinction in the typological ranges of the two fabric groups, the P (flint) fabrics being dominated by bead rim jars whereas these are relatively rare in the glauconite fabrics, which had a very strong representation of rippled or corrugated shoulder jars of types such as Thompson (1982) B2-2. At Snarkhurst Wood there appeared to be a clear chronological sequence in which the glauconite fabrics preceded the flint and flint/sand tempered fabrics of the P group, though this sequence was not seen so clearly at Thurnham. This question is discussed further below.

4.4.8 E 'Belgic type' fabrics (Table 4.13)

The term 'Belgic' is used here in the broad sense discussed by Thompson (1982, 5) - the Canterbury B fabric prefix being used in a similar way. There are questions of definition relating both to the group overall and to some of the individual fabrics within it. One area of uncertainty is the distinction between component fabrics of this group and fabrics of Middle Iron Age character (defined as MLIA and LIAB in the Canterbury system). Sherds in the latter category are typically tempered with flint or glauconite, but fabrics with these inclusions are not automatically excluded from the E ware group (cf Pollard 1988, 31). Grog is the principal inclusion type in the E ware group, but other inclusion types also occur. Nor is manufacture a clear guide, because while many 'Belgic' fabrics are wheel-thrown a significant number continue to be handmade. This tradition of hand made grog-tempered production survived throughout the period in parts of the region. The late 2nd-3rd century (and possibly later) 'native coarse ware' (fabric R1), for example, was largely hand made (ibid., 98), and late Roman grog-tempered and other wares were also hand made (ibid., 154-5). The differences between fabrics B1 and R1, for example, are not always clear, particularly when the sherds are in poor condition.

Despite these problems, however, the coarse fabrics of the E ware group represent a significant and fairly coherent group of material particularly characteristic of the 1st century

AD. The date of the earliest use of these fabrics remains open to question, but for some, at least, should extend well back into the 1st century BC if not into the late 2nd century BC. In this context CTRL sites produce a couple of significant finds associations. At Hockers Lane (ARC 420 CH62+800 99) a Class I potin coin, dated to the first half of the 1st century BC, was found in context 186 with pottery consisting entirely of sherds of glauconite-tempered fabric B9.1, vessel forms present being a corrugated jar and a barrel jar of Thompson (1982) forms B2-2 and B5-1 respectively. Two further Class I potins came from context 2535 at Little Stock Farm. The small pottery assemblage from this context was more mixed, but included a couple of grog-tempered sherds.

There were three main tempering traditions within the E ware group: grog, shell and sand, and fabrics combining two or more of these elements also occurred. The sand-tempered group had two subgroups, one consisting principally of the fine fabric B8 and perhaps also some of the sherds of fabric B9, while the other comprises the glauconite-tempered fabrics B9.1-B9.3, although some glauconite-tempered sherds have almost certainly been recorded under B9 (undifferentiated). It is clear, however, that the glauconite-tempered group has a distinct spatial concentration in the Medway valley (Pollard 1988, 31) and perhaps particularly in the Maidstone area, as for example at Quarry Wood, Loose (eg Kelly 1971, nos 4-7, 9-11, 18, 19, 23-25 and 31) and Queen Elizabeth Square (Biddulph 2003, 15-17, 19 nos 3-6). This is reflected here in its occurrence in quantity at Thurnham and particularly at Snarkhurst Wood, where fabric B9.1 amounted to 43.8% of the total sherds from the site - and 52.7% of the total weight. The pottery from Phase 1 contexts at Snarkhurst Wood consisted almost entirely of fabric B9.1, to the extent that production in the immediate vicinity can be suggested (Lyne 2006c; Fig. 4.3, bottom Nos 2-7)).

Burnishing, combing and furrowing were noted as decorative techniques on the Snarkhurst fabric B9.1 material, while bead-rimmed barrel-shaped jars of Thompson (1982) types B2.2 and C5.2 with corrugated shoulders were the most common forms. Such vessels were usually burnished externally but one example (Fig. 4.3, bottom No. 3) had square-tooth comb-stabbed decoration applied in a random manner all over its body below the shoulder corrugation. Other forms in fabric B9.1 include a butt-beaker of Thompson type G5.2 (Fig. 4.3 bottom, No. 6), a jar of type B1.7 (Fig. 4.3 bottom, No. 7) and a combed bead-rim storage-vessel and another, necked, example with polished exterior. This assemblage is dated to the first third of the 1st century AD by Malcolm Lyne.

Fine sand-tempered 'Belgic' fabric B8 was present at a number of sites, including Pepper Hill, Hockers Lane (eg Fig. 4.3, top No. 8) and Thurnham, but was most important at Saltwood, where it comprised 90.8% of Belgic sand-tempered sherds and 40% of all E wares from the site. Again a local tradition seems to be reflected, as these sherds are consistent with the identification of a south-east Kent sand-tempered ceramic zone extending as far as

Folkestone (Thompson 1982, 14-15; Pollard 1988, 31). It should be noted, however, that while B8 was important at Saltwood it was still less common than the grog-tempered component of the Belgic E ware group, which totalled 54.1% of sherds in such wares; Saltwood may thus have been situated at the margin of Thompson's sand-tempered ceramic zone.

Overall, grog-tempered fabrics accounted for *c* 59% of all E ware sherds but were most common in the Ashford area. At Leda Cottages and Beechbrook Wood they comprised 95.1% and 84.6% respectively of E wares. The corresponding figure at Bower Road was 91%, where the overall level of E wares was probably significantly higher than the present data suggest (see discussion of fabric R1 in R wares below). Any adjustment of these figures would probably enhance the grog-tempered proportion of the E ware total at Bower Road even further.

B1, B2 and B2.1 were the most important grog-tempered fabrics (eg Fig. 4.4, Nos 4-8, 10-15, 18 and 20), but grog and sand, grog and flint and grog and shell fabrics (B3, B5 and B5.1 respectively) were all fairly well-represented. None of these can be attributed to a source with confidence, but at Beechbrook Wood two vessels were identified as wasters. One was a small heavily-spalled jar of Thompson (1982) type B5-4 in fabric B2 dated to the first half of the 1st century AD while the other was a small bead-rim vessel with scratch-marking in grog and sparse flint-tempered fabric B3, complete except for a hole blown in its side. This vessel was assigned a mid 1st century BC to mid 1st century AD date range.

Grog-tempered bead-rim jars of Thompson type B5-5 occur in significant quantities on sites in the Ashford area but are comparatively rare elsewhere. This suggests that they were a local product but whether they were made at Beechbrook Wood is another matter. None of the numerous examples of B5-5 jars from that site compared closely in fabric with the identified wasters. Survival of the grog-tempered tradition in this area after the conquest is indicated by the concentration here of fabric B2.3 (see R wares below: Fig. 4.4, Nos).

Another localised production is implied by the occurrence of most of the B5.1 sherds at Pepper Hill, suggesting a relatively local origin. This is consistent with the location of the shell-tempered tradition (fabric B6) in north Kent, supported by its appearance in some quantity in Late Iron Age/early Roman assemblages as far south as Thurnham but not beyond. B6 was particularly common at Whitehill Road, the early WNB sites and Tollgate (eg Fig. 4.5, Nos 2-4, 11-12 and 16-19), comprising between 27.6% and 31.2% of sherds in four assemblages, a strong and consistent representation. The north Kent distribution of shell-tempered fabrics is seen even more clearly in the early Roman period in relation to fabric R69 (see below). The distinction between B6 and R69 was not always clear, particularly with small body sherds.

Table 4.12: Quantification (sherd count) of hand made 'prehistoric type' fabrics by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst	Leda Cottag	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
MLIA2.1	P									30	140	116		1			286
MLIA2.2	P									17	651	299	2				970
LIAB4	P									7	258	38	2	1			306
LIAB5	P									5	17	9	1				32
LIAB7	P									2							2
LIAB9	P									1							1
LIAB10	P									4							4
subtotal	P									66	1066	462	5	2			1601
% of site total										9.1	7.7	32.4	0.3	0.1			

Table 4.13: Quantification (sherd count) of 'Belgic type' (E) wares in relation to principal inclusion type, by site

CAT code	Principal inclusion	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst	Leda Cottag	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
B1	Grog	183	52	1		164	28	30	23	26	328	56	50	191	314	30	1476
B1.1	Grog	1	3														4
B2	Grog	64	493	98		550	13	45		52	1967	102	437	1753	32	982	6588
B2.1	Grog					10	18			74	522	47	303	902	7		1883
B2.2	Grog															96	96
BER3	Grog					3											3
B3	Grog/flint	43	7			91	28	3	13	4	66	3	9	27	19	23	336
B4	Grog/chalk	1				22				1	4				2	16	46
LIAB11	Grog/sand										1						1
B5	Grog/sand	110	296	2		112		20	3		106	1	1	1	1	38	691
LIAB6	Grog/shell									3	15						18
B5.1	Grog/shell	155							9		52						216
B5.2	Grog?										1						1
Subtotal	GROG	557	851	101		952	87	98	48	160	3062	209	800	2874	375	1185	11359
%		<i>52.0</i>	<i>63.6</i>	<i>30.3</i>		<i>45.7</i>	<i>34.3</i>	<i>39.2</i>	<i>55.8</i>	<i>25.2</i>	<i>54.6</i>	<i>24.4</i>	<i>95.1</i>	<i>84.6</i>	<i>91.0</i>	<i>54.1</i>	<i>58.7</i>
B6	Shell	73	450	184		941	153	127	9	2	662	3	2		3	15	2624
Subtotal	SHELL	73	450	184		941	153	127	9	2	662	3	2		3	15	2624

CAT code	Principal inclusion	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst	Leda Cottag	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
%		6.8	33.6	55.3		45.1	60.2	50.8	10.5	0.3	11.8	0.4	0.2		0.7	0.7	13.6
LIAB1	Sand	171				24		5	17	10	12	1		2			242
LIAB8	Sand									36	11						47
B8	Sand (fine)	225	1	1		38			1	108	116	1	24			878	1393
B9	Sand (coarse)	30	24	44	1	130	14	19	11		32	1		56	34	89	485
B9.1	Glauconite	5								313	1475	625	12	26			2456
B9.2	Glauconite/ flint	11								7	207	7	2	23			257
B9.3	Glauconite/ grog										8	1	1	415			425
Subtotal	SAND	442	25	45	1	192	14	24	29	474	1861	636	39	522	34	967	5305
%		41.2	1.9	13.5	100	9.2	5.5	9.4	33.7	74.5	33.2	74.2	4.6	15.4	8.3	44.2	27.4
B21	Unassigned		12	3				1			25	9		1		22	73
%			0.9					0.4			0.4	1.1		+		1.0	0.4
sherd total	E fabrics	1072	1338	333	1	2085	254	250	86	636	5610	857	841	3397	412	2189	19361
% of site total		4.0	92.9	67.8	0.2	61.1	50.5	55.2	44.6	87.8	40.3	60.1	44.7	90.0	9.9	45.9	

General chronological factors are reflected in the total incidence of E wares, which varied very widely from site to site. At both WNB sites, Tollgate and Snarkhurst Wood E wares amounted to between *c* 50% and 61% of sherds, while at Whitehill Road, Hockers Lane and Beechbrook Wood, exceptionally, they comprised 92.9%, 87.8% and 90% of the total sherds respectively, indicating the narrow and (in effect) exclusively early date range for these sites; although small quantities of 2nd century material were present at all it is likely that significant activity had ceased before the end of the 1st century AD. At White Horse Stone, Thurnham, Leda Cottages and Saltwood substantial Late Iron Age and early Roman activity is indicated by E ware levels between *c* 40% and 45%. A roughly similar figure may be postulated for Bower Road; here the problems of distinguishing between fabrics B1 and R1 were particularly acute and R1 was generally used as the 'default' code. As recorded, therefore, R1 amounted to 59.4% of all sherds from Bower Road, greatly in excess of its representation anywhere else, and it may be presumed that a significant proportion of these sherds were probably of fabric B1 and other 'Belgic' grog-tempered wares rather than the later 'native coarse ware' (see further below), though this fabric was undoubtedly quite common at Bower Road.

Only at Pepper Hill, with minimal pre-Conquest activity and (perhaps) a functional bias against vessels in 'Belgic type' fabrics (though the presence of pedestal-jars, almost unknown elsewhere on the CTRL sites, is noteworthy), and at Hazell's Road, an entirely later Roman assemblage, were quantities of E wares negligible. For the rest, their importance underlines the widespread nature of Late Iron Age and early Roman activity across the project area. In all these cases, even when occupation (at varying levels) continued throughout the Roman period, as at Thurnham, it is likely that activity commenced in the Late Iron Age, rather than being exclusively of post-conquest date. In most cases, however, this argument is based on the overall quantity of 'early' pottery in these assemblages, rather than specific and precise dating evidence for individual forms and fabrics. Some of the latter have been assigned relatively close date brackets, in several cases spanning the conquest period (eg the AD 30-70 range assigned to fabrics B5.1 and B5.2). These ranges should perhaps be treated with caution.

4.4.9 *O Oxidised (coarse) wares (Table 4.14)*

Oxidised wares are a rather disparate group of varied importance, ranging from 1% to 21% of site sherd totals. Unsurprisingly they form a small proportion of the primarily Late Iron Age/very early Roman assemblages at Whitehill Road and Snarkhurst Wood, and are entirely absent at Hockers Lane and Beechbrook Wood. They are well-represented (14.2% of sherds) at Pepper Hill, which produced almost 58% of all such sherds from the project and where a wide variety of oxidised fabrics was present. Indeed diversity of fabrics seemed to be

characteristic of the occurrence of this ware group: of its 23 fabrics, 12 or more were present at Pepper Hill, WNB98, Thurnham and Bower Road.

Several distinct traditions were represented. Patch Grove ware (fabric R68 and a variant R68.1, lacking the characteristic black grog of 'typical' Patch Grove ware) comprised some 30% of all oxidised sherds. It was particularly common at Pepper Hill, where it was used for cremation urns, and at WNB98 (Fig. 4.6, No. 84) and Thurnham (Fig. 4.9, No. 63). At all of these sites R68 was the most numerous individual oxidised fabric. Local north (as opposed to north-west) Kent sources were also important. Fine 'Upchurch' fabrics R17.1, R17.2 and R17.3 were particularly well-represented at Pepper Hill, as might be expected (eg Fig. 4.14, Grave 11366 ON 4141, Grave 12005 ON 4222), and were also relatively common at Northumberland Bottom and Thurnham. More surprisingly, they comprised 58.2% of all the oxidised sherds at Saltwood, but these sherds were on average very small (2.2 g, totalling 2.2% of weight), with only two vessels represented by tiny rim fragments. This characteristic of fragmentation was also seen at Pepper Hill (and applies also to the equivalent reduced fabric R16), though not quite to the same extent. A range of flagons, beakers and dishes was present. A further probable north Kent tradition was represented by a group of sandy fabrics (R74.1-R74.3) which occurred mainly at Pepper Hill, where they were used for a variety of forms (including flasks, jars, beakers and dishes), but with only a few examples of each (eg Fig. 4.14, Grave 1109 ON 4518 and 4520 in fabric R74.3). These fabrics are strictly unsourced, but it is likely that they are oxidised equivalents of the reduced Thameside fabrics of the R73 group. The other major regional tradition represented was that based at Canterbury (fabrics R6.1, R6.3, R9.1, R9.2 and R96), although these fabrics only accounted for *c* 7% of all oxidised sherds. Some 42% of these came from Thurnham (eg Fig. 4.7, No. 51), while the majority of the remainder came from Bower Road and Saltwood, sites which, being towards the south-eastern end of the route, had relatively easy access to the production centre at Canterbury and were both occupied through the 2nd century, the major period of production of the industry.

A further group of oxidised fabrics, R8.1-R8.3, was less well-defined. These are generally undiagnostic finely sand-tempered fabrics which may include some products of both north Kent and Canterbury origin, as well as other unknown sources within the region, although examples from Leda Cottages (Fig. 4.9, Nos 21 and 22, in fabrics R8.3 and R8.1 respectively) are attributed to Canterbury. These fabrics were encountered across the project area in modest quantities. Like the other oxidised fabrics already discussed, they seem to be most common in the later 1st and 2nd centuries rather than later. This period also saw the arrival at Pepper Hill of an 'exotic' oxidised fabric - Severn Valley ware (fabric R153), represented by a single tankard of late 1st-early 2nd century type. This is so far outside the normal western and northern distribution of the ware (eg Tyers 1996, 199, fig. 254 - note a

single findspot in London on this map) that it seems likely to represent the movement of an individual vessel with its owner rather than a typical trade process.

A single specifically late-Roman fabric is assigned to the oxidised ware group - this is fabric LR6, the buff 'Portchester D-type' fabric, which is reasonably well-distributed in Kent (eg Pollard 1988, 158, fig. 52) and presumably reached the county through the same distributive arrangements as reduced Alice Holt type wares (fabrics LR5 and LR5.1). Fabric LR6 was confined to Thurnham (44 sherds) and the small late Roman assemblage at Hazells Road (11 sherds), with a single fragment from WNB98B. Both jars and dishes were represented at Thurnham (Fig 4.10, Nos 136 and 137) while only jars were present elsewhere, including a lid-seated example from Hazells Road.

4.4.10 R Reduced (coarse) wares (Table 4.15)

The incidence of reduced wares was very variable across the project area, the variation in the range being determined largely by chronological factors. So at Whitehill Road, Hockers Lane, Snarkhurst Wood and Beechbrook Wood, all with Late Iron Age to early Roman date ranges and therefore dominated by 'E' wares (above), reduced wares totalled 3.5%, 0.4%, 1.8% and 6% of sherds respectively. A 'middling' (10%-40%) representation of reduced wares was seen at a number of sites with significant Late Iron Age activity but where occupation continued well into the Romano-British period. The four sites in the lower part of this range (10%-16%) all lay in the north-western part of the route (Northumberland Bottom (WNB98 and WNB98B), Tollgate and White Horse Stone). Here the relative scarcity of reduced wares, despite the reasonable proximity of sources of fine and other reduced wares (such as Upchurch fabric R16 and the Thameside (R73 etc) fabrics) emphasises the absence of significant activity at these sites after about the middle of the 2nd century. The reduced wares that were present were drawn mainly from the local sources already mentioned, supplemented by the grog-tempered 'native coarse ware' (fabric R1) that continued the 'Belgic' grog-tempered ware tradition (fabric B1 etc) which had been important at all these sites. The firing of these grog-tempered wares was often somewhat irregular and they cannot always be regarded as strictly reduced, but it seems clear that the potters were generally intent on producing vessels with dark surfaces, hence the rather loose categorisation as reduced wares.

In the central and south-eastern part of the project area reduced wares were more common at Thurnham, Leda Cottages and Saltwood (28.5%, 39.7% and 27.3% of sherds respectively), but were less numerous than grog or sand-tempered E wares. A similar situation might have prevailed at Bower Road but there, as noted above, the majority of grog-tempered sherds were assigned to fabric R1 rather than to B1. Since this single fabric accounted for 59.4% of all sherds at Bower Road, it is unsurprising that this site apparently had the highest representation of reduced wares of all the CTRL assemblages, at 75.5% of sherds. Across the

project as a whole, however, the ratio of the main grog-tempered Belgic fabrics (B1, B2 and B2.1) to R1 ranges from the completely overwhelming to 3.4:1 at Saltwood. Applying the latter (most generous) ratio to the Bower Road material reduces R1 to roughly 15% of sherds and the overall level of reduced wares at Bower Road to *c* 31.5%, entirely consistent with the other sites with similar date ranges in this area. It is emphasised that this is an hypothetical exercise - it is possible that there were particular factors at Bower Road that gave this site a distinctive ceramic profile, but there is no other evidence of this and the suggested emendation gives at least an indication of how this assemblage might have compared with those spatially and chronologically closest to it.

The sites that certainly stand outside the patterns discussed so far are Pepper Hill and Hazells Road. At Pepper Hill reduced wares totalled 58.7% of sherds, but these were in a relatively small number of fabrics. The fine Upchurch fabric R16 was an important component but the sandy Thameside fabrics, particularly R73.3, were especially dominant. Together, Upchurch and Thameside reduced wares accounted for 89.6% of all reduced sherds from Pepper Hill - and almost 95% of reduced vessels by rim count. Less important was fabric R100, a coarse hard-fired grey-black sandy ware, the source of which is not certainly known, though its concentration at Pepper Hill and nearby Hazells Road and its character strongly suggest a Thameside origin and affinities with fabric R73.1. Two relatively minor reduced wares were the fine sandy fabric LR2.1, which may also have been of local (Thameside) origin, and the fine Highgate Wood fabric C (fabric R67), of which only part of a single jar was present.

Upchurch fine grey ware (fabric R16) and the Thameside (R73-R73.4) products were the most widely distributed reduced wares and were still quite well-represented at the south-east end of the route at sites such as Bower Road and Saltwood. At Thurnham these fabrics accounted for 33.6% and 34.4% respectively of reduced sherds. Much of the rest of this assemblage was composed of late Roman grog-tempered and sand-tempered fabric groups LR1 and LR2. The exact sources of these are not known, nor are those of the middle Roman grog-tempered 'native coarse ware' tradition, though multiple production centres, each perhaps with a localised distribution, may have been involved. On the grounds of distribution the Ashford area can be suggested as the source for one grog-tempered fabric (fabric B2.3) in this general category. It was particularly common at Westhawk Farm (Lyne forthcoming) and in the present assemblages was quite well-represented at Leda Cottages, with a further four sherds from Thurnham.

Other components of the reduced ware assemblage at Thurnham were Canterbury products, fabrics R4 and R5. The occurrence of these was sporadic across the project area. R4 was only seen at Thurnham while R5 was found at six sites, but in minimal quantities at three of these. Only at Thurnham and Bower Road did R5 amount to more than 1% of the total

sherds from the site (2.6% in the latter case). A further reduced fabric that was also relatively well-represented at Bower Road and occurred in small quantities at six other sites was R7. Its source is unknown, but its fine sandy character and its use particularly for beakers, including poppyhead and carinated types, suggests a connection with the north Kent industries.

Extra-regional reduced wares were scarce. Most common were certain or probable products of the Alice Holt/Farnham industry (Lyne and Jefferies 1979). In the late 1st and 2nd centuries these occurred at WNB (and the adjacent sites WNB98B and HRD), Thurnham and Bower Road (fabric R26), while the better known late Roman equivalent (fabric LR5) was seen in greater quantities at Hazells Road and again at Thurnham and Bower Road. At Saltwood it was scarce but occurred alongside a possible local version (fabric R5.1) of uncertain origin. Small quantities of this fabric were also seen at Thurnham and Hazells Road. Fine reduced Highgate Wood C (fabric R67) was noted at Pepper Hill (above) and also occasionally at Northumberland Bottom, Thurnham and even Saltwood. Pollard (1988, 68) notes the presence of this fabric at Dover, however, so the Saltwood example can be seen in the context of its occasional appearance even in south-east Kent. A less common occurrence was that of a single sherd of Much Hadham black-slipped grey ware (fabric LR13.1) at Thurnham. Imported reduced wares, not uncommon in east Kent (eg Pollard 1988, 86; Booth 1994, 98 for further examples from Dover) seem not to have occurred on CTRL sites except for two probable sherds from Saltwood (fabric R95).

Overall, therefore, reduced ware provision was dominated by relatively local sources, but with a tendency for north Kent sources to dominate even outside their immediate neighbourhood. Sherds in fabrics of the R73 group cannot be specifically linked with individual kilns, but certainly belong to the Thameside production tradition. This area is defined by Monaghan (1987, 21) as located 'north of the ridge of the Hoo peninsula and east of Gravesend'. The label Upchurch has been used by Monaghan, to relate to 'all pottery production in and around the Medway estuary' (*ibid.*). The archetypal 'Upchurch' fine fabric R16 and associated fabrics are assigned to this source area, but other coarser sandy wares, both reduced and oxidised, could have been produced here. In the present report the term Upchurch has been used, except where clearly stated otherwise, in the context of the fine fabrics rather than the wider range - the latter are generally referred to as Thameside products, whether deriving from the area defined as such by Monaghan or including vessels manufactured in the Upchurch area.

Table 4.14: Quantification (sherd count) of oxidised wares by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst Wood	Leda Cottages	Beech-brook Wood	Bower Road	Salt-wood	TOTAL
BER14	O														1		1
R6.1	O					18		16			84	3	5		97		223
R6.3	O										125		9		29		163
R8.1	O	2	9	4	3	21	12	1			37		39		75	1	204
R8.2	O	54		1	1	4					15				2		77
R8.3	O	60	2			5	8				134		42		23		274
R9.1	O														1	98	99
R9.2	O	4													1	9	14
R17.1	O	708	32	23		103	11	13	19		289	1	5		35	361	1600
R17.2	O	820				5	60								4	2	891
R17.3	O	60				9	5				5				15		94
R68	O	1364	2	3	6	131	3	7			505	2			2	14	2039
R68.1	O										75	8	5				88
R70	O										4				1	2	7
R71	O	261				1					3		1			48	314
R74	O														12		13
R74.1	O	242	2	1	4	18		1	8		4					89	368
R74.2	O	32				1											33
R74.3	O	141			1												142
R96	O					1	4				1				4		10
R153	O	30															30
R154	O	13															13
LR6	O				11		1				44						56
subtotal	O	3791	47	32	26	317	104	38	27		1325	14	106		302	624	6753
% of site total		<i>14.2</i>	<i>3.3</i>	<i>6.5</i>	<i>6.0</i>	<i>9.3</i>	<i>20.7</i>	<i>8.4</i>	<i>14.0</i>		<i>9.5</i>	<i>1.0</i>	<i>5.6</i>		<i>7.2</i>	<i>13.1</i>	

Table 4.15: Quantification (sherd count) of reduced wares by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurn-ham	Snark-hurst Wood	Leda Cottages	Beech-brook Wood	Bower Road	Salt-wood	
B2.3	R/O										4		102	8			114
BER1	R/O					6											6
R1	R				70	46	2	1			65		82		2480	297	3043
R1.2	R						2									34	36
R2	R					1											1
R3	R														4	3	7
R4	R										14						14
R5	R					1	1				163		11	15	109	3	305
R7	R		1		2	20	4				6				123	23	179
R16	R	3812		13		136	25	1		2	1334	19	230	188	261	306	6327
R18.2	R															9	9
R19	R				1		19				1				11		32
R26	R				6	46	1				19				23	1	96
R29	R	1									2					3	4
R67	R	58				3	1				5					2	69
R73	R	723	44	45	19	118	22	44			851		139	10		203	2218
R73.2	R	63									289	2					354
R73.3	R	9238							25	1	148				59		9471
R73.4	R	236									78	1					315
R95	R															2	2
R100	R	1193	5		63	1			6		2						1270
R101	R				5												5
R102	R	2						12									14
R104	R										10						10
R155	R												153				153
R156	R												18				18
LR1	R				32		2				54				35	341	464
LR1.1	R										102						102
LR1.3	R										84						84
LR1.4	R										23						23
LR1.5	R										93						93
LR1.6	R										39						39
LR2.1	R	375									60		1		2	6	444

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehil l Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	
LR2.2	R										353	3	11	5		28	400
LR2.3	R						1				42				5	3	51
LR2.4	R										11						11
LR4	R										1				1		2
LR5	R				99						113				41	7	260
LR5.1	R				3		1				4					15	23
LR13.1	R										1						1
LR26	R															15	15
subtotal	R	15701	50	58	300	378	81	58	31	3	3971	25	747	226	3154	1301	26083
% of site total		<i>58.7</i>	<i>3.5</i>	<i>11.8</i>	<i>69.4</i>	<i>11.1</i>	<i>15.9</i>	<i>12.8</i>	<i>16.1</i>	<i>0.4</i>	<i>28.5</i>	<i>1.8</i>	<i>39.7</i>	<i>6.0</i>	<i>75.5</i>	<i>27.3</i>	

4.4.11 B Black-burnished wares (Table 4.16)

Black-burnished ware of probable Dorset origin (BB1, fabric R13) occurred in very small quantities at Pepper Hill, Hazells Road, Thurnham (eg Fig. 4.9, No. 103) and Bower Road, with but a single sherd from Saltwood. The only vessel from Pepper Hill assigned to this fabric was a plain rimmed dish probably of late 2nd or 3rd century date, but this vessel, although hand-made, was noted as being possibly of 'local' origin. Rims of two plain dishes and a cooking pot were present at Bower Road.

The majority of black-burnished type ware sherds were of BB2 of north Kent origin. These were mostly in fabric R14, which could have included BB2 from other sources, but no non-Kentish material was confidently identified. There was little meaningful difference between fabric R14 and the Thameside R73.1. The same Thameside reduced fabrics were used for a wide range of forms including standard types in the black-burnished repertoire and a others quite outside it. The sherds assigned to fabric R73.1 are mostly of unburnished grey wares that happen to be in black-burnished ware forms. A few non-standard examples were assigned to fabric R14.1, including a platter of form VC1 from Bower Road, in a fairly coarse sandy black fabric.

The north Kent black-burnished wares formed a variable proportion of CTRL assemblages, though it is striking that the range of variation in its occurrence was considerably less than for most other major ware groups. Where present it fell between 1.6% and 5.9% at all sites except Pepper Hill, where it was minor component. Here some 14 vessels, all bowls and dishes (Monaghan classes 5C1, 5C4, 5D1 (3), 5D2 (3), 5E1 (5) and 5F3) only amounted to 0.7% of sherds (but 3.5% of EVEs; eg Fig. 4.17, Grave 451 ON 4562 and 4564). Other sites such as Bower Road had a more typical range of vessel types including cooking pots as well as the open forms favoured in the cemetery assemblage. The distinction may be slightly spurious, however, in the sense that many of the jars used as cremation urns at Pepper Hill were in the closely related Thameside fabrics such as R73.3, effectively a continuum with the BB2 fabric used for bowls and dishes there.

The highest representation of BB2 was in the small late Roman assemblage at Hazells Road and, perhaps more significantly, at Thurnham, where the BB2 fabrics R14 and R73.1 amounted to 5.9% of all sherds but again, as at Pepper Hill, the representation in terms of EVEs was higher, at 10.7%, here with a full range of the principal vessel types of the BB2 range (eg Fig. 4.9, Nos 65-73).

4.4.12 C Calcareous (shell-tempered) fabrics (Table 4.17)

Shell-tempered fabrics were a component of the E ware group, shell appearing as a secondary inclusion type in some grog-tempered fabrics of minor importance and as the principal inclusion in fabric B6. The evidence for the occurrence of these fabrics (see above) suggests a

connection with the later shell-tempered tradition of fabric R69, the only numerically significant Roman period fabric in the C ware group. Macroscopically the two fabrics are very similar. There was a tendency for B6 to be more mixed than R69, with grog and occasionally other inclusions as well. R69 could also contain some grog, however, though it was generally 'cleaner' (and slightly better fired) than B6. Forms in the latter fabric were often simple jars of Middle Iron Age character. None of these distinctions was clear cut, however, and it seems clear that the two fabrics represent a continuous tradition, the north Kent location of which is not in doubt.

Fabric R69 was quite well-represented at Pepper Hill (6.1% of sherds) where it occurred principally as jars (mostly used as cremation urns, although bowls/dishes were also found), but overall R69 EVEs only amounted to 2.0% of the site total. R69 was common in the other early Roman north Kent assemblages as well; particularly at Northumberland Bottom (eg Fig. 4.6, Nos 69 and 70) and Tollgate. At the latter site it amounted to 21.2% of sherds and 33.8% of weight, emphasising the use of this fabric for large storage jars (Monaghan 1987 class 3D, eg Pollard 1988, 48, no. 16; Booth 1998, 11, no. 16) away from the cemetery context of Pepper Hill. South-east of Tollgate fabric R69 occurred only at Bower Road, where the five sherds included two rim fragments from storage jars of Monaghan class 3D1. This occurrence makes the total absence of the fabric at Thurnham rather surprising, though it must be indicative in general of the fall-off in the distribution of R69 away from the north Kent coast. It is likely that the large storage jars were the main, and perhaps the only, significant vessel type reaching these more remote parts of the distribution area.

The only other fabric assigned to this ware group was LR3, a Roman wheel-thrown fabric. The source of this is uncertain, but it is quite likely that it includes, if not comprising principally, products of the Harrold industry (Brown 1994). LR3 occurred at three sites, Thurnham, WNB98 and Hazells Road, but was only relatively common (4.4% of sherds) in the small late Roman group from the last site. Two small undiagnostic jar fragments were the only rims in that group, however, so little can be said about the range of forms present. All the sherds at Thurnham were from a single jar as Pollard (1988, 159) type 212, a type which also occurred at Thurnham in Alice Holt fabric LR5.

Table 4.16: Quantification (sherd count) of black-burnished wares by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Saltwood	TOTAL
R13	B	18			3						6				15	1	43
R14	B	196			5	83		3		4	814	26	57	20	97	43	1349
R14.1	B										4				1		4
R73.1	B			2	17	7	7	6			5		6		1	56	109
subtotal	B	214		2	25	90	7	9		4	829	26	63	20	114	100	1506
% of site total		<i>0.8</i>		<i>0.4</i>	<i>5.8</i>	<i>2.6</i>	<i>1.6</i>	<i>2.0</i>		<i>0.6</i>	<i>6.0</i>	<i>1.8</i>	<i>3.3</i>	<i>0.5</i>	<i>2.7</i>	<i>2.1</i>	

Table 4.17: Quantification (sherd count) of shell-tempered wares by site

CAT code	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll-gate	White Horse Stone	Hockers Lane	Thurnham	Snark-hurst Wood	Leda Cottages	Beechbrook Wood	Bower Road	Saltwood	TOTAL
R69	C	1630		59	12	332	18	96							5		2152
LR3	C				19		3				10						32
subtotal	C	1630		59	31	332	21	96			10				5		2184
% of site total		<i>6.1</i>		<i>12.0</i>	<i>7.2</i>	<i>9.7</i>	<i>4.2</i>	<i>21.2</i>			<i>0.1</i>				<i>0.1</i>		

4.4.13 Miscellaneous fabrics

Sherds assigned to catch-all coarse and 'fine' ware categories R109 and R110 were most prominent at Thurnham and Saltwood, where they comprised 1.9% and 3.3% of sherds respectively. Elsewhere such sherds occurred sporadically. The only significant (but numerically scarce) miscellaneous fabric was BER15 - so called 'chaff-tempered ware' used for salt containers (Macpherson-Grant 1980b). This was found principally from Thurnham south-eastwards, with a relatively high representation at Beechbrook Wood and Saltwood in terms of numbers of fragments - these are always small (for quantities see Table 4.4). This presumably reflects a south coast origin for this material, probably at salt-production sites in Romney Marsh, though salt production was also a significant activity on the north Kent coast.

Table 4.18: Quantification of ware groups from all main assemblage groups by sherd count

	OA ware group	Pepper Hill	Zone 1 Whitehill Road	Zone 2 SSR	HRD 99	WNB 98	WNB 98B	Toll- gate	White Horse Stone	Hockers Lane	Thurn- ham	Snark- hurst Wood	Leda Cottages	Beech- brook Wood	Bower Road	Salt- wood	TOTAL
subtotal	S	444	1	5	2	41	3	2	1	1	206	9	51	9	79	85	939
	%S	1.7	0.1	1.0	0.5	1.2	0.6	0.4	0.5	0.1	1.5	0.6	2.7	0.2	1.9	1.8	1.4
subtotal	F	179	2	2	40	2			8	12	206			29	44	85	609
	%F	0.7	0.1	0.4	9.3	0.1			4.1	1.7	1.5			0.8	1.1	1.8	0.9
subtotal	A					43	2				128		8	9	12	44	246
	%A					1.3	0.4				0.9		0.4	0.2	0.3	0.9	0.4
subtotal	M	5			4		2				37	8	19		10	16	101
	%M	+			0.9		0.4				0.3	0.6	1.0		0.2	0.3	0.2
subtotal	W	885	3		3	101	7		1		148	20	7	3	37	74	1289
	%W	3.3	0.2		0.7	3.0	1.4		0.5		1.1	1.4	0.4	0.1	0.9	1.6	2.0
subtotal	Q	2839				17	22		39	2	89	1	10			5	3024
	%Q	10.6				0.5	4.4		20.2	0.2	0.6	0.1	0.5			0.1	4.7
Subtotal	FSetc	4352	6	7	49	204	36	2	49	15	814	38	95	50	182	309	6208
FSetc	%	16.2	0.4	1.4	11.3	6.0	7.2	0.4	25.4	2.1	5.9	2.7	5.0	1.3	4.4	6.5	9.7
subtotal	P									66	1066	462	5	2			1601
	%P									9.1	7.7	32.4	0.3	0.1			2.5
subtotal	E	1072	1338	333	1	2085	254	250	86	636	5610	857	841	3397	412	2189	19361
	%E	4.0	92.9	67.8	0.2	61.1	50.5	55.2	44.6	87.8	40.3	60.1	44.7	90.0	9.9	45.9	29.9
subtotal	O	3791	47	32	26	317	104	38	27		1325	14	106		302	624	6753
	%O	14.2	3.3	6.5	6.0	9.3	20.7	8.4	14.0		9.5	1.0	5.6		7.2	13.1	10.5
subtotal	R	15701	50	58	300	378	81	58	31	3	3971	25	747	226	3156	1301	26086
	%R	58.7	3.5	11.8	69.4	11.1	15.9	12.8	16.1	0.4	28.5	1.8	39.7	6.0	75.6	27.3	40.8
subtotal	B	214		2	25	90	7	9		4	829	26	63	20	114	100	1503
	%B	0.8		0.4	5.8	2.6	1.6	2.0		0.6	6.0	1.8	3.3	0.5	2.7	2.1	2.4
subtotal	C	1630		59	31	332	21	96			10				5		2184
	%C	6.1		12.0	7.2	9.7	4.2	21.2			0.1				0.1		3.2
BER15	-					1					24	2	11	74	4	87	203
R109	-					5					257	2	14	6		144	428
R110	-										5					11	16
TOTAL		26760	1441	491	432	3412	503	453	193	724	13911	1426	1882	3775	4175	4765	64343

4.5 Vessel classes

Detailed treatment of the range of vessel types and their correlation with fabrics will be found in the individual assemblage reports. Discussion here deals with the broader patterns of vessel use seen across the whole project, the data for which are summarised in Table 4.19. The specific use(s) of an individual vessel can rarely be determined with certainty; some vessels are potentially multifunctional and others may have different uses in different contexts. This is seen most clearly with the vessels in the Pepper Hill cemetery. Some of these, such as beakers and dishes, may have been intended to duplicate in the grave the functions that they had in daily life. By contrast, however, most if not all of the vessels used as cremation urns had probably already had a functional life as (*inter alia*) cooking pots and storage vessels (see further below), while at Saltwood a number of butt beakers were used as cinerary containers. The broad classification used here imposes traditional labels on groups of vessels of broadly comparable shape and proportions for ease of reference. It is emphasised that these labels do not necessarily indicate precise function.

Table 4.19: Quantification (by EVEs, with row %) of principal vessel classes by site

Form	I Flagon	II Jar	III Beaker	IV Bowl/ Dish	IV/V Dish/ Plate	VI Cup	VII Mort- arium	IX Misc Lid	X Amph- ora	Uncertain	Total EVEs
Site											
Pepper Hill	42.57	52.27	41.03	54.77	39.17	7.56	0.78	3.67			241.82
	17.6	21.6	17.0	22.6	16.2	3.1	0.3	1.5			
Whitehill Road	0.29	6.65	0.38	0.09	0.17			0.30		1.61	9.49
	3.1	70.1	4.0	0.9	1.8			3.2		17.0	
SSR		0.77			0.03					0.61	1.41
		54.6			2.1					43.3	
Hazells Road		0.72		0.96			0.29			0.02	1.99
		36.2		48.2			14.6			1.0	
WNB98	3.79	16.34	2.05	1.19	2.16			0.35			25.88
	14.6	63.1	7.9	4.6	8.3			1.4			
WNB98B		2.58	0.10	0.51		0.02		0.05		0.08	3.34
		77.2	3.0	15.3		0.6		1.5		2.4	
Tollgate		1.58	0.35	0.10	0.02			0.05			2.10
		75.2	16.7	4.8	1.0			2.4			
White Horse Stone		0.51		0.17	0.12						0.80
		63.7		21.3	15.0						
Hockers Lane	0.05	3.25		0.05	0.47						3.82
	1.3	85.1		1.3	12.3						
Thurnham	6.34	69.89	9.19	12.84	11.94	3.40	2.96	3.63	0.37		120.56
	5.3	58.0	7.6	10.7	9.9	2.8	2.5	3.0	0.3		
Snarkhurst Wood		8.21	0.05	0.55			0.09	0.63			9.53
		86.1	0.5	5.7			0.9	6.6			
Leda Cottages	4.39	12.92	0.99	3.13		0.10	0.21	0.10	0.47	0.08	22.39
	19.6	57.7	4.4	14.0		0.4	0.9	0.4	2.1	0.4	
Beechbrook Wood	0.88	27.80	1.40	1.69	1.08	0.09		0.36			33.30
	2.6	83.5	4.2	5.1	3.2	0.2		1.1			
Bower Road	2.25	13.29	2.41	4.59	0.50	0.83	0.39	0.65		0.86	25.77
	8.7	51.6	9.4	17.8	1.9	3.2	1.5	2.5		3.3	

Form	I Flagon	II Jar	III Beaker	IV Bowl/ Dish	IV/V Dish/ Plate	VI Cup	VII Mort- arium	IX Misc Lid	X Amph- ora	Uncertain	Total EVEs
Site											
Saltwood	0.55	6.19	0.56	4.02		0.35	0.17			1.71	13.55
	4.1	45.7	4.1	29.7		2.6	1.3			12.6	
TOTAL	61.11	222.99	58.51	84.66	55.66	12.35	4.89	9.79	0.84	4.97	515.75
%											

The EVEs totals from several of the assemblages are notably small, but it is nevertheless apparent that they demonstrate fairly consistent patterning; despite size limitations, therefore, they appear to be reasonably reliable. The most immediately obvious variables that affect the composition of these assemblages are chronology and site function. Their operation together, alongside less easily defined factors such as site status, can result in a complex pattern of variation in assemblage composition. Fortunately there are assemblages in which the effects of the first two variables can be identified quite clearly.

The majority of the assemblages from this project have a strong Late Iron Age to early Roman chronological emphasis, as already discussed. Although there are indications of late Roman activity at a number of sites this was usually at a significantly lower level than that of early Roman occupation, as for example at WNB98, Thurnham, Bower Road and probably Saltwood. It is therefore to be expected that these assemblages would be dominated by jars, in line with a widely-observed trend (eg Millett 1979, 38-39; Evans 2001, 28), and broadly this is what is seen here. The representation of jars ranges from 21.6% at Pepper Hill to 86.1% at Snarkhurst Wood, but is generally in the upper half of that range - only at Pepper Hill, Hazells Road and Saltwood do jars comprise less than 50% of all vessels

The lowest jar representations are easily explained. The composition of the Pepper Hill assemblage, derived almost entirely from cemetery material, is quite different from that of the domestic sites. As a cemetery assemblage it will be discussed separately, but here it should be noted that the majority (c 60%) of the jars at Pepper Hill were cremation urns: beyond this specific use, therefore, the occurrence of jars there was very low indeed.

Different factors were at work at Hazells Road, where jars amounted to 36.2% of EVEs. Here it is possible that the small size of the assemblage has resulted in unreliable figures, but this assemblage is also notable for its late Roman emphasis, unique amongst the CTRL sites. It is quite possible, therefore, that the distinct character of the vessel assemblage, as expressed in terms of the ratio of jars to bowls and dishes, reflects this late Roman emphasis. This argument is supported up to a point by the data from Saltwood, Bower Road and Thurnham, all of which do have a late Roman component in their assemblages and correspondingly relatively low representations of jars (45.7%, 51.6% and 58% respectively), and probably also by Leda Cottages where, although 4th century activity was absent, the

majority of the pottery came from contexts dated *c* AD 150-270, this middle Roman emphasis resulting in a figure of 57.7% for jars.

All the other assemblages, with jar representations from 63% upwards, were more predominantly of early date than those just discussed - ie they usually had only a minor component of material dating from the mid 2nd century onwards. This applies to the very small assemblage from South of Station Road, where over 43% of EVEs were of 'unidentified' types, but most of the small rim sherds involved are thought likely to have derived from jars, even though this was not clearly demonstrable. Jar representation at this site is therefore likely to have been significantly higher than the 54.6% recorded. The very highest figures for jars, from 83.5% to around 86%, occurred at Hockers Lane, Snarkhurst Wood and Beechbrook Wood, sites in the central part of the route with date ranges concentrated in the 1st century AD. On this basis the CTRL data indicate that Kent follows the observed trend, at least for southern Britain, of a ?gradual change from jar dominated assemblages to more mixed groups. There are too few assemblages with quantifiable period groups to allow this trend to be detailed with much precision, but it can be crudely illustrated at Thurnham, where the representation of jars declined from 90.4% of EVEs (total 6.28) in the Late Iron Age to 56.2% in the generalised 'Roman' phase.

The process of diversification of assemblages generally involved an increase in the representation of all non-jar type classes with the passage of time, but the absolute quantities of some of these classes (for example, mortaria and amphorae) are such that growth in their importance can rarely be tracked precisely. The most consistent trend, inevitably therefore, is the increase of bowls/dishes at the expense of jars (cf Fig. 4.11). Open forms (bowls, dishes and platters), in effect entirely absent in the Middle Iron Age, appeared in the Late Iron Age in small quantities. In the Late Iron Age at Thurnham open forms only amounted to 0.8% of the vessels in contexts of that phase (as opposed to material of Late Iron Age date that occurred residually in later phases). In the predominantly 1st century assemblages of Snarkhurst Wood, Beechbrook Wood and Hockers Lane the figures were 5.7%, 8.3% and 13.6% respectively, most of the last being accounted for by a single Terra Rubra platter (Fig. 4.3 top, No. 12. Nos 10 and 14 in the same group have minimal EVEs values). Notably low representations of open forms (ie comparable to or less than that of Snarkhurst Wood) at Whitehill Road (2.7%) and Tollgate (5.7%) also conform to the pattern deduced from chronological trends. With the exception of the tiny (and therefore statistically unreliable) assemblage from White Horse Stone, however, all the sites with more than *c* 20% open forms (Thurnham, Bower Road, Saltwood and Hazells Road) fall in the group already discussed in relation to jars whose assemblages contained a distinct, though not generally dominant, late Roman component. The trend is seen in extreme form at Hazells Road, where bowls and dishes comprised 48.2% of the assemblage. This was the only group in which open forms

were more numerous than jars in absolute terms. Comparison of the relative proportions of these two vessel classes at Hazells Road with data assembled by Evans (2001, 27, fig. 5) underlines the similarity with late Roman assemblages elsewhere in southern Britain (the chronological aspect is not explicit in Evans, but is clear from the Alchester points on his figure) and also suggests comparison with urban rather than rural settlement assemblages. The Hazells Road group is insufficiently large for this point to be pushed too far, and there is no other evidence at all to support such a suggestion. This group may hint, however, that the inverse relationship between jar and open form representation continued to develop right through the Roman period in a rural settlement context - and perhaps more so in Kent than in some other parts of southern Britain.

As already indicated, the occurrence of some other vessel classes can be less easily seen in terms of broad chronological trends. The development and growing importance of a range of open forms can be broadly linked to changes in the practices of serving and consumption of food (eg Meadows 1999, 108-110). Vessels related to liquid storage and consumption, flagons/flasks, beakers and cups, are likely to have increased in importance in line with these changes, but did not necessarily follow the same trajectory of development through the Roman period. Their patterns of use are less easily deduced from the available data, partly because of the smaller numbers of vessels involved and the consequence that figures could be easily skewed. Indeed not all of these classes are present on every sites - flagons/flasks, for example, were missing (as EVEs) from four of the small assemblages (WNB98B, Hazells Road, Tollgate and White Horse Stone) and from the early site of Snarkhurst Wood. Similarly, cups were only present in seven of the fourteen main assemblages, and at Beechbrook Wood the only cup was a form 80 of late 2nd century date, clearly irrelevant to the main Late Iron Age-early Roman phase of activity. Assemblages from which cups were absent were again mostly relatively small, but included the group from Northumberland Bottom (25.88 EVEs). In a collection such as this the absence even of common samian ware forms such as Drag 27 and Drag 33 is noteworthy, but its significance remains uncertain. Beakers were relatively well-represented at this site and flagons/flasks were particularly common, occurring in greater quantities only at Pepper Hill and Leda Cottages. In small assemblages the importance of flagons/flasks measured by EVEs can be exaggerated by the survival of one or two complete rims, but this has not happened here, the sites with high representations of these types being amongst the larger assemblages. At Leda Cottages it has been suggested that the high percentage of flagons, flasks and amphorae (eg Fig 4.9) may be accounted for by their use as water containers for quenching in association with iron working on the site.

Overall, therefore, there are no clear chronological trends in the incidence of drinking vessels and associated containers, beyond the general observation that both are relatively rare

in the very earliest groups. With two exceptions the occurrence of drinking vessels, where present, ranges from 0.5% to 12.6%. The figure of 16.7% at Tollgate derives from a single vessel, which skews this small assemblage, while at Pepper Hill drinking vessels total 20.1%. The cemetery assemblage, where drinking vessels and associated containers comprise 37.7% of all vessels, is clearly exceptional and in this respect would no more be considered a direct reflection of domestic assemblages than it is with regard to quantities of jars.

The occurrence of important but numerically less common forms is even more difficult to assess. Mortaria, for example, are absent from seven of the fourteen main assemblages, and in six of these are not even represented by body sherds. They were most common at Thurnham, where they totalled 2.5% of vessels (leaving aside the anomalous figure of 14.6% in the very small assemblage at Hazells Road). Elsewhere mortaria did not exceed 1.5%. As a general rule they are absent, as might be expected, from the smaller and earlier assemblages, although there are occasional exceptions to this. The most notable absences are from the early Roman sites of the WNB group - most extraordinarily from WNB98 itself. A chronological factor may be at work here, but in view of the size of the WNB98 assemblage a functional characteristic of the assemblage may be a better explanation.

Amphorae were always scarcer than mortaria in terms of vessel numbers (but not by sherd count of the relevant fabrics, see above) and were represented by rims only at Thurnham and Leda Cottages, although body sherds were present at a further five sites. As already indicated, olive oil amphorae (Dressel 20 etc) were the most common of these vessels, but it is clear that their use was only ever at a low level.

The category of miscellaneous forms was dominated by lids, which occurred at nine sites, although they were never numerous. There is sometimes a correlation between high representations of lids and of jars, with the expectation that lids would be most common in the early jar-dominated groups, but the CTRL data do not demonstrate such a pattern. The high representation of miscellaneous forms at Snarkhurst Wood is accounted for by a single vessel - a strainer. Lids formed only a small part of the Pepper Hill assemblage, and only one of these was in position on a cremation urn. The disturbed nature of many of the graves may account for the fact that other lids were not found on urns, but from other evidence it is clear that lids, where present in graves, were not invariably placed above cremation urns or other vessel types. Three other vessels, two dishes and a ?jar, had been used as vessel covers.

A variety of miscellaneous forms did occur, but such vessels were always rare. At Pepper Hill they included a single tankard - not in itself an unusual form but notable as occurring completely outside its normal 'home territory'. More significant in this cemetery context were 'infant feeders' - identified by their small, bulbous bodies, short, narrow necks and short spouts (eg Fig. 4.14, Grave 12114 ON 4219). Five examples were recovered, one from a cremation and four from inhumation burials. These were all in local fabrics and of

Monaghan's type 13, which dates broadly from the mid 1st-early 2nd century (Monaghan 1987, 169). The purpose of these vessels has been much discussed, but their association in this cemetery appears to be with child burials in the case of all four inhumations (groups 895, 1200, 11653 and 12115) and an interpretation as infant- (rather than baby-) feeders seems to be substantiated (cf Webster 1981; Crummy 1993, 270-273). A further vessel type with a specific funerary association is the pedestal urn. Four examples of this type, of Belgic ancestry (Thompson 1982 class A) were found at Pepper Hill. All had been used as cremation urns. One was in fabric B8 while the other three were in 'Romanised' Thameside fabric R73 (eg Fig. 4.14, Grave 12005 ON 4225). Two of these were of Thompson type A5, which is known to occur in post-conquest contexts in Essex but has been thought to be absent from Kent (ibid., 66). A further pedestal urn, in fabric B3 with a black slip and probably of Thompson's type A8, was found at Northumberland Bottom. This too had been used as a cremation urn, while a vessel of type A3 in polished black fabric B9.1 from Snarkhurst Wood came from the top of an unexcavated feature (context 20). It is possible that this was another grave. No other certain examples of pedestal urns were identified in the CTRL sites, although a pedestalled jar or beaker in fabric B8 was recovered from cremation burial 14 at Saltwood and a pedestal base of uncertain form came from a ditch context at the same site.

At Pepper Hill an *unguentarium* was recovered, but no lamps or tazze were present. A fragment from a tazza (or perhaps more likely a cup) in fabric B9.1 was found at Thurnham. Fabric B9.1 was also used for a strainer, a substantial part of which was found at Snarkhurst Wood. Two strainer body sherds were found at Saltwood and another unusual form represented only by body sherds was a miniature vessel in fabric B2 from Bower Road. Overall, however, the incidence of these less common, specialised forms is remarkably low, even allowing for the slightly selective nature of the list given above.

4.6 General route-wide discussion

4.6.1 Overall chronological framework

The overall date range within which the assemblages discussed here lie extends approximately from the beginning of the 1st century BC to the end of the Romano-British period (Fig. 4.2). As already indicated, late Roman material is generally scarce and only one assemblage, the small one from Hazells Road, is in effect solely of late Roman date, with the addition amongst the minor sites of a single small isolated pit group from Nashenden Valley (NSH98), probably of the late 3rd century (URS 2000).

With these exceptions, and that of the Pepper Hill cemetery, all the main assemblages or assemblage groups include a Late Iron Age ceramic component and the extensive nature of this trend is underlined by the fact that it is also duplicated in thirteen out of fourteen minor assemblages. In some cases Late Iron Age pottery has been incorporated in reports on later

prehistoric assemblages (see general introduction), but sites producing Late Iron Age material alone, or with Late Iron Age into Romano-British period assemblages, are grouped here. A small minority of sites produced clear evidence of more or less continuous (but not necessarily physically contiguous) activity from the Middle Iron Age (or earlier) into the Late Iron Age and early Romano-British periods. At Little Stock Farm activity extended throughout the Iron Age but not meaningfully into the Romano-British period, so the Late Iron Age pottery was subsumed under that for the later prehistoric period. At Beechbrook Wood an extended late prehistoric sequence culminated in Late Iron Age and early Romano-British activity but separation of material of this date from the earlier pottery was possible, while at Saltwood there may have been a gap in the sequence of activity between Middle and Late Iron Age-Romano-British phases.

In general, therefore, Late Iron Age-Roman sequences were self contained, a fact with major implications for the development of settlement patterns, implying a substantial relocation of these in the later Iron Age. It is unclear, however, that this development was matched by corresponding changes in ceramic traditions. In the sites that appear to have been established *de novo* at about this time ceramic components of Middle Iron Age handmade character are identified but these, including fabrics tempered with flint and/or quartz sand (the MLIA and LIAB fabrics of the broad 'P' ware group), mostly seem to have been contemporary with fabrics of 'Belgic' character and represent a different potting tradition rather than a chronologically distinct phase of activity. Only at Hockers Lane is it likely that a slightly earlier ceramic tradition lay at the beginning of the sequence. Here, vessels in the common glauconite-tempered fabric B9.1 included three rims of probable or possible saucepan pot forms (eg Fig. 4.3 top, No. 7). Their presence suggests continuity between the Late Iron Age glauconite tempering tradition, which was clearly particularly important in the central part of the Section 1 route, around Thurnham, and Middle Iron Age traditions in the same general region, as the importance of glauconitic fabrics here in the Middle Iron Age has already been discussed (Morris, above). The Late Iron Age/early Roman glauconitic tradition generally survived in contemporary use with 'Belgic' grog-tempered fabrics, although at Queen Elizabeth Square, Maidstone, it was suggested that their use was sequential (Biddulph 2003, 18). Its importance in the area is well known (Pollard 1988, 31) and is indicated for example by its apparent dominance of a group of pottery from Quarry Wood Camp, Loose (Kelly 1971, 78-84), which parallels its occurrence at Hockers Lane, Thurnham and Snarkhurst Wood. The exact sources of this material remain uncertain (cf Peacock and Williams 1978), although Lyne has suggested that one may lie very close to Snarkhurst Wood on the basis of the concentration of fabric B9.1 there.

Evidence from Snarkhurst Wood appears to show that glauconite-tempered fabrics were in use earlier than the flint and flint/sand tempered fabrics of the P group. The late

emergence of the latter is curious, because flint and flint-and-sand tempering traditions were widely established across the region in the early/Middle Iron Age (see Morris above), but it seems that they were considerably reduced in importance later. Their localised reappearance at sites in the central section of the CTRL route appears therefore to be a phenomenon distinct from earlier traditions, but was probably related to the contemporary use of these fabrics in east Kent (cf. Thompson 1982, 12-14). Equally, a comparison of Hockers Lane and the earliest groups from the closely adjacent site of Thurnham indicates that the glauconitic fabrics preceded the appearance of grog-tempered ones, although there still seems to have been a substantial overlap in the chronology of the two traditions. Absolute dating remains elusive, however. Despite the use of the term 'Belgic' in the labelling of B9.1 and related fabrics it is arguable on the basis of the relative chronology of the traditions and the typological characteristics of B9.1 that this term is not appropriate, at least for the early stages of the tradition.

The earliest appearance of grog-tempered fabrics is equally difficult to establish precisely. The problem is exacerbated by the relative lack of independently dated assemblages with a significant Middle/Late Iron Age component. At one of the few such sites fulfilling the latter criterion, Little Stock Farm, the latest groups appear to have been dominated by grog-tempered fabrics (cf. Fig. 3.9). At Beechbrook Wood, there is a radiocarbon date of 100 cal BC-130 cal AD (NZA-21220, 1989±45BP, Allen 2006) for a ditch group dominated by grog-tempered pottery. This is entirely consistent with the ceramic date of *c* AD 25-60 for this group, but hardly helps address the issue of the earliest appearance of grog-tempered pottery in the region. In view of the evidence for the existence of distinct sub-regional Late Iron Age traditions such as the glauconite tempering of the Medway valley and the separate south-east Kent sand-tempered tradition mentioned above (Thompson 1982, 14-15; Pollard 1982, 31), to say nothing of flint-tempered and shell-tempered traditions (cf. Thompson 1982, 6-7, maps 1 and 2), the introduction of grog-tempering need not have been synchronous across Kent. As shown above (eg Tables 4.12 and 4.13) it was rare for a single tradition to dominate the assemblage from any one site. As for the cultural significance of the adoption of grog-tempering, discussed in the context of earlier periods by Morris (above), there is no clear evidence for this in the Late Iron Age, and for the time being a technologically-associated interpretation is preferred (cf. *ibid.*, 3-4).

These mixed assemblages were occasionally accompanied by Gallo-Belgic imports, but with the exception of two sherds of Terra Rubra (fabric B12) from Whitehill Road Terra Rubra and Terra Nigra were confined to Thurnham and the closely adjacent site of Hockers Lane. A range of Gaulish white wares also occurred, but again these concentrated at Thurnham, where sherds of all eight early imported white ware fabrics were found. These fabrics were slightly more widely distributed than TR and TN, occurring also at WNB98,

Snarkhurst Wood, Beechbrook Wood, Bower Road and Saltwood. Not all of these early imports were necessarily of pre-Conquest date, however, and few shed light on questions of pre-Conquest chronology. None need have dated before the early 1st century AD. One of the few demonstrably pre-Conquest pieces at Thurnham was an Arretine (fabric R41) Haltern 1A platter (residual in Roman context 20137) for which a date range of *c* AD 1-40 is likely (Fig. 4.7, No. 59).

The upper end of the date range of the early ceramic traditions of the region is in some cases as difficult to determine as their inception. The fabrics of the P ware group, mostly flint-tempered, and the glauconitic fabrics B9.1, B9.2 and B9.3 of the E ware group probably continued in production after the conquest (contra Thompson 1982, 12), and may have remained in use up to *c* AD 70 but thereafter disappeared rapidly. Not so the grog-tempered fabrics, however. The survival of pre-Roman grog-tempered potting traditions through the later 1st century AD and beyond is a feature of assemblages in Kent and east Sussex but not of surrounding areas such as Essex or the middle and upper Thames valley, where fabrics such as Highgate Wood B declined rapidly in importance from AD 100 onwards (Davies *et al.* 1994, 74) and only Savernake ware (and the survival of functionally specific storage jars in the Oxford industry) can be claimed as a partial exception. In parts of central southern England, however, grog-tempered traditions appear to have been more deeply-rooted and certainly re-emerged strongly in the late Roman period (Lyne 1994). In parts of Kent they never went away at all. While their occurrence as ‘native coarse ware’ and ‘late Roman grog-tempered ware’ is relatively well known it is clear that there were other traditions as well. The very large assemblage at Westhawk Farm, Ashford (Lyne forthcoming) was dominated throughout the life of the site (from the mid 1st to the mid 3rd century) by grog-tempered wares, some of which may have been of very local origin, as has been suggested for fabric B2.3, for example. For the most part, however, the sources of various grog-tempered fabrics, whether pre- or post-conquest, remain elusive and defining distinct production centres on the basis of fabric alone is effectively impossible. The identification at Beechbrook Wood of probable wasters in fabrics B2 and B3 is clearly of local significance, but does not mean that all sherds assigned to these fabrics necessarily originated from that site.

Sharply contrasting ceramic traditions appeared in the northern part of the county from the mid 1st century onwards. The Thameside industry, producing mainly (but not entirely) sand-tempered fabrics, seems to have included a number of specialist producers (such as the makers of Hoo-type flagons) amongst a diverse repertoire of fabrics and vessel forms. The fine ‘Upchurch’ reduced ware fabric R16 is amongst the most characteristic of these products and also one of the earliest to appear. In effect this fabric served as a fine ware alongside coarse vessels principally in P and E fabrics and, with its oxidised correlates such as R17 and R18.1, is particularly characteristic of the period AD 50-150. These products seem to have

achieved a wide distribution quite rapidly, and unsurprisingly are an important component of early grave groups at Pepper Hill. Further afield, at Bower Road, however, it was suggested that they might not have appeared until the early Flavian period. It may therefore have taken a little while for north Kent products to reach the southern part of the county, but at nearby Westhawk Farm, for example, fabric R16 seems to be firmly established well before the Flavian period. The apparent situation at Bower Road may thus simply reflect the uncertainties of a smaller body of data, but it could also relate to differential distribution patterns dependent upon site types and their relationship to the (presumably road based) distribution network.

By the later 1st century, if not a little earlier, Romanised sand-tempering ceramic traditions were augmented by material from the Canterbury kilns. This included mortaria and flagons as well as standard oxidised and reduced coarse ware forms, but the quantities were never large. As with the Thameside products, the supply of Canterbury pottery to the CTRL sites spanned the early 2nd century, which seems to mark the transition from an ‘early’ to a ‘middle’ Roman ceramic phase. For most sites the most obvious marker of this change was the appearance of Thameside BB2-type ware (R14). This was seen particularly clearly in Assemblage 8 at Thurnham, where such wares comprised some 36% of EVEs (Fig. 4.9)). BB2 comprised 5.9% of the total sherds at Thurnham - this was the highest representation at any CTRL site, lower figures elsewhere being indicative amongst other things of site date ranges.

It is interesting to compare the contributions of the Thameside and Canterbury industries. This is done for the larger assemblages (over 1000 sherds) in Table 4.20.

Table 4.20: Percentage of site sherd totals of Thameside and Canterbury products

Sites	Fabrics	% Thameside products	% Canterbury	Site sherd total
		R14, R16, R16.1, R17.1, R17.2, R17.3, R18.1, R18.2, R73, R73.1, R73.2, R73.3	R4, R5, R6.1, R6.3, R9.1, R9.2, R10, R 96	
Pepper Hill		68.9	+	26760
Whitehill Road		5.3	-	1441
Northumberland Bottom		13.9	0.6	3412
Thurnham		28.0	2.8	13911
Snarkhurst Wood		3.5	0.2	1426
Leda Cottages		23.8	1.3	1882
Beechbrook Wood		5.8	0.4	3775
Bower Road		11.3	6.0	4175
Saltwood		20.7	2.3	4764

This does not reveal a totally straightforward pattern, but much of the variation can be explained in chronological terms; small totals of pottery from both sources at Whitehill Road, Snarkhurst Wood and Beechbrook Wood, most obviously, being explained by the predominantly 1st century date of activity at those sites. The domination of the Pepper Hill

assemblage by Thameside products is entirely in keeping with the location and date range of the site. Northumberland Bottom was equally well-placed to draw on Thameside material, and the latter did indeed comprise *c* 61% of all oxidised, reduced and black-burnished (O, R and B) wares, but was significantly outnumbered by Late Iron Age-early Roman E wares reflecting the chronological bias of the site. Canterbury products were probably always scarce in this part of the county (Pollard 1988, 68).

A relatively high representation of Thameside products was maintained through the central and south-eastern parts of the CTRL transect. Even in the latter area these products seem to have been much more common than Canterbury ones. This may reflect a slightly greater diversity in the range of fabrics available from the Thameside industry, and in particular the importance of the fine fabric R16 to which the Canterbury industries had no equivalent. In general Canterbury products are more common at the south-eastern end of the route than further north-west, as would be expected given the relative proximity of this area to the source, only a little more than 20 km distant. In view of this proximity the fact that Thameside products continue to outnumber Canterbury ones is all the more striking. From Thurnham south-eastwards this is in a ratio of 9:1 or greater, except at Bower Road, where the ratio is less than 2:1 and Canterbury products reach much their highest level (6%) in any CTRL assemblage. It is not clear why this was so, but a possible factor is the relative proximity of Bower Road to the route running south-west from Canterbury up the Stour valley. This suggestion might be supported by the fact that at nearby Westhawk Farm, lying astride this road, Canterbury products amounted to 5.4% of the total sherds, a very similar figure to that at Bower Road (Lyne forthcoming). Why the ratio of Canterbury to Thameside products at Saltwood should not have been similar to the Bower Road figure is unclear.

The Thameside and Upchurch industries continued to be a significant source of pottery for the region through the first half of the 3rd century, but production declined sharply thereafter, probably for economic reasons, although these are poorly understood (Monaghan 1987, 227-230). Many of the CTRL sites had ceased to be occupied by this time, or only saw low-level later Romano-British activity, so they do not permit identification of the sources that filled the gap left by the demise of these industries, or even by the earlier decline of Canterbury coarse ware production, which did not significantly outlast the 2nd century (Pollard 1988, 93-97). From the end of the century onwards 'native coarse ware' (fabric R1; *ibid.*, 98) was a component of many assemblages, but was not particularly important in numerical terms - being best-represented at Saltwood and Bower Road (see discussion of R wares above for the latter site).

A late Roman ceramic phase is marked by the appearance of characteristic indicators such as Oxfordshire products. These may have reached the region as early as the mid 3rd century, although certain evidence of this is scarce (Pollard 1988, 121-2; cf Young 1977,

133). The CTRL sites add relatively little to this debate, but specifically later 3rd century mortarium forms occurred at two sites - a single example of Young (1977) type WC4 at Thurnham and another, along with WC5, M17 and M18, at Saltwood. The occurrence of residual material amongst the coarse wares is problematic in this period, but the most readily identifiable contemporary coarse wares are the late Roman grog-tempered wares of the LR1 family (at Thurnham, LR1 fabrics comprised 46% of all sherds from one of the latest groups, Fig. 4.10, Nos 127-133) and, to a lesser extent, sand-tempered fabrics of the LR2 group, neither of which can be assigned to a particular source area. Extra-regional coarse wares were also characteristic of this period. Alice Holt grey ware (fabric LR5) was the most important of these, supplemented to a lesser extent by oxidised 'Portchester D' fabric (LR6, whether or not this derived from the Overwey kilns) and other occasional fabrics. Some of these fabrics, including the local ones LR1.3-LR1.6 and the 'imported' LR6, may have belonged exclusively to the mid/late 4th to early 5th century and mark the latest identifiable stage in the evolution of the pottery of the region. The occurrence of relatively high proportions of Oxford wares (12.7% of sherds in the group from Thurnham mentioned above, for example) is consistent with this development, but the forms present are not usually themselves more closely datable than to the 4th century as a whole. At Hazells Road, the only overall site assemblage assignable to the later Roman period (Fig. 4.10), Oxford wares comprised 8.6% of the total sherds and the Alice Holt and related fabrics (LR5, LR5.1 and LR6) amounted to 26.2% (38.1% by weight). Late Roman grog-tempered ware (fabric LR1) only accounted for 7.4% of sherds - the earlier 'native coarse ware' (fabric R1), presumably the most important coarse ware in the earlier part of the period of occupation of the site, being significantly better-represented. A coarse hard fired grey/black sandy ware (fabric R100), perhaps a Thameside product, was another important component of the assemblage, as it was at nearby Pepper Hill. A general middle to late Romano-British date is likely for this fabric, but the range cannot be defined more closely.

It is unclear therefore if the Hazells Road assemblage extends right up to the 'end', in ceramic terms, of the Romano-British period. Understanding of whether the very latest assemblages were dominated by grog-tempered fabrics (LR1 and related) or by local and/or imported sand-tempered fabrics (LR2 and LR5 and LR6 respectively), or whether there was spatial variation with, for example, grog-tempering dominant in the Thurnham area and sand-tempering in the north of the county, would help in answering the question. For most sites, including Hazells Road, there is insufficient evidence to allow the point to be determined. In broad terms late Roman sand-tempered sherds appear more common at Hazells Road (if R100 can be admitted as such) and grog-tempered ones more common in the south-east at Saltwood, while at Thurnham their occurrence is approximately equal. Whether these distinctions have a wider chronological aspect remains uncertain. In general, however, the

grog-tempered fabrics of the LR1 group are thought to represent the latest discernible phase of local Romano-British pottery production.

Only at Thurnham and Saltwood did both late Roman and certain or possible Anglo-Saxon material occur on the same site. At Saltwood, however, there is no indication that pottery of the two periods was closely juxtaposed, except for a few cases when Roman sherds were (presumably) residual in the fills of Anglo-Saxon graves. At Thurnham there was a single instance of association in Assemblage 22, post-dating a cobbled surface (11170) north of corn-drier 10340, where a small but characteristic late Roman group (fabrics LR1, LR1.1, LR5 and LR6) was found alongside a fine-sanded hand made sherd fired black with brown surfaces. This was probably, but not certainly, of early Saxon date. The significance of a single sherd is difficult to assess, but its association with some of the very latest Roman pottery can hardly be completely fortuitous. Whether it indicates activity on the site beyond the early 5th century (a notional but plausible date range of *c* AD 370-420 is applied to the latest Roman material) can only be speculative. Thurnham is the only site where (a few) very late Roman groups have been identified, as opposed to the occurrence of 4th century material more generally, as at Hazells Road and Saltwood. At Hazells Road, however, the possibility that the condition of some of the Roman sherds indicates very late or post-Roman activity (see above) should be remembered. At Bower Road, in contrast, the largest late Roman group, from pit 242, included a large grog-tempered flanged bowl (Lyne 1994, 7A.12), Alice Holt fabric LR5 and Oxfordshire colour-coated types C71 and C75. A late 4th century date is preferred for this group, but it need not date much after the middle of the century.

4.6.2 Patterns of production, distribution and trade

Various aspects of this topic have been covered in the preceding discussions. It is assumed that, with the obvious exception of Gallo-Belgic imports, pottery supply in the Late pre-Roman Iron Age was usually from local sources, but this assumption cannot be proved and may not always be justified. A number of local and subregional manufacturing traditions, including the important glauconite-tempering tradition of the Maidstone/lower Medway area, have been identified in this period; some of these survived for a short while after the Roman Conquest while others, particularly the grog-tempering tradition, developed through the Romano-British period. The problem of identification of production centres of this material persists throughout the period and it is possible that a number of minor centres (such as Beechbrook Wood in the Late Iron Age/early Romano-British period) were involved throughout. Generalised east and west Kent and in some cases east Sussex connections can be identified in relation to some particular vessels. Patch Grove ware, probably from the Otford area of north-west Kent, is one distinct grog-tempered product certainly reaching the area in the mid 1st century AD if not earlier. Another very different tradition of comparable date was

the north Kent shell-tempered industry (fabric R69). Like the grog-tempered tradition, this evolved and survived well into the Romano-British period.

Specialised post-Conquest ceramic production in the Maidstone area is indicated by the finds from Eccles. The production of tiles in distinctive fabrics there seems on the basis of pre-Boudiccan finds from London (eg Betts 2003, 108; Pringle 2002) to have been underway before the construction of the villa there (Detsicas 1983, 120). In view of the relative proximity of Eccles and Thurnham it is unsurprising that the proto-villa and temple at the latter, probably built by c AD 70 if not a little earlier, were almost entirely roofed with tiles from Eccles (Betts 2006). It is notable, however, that there is effectively no evidence for the presence of pottery from the same source, even at Thurnham. Only at Northumberland Bottom was Eccles pottery tentatively identified amongst sherds recorded as fabric R75, although the beaker form noted (Every 2006c, No. 61) is not exactly paralleled in the material reported by Detsicas (1977). Some of this also reached London (Davies et al 1994, 36-7), although its distribution is otherwise sparse (Pollard 1988, 188-9). Pottery production at Eccles may have been very short lived and perhaps, in view of the range of vessel types represented, intended for a very specific and essentially non-local market. The tiles were certainly more widely distributed, but it is notable that by the later 2nd century, the date of the only known tile kiln structure at Eccles (McWhirr 1979, 157-8), this site had ceased to supply its products to Thurnham. No Eccles products were noted in the ceramic building material assemblage from Northumberland Bottom (Smith 2006a).

The relative contributions of the main 'Romanised' coarse ware industries of the region, Thameside/Upchurch and Canterbury, have been discussed above. On the basis of the CTRL evidence Canterbury can be characterised as no more than a 'local' industry, with the probable exception of some of its specialist products such as mortaria and flagons, but the latter were available in a variety of fabrics from the Thameside industries, so even in this aspect the impact of the Canterbury industry was slight, particularly at sites in the Springhead area. Enhanced figures for Canterbury fabrics at Bower Road and Westhawk Farm may indicate a limited road-based penetration of market areas beyond the immediate environs of Canterbury itself. The distinctly larger scale of Thameside/Upchurch production is demonstrated by the representation of these vessels even at the south-eastern end of the CTRL route. These industries dominated coarse ware supply to north Kent sites in the middle Romano-British period - elsewhere they were always supplemented by grog-tempered wares from whatever sources. After the decline of the Thameside industry, by the late 3rd century, grog-tempered wares seem to have reasserted their dominant Late Iron Age status, but the late Roman sand-tempered fabrics of the LR2 group may in fact represent some survival of the Thameside tradition, with which they have much in common. Whether they were supplanted

by the latest Roman grog-tempered fabrics, or survived alongside them up the end of the Romano-British period, is unclear, as already indicated.

Imported pottery, whether from outside the region or from the continent, was present on many sites and appeared throughout the period, but the quantities involved rarely amounted to more than a trickle. The only continental material to occur in quantities sufficient to suggest consistent trade was samian ware and even this was never common. The sources represented by both continental and extra-regional British material are uniformly consistent with the picture established by the work of Pollard (1988 *passim*) and there is a complete absence of exotica. Late Iron Age and early and middle Roman fine wares came mostly from north-eastern France and the Rhineland. Occasional mortaria may have derived from the same general area. Amphorae, where present at all, were also from predictable sources, dominated by southern Spanish olive-oil containers. Only the occasional early amphora fragments from Thurnham stand out as noteworthy and none of these was particularly diagnostic of form, though an Italian source seems likely and the fabrics are consistent with wine amphora forms such as Dressel 2-4 or perhaps (in the case of fabric B19.1) Dressel 1B.

In the late Romano-British period the range of material from outside the region includes coarse wares such as the Alice Holt and Portchester D/Overwey type fabrics, although the former had occurred in smaller quantities (as fabric R26) at a number of sites perhaps as early as the 2nd century AD. Again the sources represented, for both fine and coarse wares, were the usual suspects, the former group dominated by Oxfordshire products, which also accounted for all the identifiable late Roman mortaria from the project. The contributions of Nene Valley, Much Hadham and New Forest industries were all minimal. Nene Valley colour-coated ware did occur on more sites than Oxford colour-coated ware, including Pepper Hill, from which Oxford material was absent. This difference reflects the earlier appearance of Nene Valley in Kent, perhaps as much as a century before the later 3rd century arrival of Oxford wares. The late British colour-coated wares were supplemented by a few sherds from the Argonne region at Thurnham and Saltwood, and single sherds of Mayen ware from Hazells Road and Saltwood were the only late coarse ware imports.

Overall, therefore, the quantities of extra-regional pottery, whether British or continental in origin, are modest, and it is difficult to determine potential distribution mechanisms from their occurrence. The greatest quantity and variety of such material came from Thurnham, by virtue both of the size of its assemblage, its chronological range and also, presumably, of its character (see further below). The latter characteristic may have linked Thurnham to a different set of distribution mechanisms from those that served other settlements in the area.

4.6.3 *Status and function*

The potential importance of aspects of site status and function in conditioning the content of their pottery assemblages has already been mentioned. The reverse side of this is that it may be possible to draw conclusions about status and function from the material itself where other types of evidence are lacking. Romano-British archaeologists have done this intuitively for many years, but without deploying systematically collected, quantified data, thus compromising the validity of the inferences drawn. Typical of this approach has been the assumption that samian ware is a high status indicator (Willis 1998, 85-6). While its occurrence is certainly variable and may be affected by numerous factors the present data show that it is ubiquitous, although routinely less common in rural than in other contexts (*ibid.*, 116) - presence alone is no guide to site status. A simple method for assessing assemblage variation through the relative proportions of major ware groups, previously tested in Warwickshire and the upper Thames valley (Booth 1991; 2004), has been applied here. The relevant data are summarised in Table 4.18. The principal potential indicator of site status is thought to lie in the representation of fine and specialist wares, but there is not necessarily a simple correlation between a high level of these and 'high' site status. Other factors, of chronology, function and location in relation to marketing centres or other distribution networks have to be taken into account. The complex interplay of these factors can therefore make interpretation in terms of status alone problematic. It follows that variations between assemblages of similar date and in close proximity can be interpreted in relation to status with more confidence than variations between more chronologically and spatially disparate assemblages.

Despite their geographical spread, however, the CTRL assemblages have some potential for interpretation in status-related terms. Only one assemblage, the cemetery group from Pepper Hill, is clearly of radically different character from the rest and can be set on one side. With regard to spatial issues - and therefore to questions of access to markets, there are no idiosyncratically placed fine and specialist ware suppliers whose input would be likely to produce heavily skewed figures. White slipped flagons (almost the only significant locally-produced component in the fine and specialist ware spectrum) came from both of the main local/regional coarse ware providers, Thameside/Upchurch and Canterbury, while the latter centre was also responsible for some mortaria (and the occasional amphora), but these were of minimal significance for the CTRL sites. Broadly, therefore, fine and specialist wares were potentially drawn from a similar pool for all sites. The chronological factor is perhaps the most problematic, as work in the Thames valley showed that the baseline representation of fine/specialist wares increased markedly in the late Romano-British period, almost entirely as a result of the impact of the Oxford industry (Booth 2004, 42-44). The same pattern is seen

here. At Hazells Road, the only substantially late-Roman CTRL assemblage, fine/specialist wares were more common than at any other site except Pepper Hill and the small (and statistically invalid) sample from White Horse Stone. The sherds, comprising 11.3% of the assemblage, were almost entirely of Oxford colour-coated ware and mortarium fabrics. It is to be expected, therefore, that those assemblages with a late Roman component would automatically have had higher fine/specialist ware levels than those occupied only in the early Romano-British period, regardless of any other distinctions between them.

The data can be considered with these factors in mind. Leaving aside the chronological and functional anomalies (Hazells Road and Pepper Hill respectively) two or possibly three groups of sites emerge. Whitehill Road and Tollgate have extremely low fine and specialist ware levels (0.4% of sherds in each case) while at Hockers Lane, Beechbrook Wood and Snarkhurst Wood the figures are 1.9%, 1.3% and 2.7% respectively. All these sites are exclusively early in date and their assemblages are effectively dominated by 'E' and related wares (shell-tempered wares at Tollgate, 'P' wares at Snarkhurst Wood). The remaining sites all had a significant Late Iron Age-early Roman aspect but then saw continued activity into the late Romano-British period, even though the exact extent of this is not easily quantified and seems usually to have been at a lower level than earlier. Their fine and specialist ware levels are remarkably consistent, in a range from 4.4% at Bower Road to 7% at Northumberland Bottom with Thurnham firmly in the middle at 5.9%. A more detailed examination of the fine and specialist ware breakdown reveals no evident distinction between the sites in these terms.

Several possible conclusions can be drawn from this. The most straightforward is that there was no significant difference in the character of this group of sites as demonstrated by their ceramic assemblages, despite the perceived distinction, particularly between the villa site at Thurnham and the other rural settlements. The absence of the expected correlation between the 'high status' site of Thurnham and a high fine and specialist ware level could therefore indicate that Thurnham was fundamentally similar to the other rural sites (which seems improbable), or that an undetected chronological characteristic has masked the real difference between Thurnham and the other sites (which seems extremely unlikely), or that the basic premise of a correlation between site status and fine and specialist ware levels is not valid in this region. If at first sight this conclusion is disappointing it is not without interest. It could be interpreted to indicate that most pottery types had at least the potential to achieve an even distribution through the area and that the principal factors affecting distribution were related to the physical characteristics of the distribution mechanism. If this was the case it might be expected that the more distantly derived fabrics would concentrate in a possibly very limited number of principal distribution centres but that there would otherwise be little difference in the incidence of fabrics across a range of types of site in 'rural' contexts. There are too few

quantified data for this model to be tested adequately, but it receives superficial support from Westhawk Farm, where the fine and specialist ware figure was 5.1%, exactly in the range of the majority of CTRL sites and not showing any enhancement to reflect its character as a local market centre, as opposed to one of the few principal distribution centres postulated above.

Other villas in the Maidstone area seem to have been broadly comparable to Thurnham in the character of their assemblages. At Snodland (Seager Smith 1995) a group of 1024 sherds mainly of 2nd-3rd century date included 20 of samian ware (2%) and although sherd counts are not given for all the fine and specialist wares the total of these is unlikely to have fallen much outside the 4%-7% range seen on the CTRL sites. At The Mount, Maidstone, 'Finewares,...mostly Upchurch-type fabrics...comprise *c* 12 per cent by sherd count of the total assemblage.' (Savage 1999, 114). Clearly if the fine Upchurch wares (principally fabric R16) are removed from the equation the total fine ware figure will have been low, and the fine and specialist ware representation recorded for a sample from the 1994 excavation was *c* 5.5%. This figure was based on a small EVEs total and a list that appears not to have included samian ware (*ibid.*, 116-118), so comparison of percentages based on different measures is not strictly valid, but broad comparability with the figures already discussed seems to be indicated. It is unfortunate that the pottery from the 1970s excavations (Kelly 1992) was not systematically quantified, though one mid 2nd-mid 3rd century group was analysed in terms of EVEs by Pollard (1988, 236-238). Some 3% of this group consisted of fine and specialist wares. In a subsequent note Pollard (1992, 223) remarks on 'this anachronistic situation - a well appointed property with a humble range of pottery', but the CTRL sites and the Snodland data suggest that this situation was far from being anachronistic, and that Pollard's comparanda - Springhead, Rochester and the cellar deposit at Chalk - conform to a pattern distinct from that of the majority of rural settlements.

The figures therefore seem to suggest a reasonable degree of uniformity in supply of fine and specialist wares across this part of Kent, more or less regardless of site type. A possible inference from this is that there is little indication of socially-embedded control of the distribution of imported material, which might have been expected to produce a more distinctly varied pattern of consumption. If this was the case it may be inferred that the observed pattern reflects a fairly well-integrated market economy; though perhaps not a hugely effective one in terms of distribution of imported pottery. Such a situation would contrast with that observed in regions such as the Upper Thames, where significant site to site variations in the incidence of fine and specialist ware can be correlated with variations in social status inferred from other characteristics and, by implication, indicate control of the distribution of certain types of ceramic (and presumably other) materials. By contrast, interpretation of the CTRL material in terms of a well-integrated economic system would

perhaps mesh with Monaghan's view that economic rather than other factors led to the decline of the Thameside/Upchurch industries in the 3rd century AD (see above).

If assemblage analysis in terms of fine and specialist wares generally sheds little light on the character of the CTRL sites, what of examination in functional terms? Evans (2001) has used the ratio of jars to dishes and bowls as a means of clarifying distinctions between some major site types and also indicating regional variation in these patterns. Broadly speaking, higher ratios of open forms (bowls and dishes) to jars are associated with urban sites but, as indicated above, there is a chronological element as well, with a general trend, in southern Britain at least, towards increased representation of bowls and dishes on sites of all types - paralleling the shift in the base line level of fine and specialist wares discussed above (see also Booth forthcoming). In Fig. 4.11 aspects of both analyses are presented, with the percentages of fine and specialist wares recalculated in terms of EVEs so that the figures in both axes are based on the same measure. Reassuringly the relationships between sites based on these recalculated figures are almost all the same as those based on sherd count, even though the percentage figures are not identical (the EVEs figures enhance fine and specialist ware levels across the board).

Three main groupings can be seen - the almost exclusively early sites of Whitehill Road, Snarkhurst Wood, Tollgate and WNB98B, all with fine and specialist wares at less than 2% of EVEs, then the previously identified cluster of sites with fine and specialist ware levels now between 8.5% (Bower Road) and 12% (Hockers Lane). The two 'anomalous' sites, Pepper Hill and Hazells Road, have effectively identical fine and specialist ware figures at nearly 31%. The sites of the first two groups, however, show considerable variation in the percentages of open forms present, not so much in absolute numbers, but in relation to each other. In the small assemblage at WNB98B open forms are more than twice as common as in the other sites in this early group. This may be a quirk of the small assemblage size, but it may reflect the small slightly later (late 1st-2nd century) component in this assemblage missing from the other sites. The 'middle status' group of sites also shows variation in the percentages of open forms, but only Saltwood really stands out as anomalous and this may simply be because the bowl total was boosted by two complete vessels. The exclusively early site of Hockers Lane also joins this group on the basis of a single vessel, a Terra Rubra platter that enhances the fine and specialist ware level as well as the representation of open forms. The real significance of this vessel remains debatable.

Overall, therefore, while there is a fairly clear correlation between enhanced fine and specialist ware levels and the incidence of open forms it is less clear that this has anything to do with status-based characteristics. On balance the 'status' (ie fine and specialist ware level) distinctions have been seen as chronologically based or related to specific site function, and increases in the occurrence of open forms could be seen in the same way. This broad picture

probably conceals nuances in the evidence that reflect the working of other factors. It is possible that the Terra Rubra platter at Hockers Lane is one such. The wide variety of Late Iron Age and early Roman imported fabrics at Thurnham may constitute another. These were not numerically important - which perhaps supports a view that they do not represent normal trade, but rather a selective and still socially embedded network of distribution which had a minimal impact on most sites in the area. It can hardly be a coincidence, therefore, that Hockers Lane lies very close to Thurnham. A direct connection between the two sites in the Late Iron Age can be postulated.

4.6.4 Cemetery assemblages

Some distinctive characteristics of the Pepper Hill cemetery assemblage have already been referred to. This was very different from the settlement sites discussed above, deriving from an almost entirely excavated cemetery closely associated with the small town of Springhead, placed alongside one of the minor roads leading from this settlement. The present summary will focus entirely on the material from the graves, which forms the majority of the total pottery from the site. In fact it is likely that most of the pottery not securely assigned to graves once belonged to burials, but became dislocated through intercutting and later disturbance. A number of the many analytical possibilities of this assemblage are explored in greater detail in the main report on this site (Biddulph 2006). Pottery was recovered from 232 out of a total of some 505 graves (this total includes 7 *busta*, but excludes a further 54 pyre sites and funerary-related features). Some 82% of cremation graves (including *busta*) contained pottery vessels, amounting to 263 vessels, (including cremation urns) from 124 features, while only 30% of inhumation graves contained pottery (170 vessels from 108 graves). The breakdown of this material in terms of numbers of vessels per grave is summarised in Table 4.21. It should be noted that discussion of this assemblage is in terms of numbers of vessels (which can be calculated with some confidence: MV in Table 4.22) rather than EVEs.

Table 4.21: Pepper Hill numbers of vessels (count) per grave correlated with burial type

No. vessels per grave	Cremations			Inhumations
	excluding urn	number with urn	total including urns	
1 (cremation urn alone)		25		
1	41	22	44	61
2	38	20	40	36
3	12	6	26	10
4	7	3	10	
5			3	
6	1		1	
7				1
Total burials	99	76	124	108
Total vessels	187	76	263	170

This shows that a fifth of the cremation graves with pottery only had a ceramic container for the cremated remains, and an urn occurred in almost exactly half of the cremation groups accompanied by other (ancillary) vessels. Most identifiable ‘urns’ were of one of four basic jar types: narrow-necked jars (Monaghan type 3A), storage jars (type 3D), cooking-jar types (type 3J) and ledge-rimmed jars (type 3L). Excluding urns, ancillary vessels in cremation burials almost never exceeded four in number, while in the inhumations three was the normal maximum, and a higher proportion of inhumation than cremation burials contained only a single vessel. In each group there was a single exception to these figures - one cremation grave (Fig. 4.17, Grave 451) contained six ancillary vessels (and no urn) and one inhumation grave contained seven vessels (Fig. 4.15, Grave 254). The latter group, dated to the mid 2nd century, was of particular interest, comprising a flagon and a flask, a beaker sized jar with a jar base placed above it as a lid and a plain dish covered by two inverted Drag 18/31 dishes, each with an X mark on the underside. In addition, a group of 148 sherds lay in a small circular area over the foot end of the grave, perhaps suggesting the placement of a special deposit during infilling of the grave.

Table 4.22: Pepper Hill, pottery quantification by site phase

Phase	Approximate date range	Sherds	% sherds	Weight (g)	% wt	MV	% MV	EVE	% EVE
Iron Age	350 BC-AD 43	17	<1%	87	<1%	-	-	-	-
Early Roman	43-120/130	13827	51%	82594	43%	272	43%	116.43	48%
Early-mid Roman	43-260	3020	11%	19375	10%	27	4%	6.93	3%
Mid Roman	120/130-260	6973	26%	69193	36%	204	33%	88.53	37%
Mid-late Roman	120/130-410	388	2%	3866	2%	13	2%	5.71	2%
Late Roman	260-410	288	1%	2439	1%	9	1%	5.03	2%
Roman	43-410	194	1%	644	<1%	10	2%	0.53	<1%
Unphased		2154	8%	14439	7%	82	13%	18.69	7%
Total		26861		192637		627		241.85	

Note that this table includes 101 sherds (312 g, 1 vessel 0.03 EVEs) of Iron Age date excluded from all other tables presented above

The broad chronology of the cemetery is summarised in Table 4.22, which underlines the preponderance of early (1st-2nd century) material. It should be noted that the majority of the pottery assigned to the ‘middle Roman’ period - roughly AD 120-270, belonged to the first half of that range. Demonstrably 3rd century pottery was scarce and late Roman material was extremely rare. These factors contribute to the overall homogeneity of the assemblage, which includes broad similarity between the groups of material from cremations and inhumations.

Analysis of the ancillary vessel assemblage (some 378 vessels including those from *busta* and ‘cenotaph’ features as well as standard graves) by interpretative type revealed a bias towards drinking-related vessels, which totalled *c* 59% by vessel count. Eating vessels (bowls, dishes and platters) formed 28%, while cooking or storage vessels amounted to 9%. The

drinking-related category was dominated by beakers - typically poppy-headed and carinated types - and liquid-containers (flasks and collared and ring-necked flagons). Cups and beaker-sized jars formed only a minor part of the assemblage.

Differences between ancillary vessel assemblages in inhumation and cremation burial pottery were few, but those observed are potentially significant (see Fig. 4.12). The proportion of jars (apart from cinerary urns) from cremation burials was higher than that from inhumation graves. Conversely, drinking-related forms were slightly better represented in inhumation graves. The two sub-sets of the funerary pottery, cinerary vessels and ancillary vessels, differ in terms of the functional attributes of their assemblages, also clearly illustrated by Fig. 4.12. Cooking or storage vessels dominated as cinerary vessels, while drinking-related containers were barely represented. The ceramic pyre-goods assemblage contrasted sharply with cinerary vessels, having a drinking-vessel bias, a low count of jars and an absence of eating-vessels. These remarkable differences highlight the obvious point that different assemblages were selected depending on the stage in the mortuary process in which they were used. Each had a function specific to its context.

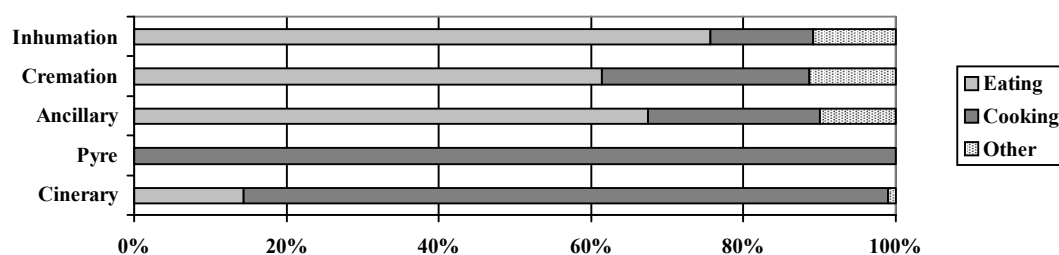
The frequency of combinations of these functional types is shown in Table 4.23. Here the data for cremations and inhumation have been combined, partly because there were few clear differences between the patterns (cf above) and also to allow comparison with a sample of data from the assemblage from Ospringe (Whiting *et al.* 1931), for which confident differentiation between cremation and inhumation groups is not possible.

Table 23**: *Functional representation among ancillary vessels at Pepper Hill and Ospringe. Not including 'other' functions*

Combination (function)	Number of graves*	
	Pepper Hill	Ospringe†
Drinking	47	18
Liquid-servers	45	35
Eating + drinking	28	22
Eating	22	8
'Cooking'	21	-
Liquid-servers + eating	19	20
Eating + drinking + liquid-servers	18	31
Liquid-servers + drinking	13	32
Cooking + eating	4	
Eating + drinking + cooking + liquid-servers	3	
Cooking + drinking + eating	2	
Cooking + drinking	2	
Cooking + drinking + liquid-servers	1	
Cooking + liquid-servers	1	
Total	226	

*Pepper Hill figure includes busta and 'cenotaph' feature types

†Only data on eating and drinking vessels were collected for Ospringe

Figure 4.12. Pepper Hill ceramic vessels from funerary contexts: functional distribution

These figures show how the preponderance of drinking and liquid serving vessels at Pepper Hill was articulated with other types (excluding cremation urns). It is particularly notable that drinking vessels and liquid-servers (flasks and flagons), both particularly common, occurred much more often apart than together, while in the Ospringle sample the combination was more common, but still not as frequent as individual occurrences. Eating vessels - single dishes or platters (much less commonly bowls) - were also relatively common at Pepper Hill, although they were more often seen in combination, with drinking vessels, with liquid servers, or with both. There was also a fairly common incidence of single 'cooking' vessels, ie vessels of jar form, but of uncertain function in the context of burial.

Overall there was no set combination of vessels represented within individual graves although the selection of vessels for cemetery use conformed to standard, funerary-related, norms. Pottery was mainly of local origin. That it was drawn at least in part from the ceramic supply intended for domestic use is indicated by the presence of some worn or burnt vessels. Some 'antique' grave-goods may have remained in the household for generations before burial, though others had already been buried, only to be re-interred accidentally after later grave-digging and backfilling. It may be doubted, however, if all the flagons and flasks necessarily derived from domestic assemblages. These certainly included some unusual forms, such as the angular flask in fabric R16 from Grave 1167 (Fig. 4.13, Grave 1167 ON 4095) for which parallels are hard to find. Perhaps some of these vessels were supplied specifically for use in funerary contexts.

There was no significant difference between inhumation- and cremation-derived assemblages, and no firm conclusion could be drawn about selection of pottery based on the sex of the individual. Evidence for a range of treatments was found. Some vessels had been deliberately mutilated, inverted or laid on their sides. Pottery placed inside cinerary vessels may first have been placed on the pyre. Pottery recovered from inhumation graves tended to be placed outside the coffin during the 1st and 2nd centuries, but inside the coffin during the 3rd and 4th centuries.

As already discussed, the principal differences between Pepper Hill and the contemporary settlement assemblages lie in the balance of forms (with the notable Pepper Hill

emphasis on forms related to serving and consumption of food and drink rather than food storage and preparation) and, intimately linked to this, of fabrics (in particular the emphasis on white and white-slipped wares and a high proportion of R16), rather than in particular characteristics of the range of fabrics and forms - a small number of specialised vessels excepted.

Pottery was recovered from burials or probable burials at a further seven sites (see Table 4.24). The tabulated material consists of pottery thought to have been deliberately deposited in these graves - certainty on this was not always possible because of the poor condition of the features. All the graves in question except one from Thurnham were cremation burials. Pottery was recovered from inhumation burials at Saltwood (most of Saxon date), but the material consisted only of redeposited fragments.

Table 4.24: Pottery from Late Iron Age-Roman CTRL burials except Pepper Hill

Site	No. burials	No. vessels	Fabrics/forms	Comment
WNB98	1	1	B3/pedestal urn*	Grave 316
Snarkhurst Wood	1?	1?	B9.1/pedestal urn	Context 20, fill of unexcavated feature
Beechbrook Wood	6	11	B2.1/jar*, B2.1/jar, R16/beaker; B2.1/jar*, B2.1/jar*, R42/dish; B2.1/jar*, B2.1/jar*, B2.1/jar, R16/beaker, B2/dish	Burials 2029; 2035; 2046; 2047; 2049; 2056
Boys Hall	5	6	R16/beaker; R68/flagon; B3/jar*; R17/flagon, R16/dish; B2.1/jar*	Burials 39; 43; 45; 46; 48
Bower Road	1	3	R1/jar*, R16/beaker, R16/cup	Burial 107
Saltwood Tunnel	10	23	R16/?*, R9.1/flagon, R43/cup; R17.1/beaker?*, R17.1/beaker, B8/jar; B8/jar*, BER7/butt beaker, B8/dish, B8/beaker; B8/jar, R9.1/flagon, R17.1/beaker*; B8/jar*; B8/jar*; B8/jar*, R17.1/beaker; R18.1/butt beaker*; R16/jar*, R16/beaker, R73/bowl, R73.1/dish; R109/jar*	Burials 6; 12; 14; 15; 16; 19; 20; 21, 22; 337
Thurnham	1	2	R73/beaker; R14/dish	Inhumation burial 10640

*cremation urn

In general this material is similar in character to that from Pepper Hill. and will not be discussed extensively, although the Saltwood assemblage merits some comment. Pedestal urns occurred at WNB and Snarkhurst Wood, in each case in an apparently isolated burial. The Saltwood cemetery produced a useful assemblage of 23 (or possibly 24) vessels. Although too small for detailed analysis the group presents some interesting contrasts with Pepper Hill. All the ten burials included pottery, and four of the graves contained brooches. The numbers of vessels per grave ranged from one to four (or possibly five in one case). In seven cases the cremated remains were placed in jars in reduced coarse ware fabrics, or their 'Belgic' predecessor B8 (four vessels), while in the other three graves the 'urns' were oxidised/white slipped vessels, probably butt beakers, in Upchurch fabrics R17.1 and R18.1.

Apart from these 'urns' the remaining vessels comprised two flagons, a cup, five probable beakers, two small jars, a shallow bowl and two dishes. It seems likely that the two small ancillary jars, in fabric B8, were intended to represent drinking vessels, a diverse class also including a pedestal beaker (again in fabric B8), butt beakers and a Drag 27 cup. There is an interesting correlation between the size of the grave groups and the range of vessels included. In all groups except those comprising only an 'urn', the second vessel of choice is a probable drinking vessel - a beaker, cup (in one case) or small jar. Flagons (liquid containers) appear only in two groups (Graves 6 and 15), in each case as the third vessel behind the urn and drinking vessel combination already mentioned. The only other grave group with three vessels, Grave 12, appears to have two drinking vessels in addition to the 'urn', though one of these was very fragmentary. Dishes only appear in the two groups which have four vessels, but interestingly neither of these groups contained a flagon; instead grave 14 appears to have had two drinking vessels and Grave 22 had a shallow necked bowl to complement the 'urn', beaker and dish (Fig. 4.19).

Overall, the pottery suggests a date range from about the middle of the 1st century AD to the late 2nd century for the Saltwood cemetery, but only two graves must have been of 2nd century date. All the remaining graves can be assigned to the 1st century. It is possible that some of these, particularly those containing only vessels in fabrics such as B8, were of pre-Conquest date, though direct evidence is lacking.

4.7 Conclusions

The Late Iron Age and Roman pottery provides a major body of data for understanding aspects of the character and chronological development of rural sites across a part of Kent less commonly examined archaeologically than the relatively well-studied northern and eastern parts of the county. The pottery demonstrates that most rural settlement sites of the early Romano-British period were already established in the later Iron Age (although the precise chronology within the 1st century BC remains uncertain), but that only a few of these had direct antecedents in the Middle Iron Age. Occupation in the early Roman period was effectively universal - only one of the fourteen main assemblages examined did not contain pottery of this period and all but one of the previously assessed minor groups were also of Late Iron Age date with most (but probably not all) running into the early Romano-British period. Of the main sites, Hockers Lane may not have continued in occupation after the end of the 1st century, but most saw activity through the 2nd century even though at some, such as Whitehill Road, Snarkhurst Wood and Beechbrook Wood, and probably WNB98 and Tollgate, this was at a low level by the mid 2nd century at latest. Relatively few sites have evidence of substantive occupation after the early to mid 3rd century, and even fewer have significant 4th century material. The principal site of this date is Hazells Road. Fourth century

pottery came also from WNB98, Thurnham, Bower Road and Saltwood, but at WNB and Bower Road the scale of activity of this date seems quite limited and even at Thurnham it is very localised compared with the occupation of the 1st to early 3rd centuries. The pottery therefore supports the view that in this transect across Kent the rural settlement pattern had been radically changed by the mid-late 3rd century. If expressed in terms of locations producing pottery - not all necessarily settlement sites - the numbers had declined from approximately 24 at the time of the Roman Conquest to at best 5 or 6 at the beginning of the 4th century.

The ceramic evidence alone can only help to identify this change, it cannot explain it. Monaghan's interpretation of the demise of the Thameside/Upchurch industries has already been referred to. Apparently synchronous (in broad terms) with the decline of the rural settlement pattern, it is explained in terms of changing economic factors, but the situation may have been more stark than Monaghan realised; if the rural population had declined as significantly as the pottery evidence might suggest, this would have had a very significant effect indeed on the pottery producers.

The excavated pottery assemblages mostly derive from rural settlements. Notwithstanding the relative lack of qualitative differentiation in the assemblages (except (usually) for those from sites exclusively of early Romano-British date) there is a variety of settlement types, from the villa complex of Thurnham to the site at Bower Road containing at least one substantial (timber) building to a larger group of others where structural traces are not readily identified. In contrast to these is the cemetery assemblage of Pepper Hill, associated with the major nucleated settlement ('small town') of Springhead. All of these sites are affected by changes in the later Roman period. It may be significant that the two with the most substantial structural evidence, Thurnham and Bower Road, show some evidence of continued activity in the 4th century, albeit at a much lower level than earlier, both in terms of the quantity of material and the treatment of the major structures. At Lower Runhams Farm, Lenham, a rural settlement with some evidence for iron production lying some 10 km south-east of Thurnham, the excavator's conclusion that 'parts of the site continued in use during the 3rd and first half of the 4th century, but on a much reduced scale' (Philp 1994, 44) is clearly supported by the published pottery (it is unfortunate that this substantial assemblage (over 16000 sherds; *ibid.*, 25) was not quantified by fabric).

Pepper Hill, despite its association with Springhead, seems to have declined in exactly the same way as the rural sites. This presumably reflects some change at Springhead itself. At the roadside settlement of Westhawk Farm, close to sites such as Bower Road, the same pattern was again seen, with minimal activity in the 6 ha excavated sample area after the mid 3rd century, even though the focal (road junction) area of the settlement may have seen some occupation surviving later.

After these major changes a feature of the identifiable late Roman pottery is the re-emergence, alongside a well-recognised suite of regionally if not nationally distributed fine and coarse wares, of both local and regional grog-tempered potting traditions. This characteristic is in contrast to other regions of southern Britain which show no such reversion to the traditions of the pre-Conquest period - traditions which had in fact never been fully displaced in parts of the CTRL area. It is uncertain if this development represents a pragmatic response to the demise of the north Kent industries discussed above, or whether it reflects a particularly deeply-entrenched conservatism on the part of some sectors of the regional population. The latter would not sit very easily, however, with the earlier (tentative) suggestion that the lack of clear status-related differentiation in the CTRL assemblages indicated a well-integrated market rather than a socially controlled and determined one.

Socially embedded distribution networks seem certain to have prevailed in the Late Iron Age. The relative quantities of imported pottery of this date and slightly later hint at a qualitative distinction between Thurnham and most other CTRL sites, with a hint that there may have been secondary (or tertiary?) redistribution of some material from Thurnham to nearby sites such as Hockers Lane. Overall, however, Late Iron Age imports were scarce on CTRL sites, despite the fact that this area of Kent shows the most intensive distribution of Gallo-Belgic material in Britain (Fitzpatrick and Timby 2002, 168-9). However, this distribution reflects the occurrence of small quantities of Gallo-Belgic wares at a number of sites, rather than the presence of large quantities of this material (Jane Timby pers comm), a pattern with which the CTRL evidence is consistent. Two of the most popular forms of the Upchurch industry, the class 2G carinated beaker (Monaghan 1987, 68-71) and the class 7A platter (*ibid.*, 158-9), were both derived from the Gallo-Belgic form repertoire, but it is unclear whether their popularity, for example at Pepper Hill (eg Fig. 4.13, Grave 327), was as a supplement to or a substitute for access to the prototype material in the early post-Conquest period; the CTRL evidence would suggest the latter. There remains a chronological distinction between the probable very Late Iron Age to post-Conquest date range of such Gallo-Belgic material as there is on CTRL sites and the rather earlier commencement of demonstrable importation to sites like Canterbury (Rigby and Freestone 1995, 640-641). With the probable exception of Quarry Hill, Loose (Kelly 1971), there are no sites of comparable character in the vicinity of the CTRL transect, and too little is known of this site for its potential role as a redistribution centre for ceramics (and other, more highly prestigious goods) to be assessed, though a Gallo-Belgic white ware butt beaker and a stamped amphora sherd (*ibid.*, 83, nos 32 and 33), probably of Dressel 1 (Peacock 1971, 182), are hints in this direction. Nevertheless the importance of the Maidstone area seems to be reflected at least in a relatively high density of rural settlement at this time. It is the more remarkable that the

pottery evidence indicates abandonment of most of these settlements by the mid 3rd century AD. Explanation of the changes that lay behind this development is still to be found.

4.8 Summary descriptions of illustrated pottery

Figure 4.3. Late Iron Age pottery groups from Hockers Lane, Thurnham (Assemblage 1) and Snarkhurst Wood (Assemblage 1)

Hockers Lane (1st century BC to c mid 1st century AD)

Assemblage 1 c 50-1BC

- 1 (not illustrated). Slack-profiled jar rim from vessel of Thompson type B3.5 (1982) in rough black glauconitic fabric B9.1. Ext. rim diameter 120 mm. 150-1 BC. Context 44. Secondary fill of slot 255.
 2. A slack-profiled vessel in similar fabric; polished both externally and internally. Ext. rim diameter 160 mm. Context 250.
 3. Rim from weak-profiled vessel in polished similar fabric. 50 BC-AD 50. Context 44.
 4. Bead-rim jar of Thompson type B5.1 in polished similar fabric. Ext. rim diameter 140 mm. 50 BC-AD 30. Context 186.
 5. Bead-rim jar of Thompson type B2.2 with corrugated shoulder in similar fabric. 50-1 BC. Context 186.
- dated roughly to the second half of the 1st century BC

Assemblage 2

6. Bead-rim jar of Thompson type B2.2 in rough grey-black fabric B9.1. Ext. rim diameter 160 mm. 50 BC-AD 50. Context 41.

Assemblage 3

7. Hole-mouthed jar or saucepan pot in black fabric B9.1 with knife-trimmed body. c 150 BC-AD 50. Context 68.

Assemblage 4

8. Bead-rim jar of Thompson type B2.2 with corrugated shoulder in quartz-sand-tempered fabric B8. Ext. rim diameter 130 mm. c 50 BC-AD.50. Context 83.
9. Lid-seated butt-beaker of Thompson Class G5-6 in black glauconitic fabric B9.1 with surface polish. Ext. rim diameter 140 mm. c AD 1-50. Context 83.
10. Fragment from copy of ?CAM 13 platter (Thompson type G1-8) in very fine grog-tempered fabric B1. c AD 20-60. Context 83.
11. Necked jar of Thompson type B1.1 in polished, siltstone grog tempered fabric B2.1. Ext. rim diameter 180 mm. c 50 BC-AD 70. Context 83.
12. CAM 8 platter in Gallo-Belgic Terra Rubra fabric TR2 fired polished orange. Ext. rim diameter 160 mm. c AD 25-65. Context 173.

Assemblage 5

13. Jug of uncertain type in black fabric B1 fired rough brown with triple reeded handle. c AD 1-50. Context 90.
14. Copy of Gallo-Belgic CAM 1 platter (Thompson type G1-1) in similar fabric with overall polish. c 20 BC-AD 30. Context 70.

*Thurnham*Assemblage 1 (c AD 1-50)

1. Bead-rim storage-jar in reddish-brown, grog-tempered fabric B2 with decorated shoulder cordon. Ext. rim diameter 300 mm. Paralleled in Phase 2 at Farningham Hill (Couldrey 1984, fig. 18, nos 82 and 83). *c* 25 BC-AD 50. Context 11492.
2. Bead-rim jar of Thompson type C1-1 in black fabric B2 fired buff-brown. Ext. rim diameter 180 mm. *c* AD 1-50. Context 11654.
3. Necked jar of Thompson type B2-1 in polished brown-black very fine fabric B2.1 variant with a shoulder cordon. *c* 50 BC-AD 50. Context 11654.
4. Everted-rim jar of Thompson type B4.2 in polished brown-black fabric B2.1. Ext. rim diameter 160 mm. Context 11888.
5. Body sherd from closed-form in glauconitic black fabric B9.1 with stabbed decoration. Context 11492.
6. Necked-jar of Thompson (1982) type C2.1 in similar fabric. Ext. rim diameter 200 mm. Context 11888.
7. Rim sherd from ?cup of Thompson Class E1 in patchy brown/grey-black fabric B9. Ext. rim diameter 140 mm. *c* 25 BC-AD 50. Context 10944.

*Snarkhurst Wood*Assemblage 1 (c AD 1-30+)

2. Hole-mouthed jar of Thompson type B2.2 in black glauconitic fabric B9.1. Rim diameter 70 mm. *c* 50 BC-AD 50. Context 129 top fill of ditch 242.
3. Bead-rim jar of similar type and in similar fabric with corrugated shoulder above all-over square-toothed comb stabbed rustication. Rim diameter 140 mm. The decoration is paralleled on a sherd from Quarry Wood Camp, Loose (Kelly 1972, Fig. 11. no. 25). *c* 50-1 BC. Context 131 in ditch 242.
4. Upper part of a similar jar in the same fabric but with polished, plain exterior below the corrugated shoulder. Rim diameter 140 mm. Also paralleled at Loose (ibid. Fig. 10 no. 7). *c* 50-1 BC. Context 229 upper fill of ditch 242.
5. Lid seated bead-rim jar with corrugated shoulder; similar in some respects to Thompson type C5.3 in similar fabric fired brown-black. Rim diameter 200 mm. *c* AD 1-50. Context 131 in ditch 242.
6. Sherd from barrel-shaped butt-beaker of type G5.2 in similar fabric with horizontal cordons separated by bands of burnished latticing. *c* AD 1-50. Context 132 upper fill of ditch 242.
7. Jar of type B1.7 in similar fabric with weakly-everted rim and external polish. Rim diameter 160 mm. Paralleled at Quarry Wood Camp, Loose (Kelly 1972, Fig. 11 no. 18). *c* AD 30-50. Context 270 in ditch 242.

Note: vessels 1, 8 and 9 from this assemblage were not illustrated

Figure 4.4. Late Iron Age pottery groups from Beechbrook Wood (Assemblages 2 (nos 4-9) and 3 (nos 10-20)).

*Beechbrook Wood*Assemblage 2 (c AD 1-25+)

4. Neck-cordoned jar of Thompson type B3-5 in grey fabric B2 fired black with pink margins. Ext. rim diameter 140 mm. *c* 50-1 BC. Context BBW00 1567.
5. Neck-cordoned jar of Thompson type B1-1 in black fabric B1 fired buff-brown. Ext rim diameter 160 mm. *c* 50 BC-AD 70. Context BBW00 219.

6. Neck-cordoned jar of Thompson type B1-3 in grey fabric B1 fired polished black with pink margins. Ext. rim diameter 130 mm. *c* AD 1-50. Contexts BBW00 219 and 1479.
7. Hole-mouthed vessel of Thompson class C3 in black fabric B2.1 with diagonal body combing. Ext. rim diameter 110 mm. *c* 50 BC-AD 50. Contexts BBW00 894 and 968.
8. Bead-rim jar of Thompson type C1-1 in black fabric B2.1 with combed body and perforated base. Ext. rim diameter 160 mm. *c* 25 BC-AD 70. Context BBW00 713.
9. Greater part of jar of Thompson type B2-3 with corrugated shoulder in black glauconitic sand and grog-tempered fabric B9.3. Ext. rim diameter 140 mm. *c* 50 BC-AD 50. Context BBW00 746.

Assemblage 3 (*c* AD 25-50/60)

10. Bead rim jar of Thompson class C4 in black fabric B2. Ext. rim diameter 180 mm. *c* AD 30-80. Context BBW00 210.
11. Bead-rim jar of Thompson type B5-5 in fabric B2 with shoulder groove below polished shoulder and bead and above rough-surfaced body. Ext. rim diameter 160 mm. *c* 25 BC-AD 50. Context BBW00 277.
12. Similar vessel in similar fabric but with combing below the shoulder groove. Ext. rim diameter 160 mm. *c* 25 BC-AD 50. Context BBW00 277.
13. Narrow necked cordoned jar of Thompson type B3-5 in polished black fabric B2 with burnished decoration on the shoulder cordon. Ext. rim diameter 80 mm. 50 BC-AD 50. Context BBW00 210.
14. Everted-rim jar of Thompson type B2-1 with corrugated shoulder in fabric B2 with polished exterior. Ext. rim diameter 120 mm. *c* 25 BC-AD 50. Context BBW00 277.
15. Bead-rim jar of Thompson type B2-2 with corrugated shoulder in fabric B2 with polished exterior. Ext. rim diameter 140 mm. 50 BC-AD 50. Context BBW00 214.
16. Lid-seated jar in polished reddish-brown/black fabric B2.3. Ext. rim diameter 180 mm. *c* AD 50-170. Context BBW00 210.
18. Bead-rim storage-jar in black fabric B2.1 with incised latticing on shoulder cordon. Ext. rim diameter 280 mm. *c* AD 1-70. Context BBW00 715.
20. Small slack-profiled jar in pinkish-red misfired fabric B2.1. Ext. rim diameter 120 mm. *c* AD 1-70. Context BBW00 729.

A date of *c* AD 25-50/60 is suggested for the assemblage.

Note: vessels 17, 19 and 21 from this assemblage could not be illustrated

Figure 4.5. Late Iron Age-early Roman pottery groups from Tollgate (Pit groups) and Northumberland Bottom (Pit group 411)

Tollgate

Pit groups (mid-late 1st century)

2. Storage jar (IIM, Monaghan type 3D1). Shell-tempered ware (fabric B6). Pit 161, context 160.
3. Storage jar (IIM, Monaghan type 3D1). Shell-tempered ware (fabric B6). Pit 161, context 160.
4. Bead-rim jar (IIA, Monaghan type 3F3.1). Shell-tempered ware (fabric B6). Probably product of Cliffe potteries. Pit 263, context 261.
6. Bead-rim jar with lid-seating (IIA16, Pollard 1988, no.12). Shell-tempered ware (fabric R69). Pit 673, context 609.

Northumberland Bottom

Group from Pit 411, *c* AD 80-100

10. Plain jar base, grog-tempered ware (B1). Fill 412.
11. Lid in shell-tempered ware (B6). Fill 412.

12. Lid in shell-tempered ware (B6). Fill 412.
13. Butt beaker copy in coarse dark grey sandy ware with sparse flint (B9.2). Fill 412.
14. Beaker in white-slipped Upchurch fine grey ware (R18.1). Fill 412.
15. Platter in fine grog-tempered ware (B2). Fill 412.
16. Bead-rim jar in shell-tempered ware (B6). Fill 412.
17. Bead-rim jar with lid seating in shell-tempered ware (B6). Fill 412.
18. Bead-rim jar in shell-tempered ware (B6). Fill 412.
19. Bead-rim jar with lid seating in shell-tempered ware (B6). Fill 412.

Figure 4.6. Late Iron Age-early Roman pottery groups from Northumberland Bottom (Pit group 1035 (Nos 69-74) and ditches 1049 and 1086 (Nos 75-85))

Northumberland Bottom (?mid-late 1st century)

Pit 1035

69. Decorated storage jar in shell-tempered ware (R69). Upper fill 1036.
70. Bead-rim jar with lid seating in shell-tempered ware (R69). Upper fill 1036.
71. Platter in grog-tempered ware (B1), loosely related to Thompson types G1-7 and G1-8. Probably *c* AD 50-100. Upper fill 1036.
72. Cordoned jar or bowl in Upchurch fine grey ware (R16). Monaghan dates this type (4J) to AD 43-120. Upper fill 1036.
73. As No. 72 above. Upper fill 1036.
74. Narrow necked jar in grog and sand-tempered ware (B5). Monaghan type 3A has a wide date range of *c* AD 40-250. Lower fill 1043.

Ditches 1049 and 1086

75. Disc-mouthed flagon in white ware (R75). Mid to late 1st century. Ditch 1049, fill 1048.
76. Bead-rim jar with lid seating in shell-tempered fabric (B6). Ditch 1086, fill 1072.
77. As No. 76 above. Ditch 1049, fill 1048.
78. As Nos 76 and 77 above. Ditch 1086, fill 1072.
79. Bead-rim jar in shell-tempered ware (B6). Ditch 1086, fill 1072.
80. As Nos 76-78 above. Ditch 1086, fill 1072.
81. Narrow necked jar (Monaghan 4F) in dark grey coarse sandy ware (B9). Ditch 1086, fill 1072.
82. Bead-rim jar with lid seating in shell-tempered ware (B6). Ditch 1086, fill 1073.
83. Lid in shell-tempered ware (B6). Waster or, more likely, a re-fired sherd. Ditch 1086, fill 1117.
84. Storage jar in Patchgrove grog-tempered ware (R68), AD 50-150. Ditch 1086, fill 1117.
85. Bead-rim jar with lid seating in shell-tempered ware (B6). Ditch 1086, fill 1117.

Figure 4.7. Early Roman pottery group from Thurnham (Assemblage 6)

Thurnham

Assemblage 6 (late 1st-early 2nd century)

43. Much of necked-bowl of Thompson type D1-1 in brown-black grog-tempered fabric B1 with light vertical combing. Ext. rim diameter 120 mm. 25 BC-AD 50. Context 20174.
44. Much of polished bead-rim jar of Thompson type B5-2 in black fabric B2. Ext. rim diameter 180 mm. *c* 25 BC-AD 50. Context 20175.
45. Bead-rim jar in fabric B2.1 with diagonal body furrowing. Ext. rim diameter 180 mm. *c* 50 BC-AD 50. Context 20239.
46. Bead-rim jar in orange fabric MLIA2.1 variant fired rough black with diagonal body furrowing below horizontal shoulder groove. Ext. rim diameter 130 mm. *c* AD 30-70. Context 20174.
47. Bead-rim jar in reddish-brown fabric R73.3 fired black. Ext. rim diameter 140 mm. *c* AD 50-70. Context 20174.

48. Bead-rim jar in rough patchy brown/black fabric R73.3. Ext. rim diameter 180 mm. *c* AD 50-150. Context 20377.
49. Bead-rim jar in grey fabric R73.2. Ext. rim diameter 180 mm. *c* AD 50-150. Context 20237.
50. Jar in grey fabric R73.2 with traces of black paint or resin around rim and on girth. *c* AD 50-90. Contexts 20175 and 20176.
51. Ring-necked flagon in sandy oxidised Canterbury fabric R6.3. Ext. rim diameter 45 mm. *c* AD 70-125. Context 20174.
52. Small beaker with weak everted rim in grey Upchurch fabric R16. Ext. rim diameter 80 mm. *c* AD 50-120. Context 20168.
53. Everted-rim beaker of Monaghan type 2I4.1 in similar fabric. Ext. rim diameter 100 mm. *c* AD 90-150. Context 20174.
54. Biconical beaker of type Monaghan type 2G1. Ext. rim diameter 80 mm. *c* AD 60-130. Context 20176.
55. Bowl of Monaghan type 5B0.2 in similar fabric. Ext. rim diameter 140 mm. *c* AD 50-70. Context 20174.
56. Bowl of type 5B6.2 in similar fabric. Ext. rim diameter 180 mm. *c* AD 70-130. Context 20174.
57. Platter of type 7A1 in similar fabric. Ext. rim diameter 160 mm. *c* AD 43-120. Context 20174.
58. Thin-walled everted-rim beaker in sand-free fabric R19. Ext. rim diameter 60 mm. *c* AD 50-120. Context 20377.
59. Haltern type 1A platter in Arretine fabric R41. Ext. rim diameter 180 mm. Context 20137.
60. Bead-rim jar in very fine sanded orange fabric with occasional ferruginous red sandstone up to 5 mm and crushed chert inclusions, fired black. Ext. rim diameter 150 mm. *c* AD 30-70. Context 20174.

Figure 4.8. Mid 2nd century pottery group from Bower Road (ditch 169)

Bower Road

Ditch 169 (mid 2nd century)

13. Fabric R65. Hook rimmed mortarium with stamp of LALLANS or LALLAIUS. Verulamium product with flint trituration grits. Context 277.
14. Fabric B1/R1. Type IIL cordoned jar (Thompson type C6-1) cordoned. Context 367.
15. Fabric B1. Type IIH cordoned jar (Thompson type B3-4). Context 367.
16. Fabric R5. Type IVA5 bowl. Context 367.
17. Fabric R6.1. Lid. Context 367.
18. Fabric R33. Type IIIB cornice rimmed beaker. Context 487.
19. Fabric B1/R1. Large everted rim jar, Monaghan class 3H. Context 487.
20. Fabric B1/R1. Type IIL rounded jar (Thompson type C 6-1) with incised line decoration. Context 487.
21. Fabric B1/R1. Body sherd of jar with combed decoration below two rows of ovoid indentations. Context 487.
22. Fabric R5. ?Type IVA8 bowl. Context 487.
23. Fabric ?R73. Type IVA8 bowl. Context 487.
24. Fabric R73.3. Type IVF carinated bowl. Context 487.
25. Fabric B1/R1. Type IID jar. Context 487.
26. Fabric B1/R1. Type IIG jar (cf Monaghan class 3H1.7). Context 488.
27. Fabric R73.3. Type IIG1 jar. Context 488.
28. Fabric B1/R1. Shallow bowl (Thompson type D1-4). Context 488.
29. Fabric R73.3. Type IIG1 jar. Context 488.
30. Fabric B1/R1. Type IIG jar. Context 488.
31. Fabric R73.3. Lid, similar to No. 17. Context 488.
32. Fabric R16. Type IIIG carinated beaker. Context 488.

- 33. Fabric R16. Base of ?jar with notched or indented foot. Context 489.
- 34. Fabric R73.3. Similar base, perhaps from a beaker or possibly a lid. Context 489.
- 35. Fabric B1/R1. Type IIF jar with black slip or 'paint' at junction of neck and shoulder. Context 489.
- 36. Fabric R5. Type IVA5 reeded-rim bowl. Context 489.

Figure 4.9. Late 2nd-early 3rd century pottery groups from Thurnham (Assemblage 8) and Leda Cottages (Assemblage 11) and late 3rd century pottery group from Thurnham (Assemblage 16)
Thurnham

Assemblage 8 (late 2nd century)

- 61. Everted rim jar of Thompson type C2-2 in black fabric B2 with vertically combed body below polished shoulder and rim. Ext. rim diameter 140 mm. *c* 50 BC-AD 70. Context 10498.
- 62. Lid-seated jar of Thompson type C5-3 in fabric B2. Ext. rim diameter 220 mm. *c* AD 1-250. Context 10616.
- 63. Necked bowl with corrugated neck of Pollard type 19 in grey fabric R68 fired smooth brown. Ext. rim diameter 240 mm. Paralleled on numerous sites in west Kent including Lullingstone, where dated *c* AD 70-130 (Pollard 1987, type IVM.2(3)). Contexts 10497 and 10499.
- 64. Lid in sandy grey Canterbury fabric R5. Ext. rim diameter 180 mm. *c* AD 70-175. Context 10609.
- 65. Hook-rim jar of Monaghan type 3H1-4 in BB2 fabric R14. Ext. rim diameter 140 mm. *c* AD 100-250/300. Context 10609.
- 66. Everted-rim cooking-pot of Monaghan type 3J0-5 in BB2 fabric R14 with acute lattice on the body. *c* AD 120-200. Context 10609.
- 67. Pie-dish of Monaghan type 5C4.5 in black BB2 fabric R14. *c* AD 150-250. Context 10608.
- 68. Pie-dish of type 5D1.6 with acute-lattice decoration in similar fabric. *c* AD 120-180. Context 10609.
- 69. Similar dish but of Class 5D2 in similar fabric. Ext. rim diameter 220 mm. *c* AD 120-180. Context 10609.
- 70. Pie-dish of type 5C7.1 in similar fabric. *c* AD 170-230. Context 10609.
- 71. Pie-dish of Class 5C2 in similar fabric. *c* AD 120/150-210. Context 10609.
- 72. Dish of Monaghan type 5E2.2 in similar fabric. *c* AD 110/20-210/300. Context 10609.
- 73. Dish of Monaghan type 5E2.4 in similar fabric. *c* AD 120-270. Context 10616.
- 74. Poppyhead beaker of Monaghan Class 2A3 in fine Upchurch grey ware fabric R16. Ext. rim diameter 100 mm. *c* AD 100/110-130/50. Context 10616.
- 75. Body sherd from beaker of Monaghan Class 2H1 in similar fabric with combed decoration. *c* AD 80/90-120/30. Context 10609.
- 76. Everted-rim beaker of Monaghan Class 2I3 in similar fabric. Ext. rim diameter 70 mm. *c* AD 120-150/90. Context 10616.
- 77. Hooked flange mortarium in soft cream-buff fabric R62. Ext. rim diameter 280 mm. *c* AD 100-150. Context 10609.

Leda Cottages

Assemblage 11 from pit 8037 (late 2nd-early 3rd century)

- 19. Truncated bag-shaped flagon in burnt Hoo fabric R18.1 with stub of bilobate handle. *c* AD 140-190. Context 8042.
- 20. Class IVH5-7 bowl of Monaghan type 5C7.1 in BB2 fabric R14 with rough external finish. Rim diameter 200 mm. *c* AD 170-230. Context 8043.

21. Ring-neck flagon in buff-yellow fabric R8.3 fired smooth orange externally. Rim diameter 37 mm. Paralleled in the Dane John kiln at Canterbury (Kirkman 1940, 131, No. 58). *c* AD 200-250. Context 8044.

22. Top of amphora in pink Canterbury fabric R8.1 fired smooth yellow-brown. Rim diameter 150 mm. *c* AD 150-250. Context 8045.

Possibly a 'ritually broken' group, below an upper fill 8036 with more varied contents

Thurnham

Assemblage 16 (late 3rd century)

101. Handmade necked-jar of Lyne (1994) type 7A1 in polished black/brown fabric LR1.1. Ext. rim diameter 180 mm. *c* AD 270-300. Context 20058.

102. Another example in similar fabric. *c* AD 270-300. Context 20089.

103. Straight-sided dish in BB1 fabric R13. Ext. rim diameter 220 mm. *c* AD 200-270. Context 20112.

104. Necked jar of Pollard Class GFXVI (Pollard 1983, fig. 15 no. 70) in BB2 fabric R14. *c* AD 250-300. Context 20058.

105. Developed beaded and flanged bowl of Monaghan Class 5A5 in similar fabric. Ext. rim diameter 180 mm. *c* AD 240/70-370. Context 20058.

106. Another example but of Pollard Class GFV (Pollard 1983, fig. 13 no. 24) in similar fabric. Ext. rim diameter 160 mm. *c* AD 240/70-300. Context 20058.

107. Everted rim jar of Pollard Class GFXVI with heavily-beaded everted rim (Pollard 1983, fig. 15 no. 74) in grey Thameside fabric R73. Ext. rim diameter 160 mm. *c* AD 200-370. Context 20058.

108. Jar with rolled over rim in late Thameside grey ware fabric LR2.2 with reddened surfaces. Ext. rim diameter 220 mm. *c* AD 180-250. Context 20058.

109. Everted-rim jar of Lyne and Jefferies (1979) type 3B.10 in fabric LR5 with slate-coloured slip on the rim and shoulder. Ext. rim diameter 160 mm. *c* AD 270-400. Context 20058.

110. Flanged neck flagon of Pollard (1988) type 169 in Hadham black-slipped grey ware fabric LR13.1. Ext. rim diameter 25 mm. *c* AD 170-270. Context 20058.

Figure 4.10. Late 4th century pottery groups from Thurnham (Assemblage 23), Bower Road (pit group 242) and Hazells Road (various contexts)

Thurnham

Assemblage 23 (late 4th century)

127. Rim sherd from slack-profiled lid-seated jar or bowl in patchy buff/ brown/grey fabric LR1.1. Possibly similar to an incipient beaded-and-flanged bowl in similar fabric from the dark earth at the Marlowe Car Park site in Canterbury (Pollard 1995, fig. 319 no. 582). Ext. rim diameter 240 mm. *c* AD 370-420. Context 11044.

128. Crude handmade hook-rim jar in patchy black/red/buff-grey fabric LR1.3 with very-profuse buff grog filler up to 3 mm. Ext. rim diameter 200 mm. *c* AD 370-420. Context 11044.

129. Smaller example in similar fabric. Ext. rim diameter 120 mm. *c* AD 370-420. Context 11044.

130. High, hollow pedestal base in similar fabric fired patchy black/orange-brown. There is a central perforation and a trace of a further one in the lower part of the vessel outside the pedestal, both formed pre-firing. *c* AD 370-420. Context 11044.

131. Wheel-turned necked jar in very-fine-sanded patchy red/black fabric LR1.5 with additional sparse brown and red grog up to 3 mm. Ext. rim diameter 200 mm. *c* AD 370-420. Context 11044.

132. Another example in similar fabric fired black. Ext. rim diameter 160 mm. *c* AD 370-420. Context 11044.

133. Hook-rim jar in grey similar fabric fired reddish-brown. Ext. rim diameter 160 mm. *c* AD 370-420. Context 11044.
134. Necked and horizontally-rilled jar of Lyne and Jefferies (1979) Class 3C in grey Alice Holt/Farnham ware fabric LR5. Ext. rim diameter 150 mm. *c* AD 300-420. Context 11044.
135. Hook rimmed jar in similar fabric. Ext. rim diameter 160 mm. *c* AD 300-420. Context 11044.
136. Hook-rimmed jar in buff Portchester D/Overwey fabric LR6. *c* AD 330-420. Context 11044.
137. Deep convex-sided dish in coarse reddish-brown fabric LR6 variant with profuse multi-coloured quartz filler (up to 1 mm) and rim edge blackening. Ext. rim diameter 220 mm. *c* AD 330-420. Context 11044.
138. Developed beaded and flanged bowl similar to Alice Holt/Farnham type 5B-8 (Lyne and Jefferies 1979, 46) in rough dirty-grey fabric LR5.1 without internal black/white slip, fired black externally. Ext. rim diameter 200 mm. *c* AD 350-420. Context 11044.
139. 'Pie dish' of Monaghan Class 5C2 in rough very-fine-sanded grey fabric R73. Ext. rim diameter 200 mm. *c* AD 150-210. Context 11044.

Bower Road

Pit 242 (late 4th century)

56. Fabric LR5. Bead and flanged bowl (Lyne and Jefferies 1979, 46, type 5B.8). Context 250.
57. Fabric LR10. Bowl, Young (1977) type C71. Context 250.
58. Fabric LR1.1. Bead and flanged bowl (Lyne (1994) type 7A12. Context 250.

Hazells Road

1. Late Roman lid seated jar in Mayen ware (*Eifelkeramik*) LR19. Produced from *c* AD 300-450 but most common in Britain mid-late 4th century. Demolition layer 14.
2. Necked bowl or jar in Hadham oxidised ware LR13. Mid 3rd-4th century. Deposit 159 over kiln plug 160.
3. Body sherd of rosette stamped bowl (Young (1977) form C78) in Oxfordshire red-slipped ware (LR10). The type dates to AD340-400+. Demolition deposit 178.
4. Beaker base in Nene Valley colour-coated ware (LR11). Mid/late 2nd-4th century. Demolition deposit 178.
5. Dish in Alice Holt reduced fabric (LR5). Demolition deposit 178.
6. Jar base in hard-fired grey ware (R100), deliberately trimmed. Demolition deposit 178.

Figure 4.13. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Pepper Hill

Mid 1st century

Grave 12011

- ON 4246: 'Hofheim'-type flagon (Marsh and Tyers IIA), Verulamium-region white ware R15. Severely burnt before burial. AD 43-70.
- ON 4247: 'Hofheim'-type flagon (Marsh and Tyers IIA), Verulamium-region white ware R15. Handle burnt before burial. AD 43-70.

Grave 12063

- ON 4242: 'Drinking-jar' (Monaghan 3F1), 'Belgic'-type grog- and sand-tempered ware B5. AD 43-70.

ON 4243: 'Hofheim'-type flagon (Monaghan 1E5), 'Upchurch'-type white-slipped oxidised ware R18.1. AD 43-80.

ON 4244: Platter (Monaghan 7F), Thameside grey ware R73.3. AD 43-70. Incised pattern on base.

Mid-late 1st century

Grave 327

ON 4307: Platter (Monaghan 7A3), 'Upchurch'-type fine reduced ware R16. AD 43-100.

ON 4308: Carinated beaker (Monaghan 2G1), 'Upchurch'-type fine reduced ware R16. The top half of the vessel was separated, inverted and used as a stand for ON 4308. AD 43-100.

Grave 11167

ON 4094: Bead-rimmed platter (Monaghan 7A1), 'Upchurch'-type fine reduced ware R16. Placed above ON 11229 and cremated bone. Vessel was incomplete before burial. AD 43-120.

ON 4095: Carinated beaker (Monaghan 2G1), 'Upchurch'-type fine reduced ware R16. AD 43-100.

ON 4096: Flask (Monaghan 1A), 'Upchurch'-type fine reduced ware R16. AD 43-200.

Figure 4.14. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Late 1st century

Grave 1087

ON 4305: Butt-beaker (Monaghan 2B), Thameside fine grey ware R73. AD 43-80.

ON 4306: Platter (Marsh and Tyers VA), Thameside grey ware R73.3. AD 43-100.

ON 4312: Platter, flint-tempered ware LIAB1. AD 43-70.

Grave 1109

ON 4518: Cinerary vessel. Double-handled flagon (Monaghan 1C), unsourced buff ware R74.3. AD 43-200.

ON 4520: Ring-necked flagon (Monaghan 1E1), unsourced buff ware R74.3. Perforated below handle. AD 70-160.

ON 4521: Bead-rimmed platter (Monaghan 7A2), 'Upchurch'-type fine reduced ware R16. AD 43-140.

ON 4523: Poppy-headed beaker (Monaghan 2A1), 'Upchurch'-type fine reduced ware R16. AD 70-90.

Grave 11366

ON 4140: Flanged bowl/dish (Monaghan 5B), highly micaceous ware R29. Complete, except for two holes drilled after firing through base; more holes attempted. AD 50-80.

ON 4141: Beaker, 'Upchurch'-type oxidised ware R17.2. AD 70-260.

ON 4142: Flagon, pink/buff ware R71. AD 43-130.

Grave 12005

ON 4222: Globular beaker (Monaghan 2H), 'Upchurch'-type oxidised ware R17.1. AD 70-130.

ON 4223: Ring-necked flagon (Marsh and Tyers IB2), Verulamium-region white ware R15. The vessel wall is slightly dented; ?a 'second'. AD 70-130.

ON 4225: Cinerary vessel. Pedestal jar (rim as Marsh and Tyers IIA15), Thameside grey ware R73.3. AD 50-100.

Grave 12114

ON 4219: 'Infant feeder' (Monaghan 13B1), Thameside grey ware R73.3. AD 80-120.

ON 4240: Narrow necked jar (Monaghan 3A), Thameside grey ware R73.3. AD 43-100.

Figure 4.15. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Late 1st-early 2nd century

Grave 11262

ON 4143: Bowl imitating Drag. 30 (Monaghan 4H1), 'Upchurch'-type fine reduced ware R16. Compass-inscribed decoration. AD 70-130.

ON 4144: Platter (Monaghan 7F1), Thameside grey ware R73.3. AD 50-70.

Mid 2nd century

Grave 48

ON 4505: Bowl (Monaghan 4B2), Thameside grey ware R73.3. AD 70-130.

ON 4506: Bead-rimmed platter (Monaghan 7A2), 'Upchurch'-type fine reduced ware R16. AD 43-140.

ON 4507: Cinerary vessel. Jar, Thameside grey ware R73.3. AD 43-180.

ON 4508: Cup (Drag. 46), East Gaulish samian ware R46. Inside ON 4507. A 'second'. Post-fired X-graffiti below rim and within footring. AD 140-170.

Grave 254

ON 4254: 'Drinking-jar' (Monaghan 3H2), coarse sandy grey ware R100. AD 170-230.

ON 4255: Dish (Drag. 18/31), Central Gaulish samian ware R43. Inverted and used as lid of ON 4258. Large portion of rim deliberately removed before deposition. Post-firing X-graffito within footring. AD 135-155.

ON 4256: Dish (Drag. 18/31), East Gaulish samian ware R46. Inverted and used as lid of ON 4258, partially overlying ON 4255. Large portion of rim deliberately removed before deposition. ?Post-firing graffito within footring. AD 130-160.

ON 4257: Flask (Monaghan 1B3), 'Upchurch'-type fine reduced ware R16. AD 90-200.

ON 4258: Plain-rimmed dish (Monaghan 5E2), Thameside fine grey ware R73. AD 120-200.

ON 4554: Jar, Thameside grey ware R73.3. Placed upright, used as lid of ON 4254. Base present only; deposited incomplete. AD 43-200.

ON 4591: Flagon, 'Upchurch'-type white-slipped oxidised ware R18.1. AD 43-200.

A substantial quantity of fragmented and abraded pottery (fabrics R14, R16, R17, R18, R42, R43, R46, R68, R69, R73; 148 sherds, 1092 g), comprising at least one flagon, six jars, three beakers, three dishes, one platter and one cup by rim count, was dispersed throughout 'foot end' of the backfill. The sherds formed a roughly circular pattern and were densest within the upper portion of the fill. The dating of this assemblage is consistent with the date of the main ceramic grave goods. The pottery was fragmented before deposition and is likely to form a deliberate deposit covering the southern portion of the coffin and surrounding the top of the main vessels.

Grave 560

ON 4345: Poppy-headed beaker (Monaghan 2A4), 'Upchurch'-type fine reduced ware R16. AD 130-170.

ON 4594: Ring-necked flagon (Monaghan 1E1), Verulamium-region white ware R15. AD 70-150.

Grave 1434

ON 4547: Flagon, 'Upchurch'-type white-slipped oxidised ware R18.1. AD 43-200.

ON 4552: Squat flask (Monaghan 3A2), 'Upchurch'-type fine reduced ware R16. AD 70-100.

ON 4635: Bag-shaped beaker (Cam 391), Lower Rhineland colour-coated ware R25. AD 120-170.

Figure 4.16. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Grave 10744

ON 4029: Ovoid beaker (Monaghan 2J4), 'Upchurch'-type fine reduced ware R16. Rim fragment ?deliberately removed before burial. AD 70-120.

ON 4036: Cinerary vessel. Bowl (Monaghan 5C7), 'Upchurch'-type fine reduced ware R16. AD 120-230.

ON 4037: Flagon, 'Upchurch'-type white-slipped oxidised ware R18.1. AD 43-200.

ON 4084: Dish (Drag. 18/31), East Gaulish samian ware R46. Rim fragment ?deliberately removed before burial. AD 140-170.

Grave 11961

ON 4230: Cup (Drag. 27), South Gaulish samian ware R42. On grave floor. Worn through use. Distorted rim; a 'second'. AD 70-90.

ON 4231: Poppy-headed beaker (Monaghan 2A4), 'Upchurch'-type fine reduced ware R16. Fragment of rim deliberately removed before burial. AD 130-170.

ON 4232: Cinerary vessel. High-shouldered bowl (Monaghan 4C1), Thameside grey ware R73.3. Rests above ON 4230. AD 43-100.

Mid-late 2nd century

Grave 796

ON 4267: Folded beaker (as Monaghan 2C4), 'Upchurch'-type fine reduced ware R16. AD 140-200.

ON 4268: Dish (Drag. 79), Central Gaulish samian ware R43. Partially overlying ON 4270. Complete. AD 160-200.

ON 4269: Flask (Monaghan 1B7), 'Upchurch'-type fine reduced ware R16. Partially overlying ON 4270. AD 130-200.

ON 4270: Cinerary vessel. Storage jar (Monaghan 3D2), Thameside grey ware R73.3. AD 100-150.

Figure 4.17. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Grave 864

ON 4598: 'Drinking-jar' (Monaghan 3J3), Thameside grey ware R73.3. AD 150-200.

ON 4599: Plain-rimmed dish (Monaghan 5E1), Thameside grey ware R73.3. Post-firing internal X-graffito and external incised lines. AD 130-200.

ON 4600: Flagon (Pollard 155), Verulamium-region white ware R15. Possibly deliberately broken at the neck. AD 130-160.

Late 2nd century

Grave 451

ON 4341: Cup (Drag. 46), East Gaulish samian ware R46. AD 130-160.

ON 4353: Bowl (Curle 11), Central Gaulish samian ware R43. ?Redeposited. Unevenly spaced decoration - a 'second'. AD 125-150.

ON 4562: Plain-rimmed dish (Monaghan 5E1), black-burnished ware 2 R14. AD 130-300.

ON 4563: Flask (Monaghan 1B6), Thameside grey ware R73.3. AD 170-230.

ON 4564: Plain-rimmed dish (Monaghan 5E1), black-burnished ware 2 R14. Spalled - ?a second. AD 130-300.

ON 4641: Poppy-headed beaker (Monaghan 2A5), 'Upchurch'-type fine reduced ware R16. Placed inside ON 4564. AD 150-190.

Early 3rd century

Grave 787

ON 4352: Mortarium (Drag. 45), Central Gaulish samian ware R43. Portion of rim possibly removed deliberately before burial; worn internal surface. AD 210-240.

ON 4372: Platter (Monaghan 7B1), fine red-surfaced grog-tempered ware R154. Burnt on external surface. AD 43-70.

ON 4586: Flange-necked flagon (Pollard 167), 'Upchurch'-type white-slipped oxidised ware R18.1. AD 170-230.

Grave 10520

ON 4032: Groove-rimmed dish (Monaghan 5F3), sandy grey ware LR2.1. Scorched externally on base. Placed inside box. AD 130-300.

ON 4033: Funnel-necked, globular beaker (Monaghan 2C6), sandy grey ware LR2.1. Scorched on exterior surface. Placed inside box. AD 190-230.

Figure 4.18. Pottery from selected grave groups at Pepper Hill (ON = object (small find) number)

Early-mid 3rd century

Grave 886

ON 4323: 'Hofheim'-type flagon (Monaghan 1E5), 'Upchurch'-type white-slipped oxidised ware R18.1. AD 43-80.

ON 4343: Squat globular beaker (Monaghan 2C5/6), Thameside fine grey ware R73. AD 200-260.

ON 4344: Flask (Monaghan 1B), Thameside fine grey ware R73. Rim piece ?deliberately removed before burial. AD 130-200.

Late 3rd-mid 4th century

Grave 962

ON 4280: Bead-and-flanged dish (Monaghan 5A4/5), sandy grey ware LR2.1. AD 200-350.

ON 4346: Pentice beaker (Monaghan 2C2/3), Thameside grey ware R73.3. AD 260-360.

Figure 4.19. Mid 2nd century grave groups from Bower Road and Saltwood

Bower Road

Burial 107 (c mid 2nd century)

59. Fabric R16. Funnel-necked beaker with rounded body, slightly beaded rim and rouletted decoration. Not closely paralleled in Monaghan. Context 105, burial 107,

60. Fabric R16. Type VIC.1 carinated cup, rouletted. Similar to Monaghan class 6A1 but the rim is more sharply angled than in this or the London examples. Context 106, burial 107.

61. Fabric B1/R1. Large type IIF jar used as cremation urn. Context 273, burial 107.

unusual fabric/form combinations

Saltwood

Burial 22 (c mid-late 2nd century)

ON 4046: Upchurch ware jar base (cinerary urn) in fabric R16. c AD 120-150.

ON 4047: Upchurch ware indented beaker (Monaghan Class 2D) in fabric R16. c AD 120/140-?250.

ON 4048: Complete black-burnished type straight sided dish (Monaghan Type 5F3.3), in fabric R73.1. c AD 130-210.

ON 4049: Grey ware carinated jar in fabric R73.

5 CHAPTER 5. POST-ROMAN POTTERY

by Lorraine Mephram

5.1 Introduction

Post-Roman pottery was recovered from 12 sites along the CTRL route, from Northumberland Bottom in the north to Saltwood in the south (Fig. 5.1). Two of these sites produced early/middle Saxon funerary-related assemblages – three vessels from the Cuxton cemetery, and nine vessels (plus some miscellaneous sherds) from the Saltwood cemetery. The remaining 11 assemblages (including a post-Saxon group from Saltwood) amount to a total of *c* 7700 sherds, of which just under half (*c* 3500 sherds) came from one site – Parsonage Farm. Most of the other sites produced small assemblages (less than 500 sherds). In terms of chronology, these assemblages range from late Saxon to post-medieval, with a few stray early/middle Saxon sherds. The emphasis, however, is on the 12th and early 13th century, and outside that date range the information is sparser.

This report seeks to pull together the evidence from all the individual site assemblages in order to examine various aspects of the post-Roman ceramic sequence in Kent, and to gauge the impact of the results of the CTRL project on our understanding of this sequence. Three major themes will be explored here:

Production and distribution, with particular reference to the Ashford industry

Site function

Site status/hierarchy

5.2 Methodology

The pottery for most sites was recorded using a project-specific Access database (exceptions were the early/middle Saxon assemblages from Saltwood and Cuxton, recorded using dBase IV software).

Early/middle Saxon pottery fabrics from Saltwood and Cuxton were defined on the basis of the range and frequency of macroscopic inclusion types, and form site-specific type series (both assemblages were recorded at the assessment stage using the Canterbury Archaeological Trust (CAT) fabric series, and details are held in the project archive). For other sites, fabric types were defined following the CAT type series for post-Roman pottery (a full list of fabric types is included here as Table 5.1). These are defined and coded within chronological blocks, i.e. EMS = early/middle Saxon; MLS = middle/late Saxon; LS = late Saxon; EM = early medieval; M = medieval, LM = late medieval; PM = post-medieval; LPM = late post-medieval (modern). Table 5.2 gives the totals of each fabric type by site.

Table 5.1: Canterbury post-Roman pottery fabric type series (only fabrics occurring on CTRL sites)

FABRIC CODE	DESCRIPTION	DATE
EMS1	Early Saxon Sandy Ware	450-700
EMS4	Early Saxon Organic-tempered Ware	550-725
MLS2	Canterbury-type Sandy Ware	775-875
MLS7	Ipswich Ware	720-850
MLS100	Misc. middle Saxon wares	700-850
LS1	Canterbury-type late Saxon Sandy Ware	850-1050
LS2	Late Saxon Shelly Ware	850-1050
LS3	Late Saxon Shelly-Sandy Ware	850-1050
LS19	Late Saxon Non-Local Chalk-Filled Ware	850-1050
LS100	Misc. late Saxon wares	850-1050
EM.M5	Ashford-type (Potter's Corner) Shelly-Sandy Ware	1175-1300
EM1	Canterbury Sandy Ware	1050-1225
EM2	Early Medieval Shelly Ware	1075-1225
EM3	Misc Shelly Ware	1050-1250
EM3A	Misc Shelly-Sandy Ware	850-1225
EM4	West Kent Fine Sandy ware	1125-1250
EM22	N/W Kent Fine Sandy with Sparse Shell And Sparse grits	1125-1250
EM26	Coarse London-type ware	1125-1225
EM28	Kentish Sandy Ware With Shell +Sparse Flint	1175-1225
EM29	Kentish Sandy Ware with flint+sparse shell	1125-1225
EM30	Non-local coarse sand and shell-tempered	1050-1200
EM31	?Kentish Coarse Sandy Ware With moderate shell	1100-1200
EM32	?East Sussex flint and shell-tempered	1050-1225
EM33	?East Sussex Shell+ Flint-Tempered Coarse Sandy ware	1075-1225
EM34	?East Sussex Coarse Sandy Ware with sparse shell	1075-1250
EM35	NW Kent Shell-Tempered	1050-1225
EM36	N/W Kent Sandy And Shell-Tempered	1100-1250
EM41	Non-local moderate quartz sand with shell + flint temper	1050-1225
EM45	Non-local Coarse Sandy Ware	1050-1400
EM48	NW Kent? Shell-Filled Fine Sandy Ware	1050-1250
EM100	Misc. early Medieval wares	1050-1225
M1	Medieval Tyler Hill Ware	1225-1375
M5	Fine London-Type Ware	1080-1350
M10	Wealden-Type Pink-Buff Sandy Ware	1350-1550
M10R	Wealden Brown-Buff Sandy Ware (?Rye/Romney March variant)	?1400/25-1550
M19G	N. French/Rouen Green-Glazed	1170-1350
M22P	Saintonge Polychrome Ware	1280-1325
M37	?Medway Chalk-tempered Sandy Ware	1225-1400
M38A	N/W Kent Sandy Ware (Mainly Reduced)	1175-1350
M38B	N/W Kent Fine Sandy Ware (Reduced)	1175-1400
M40A	Ashford/Wealden Sandy Ware with Sparse chalk/shell	1175-1400
M39/M40B	Ashford/Wealden Sandy Ware with very rare shell	1175-1400
M40C	Ashford/Wealden Fine Ware with chalk, shell + flint	1250-1400
M41	Coarse Border Ware	1340-1500
M44A	Coarse Limpsfield-type grey ware	1150-1300
M53	Surrey/Wealden Ware	1250-1450
M100	Misc Unidentified Medieval	1200-1400
LM1	Late Medieval Tyler Hill Ware	1375-1550
LM2	Canterbury-type earthenware	1475-1550
LM4	Wealden Buff Sandy Ware	1450-1550
LM8	Langerwehe Stoneware	1350-1500
LM11	Early Valencian Lustreware	1380-1450
LM30	?Wealden Orange-Buff White Slipped Ware	1550-1700
LM32	Wealden Orange-Buff Sandy with reduced Streaks	1475-1550
LM100	Misc. late medieval wares	1350-1550
PM1	Local Post-Medieval Redware	1550-1775
PM2.5	Wealden fine earthenware	1550-1675
PM2.6	Wealden Buff earthenware	1550-1750
PM5	Frechen Stoneware	1550-1700
PM25	London Stoneware	1675-1825
PM40B	Chinese porcelain 'famille rose'	1725-1800
PM100	Misc. post-medieval wares	1550-1775
LPM7BJ	Transfer-printed Bone China	1800-1900
LPM4	Sunderland-type slipware	1800-1900
LPM12C	Pearlware	1780-1825
LPM18A	Black Basalt Ware	1770-1900
LPM43A	Creamware – Whieldon Type	1750-1780

Table 5.2: Post-Roman fabric totals by site* (number/weight of sherds)

Fabric Type	Fabric Name	North'land Bottom	Tollgate	Boarley Farm	Thurn-ham	Parsonage Farm	Beech-brook	Mersham	Little Stock Fm	Bower Rd	Westen-hanger	Saltwood	TOTAL
-	Misc. early/middle Saxon wares†											130/5923	130/5923
EMS1	Early Saxon Sandy Ware								1/50				1/50
EMS4	Early Saxon Organic-tempered Ware	1/10											1/10
MLS2	Middle/late Saxon Canterbury-type sandy							3/27				7/91	10/118
MLS7	Ipswich Ware			1/19									1/19
MLS100	Misc. middle Saxon wares (unid.)							1/4					1/4
LS1	Canterbury-type late Saxon Sandy Ware							26/271			1/5	8/54	35/330
LS2	Late Saxon Shelly Ware					3/16		12/249					15/265
LS3	Late Saxon Shelly-Sandy Ware					1/8		6/87					7/95
LS19	Late Saxon Non-Local Chalk-Filled Ware							1/11					1/11
LS100	Misc. late Saxon wares (unid.)							1/2	1/13				2/15
EM1	Canterbury Sandy Ware	1/22				2/20		74/849	2/2	17/122	275/2447	219/2606	590/6068
EM2	Early medieval Shelly Ware						2/11	91/689	14/55		2/33	36/326	145/1114
EM3	Misc. Shelly wares	35/443				93/2409							128/2852
EM3A	Misc. Shelly-Sandy wares (E Kent?)				236/1319	25/364		7/81					268/1764
EM4	West Kent Fine Sandy Ware							2/19		4/22			6/41
EM22	NW Kent Fine Sandy Ware with sparse shell + sparse grits	25/166		735/7250	14/169								774/7585
EM26	Coarse London-type Ware	1/5											1/5
EM28	Kentish Sandy Ware with shell +sparse flint					1/5		1/22	2/10	2/2			6/39
EM29	Kentish Sandy Ware with flint+sparse shell											6/40	6/40
EM30	Non-local coarse sand + shell-tempered ware											9/84	9/84
EM31	?Kentish Coarse Sandy Ware with moderate shell	5/42	2/10			6/79				1/16	3/6		17/153
EM32	?East Sussex flint + shell-tempered ware						10/51		17/102	9/72	87/1062	9/54	132/1441

Fabric Type	Fabric Name	North'land Bottom	Tollgate	Boarley Farm	Thurnham	Parsonage Farm	Beechbrook	Mersham	Little Stock Fm	Bower Rd	Westenhanger	Saltwood	TOTAL
EM33	?E.Sussex Shell+ Flint-Tempered Coarse Sandy Ware					2/5			2/12	1/2	40/325	3/82	48/426
EM34	?E Sussex Coarse Sandy with sparse shell								1/4		1/2		2/6
EM35	NW Kent Shell-Tempered Ware	287/3669	72/392	72/1215	5/44								436/5320
EM36	NW Kent Sandy + Shell-Tempered Ware	113/1133	5/142	11/150	24/251	1/23							154/1699
EM41	Non-local moderate quartz sandy ware with shell + flint temper										6/67	1/1	7/68
EM45	Non-Local Coarse Sandy Ware											11/82	11/82
EM48	?NW Kent Shell-Filled Fine Sandy Ware	5/51	14/80										19/131
EM.M5	Ashford Potter's Corner Sandy Ware with fossil shell		1/16	165/1082	75/869	2720/44,984	7/60	3/18	28/299	84/873	173/1258	5/23	3261/49,482
EM100	Misc. early medieval wares (unid.)		1/19					1/13	2/2		2/8	3/20	9/62
M1	Medieval Tyler Hill Ware			3/24		67/1402					23/190	10/80	103/1696
M5	Fine London-Type Ware	1/9	1/9	43/2552	28/222	60/830							133/3622
M10	Wealden-Type Pink-Buff Sandy Ware					2/209		1/7	3/10	4/17			10/243
M10R	Wealden Brown-Buff Sandy Ware										1/20		1/20
M19G	N. French/Rouen Green-Glazed Ware					6/28							6/28
M22P	Saintonge Polychrome Ware					1/5							1/5
M37	?Medway Chalk-tempered Sandy Ware											11/53	11/53
M38A	NW Kent Sandy Ware (mainly reduced)		9/75	235/2674	1/2	145/1370							390/4121
M38B	NW Kent Fine Sandy Ware (reduced)	32/316		202/1652	7/35	8/260							249/2263
M40A	Ashford/Wealden Sandy Ware with sparse chalk/shell					181/3120			11/81		2/11		194/3212
M40B	Ashford/Wealden Sandy Ware with very rare shell				1/3	138/3578	117/3438	5/30	12/88	1/1	40/357	9/59	323/7554
M40C	Ashford/Wealden Fine Ware with chalk, shell+flint					19/380						1/14	20/394

Fabric Type	Fabric Name	North'land Bottom	Tollgate	Boarley Farm	Thurn-ham	Parsonage Farm	Beech-brook	Mersham	Little Stock Fm	Bower Rd	Westen-hanger	Saltwood	TOTAL
M41	Coarse Border Ware		1/2										1/2
M44A	Coarse Limpsfield type Grey Ware	1/48											1/48
M53	Surrey/Wealden Ware			2/11		5/32							7/43
M100	Misc. medieval wares (unid.)	2/9				5/76						3/27	10/112
LM1	Late Medieval Tyler Hill Ware		1/4			4/56			5/104			4/13	14/177
LM2	Canterbury-type earthenware							6/79	1/1	1/4		2/6	10/90
LM4	Wealden Buff Sandy Ware							5/103	6/140	11/94			22/337
LM11	Early Valencian Lustreware					2/25							2/25
LM30	?Wealden Orange-Buff Sandy Ware with slip	1/44											1/44
LM32	Wealden Orange-Buff Sandy Ware with reduced streaks					1/39		6/173	3/36			9/181	19/429
LM100	Misc. late medieval wares (unid.)							1/4					1/4
PM1	Local Post-Medieval Redware	1/36		1/2		1/7		7/227					10/272
PM2.5	Wealden fine earthenware							2/9					2/9
PM2.6	Wealden Buff earthenware							1/32		3/65			4/97
PM5	Frechen Stoneware					1/13							1/13
PM25	London Stoneware							1/5					1/5
PM40B	Chinese porcelain 'famille rose'											1/6	1/6
-	All modern wares		6/22	3/10	9/37			3/5				73/703	94/777
TOTALS		511/6003	113/771	1473/16,641	393/2861	3500/59,343	136/3560	267/3016	111/1009	138/1290	656/5791	571/10,571	7875/111,003

* excluding Cuxton (Early/middle Saxon cemetery assemblage quantified by number of vessels only)

† Saltwood: site specific fabric series for early/middle Saxon pottery (fabrics recorded at analysis stage largely as EMS1 variants)

A scheme-wide type series was created for rim, base and handle forms, and this was linked where possible to vessel forms whose definition followed nationally recommended nomenclature (MPRG 1998). Details of decoration, surface treatment, manufacture, use-wear and condition were also recorded. Quantification in all cases is by both number and weight of sherds; EVEs have not been considered appropriate for use with post-Roman assemblages. Recording throughout accords with the minimum standards recommended for post-Roman pottery (MPRG 2001).

5.3 Site assemblage summaries

Figure 5.2 gives a crude indication of the post-Roman ceramic sequence represented by the 12 individual site assemblages, together with overall quantifications for each assemblage. Brief statements on the range and chief characteristics of the individual site assemblages are given below.

5.3.1 Northumberland Bottom:

An assemblage of modest size gives a ‘snapshot’ of the early medieval ceramic sequence for north Kent (late 11th to early 13th century). Shelly and sandy/shelly wares of local manufacture are predominant, later superseded by grey wares, again probably locally made. There are also small amounts of regional wares, including a London-type Rouen-style jug and a Canterbury-type spouted pitcher. A small amount of glazed fine wares (including the London-type jug) indicates some pretensions to status (Mephram 2006a).

5.3.2 Tollgate

A small assemblage with a date range focusing on late 11th to early 13th century, closely comparable in date range and character to that from the adjacent site at Northumberland Bottom. It is dominated by locally manufactured shelly wares, with some regional wares from London, Canterbury and the Surrey/Hampshire border (Mephram 2006b).

5.3.3 Cuxton

Three vessels found as grave goods in the early/middle Saxon cemetery, including a 7th century imported Frankish bottle (Blinkhorn 2006).

5.3.4 Boarley Farm/Pilgrims Way

The occurrence of a single sherd of middle Saxon Ipswich ware is of interest here. Along with the assemblage from Thurnham, the medieval assemblage provides a useful ‘keyhole’ into the ceramic sequence for the Maidstone area. Pits at Boarley Farm contained domestic refuse (including a complete bottle and a partial London-type fine ware jug) dating to the later 13th century, while pottery from Pilgrims Way has broader potential date range of 12th to 13th

century. The primary source area is still north-west Kent, but interestingly there are more London-type wares here than at sites to the north-west (perhaps at least partly an indication of higher status). However, there is also a significant proportion of Ashford-type wares (Mephams 2006c).

5.3.5 Thurnham

A relatively small assemblage, probably representing a short-lived phase of activity in the later 12th or early 13th century, associated with the nearby manorial site of Corbier Hall. There are some indications of status in the form of at least one London-type fine ware jug. The predominant wares are shelly/sandy and sandy/shelly wares from East Kent and Ashford (Mephams 2006d).

5.3.6 Parsonage Farm

This is the largest assemblage by far from the CTRL route, with a date range from the 12th to the 14th century, associated with two phases of building on this manorial site. Unsurprisingly, given its location, the assemblage is dominated by Ashford-type wares, both early medieval and medieval types, but there are also some regional wares (Canterbury and London types), and the only occurrence of imported continental wares from the CTRL route. As well as the evidence for the output and development of the Ashford industry, this assemblage has enabled dating of the various phases of activity on the site, and provided functional and socio-economic evidence (Mephams 2006e).

5.3.7 Beechbrook Wood

A small assemblage, consisting largely of sherds from a single jar of local type and probable 13th century date (Mephams 2006f).

5.3.8 Mersham

This assemblage includes the only significant group of late Saxon pottery from the CTRL route, and provides useful evidence for the origins of the medieval pottery industries of Ashford and Canterbury, both of which sources were supplying the site in roughly equal quantities throughout its occupation from 9th/10th century to mid 12th century. There is a strictly utilitarian range of vessel forms from a modest rural settlement (Mephams 2006g).

5.3.9 Bower Road

A small assemblage, broadly comparable in date range and character to that from Little Stock Farm below (Mephams 2006h).

5.3.10 Little Stock Farm

A small assemblage, resulting from sporadic activity on the site from the mid 11th to the 16th century, with an emphasis on the earlier part of this sequence. There is a range of sources of

supply, including the Canterbury and Ashford industries, as well as miscellaneous shelly and flint-tempered wares found along southern coast of Kent and East Sussex (Mephams 2006i).

5.3.11 *Westenhanger*

An assemblage of moderate size, relating to three short-lived phases of medieval activity on the site from the mid 11th to the 14th century. The site appears to have been supplied first from the Canterbury area, then from the 12th century by the Ashford industry, supplemented by shelly and flint-tempered wares probably of local manufacture. Once again the emphasis is firmly on utilitarian wares, despite the proximity to Westenhanger Castle (Mephams 2006j).

5.3.12 *Saltwood*

Nine vessels were found as grave goods (plus miscellaneous sherds) in the early/middle Saxon cemetery, including a 7th century imported Frankish bottle. Other sherds are in variants of the local coarse sandy ware (Blinkhorn 2006b). The remainder of the medieval assemblage dates to between the 11th and the 13th century, with an emphasis on the early part of this date range. This site shows a heavier reliance than sites to the west on pottery from the Canterbury area, perhaps due to chronological factors. The assemblage contains very few glazed wares, but a relatively high proportion of open forms has a possible functional implication (Mephams 2006k).

5.4 The major ceramic traditions

Individually, while most of these site assemblages can only give a small ‘keyhole’ view of the local ceramic sequence over a fairly limited date range, when combined, they provide a useful ‘slice’ across Kent, cutting through a number of different ceramic traditions for the middle/late Saxon and medieval periods. Four such traditions, or groups of wares, can be defined, and some comment can be made on the chronological development of each. The breakdown of each site assemblage into these ware traditions is given in Table 5.3, while Table 5.4 presents this information as percentages of each assemblage by period.

5.4.1 *The shelly, shelly/sandy and sandy wares of north-west Kent*

No source is known for these wares (and there were probably several), but general areas can be highlighted - the fossil shell in some of the shelly wares derives from the Woolwich Beds. Some of these wares (particularly from Tollgate and Northumberland Bottom) are comparable to London types, as was also noted at the nearby site at Pepper Hill (Blinkhorn 2001). Their date ranges from the mid 11th to mid 13th century, but their origins probably lie earlier in the late Saxon period.

5.4.2 Ashford-type shelly/sandy wares, comparable to products of the Potter's Corner kiln; and later Ashford/Wealden wares

The existing evidence for pottery production from Ashford is in the form of wasters only, no associated structures being identified. The site was never fully excavated and the pottery found there (dated to the 13th century on typological grounds) has only been published in summary form (Grove and Warhurst 1952).

It is extremely unlikely that the Potter's Corner site was the only such production site in operation in the Ashford area at this period, and other sites almost certainly remain to be discovered. For example, Rigold noted the difference in colour between the Potter's Corner wares and those of similar fabric from the nearby moated site at Pivington, suggesting that another source, perhaps closer, might have been supplying the latter site (Rigold 1962, 40).

5.4.3 Sandy wares from east Kent, deriving from the Canterbury/Tyler Hill production centre

As for Ashford, evidence for pottery production at Tyler Hill is so far largely restricted to wasters rather than kiln structures. All the excavated kilns here appear to have been for tile rather than pottery production, although the site of one 12th century kiln is known. Petrological analysis of late Saxon pottery from Canterbury suggests that pottery production at Tyler Hill could have started as early as the 9th century AD, although the earliest excavated evidence dates from the mid 12th century (Cotter 1991). The industry reached its peak in the period c 1275-1350, and had a virtual monopoly at this period over east Kent, but continued until the early 16th century.

5.4.4 Miscellaneous flint-tempered and shelly wares

These wares form a loosely defined group found along the south Kent/east Sussex coast and probably originating from several different sources. Little is as yet known about their potential sources and distribution. They have a broad date range of late 11th to early 13th century.

5.4.5 Other wares

In addition to these four traditions, regional and imported wares appear in small quantities in the medieval assemblages – Surrey/Wealden wares from the west, London-type wares from the north-west, and a handful of imports (the latter restricted to Parsonage Farm).

Imported wares also occur in the two early/middle Saxon cemetery assemblages from Cuxton and Saltwood, in the form of 7th century wheel-thrown 'Merovingian' bottles. Imports such as these are well known from Anglo-Saxon sites in Kent (rarely outside the county) where they occur mainly, but not exclusively, as accessory vessels in graves (Evison 1979), for example at the Dover Buckland cemetery (Evison 1987, 94).

Also of interest in this respect is a single sherd of Ipswich ware from the Boarley Farm site, marking an addition to a small but growing number of find-spots of Ipswich ware in Kent. The distribution of the ware appears to be an indicator of the hinterland of the emporia at Ipswich and London. Within Kent the ware has a mainly coastal distribution, and has been identified, for example, at Folkestone, Hythe and Dover, with the largest assemblages from sites with ecclesiastical components, such as Minster-in-Sheppey and Canterbury (Riddler 2004, 28). Apart from the latter sites, most findspots are of a handful of sherds. These findspots probably represent settlements producing goods for trade, or perhaps even small-scale local markets (Blinkhorn 1999).

Table 5.3: Ware traditions by site (number / weight of sherds), excluding early/middle Saxon wares

Ware Tradition	Date Range	North'land Bottom	Tollgate	Boarley Farm	Thurnham	Parsonage Farm	Beechbrook	Mersham	Little Stock Fm	Bower Rd	Westen-hanger	Saltwood	TOTAL
NW Kent	EM	465/5462	91/614	818/8615	43/464	94/2431							128/2852
	M	32/316	9/75	437/4326	8/37	153/1630							2022/21,119
	<i>sub-total</i>	497/5778	100/689	1255/12941	51/501	247/4062	0	0	0	0	0	0	2150/23,971
Ashford	LS					4/24		18/336					22/355
	EM		1/16	165/1082	75/869	2720/44,984	9/71	94/707	42/354	84/873	175/1291	41/349	3406/50,596
	M				1/3	338/7078	117/3438	5/30	23/169	1/1	42/368	10/73	537/11160
	<i>sub-total</i>	0	1/16	165/1082	76/872	3062/52086	126/3509	117/1073	65/523	85/874	217/1659	51/422	3965/62,310
E Kent	M/LS							29/298			1/5	8/54	38/357
	EM	1/22			236/1319	27/384		81/930	2/2	17/122	275/2447	219/2606	858/7832
	M			3/24		67/1402					23/190	10/80	103/1696
	LM		1/4			4/56		6/79	6/105	1/4		6/19	24/267
	<i>sub-total</i>	1/22	1/4	3/24	236/1319	98/1842	0	116/1307	8/107	18/126	299/2642	243/2759	1023/10,152
S Coast	EM	5/42	2/10	0	0	9/89	10/51	1/22	22/128	13/92	137/1462	28/261	227/2257
	<i>sub-total</i>	5/42	2/10	0	0	9/89	10/51	1/22	22/128	13/92	137/1462	28/261	227/2257
Surrey/Weald	M	1/48	1/2	2/11		7/241		1/7	3/10	4/17	1/20		20/356
	LM	1/44				1/39		11/276	9/176	11/94		9/181	42/810
	<i>sub-total</i>	2/92	1/2	2/11	0	8/280	0	12/283	12/186	15/111	1/20	9/181	62/1166
London	all	2/14	1/9	43/2552	28/222	60/830							134/3627
Imports	regional		1/19										1/19
	Continent					9/58							9/58
	<i>sub-total</i>	2/14	2/28	43/222	28/222	69/888	0	0	0	0	0	0	144/3704
Miscellaneous	M/LS			1/19				3/17	1/13				5/49
	EM							3/32	2/2	4/22	2/8	14/102	25/166
	M	2/9				5/76						14/80	21/165
	LM							1/4					1/4
	<i>sub-total</i>	2/9	0	1/19	0	5/76	0	7/53	3/15	4/22	2/8	28/182	52/384
	<i>TOTAL</i>	508/5952	107/749	1469/16,629	384/2824	3498/59,323	136/3560	253/2738	110/959	135/1225	656/5791	360/3848	7623/103,757

Table 5.4: Proportions of early medieval and medieval pottery by ware tradition (percentages by weight of total site assemblages by period). Smaller site assemblages (<1000 g and Beechbrook Wood) have been omitted, as have medieval (M) assemblages from asterisked sites.

Ware Tradition	Date Range	North'land Bottom	Boarley Farm	Thurnham	Parsonage Farm	Mersham*	Bower Road*	Westenhanger	Saltwood
NW Kent	EM	99%	89%	17%	5%				
	M	83%	63%	14%	14%				
Ashford	EM		11%	33%	96%	42%	79%	25%	10%
	M			1%	63%			66%	31%
E Kent	EM	<1%		50%	1%	55%	11%	47%	79%
	M		<1%		13%			34%	34%
S Coast	EM	<1%			<1%	1%	8%	28%	8%
	M								
Surrey/Weald	EM								
	M		<1%		2%				
London	M	2%	26%	85%	7%				
Imports	M				<1%				
Miscellaneous	EM					2%	2%	<1%	3%
	M	15%			<1%				34%
TOTAL (g)	EM	5531	9697	2652	47,087	1691	1109	5228	3318
	M	382	6913	262	11,257	37	18	558	233

5.5 Production and distribution

Only four production sites are known within the county (see Fig. 5.1)– Ashford (Potter's Corner), Canterbury (Pound Lane and Tyler Hill), and Hareplain, Biddenden – although a few pieces of kiln furniture have been found in Maidstone (Grove 1967). In terms of the CTRL sites, the early 16th century production site at Hareplain made no significant contribution to the assemblages, largely due to the relatively small amount of pottery of this period recovered, and products of the Pound Lane kiln are confined to Canterbury (J Cotter pers. comm.).

The CTRL assemblages have not added any more production sites to the known examples, but they have significantly augmented the information on the Ashford industry, in terms of chronology and the range of forms produced, and they have enabled some discussion of the interaction of the major ceramic traditions, and changes in the sources of supply through time.

5.5.1 North-West Kent wares (Figure 5.4 group 1)

These wares dominate assemblages on sites across north Kent, such as Rochester, Dartford and Eynsford Castle (Harrison 1972; Mynard 1973; Rigold 1971; Rigold and Fleming 1973). On the CTRL sites, this pattern is confirmed by their predominance within the early medieval assemblages at Northumberland Bottom, Tollgate and Boarley Farm (see Table 5.4), although that predominance was eroded somewhat in the later medieval period (13th century onwards)

when more regional imports (mostly London-type wares) were circulating in north-west Kent. Further south, north-west Kent wares apparently lost out to competition from the local Ashford industry – they are present, but in much smaller proportions, at Thurnham and Parsonage Farm, and completely absent from the other CTRL sites to the south-east beyond Ashford.

Whereas in London the shelly and shelly/sandy wares have a fairly restricted date range of 11th to later 12th century (Vince and Jenner 1991, fabrics EMS and EMSS), in Kent their period of use seems to continue into the 13th century. At Northumberland Bottom the vessel forms present (jars/cooking pots with undeveloped rims) suggest an earlier date range (11th/12th century) for the dominant fabrics EM35 and EM36, with more developed rims confined to other fabric types (EM3 and EM22). Sandy grey wares (M38B), which appear slightly later, are also likely to be of local manufacture, and these grey wares obviously competed successfully against the Canterbury-type wares which are common across much of the rest of Kent. Only one Canterbury-type sherd was present at Northumberland Bottom, one at Tollgate and three at Boarley Farm, and this is in line with other sites in the area.

5.5.2 *The Ashford industry*

There is now a considerable body of evidence from sites excavated in recent years across south Kent and beyond, including the sites on the CTRL route, to enable at least a preliminary reassessment of the Ashford industry. Of these sites Parsonage Farm, situated very close to Potter's Corner, provides a valuable 'snapshot' of the industry at its 13th century peak, while evidence from other sites along the CTRL route, in particular Mersham, has shed some light on the possible late Saxon origins of the industry.

Very little is as yet known of the Saxon and early medieval pottery industry of the Ashford area and, in fact, assemblages of this date range are rare in the rural Weald of Kent as a whole. Although only 50 sherds of middle and late Saxon pottery were recovered from Mersham, this nevertheless represents the largest such group from the CTRL route. The close similarity of these sandy, shelly and shelly-sandy wares to the early medieval wares from the site provides evidence for the early precursors of both the Ashford and Canterbury industries. Good independent dating evidence is still lacking for these wares, and dating here is based entirely on vessel form, which seems to show little development between the late Saxon and early medieval wares, both occurring in fairly crudely made, rounded jar forms with relatively simple rims.

By the late 12th and early 13th century it is apparent that the Ashford industry was supplying a range of kitchen and table wares to sites in south Kent and beyond. At this period, the Parsonage Farm assemblage illustrates the transition between the production of jars with

relatively simple rims (externally beaded, thickened and/or flattened) to those with more developed, squared rims, and suggests that this involved some standardisation in size.

The range of vessel forms seen on the CTRL sites (Figs 5.4 and 5.5, group 2) extends that known from the Potter's Corner waster group (Grove and Warhurst 1952), to include jars with undeveloped rims, curfews (although one Potter's Corner vessel drawn as a bowl is almost certainly a curfew: *ibid.*, fig. 4, no. 11), dripping pan(s) and possible industrial vessels with perforated bases or inturned rims. The two rims with integral lug handles appear to be unique in Kent, and may represent special commissions. Like cauldrons, these vessels are rare ceramic forms, the form presumably being more frequently provided by the metal prototypes.

Any comment on the marketing and distribution of medieval pottery in Kent must acknowledge the work already done by Streeten (1982). This preliminary study has not yet been superseded, and little can be added to it in terms of known production sites within the county. Despite defining a textural profile for the Potter's Corner products, however, Streeten did not attempt to map their distribution (presumably because insufficient excavated assemblages were at that time available for study from the area), merely noting that Ashford and Tyler Hill products could be visually distinguished (*ibid.*, 93, fig. 38B). His analysis was based on the sandy wares, rather than the sandy/shelly wares, and only on the finds published in 1952, which may not be representative.

Evidence from the CTRL sites indicates that the early medieval Ashford-type products (fabric EM.M5) represent the dominant fabric type only at Parsonage Farm, Bower Road and Little Stock Farm (see Tables 5.3 and 5.4). To the east, although they form a significant component of the assemblage from Westenhanger, this site and Saltwood relied more heavily on Canterbury wares and, in the case of Westenhanger, flint and shell-tempered wares from the Kent/Sussex coast. On the CTRL sites to the north-west of Parsonage Farm, fabric EM.M5 is present at Thurnham and Boarley Farm in significant quantities but further north is notable by its absence. Later Ashford-type wares (fabrics M40A, M40B and M40C) are also absent from the northern sites, but, apart from Parsonage Farm, do not occur in appreciable quantities on any of the other sites except Westenhanger, largely for chronological reasons (the high proportion at Beechbrook Wood comprises sherds of a single vessel).

Elsewhere it is difficult, in the absence of a larger body of published evidence, to gauge the impact of Ashford wares. They appear to predominate amongst the later 13th and 14th century groups from Pivington, just to the west of Parsonage Farm (Rigold 1962). To the south, Rigold mentions the identification of Ashford-type wares at New Romney (*ibid.*, 40), although not their quantity. Other assemblages from Romney Marsh (Newchurch, Isle of Oxney, Aldington) are characterised by the presence of 'Pink East Wealden wares' (Streeten 1982, 93), and the distribution of these and the Ashford-type wares suggests a relatively

localised market in areas where the large-scale Tyler Hill industry could not economically penetrate (*ibid.*).

5.5.3 *Tyler Hill wares and other wares from east Kent*

Within the central and southern part of the CTRL route, various sites have provided evidence for the distribution of wares from east Kent, primarily Canterbury-type wares. These wares formed the major part of the assemblages from Mersham, Westenhanger and Saltwood, and at the two latter sites Canterbury-type wares were still important (although not as common) in the later medieval period. They also appear in the later medieval assemblage at Parsonage Farm.

Streeten concluded that 12th century and earlier Canterbury wares were marketed as far afield as Rochester and the south Kent coast, while 13th and 14th century wares were found throughout east Kent, most probably distributed through local markets, and reached west Kent in small quantities (Streeten 1982, 92). In south Kent they would have faced competition from the Ashford industry, and this is illustrated most clearly by the assemblages from sites at the south-eastern end of the CTRL route. The two sites at the extreme south-east end of the CTRL route, Westenhanger and Saltwood, show interesting patterns (for examples of Canterbury vessels from these sites see Fig. 5.5, group 3). At Westenhanger early medieval dominance by Canterbury-type wares shifts to the Ashford industry in the later medieval period, while at Saltwood an even heavier reliance on Canterbury-type wares in the early medieval period evens out to roughly equal proportions later (see Table 5.4, although note that the quantities of wares at Saltwood dating later than the 12th century are relatively small). In other words, an early monopoly of the market in this part of Kent by Canterbury faced competition from Ashford from the later 12th century.

5.5.4 *Miscellaneous south coast coarse wares*

Miscellaneous coarse shelly, sandy/flint-tempered and shelly/flint-tempered wares, probably deriving from several different sources in south Kent and/or east Sussex, were found on all sites in the southern half of the route (from Parsonage Farm to Saltwood), with a few stray sherds from northern sites (Northumberland Bottom and Tollgate), although only at Westenhanger did they occur in any significant quantity. Their currency was confined to the early medieval period (late 11th to early 13th century), and they appear to have been supplying almost exclusively jar forms to local markets.

5.5.5 *General trends*

Overall, the main trend visible in the pattern of pottery supply to the various sites, as illustrated by the figures in Table 5.4, seems to indicate a wider distribution from the later 13th century, and a greater penetration of non-local markets, for at least the Ashford-type

wares and Canterbury-type wares. This may mark a chronological shift in marketing techniques, from trade direct with the kiln sites to increased distribution through local markets, although there is insufficient evidence, either archaeological or documentary, to allow firm conclusions to be drawn (Streeten 1982, 94).

The pattern of wider distribution is illustrated, for example, by a significant presence of Canterbury-type wares at Parsonage Farm at this period. Ashford-type wares have a higher profile in later phases on southern sites such as Westenhanger and Saltwood, although not on sites to the north, such as Boarley Farm and Thurnham, where an early presence is not continued later in the sequence. However, a note of caution should be sounded here, since percentages for the medieval assemblages (later 13th century onwards) are based on much lower site totals than for the early medieval wares. Only on two sites (Boarley Farm and Parsonage Farm) are the later assemblages of significant size (see Table 5.4).

Other factors may also be at work here. The London area, for example, was supplying exclusively fine table wares to sites such as Boarley Farm, Thurnham and Parsonage Farm; their presence could be explained by the relative status of these sites rather than purely marketing factors. Similar reasons may be behind the presence of Ashford-type wares at Boarley Farm during the early medieval period, and Canterbury-type wares at Parsonage Farm from the later 13th century – in both cases these occurred almost exclusively as table wares rather than in kitchenware forms. In other words, at any period table wares are likely to have had a wider distribution than kitchenwares, and this is likely to skew the figures for non-local wares at any individual site.

5.6 Site function

Leaving aside the two early/middle Saxon cemetery assemblages, most of the individual assemblages comprise a restricted range of basic utilitarian forms – jars and bowls, with possibly a few jugs. There is little that can be deduced regarding site function from these assemblages, beyond the presumption of a range of fairly standard activities revolving around the storage, preparation and consumption of food and drink. There are possible hints, however, of more specialised activities at a few sites. Parsonage Farm, probably by virtue of being the largest assemblage, contains the greatest range of vessel forms. Unsurprisingly, this is dominated by the utilitarian jar and bowl forms, but there are significantly more serving wares (glazed jugs) amongst this assemblage. There are also a significant number of curfews amongst the assemblage, as well as specialised cooking vessels (more suitable for catering for a large household?) - two lug-handled jars and several dripping pans. None of these vessel forms (Figs 5.4 and 5.5, group 2) was identified amongst the other CTRL assemblages, and the lug-handled vessels are apparently unique within Kent (and indeed rare elsewhere). Furthermore, the relative scarcity of bowls and dishes at Parsonage Farm, and the high

incidence of decoration of these forms, suggest that these vessels fulfilled a more specialised food preparation or serving function (none is glazed and none obviously sooted). In addition, there are five vessels of unknown function from this site – four with inturned rims, and a shallow, straight-sided vessel with a flanged base (Fig. 5.5, group 4).

An examination of the intra-site distribution of vessel forms at Parsonage Farm has proved inconclusive as to the functions of the various rooms within the building, or areas outside. A few general points can, however, be made. Jars occur in all areas of the site in Phases 2 and 3, which is unsurprising given their probable multi-purpose nature. Jugs likewise are found throughout, including sherds of the finer wares (London-type and imported) which might be considered to represent the higher quality table wares. Almost all the curfews were associated with Building 1, but were found in each of the three main rooms.

The decorated bowls which, by virtue of their relative scarcity, and the high proportion of decorated examples, might be considered to have a more specialised function, also occur across the site in Phases 2 and 3; one example was found in the Phase 1 watercourse. The only dripping dish was found in the large pit group outside the moat, as were three of the four possible industrial vessels. The provenance of an unusual flanged vessel with a cut-out cannot now be determined. In other words, the ceramic assemblage cannot help in the identification of specific activity areas, whether cooking or industrial/other. This is in contrast to the evidence from, for example, the metalwork – a concentration of tripod feet from metal vessels was found within Rooms 4 and 5 of Building 2, which have been identified as kitchens.

The small assemblage from Saltwood also warrants comment, concerning the number of dishes seen on the site. The numbers involved are very small (five identifiable dishes and 20 jars within the early medieval assemblage), but the relative proportion is high – open forms are rare or absent on most other sites on the CTRL route. Open forms, when found in any quantity, are usually considered to be associated with dairying practices.

5.7 Social/economic status

As well as illustrating the distribution patterns of various local and regionally traded wares, the relative proportion of wares on various sites can be an indication of the status of the inhabitants. At Parsonage Farm, for example, the presence of London-type fine wares, as well as imported continental wares (the only occurrence of such wares from the route), suggests a relatively high standard of living and the wide-ranging connections of the inhabitants. London-type wares and imports were absent from the earlier medieval assemblage from the nearby moated site at Pivington (Rigold 1962), although the moated site at Leigh near Tonbridge did produce some London-type wares (Parfitt 1962). From other sites on the CTRL route, London-type wares were also found at Boarley Farm (largely deriving from a single jug and Thurnham, as well as single sherds from Northumberland Bottom and Tollgate. Imports

are in fact rarely found in Kent outside the ports and major towns (e.g. Dover, Canterbury, Rochester); other sites within the county producing imports include Eynsford Castle and the Maison Dieu Hospital, Ospringe (the latter situated on the main road between Rochester and Canterbury).

As well as the presence of London-type wares at Boarley Farm, the deposition of a complete bottle (probably a measuring vessel), is unusual in such a rural location.

On other sites, the paucity of glazed wares and the unremittingly utilitarian nature of the early medieval assemblages can be noted; these appear to represent fairly low status, rural assemblages, although an increase in glazed table wares can be seen on some of these sites from the later 13th century, for example at Tollgate, Westenhanger and Saltwood.

5.8 Conclusions

What impact has the study of the pottery from the CTRL sites had on our understanding of the post-Roman ceramic sequence in Kent? The county does not as yet have a large body of published evidence for post-Roman pottery outside the urban and other ‘higher status’ sites, although much research is still ongoing, particularly on sites in the east of the county. First and foremost, then, the CTRL sites have added a considerable body of evidence to that already existing for the county – an assemblage of just under 8000 sherds. Consistent recording of this assemblage, the correlation with regional type series and the curation of digital data for the project should ensure full accessibility to future researchers. The assemblages derived from sites of varying type and geographical location – the CTRL route crosses several distinct topographical zones from the south coast across the Weald and the North Downs to the lower Thames valley.

The conclusions presented here draw together the various strands of investigation discussed above within a chronological framework. The overall range of the post-Roman assemblage is from early/middle Saxon to post-medieval, but the emphasis is on the 12th and 13th centuries, leaving some parts of the sequence, particularly the late medieval and post-medieval periods, only sparsely represented.

5.8.1 *Early/middle Saxon (5th to 7th century)*

Two small funerary assemblages came from the cemetery sites at Cuxton and Saltwood, of 5th-7th century date. Each assemblage includes one imported vessel – in both cases a wheelthrown ‘Merovingian’ bottle – alongside locally produced, handmade, plain and decorated wares. Parallels can be found within other early/middle Saxon cemetery assemblages from the county, e.g. Dover Buckland (Evison 1987), although the presence of handmade wares on both sites adds to the scant evidence within the county for the use of these wares as grave goods.

5.8.2 Middle/late Saxon (8th to mid 11th century)

The occurrence of a single sherd of middle Saxon Ipswich Ware is of interest and adds to a growing collection of Ipswich ware from Kent. Other wares falling within this chronological period were found in quantity only at Mersham, to the south-east of Ashford (although still only amounting to 50 sherds). Very little is as yet known of the Saxon and early medieval pottery industry of the Ashford area and assemblages of this date range are rare in the rural Weald of Kent as a whole. The assemblage from Mersham, then, provides a useful body of data, albeit relatively small, towards an understanding of the ceramic sequence at this period. The close macroscopic similarity of the middle/late Saxon sandy, shelly and shelly-sandy wares to the early medieval wares at Mersham provides evidence for the early precursors of the Ashford and Canterbury industries. Good independent dating evidence is still lacking for these wares, and dating here is based entirely on vessel form, which seems to show little development between the late Saxon and early medieval wares, both wares occurring in fairly crudely made, rounded jar forms with relatively simple rims.

5.8.3 Medieval (mid 11th to 13th century)

The bulk of the overall post-Roman assemblage falls within this chronological period. Collectively, the sites of this date, with their wide geographical spread, illustrate the distribution patterns of the major ceramic traditions of the region, and how these shifted through time. A broad overview would see an early predominance at each site of local industries – illustrated most clearly by the near-monopoly of North-West Kent wares at Tollgate and Northumberland Bottom and Ashford-type wares at Parsonage Farm. Competition between these two ceramic traditions is seen on sites in between, with the North Downs marking the border. To the south-east of Parsonage Farm, growing distance from Ashford is marked by an increased share of the market for Canterbury-type wares, and the appearance of shelly/flint-tempered wares characteristic of the south Kent/east Sussex coastal area. This general picture may, however, mask interesting detail at site level. In the ceramic sequence from Mersham, closest to Ashford on the south-east side, Ashford-type wares were supplemented from the start by Canterbury-type wares, which were supplying essentially the same range of forms. Despite the evidence for a late Saxon origin for the Ashford industry, it seems that it was not until the later 12th century that it was able to compete successfully with Canterbury, and gained a real hold on the local markets.

From the 13th century a wider distribution is indicated for at least the Ashford and Canterbury products, and this period also sees the appearance of more regional wares, such as London and Surrey/Wealden types. This may coincide with a shift from trade direct with the kiln sites to increased distribution through local markets.

The CTRL sites include various types, which provides the opportunity to compare and contrast assemblages from manorial sites (Parsonage Farm and Thurnham) with those from smaller rural settlements (e.g. Tollgate and Saltwood), and an assemblage from an industrial site (Mersham) with those from (apparently) purely domestic sites. There are no urban assemblages to compare with those from Canterbury, Dover and Folkestone, and the small assemblage from Westenhanger Castle can hardly be compared with the much larger collections from Rochester and Eynsford castles.

On the manorial sites, assumed to be of higher status, the presence of a higher proportion of fine table wares and a wider range of ware types, including regional and continental imports, is unsurprising. The assemblages from Joyden's Wood in north Kent and Leigh, near Tonbridge, are broadly comparable in this respect (Tester 1958; Parfitt 1962), although the absence of London-type wares at Pivington manor, close to Parsonage Farm, can be noted (Rigold 1962). On the other hand, the overwhelmingly utilitarian nature of the assemblage from Westenhanger, adjacent to Westenhanger Castle, is interesting, as is the enigmatic presence of fine, decorated London-type wares and a complete bottle (possibly a half-pint measure) within an apparently isolated group of pits at Boarley Farm and at the adjacent site of Pilgrims Way.

Site function has proved a more difficult topic to explore, largely due to the relatively small size of many of the site assemblages, and the very limited range of vessel forms represented. The Mersham assemblage, deriving from a site with evidence for iron smithing, certainly produced nothing to suggest anything other than a purely domestic assemblage, as did most of the other sites, although bowls at Saltwood may have had a more specific function, possibly connected with dairying. Parsonage Farm was the only site to produce a wider range of vessel forms, some more specialised (e.g. dripping pans, curfews, possible industrial vessels), but these could not, on the whole, be used to identify intra-site functional variation.

5.8.4 Late Medieval (14th to early 16th century)

The combined late medieval assemblage from the CTRL sites amounts to just 69 sherds, marking a very sharp decline in activity on the CTRL sites after the 13th century. Little comment can be made on this small group, or indeed on any later wares, similarly poorly represented. At best, this can suggest only sporadic activity at some sites, including Parsonage Farm, where two sherds of imported Spanish lustreware extend the period of activity at least into the late 14th century.

5.9 Key to Figures 5.3-5.5

Figure 5.3: Early Saxon pottery

1. Imported 'Merovingian' bottle, wheelthrown, grey fabric; three horizontal rows of rouletted decoration. Cuxton (ARC CXT98), Grave 247.
2. High-necked jar, handmade, organic-tempered fabric. Cuxton (ARC CXT98), Grave 291.
3. Small jar, handmade, organic-tempered fabric. Cuxton (ARC CXT98), Grave 294.
4. Globular jar, chalk-tempered fabric. Saltwood (ARC SLT99), Grave C133, SF4066, context 3997.
5. Imported 'Merovingian' bottle, wheelthrown, grey fabric; rouletted decoration around the girth and shoulder. Saltwood (ARC SLT99), Grave C169, SF2200, context 4720.
6. Sharply carinated jar with vertical bosses and incised lines, double incised cordon at base of neck, sandy fabric. Saltwood (ARC SLT99), Grave C117, SF4013, context 3758.
7. Small, globular jar, fabric containing prominent iron compounds. Saltwood (ARC SLT99), Grave C029, SF1177, context 1253.
8. Small, convex jar, sandy fabric. Saltwood (ARC SLT98), Grave C039, SF1228, context 1351.

Figure 5.4: Medieval pottery, Groups 1 (NW Kent wares) and 2 (Ashford type wares)

1. Jar profile, fabric EM22. Boarley Farm (watching brief), pit 23.
2. Flared bowl, fabric EM35. Boarley Farm (watching brief), pit 23.
3. Jar profile, fabric EM35. Northumberland Bottom (ARC WNB98), post hole 740 (Downs Road settlement)
4. Jar profile, fabric EM35. Northumberland Bottom (ARC WNB98), post hole 752
5. Jar rim, fabric EM.M5. Parsonage Farm (ARC PFM98), pit 165, west of Phase 3 moat (Group 43514), Medieval Phase 2.
6. Jar rim, fabric EM.M5; 'dimpled' shoulder. Parsonage Farm (ARC PFM98), pit 226, west of Phase 3 moat (Group 43514), Medieval Phase 2.
7. Jar profile, fabric EM.M5; 'dimpled' shoulder. Parsonage Farm (ARC PFM98), pit 252, unstratified activity outside Phase 3 moat (Group 43519), Medieval Phase 2/3.
8. Jar rim, fabric M40B; applied thumbled strip(s); pre-firing perforation below rim. Parsonage Farm (ARC PFM98), unphased context.
9. Cauldron handle, fabric EM.M5. Parsonage Farm (ARC PFM98), occupation layer 382 dumped over Building 1 (Group 43700), Medieval Phase 3.
10. Dish rim, fabric EM.M5, curvilinear tooling inside rim. Parsonage Farm (ARC PFM98), pit 226, west of Phase 3 moat (Group 43514), Medieval Phase 2.
11. Bowl rim, fabric EM.M5. Parsonage Farm (ARC PFM98), garderobe pit 127 (Group 43761), Medieval Phase 3.

Figure 5.5: Medieval pottery, Groups 2 (Ashford type wares) and 3 (Canterbury type wares)

12. Dripping dish rim and hollow handle, fabric EM.M5; stabbing on top of rim. Parsonage Farm (ARC PFM98), pit 226, west of Phase 3 moat (Group 43514), Medieval Phase 2.
13. Curfew part profile, fabric EM.M5. Parsonage Farm (ARC PFM98), pit 226, west of Phase 3 moat (Group 43514), Medieval Phase 2.
14. Jug rim and neck; fabric EM.M5; tooled decoration and degraded glaze. Parsonage Farm (ARC PFM98), pit 226, outside Phase 3 moat (Group 43514), Medieval Phase 2.
15. Jug rim and neck, fabric M40C; combed and stamped decoration; glazed. Parsonage Farm (ARC PFM98), pit 165 (outside Phase 3 moat)/ditch 132 (primary moat fill) (Groups 43514/43515), Medieval Phases 2/3.
16. Jar rim, fabric EM1. Westenhanger A(C WSG99), pit 99.
17. Dish profile, fabric EM1. Saltwood (ARC SLT98), context 278.
18. Jar rim, fabric EM1. Saltwood (ARC SLT98), context 602.

19. Unusual ?industrial vessel, fabric M40B. Parsonage Farm (ARC PFM98), unphased context.
20. Inturned base/rim, fabric EM.M5. Parsonage Farm (ARC PFM98), pit 165, outside Phase 3 moat (Group 43514), Medieval Phase 2.

6 DIGITAL ARCHIVE

This schemewide specialist report has been prepared and published as part of the Channel Tunnel Rail Link Section 1 Post-excavation Project. This report is one of five publication level schemewide specialist reports available to download from the Archaeology Data Service website: <http://ads.ahds.ac.uk/catalogue/projArch/ctrl/>. These provide synthetic overviews of the specialist data from CTRL Section 1 in its regional context. The ADS site also includes 20 integrated site reports, which present synthesised data from key site sequences at an interpretative level that can be readily assimilated into complementary studies. Underpinning the site reports and overviews, is a comprehensive archive of individual specialist reports and databases, which are also available to download. The CTRL reports and data can be accessed through the ‘Project Archives’ section of the ADS website.

Hard copy publication of the CTRL Section 1 results comprises a single volume synthetic overview of the excavated results in their regional context, which includes a complete site gazetteer and guide to the archive (Booth et al 2007).

Table 6.1 below details all available digital data for the ceramic schemewide overview. Reports and accompanying figures are presented as downloadable, print-ready Adobe Acrobat files (.pdf). ADS also maintain archivally stable versions of report image pages (.tiff) and of the report text (.rtf). Databases are also available as excel files (.xls).

Table 6.1: Digital Archive

Principal site name	Description	Filename root	Principal authors and organisation
Schemewide specialist report			
Ceramic Schemewide Report	Ceramic Schemewide Report	CER_SSR	Barclay A (OWA JV), Booth P (OWA JV), Edwards E (OWA JV), Mephram L (OWA JV) and Morris EL (Southampton)
Specialist research reports			
02 Pepper Hill	Ceramics (Late Iron Age and Roman)	CER_ROM_PHL	Biddulph E (OWA JV)
02 Pepper Hill	Ceramics (later prehistoric)	CER_LPR_PHL	Jones G (University of Southampton)
03 Whitehill Road Barrow	Ceramics (later prehistoric)	CER_LPR_WHR	Mcnee B and Morris EL (Southampton)
03 Whitehill Road Barrow	Ceramics (Late Iron Age and Roman)	CER_ROM_WHR	Every R
04 Northumberland Bottom	Ceramic building material	CER_CBM_WNB	Smith TP (MoLSS)
04 Northumberland Bottom	Ceramics (early prehistoric)	CER_EPR_WNB	Edwards E (OWA JV)
04 Northumberland Bottom	Ceramics (later prehistoric)	CER_LPR_WNB	Bryan E and Morris EL (Southampton)
04 Northumberland Bottom	Ceramics (late Iron Age and Roman)	CER_ROM_WNB	Every R
04 Northumberland Bottom	Ceramics (post-Roman)	CER_MED_WNB	Mephram L (OWA JV)
05 Tollgate	Ceramics (later prehistoric)	CER_LPR_TLG	Jones GP (OWA JV)
05 Tollgate	Ceramics (Late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
05 Tollgate	Ceramics (post-Roman)	CER_MED_TLG	Mephram L (OWA JV)
06 Cobham Golf Course	Ceramics (early prehistoric)	CER_EPR_CGC	Edwards E (OWA JV)
06 Cobham Golf Course	Ceramics (later prehistoric)	CER_LPR_CGC	McNee B and Morris EL (Southampton)
07 Cuxton	Ceramics (later prehistoric)	CER_LPR_CXT	Morris EL (Southampton)

Principal site name	Description	Filename root	Principal authors and organisation
07 Cuxton	Ceramics (post-Roman)	CER_SAX_CXT	Blinkhorn P (Freelance)
09 White Horse Stone	Ceramics (early prehistoric)	CER_EPR_WHS	Edwards E (OWA JV)
09 White Horse Stone	Ceramics (later prehistoric)	CER_LPR_WHS	Morris EL (Southampton)
09 White Horse Stone	Ceramics (late Iron Age and Roman)	CER_ROM_WHS	Stansbie D (OWA JV)
09 White Horse Stone	Ceramics (post-Roman)	CER_MED_WHS	Mephram L (OWA JV)
12 Thurnham Villa	Ceramic building material	CER_CBM_THM	Betts IM (MoLSS)
12 Thurnham Villa	Ceramic building material	CER_CBM_THM	Betts IM (MoLSS)
12 Thurnham Villa	Ceramic building material	CER_CBM_THM	Betts IM (MoLSS)
12 Thurnham Villa	Ceramics (late Iron Age and Roman)	CER_ROM_THM	Lyne M (Freelance)
12 Thurnham Villa	Ceramics (late Iron Age and Roman)	CER_ROM_THM	Lyne M (Freelance)
12 Thurnham Villa	Ceramics (post-Roman)	CER_MED_THM	Mephram L (OWA JV)
13 Snarkhurst Wood	Ceramics (late Iron Age and Roman)	CER_ROM_SNK	Lyne M
14 Eyborne Street	Ceramics (early prehistoric)	CER_EPR_EYH	Edwards E (OWA JV)
14 Eyborne Street	Ceramics (later prehistoric)	CER_LPR_EYH	Jones GP (OWA JV)
16 Sandway Road	Ceramics (early prehistoric)	CER_EPR_SWR	Edwards E (OWA JV)
16 Sandway Road	Ceramics (later prehistoric)	CER_LPR_SWR	Jones GP (OWA JV)
17 Chapel Mill	Ceramics (later prehistoric)	CER_LPR_CML	Jones GP (OWA JV)
18 Leda Cottages	Ceramics (later prehistoric)	CER_LPR_LED_HW D	Jones GP (OWA JV)
18 Leda Cottages	Ceramics (later prehistoric)	CER_LPR_LED_NE W	Jones GP (OWA JV)
18 Leda Cottages	Ceramics (late Iron Age and Roman)	CER_ROM_LED	Lyne M (Freelance)
19 Tutt Hill	Ceramics (early prehistoric)	CER_EPR_TUT	Edwards E (OWA JV)
19 Tutt Hill	Ceramics (later prehistoric)	CER_LPR_TUT	Morris EL (Southampton)
19 Tutt Hill	Ceramics (late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
20 Parsonage Farm	Ceramic building material	CER_CBM_PFM	Betts IM (MoLSS) and Smith TP (MoLSS)
20 Parsonage Farm	Ceramics (post-Roman)	CER_MED_PFM	Mephram L (OWA JV)
21 Beechbrook Wood	Ceramics (early prehistoric)	CER_EPR_BBW	Edwards E (OWA JV)
21 Beechbrook Wood	Ceramics (later prehistoric)	CER_LPR_BBW	Jones GP (OWA JV)
21 Beechbrook Wood	Ceramics (late Iron Age and Roman)	CER_ROM_BBW	Lyne M
21 Beechbrook Wood	Ceramics (post-Roman)	CER_MED_BBW	Mephram L (OWA JV)
24 West of Blind Lane	Ceramics (later prehistoric)	CER_LPR_BLN	Jones GP (OWA JV)
25 Mersham	Ceramics (later prehistoric)	CER_LPR_MSH	Jones GP (OWA JV)
25 Mersham	Ceramics (post-Roman)	CER_MED_MSH	Mephram L (OWA JV)
26 Bower Road	Ceramic building material	CER_CBM_BOW	Smith TP
26 Bower Road	Ceramics (late Iron Age and Roman)	CER_ROM_BOW	Brown L (OWA JV)
26 Bower Road	Ceramics (post-Roman)	CER_MED_BOW	Mephram L (OWA JV)
27 Little Stock Farm	Ceramics (early prehistoric)	CER_EPR_LSF	Edwards E (OWA JV)
27 Little Stock Farm	Ceramics (later prehistoric)	CER_LPR_LSF	Bryan E
27 Little Stock Farm	Ceramics (late Iron Age and Roman)	CER_ROM_LSF	Every R
27 Little Stock Farm	Ceramics (post-Roman)	CER_MED_LSF	Mephram L (OWA JV)
28 Church Lane	Ceramics (later prehistoric)	CER_LPR_CHL	Jones GP (OWA JV)
29 Westenhanger Castle	Ceramics (early prehistoric)	CER_EPR_WGC	Edwards E (OWA JV)
29 Westenhanger Castle	Ceramics (late Iron Age and Roman)	CER_ROM_WGC	Every R
29 Westenhanger Castle	Ceramics (post-Roman)	CER_MED_WGC	Mephram L (OWA JV)
30 Saltwood Tunnel	Ceramics (early prehistoric)	CER_EPR_SLT	Edwards E (OWA JV)
30 Saltwood Tunnel	Ceramics (later prehistoric)	CER_LPR_SLT	Jones GP (OWA JV)
30 Saltwood Tunnel	Ceramics (late Iron Age and Roman)	CER_ROM_SLT	Every R
30 Saltwood Tunnel	Ceramics (post-Roman)	CER_SAX_SLT	Blinkhorn P (Freelance)
30 Saltwood Tunnel	Ceramics (post-Roman)	CER_MED_SLT	Mephram L (OWA JV)
Specialist research datasets			

Principal site name	Description	Filename root	Principal authors and organisation
02 Pepper Hill	Ceramics (Late Iron Age and Roman)	CER_ROM_PHL	Biddulph E (OWA JV)
02 Pepper Hill	Ceramics (later prehistoric)	CER_LPR_PHL	Jones G (Southampton)
03 Whitehill Road Barrow	Ceramics (later prehistoric)	CER_LPR_WHR	Mcnee B and Morris EL (Southampton)
03 Whitehill Road Barrow	Ceramics (Late Iron Age and Roman)	CER_ROM_WHR	Every R
04 Northumberland Bottom	Ceramics (early prehistoric)	CER_EPR_WNB	Edwards E (OWA JV)
04 Northumberland Bottom	Ceramics (later prehistoric)	CER_LPR_WNB	Bryan E and Morris EL (Southampton)
04 Northumberland Bottom	Ceramics (late Iron Age and Roman)	CER_ROM_WNB	Every R
04 Northumberland Bottom	Ceramics (post-Roman)	CER_MED_WNB	Mephram L (OWA JV)
05 Tollgate	Ceramics (later prehistoric)	CER_LPR_TLG	Jones GP (OWA JV)
05 Tollgate	Ceramics (Late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
05 Tollgate	Ceramics (post-Roman)	CER_MED_TLG	Mephram L (OWA JV)
06 Cobham Golf Course	Ceramics (early prehistoric)	CER_EPR_CGC	Edwards E (OWA JV)
06 Cobham Golf Course	Ceramics (later prehistoric)	CER_LPR_CGC	McNee B and Morris EL (Southampton)
06 Cobham Golf Course	Ceramics (post-Roman)	CER_MED_CGC	Mephram L (OWA JV)
07 Cuxton	Ceramics (later prehistoric)	CER_LPR_CXT	Morris EL (Southampton)
07 Cuxton	Ceramics (post-Roman)	CER_SAX_CXT	Blinkhorn P (Freelance)
09 White Horse Stone	Ceramics (early prehistoric)	CER_EPR_WHS	Edwards E (OWA JV)
09 White Horse Stone	Ceramics (later prehistoric)	CER_LPR_WHS	Morris EL (Southampton)
09 White Horse Stone	Ceramics (late Iron Age and Roman)	CER_ROM_WHS	Stansbie D (OWA JV)
09 White Horse Stone	Ceramics (post-Roman)	CER_MED_WHS	Mephram L (OWA JV)
12 Thurnham Villa	Ceramic building material	CER_CBM_THM	Betts IM (MoLSS)
12 Thurnham Villa	Ceramics (late Iron Age and Roman)	CER_ROM_THM	Lyne M (Freelance)
12 Thurnham Villa	Ceramics (post-Roman)	CER_MED_THM	Mephram L (OWA JV)
13 Snarkhurst Wood	Ceramics (late Iron Age and Roman)	CER_ROM_SNK	Lyne M
14 Eyhorne Street	Ceramics (early prehistoric)	CER_EPR_EYH	Edwards E (OWA JV)
14 Eyhorne Street	Ceramics (later prehistoric)	CER_LPR_EYH	Jones GP (OWA JV)
16 Sandway Road	Ceramics (early prehistoric)	CER_EPR_SWR	Edwards E (OWA JV)
16 Sandway Road	Ceramics (later prehistoric)	CER_LPR_SWR	Jones GP (OWA JV)
17 Chapel Mill	Ceramics (later prehistoric)	CER_LPR_CML	Jones GP (OWA JV)
18 Leda Cottages	Ceramics (later prehistoric)	CER_LPR_LED_HW D	Jones GP (OWA JV)
18 Leda Cottages	Ceramics (late Iron Age and Roman)	CER_ROM_LED	Lyne M (Freelance)
19 Tutt Hill	Ceramics (early prehistoric)	CER_EPR_TUT	Edwards E (OWA JV)
19 Tutt Hill	Ceramics (later prehistoric)	CER_LPR_TUT	Morris EL (Southampton)
19 Tutt Hill	Ceramics (late Iron Age and Roman)	CER_ROM_TLG	Brown L (OWA JV)
20 Parsonage Farm	Ceramics (post-Roman)	CER_MED_PFM	Mephram L (OWA JV)
21 Beechbrook Wood	Ceramics (early prehistoric)	CER_EPR_BBW	Edwards E (OWA JV)
21 Beechbrook Wood	Ceramics (later prehistoric)	CER_LPR_BBW	Jones GP (OWA JV)
21 Beechbrook Wood	Ceramics (late Iron Age and Roman)	CER_ROM_BBW	Lyne M
21 Beechbrook Wood	Ceramics (post-Roman)	CER_MED_BBW	Mephram L (OWA JV)
24 West of Blind Lane	Ceramics (later prehistoric)	CER_LPR_BLN	Jones GP (OWA JV)
25 Mersham	Ceramics (later prehistoric)	CER_LPR_MSH	Jones GP (OWA JV)
25 Mersham	Ceramics (post-Roman)	CER_MED_MSH	Mephram L (OWA JV)
26 Bower Road	Ceramic building material	CER_CBM_BOW	Smith TP
26 Bower Road	Ceramics (late Iron Age and Roman)	CER_ROM_BOW	Brown L (OWA JV)
26 Bower Road	Ceramics (post-Roman)	CER_MED_BOW	Mephram L (OWA JV)
27 Little Stock Farm	Ceramics (early prehistoric)	CER_EPR_LSF	Edwards E (OWA JV)
27 Little Stock Farm	Ceramics (later prehistoric)	CER_LPR_LSF	Bryan E
27 Little Stock Farm	Ceramics (late Iron Age and Roman)	CER_ROM_LSF	Every R
27 Little Stock Farm	Ceramics (post-Roman)	CER_MED_LSF	Mephram L (OWA JV)
28 Church Lane	Ceramics (later prehistoric)	CER_LPR_CHL	Jones GP (OWA JV)
29 Westenhanger Castle	Ceramics (early prehistoric)	CER_EPR_WGC	Edwards E (OWA JV)

Principal site name	Description	Filename root	Principal authors and organisation
29 Westenhangar Castle	Ceramics (late Iron Age and Roman)	CER_ROM_WGC	Every R
29 Westenhangar Castle	Ceramics (post-Roman)	CER_MED_WGC	Mephram L (OWA JV)
30 Saltwood Tunnel	Ceramics (early prehistoric)	CER_EPR_SLT	Edwards E (OWA JV)
30 Saltwood Tunnel	Ceramics (later prehistoric)	CER_LPR_SLT	Jones GP (OWA JV)
30 Saltwood Tunnel	Ceramics (late Iron Age and Roman)	CER_ROM_SLT	Every R
30 Saltwood Tunnel	Ceramics (post-Roman)	CER_SAX_SLT	Blinkhorn P (Freelance)
30 Saltwood Tunnel	Ceramics (post-Roman)	CER_MED_SLT	Mephram L (OWA JV)

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