Channel Tunnel Rail Link
Union Railways (South) Limited

Project Area 420

EYHORNE STREET, HOLLINGBOURNE, KENT
ARC 420/68+100-68+500

TARGETED WATCHING BRIEF
ASSESSMENT REPORT
FINAL

Prepared By **Date:**	**A. Barclay**
Checked By: **Date:**	**S. Foreman**
Approved By: **Position:** **Date:**	**A. Dodd**

Contract S/400/SP/0009/P482

Oxford Archaeological Unit
Janus House
Osney Mead
Oxford OX2 0ES

8th October 2001

LIST OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

SUMMARY

As part of an extensive programme of archaeological investigation carried out in advance of the construction of the Channel Tunnel Rail Link (CTRL), the Oxford Archaeological Unit was commissioned by Union Railway (South) Limited to undertake a targeted watching brief at south-east of Eyhorne Street.

The excavation area contained a series of discrete features with a wide date range. The features are mostly pits and appear to represent periodic and largely domestic use of the site from the late Neolithic through to the late Iron Age. The earliest activity is Mesolithic, although the evidence consists of only a few residual flints. A single feature and other residual finds indicate activity in the earlier Neolithic. In the late Neolithic activity associated with the deposition of Grooved Ware and other cultural material is focussed around a cluster of pits and postholes. Similar activity occurs in the Beaker period with the digging of similar pits. The next significant phase of activity occurs in the Iron Age and consists of a scatter of pits, gullies and hollows.

The site offers good potential to address some of the research aims identified for the Wealden Greensand landscape zone and, in particular, those concerned with the periods Early Agriculturists (4500 BC - 2000 BC) and Farming Communities (2000BC - 100BC), as defined in the CTRL Research Strategy. The general absence of prehistoric evidence from the Wealden Greensand landscape zone increases the importance of the evidence from Eyhorne Street despite the comparatively small scale of the excavation. An important comparison can be made between this site and those that cover the same periods in the North Downs Landscape Zone, to the north (e.g. White Horse Stone).

1. INTRODUCTION

1.1 Project Background

1.1.1 The Oxford Archaeological Unit was commissioned by Union Railways (South) Limited (URS) to maintain a Targeted Watching Brief at South-east of Eyhorne Street, within CTRL Project Area 420 (Fig. 1). The site was designated as a Targeted Watching Brief following the discovery of remains of uncertain significance during an evaluation by Wessex Archaeology (URS 1999). The Targeted Watching Brief confirmed the presence of significant remains which were consequently designated as a Watching Brief Significant Discovery Individual (WBSDI). The targeted watching brief covered an area *c* 40 m by 360 m (1.47 ha) centred on URS grid point 63590 34230 (OS NGR TQ 8370 5420).

1.1.2 The archaeological Written Scheme of Investigation (WSI) (URS 1999e) was prepared by Rail Link Engineering (RLE), agreed in consultation with English Heritage (EH) and Kent County Council (KCC) on behalf of the Local Planning Authorities.

1.1.3 The assessment considers the results of all Fieldwork Events listed in Table 1. The geophysical surveys and evaluations have been reported separately and are therefore not incorporated in detail in the stratigraphic or specialist assessments.

Table 1: List of fieldwork events

Fieldwork event name	Fieldwork event code	Contractor	Dates of Fieldwork
South-east of Eyhorne Street WBSDI	ARC 420 68+100 - 68+500 99	OAU	22/7/99-14/12/99
South-east of Eyhorne Street evaluation	ARC SEE99	Wessex Archaeology	21/5/99 - 28/5/99
West of Eyhorne Street	ARC ESTW95	Geophysical Surveys of Bradford	1995
East of Eyhorne Street geophysical survey	ARC ESTE95	Geophysical Surveys of Bradford	1995

1.2 Geology and Topography

1.2.1 The site lies on a narrow band of the Folkstone Beds, bordered to the north by Gault Clay and to the south by the Hythe Beds, and is covered with silty sand soils.

1.2.2 The area of the watching brief lies just over 1 km south-west of the North Downs escarpment, in an area of gently undulating land that is between *c* 50-60 m OD. A stream flows near the western edge of Targeted Watching Brief area.

1.2.3 Prior to work on the CTRL the two fields in which the area of the targeted watching brief lies were being used for pasture and arable cultivation.

1.3 Archaeological and Historical Background

1.3.1 Eyhorne Street lies within an area where numerous prehistoric and Roman remains have been recorded. CTRL excavations have been carried out at two sites near

Eyhorne Street: Snarkhurst Wood, *c* 1.5 km to the north-west and Holm Hill, just over 1 km to the south-east (URS 1999a). This section considers archaeological discoveries in the vicinity of the CTRL corridor in the area between these two excavations.

1.3.2 Several Mesolithic flint scatters have been recorded between 1 km and 3 km to the south-west of Eyhorne Street in the area around Holm Hill (URL 1994, nos 1070 and 1072; URS 1999a). A probable palaeochannel along with flint of Mesolithic date was identified during the evaluation at Holm Hill (URS 1999a). Further worked flint of possible Mesolithic date was found in the evaluation at Eyhorne Street (URS 1999b) as well as during the watching brief (see below).

1.3.3 Numerous Neolithic and early Bronze Age flint scatters have been recorded. An early Bronze Age flint scatter was found at Snarkhurst Wood (URS 1999c), in an area where Neolithic-early Bronze Age flint and a fragment of a polished stone axe had previously been recorded by surface collection survey (URL 1994, nos 1342, 1343 and 1345). Further late Neolithic-early Bronze Age flint, including a flint knife, were found in the area of Holm Hill (URS 1999a and 1999d). Features of similar date have not been widely recorded, although one ditch at Holm Hill, probably associated with two more, has been dated to the early Bronze Age (URS 1999d). An area of undated ring and linear cropmarks has been recorded near the eastern end of the Holm Hill evaluation (URL 1994, no. 1315). Undated earthworks, perhaps of much later date, have been recorded at the eastern end of the Eyhorne Street evaluation (URL 1994, no. 1968). In neither of these cases have corresponding features been noted during the evaluations.

1.3.4 A larger number of possibly late Bronze Age or earlier Iron Age features, usually ditches perhaps forming field boundaries, have been found around Eyhorne Street. Such ditches were recorded at Holm Hill (URS 1999a and 1999d) and during the evaluation at Eyhorne Street (URS 1999b). There is uncertainty surrounding the exact date of these ditches. Those at Holm Hill were assigned to the late Bronze Age. However, late Bronze Age pottery was found only in unstratified contexts during the excavation, the ditches found being dated to the early Iron Age. Similar problems of dating may affect the ditches and pits dated to the late Bronze Age, which were found in the evaluation at Eyhorne Street. Very little evidence for activity in this period was found during the Targeted Watching Brief in the same area, but a number of pits, hollows and ditches have been tentatively dated to the early-middle Iron Age. It is possible that these discrepancies arise because of the similarity in fabrics between pottery of different dates (see below, Appendix 1). A socketed axe, found near Holm Hill, is of certain late Bronze Age date (URL 1994, no. 1071).

1.3.5 More certain late Iron Age-early Roman dates can also be attributed to ditches, again probably often forming field boundaries, at several sites near Eyhorne Street. Such ditches have been found at Holm Hill (URS 1999a and 1999d) and at Snarkhurst Wood where they may have formed rectangular enclosures. Four-post and other structures were also found (URS 1999c). A tree-throw hole, found during the evaluation at Eyhorne Street (URS 1999b) was the only feature that contained late Iron Age-early Roman pottery.

1.3.6 Two geophysical surveys to the east (ARC ESTE 95) and west (ARC ESTW95) of Eyhorne Street (URL 1996) were unproductive and did not indicate any traces of archaeological significance. The survey to the west revealed only modern disturbance, whilst that to the east revealed what may have been archaeological features which were not, however, subsequently found during the evaluation. They may correspond to some of the features assessed in this report.

2. ORIGINAL PRIORITIES, AIMS AND METHODOLOGY

2.1 Landscape Zone Priorities

2.1.1 The site falls within the Wealden Greensand landscape zone and is of relevance to the following periods, as defined in the CTRL Research Strategy (most of the evidence discovered falls within periods 2 and 3):

- 1- Hunter-foragers (400,000-4000 BC)
- 2- Early Agriculturalists (4000–2000 BC)
- 3- Farming Communities (2000–100 BC)
- 4- Towns and their rural landscapes (100 BC- AD 1700)

2.1.2 Two key themes identified were:

- understanding the ritual and ceremonial use of the landscape in the prehistoric period,
- and changes arising from the adoption of agricultural economies.

2.2 Fieldwork Event Aims

2.2.1 A series of Fieldwork Event Aims were highlighted in the WSI to address the outlined Landscape Zone Priorities for the fieldwork, see Section 2.1 above. As the Targeted Watching Brief was carried out under the general Watching Brief WSI, with little prior knowledge of the archaeology present, the original Fieldwork Event Aims are generic in character but were set within the context of the landscape zone priorities (see 2.1.1 above). The aims were:

i) to record any significant archaeological structures, features or deposits,

ii) to retrieve environmental and economic evidence and artefacts from those archaeological contexts, as well as any other artefacts disturbed during construction work.

2.3 Fieldwork Methodology and Summary of Excavation Results

2.3.1 Throughout the watching brief all groundworks were carefully observed. In Targeted Watching Brief areas stripping was carried out by the main contractor using a 360° excavator fitted with a toothless bucket, under the direct control of an archaeologist. Where archaeological features were revealed, they were excavated by hand, pits being half-sectioned and ditches being sectioned at appropriate points. All features were recorded using a single context recording system, were drawn in plan and section, and were photographed. Samples for environmental analysis were taken from appropriate contexts. A daily record of all activity related to the watching brief was maintained.

2.4 Assessment Methodology

2.4.1 This assessment report was commissioned by URS to the specification provided by RLE, as discussed with EH and KCC (URS 2000). This specification follows national guidelines prepared by EH and provides additional information regarding the level of detail required in the report and its format. Stuart Foreman (Project Manager), Chris Hayden (Team Leader until October 2000) and Alistair Barclay (Team Leader after October 2000) managed the production of the report. The specialist work was undertaken by appropriately qualified specialists. Because the quantity of finds and environmental samples was relatively small all material was assessed.

3. FACTUAL DATA AND QUANTIFICATION

3.1 The Stratigraphic Record

Stratigraphy

3.1.1 The area of excavation includes a small number of linear ditches and gullies, pit groups, isolated postholes and clusters of stakeholes (Figure 2). There are also a number of tree-throw holes and other natural features. These range in date from Neolithic through to Medieval, although many of the natural features are undated. Many are stratigraphically discrete with the significant exception of a sequence of three Iron Age hollows (118, 125, 35/74) cut more or less in the same place near the centre of the site, the last of which was cut by an Iron Age ditch (55/77/135). With the exception of this localised sequence, stratigraphy is of little use in phasing and dating the features on the site.

Phasing

3.1.2 In the absence of stratigraphy most features are dated by artefacts that they contained, principally the pottery. The earliest activity represented is of Mesolithic date and is represented by a small number of worked flints.

3.1.3 Only around a quarter of features (24%) contain any pottery. However, of the undated features many can be dismissed as natural hollows or disturbance caused by tree throw. Those features that do contain pottery usually contain reasonably large numbers of sherds, and not surprisingly the larger groups tend to be later in date (Table 2). The one exception is late Bronze Age pottery, which is very scarce, comprising only single sherds in two features.

3.1.4 Whilst the features containing pottery can be dated with a reasonable degree of confidence, many of the features on the site remain undated.

Table 2: Summary of context types in which pottery occurs

Phase	No. contexts with pottery	No. features with pottery	Mean no. sherds per feature	Location of pottery (% of all sherds in phase)					Total no. sherds
				Primary fill	Middle fill	Upper fill	Single fill	Other	
E-MNE	2	2	12	-	-	100	-	-	23
LNE	2	2	17	-	-	-	100	-	33
LNE-BA	3	3	10	97	-	-	3	-	30
LBA	2	2	1	-	50	50	-	-	2
E-MIA	20	12	39	6	34	39	9	12	467
LIA	5	3	55	21	45	13	21	-	165
Total	***32***	***25***	***29***	***13***	***33***	***32***	***15***	***8***	***720***

3.1.5 Eight phases of activity can be distinguished that span the later prehistoric and historic periods, although not all of them are necessarily sequential:

Hunter-foragers (200,000 - 4500 BC)

3.1.6 Later Mesolithic (8000-4000 BC): This consists entirely of flintwork most of which occurred as redeposited material. No features of this date were identified.

Early Agriculturists (4500 BC - 2000 BC)

3.1.7 The Early or Middle Neolithic (4000-2900 BC): A single feature (100) contained 20 sherds of early-middle Neolithic pottery in its upper fill as well as flint including a probably later Mesolithic obliquely blunted point. This feature was only partially excavated at the edge of the watching brief area, and its precise form is uncertain. It may have been either a pit or a ditch. If it was a ditch then it may have been associated with the adjacent ditch, 116 (=136). There is no direct dating evidence for ditch 116. An alternative explanation would be that it formed part of a tree-throw hole into which finds accumulated or were deposited. Six pieces of undiagnostic flint were found in the upper fill of 116. The relative depths to which these features are preserved, compared to other features on the site, however, suggests that they may have been associated. Given the degree of truncation that the rest of the site appears to have suffered (see 3.1.24 below). The surviving depth also suggests that originally both features would have been of considerable size.

3.1.8 Other evidence for activity of this date was found nearby. Residual sherds of early or middle Neolithic pottery were found in the primary and upper fills of pit 23, which contained Beaker pottery.

3.1.9 Flint of a broad Neolithic date was found in pits 91, 96 and 126, which form a short alignment or linear scatter, and could perhaps include pits 107 and 108. These pits may have been associated either with the early-middle Neolithic activity represented in feature 100 or with the late Neolithic-early Bronze Age activity represented by pits 23 and 60. Assuming the flint in these features is not redeposited, then this group forms an important and unusual focus of possible domestic or ritual activity.

3.1.10 The Late Neolithic - Grooved Ware (2900-2200 BC): Grooved Ware was found in postholes 19 (27 sherds) and 21 (6 sherds) near the centre of the site. This pair of postholes appear to belong to a group (Group 66) of four or five postholes arranged in a roughly trapezoidal pattern, comprising also postholes 63 and 70 and possibly 67 (although 67 is smaller than the others and does not fit the perceived trapezoidal pattern).The radiocarbon determination of 2402-2022 cal BC (OxCal 2σ NZA-12233 3773±60BP) on charred remains from pit 70 supports the idea that this group of postholes could form a contemporary group. Clear evidence of a post-pipe was found in posthole 70, but not in the other features, which may, therefore, have been pits rather than postholes. It is possible that the four features were related to some kind of structure, as the fired clay found in pit 19 hints. Material including a decorated, roughly spherical clay object, perhaps a spindle-whorl, flint and a charred fruit, was also found in pit 19. The concentration of Grooved Ware in this one, restricted area, and in particular its separation from the possibly roughly contemporary or slightly later Beaker pits in the south-east of the site is notable.

Early Agriculturists (4500 BC - 2000 BC) into Farming Communities (2000 BC - 100 BC)

3.1.11 Late Neolithic-early Bronze Age (2400-1700 BC): Two small pits (23 and 60) at the eastern end of the site are the only clear features which can be assigned to this phase. In both pits Beaker pottery was found in the primary fill (pit 23, 28 sherds; pit 60, 1 sherd). Both pits are typical of this period containing assemblages of pottery, worked flint, burnt flint and burnt hazel nut shells. The possible, albeit token, presence of burnt or cremated human bone is of considerable interest.

3.1.12 Less certain is a much shallower feature (89), a short distance to the north, which may be a pit or a tree-throw hole, which contained only a single sherd of possibly residual Beaker pottery.

Farming Communities (2000 BC - 100 BC)

3.1.13 Late Bronze Age and Late Bronze Age-Early Iron Age (1150-400 BC): A single possibly residual late Bronze Age sherd was found in pit 161 towards the western side of the site. This pit also contained a larger number of possibly early-middle Iron Age sherds and lies within a loose scatter of pits most of which have been tentatively dated to that period. A further single sherd of possible late Bronze Age-early Iron Age pottery was found in a short stretch of gully (97) towards the eastern side of the site.

3.1.14 There is thus only very scant evidence for activity on the site in the late Bronze Age, despite most of the features found in the evaluation having been dated to this phase. The discrepancy in date may arise because differing dates have been assigned to similar pottery. This is due partly to the fact that the pottery consists mostly of body sherds and partly because late Bronze Age, early Iron Age and middle Iron Age pottery is not well known in this area (see below Appendix 1). Many of the features tentatively dated to the early-middle Iron Age may correspond to those dated in the evaluation to the late Bronze Age.

3.1.15 The Iron Age (700-100 BC): Two main groups of features have been tentatively assigned to the Iron Age: a scatter of pits (14, 17, 161, 153, 170, 175, 217 and 226) towards the eastern side of the site, and a sequence of shallow, circular features (hollows 118, 125 and 35/74) and a gully (55/77/135) near the middle of the site. As discussed above the exact dates of these features has not yet been confidently fixed because of difficulties in dating the pottery.

3.1.16 Most of the pits, including all of the more northerly examples (14, 17, 153, 161, 170 and 175) have pottery which at present is believed to date from the early-middle Iron Age. The loomweights, noticeably found in two adjacent pits (170 and 175) in this group, also indicate an Iron Age date for these two features.

3.1.17 The two more southerly pits in this area (217 and 226) appear to contain later pottery. This is certain in the case of pit 226 which contains clearly late Iron Age sherds in its primary fill, but less so in the case of pit 217 where the dating of the pottery is less clear. These two pits are also preserved to greater depths than any of the other pits on the site.

3.1.18 The second group of features consists of three shallow, circular hollows (118, 125 and 35/74) cut in more or less the same location one after the other, and a linear gully (55/75/135) which cuts the latest hollow and terminates within it, and is itself cut by a further curving gully (94). The hollows and the gully all contained Iron Age pottery, possibly dating to the early-middle Iron Age transition. Aside from some residual flint and small quantities of charred plant remains, no other artefacts were recovered from the hollows and their function is unclear. It is possible that the curving gully 143 is associated with these features, although it contained no datable material.

Towns and their rural landscapes(100 BC - 1700 AD)

3.1.19 Sub-period i) Late Iron Age-Romano-British (100 BC - AD 410): A further stretch of ditch (229) in the southern part of the site, not clearly related to any others, contained six late Iron Age-early Roman sherds. This ditch also contained a fragment of Roman tile in its upper fill (227), apparently supporting the date suggested by the pottery. However, two fragments of post-medieval or medieval peg tile were found in the context, and it is possible that the late Iron Age- Roman finds are residual. The ditch may, in fact be much later in date, perhaps being related to ditch 85 (see 3.1.20).

3.1.20 Sub period ii): The medieval and post-medieval Periods (AD 1100-1700): The only evidence that some of the features may be medieval or post-medieval in date is provided by three fragments of brick and peg tile found in the upper fill (87) of ditch 85, towards the eastern side of the site. It is possible that these are intrusive finds and that the ditch is earlier in date.

Undated Features

3.1.21 Because they do not contain datable artefacts, a large number of features on the site cannot be assigned a date. Many of these are tree-throw holes which, although a few occur elsewhere, are concentrated predominantly in the southern part of the site. One of these features contained early-middle Neolithic pottery, although this could represent redeposited material.

3.1.22 A number of the features in this area appear to be deliberately dug pits (198, 203, 206, 209 and 212-3) or postholes (232), the date of which is uncertain, although the relatively great depth of pit 206 suggests that it may be late Iron Age in date (see 3.1.24 below). A further undated pit lies near to the end of gully 97, which has been tentatively dated to the late Bronze Age.

3.1.23 Several other groups of possibly associated features can be recognised, although there are no real grounds for assuming that they are contemporaneous. These include a large group of stakeholes (Group 47) near the centre of the Targeted Watching Brief area, a smaller group of stakeholes nearby (80, 82, 84), and a pair of pits (110 and 119) and a posthole (121) at the eastern side of the site. Short stretches of gullies and ditches were found sporadically across the site. Some of these features, such as gullies 163, 48/57, 152 and 141/143, may be the truncated remnants of the early-middle Iron Age settlement, but other possible dates cannot be excluded.

Truncation

3.1.24 The site has suffered from quite severe truncation, as the fact that only stretches of most ditches were found indicates. Few of the features survive to depths of over 0.30 m. The few exceptions to this are instructive. One of the late Iron Age pits (226), preserved to a depth of 0.93 m, is amongst the features preserved to the greatest depth, and the degree of truncation would appear to be relatively slight. The remaining Iron Age pits, however, are preserved to only around half this depth (0.44 to 0.54 m), and it thus seems likely that a large proportion of them has been removed. Earlier features, with the exception of the possibly Neolithic ditches discussed above (see 3.1.7 above), are preserved to much shallower depths.

Residuality

3.1.25 The reasonably large numbers of sherds found in some of the features means that residual pottery can easily be identified. Both Mesolithic and early Neolithic flint and early Neolithic pottery were identified as residual within later features. Late Bronze Age and Iron Age pottery presents more of a problem because of the uncertainty of the date of some fabrics and especially where featured sherds are absent (see Section 3.1.14 above).

3.2 The Artefactual Record

Prehistoric Pottery (Appendix 1.1)

3.2.1 A total of 684 sherds (5354 g) of prehistoric pottery was recovered from the excavation at Eyhorne Street. This includes both hand retrieved material and sherds recovered during sieving of environmental samples. The pottery has a wide date

range that includes Neolithic, Bronze Age and Iron Age material. The earliest material is of early or middle Neolithic date and consists of a small number of flint-tempered body sherds (23 sherds) some of which is residual material. There are isolated pit groups with late Neolithic Grooved Ware (33 sherds) and late Neolithic/early Bronze Age Beaker (30 sherds). However, the majority of the pottery is of Iron Age date (mostly early) and comes from pits and more rarely ditches. Some of this material occurs in features with diagnostic late Iron Age vessels and is considered to be redeposited (for the late Iron Age see Appendix 1.2).

Late Iron Age Pottery (Appendix 1.2)

3.2.2 The 225 sherds (1252 g) of late Iron Age pottery from Eyhorne Street come from eleven contexts and for the most part comprise badly broken up sherds in handmade sand and calcined-flint tempered fabrics, some of which incorporate glauconitic sand as well as quartz and hint at local manufacture. One or two sherds in glauconitic sand and calcined flint tempered fabric B9.3 occurred in late Iron Age contexts at Thurnham and it is probable that these are of similar date and source. This notion is reinforced by the fact that the primary fill of pit 226 produced the greater parts of a late Iron Age pedestal jar and conical cup in grog-tempered ware alongside fresh sherds in the sand and flint-tempered fabric. The pot forms suggest that activity took place on the site during the period 150 BC-0 during the earlier part of the late Iron Age.

Ceramic Building Material and Fired Clay (Appendix 1.3)

3.2.3 A small quantity of ceramic building material weighing 2 kg, of which the fired clay assemblage totalled 1.5 kg, was recovered during the watching brief. Fragments of at least two triangular loomweights of Iron Age date were present. The ceramic building material dates from the Roman period and the later medieval or early post-medieval period.

Worked and Burnt Flint (Appendix 2)

3.2.4 A total of 327 pieces of worked flint and 426 pieces of burnt unworked flint (3900 g) were recovered during the watching brief. The material is of Neolithic to early Bronze Age date but includes two Mesolithic artefacts. The material is generally fairly thinly spread over a number of differing contexts with only five contexts producing 15 or more pieces of flint (including the two Beaker pits, Iron Age hollow 35/74 and tree-throw hole 189). However, the count from tree-throw hole 189 was boosted by the large number of chips (40+) recovered.

Metalwork (Appendix 3)

3.2.5 Eight fragments including a tang with retaining washer and blade tip possibly from a sword were recovered by hand excavation and during sample processing from the upper fill (178) of an Iron Age pit (175).

3.3 The Environmental Record

Human Remains (Appendix 4)

3.3.1 Small quantities (2 g in total) of cremated bone was recovered from two pits (23 and 60), which were dated to the late Neolithic-early Bronze Age (Beaker). Only long bone shaft fragments could be identified. The very small quantity of bone makes it highly unlikely that these are cremation burials as such.

Animal Remains (Appendix 5)

3.3.2 A total of 372 fragments of bone (579 g) was recovered by hand from the site and a further 138 fragment of bone (80 g) was retrieved from environmental samples, sieved through meshes of 10 mm to 10-4 mm where necessary. Almost all of the bone was in very poor condition with a high degree of fragmentation. Only 5% of the hand collected bone and 2% of the sieved bone was identified to species. However, 81% of the hand collected bone was from context 174, the middle fill of pit , which contained part of a horse skeleton. This consisted of tiny fragments which are probably pieces of the identified elements and other parts of the skeleton. In addition to this 11% of the unidentified hand collected bone was from context 220, the middle fill of pit 217, and is likely to consist of fragments of cattle teeth. These again were tiny fragments that could not be clearly identified.

3.3.3 Cattle and horse bones were the most numerous fragments from the hand collected bone. However, all of the horse bones were found within early-middle Iron Age pit 170 and consisted of part of a right radius and astragalus, ribs, vertebral fragments and one tooth. The radius belonged to an individual of no less than 3.5 years of age. Fragments of cattle teeth were found in contexts 220 and 223, the fills of pits 217 and 226 respectively.

3.3.4 A small number of sheep bones were identified from the sieved assemblage. They consisted of one tooth and two burnt elements from context 173, the middle fill of pit 170. It is likely that the horse and cattle have been over-represented in the assemblage. The smaller bones of the sheep do not appear to have survived unless altered by burning.

3.3.5 Many of the bones from the sieved material had been burnt. The majority of the burnt bone (62 fragments) was from context 178, the upper fill of pit 175. The few other burnt bones were from context 24, the upper fill of pit 23, and context 173, the middle fill of pit 170.

Charred Plant Remains and Charcoal (Appendix 6)

3.3.6 The Targeted Watching Brief at Eyhorne Street included a systematic sampling programme for the recovery of charred seeds and chaff. A total of 34 samples from deposits of Early Neolithic to Early Bronze Age, Iron Age and unknown date, were processed by bulk water flotation. A charred crab apple was found associated with Grooved Ware and other unusual finds in pit 19. The Neolithic-early Bronze Age deposits included four samples from the late Neolithic-early Bronze Age pits, which were rich in hazelnut shell. Cereal remains were rare from these samples and may represent contamination from later features. The samples from the early-middle Iron Age pits included six deposits that were very rich in cereal grain, possibly representing a stored, unprocessed product. Barley, spelt wheat, emmer wheat and oats were all recorded.

3.4 Dating

Radiocarbon

3.4.1 A sample consisting of charred cereal grains was submitted for radiocarbon dating. The sample was taken from the primary fill (71) of posthole 70, which formed the packing around the post-pipe. This posthole was thought to form part of a group of four features, mostly pits, (Group 66) two of which contained Grooved Ware amongst other artefacts and charred plant remains. The sample was intended to test the association of these four features by showing whether or not one of the features which did not contain Grooved Ware was similar in date to those that did. It was

3.4.2 The date obtained calibrates to 2402-2022 BC (2 sigma NZA-12233 3773±60 BP). This result indicates that the posthole is of late Neolithic date and that it probably belongs to the same phase as the adjacent pits that contained Grooved Ware.

3.5 Archive Storage and Curation

3.5.1 The material recovered from the site has been stored according to the United Kingdom Institute for Conservation guidelines. It requires no special conservation measures.

3.5.2 The archive index has been updated and is shown below in Table 3.

Table 3: Archive index table

Item	**Number of Items or boxes or other**	**Number of fragments or litres**	**Condition (No. of items)** (W=washed; UW=unwashed; M=marked; P=processed; UP=unprocessed; D=digitised; I=indexed)
Context records	239		I
A1 plans	8		I, D
A4 plans	1		-
A4 sections	89		I
Small finds			W, M
Films (monochrome)	23		I
Films (colour)	43		I
Flint	2 size 3	753	W, M
Pottery	1 size 1	684	W, M
Fired Clay	2 size 4	134	W, M
CBM	Misc	6	W, M
Metalwork	Misc	8	W, M
Animal Bone	1 size 2	372	W, M
Misc	1 size 3		-
Soil samples (bulk)	82	820	P

* flot size

Key to box sizes

Cardboard boxes

Size 2 = Half box	391mm x 238mm x 100mm	0.01 m^3
Size 3 = Quarter box	386mm x 108mm x 100mm	0.004 m^3
Size 4 = Eighth box	213 mm x 102 mm x 80 mm	0.002 m^3

Plastic boxes

Size 4 = Small	213 mm x 102 mm x 80 mm	0.002 m^3

4. STATEMENT OF POTENTIAL

4.1 Stratigraphic Potential

4.1.1 The landscape zone priorities and fieldwork event aims for Eyhorne Street are set out in Section 2 of this document. The site has particular potential for addressing a number of aspects of the CTRL research strategy for the periods `early agriculturists' (4500 BC - 2000 BC) and `farming communities` (2000 BC - 100 BC).

4.1.2 The main stratigraphic potential for the site lies in providing evidence for the persistent use of a site for domestic and probably ritual activity during the Neolithic and the Iron Age. The stratigraphic evidence has been examined in detail at the Fieldwork Event Aim level and there is little potential for further analysis to provide additional insights. However, the dating and characteristics of the main phases of activity, described below, can contribute to broader studies at the Landscape Zone level, as discussed in section 4.5 (Overall Potential).

Hunter-foragers (400,000-4000 BC)

4.1.3 Although Mesolithic flintwork was recovered from the site there is no potential for further study other than to note its presence. However, the paucity of Mesolithic sites from Kent increases the importance of these finds. The material would be of most value if published alongside other Mesolithic material from CTRL sites (eg. Beech Brook Wood and Sandway Road).

Early Agriculturists (4500-2000 BC)

4.1.4 This phase can be divided into clusters of features that are both stratigraphically and spatially discrete. The Neolithic-early Bronze Age features occur in three clusters: The early-middle Neolithic features are grouped towards the eastern side of the site. The Grooved Ware pits (mid-late Neolithic) form a separate cluster near the middle of the site which was, perhaps, related to some form of structure. The late Neolithic-early Bronze Age features again form a discrete cluster away from the Grooved Ware pits, but near to the early-middle Neolithic pits. The extent to which these ceramic phases overlap is uncertain; the spacing of the features at Eyhorne Street suggests that they could be broadly contemporary, representing a single episode of activity.

4.1.5 The earliest group of features contain earlier Neolithic flintwork and pottery and form a zone of activity towards the south-eastern end of the site. The redeposition of similar material in later features indicates that the area of occupation during this period may have been substantially wider than indicated by the surviving features.

4.1.6 The presence of a group of five features containing late Neolithic material laid out in a rectangular pattern and apparently associated with a posthole is perhaps unusual. The pairing of Grooved Ware pits is a common phenomenon, while contemporary structures are often arranged around post settings laid out in a rectangular plan. These deposits tend to show a familiar pattern of deposition with the deliberate selection of a set of material residues (see Thomas 1996). In addition the pits were deliberately dug so as to receive these selected deposits. The character of these pit deposits is strikingly homogenous across much of southern Britain and, it can be argued, reflects a particular set of practices that may well be linked to feasting. The structured nature of the deposits within these features probably denotes ritual activity in the form of a restricted set of practices. A similar argument

can be applied to the paired pits associated with Beaker finds although these features are likely to be later in date.

Farming Communities (2000-100 BC)

4.1.7 There seems to be a hiatus in occupation until the late Bronze Age or the earlier part of the Iron Age. Thereafter, the ephemeral character of the earlier prehistoric occupation is replaced in the first millennium BC by more substantial traces of settlement. There is evidence for low-level settlement activity that comprises ditches, gullies, a hollow and isolated pits. Other undated features may also belong to this period of activity. The presence of intercutting features provides one of the few stratigraphic sequences for the site as a whole. These features nearly all belong to a period within the early-middle Iron Age, although there are traces of slightly earlier and later activity. Although the character of the site indicates domestic settlement there is some evidence for structured deposits (as defined by Hill 1995), especially within pits and these perhaps warrant more detailed analysis. In particular the adjacent pits 170 and 175 contained elements suggestive of ritual deposition, (175 contained iron fragments, probably from a sword, and small quantities of burnt animal bone; pit 170 contained part of a horse skeleton and was rich in charred grain).

4.1.8 A major obstacle to dating is the absence of pottery from a large proportion of the features. Many of the undated features, however, are tree-throw holes which, although forming an important aspect of the site's history, are less important to an understanding of the site's structure than the anthropogenic features. Since few of the features, dated or undated, have clear spatial or stratigraphic relationships radiocarbon dating of the remaining undated anthropogenic features would be unlikely to greatly improve our understanding of the site unless large numbers of dates are obtained. Given the fragmentary character of the archaeological evidence and the high potential for residuality, a large dating programme cannot be justified, although dating of intrinsically important deposits should be considered where suitable sample material is available (see 4.4 below)

4.2 Artefactual Potential

Prehistoric pottery (Appendix 1.1)

4.2.1 The relatively small groups of pottery cover a wide date range and will contribute to the dating of the site and to the understanding of the local and in some cases the regional ceramic sequence. Some of the decorated Grooved Ware might be of more than regional importance. This includes a sherd with a possible `Greek Key` geometric design and a fragment from a possible spindlewhorl or spherical object. If the interpretation as a spindlewhorl is correct, then it presents rare evidence for textile production during the late Neolithic. The small group of Beaker pottery from a pit deposit provides evidence for domestic activity that is generally under-represented in this region. The Iron Age pottery assemblage provides further evidence for domestic settlement.

4.2.2 As with some other CTRL sites such as Tutt Hill, the assemblage, although small, is of value because it contains material with a wide prehistoric date range from the same locality. Such assemblages will be of particular importance for comparison with the much larger prehistoric assemblage from White Horse Stone. Of particular interest for inter-site comparison are the gaps in the chronological range represented, which potentially reflect regional social and economic trends.

4.2.3 Detailed analysis of the prehistoric pottery is therefore recommended, as part of a wider study of small prehistoric pottery assemblages from the CTRL.

Late Iron Age Pottery (Appendix 1.2)

4.2.4 The small amounts of late Iron Age pottery are insufficient for anything other than dating purposes and the suggestion that vessels in the glauconitic sand and calcined flint tempered fabric B9.3 may have been produced in the Hollingbourne area. It is recommended that the three pot profiles from pit 226 be drawn as part of a short note on the material and that a search for parallels be made.

Ceramic Building Material and Fired Clay (Appendix 1.3)

4.2.5 The Iron Age loomweights provide evidence for textile manufacture associated with prehistoric occupation of the area, and are also significant as chronological evidence. Although no textiles have been recovered there is evidence for their production in the form of a possible Neolithic spindlewhorl and Iron Age loomweights. Further analysis of their context, associations and parallels from other sites, may shed light on the production process.

4.2.6 The post-Roman assemblage includes an example of a type of brick imported from the Low Countries in the 14th and early 15th century, which is likely to have been used in a high-status building in the vicinity, but is significant in terms of the interpretation of the site only as dating evidence for two ditches. Otherwise the quantity of material is too small to justify further analysis.

Worked and Burnt Flint (Appendix 2.1)

4.2.7 The flint assemblage is relatively small, and dating to the later Neolithic to early Bronze Age is reliant on technological traits as well as typological aspects of the assemblages. However there are a few good groups (*eg* contexts 18, 20 and 68; 22 and 61-2). These are potentially more closely datable because they are associated with ceramics. In order to contribute to the characterisation of flint assemblages in the region it will be useful to compare these groups with other larger assemblages (eg the flint from the Grooved Ware pits at White Horse Stone) and other later Neolithic to early Bronze Age assemblages from the route of the CTRL. The limited identified Mesolithic material suggests sporadic use of the area for hunting.

4.2.8 Areas of further analysis will include identification of in situ scatters by spatial and refitting analysis, particularly within the Neolithic contexts. Methods of production including reduction techniques may also be studied by means of refitting analysis. The sources of the flint, which will shed light on patterns of contact and exchange, can be suggested by its physical appearance (e.g. Bullhead flint) and the presence of corticated material. The study of low-power use-wear and assemblage composition will shed light on the types of activity being undertaken. Study of the Grooved ware associated pit assemblages will contribute to understanding of Grooved Ware pit deposits, and will be valuable for comparison with similar deposits from White Horse Stone.

Metalwork (Appendix 3)

4.2.9 The occurrence of probable sword fragments within a single deposit is of great significance. The blade appears to have been bent before deposition. Aside from providing additional dating evidence for this feature, the study of the metalwork and its context will contribute towards the understanding of the character of this deposit. It is recommended that the metalwork and associated deposits be analysed in full in order to contribute to Landscape Zone Priorities connected with definition of ritual and economic landscapes and their relationships. Its detailed study, in particular the observation that it may have been deliberately bent prior to deposition, will

contribute towards the interpretation of the pit and more generally to our understanding of Iron Age ritual practices.

4.2.10 Avenues for further analysis include typological study, to confirm and possibly refine the date of the object and the context, and identification of the likely source of the iron. Comparison with the early-mid Iron Age metalwork from cremation group 6131 at White Horse Stone will also be of value for identifying differences and similarities in quality, composition and typological characteristics? This may be addressed by metallographic analysis including X-ray fluorescence, optical microscopy and hardness testing. Microscopic analysis has the potential to establish the extent to which the artefact was used before being deposited, and whether or not it was broken deliberately.

4.3 Environmental Potential

Human Remains (Appendix 4)

4.3.1 The potential of this assemblage is limited by its small size as a group and by the small size of the individual deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). It therefore seems probable that those observed at Eyhorne Street are only token deposits, which do not represent the entire remains of any one individual. Nevertheless, it is recommended that the material is analysed (identification and quantification) alongside associated stratigraphic, artefactual and palaeoenvironmental evidence in order to characterise the deposits and if possible determine their true function. Such a study would benefit from an integrated approach considering all similar features from CTRL sites.

Animal Remains (Appendix 5)

4.3.2 The small number of bones recovered from the site do not provide much information regarding the economy of the site during the early and late Iron Age other than the presence of the animals. It is not recommended that further work be done on this assemblage as a whole. However, the partial horse skeleton from late Iron Age pit 175 warrants radiocarbon dating to aid interpretation of this possible structured deposit. It is recommended that the bone from this feature is analysed in full alongside associated stratigraphic, artefactual and palaeoenvironmental evidence in order to contribute to Landscape Zone Priorities connected with definition of ritual and economic landscapes and their relationships. In addition, a single small mammal tooth from context 178 should be identified to species.

Charred Plant Remains (Appendix 6)

4.3.3 The charred fruit from the Grooved Ware pit is typical of the kinds of finds associated with Grooved Ware. The samples from the Beaker pits, with hazel nut shells being the most notable feature, are typical. The deposits from the early-middle Iron Age pits suggest that spelt wheat was being quite widely cultivated in the region during the Iron Age and the Roman period, despite the widespread introduction and cultivation of emmer wheat. The oats may demonstrate an early date for their cultivation although they may represent weeds.

4.3.4 Given the limited range of plant remains from Neolithic-Bronze Age and from Iron Age deposits within the region the present samples have considerable potential for increasing our existing dataset for the area. The Neolithic-Bronze Age samples are unlikely to extend the known species list for the period but will provide valuable data for the region.

4.3.5 The analysis of some charcoal from Neolithic/Bronze Age deposits may shed light on the woodland landscape in the period and provide some information about woodland management. The charcoal in the Iron Age period is very limited.

4.3.6 The Iron Age samples are exceptionally rich and therefore offer great potential for investigation the role of specific cereals, such as emmer wheat and oats, as well as broader agricultural trends at both the site and within the region. Emmer wheat is now known from the Late Iron Age, but has not been widely recorded and it has not been established if it is present as a relic of earlier agricultural systems or is a reintroduction. It is therefore important to fully record (species identification and quantification) these present samples and extend the existing dataset. Likewise, oats are recorded in significant numbers from some sites in this period, but it is not clear how much it was cultivated or how much it appears as a weed. The late Iron Age deposits may represent *in-situ* stored products. In addition to providing valuable information about agricultural systems at the site, there is also therefore the potential to look at storage patterns and possible structured deposition in a ritual context. This data will be of particular value for comparison with the Iron Age settlement at White Horse Stone.

4.3.7 It is recommended that the hazel-nut rich deposits and the grain rich Iron Age deposits are analysed in full (species identification and quantification) in order to contribute to Landscape Zone Priorities connected with defining ritual and economic landscapes and their relationships.

4.4 Dating Potential

4.4.1 There is limited potential to use radiocarbon dating to improve the phasing of the site. The undated features produced little suitable sample material, the most significant exception being ditch 116/136. However, only unidentified charcoal was recovered from this feature, which would produce a date of uncertain validity, although it would probably be sufficient to distinguish whether the feature was of Neolithic-early Bronze Age or Iron Age date. Similar material was recovered from pit 91.

4.4.2 More reliable dates could be obtained from hazel nut shells from gully 141/143 and pit 112, but this would be unlikely to greatly improve understanding of the site.

4.4.3 Consideration could be given to obtaining good quality dates for the pit contexts containing Grooved Ware and Beaker, where charred plant material such as grain or hazelnut are available. In addition, dates could be obtained on charred residues that adhere to sherd surfaces (noted for Grooved Ware). This would provide direct and high quality dates for this type of ceramic.

4.4.4 Consideration could also be given to obtaining high quality radiocarbon dates for selected Iron Age features, including the partial horse burial within pit 170 and the adjacent pit 175 which contained the sword fragments.

4.5 Overall Potential

4.5.1 The site offers good potential to address some of the research aims identified for the Wealden Greensand Landscape Zone and, in particular, those concerned with the Early Agriculturists (4500 BC - 2000 BC) and Farming Communities (2000BC - 100BC) periods, as defined in the CTRL Research Strategy. The general scarcity of prehistoric evidence from the Wealden Greensand Landscape Zone increases the importance of the evidence from Eyhorne Street. An important contrast can be drawn between this site and contemporary sites in the North Downs Landscape Zone (*eg* White Horse Stone).

4.5.2 Overall, the features provide evidence for the persistent, albeit episodic use of a site over a period of at least four millennia. This includes rather slight evidence for occupation and some probable structured deposition within pits, possibly for ritual purposes. Pit digging for the burial of particular sets of cultural material appears to have happened throughout the Neolithic period and again in the Iron Age.

4.5.3 At Eyhorne Street there is a hiatus in the overall sequence that spans most of the Bronze Age, a pattern that can also be paralleled elsewhere (*eg* White Horse Stone). In contrast, several sites on the CTRL, all located in the 'Wealden Greensand' Landscape Zone (*eg* South of Snarkhurst Wood, Beechbrook Wood, West of Blind Lane, Church Lane/ East of Station Road), show almost the opposite pattern. These sites characteristically show evidence for middle-late Bronze Age activity in juxtaposition with late Iron Age and early Roman activity, with no evidence for continuity in the intervening period. Considered together this evidence provides a complex picture of landscape history and development.

4.5.4 The consistent selection of certain sites by communities widely separated in time, is of considerable interest. It could suggest that such sites retained their significance over very long periods of time, even when not in active use, perhaps because of visible traces of past use. Alternatively, in responding to fluctuating demographic and/or environmental conditions, communities in different periods may have independently evolved similar criteria for the selection of particular sites for industry, agriculture, settlement or ritual, perhaps determined by the basic agricultural qualities of the land.

4.5.5 This deserves further consideration at the Landscape Zone level of analysis. The identification of such chronological patterns in land-use at a regional level would contribute to a number of Landscape Zone Priorities. Palaeoenvironmental sequences from sites such as White Horse Stone and East of Station Road have the potential to determine the environmental background to these major changes. Central to any such analysis will be the establishment of independent site-based chronologies, by means of artefact (in particular pottery) studies, in conjunction with a programme of radiocarbon dating.

Hunter-foragers (200,000 - 4500 BC)

4.5.6 Later Mesolithic (8000-4000 BC): There is little potential for this period other than noting the presence of residual flintwork.

Early Agriculturists (4500 BC - 2000 BC)

4.5.7 The Early or Middle Neolithic (4000-2900 BC): The presence of features dating from the early-middle Neolithic to the early Bronze Age in nearby locations gives the site some potential in terms of an understanding of the persistent use of an area or place, and of the ways in which past activities may have influenced and been perceived by later inhabitants (KCC and EH 2000, 4).

4.5.8 There is little indication of the activities with which the early-middle Neolithic feature or features were associated, although features contained pottery, flint and more rarely charred plant remains. It is possible that they formed part of a ditched structure, but there is no clear indication of its overall form. Pits with burnt flint and a general scatter of flint and pottery indicate more domestic activities, perhaps associated with cooking and feasting. Although this activity is relatively small-scale it none-the-less provides important evidence for the domestic and ritual use of the landscape.

4.5.9 The Late Neolithic - Grooved Ware (2900-2200 BC): The Grooved Ware pits contain a typical assemblage of artefacts and charred plant remains. It is amongst the most securely associated Grooved Ware assemblages known in Kent (cf Cleal 1998). Further research is needed to compare and contrast the Eyhorne Street assemblage with comparable Grooved Ware deposits elsewhere, in order to assist in the interpretation of such features. This group is of considerable local and regional interest and may contribute to a wider regional understanding of patterns of deposition associated with Grooved Ware. In addition to the pottery, the associated flint may allow useful comparisons to be made. Charred plant remains are commonly found associated with Grooved Ware pits and will also provide a basis for comparison. Further research is needed to identify parallels for the possible spindlewhorl.

Early Agriculturists (4500 BC - 2000 BC) into Farming Communities (2000 BC - 100 BC)

4.5.10 Late Neolithic-early Bronze Age (2400-1700 BC) (Beaker): Although the Beaker pits and their associated cultural material are typical for the period they are important discoveries in Kent as such evidence is lacking. The possibility that both pits contained token cremation deposits is intriguing, although the inclusion of human remains within non-funerary deposits is not uncommon and may simply serve to stress the ritual character of these assemblages.

4.5.11 Collectively the site provides the basis to assess non-monumental ritual and domestic activity that may be profitably compared to other sites with sequences of activity of similar date (eg White Horse Stone, Tutt Hill, Sandway Road (URS 1999f), Saltwood Tunnel (CAT and WA 2000) and Chalk Hill (Dyson *et al*. 2000).

4.5.12 This period is still relatively poorly understood within the region, although the quantity of information is rapidly increasing (URS 2000; Dyson *et al*. 2000; Barber 1987). Eyhorne Street, with its small number of prehistoric pit deposits and related features, will make a useful contribution to any comparative study at a regional level. Elsewhere, pit deposits on a similar scale have been found at White Horse Hill and Pilgrim's Way. Collectively this evidence will contribute to a better understanding of social practices, artefacts, the palaeoecomomy and the environment.

Farming Communities (2000-100 BC)

4.5.13 The Iron Age (700-100 BC): The arrangement of the possibly early-middle Iron Age features does not suggest any obvious interpretation of the character of the site. The function of the sequence of hollows also remains unclear. However, the presence of loomweights and charred plant remains including cereals, suggests that they may be related to the edge of a settlement or the remains of an otherwise poorly preserved settlement. Although the general character of this site indicates domestic activity, there is some suggestion that ritual may have played a part in the deposition of cultural material. The broken and bent sword, the horse remains and the charred grain and large quantities of broken pottery are unlikely to represent simple rubbish disposal. The potential of the remains from this phase is vitiated at present by the uncertainty over their date, which further comparative analysis of the pottery may resolve. Whether they are late Bronze Age or early-middle Iron Age their significance in local terms is enhanced by the general paucity of settlement evidence from these periods, although Eyhorne Street itself provides little detailed insight into the form of the settlement.

4.5.14 The limited evidence discovered will provide some comparative data for other sites located along CTRL, in particular the more substantial settlement evidence from

White Horse Stone. This aspect of the site certainly has some potential to contribute to the local and regional understanding of the Iron Age, in particular the character of open settlement. Similarly, although the evidence is limited, some contribution can be made towards addressing some of the research issues identified by the Iron Age Research Seminar in (nd) *Understanding the British Iron Age: An Agenda for Action.* In combination with other CTRL sites, Eyhorne Street will contribute to addressing research issues relating to chronology, aspects of settlement, landscape and society (especially in relation to ritual practises), material culture, regionality and processes of change.

Towns and their rural landscapes(100 BC - 1700 AD)

4.5.15 Sub-period i) Late Iron Age - Romano-British (100 BC - AD 410): The evidence for late Iron Age activity largely replicates that of the early and middle Iron Age in that it consists of further pit digging. In general this activity represents continuity in use and practice. There is a notable lack of Roman material from the site.

4.5.16 Sub period ii): The medieval and post-medieval Periods (AD 1100-1700):

4.5.17 Similarly there is a lack of post-Roman activity other than a few scattered finds of tile and a ditch of uncertain date, none of which has any potential to address the Fieldwork Event Aims.

4.6 Updated Research Questions

4.6.1 The following updated research questions are formulated from the statement of potential (see section 4.5 above). These are presented as a series of aims and objectives, following recent guidance from English Heritage regarding the formulation of updated project aims (English Heritage nd, 2-3). This recommends that it is helpful, when appropriate, to treat *aims* as major themes or goals to which specific *objectives* contribute, and that it is helpful, when appropriate, to think of aims and objectives as questions.

4.6.2 The questions formulated will seek to address current academic agendas as set out by English Heritage in *Frameworks for Our Past* (Olivier 1996) and for the Iron Age in particular reference is made to the draft document *Understanding the Iron Age: an agenda for action* (Haselgrove nd).

4.6.3 Overall, there is little potential for further detailed analysis of the site data, although certain elements of the artefact and ecofact assemblages, and their stratigraphic context, can be used to address research themes concerning chronology (in particular the longevity of the ceramic traditions present) and material culture (in particular sources of raw materials and patterns of deposition in relation to ritual deposits). The value of the data will be increased if the analysis is underpinned by radiocarbon dating, which will provide a chronology independent of the ceramic sequence.

4.6.4 Broader issues concerning settlement, landscape and society, regionality (distribution and exchange, cultural identity, interegional contact) and processes of change, also have potential to be addressed, but only insofar as the site provides comparative data for key prehistoric sites such as White Horse Stone. More detailed consideration of these issues, and a statement of up-dated research aims, is included in the White Horse Stone post-excavation assessment (URS 2001).

Chronological issues

4.6.5 *Updated Research Aim 1:* to refine and confirm the chronology of the site. The following objectives can be achieved by integrated, detailed stratigraphic analysis

combined with detailed analysis of the pottery assemblage and other datable artefact assemblages. Although the quantity of material is small, the prehistoric pottery assemblage is of value for comparison with other CTRL sites, in particular for establishing and revising ceramic chronologies for Kent. It is recommended that radiocarbon dating is carried out on key contexts to establish a radiometric chronology independent of the artefactual dating. Where possible, radiocarbon dates should be obtained for key ceramic groups from residues adhering to the vessels. Objectives relating to understanding of the site chronology in its regional context can be addressed by comparative study of the ceramic dating evidence from Eyhorne Street and other CTRL sites with long prehistoric sequences, in particular White Horse Stone, Northumberland Bottom, Tutt Hill and Beechbrook Wood.

- Objective 1: For how long was the site occupied in the Neolithic? Was the period of use continuous or sporadic? A central issue for this period is the extent to which the various ceramic traditions represented overlap chronologically, which may be addressed by a broad comparative study of prehistoric pottery from CTRL sites, supported by a programme of radiocarbon dating. It is thought that Neolithic occupation on the site extended over perhaps 1500-2000 years and this is reflected in the presence of various ceramic traditions (Plain Bowl or early Ebbsfleet ware tradition, Grooved Ware and Beaker). Attempts will be made to confirm and refine the longevity of the Neolithic occupation by means of radiocarbon dating and comparison with key regional pottery assemblages including White Horse Stone.

- Objective 2: To what extent do gaps in the artefactual chronologies reflect absence of settlement in these periods? A possible hiatus has been identified between the late Neolithic and the late Bronze Age, a period of perhaps 500 years. A further possible hiatus has been recognised in the middle Iron Age, followed by renewed activity in the late Iron Age. Does this sequence reflect a widespread regional pattern or a local phenomenon? Do the hiatuses reflect general contraction in settlement or movement to alternative locations? This objective may be addressed by intersite comparison, in particular with other CTRL sites with long prehistoric ceramic sequences.

- Objective 3: What is the chronological range of the Iron Age activity? Can a late Bronze Age origin be demonstrated from the ceramic evidence (supported by radiocarbon dating of key groups)? Can different later prehistoric pottery fabrics be regarded as chronological indicators? Again, this can be tested by radiocarbon dating key pottery groups.

- Objective 4 At what date did the settlement go out of use? What was the reason for its abandonment? To what extent do the ritual deposits post-date the settlement and are they linked to its abandonment (eg. closing down deposits)? The lack of evidence for late Iron Age and Romano-British activity at Eyhorne Street is of interest in this respect given the long sequence of prehistoric activity at the site. The CTRL has produced a number of sites of this period which suggest dramatic changes in settlement patterns and land-use in the late Iron Age. Some, such as White Horse Stone, show a similar pattern to Eyhorne Street, *ie* a long sequence of prehistoric activity, culminating in a period of more intense activity in the early-middle Iron Age, followed by abandonment by the middle-late Iron Age. Thurnham, in contrast, shows evidence for the establishment of a new settlement in the late Iron Age, with occupation continuing and expanding in the early Roman period, at a location with little evidence for preceding prehistoric activity.

Settlement, landscape and society

4.6.6 Although the evidence is limited, consideration of the settlement context will be required to provide a basis for comparison with key prehistoric sites in the region.

Hunter-foragers (200,000 - 4500 BC)

4.6.7 *Updated Research Aim 2:* Examine evidence for Mesolithic activity in Kent against the background of environmental change. The unstratified Mesolithic material will only be of value in contributing to broad study of the distribution of Mesolithic artefacts in the region, in relation to environmental factors such as climate, vegetation change and geology.

- Objective 1: What is the significance of the late Mesolithic worked flint at Eyhorne Street?

Early Agriculturists (4500 BC - 2000 BC)

4.6.8 *Updated Research Aim 3:* To determine the landscape setting and contemporary environment of the Neolithic activity. Although there is limited potential for landscape reconstruction from this site the aim may be partially addressed by analysis of charred plant remains from the site, consideration of the archaeology against published evidence for palaeoenvironmental change at a regional level, and consideration of the local topographical setting.

- Objective 1: Record any observable changes in landscape use at the beginning and throughout the Neolithic and early Bronze Age.

4.6.9 *Up-dated Research Aim 4:* To determine the character of activity on the site in the Neolithic and early Bronze Age. This aim may be addressed by characterisation and comparison of the groups of Neolithic and early Bronze Age features, including all available classes of evidence (principally ceramics, worked flint and charred plant remains). Some of the deposits, including the Grooved Ware pits, are examples of well-documented feature types and would benefit from detailed contrast and comparison with similar assemblages at a regional level, which might shed light on the function of such deposits.

- Objective 1: to determine the date, character and extent of ritual and economic activity, in particular with respect to the deposition of Grooved Ware or Beaker pottery, flintwork and charred plant material in pit deposits.

- Objective 2: to examine the use and available range of natural and cultivated resources throughout the Neolithic and early Bronze Age.

Farming Communities (2000 BC - 100 BC)

4.6.10 *Updated Research Aim 5* To identify evidence for cultural and environmental change in the post-Neolithic landscape and to confirm a pattern of later prehistoric intensification. This aim can be addressed by comparative study of prehistoric activity at a regional level. The CTRL project has provided a number of sites which can contribute to definition and understanding of apparent fluctuations in later prehistoric activity within the North Downs and Wealden Greensand landscape zones including Northumberland Bottom, White Horse Stone, Thurnham, South of Snarkhurst Wood, Chapel Mill, Tutt Hill, Beechbrook Wood, West of Blind Lane, East of Station Road and Saltwood Tunnel. These include a wide range of activities, including isolated metalwork and pottery deposits, barrow cemeteries, field systems and settlement sites. White Horse Stone, Tutt Hill and Beechbrook Wood in

particular have very long-lived and varied prehistoric ceramic assemblages which will be important for intersite comparison.

- Objective 1 What is the significance of apparent gaps in the post-Neolithic prehistoric ceramic sequence? Does the lack of early and middle Bronze Age activity at Eyhorne Street reflect a regional pattern or do other sites show evidence for activity in this period?

4.6.11 *Updated Research Aim 6* To establish the date, character, economic basis, environment and affinities of the Iron Age settlement. These aims can be addressed by characterising the late Bronze Age/ early Iron Age activity and comparing it with other sites of similar date in the region. The CTRL project provides a potential framework for a regional study of later prehistoric settlement. In this context the fragmentary site at Eyhorne Street will mainly be of value for comparison with the contemporary settlement at White Horse Stone, which is one of the most extensively investigated settlement sites of this period in the region and is associated with much palaeoeconomic, environmental and artefactual evidence.

- Objective 1: What is the evidence for and extent of late Bronze Age activity and the reorganisation of the landscape?

- Objective 2: Can the origins of the settlement activity be placed within the late Bronze Age? How does this date compare with the known settlement pattern for the region?

- Objective 3: What is the character of the Iron Age settlement and how does this compare with other settlement types within the region?

- Objective 4: How did the settlement develop and what can be determined about its layout and organisation? Are there clearly defined activity areas and what practices do these represent (ritual, domestic)?

- Objective 5: What economic evidence is there for farming? What domestic resources were being exploited? How significant is the cultivation of emmer wheat within the region? What is the role of plant and animal remains in ritual deposits?

Material culture

4.6.12 Updated Research Aim 7: What are the sources of raw materials? What evidence is there for the trade in raw materials?

4.6.13 The following objectives can be achieved through the selection of ceramics, lithics and metalwork for detailed study (petrological and metallographic analysis).

- Objective 1: Ceramics - What are the sources of the ceramic objects found on the sites? Were all the materials obtained locally? Is there any evidence that non-local materials were being traded? What is the source of shell temper found in the late Neolithic Grooved Ware and some of the Iron Age pottery? Are glauconitic clays found locally or does their identification suggest procurement of raw materials or trade over longer distances? Can any finished vessels be identified as non-local products? Is there any difference in the sources of supply over time? These objectives can be addressed by detailed comparative study of forms and fabrics from White Horse Stone and comparable assemblages, including thin section analysis of sherds from selected fabric groups.

- Objective 2: Lithics - Did the stone and flint derive from local sources? Is there any evidence for long-distance trade? Is there evidence that trade was in raw

materials rather than finished objects? The sources of the flint can be suggested by its physical appearance (e.g. Bullhead flint) and the presence of corticated material.

- Objective 3: Metalwork and metalworking residues - What is the likely source of the iron used to make the fragmentary sword from Pit 175? What are the differences and similarities in quality, composition and typological characteristics between this find and the mid-late Iron Age metalwork from cremation group 6131 at White Horse Stone? If sufficient and suitable sample material survives then this may be addressed by metallographic analysis including X-ray fluorescence, optical microscopy and hardness testing.

4.6.14 Updated Research Aim 8: What is the evidence for on-site artefact production?

4.6.15 The following objectives can be achieved by considering aspects such as the evidence for manufacturing processes and stages of production and artefact use (in a production context.

- Objective 1:Lithics - Areas of further analysis will include identification of in situ scatters by spatial and refitting analysis, particularly within the Neolithic contexts. Methods of production including reduction techniques may also be studied by means of refitting analysis.

- Objective 2 What evidence is there for textile production? Although no textiles have been recovered there is evidence for their production in the form of spindlewhorls and loomweights. Further analysis of their context and associations may shed light on the production process. The decorated `spindlewhorl`, from a late Neolithic context, is possibly a unique find, although part of a plain spindlewhorl is recorded as coming from the site of Durrington Walls, Wilts (Wainwright with Longworth 1971, 188 & fig.82). If this interpretation is correct then it provides rare evidence of textile production in the late Neolithic.

4.6.16 Updated Research Aim 9: What evidence is there for the use and function of artefacts, including primary and secondary uses?

4.6.17 The following objectives can be achieved through the physical and microscopic analysis of artefacts with a view to recording any signs of use, damage, repair and breakage.

- Objective 1: Ceramics - One of the Grooved Ware sherds is encrusted with charred residue and would have the potential for residue analysis and radiocarbon dating. Such analysis would contribute to understanding of Grooved Ware pit deposits, and would be valuable for comparison with similar deposits from White Horse Stone.

- Objective 2: Lithics - The study of low-power use-wear and assemblage composition will shed light on the types of activity being undertaken. Study of the Grooved ware associated pit assemblages will contribute to understanding of Grooved Ware pit deposits, and will be valuable for comparison with similar deposits from White Horse Stone.

- Objective 3: Metalwork - Further analysis of the metalwork will focus on the Iron Age sword fragments from pit 175. Microscopic analysis has the potential to establish the extent to which the artefact was used before being deposited, and whether or not it was broken deliberately.

5. BIBLIOGRAPHY

Barber, M, 1987 Landscape, the Neolithic, and Kent, in *Neolithic Landscapes: Neolithic Studies Group Seminar Papers 2*. (Ed P Topping), Oxbow Mono 86, 77-86

CAT and WA (Canterbury Archaeological Trust and Wessex Archaeology), 2000, Saltwood, *Current Archaeology* 168, 462-3

Cleal, R, 1998, Appendix, in R Cleal and A MacSween (eds), *Grooved Ware in Britain and Ireland*, ed Neolithic Studies Group Seminar Papers 3

Dyson, L, Shand, G, Stevens, S, 2000, Causewayed enclosures, *Current Archaeology* 168, 470-2

Haselgrove, C, *et al*. nd Understanding the British Iron Age: an agenda for action. Draft report prepared by the Working Party of the Iron Age Research Seminar

Hill, J D, 1995, *Ritual and Rubbish in the Iron Age of Wessex*. BAR Brit Archaeol Ser **242**

KCC and EH, 2000, Channel Tunnel Rail Link Section 1: research strategy addendum, prepared by Kent County Council and English Heritage

Moore, J and Jennings, D, 1992, *Reading Business Park: a Bronze Age landscape*, Thames Valley Landscapes: the Kennet Valley 1

Thomas, J, 1996, *Time, Culture and identity: An Interpretive Archaeology*. London, Routledge

URL 1994, Channel Tunnel Rail Link: assessment of historic and cultural effects, final report, prepared by the OAU for URL

URL 1996, Report on geophysical survey, contract 194/580, prepared by Geophysical Surveys of Bradford for URL

URS 1999a, Archaeological evaluation at A20 Diversion Holm Hill (ARC HOL98), nr Harrietsham, Kent: draft fieldwork report, prepared by Wessex Archaeology for URS

URS 1999b, Archaeological evaluation south-east of Eyhorne Street (ARC SEE99), Hollingbourne, Kent: draft fieldwork report, prepared by Wessex Archaeology for URS

URS 2000b CTRL Section 1 Archaeology: Post Excavation Assessment Instruction. Technical Report 000-RMA-RLEVC-00030-AB. Prepared by RLE for URS

URS 1999c, South of Snarkhurst Wood, Hollingbourne, Kent, ARC SNK 99: strip, map and sample archaeological works interim report, prepared by the OAU for URS

URS 1999d, Archaeological excavation at A20 Diversion Holm Hill (ARC HOL99): interim excavation report, prepared by Wessex Archaeology for URS

URS 1999e, Archaeological watching brief written scheme of investigation, Project Area 420, Technical Report No. 420-RUG-RLEVC-00002-AA

URS 1999f, Archaeological excavations at Sandway Road, ARC SWR99, interim excavation report, prepared by Wessex Archaeology for URS

APPENDIX 1 - ASSESSMENT OF CERAMICS

1.1 Prehistoric pottery and fired clay objects

By Alistair Barclay

Introduction

1.1.1 A total of 684 sherds (5354 g) of prehistoric pottery was recovered from the excavation at Eyhorne Street. This includes hand retrieved as well as sherds recovered during sieving of environmental samples. The pottery has a wide date range that includes Neolithic, Bronze Age and Iron Age material. The earliest material is of early or middle Neolithic date and consists of a small number of flint-tempered body sherds (23 sherds) some of which is residual material. There are isolated pit groups with late Neolithic Grooved Ware (33 sherds) and late Neolithic/early Bronze Age Beaker (30 sherds). However, the majority of the pottery is of Iron Age date (mostly early) and comes from pits and more rarely ditches. Some of this material occurs in features with diagnostic late Iron Age vessels and is considered to be redeposited (for the late Iron Age see M Lyne below). This material came from settlement features, mostly pits but also from ditches.

1.1.2 The recovery and study of the pottery was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular Aim 1.

1.1.3 The relatively small groups of pottery cover a wide date range and will contribute to the dating of the site and to the understanding of the local and in some cases the regional ceramic sequence. Some of the decorated Grooved Ware might be of more than regional importance. This includes a sherd with a possible `Greek Key` geometric design and a fragment from a possible spindlewhorl or spherical object. If the interpretation as a spindlewhorl is correct then it presents rare evidence for textile production during the late Neolithic. The small group of Beaker pottery from a pit deposit provides evidence for domestic activity that is generally under-represented in this region. The early Iron Age pottery provides further evidence for domestic settlement.

Methodology

1.1.4 All of the material was examined. The assemblage was quantified by count and weight and a note was made of principal fabrics, forms and decoration. Spot dates were based on the presence of diagnostic forms and particular fabrics. Early/middle Neolithic fabrics are tempered with angular ill-sorted flint, which is a common additive to both early Neolithic Bowl and also to middle Neolithic Ebbsfleet Ware. Grooved Ware tends to be tempered with either shell or grog partly depending on sub-style. Beaker pottery is generally tempered with grog sometimes in combination with sand and flint. Early Iron Age pottery often contains either flint, flint with sand or just sand. Glauconitic (black sand) fabrics are typical of the late Iron Age but also appear to have been used in the early Iron Age.

Quantification

1.1.5 A breakdown of the assemblage by context is given in Table 1.1.1.

Table 1.1.1: Quantification and breakdown of the assemblage by context

Chainage	Special number	Context	Count	Weight (g)	Period	Comment
ARC 420 68+100	SS1	24	3	4	E-MNE	F. Body sherds
ARC 420 68+100	SS9	99	1	2	EIA?	F. Decorated fineware sherd
ARC 420 68+100	SS27	164	1	1	EIA	F. Fineware burnished neck sherd.
ARC 420 68+100	SS28	165	14	52	EIA	AF,F.Body sherds
ARC 420 68+100	SS89	167	2	15	E-MIA?	ABF.Rim from ovoid jar. Mostly body sherds.
ARC 420 68+100-68+500 99		1	4	7	EIA	FA. Body sherds
ARC 420 68+100-68+500 99	SS23	11	51	205	EIA	AB. Mostly body sherds. One expanded rim.
ARC 420 68+100-68+500 99		15	15	532	EIA	FA. Body sherds
ARC 420 68+100-68+500 99		18	27	171	LNE	GA. Grooved Ware also contains possible spindlewhorl fragment
ARC 420 68+100-68+500 99		20	6	50	LNE	GA. Grooved Ware
ARC 420 68+100-68+500 99	SS1	22	28	228	LNEBA	G. Beaker -comb decorated sherds
ARC 420 68 +99 200		34	34	11	E-MIA?	ABF, F. Simple incurving rim. Two sherds of residual earlier prehistoric
ARC 420 68+100-68+500 99		61	1	54	EBA	G. Base from urn or possible Beaker
ARC 420 68+100-68+500 99		75	20	27	IA	ABF. Body sherds
ARC 420 68+100-68+500 99	SS11	76	20	50	IA	ABF,AF.Body sherds
ARC 420 68+100-68+500 99		78	16	35	IA	ABF,GF. Residual EBA sherd
ARC 420 68+100-68+500 99		88	1	3	LNEBA	FG. Beaker comb decorated sherd
ARC 420 68+100-68+500 99		104	20	70	E-MNE	F,FA.Body sherds
ARC 420 68+100-68+500 99		117	58	145	IA	ABF. Body sherds
ARC 420 68+100-68+500 99		125	9	38	IA	Body sherds
ARC 420 68+100-68+500 99		158	22	84	EIA?	ABF,F. Red finish on shoulder from fineware bowl. Rest body sherds.
ARC 420 68+100-68+500 99		172	16	139	EIA	ABF,F. Shoulder with burnish from fineware bowl, rim from coarseware shouldered jar, rim from?straight sided jar.
ARC 420 68+100-68+500 99	SS25	173	24	184	EIA	ABF,F. Expanded rim, rim from shouldered jar, shoulder from fineware vessel.
ARC 420 68+100-68+500 99		176	9	146	EIA	ABF. Thickened rim from ovoid jar
ARC 420 68+100-68+500 99		177	27	258	E-MIA	ABF. Sherds from an ovoid jar with cordoned rim
ARC 420 68+100-68+500 99	SS30	178	54	714	IA	ABF. Mostly body sherds from coarseware vessels some with wiped and rusticated surfaces. One grogged sherd could be LIAER and intrusive.
ARC 420 68+100-68+500 99		218	1	24	IA	ABF. Body sherd.
ARC 420 68+100-68+500 99		220	74	956	E-MIA	ABF. Sherds from fineware bowls either rounded or angular bipartite and coarseware bowls of ovoid shape with rusticated surfaces. There is also the rim from a burnished globular bowl.
ARC 420 68+100-68+500 99		221	4	32	EIA	ABF. Body sherds
ARC 420 68+100-68+500 99	SS31	222	27	168	EIA	ABF. Squared rim, body sherd with surface rustication.
ARC 420 68+100-68+500 99		223	16	124	E-MIA	ABF. Slight shoulder with finger-tip impression
ARC 420 68+100-68+500 99		224	74	759	EIA	ABF. Rim from ovoid vessel with rusticated surface. Other rusticated sherds match those from 220.
ARC 420 68+200 99	+ SS36	225	3	60	EIA-LIA	ABF. Residual EIA. LIA forms (jar, lid) in non ABF fabrics
ARC 420 68+300 99		227	2	6	IA	AB. IA body sherd. Residual grog-tempered ?Beaker sherd
			684	5354		

Fabric codes: A= sand, AB=glauconitic sand, F=flint, G=grog

1.1.6 Early/middle Neolithic: Plain body sherds in fabrics tempered with sparse ill-sorted angular flint represent probable early or middle Neolithic pottery. In the absence of diagnostic sherds, these could either be from vessels belonging to the Plain Bowl or `early` Ebbsfleet Ware ceramic traditions.

1.1.7 Late Neolithic - Grooved Ware: Grooved Ware is represented by material which is manufactured from grog and sand tempered fabrics. Diagnostic sherds have grooved and impressed decoration forming a variety of motifs. One sherd has an applied vertical cordon. Rims are incurving, pointed and bevelled. Forms are

mostly jars. The fabric, decoration and forms indicate affinities with the Durrington Walls substyle as defined by Wainwright and Longworth (1971).

1.1.8 Late Neolithic/early Bronze Age - Beaker: Beaker pottery includes fine as well as coarser vessels in principally grog-tempered fabrics. The fineware is comb impressed with geometric motifs, while the coarseware has ridge mouldings and finger-tip impressed plastic decoration. The small number of forms approximate to Clarke's Southern and FP groups (1970). This type of pottery is commonly found together in so-called `domestic` contexts (see Gibson 1982).

1.1.9 Iron Age: Iron Age pottery from the site is mostly manufactured from glauconitic clays with flint temper. Vessel forms are ovoid and more rarely shouldered. Rims are mostly flattened, squared or more rarely pointed and everted. Most of the pottery is plain, although many of the coarser vessels have a rusticated slip and some of the finer vessels have been burnished. There is a single example of a fineware sherd with burnished surfaces and red finish. On the whole the pottery would appear to fall within Macpherson-Grant's transitional early-middle Iron Age group (1991, 42).

Provenance

1.1.10 Early to middle Neolithic: Three contexts produced material of this date. Five body sherds were recovered from fills 22 and 24 of Beaker pit 23 and a further 20 sherds were recovered from fill 104 of pit 100.

1.1.11 Late Neolithic: Late Neolithic Grooved Ware was recovered from pits 19 and 21. Pit 19, fill 18 contained 27 sherds from at least four vessels that can be classified as belonging to the Durrington Walls substyle. Part of an object with lozenge decoration also came from context 18. This object is like a fragment from a clay ball, bead/toggle or weight and is similar in size and shape to some spindlewhorls of later prehistoric date. An alternative explanation that it is a boss or lug seems less likely because of the overall roundness of the fragment. Part of what appears to be a central perforation survives but has rough edges. Pit 21, fill 20, contained six body sherds, including three decorated, of Durrington Walls style Grooved Ware.

1.1.12 Late Neolithic/early Bronze Age - Beaker: Pit 23, fill 22, contained part of a fine Beaker with impressed comb decoration and a coarser vessel with plastic mouldings and impressed decoration. There are also two residual flint-tempered sherds of early/middle Neolithic date. Tree throw hole 89, fill 88, contained a single comb decorated sherd. Pit 60, fill 61, contained a grog-tempered base sherd that could belong to a Beaker or to an Early Bronze Age urn.

1.1.13 Iron Age: Early and middle Iron Age pottery was recovered from pit contexts 161 (fills 164-5,167), 14 (fill 15), 33 (fill 34), 153 (fill 158), 170 (fills 172-3), 175 (176-8), 217 (fills 218, 220-2) and pit 226 (223-5).

1.1.14 Pit 153 (fill 158) contained only body sherds, although one with red finish is likely to come from an Early Iron Age bowl. Pit 217 (fills 218, 220-5, 227) contained a number of sherds that could be placed towards the end of the Early Iron Age as well as at least one middle Iron Age rim. Although much of this material can be placed within the transitional early/ middle Iron Age (Macpherson-Grant 1991), the most complete vessels were two that are clearly late Iron Age (see report by M Lyne below).

1.1.15 Indeterminate Iron Age pottery was recovered from a hollow (76), pits 74 and 118 (fills 75, 117 respectively), ditch 77 (fill 78), from topsoil context 1, buried soil 11, deposit 125 and ditch fill 227.

1.1.16 A small decorated sherd (oblique stab) from a fineware vessel came from ditch fill 99. The thinness of the wall and the flint-tempering are more indicative of an early Iron Age date.

Conservation

1.1.17 The pottery is adequately bagged and boxed for long term storage and will require no further conservation. All the material should be retained until analysis is complete and decisions on final deposition have been made. It is recommended that all of the prehistoric material be retained for long-term storage.

Comparative material

1.1.18 There is relatively little published material from this area of Kent. There are no large published assemblages of earlier prehistoric pottery and on the whole finds of Grooved Ware and Beaker are poor in comparison to other regions of southern England (cf. Cleal & MacSween 1999; Clarke 1970; Gibson 1982). Many of the Grooved Ware finds are from the coastal area of east Kent (Longworth & Cleal 1999), however, there is also a single pit deposit from East Malling, Snodland (Wainwright & Longworth 1971, 278-9). Other comparative material is likely to come from north of the Thames Estuary.

1.1.19 With reference to the Iron Age material similar forms and fabrics occur at the excavated settlement site at White Horse Stone and reference should be made to this assemblage. Other published assemblages with comparable material are known from east Kent (Cunliffe 1974; Macpherson-Grant 1994).

Potential for further work

1.1.20 The pottery has already provided dating evidence for the site and has contributed towards the phasing. There is therefore little potential for further analysis in this respect. However, the prehistoric assemblage is very long-lived and has considerable potential for establishing a regional ceramic sequence, particularly by providing comparative material for larger assemblages such as White Horse Stone.

1.1.21 The Neolithic pits contain important groups of material for understanding the regional ceramic sequence and it is recommended that these are published in full. Some of the decorated vessel fragments have unusual motifs that may not have local parallels. The decorated `spindlewhorl` is possibly a unique find, although part of a plain spindlewhorl is recorded as coming from the site of Durrington Walls, Wilts (Wainwright with Longworth 1971, 188 & fig.82). If this interpretation is correct then it provides rare evidence of textile production in the late Neolithic. One of the Grooved Ware sherds is encrusted with charred residue and would have the potential for residue analysis and radiocarbon dating.

1.1.22 The small group of Beaker pottery can be described as being `domestic` in character, including both comb impressed and rusticated vessels. There is little published material of this type from north Kent and therefore the find is important and will add to the emerging overall picture for the development of earlier prehistoric ceramics.

1.1.23 The Iron Age pottery assemblage will contribute to the understanding of the date and character of the contemporary settlement and associated activity.

1.1.24 The potential described above may be addressed by a programme of detailed pottery recording, followed by analysis of forms, fabrics (including sources of materials), vessel function, production methods, vessel use (including patterns of deposition) and spatial distribution. Chronological issues may be addressed by selecting

radiocarbon samples in close association with key pottery deposits, where possible using material adhering to the sherds, to establish an independent radiometric chronology for the site. Possible inter-regional research objectives (see Section 4.5.9 and 4.5.14 above) may be met by a review of published sources for comparative assemblages, including continental sources. Viewing of key assemblages may be required for unpublished collections and selected items. It is recommended that the prehistoric pottery is studied alongside other CTRL sites with prehistoric assemblages, in particular White Horse Stone, Tutt Hill and Beechbrook Wood.

1.1.25 Specific issues that may be addressed include identification of the sources of the ceramic objects found on the sites: Were all the materials obtained locally? Is there any evidence that non-local materials were being traded? What is the source of shell temper found in the late Neolithic Grooved Ware and some of the Iron Age pottery? Are glauconitic clays found locally or does their identification suggest procurement of raw materials or trade over longer distances? Can any finished vessels be identified as non-local products? Is there any difference in the sources of supply over time? These objectives can be addressed by detailed comparative study of forms and fabrics from White Horse Stone and comparable assemblages, including thin section analysis of sherds from selected fabric groups.

Bibliography

Clarke, D L, 1970 *Beaker pottery of Great Britain and Ireland*, Cambridge University Press

Cleal, R and MacSween, A, 1999 *Grooved Ware in Britain and Ireland*. Neolithic Studies Group Seminar Papers 3. Oxbow Mono.

Cunliffe, B, 1974 Iron Age Communities in Britain

Gibson, A M, 1982 *Beaker domestic sites: a study of the domestic pottery of the late third and early second millennia BC in the British Isles*, Brit Archaeol Rep Brit Ser **107**, Oxford

Longworth, I and Cleal, R, 1999 Grooved Ware Gazetteer, in *Grooved Ware in Britain and Ireland*. Neolithic Studies Group Seminar Papers 3. (eds R Cleal and A MacSween) Oxbow Mono.

Macpherson-Grant, N, 1994 `The Pottery', in D R J Perkins, N Macpherson-Grant and E Healey `Monkton Court Evaluation, 1992', *Arch. Cant*., **114**, 237-316

Wainwright, G J with Longworth, I H, 1971 *Durrington Walls: excavations 1966-1968*, Rep Res Comm Soc Antiq London **29**

1.2 Late Iron Age Pottery

by Malcolm Lyne

Introduction

1.2.1 The 225 sherds (1252 g) of late Iron Age pottery from Eyhorne Street come from eleven contexts (see Table 1.1.1) and for the most part comprise badly broken up sherds in handmade sand and calcined-flint tempered fabrics, some of which incorporate glauconitic sand as well as quartz and hint at local manufacture.

1.2.2 The recovery and study of the pottery was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular aim 1.

Methodology

1.2.3 A record was made of all the sherds. Where applicable reference was made to the CAT fabric series.

Quantification

1.2.4 A breakdown of the assemblage by context is included in Table 1.1.1 (see above). One or two sherds in glauconitic sand and calcined flint tempered fabric B9.3 occurred in late Iron Age contexts at Thurnham (ARC THM98) and it is probable that these are of similar date and source. This notion is reinforced by the fact that the primary fill of pit 226 produced the greater parts of a late Iron Age pedestal jar and conical cup in grog-tempered ware alongside fresh sherds in the sand and flint-tempered fabric. The pot forms suggest that activity took place on the site during the period 150 BC-AD 1 during the earlier part of the late Iron Age.

Conservation

1.2.5 The pottery is adequately bagged and boxed for long term storage and will require no further conservation. At this stage, all the material should be retained.

Potential for further work

1.2.6 The small amounts of late Iron Age pottery are of limited value for anything other than dating purposes and for suggesting that vessels in the glauconitic sand and calcined flint tempered fabric B9.3 may have been produced in the Hollingbourne area. The group of vessels from pit 226 is an important chronological indicator of activity in the earlier part of the late Iron Age and would therefore justify detailed study and publication.

1.3 Ceramic Building Material and Fired Clay

by Susan Pringle

Introduction

1.3.1 A small amount of ceramic building material, 2 kg in weight, including 1.5 kg of fired clay, was recovered during the watching brief. It was hoped that this material would provide evidence for activities and structures on the site. The recovery and study of the ceramic building material and fired clay was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular Aim 1.

Methodology

1.3.2 All the ceramic building material, including the fired clay, was examined. Ceramic building material has been divided by form, and fragments counted and weighed. The presence of distinctive fabric types has been noted and compared to the Museum of London ceramic building material fabric series, but no analytical work has been done on the fabrics from the site, as this task is more appropriately carried out at the next stage, should the material merit it. The CAT fabric series was not consulted at this stage. Other information recorded includes the presence of combing tally or signature marks, the presence or absence of glaze, and any complete dimensions.

1.3.3 The fired clay fragments have been counted and weighed, and notes made of the most distinctive fabrics and any unusual inclusions. Exceptionally reduced (blackened) or vitrified material has been noted. The presence of original surfaces, imprints and tempering has been noted. No analytical work has been carried out on the fabrics.

Quantifications

1.3.4 Of the total weight of ceramic building material from the site, 0.42 kg was ceramic building material (Table 1.3.1). Apart from one scrap of probable Roman date, all the ceramic building material was medieval or post-medieval.

Table 1.3.1: Summary of ceramic building material

Context	Count	Weight (g)	Type	Period	Early date	Late date	Comments
87	1	225	Brick	MD-PM	1350	1500	Whitish sandy fabric, prob Flemish. Odd moulded depression in top
87	2	118	Peg tile	MD-PM			1 nr Mol 3201,overfired; 1 light red; unglazed
227	1	6	Tile	RO	43	400	Flake, orange fabric, abraded
227	2	122	Peg tile	MD-PM			1 fine orange, med sand; 1 red with post-firing n/hole, reused as small square

1.3.5 Tile types present consist of a brick in a Flemish-type yellow fabric, which is probably of medieval date. It pre-dates the use of brick as a major component of load-bearing walls, and would probably have been used for paving, nogging, or the construction of a fireplace or chimney. Peg tile occurs in at least three fabrics, one of which is close to MoL fabric 3201; the others are orange and red, and unglazed.

1.3.6 The total weight of fired clay assemblage is 1.5 kg (Table 1.3.2). The assemblage includes a number of triangular loomweights, that are typical of the Iron Age. Some had a distinctive appearance, with a reduced pale brown surface and a fabric containing quartz grains, flint flakes and organics.

Table 1.3.2: Summary of fired clay

Context	Count	Weight (g)	Type	Period	Comments
11	8	21	Fired clay	E-MIA	Loomweight; reduced pale brown surface, with quartz, flint and organics
11	80	124	Fired clay	E-MIA	Loomweight; reduced pale brown surface, with quartz, flint and organics
11	6	217	Fired clay	E-M-LIA	Loomweight
18	3	24	Fired clay		Dark chocolate brown - burnt natural?
114	34	116	Fired clay		Coarse orange lumpy/sandy daub, smoothed surface, no impressions
172	1	946	Fired clay	E-MIA	Loomweight
178	1	4	Fired clay		Orange sandy lumpy daub
178	1	52	Fired clay	E-MIA?	Loomweight? Fragment, similar to that in [172]

Provenance

1.3.7 The datable material came from a variety of features. A few fragments of fired clay were found in pit 19 associated with Grooved Ware. They support the suggestion that the group of features to which this pit belongs (Group 66) were related to some kind of structure. The small piece of probable Roman tile in context 227 came from the upper fill of ditch 229, but this also contained peg tile, so the Roman material is likely to be residual. The other medieval/post medieval building materials were from context 87, the upper fill of ditch 85. This ditch may be related to ditch 229. There are no good groups of ceramic building material, and the assemblage is of little potential value.

1.3.8 The Iron Age loomweights come from the western group of large pits, specifically two adjacent pits, both tentatively dated to the early-middle Iron Age on the basis of the pottery they contain (170 and 175; contexts 172 and 178 respectively), and from a subsoil layer (context 11).

1.3.9 The condition of the material is fairly abraded, but there is no risk to its preservation.

Conservation

1.3.10 Further analysis will be needed on some of the material, so it should not be placed in long-term storage until this has been carried out. There are no special requirements for long-term storage, other than the use of robust packaging materials and a dry environment.

1.3.11 At this stage, all the material should be retained. In the future, after the tile has been fully recorded and quantified by fabric and form, the majority can be discarded. Material to be retained includes samples of the tile fabrics, and the fired clay, which has features of interest and is likely either to be of assistance in the interpretation of the site or to provide useful comparanda with similar material from other sites.

Comparative Material

1.3.12 Comparanda for the fired clay assemblage may be provided by other sites in the project such as Tutt Hill or from sites of similar date in the area.

Potential for Further Work

1.3.13 The tile fabrics are most significant here as evidence for the date of two ditches, and contribute little else to the interpretation of the site. The fired clay and daub is a potential source of information on the types of structure.

1.3.14 The Iron Age loomweights provide evidence for textile manufacture associated with prehistoric occupation of the area, and are also significant as chronological evidence. Although no textiles have been recovered there is evidence for their production in the form of a possible Neolithic spindlewhorl and Iron Age loomweights. Further analysis of their context, associations and parallels from other sites, may shed light on the production process.

APPENDIX 2 - ASSESSMENT OF LITHICS

2.1 Lithics

by Philippa Bradley

Introduction

2.1.1 A total of 327 pieces of worked flint and 426 pieces of burnt unworked flint (3900 g) were recovered from the excavations. Some diagnostic retouched forms were recovered (eg two microliths and an arrowhead fragment) allowing broad dates to be suggested for the flint. For certain groups (eg the material from context 22) the suggested dating is based on technology rather than typology. The obliquely blunted point from context 101 and the broken possible rod microlith suggest some limited Mesolithic (possibly later Mesolithic) activity in the vicinity, although as no diagnostic debitage was identified it is perhaps more plausible that these microliths represent chance losses during hunting.

2.1.2 The recovery and study of the flint was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular aim 1.

Methodology

2.1.3 All of the flint was briefly scanned and recorded, with information regarding dating, technology and general condition being noted. The material was added to an Access database. All of the burnt unworked flint was scanned and weighed; its general characteristics were also recorded.

Quantification

2.1.4 The worked flint is summarised by context in Table 2.1.1 and the burnt flint in Table 2.1.2. A total of 327 pieces of worked flint and 426 pieces of burnt, unworked flint (3900 g) was recovered during the watching brief. This material was all very heavily calcined and ranged in colour from grey to white and red. Table 2.1.3 provides a breakdown of the relative elements of the assemblage. Typically debitage dominates with only 4.8% being retouched. Scrapers dominate the retouched component, as is typical of a domestic assemblage.

Table 2.1.1: Summary worked flint by context

Context	Count	Period	Comments
62 (68+100)	5		5 chips
1 (68+200)	3		2 flakes, 1 core (multi-platform flake)
7	7		6 flakes, 1 retouched flake
68	5		3 flakes, 1 core tablet, 1 core fragment
11	23	LNEBA?	21 flakes (1 flake possibly from a hammerstone, 1 burnt flake, 4 blade-like flakes), 1 possible core rejuvenation flake (face/edge), 1 end and side scraper, also 1 natural
18	13		11 flakes (7 burnt), 1 burnt chip, 1 retouched flake (possibly use rather than retouch)
20	6	NE?	1 broken end and side scraper, very worn edge, 5 flakes (1 is burnt)
24	5		1 small flake, 4 chips
34	11		11 flakes
49	7		7 flakes
57	1		1 flake
59	8		8 flakes
68	1		1 large flake with some ?usewear

75	4		4 flakes one with some ?usewear
76	19		18 flakes (one of which is burnt), 1 chip
117	1		1 flake
123	3		2 flakes, 1 chip
1 (68+300)	2	NE or EBA	1 worn retouched flake, 1 miscellaneous retouch (arrowhead fragment – leaf or barbed and tanged)
22	58	NE or EBA	30 flakes, 3 cores (multi-platform and tested nodules), 20 chips and small flakes, 4 end and side scrapers, 1 end scraper
61	15		10 flakes, 5 chips/small flakes, one of which is burnt
99	3		2 flakes, 1 core rejuvenation flake – face/edge
101	9	Some LME	7 flakes, 1 obliquely blunted point with ancillary retouch, 1 chip – possibly natural
103	7		7 flakes
104	1		1 flake
115	6		6 flakes, 3 of which are burnt, also 1 natural
125	3		3 flakes
164	1	ME, possibly later	1 broken and burnt microlith, possibly a rod, extensively retouched
165	2		2 flakes
167	-		Natural
178	3		1 misc retouch (possibly a scraper fragment), 2 chips, also 1 natural
214	2		2 flakes
215	1		1 flake
223	2		2 flakes
225	-		Natural
127	10	?NE	7 flakes, 3 cores (multi-platform flake), also 1 natural
160	8		5 flakes (inc 1 very large flake), 1 multi-platform flake core, 1 serrated flake, very worn, 1 chip
181	7		6 flakes (including 1 burnt) and a chip
189	55*		15 flakes (inc 2 burnt) and 40+ chips NB this material was scanned, counts are therefore approximate
208	1		1 flake
5 (68+400)	9		1 retouched flake, 1 core rejuvenation flake (face/edge), 1 discoidal core, 6 flakes

Table 2.1.2: Summary of burnt unworked flint by context

Context	Count	Weight (g)	Comments
15 (68+200)	23	358	Burnt flint fragments, all calcined grey to red
16	4	12	Burnt flint fragments calcined grey to red
18	6	73	Burnt flint fragments calcined grey to red
26	5	22	Burnt flint fragments calcined red
42	3	1	Burnt flint, calcined grey
76	1		Flake, very heavily calcined grey
164	3	25	Burnt unworked fragments, calcined grey
167	1	1	Burnt unworked fragment calcined grey to red
173	3	51	Burnt unworked flint calcined red and grey
22 (68+300)	29	646	Burnt unworked flint calcined grey, some reddish tinges
61	9	37	Burnt unworked flint calcined grey; also 1 natural
62	58	610	Burnt unworked flint calcined grey
95	22	33	Burnt unworked flint calcined grey
99	1	10	Burnt unworked flint calcined grey to red
101	1	2	Heavily calcined grey/red
104	1	1	Calcined grey
127	256*	2018	Burnt ?quartzite and flint calcined grey, quite fragmentary.

* Scanned only (counts based on OAU finds records)

Table 2.1.3: Summary of typology of worked flint

Artefact Type	Number	Group %	Total %	Period	Comments
Scrapers	7	43.8	2.1	NE-EBA	Mostly neatly retouched, one is very worn
Serrated flake	1	6.25	0.6		
Microlith	2	12.5	0.6	ME, possible later	1 obliquely blunted point with ancillary retouch and 1 burnt and broken ?rod microlith
Retouched flake	4	25.0	1.2		
Misc retouch	2	12.5	0.6	NE or EBA	1 arrowhead fragment (leaf or barbed and tanged), 1 possible scraper fragment
(Tools – sub total)	*16*	*100*	*4.8*		
Flake cores & core frags	10	10.4	3.1	NE – BA	Mostly multi-platform flake cores, fragments and tested nodules, 1 discoidal core
Rejuvenation tablets	4	4.2	1.2		2 face/edge flakes and 2 tablets
Chips	82+	85.4	25.1		Mostly small fragments from larger flakes, some complete chips, some are burnt
(Production - sub total)	*96*	*100*	*29.4*		
Flakes	215	100	65.7		In all stages of reduction, hard and soft hammers noted, all types of butts noted
(Flakes – sub total)	*215*	*100*	*65.7*		
Total	***327***				

Provenance

2.1.5 The flint came from a series of pits, post- and stakeholes, ditch fills, tree-throw hole fills and layers. Only five contexts (11, 22, 61, 76 and 189) produced 15 or more pieces of worked flint, and the latter count was boosted by a large number of chips that were recovered (Table 2.1.1). The shallow pits (14 and 17, contexts 15 and 16) produced only burnt unworked flint, which could equally belong in the early-middle Iron Age or may perhaps be residual. The pits and postholes forming Group 66, some of which were associated with Grooved Ware, produced small assemblages, mostly of debitage (Table 2.1.1: contexts 18, 20 and 68) together with burnt unworked flint. A broken and very worn end and side scraper from context 20 together with the technology of the material from this context and others from the group suggest a Neolithic date which accords with the ceramic dating. Several of the

flakes have been burnt and burnt unworked flint was also recovered from context 18 (Table 2.1.2). Some possible usewear was identified on material from context 18. This combination of burnt and worn elements is typical of Grooved Ware assemblages (cf Bradley 1999, 214-8).

2.1.6 The stakeholes forming Group 47 produced quantities of burnt unworked flint together with limited numbers of flakes, cores and core rejuvenation flakes. A single flake was recovered from Iron Age hollow 35-74. The fills of various ditches and gullies produced a few flakes, a core rejuvenation flake and burnt unworked flints. Feature 100, which contained a small number of early-middle Neolithic sherds, produced a small assemblage including a redeposited Mesolithic obliquely blunted point. Two Beaker pits (23 and 60, contexts 22 and 61-2) produced coherent groups of probably later Neolithic to early Bronze Age flintwork (Table 2.1.1); this dating accords with the ceramic evidence. Context 22 produced an assemblage of debitage (flakes, chips and three cores/tested nodules) and a range of neatly worked scrapers (four end and side and one end scraper). Contexts 61-2 produced smaller quantities of material of flakes, chips and burnt unworked flint (Tables 1-2). Although this material is not diagnostic it is very similar to that from context 22, and may be contemporary. Interestingly the majority of the flint came from the primary fills of these two pits (contexts 22 and 61 respectively) suggesting deliberate deposition, perhaps as grave goods.

2.1.7 Flint from the possible pit alignment (pits 91, 96 and 126; contexts 90, 95 and 127) amounts to seven flakes, three multi-platform flake cores (127) and a substantial quantity of burnt unworked flint and quartzite from contexts 127 and 95 (Tables 1-2). The worked element of this group is really too small to provide accurate dating, although the technology of the material suggests a Neolithic date may be appropriate. Iron Age pit 161 produced three pieces of burnt unworked flint from context 164, the middle fill, and a single piece from 167, the upper fill of the pit. The western group of Iron Age pits produced a few worked flints and some burnt unworked material (pits 161, 170 and 175; contexts 164, 165, 167, 173 and 178). The material would seem to be mostly redeposited as a possibly broken rod microlith was recovered. Two flakes came from context 223, the upper fill of Iron Age pit 226. The scatter of tree-throw holes and pits (pit 213, contexts 214-5; tree-throw hole 182, context 181; tree-throw hole 189, context 208) produced a reasonable quantity of debitage, although the figures are boosted by a large number of chips from context 189. The remaining material came from natural layers and includes debitage and a limited number of retouched pieces (eg an end and side scraper and a retouched flake). It is likely that some of this material is of a broad later Neolithic to early Bronze Age date.

Conservation

2.1.8 Much of the flint has suffered some post-depositional damage; cortication is mixed. A few flakes have also been burnt. The burnt unworked flint recovered was mostly very heavily calcined grey-white and red.

2.1.9 It is recommended that samples only of the burnt flint are retained (eg from stratified contexts). Some of the burnt unworked flint is beginning to disintegrate, however, there is little that can be done to stop this process. The flint is adequately bagged and boxed for long term storage. There are therefore no storage or conservation requirements. At this stage, all the material should be retained.

Comparative Material

2.1.10 This small group could be compared to other sites from the route which produced contemporary material, for example the Grooved Ware associated flint from White

Horse Stone and other sites along the CTRL route. It may also be useful to compare any fieldwalking scatters that were identified.

Potential for Further Work

2.1.11 Although this assemblage is small to medium-sized there is some potential for further work. The Grooved Ware associated flint will provide an interesting comparison for the material from White Horse Stone and other sites from the CTRL project. The identification of possible usewear on some material from this assemblage is also of interest and, if analysed, has the potential to add further information on the nature of these deposits and the range of activities represented. Some of the other groups (eg the material associated with Beaker pottery from context 22) are also of interest. Although the groups are not large enough for metrical analysis some technological analysis may provide useful comparative material.

2.1.12 Areas of further analysis will include identification of in situ scatters by spatial and refitting analysis, particularly within the Neolithic contexts. Methods of production including reduction techniques may also be studied by means of refitting analysis. The sources of the flint, which will shed light on patterns of contact and exchange, can be suggested by its physical appearance (e.g. Bullhead flint) and the presence of corticated material. The study of low-power use-wear and assemblage composition will shed light on the types of activity being undertaken. Study of the Grooved ware associated pit assemblages will contribute to understanding of Grooved Ware pit deposits, and will be valuable for comparison with similar deposits from White Horse Stone.

Bibliography

Bradley, P, 1999, Worked flint, in *Excavations at Barrow Hills, Radley, Oxfordshire*, Volume 1, *The Neolithic and Bronze Age monument complex* (A Barclay and C Halpin), Thames Valley Landscapes volume **11**, Oxford, 211-228

APPENDIX 3 - ASSESSMENT OF METALWORK

3.1 Metalwork

by Alistair Barclay, Vanessa Fell and Ian Scott

Introduction

3.1.1 Eight fragments including a tang with retaining washer and blade tip, possibly from a sword, were recovered by hand excavation and during sample processing from the upper fill of an Iron Age pit.

3.1.2 The recovery and study of the metalwork was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular aim 1.

Methodology

3.1.3 The object has been examined visually and from the X-ray.

Quantification

3.1.4 The object is made up of eight fragments most of which refit along fresh breaks indicating that it was originally deposited in a more complete state.

Table 3.1.1: Summary of metalwork

Context	Special number	Material	Count	Period	Comments (description)
178	30	Fe	2	MIA-LIA	Sword fragments
178		Fe	6	MIA-LIA	Sword fragments

3.1.5 Some of the fragments refit to form part of a blade tip with mid-rib, while another fragment represents most of the tang and has a terminal washer. The blade tip was bent and therefore damaged before deposition. The blade tip and tang could come from the same object, possibly a sword. The object has a provisional middle or late Iron Age date (Cunliffe 1991, 479).

Provenance

3.1.6 The fragments refit to form the blade of a possible sword with midrib. The blade had been bent prior to deposition. It was recovered from the upper fill (178) of the possibly early-middle Iron Age pit 175.

Conservation

3.1.7 The object is adequately packed for long term storage. At this stage, all the material should be retained. It will require selective investigative conservation to retrieve details of the probable washer at the end of the tang.

Comparative material

3.1.8 Comparative material is likely to come from Kent and elsewhere in England. Swords are known from middle-late Iron Age burials and from other contexts. Deposition within a pit in association with pottery, quantities of burnt grain, a partial horse skeleton, burnt bone and pottery could be locally unusual but certainly has a

number of parallels with other ritually placed deposits of metalwork (eg. White Horse Stone).

Potential for further work

3.1.9 The sword fragments have some potential for further analysis and typological study. The latter should confirm and possibly refine the date of the object and the context. Its detailed study, in particular the observation that it may have been deliberately bent prior to deposition, will contribute towards the interpretation of the pit and more generally to our understanding of Iron Age ritual practices.

3.1.10 Avenues for further analysis include identifying the likely source of the iron used to make the fragmentary sword from Pit 175. Comparison with the early-mid Iron Age metalwork from cremation group 6131 at White Horse Stone will also be of value for identifying differences and similarities in quality, composition and typological characteristics? This may be addressed by metallographic analysis including X-ray fluorescence, optical microscopy and hardness testing. Microscopic analysis has the potential to establish the extent to which the artefact was used before being deposited, and whether or not it was broken deliberately.

Bibliography

Cunliffe, B, 1991 *Iron Age Communities in Britain*. Routledge, London

APPENDIX 4 - ASSESSMENT OF HUMAN REMAINS

4.1 Cremated Human Bone

by Angela Boyle

Introduction

4.1.1 Cremation contexts were subject to 100% recovery as whole-earth samples during the watching brief and were subsequently wet-sieved. Material from the >2 mm fractions were retained en masse. The study of the material was aimed at determining the number, age and sex of the burials and details of burial practices.

4.1.2 The recovery and study of the human bone was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular Aim 1.

Methodology

4.1.3 Cremated material was quantified by weight and scanned in order to determine age, sex, and potential for further analysis. Given the small size of the assemblage a decision was made to scan all of it. Each deposit was recorded on a pro forma record sheet which includes context, context type, period, weight, identifiable fragments, colour and minimum number of individuals (where determined). The >2 mm fraction was scanned with a view to determining whether or not it should be sorted for small fragments of human bone.

Quantification

4.1.4 The cremated remains are quantified in Table 3.1. Both deposits of cremated remains weigh only 2 g, only a small fraction of the weight of the complete remains of a human cremation. Only long bone fragments could be identified.

Table 3.1: Summary of cremated human remains

Context	Context type	Period	Weight (g)	Identifiable fragments	Colour	Minimum number of individuals
22	Primary fill of pit 23	LN;EBA	2	Nothing identifiable	white	?
24	Upper fill of pit 23		-	Residue only, no bone		-
61	Primary fill of pit 60	LN;EBA	-	Residue only, no bone		-
62	Upper fill of pit 60		2	Long bone shaft	White	?

Provenance

4.1.5 The deposits came from two Beaker associated pits (23 and 60) located near the south-eastern end of the site.

Conservation

4.1.6 The material does not require any conservation for the purposes of long-term storage. Under the terms of the CTRL Act 1996, however, all human remains are to be reburied.

Comparative Material

4.1.7 Cremations of comparable date have been found at Tutt Hill, and further deposits may exist at Saltwood and elsewhere in Kent, while token deposits from pits are less easy to parallel. It is unlikely that valuable insights would be yielded by comparison of these small deposits of cremated remains with those elsewhere, except insofar as it might reveal the consistency with which small, possibly token deposits of human remains were deposited.

Potential for Further Work

4.1.8 The potential of this assemblage is limited by its small size as a group and by the small size of the individual deposits. An average adult cremation can weigh between 1000-2400 g if complete (McKinley 1997, 68; observations at modern crematoria). It therefore seems probable that those observed at Eyhorne Street are only token deposits, which do not represent the entire remains of any one individual. Nevertheless, it is recommended that the provisional identification of the material is confirmed and that its context is examined alongside associated stratigraphic, artefactual and palaeoenvironmental evidence in order to characterise the deposits and if possible determine their true function. Such a study would benefit from an integrated approach considering all similar features from CTRL sites.

Bibliography

McKinley, J, 1997 The cremated human bone from burial and cremation-related contexts, in *Archaeological excavations on the route of the A27 Westhampnett Bypass, West Sussex, 1992*. Volume 2*: the cemeteries* (A P Fitzpatrick), Wessex Archaeology Report No 12, 55-73

APPENDIX 5 - ASSESSMENT OF ANIMAL REMAINS

5.1 Animal Remains

by Bethan Charles

Introduction

5.1.1 A total of 372 fragments of bone (579 g) were recovered by hand from the site at Eyhorne Street. A further 138 fragments of bone (80 g) were retrieved from environmental samples, sieved through meshes of 10 mm to 10-4 mm where necessary.

5.1.2 The recovery and study of the animal bone was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular aim 1.

Methodology

5.1.3 The assemblage was recorded through the use of a simple recording sheet. This enabled a quick calculation of totals to be made along with a rough estimation of the number of individuals in each context and in total. All fragments of bone were counted including elements from the vertebral centrum, ribs and long bone shafts.

5.1.4 Ageing through measuring the rate of epiphyseal fusion of the bones was done using Silver's (1969) tables.

Quantification and Provenance

5.1.5 Table 5.1.1-2 present a summary of the identified animal bone from hand collected and sieved samples. In total only 5% of the hand collected bone and 2% of the sieved bone could be identified to species. However, 81% of the assemblage of hand-collected bone was from fill 174 of pit 170, which produced part of a horse skeleton. It is almost certain that these tiny fragments derive from the identified elements and other parts of the horse skeleton.

Table 5.1.1: Summary of identified, hand collected animal bone

Context	Interpretation	Period	% of identified fragments		Count	Weight (g)
			Horse	Cattle		
173	Pit	EIA	100	0	1	57
174	Pit	EIA	100	0	14	278
220	Pit	EIA	0	100	2	7
223	Pit	LIA	0	100	2	15

Table 5.1.2: Summary of identified sieved bone >10 mm (none was identified from the smaller sieves)

Context	Interpretation	Period	% of identified fragments	Count	Weight (g)
			Sheep		
173	Pit	EIA	100	3	11
180	Pit	EIA	100	1	1

5.1.6 Cattle and horse bones were the most numerous fragments from the hand collected bone. However, all the horse bones were found within pit 170 and consisted of part of a right radius and astragalus, ribs, vertebral fragments and one tooth. The radius

belonged to an individual of no less than 3.5 years of age (Silver 1969). Fragments of cattle teeth were found in contexts 220 and 223.

5.1.7 A small number of sheep bones were identified from the sieved assemblage. They consisted of one tooth and two burnt elements from context 173. It is likely that the horse and cattle have been over represented in the assemblage. The smaller bones of the sheep do not appear to have survived unless altered by burning. A single unidentified tooth was found in context 278.

5.1.8 Many of the bones from the sieved material had been burnt. The majority of this (62 fragments) was from context 178. The few other burnt bones were from context 24 and 173.

5.1.9 All of the bone from the site was in poor condition. The majority of the fragments identified were teeth, which again indicates that much of the bone material would not have survived. None of the bone had signs of butchery or gnaw marks. However, the condition of the surface of the bone would have obscured any marks.

Conservation

5.1.10 The material is adequately boxed for long-term storage and should be stored in a dry environment. It requires no further conservation. At this stage, all the material should be retained.

Potential for further work

5.1.11 The small number of bones recovered from the site do not provide much information regarding the economy of the site during the early and late Iron Age other than the presence of the animals. It is not recommended that further work be done on this assemblage as a whole. However, the partial horse skeleton from late Iron Age pit 175 warrants radiocarbon dating to aid interpretation of this possible structured deposit. It is recommended that the bone from this feature is analysed in full alongside associated stratigraphic, artefactual and palaeoenvironmental evidence in order to contribute to Landscape Zone Priorities connected with definition of ritual and economic landscapes and their relationships. In addition, a single small mammal tooth from context 178 should be identified to species.

Bibliography

Silver, I A, 1969 The Ageing of Domestic Animals, in *Science in Archaeology.* (eds D Bothwell & E Higgs), Thames and Hudson, 283-302

APPENDIX 6 - PLANT REMAINS

6.1 Charred Plant Remains

by Ruth Pelling

Introduction

6.1.1 Samples were recovered during excavation works for the recovery of charred plant remains and charcoal. Dated deposits are either from the early Neolithic to the early Bronze Age or are Iron Age. A total of 34 samples were processed by bulk water flotation and the flots collected onto 250 μm mesh sieves. The volume of deposit processed ranged from 10 to 40 litres. Flots were air dried slowly before being submitted for assessment.

6.1.2 The recovery and study of the charred plant remains was undertaken in accordance with the Fieldwork Event Aims (see Section 2.2), in particular Aim 1.

6.1.3 The samples were taken in order to address questions concerning the diet and cereal economy of both the Neolithic/early Bronze Age and the Iron Age settlements. In addition a spot find of a *Malus sylvestris* (crab apple) core was recovered during the excavation from a late Neolithic context (18, pit 19).

Methodology

6.1.4 The sampling programme was intended to recover material from the full range of feature type and date excavated. Samples were taken from ditches, pits, layers, post-holes and tree-throw holes. Each flot was assessed by scanning under a binocular microscope at x10 magnification. Any seeds or chaff noted were provisionally identified and an estimate of abundance made. Random fragments of charcoal were fractured and examined in transverse section at x10 and x20 magnification.

Quantification

6.1.5 A total of 9 Neolithic/Early Bronze Age flots and 15 Iron Age flots were assessed. A further 10 flots of unknown date were also assessed.

6.1.6 Of the early prehistoric samples, two contained no charred plant remains and two contained charcoal only. Cereal remains were only present in small numbers (less than ten grains) and no chaff was noted. Four samples (1-4) produced fragments of *Corylus avellana* (hazel) nut-shell, including very large amounts in sample 1. These samples also contained moderate to abundant quantities of charcoal, including *Quercus* sp. (oak) and *Corylus/Alnus* sp. (hazel/alder). The cereal remains noted included *Hordeum vulgare* (barley) and hulled wheats including *Triticum spelta* (spelt wheat). The *Triticum spelta* in pit 23 is likely to be contamination from the later prehistoric deposits as it is not known in Britain from before the middle Bronze Age.

6.1.7 Of the 15 Iron Age samples charred remains were abundant in six, including over 1000 grains in at least two samples. Grain appears to dominate these deposits although abundant chaff and weed seeds were also noted. The cereal remains noted were dominated by *Hordeum vulgare* (barley) and *Triticum spelta* (spelt wheat), although *Triticum dicoccum* (emmer wheat), and *Avena* sp. (oats) were also recorded. Occasional additional plant items included *Brassica/Sinapis* sp. seeds, which may be derived from cultivated brassicas (cabbage, mustard etc.), a bracken frond, hazel nut shell fragments and hawthorn stones. Noticeable amongst the weeds were large quantities of *Bromus* subsect *Eubromus* (brome grass) seeds in samples

24 and 25. The preservation of remains in these samples is exceptionally good. Three samples contained fewer but still useful quantities of grain chaff and weeds. The remaining six samples contained little or no cereal grain and no chaff.

6.1.8 The undated samples produced very limited remains. No seeds or chaff were present in seven samples, while two samples contained occasional *Corylus avellana* (hazel-nut) shell fragments only and one sample (32) contained a single *Hordeum vulgare* (barley) grain. Charcoal was generally rare but more frequent in sample 8, consisting entirely of *Quercus* sp. (oak).

Table 6.1.1: Summary of plant remains in undated samples

Sample	Context	Feature	Period	Sample size (l)	Flot size (ml)	Grain	Id-Grain	Chaff	Id-Chaff	Weed seeds	Other	Id-Other	Charcoal	Comments
8	90	Pit		10	150	0		0		0	0		+++	
9	99	Ditch		20	20	0		0		0	0		+	Worm capsules
15	114	Pit	PR?	10	10	0		0		0	+	Corylus	+	
16	127	Pit		16	10	0		0		0	0		+	Modern insects worm capsules
20	138			30	10	0		0		0	0		+	
21	144	Ditch		7+10	10	0		0		0	+	Corylus	+	Rooty
22	146	Ditch		20	10	0		0		0	0		+	Roots, sand, coal
32	205	Pit		40	10	+	Hor	0		0	0		++	
33	189	Tree	PR?	40	10	0		0		0	0		0	
34	215	Pit		40	10	0		0		0	0		+	

Table 6.1.2: Summary of plant remains in Neolithic and Early Bronze Age samples

Sample	Context	Feature	Period	Sample size (l)	Flot size (ml)	Grain	Id-Grain	Chaff	Id-Chaff	Weed seeds	Other	Id-Other	Charcoal	Comments
1	22	Pit 23	LNE;BA	40	200	0		0		0	++++	Corylus	++++	pit
2	24	Pit 23	LNE;BA	26	50	+	T.spt/dic T.spt Hor	0		0	++	Corylus	++	small pit
3	61	Pit 60	LNE;BA	40	100	+	indet	0		+	+	Corylus	++	pit
4	62	Pit 60	LNEBA	16	150	+	Hor	0		0	++	Corylus	++	pit
5	71	Posthole 70	LNE?	10	10	0		0		0	0		+	Roots
6	72	Posthole 70	LNE?	10	10	0		0		0	0		+	charcoal flecks
7	73	Postpipe in posthole 70	LNE?	32	10	0		0		0	0		0	Occ. modern weeds
12	102	Pit 100	E-MNE	29	20	+	T.spt Hor	0		0	0		++	

13	103	Pit 100	E-MNE	20	10	0		0		0	0		0	

Table 6.1.3: Summary of plant remains in Iron Age samples

Sample	Context	Feature	Period	Sample size (l)	Flot size (ml)	Grain	Id-Grain	Chaff	Id-Chaff	Weed seeds	Other	Id-Other	Charcoal	Comments
11	76	Hollow 35/74	E-MIA	40	10	+	T.sp	0		0	0		+	
17	123	Hollow 124	E-MIA	10	10	0		0		+	0		+	
18	133	Ditch 135	E-MIA	36	20	+	Hor indet	0		0	0		+	Rooty
19	134	Ditch 135	E-MIA	40	50	+	Indet	0		0	0		+	Modern weeds, coal
23	11	Hollow 35/74	E-MIA	40	20	+	Hor	0		+	+	Corylus	++	
24	172	Pit 170	E-MIA	40	400	1000+	Hor T.spt T.dic Av	++	T.spt Av (wild)	++++	+	Brassica	+	Grain rich
25	173	Pit 170	E-MIA	40	300	++++	Hor T.spt T.dic	++	T.spt/dic Hor	+++	+	Crataegus	+	Grain rich
26	180	Pit 170	E-MIA	40	150	++++	Hor T.spt Av	+	T.spt/dic	++++	0		++	Grain rich
27	164	Pit 161	E-MIA	20	1500	1000+	Hor T.spt Av T.dic	+++	T.spt T.dic Hor	+++	+	Bracken	+	grain rich, less bromus
28	165	Pit 161	E-MIA	40	150	++++	Hor T.spt T.dic Av	++	T.spt/dic	+++	0		0	Grain rich
29	167	Pit 161	E-MIA	40	100	++++	Hor T.spt T.dic Av	++	T.spt T.dic	+++	+	Brassica	0	Grain rich
30	178	Pit 175	E-MIA	40	300	+++	Hor T.spt T.dic	+	T.spt	++	+	Vic/Pis Rosa?	++	preservation excellent
31	222	Pit 226	LIA	40	50	+++	Hor T.spt	+	T.spt	++	0		+	
35	223	Pit 226	LIA	40	50	+++	T.spt T.dic Hor Av	+	T.spt/dic	+	0		0	
36	225	Pit 226	LIA	14	10	++	Hor T.spt/dic Av	0		+	0		+	

Hor = Hordeum T.dic = Triticum dicoccum T.sp = Triticum sp. Vic/Pis = Vicia/Pisum sp.
T.spt = Triticum spelta T.spt/dic = T. spelta/dicoccum Av = Avena sp.

Provenance

6.1.9 The hazelnut rich early prehistoric deposits were derived from pits (23 and 60), and also contained frequent charcoal. It is likely that they represent the redeposited remains of fires, including the fuel. The fact that the hazelnut is represented by broken shell fragments rather than whole nuts suggests it to be derived from food residues, rather than entering the deposits attached to fuel wood.

6.1.10 The grain rich Iron Age samples are all derived from pits (161 and 170). It must therefore be considered that they are derived from stored product, perhaps recovered more or less *in-situ*, although the mixture of several types of cereal grain might contradict this. The presence of glume bases and weeds suggest that the grain had not been fully processed. The ditch deposits contained little or no material, and the remains that were present are likely to be no more than redeposited background scatters or 'noise', present across the site.

Conservation

6.1.11 The flots are in a stable condition and can be archived in their present state for long-term storage.

6.1.12 Samples that have been demonstrated to have no potential could be discarded.

Comparative Material

6.1.13 Hazelnut shell tends to be the most commonly recovered plant of economic importance found within Neolithic and Early Bronze Age deposits in Britain. Crab apple is also recorded on a number of sites throughout the British Isles (see Moffett *et al.* 1989). Hazelnuts clearly played an imported role in a Neolithic-early Bronze Age diet which must have still included a large wild element despite the introduction of agricultural technology at the beginning of the Neolithic. The Eyhorne Street samples do not suggest that cereal agriculture played a significant role and these results will be important for wider comparative analysis, although it is too early to establish if agriculture was important elsewhere in Kent at this time. Within the CTRL project Neolithic material has been identified from the White Horse Stone group and Tutt Hill. There are no known published records of material of this date from within Kent.

6.1.14 Spelt wheat and barley are the principal cereal species known in Southern Britain from the Iron Age (Greig 1991). Emmer wheat is less frequently recorded although there is some evidence of its cultivation from Late Iron Age sites. Within Kent a deposit of roughly equal proportions of emmer and spelt were recovered from a late Iron Age pit at Wilmington (Hillman 1982). Large deposits of emmer wheat have also been recovered from late Iron Age pits at Hascombe, Surrey, (Murphy 1977, 82-84), and Ham Hill, Somerset (Ede 1991). The late Iron Age deposits so far assessed from the within the Channel Rail Link project have not produced comparable results in terms of scale, although both spelt wheat and emmer wheat were represented within contemporary deposits at Thurnham Villa and South of Snarkhurst Wood. The Roman deposits from Thurnham Villa suggest a similar agricultural tradition was continuing into the Romano-British period. The evidence from within Kent is therefore suggesting that despite the widespread cultivation of spelt wheat, emmer wheat was also being cultivated within the Iron Age and Romano-British period. It is not clear whether this represents a continuation from the Bronze Age or a reintroduction within the Iron Age.

Potential for Further Work

6.1.15 Given the limited range of plant remains from Neolithic-Bronze Age and from Iron Age deposits within the region the present samples have considerable potential for increasing our existing dataset for the area. The Neolithic-Bronze Age samples are unlikely to extend the known species list for the period but will provide valuable data for the region. The Iron Age samples are exceptionally rich and therefore offer great potential for investigation of the role of specific cereals, such as emmer wheat and oats, as well as broader agricultural trends at both the site and within the region. Emmer wheat is now known from the Late Iron Age, but has not been widely recorded and it has not been established if it is present as a relic of earlier agricultural systems or is a reintroduction. It is therefore important to fully record (species identification and quantification) these present samples and extend the existing dataset. Likewise, oats are recorded in significant numbers from some sites in this period, but it is not clear how much it was cultivated or how much it appears as a weed. The late Iron Age deposits may represent *in-situ* stored products. In addition to providing valuable information about agricultural systems at the site, there is also therefore the potential to look at storage patterns and possible structured deposition in a ritual context. This data will be of particular value for comparison with the Iron Age settlement at White Horse Stone. The analysis of some charcoal from Neolithic/Bronze Age deposits may shed light on the woodland landscape in the period and provide some information about woodland management. The charcoal in the Iron Age period is very limited but its identification could shed light on what species was used for fuel. This would involve species identification and quantification.

Bibliography

Ede, J, 1990 Carbonised seeds, in G Smith, Excavations at Ham Hill, 1983, *Proc Somerset Archaeol Nat Hist Soc* **134**, 27-45, 39-43

Greig, J, 1991, The British Isles, in Progress, in *Old World Palaeoethnobotany*. (eds W van Zeist, K Wasylikowa and K-E Behre, Rotterdam299-334

Hillman, G C, 1982, Late Iron Age glume wheats from Wilmington Gravel-pit, Kent, *Ancient Monuments Laboratory Report* **3611**

Moffett, L, Robinson, M and Straker, V, 1989 Cereals, fruit and nuts: charred plant remains from Neolithic sites in England and Wales and the Neolithic economy, in, *The beginnings of agriculture*, (A Milles, D Williams, and N Gardner), Brit Archaeol Rep Int Ser **496**, 243-61

Murphy, P A, 1977 Early agriculture and environment on the Hampshire chalklands, c 800 BC - 400 AD, unpublished MPhil Thesis. University of Southampton

